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COMMUNICATING ENVIRONMENTAL MIGRATION

Strategic Representations in the Discourse of

International Organisations and News Discourse

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CONTENTS

ABSTRACT

This thesis is based on a corpus-assisted Ecolinguistic Discourse study and explores the discourse on environmental migration of international organisations and selected newspaper outlets. It is based on the theoretical framework of Critical Discourse Analysis and adopts a socio-cultural approach to the study of discourse and its relationship with socio-cultural behaviour. It has a major focus on representations of the ecological and humanitarian aspects of environmental migration.

The study investigates and discusses written representations of environmental migration, migrant and host communities, and the role of the climate and environment in this phenomenon. More specifically, it focuses on representations shaped by authoritative international organisations and newspaper outlets, two "voices" which are often representative of dominant discourses on this phenomenon.

The methodology adopted for the analysis is based on corpus-assisted eco-critical discourse analysis of two specialised self-collected corpora: the International Organisations Corpus (IOC), a collection of open-access publications published by international intergovernmental organisations; and the News Corpus (NC), a corpus of English-language newspaper articles from international media outlets. Corpus-analysis tools are used to interrogate the dataset according to specific criteria and research questions. More specifically, they are used to explore the topicality of the corpora based on their keywords and most frequent words. The tools are also used to integrate the analysis of representations with significant collocations and data occurrences on environmental migration generated from the tools and retrieved from close reading of the texts of the corpora.

The study aims at raising awareness on the complexity of communication about environmental migration, and on how the language used by different stakeholders for different publics construes specific viewpoints of this phenomenon and may impact on how it is dealt with. The discourse of international organisations and media discourse instantiate social and power-related variables, promoting specific ideological constructs and value systems. It therefore plays an influential role in knowledge-building and information-delivery processes, and it most likely influences the way environmental migration is understood and approached by either exacerbating xenophobic and intolerant behaviours or promoting partnership-oriented and inclusive reception of migrant people and actions in their favour. The analysis explores the extent to which the discourse of selected newspaper and official international organisations construct similar understandings of environmental migration; these two discourses are very influential and can impact on people's understanding of this complex and controversial phenomenon.

The discourses of the two corpora are multi-faceted and complementary. The discourse on environmental migration of the IOC promotes a proactive attitude towards environmental migration, encouraging practices and behaviours that should grant safety and wellbeing for all; however, these practices are often disregarded and represented as aspiring to. The discourse of the NC, instead, represents the present and future state of affairs as an impending ecological and humanitarian catastrophe. Both discourses evoke problematic future scenarios, but at the same time they do not promote a real transition towards innovative socio-ecological systems of living; rather, they seem to imply the need for preserving an unethical *status quo*. Representations in the IOC and NC are generally biased by the perspective of dominant and powerful social groups. These representations often contribute to partial or superficial knowledge about migrants and origin communities, rather than promoting their wellbeing, and tend to exclude their "voice" or include it only sporadically. In this way, the possibility to explore diverse perspectives and inform new comprehensive vision of this phenomenon is hindered.

Building a cohesive socio-cultural structure based on tolerance and understanding is of paramount importance for living together. An eco-cultural biocentric framework for understanding and communicating environmental migration in an innovative way is the first step to deal with it with a renewed mind-set that values partnership between communities, and the wellbeing of the eco-system on which all life-forms depend.

LIST OF ABBREVIATIONS

BBC	British Broadcasting Corporation
CT	Camberra Times
EDN	Earth Day Network
EEA	European Environment Agency
EMP	Environmental Migration Portal
EU	European Union
G	The Guardian
IBNS	India Blooms
IOM	International Organization for Migration
IOC	International Organisations Corpus
IPCC	Intergovernmental Panel on Climate Change
LDC	Least Developed Countries
NC	News Corpus
NN	The New Nation
NYT	The New York Times
OED	Oxford English Dictionary

RVN	Right Vision News
SMH	Sydney Morning Herald
TS	The Toronto Star
UN	United Nations
UN ECOSOC	United Nations Economic and Social Council
UNCC	United Nations Climate Change
UNEP	United Nations Environment Programme
UNFCCC	United Nations Conference on Climate Migration
UNHCR	United Nation High Commissioner for Refugees
UNU-EHSU	United Nations University – Institute for Environment and Human Security
US ON	United States Official News
WCC	World Climate Conference
WMO	World Meteorological Organisation

1. ENVIRONMENTAL MIGRATION: SETTING THE SCENE

The present study examines the linguistic context and expressions related to environmental migration in online publications of international intergovernmental organisations and selected newspaper outlets. Drawing on the main literature on Ecolinguistics, frame analysis, identity and corpora studies, this study aims at analysing representations of environmental migration. More specifically, the object of the analysis is to examine how environmental migration, environmental migrants and the role of the environment in this phenomenon are represented in official authoritative discourses, and therefore what kind of representations are formulated and circulate through the "voice" of highly influential intergovernmental organisations and newspapers (data-gathering, selection and the concept of "frame" are discussed in Section 2.2.3.; see Section 2.2.1. on "voice"; see Section 3.2. for discussion of the research questions).

Chapter 1 sets the scene of the study: it contextualises the controversial phenomenon of environmental migration and provides a brief excursus of the circumstances that brought to its linguistic emergence. More specifically, the links between discourses on environmental migration and environmental and climate change are investigated. Section 1.2. provides an overview of the most used labels for environmental migration identified from a preliminary analysis of the dataset and authoritative documents, focusing on official terminological choices adopted by authoritative intergovernmental organisations. In Section 1.3., fundamental definitional issues and the lexical choices adopted in the present study are presented and discussed. Chapter 2 presents the theoretical framework of the study (Critical Discourse Analysis, Ecolinguistics and corpus-assisted analysis of discourse) and it introduces the concepts of discourse, story, representation, framing and identity. Chapter 3 presents the data for the corpus-assisted qualitative analysis and the methodological approach with which data are analysed; more specifically, it outlines the two specialised self-collected corpora for the study: the International Organisations Corpus (IOC) and News Corpus (NC). Also, Chapter 3 introduces the criteria for interrogating the dataset. Chapter 4 specifies the methodological procedures for the analysis, focusing on the use of corpus tools, and it derives the topicality of the IOC and NC through an analysis of their keywords and most frequent words (see Sections 4.1. and 4.2. on topicality and keyword). Chapter 5 presents the texts chosen for close-reading and it analyses specific terminology related to environmental migration and retrieved from both corpus analysis and close reading of the dataset and literature; more specifically, it investigates key data occurrences and shared collocations (see Sections 5.2. and 5.3.) on environmental migration, environmental migrants and the environment that characterise the discourses of environmental migration of the IOC and NC. Chapter 6 and Chapter 7 present the analysis of the

IOC and NC respectively: they outline the representations of environmental migration, environmental migrants and origin societies, the environment, and other participants in this phenomenon of mobility. Chapter 8 draws some conclusions on the study, it underlines several specific characteristics of the discourses of the IOC and NC and some innovative representations and understandings of this phenomenon of mobility; also, it identifies the limitations of the study and its potential future developments.

This study investigates the role of language in shaping representations of environmental migration, and it proposes a context-oriented interpretation of the ideological standpoints underlying these representations. As such, the first chapter investigates the main labels for environmental migration in their socio-cultural and historical context in order to identify the correlation between semantic and ideological motives; also, it tries to explain changes in terminology over time. The contextualisation of terminology contributes also to shedding light on key expressions and words around environmental migration, which are further investigated in Section 1.2. and in Chapters 4 and 5 with corpora tools. This contextualisation helps understanding the meaning attached to representations of environmental migration. The importance of studying the terminology in relation to time and context of production lies in the semantic difference that representations may acquire in different periods of time: representation of environmental migration overtime imply and promote different values and ideologies (Lakoff, 2010, p.73).

Environmental migration is named differently in different contexts of use, and sometimes there are differences within the same context. Even though seemingly definitions are used interchangeably, this is not always the case: different "voices" may represent environmental migration differently in order to promote a specific point of view or ideological position (Bevitori, 2010, p.18). Social actors may have divergent understandings of environmental migration due to diverse backgrounds, worldviews, experiences, interests, values and beliefs (Dahl & Flottum, 2014, p.402). In turn, different representations of environmental migration have different implications on public understanding and opinion. The "voices" of major intergovernmental organisations and media outlets analysed in this study are likely to influence greatly individual understanding and action (I will expand on representations and their implications in Section 2.2.3.). Moreover, official representations have a noticeable impact on politics and policy-making practices (Nerlich *et al.*, 2014, p.46) and at times they stem from them. The analysis of the linguistic representations of this phenomenon is worthwhile because of the impact of official online coverage and media coverage on people's understanding and awareness of environmental migration.

1.1. The linguistic emergence of environmental migration

The concept of environmental migration is profoundly problematic for several reasons. First and foremost, the link between environmental change and migration is not straightforward. In this respect, the concept of environmental migration is highly debatable, as is not easy to establish clear boundaries to tell apart environmental migration from other kinds of migration. In particular, the problem with environmental migration is twofold: on the one hand it is not easy to separate environmental factors from other migration drivers; while on the other hand environmental change does not necessarily result in migration. In fact, environmental change is just one factor impacting on migration and migration is just one field which is impacted by environmental change. In other words, the links between environmental change and migration are not easy to determine: environmental migration happens in conjunction with multiple areas affected by environmental change which together might trigger migration patterns; also, migration is not a straightforward answer to environmental change but just one possible response to it (IOM, 2007, pp.1-5).

Given the multiplicity of factors lying behind migration patterns, environmental change cannot be said to directly cause environmental migration but it is one of the forces that contribute to it. Essentially, there is often a knowledge gap around the causes of migration. Some claim that environmental migrants can be differentiated from other types of migrants because they primarily respond to push factors -say "predisposing" conditions- in the place of origin; while others claim that there are multiple reasons for which people decide to migrate. As Hall remarks, the very definition of environmental migration is rather limited in describing who environmental migrants actually are (2010, pp.111-112). Arguably, there is a relative convergence between push factors on the one hand and multi-causality on the other hand as triggers to migration. The very fact that agreement on a shared view of this kind of migration is lacking suggests that perhaps new models for migration need be coined in order to better adapt to present-day phenomena. In this respect it is worth analysing the representations of and lexical choices used to refer to environmental migration.

In this chapter I will argue that environmental migration as a linguistically self-consistent concept on its own developed as a branch of the climate change debate. Environmental migration can be said to be the social dimension of climate change (WBG, 2018), hence to have emerged as the outcome of much debate around climate change and its social and economic impact. The growing awareness that climate change is profoundly impacting on migration patterns brought to the linguistic emergence of the concept of "climate-linked migration". Possibly, the fact that the notion of environmental migration stemmed from the debate around climate change can explain why it is often called "climate" migration, despite the inadequacy of this collocation in representing the multiplicity of trigger factors at the basis of human movements. Overtime, the debate on

environmental migration has expanded and this newborn blurred category of migrants has gained visibility in language. Environmental migrants do not seem to fit the parameters of any category of migrants officially recognised thus far by either governmental or non-governmental organisations (IOM, 2018a, pp.3-4). However, the awareness that climate change is just one trigger of migration and that a general deterioration of the quality of life and livelihoods of certain populations pushes them to move has brought to the enlargement of the category of "climate migrants" to that of "environmental migrants" (with its linguistic variations). By means of replacing "climate" with "environmental", the complexity of factors that contribute to human migration is recognised (see Section 1.3.). All in all, environmental migration is an emerging concept and is not commonly agreed upon, but different attempts have been made to try and describe it.

Apparently, terms and concepts such as "climate migration", "climate-induced migration", "environmental migration", and "environment-induced migration" are used almost interchangeably without a general agreement on any specific definition (Warner, 2010, p.403). What stands out from the use of these multi-word expressions is the endeavour to blend the environmental sphere and human movements into a univocal concept.

Though environmental migration is an ancient phenomenon, the concern for this type of displacement is relatively new (Gemenne, 2012, p.239). A preliminary investigation of the interrelatedness of the environmental sphere and human migration in the discursive practices of intergovernmental organisations would likely lead to identify 1979 as a milestone: it is during the 1979 First World Climate Conference (WCC) that the link between climate change and human activity is established in official papers. Nowadays, an attempt to combine human movements and environmental transformations is International Organization for Migration (IOM)'s definition of "environmental migrants" proposed in 2007 and developed as follows:

> "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" (EMP, 2018).

The need to discuss environmental migration testifies the growing awareness of the influence environmental and climate change did (and does) have on human displacement and the state of relative concern environmental migration dynamics create; though environmental drivers have always played a role in migration movements, natural disasters became more frequent and severe (Gemenne, 2012, p.237). In this sense, it is significant that a new concept is coined which

establishes a stable and clear correlation between migration and environmental change even from a linguistic point of view. Possibly, this linguistic expedient aimed at catalysing greater attention on how the livelihoods of certain populations were being sharply and hugely affected by changes in the climate and the natural environment. Among the concerns towards environmental issues, I would argue that the origin of the concept of environmental migration is to be found in the discourse around climate change. Climate and environmental change moved from being considered predominantly as a physical phenomenon to including also its social, cultural, political, economic and ethical aspects (Dahl & Flottum, 2014, p.403). Media coverage of climate and environmental change, as well as attention from policymakers, scholars and researchers, has increased steadily from the mid-2000s onwards, after the release of the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report and Al Gore's film *An Inconvenient Truth* (2006). Most of all, the debate was influenced to a great extent by major natural disasters that happened around that time (Gemenne, 2012, pp.237, 242; Nerlich *et al.*, 2014, p.44). If we consider environmental migration as the social dimension of climate change, then media coverage of environmental migration probably had a similar increase.

The time between the end of World War II and the present day is a period characterised by growing awareness towards environmental themes. The series of conferences on environmental and climate issues that took place across the Second Post-war Period -from the 1950s onwards- culminates in the 1979 World Climate Conference (Zillman, 2009). This chapter focuses on the period which goes from the rise of contemporary environmental movements onwards and analyses the background against which the ecological movement has taken shape. This is a time when ecological awareness became of widespread interest due to the potentially harmful impact environmental and climate transformations were having on real-life contexts (Gemenne, 2012, p.242; Ponton, 2015, p.97).

The exact starting point of the movement is comprehensibly hard to establish –some points of reference are said to be the first Earth Day in 1970, that became global in 1990; or the publication of Rachel Carson's *Silent Spring* (Carson, 2000 [1962]) on the danger of pollution and interrelatedness of living organisms, the environment and health (EDN, 2018b). Some mention Lovelock's theories in the 1970s (Lovelock, 1979), or the first picture of planet Earth taken from outer space in 1968 -all of these are interchangeably taken as the starting point of what today we call "modern environmental (or ecological) movement" (*An Inconvenient Truth*, 2006; EDN, 2018b). Some even date the origins of environmental awareness back to the Romantic period (Bondì, 2007, p.43). I will not linger on these positions for two main reasons: on the one hand, this introduction is not meant to be a speculation on the historical roots of environmental awareness, but just a report of human relations with the environment and their influence on institutional and

organisational practices around environmental migration. On the other hand, the data selected need to be interpreted in relation to their context of production and reception in order for the analysis to be consistent. However, the establishment of a precise watershed between a before- and after-the-environmental-movement is of no use by itself; it acquires meaning when used to identify the time when today's environmental consciousness gradually emerged. The span of time taken into consideration is characterised by a broadened definition of "environment" that expands to include issues that affect communities and their health (EDN, 2018a); it is a historical period which is somehow "civically-oriented" and concerned with the way changing habits of communities and changing environmental conditions interact and impact on each other reciprocally. Possibly, it is a period when concerns about human contributions to environmental change emerged alongside the importance of preserving a healthy environment (Nerlich *et al.*, 2014, p.45).

Linguistic definitions of environmental migration will hence refer to a time that starts around the 1950s; however, environmental matters only gained currency during the 1970s "but they were not really linked with migration issues until recently" (Gemenne, 2012, p.239). This period marked the beginning of studies on climate change and rising temperatures after the first negative effects on and of climate became evident (*An Inconvenient Truth*, 2006). Ethical grassroots movements characterised the 1960s with debates about civil rights and socio-political tensions (De Bernardi & Guarracino, 2000, pp.358-373). From an economic, political and social point of view, the post-industrial consumer society developed in a climate of political instability and new (un)balances; it is a time when consumer goods found a web of production and distribution in the Global South and the international market respectively (De Bernardi & Guarracino, 2000, pp.410-415). The awareness of the Earth's limits increased and the ecological question slowly developed into the modern environmental movement, with its different more or less radical branches (cornucopianism, sustainable development, social ecology, ecofeminism, deep ecology, transition movement, the dark mountain project, deep green resistance, voluntary human extinction movement, to name a few) virtually promoting "sustainable development" or "sustainable withdrawal" (Stibbe, 2015, p.24; Bondì, 2007, pp.105-107). Concern with potential damages to the ecosystems caused by human activity are crucial for "environmentalism"; the Oxford English Dictionary (OED) (2018) defines environmentalism as:

"Concern with the preservation of the natural environment, esp. from damage caused by human influence; the politics or policies associated with this".

Ecology, health, human rights, conservation movements and the creation of societies for the

protection of the environment (Greenpeace in 1971, the WWF in 1961, Earth First! in 1979) can all be said to relate to this new critical perspective on the world (Bondì, 2007, pp.56-60). At the same time, within the framework of the UN international discourse, themes such as environmental degradation, environmental protection, disaster risk reduction and environmental resource management started being discussed in response to the general situation of affluence, resource-depletion, pollution, destruction of ecosystems and extinction of wildlife (see, for instance, the Stockholm declaration) (Handl, 2012, pp.1, 4-5). The 1970s saw what was referred to, in a rather controversial way, the "war" to the ozone; it took place in terms of policies of reduction of human pollution and greenhouse gases. Meantime, Lovelock's hypothesis of Gaia (Lovelock, 1979) -then theory- became popular and controversial; it nevertheless functioned as an alarm, a call to public conscience on the dynamics of change that were taking place worldwide. The Earth started to be thought of in more articulated terms; new views of the whole planet as worthy of dignity and respect were conceived (Lovelock himself admitted that the metaphor of Gaia and the language and discourse around it were also meant to instill a sense of respect towards planet Earth) (Bondì, 2007, pp.3-19; Eisler, 1988, p.75).

The core innovative view is that natural ecosystems are seen today in their self-regulatory function: by the end of the 20th century the environment starts to be conceptualised and understood as a whole interconnected system. This new paradigm has had an influence on the awareness that the risk environmental change creates is global. The revolutionary concept at the basis of these views is that they are in line with systems theory which claims that the single parts of a system influence each other reciprocally and the relations between the parts of a system have great relevance for the whole system. The anthropocentric view of the world is challenged by a new holistic paradigm: interrelatedness, interdependence and interaction between forms of life (Bondì, 2007, pp.28-32; Eisler, 1988, pp.xxii-xxiii). Accordingly, the relations that tie together the environment in all its parts are increasingly taken into serious consideration. Among them the relationship between environmental change and human action. Increasingly greater attention is given to climate change from the late 1980s, with the creation of the Intergovernmental Panel on Climate Change (IPCC) in 1988; climate science began to intersect with politics and media coverage (Gemenne, 2012, p.239; Nerlich *et al.*, 2014, p.45). While the debate on nuclear energy, renewables and energy saving spread over the 1980s, the 1990s were the hottest years in a century or so, with waves of heat growing more and more frequent in time (IPCC, 2007, p.30; *An Inconvenient Truth*, 2006). In its reports, the IPCC increasingly attributes responsibility for "global warming" to human action and maintains that it is difficult to explain environmental change as a natural phenomenon (Bondì, 2007, pp.76-82).

The 2000s became the decade when the impact of environmental change onto real contexts of life grew evident, with rise in global temperature and sea level, increasing levels of carbon dioxide released in the atmosphere, glaciers shrinking, extreme weather events and rising trends in annual precipitations (IPCC, 2007, p.30; UNEP, 2018c; Gemenne, 2012, p.237). From a linguistic point of view, an interesting attempt at "reframing" (see Section 2.2.3. on frames) is carried out and the expression "global warming" is replaced by "climate change" which has a less frightening connotation. The operation was successful and nowadays climate transformations seem to be mostly mentioned in terms of climate change; whether this has also resulted in a change at the level of understanding of environmental change is not easy to tell (Lakoff, 2010, p.71; Stibbe, 2015, pp.48-49). All in all, the period between the late 20th and early 21st century is a time of growing awareness of environmental and climate transformations and the need to act promptly (EMP, 2018). The emergence of discourses on environmental migration is closely linked to the emergence of discourses on environmental and climate security in mid-late 2000s, even though discussions of migration and environmental change were well underway in the mid1980s and 1990s (Hartmann, 2010, pp.234-239). Some have tried to raise awareness on the theme of environmental and climate change; see, among others, the former vice-president of the USA Al Gore (see *An Inconvenient Truth,*2006; Al Gore, 2018). Still, resistance to scientific research cyclically re-appears in the shape of skepticism strongly supported by the political and economic interests of parts of our global society (*An Inconvenient Truth*, 2006*;* Bondì, 2007, pp.85-88).

Going back to the origin of the concept of environmental migration, it can be said it is rooted in the climate change debate. Within the latter, the topic of migration was gradually introduced and discussed. Indeed, the core concern of research on environmental matters was the linkage between environmental disruption and conflicts "and soon enough refugee flows were mobilised as an explanatory variable to justify a causal relationship between environmental change and conflicts. Migration was viewed both as a consequence of environmentally-induced conflicts and a trigger of future conflicts over natural resources"; hence the interest in migration flows induced by environmental change (Gemenne, 2012, p.240). Since migration was presented as a dramatic consequence of climate change, most publications on this topic from the mid-2000s onward focused only on "climate change-induced migration", thus sidelining other environmental causes for migration (Gemenne, 2012, p.242).

The discursive convergence of these two themes –that is climate change and human migration- seems to be also as the product of the dialogical interaction between non-governmental organisations and governmental organisations. For instance, the 2009 UN Climate Change Conference (also known as Copenhagen Summit) saw non-governmental organisations ask

measures to be taken to mitigate climate change and preserve the survival of vulnerable countries; the UN expressed similar concerns (UNCC, 2009). The discursive convergence of migration and the environment seems to be the result of a move from environmental concerns, to climate change specifically, and finally to "climate migration" as a subsidiary issue to the latter.

The reason for this convergence is perhaps to be looked for in the way climate issues have been shaped all along the second half of the 20th century: concern about the climate seems to have emerged in relation to a variety of areas which go beyond mere human concern for the preservation of a healthy and supportive environment and extend to so-called more practical fields of interest, economy and security amongst all. The fact that climate change, which I have identified as the starting point for the emergence of the concept of environmental migration, developed from such interdisciplinary a field cannot but make environmental migration itself as interdisciplinary. In turn, this interdisciplinarity makes it difficult to establish clear boundaries of appropriateness to refer to this phenomenon. If we look at environmental migration bearing in mind the UN Sustainable Development Goals (UN, 2018) it is evident that environmental migration cuts across a relevant number of goals. The UN network is of great relevance for this study: the representations of environmental migration here analysed mainly refer to UN documents or documents produced by organisations which work in close collaboration with the UN, as stated below in Section 1.1. In fact, environmental mobility undeniably impacts both migrants' lives and the environment, hence it is concerned with issues such as poverty, hunger, health, education, gender equality, sanitation, work, marine and terrestrial life, etc., virtually the whole of the seventeen Goals (UN, 2018). I now briefly expand on this interdisciplinarity as it is fundamental to investigate how the topic of environmental change and human mobility gradually developed and merged into a comprehensive and complex notion known as "environmental migration".

The environmental change debate seems to have been related to "sustainable development" from the very beginning (the concept of sustainable development was first introduced in the 1980s) (Bondì, 2007, p.105). Taking 1979 as the milestone for the establishment of a solid international debate around environmental change in terms of degradation and risks for both the environment and human wellbeing, the link between environmental change and its economic implications is set from the start. According to the World Meteorological Organisation (WMO) homepage website, the 1979 World Climate Conference Declaration (following the 1979 World Climate Conference) states the member parties' intention to plan for social and economic development. More specifically, improving knowledge on the ecological situation and preventing "man-made changes in climate that might be adverse to the well-being of humanity" are promoted as the core actions parties intend to take in order to preserve -and possibly implement- society and the economy (Zillman, 2009).

Economic concerns seem to have been at the forefront in the development of discourse around environmental change, together with security concerns related to the gradual disruption of the ecosystems. References to both economic and security issues are frequently mentioned by international organisations. For instance, the WMO defines the World Climate Conference as "a world conference of experts on climate and mankind" (Zillman, 2009); also, the IOM sees environmental mobility as a threat to "human security and sustainable development" (IOM, 2018b). Drawing from the above quotations, it is worth noticing that the ecological question is addressed in terms of two main areas of interest: social development and economic development (where the two seem to go hand in hand and possibly merge into the concept of "sustainable development"). The UN Economic and Social Council ECOSOC definition of "sustainable development" as threefold (economic, social and environmental) (UN ECOSOC, 2018) corroborates the hypothesis that environmental, economic and social concerns have developed in parallel. Later on, environmental migration possibly emerged as one urgent social concern among others. In other words, environmental migration seems to be born as the social dimension of the climate change debate, which in turn is closely linked with the economic debate. The representations of environmental migration analysed in this study need to be interpreted in relation to their context of production and reception: representations and terminology are to be explained in relation to the social, economic and environmental concerns just mentioned.

Another interesting point of such debate on environmental change is that a *first* reference to humankind is made; these references tend to confirm the view that environmental migration can be seen as one of the social dimensions of environmental change. In the references above, humankind and environmental change are mentioned together in two main respects: on the one hand environmental change is to be limited to avoid major setbacks for humanity; on the other hand, human-made action is to be opposed if it affects the environment negatively. Therefore, environmental issues are dealt with in terms of their relation with humans. These brief references are highly relevant for the purpose of this study as they encapsulate a twofold but complementary view of the role human beings play in the ecological question. Humans take the role of both the "agent" and "affected", affecting and being affected by environmental change alternatively (see Section 3.2. on "agent" and "affected"). Across the 1980s, research on the role of human activity in environmental change -at the time called "global warming"- puts an increasingly greater emphasis on the role of humankind as "agent" in the ecological question, to the point that the WMO (World Meteorological Organisation) discusses "human-induced climate change" and underlines the need for "protection of the atmosphere" (who from, it is not mentioned, but it is inferrable from the context: human beings) (Zillman, 2009).

In the 2000s, growing awareness and evidence of the consequences of environmental and climate change marks a turning point in defining the role of humankind within the ecological question (Gemenne, 2012, p.237; *An Inconvenient Truth*, 2006). Common conscience of the challenge posed by environmental change leads to a new view of the role played by human beings in the ecological question: the idea of humanity as "agent" that acts upon the environment and climate is now juxtaposed to the idea of humanity as "affected" by the climate and environment. It is significant, in this respect, that recent publications by the United Nations Climate Change (UNCC), among others, discuss environmental change as an issue of both human impact on the environment and human safety, hence highlighting the impact environmental change has on "security issues" (UNCC, 2018b, 2018c). I will argue that it is precisely the idea of humanity as the "affected" that gives rise to the concept of environmental migration.

The notion of environmental migration seems to have a double connotation: it is seen either in a relatively positive light as an adaptation strategy to environmental change; or in relatively negative terms as an unhappy consequence of maladaptation to extreme environmental conditions (Warner, 2010, p.403). The introduction of human beings in the role of the "affected" in the ecological question is a great achievement. The "voice" in official discourses on environmental migration is likely to be at least partly in line with official discourses of the most polluting and less-affected countries which have a major influence on policy-making practices in this field. Less powerful actors are barely included, even though they are those populations who either provoke and suffer, or just suffer from climate and environmental change the most. The UNCC among others (see Earth Day Network for instance) states that the most vulnerable populations to the effects of environmental change are the so-called "Least Developed Countries" (from now on LDC), namely those who "are most reliant on natural resources for their livelihoods" (UNCC, 2018a, 2018e; EDN, 2018a).

There seems to be a double response to climate and environmental change in the agenda of the organisations and newspaper outlets analysed in this study (see Sections 3.1.1., 3.1.2. and 3.1.3. on the dataset): two actions can be undertaken and they seem to be in an order of priority. First, environmental change can be addressed in terms of mitigation strategies: this option is one the so-called "Developed Countries" ought to be able and/or possibly morally-induced to undertake. Secondly, environmental change can be dealt with in terms of adaptation strategies: since it is internationally stated that LDC are affected the most by environmental events, it should be inferred that it is mostly up to them to adapt. In this respect, the UNCC introduces the debatable but eloquent concept of "resilient societies" and refers to the notion of "capacity-building" as the process of "enhancing the capacity and ability of developing country Parties to take effective

climate change action" in terms of adaptation and mitigation strategies, technology dissemination and education, information and public awareness, among others (Zillman, 2009; UNCC, 2018c, 2018d, 2018f). Sadly enough, the UNCC, among other organisations, also claims that LDC are the least able to adapt to environmental change and/or "have less capacity to respond to hazards" (UNCC, 2018a, 2018e). It must not be forgotten that environmental change *can* be a trigger of migration, depending on the vulnerability of populations. The fact that these people are the most affected and less capable to respond and adapt should possibly induce countries most responsible for environmental change to take action. Perhaps, introducing environmental migration into the international debate has also meant raising awareness on how much an ethical turn in lifestyles is needed and morally due.

Power relations are inherent in the question and international discourse about environmental migration for two main reasons: firstly, because thus far discourse has been mainly shaped, directed and controlled by "Western" "voices"; and secondly, because the highly industrialised and affluent "West" and its institutions are often not legally bound to undertake mitigation strategies, thus leaving it to LDC to deal with environmental change and its consequences (Zillman, 2009). This is not to say that the entire responsibility of the phenomenon of environmental change falls upon highly industrialised countries and their economic practices and lifestyles. Environmental change is due to the action of a relatively substantial number of countries globally. Still, LDC are not likely to be able to limit pollution during their process of "development" as it is intended nowadays; possibly, a solution could be found in rethinking the concept of development in terms of preservation of life – quality life on the planet – a solution which would require more time than what is available for dealing with environmental change and migration.

Summarising, environmental migration is an interdisciplinary concept that cuts across multiple fields of research and as such needs to be dealt with in an interdisciplinary way. Also, it is a concept that has developed from the debate around climate change and its economic and social consequences, and it has expanded to include the role of human beings in environmental change as both "agent" and "affected". Both views include a relatively positive and negative dimension: as "agents", humans can either damage or preserve the environment; while as "affected", they may be seen as migrating either as a form of adaptation, or of maladaptation. Regardless of the controversial nuance of meanings attached to it, the idea of humans as "affected" by environmental change has ultimately emerged as a self-consistent concept on its own in the expression "environmental migration".

1.2. Different terms for different voices?

The data selected for the analysis (see Sections 3.1.1., 3.1.2. and 3.1.3.) are collected in two specialized corpora: a corpus of online publications of highly influential and authoritative organisations which work internationally in the field of environmental change and migration; and a corpus of English-language newspaper articles on environmental migration. The texts analysed in this study are produced by influential intergovernmental organisations that can shape public perception and opinion on environmental migration due to their status and international recognition, and by newspaper outlets that can either reflect or challenge the representations of this phenomenon provided by international organisations (see Section 2.2.3. on "representation"). The resources of organisations selected as data were published as open access documents because they are meant for wide-ranging dissemination and aim to have an impact or, at the very least, an influence on public opinion. Moreover, the status of these organisations makes the websites they run important sites of mediation of concepts and discourses (Dahl & Flottum, 2014, p.403).

The history of the cooperation of these organisations in the field of research and knowledge dissemination is revealing. Interestingly enough, there seems to be a preponderant voice in terms of disseminating information around the topic of environmental migration and it is related to the United Nations. The main organisations that shape discourse on environmental migration do so in close collaboration with the UN, with wide-ranging implications in terms of power relations. The United Nations Environment Programme (UNEP) and other UN agencies, as well as World Meteorological Organisation (WMO), Intergovernmental Panel on Climate Change (IPCC) and International Organization for Migration (IOM) are all subsidiary systems of the UN; they are probably the main organisations at world level disseminating knowledge about environmental migration. The present study focuses on the analysis of their discourse on environmental migration precisely because of their authoritative position. The extensive presence of the voice of the UN might be perceived as problematic if we think in terms of relative monopoly of information and knowledge dissemination on the topic of environmental migration.

The intergovernmental organisations whose documents were selected for the present study seem to refer to one common institutional framework "managed" by the United Nations. These organisations seem to be all interrelated: the UNEP was founded in 1972 and defined itself as "the leading global environmental authority that sets the global environmental agenda" (UNEP, 2018a; 2018d); the IPCC was born as "a subsidiary system of WMO and UNEP", even though it states that it works independently (Zillman, 2009); and the IOM became an organisation related to the UN in July 2016 (IOM, 2016). From a linguistic point of view the UN and IOM use different labels for environmental migration, but expressions such as "environmental displacement", "climate change-

induced migration" and "environmental migration" are used interchangeably in their documents (see, for instance, UNEP, 2018b; IOM, 2018b). The problem of the authorial voice/s is therefore manifold and complex: not only do the voices that shape the discourse of environmental migration belong to highly influential and powerful organisations, but these powerful actors are also closely collaborating and their voices tend to reinforce one another in a sort of self-referential process. I will expand on the question of authoriality in Sections 2.2.1. and 2.2.2.

One of the salient aspects in these texts about the phenomenon of environmental migration is naming. The concept of environmental migration would need clear and consistent terminology especially among the organisations dealing with it as their major concern. Different linguistic solutions have been proposed; all refer to the two wide areas of environmental migration, namely migration and the environment. The role played by the environment in contributing to migration patterns is multifaceted and complex and has inevitably led to a multiplicity of lexical solutions, among which "climate migration", "climate-induced migration", "environmental migration", "environmental-induced migration" and "environmental displacement" (see for instance IOM, 2018b; 2015; 2010; UNEP, 2018b) to name a few. Across international discourse, environmental migration is referred to with a multiplicity of expressions that are often used interchangeably. Lexical choices vary even within the same organisation. For instance, "climate change induced migration" and "environmental migrants" as well as the periphrasis "people on the move as a result of environmental factors" are used interchangeably in the same IOM online page (IOM, 2018b). Attested use of a variety of compounds about environmental topics well underlines the controversial complexity of these issues (Nerlich & Koteyko, 2009, p.345).

One of the first problems to be addressed is the role played by the environment in representations of environmental migration. What stands out from the terminology mentioned above is that some noun phrases tend to limit the role of nature as climate, while others expand on it (or maybe generalise it) referring to the environment as a whole. When "environmental migration" is used, specific reference to the climate is avoided and instead a complex web of natural and human factors is evoked, climate being just one of them (see Section 1.3.). Environment and climate have been variously included in definitions of environmental migration. Attempts to justify diverse labels were proposed: for instance the IOM's website articulates the concept of "climate change" as including a great variety of factors, such as "increasing intensity of extreme weather events, sea-level rise and acceleration of environmental degradation" (IOM, 2018b). However, the nexus between environment and migration remains highly controversial; as a result, definitions, typologies and statistics of environmental migrants remain highly contested, and no real comprehensive policy response has emerged (Gemenne, 2012, p.238).

Possibly the most problematic aspect of defining the role played by the environment in environmental migration has to do with the fact that neither the climate nor the environment can be addressed directly as the primary source for displacement. It is not climate and environmental changes that directly bring people to leave their homeplace, but rather the "adverse consequences for livelihoods, public health, food security, and water availability" caused by climate and environmental changes (IOM, 2018b). In other words, it is often human activities that produce environmental changes "sometimes beyond the carrying capacity of nature" to affect where and how people live, thus determining migration (UNEP, 2018b). The difficulty in defining who an environmental migrant is can be related to the difficulty of identifying the reasons that brought her/him to move. Furthermore, as IOM clearly states, environmental migration may be the outcome of a combination between deteriorated conditions and possibilities of safe living (i.e. compromised livelihoods) together with local political and economic dynamics:

> "[t]he links between climate change and migration […] are usually far from simple and direct. Climate-specific factors are often difficult to isolate from other environmental challenges, so it's important to look at a broader migration and environment nexus. Other factors, such as conflict, governance and levels of development, also play important roles" (2018b).

The combination of so many a factor comprehensibly constitutes a continuous challenge to understanding this phenomenon and dealing with it. In this respect, during the 1990s, some migration scholars asserted that it would be more useful to consider environmental drivers "as part of a complex and multidimensional reality, rather than isolate them as a single, direct causes of migration" (Gemenne, 2012, p.241). It is now the dominant view that environmental factors are part of a vast ensemble of migration drivers, and they are deeply rooted in socio-economic, cultural and political contexts from which they cannot be easily disentangled; as such, environmental migration encompasses different types of migration. Compared to other migration drivers, the importance of environmental changes is re-dimensioned; they can precipitate events if combined with predisposing conditions, which in turn may induce migration (Gemenne, 2012, pp.243, 250, 254).

The concept of environmental migration has been developing gradually in the mind and language of people overtime. This is evident in the evolution of the terminology used to refer to it: if almost any terminology for environmental mobility unanimously adopts the term "migration" to indicate human movements, difficulties arise when it comes to including the environment. This linguistic uncertainty and over-lexicalisation (see Section 6.3.2.) may reflect a vague conceptualisation of the role the climate and environment play in the phenomenon of migration. Some instances can be

found in texts produced by influential organisations worldwide. For example, in 2010 the IOM uses the multi-word expression "climate- and environmental-induced migration" (both with and without hyphens), possibly to highlight that there are multiple "natural" drivers to migration apart from the climate. After the 2015 Paris Agreement discussion on "migrants in vulnerable climate situations", IOM claims it is justifiable to talk about "climate migration"; today IOM prefers the collocation "environmental migrants" (IOM, 2018b; 2015; 2010; 2007).

In a similar way, discrepancies in naming can be found elsewhere. In contrast with IOM, the linguistic behaviour of the UN seems to waver between a multiplicity of terms with apparently no clear reason for its variety. Scrolling down the titles of online-searchable UN publications, multi-word expressions such as "environmentally induced migration" and "environmental migration" are used along with periphrasis that refer to environmental change and migration (see for instance "climate change and displacement", "environmental change and human migration"; UNU-EHS, 2018).

Similarly, within the European context, migration and the ecosystem tend not to be used in a single expression: for example, the European commission EACH-FOR project mentions "Environmental Change and Forced Migration" (UNU-EHS, 2010). Overall, these lexical choices have a common denominator: all seem to have evolved in time and included the wide spectrum of the whole environment, thus acknowledging that specific natural factors alone are insufficient in determining environmental migration.

Expressions to identify environmental migration are a core component of this study: representations of environmental migrants and environmental migration are rooted in the way this specific phenomenon of human movements is named and conceptualised. Official representations are highly relevant in the process of identification and protection of environmental migrants under a shared international legal structure of human rights: the way in which environmental migration is represented has huge implications on the way environmental migrants will be conceptualised and dealt with in the future.

Far from playing a decisive role in the process of formation of official representations, the present study seeks to be a meaningful contribution to the debate around environmental migration by proposing a reflection on its linguistic representations in official international papers and mainstream newspaper outlets. The idea underlying the present study is that it is at their initial stages that new-born concepts are still flexible enough to be moulded; before they are introduced into common knowledge, conscience and language, new concepts and terms can be discussed and (re-)shaped. The way they are shaped, or represented will influence the way they are talked and thought about and treated (Stibbe, 2015, p.1). That is why a preliminary study on environmental

migration as represented by eminently powerful voices globally is of fundamental importance in the view of how environmental migrants and migration will enter common knowledge and be dealt with.

1.3. Working definitions and terminology

This section presents and discusses the terminology adopted in the present study to refer to human mobility related to natural changes. Representations of environmental migration are problematic and it is not easy to assess them in relation to the latest available scientific knowledge on this phenomenon. Also, there is no definition which is commonly shared and used for environmental migrants, so people who move in relation to environmental change can never be identified as such beyond doubt (Baldwin, 2016, p.81). In this respect, the working terminology adopted in this study to name this phenomenon of migration is based on the most recent labels adopted by official organisations that work in the field of migration and are internationally recognised, and on the definitions of the Oxford English Dictionary (OED).

In this present study, "environmental migration" will refer to movements of people related to environmental circumstances and events and it is based on the IOM's definition of "environmental migrants" proposed in 2007 and explained as follows:

> "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" (EMP, 2018).

The IOM's definition partly overlaps with the first ever definition of "environmental refugees" given by the United Nations Environmental Programme (UNEP) in 1985. UNEP defined "environmental refugees" as follows:

> "people who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardised their existence and/or seriously affected the quality of their life" (EU, 2019, p.3).

Interestingly enough, this definition was quickly criticised by many as it was considered to be so wide and vague that it rendered the concept practically meaningless (Gemenne, 2012, pp.239-240). However, the definition of environmental migrants given by the IOM is adopted in this study mainly because it is widely acknowledged: it has been used as a working definition by a number of

26

scholars and therefore has gained authoritativeness and currency (Gemenne, 2012, p.244). Moreover, the terms "environmental" and "migrant" are well suited to describe this phenomenon of mobility as I discuss below.

As far as the term "migrant" is concerned, the terminology adopted in this study acknowledges IOM's definition of migrant in the light of its accepted common meaning. Also, for the purposes of this study, the definition of "migrant" provided by the OED is not sufficiently refined: the OED (2020) defines "migrant" as either "A person who moves temporarily or seasonally from place to place", or "A person who moves permanently to live in a new country". These definitions are vague and unspecific, and reflect the multifaceted complexity of the concept of "migrant". IOM's definition of "migrant" is constantly evolving; the following definition was provided in 2018:

> "IOM defines a migrant as any person who is moving or has moved across an international border or within a State away from his/her habitual place of residence, regardless of (1) the person's legal status; (2) whether the movement is voluntary or involuntary; (3) what the causes for the movement are; or (4) what the length of the stay is" (2018c).

In 2020, IOM's definition of "migrant" retrievable from the same webpage is different, showing that the definition is constantly updated and integrated according to new insights and knowledge on the topic:

> "a person who moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons. The term includes a number of well-defined legal categories of people, such as migrant workers; persons whose particular types of movements are legally-defined, such as smuggled migrants; as well as those whose status or means of movement are not specifically defined under international law, such as international students" (2020).

Finally, the expression "refugee", which is the first that was adopted in discussions about environmental migration (Gemenne, 2012, pp.239-240), is not used in the present study because it has been widely criticised and discouraged since it does not match the boundaries established by the Convention on the *Status of Refugees* (1951) (UNHCR, 2010): the Convention does not include environmental triggers as factors causing refugeeism (Warner, 2010, p.404). Interestingly enough, during the late 1980s and prior to criticism about its legal meaning, many insisted that the term evoked future scenarios that were too tragic and unrealistic (Gemenne, 2012, p.240).

In the collocation adopted in this study, "environmental migrant" has been chosen for two main reasons: it is consistent with international authoritative definitions of this phenomenon such as IOM's definition; and it is semantically more appropriate than other alternative expressions, as I discuss below (see also Section 1.1.). In the present study, the term "environment" is understood on the basis of the OED (2020) definition of "environment":

"The natural world or physical surroundings in general, either as a whole or within a particular geographical area, esp. as affected by human activity".

In this definition, human agency is included as part of the environment: the environment in not the biosphere, but rather the result of human actions on the biosphere. The environment is not merely natural: it is natural landscape moulded by human intervention. The expression "environmental" in "environmental migration" describes a mobility which results from extreme human activity on the environment. If human activity on the biosphere becomes excessive, it can cause negative impact both on the ecosystem and on human wellbeing; damaged ecological, socio-economic and political systems can eventually cause migration.

This study therefore adopts the label "environmental migration" bearing in mind that environmental disruption can be both natural or triggered by people. Environmental factors are not identified as the only trigger to migratory movements; rather they are acknowledged as a contributing factor of environmental circumstances in particular migratory events, thus appreciating the complex ways in which humans interact with and affect the biosphere upon which they depend for their existence. "Environmental migration" is also a social and cultural phenomenon because specific socio-economic and political forms of organisation have environmental consequences (Alexander, 2009, p.2; Palsson *et al.*, 2013, pp.4, 10) and "[c]hanging the current trajectory will closely depend on the emergence and spread of diverse forms of innovation that can trigger new ways of thinking and living" in ecology (EEA, 2020, p.15). In sum, "environmental migration" is an expression that refers to mobility without giving to the natural sphere the whole responsibility for migration.

Overall, the phenomenon of environmental migration and its representations and terms used to identify it remain vague, open-ended, ambiguous and vividly debated. Possibly, a less connoted representation of environmental migration is one which does not focus solely on the role of the climate in this phenomenon.

2. THEORETICAL FRAMEWORK, DISCOURSE AND IDENTITY

Chapter 2 outlines the theoretical framework for the study: it introduces the frameworks of Critical Discourse Analysis (CDA) and Ecolinguistics adopted for the present study, and it discusses the two components of the methodological approach, namely Corpus Analysis and eco-Critical Discourse Analysis. Also, it discusses the discourse of newspapers and organisations and it presents the complexities of concepts which are fundamental for the analysis: "discourse", "framing" and "identity". The chapter contextualises the analysis referring to previous studies and the state of the art, and it provides an outline of the variables adopted for the corpus-assisted qualitative analysis of this study, further explored in Chapter 3. Chapter 3 will focus on the methodological approach of the research; the data collected for analysis in terms of text type, source and criteria for selection; and the corpora built and adopted for the analysis. Also, it will present the criteria to interrogate the dataset on discoursal aspects of representations (see Section 3.2.).

2.1. The analysis of discourse

In this section I introduce the main theoretical framework for the analysis of discourse; more specifically, I focus on the approaches to discourse analysis that inform ecological Critical Discourse Analysis, the theoretical and methodological approach to discourse analysis adopted in this study. This section surveys Discourse Analysis, Critical Discourse Analysis, Positive Discourse Analysis and eco-Critical Discourse Analysis; it provides an overview of the similarities and differences between these approaches; and it outlines the wider theoretical approaches to the investigation of language and discourse that inform them (see Section 2.2. for a definition of discourse).

The section provides an account of the broad field of Applied Linguistics and it introduces two main theoretical frameworks for the exploration of language-related social issues, namely Systemic Functional Linguistics (SFL) and Critical Discourse Analysis (CDA). Section 2.1.1. focuses on the ecolinguistics-based framework for analysis adopted in this study; it discusses the state of the art of this field of linguistic enquiry, and its innovative as well as its controversial aspects. Finally, Section 2.1.2. introduces the corpus-based approaches to discourse analysis which complement and support the qualitative analysis of data.

The present study is an analysis of discourse. Discourses are socio-cultural constructs of reality; they are a social phenomenon, language-in-society, and represent the way people express their experience of the world. More specifically, discourses are knowledge systems with which people

understand and construe reality; they are linked to the context of specific communicative events and materialise in texts and other semiotic resources. Each discourse is grounded on a set of ideologies, namely normalised ideas, rationalisations of reality, worldviews, or beliefs characterising a social formation (Fairclough & Wodak, 1997, p.261; Caldas-Coulthard & Fernandes Alves, 2008, pp.121-122) (see Section 2.2. on "discourse"). Since they are context-dependant and context-creating, discourses display values and beliefs of the social group that uses them, and inform their action in real-life contexts. They can be thought of as "accounts of the world: how individuals categorize and construct the world, and how these accounts may inform and influence attitudes, beliefs, dispositions, and values -the latter making actions accountable" (McEntee-Atalianis, 2019, p.156). Essentially, discourses are socio-cultural and political conventional ways of organising knowledge and they represent a specific version of events associated with a particular social perspective.

The present study refers to the interdisciplinary field of Applied Linguistics. Applied Linguistics is concerned with the investigation of real-world problems in which language is central, and it focuses on language-related issues with the aim of impacting on them. There are various approaches to the exploration of language-related real-world problems within Applied Linguistics; among them, Critical Discourse Analysis (CDA) which is adopted in this study. Critical Discourse Analysis (CDA) draws (among other theories of discourse) from Systemic Functional Linguistics (SFL). Critical Discourse Analysis and Systemic Functional Linguistics share some theoretical grounds and have a common interest in the link between language and society, but they differ in the methods adopted to analyse language and in the methods of intervention in real-world issues; both have a focus on language use and its social functions (Coffin *et al.*, 2010a, pp.1-2).

Systemic Functional Linguistics was developed by linguist M. A. K. Halliday and his colleagues in the 1960s; from then it gained relevance and influence in linguistics. Systemic Functional Linguistics studies how humans make meaning in terms of the relations they establish between language and society. More specifically, language is studied as a system of options that are selected while communicating in relation to the socio-cultural context in which the communication event happens; linguistic choices shape and are shaped by the context, both immediate and cultural (Coffin *et al.*, 2010a, pp.2-3; 2010b, p.9). From a theoretical point of view, language is analysed in its relationships between meaning, function, context, and grammar.

Systemic Functional Linguistics conceives language as a social semiotic system structured in layers that are connected via their realisation in discourse. Discourse and language are conceived as multifunctional; more specifically, they have three main metafunctions -ideational, interpersonal and textual. The ideational metafunction deals with representations of the world, opinions and ideologies encoded in discourse, and those who are responsible for informing and communicating

them (field). The interpersonal metafunction deals with power relationships (between text and language user, addresser and addressee, etc.); these can be either formal, semi-formal, or informal (tenor). The textual metafunction is concerned with text organisation, and foregrounding and/or backgrounding of information in the text (mode) (Halliday, 2003, pp.2-4, 7-18; Halliday & Matthiessen, 2004, pp. 586-593).

As Eggins notes in *Introduction to Systemic Functional Linguistics* (2004), the three key dimensions "of mode (amount of feedback and role of language), tenor (role relations of power and solidarity) and field (topic or focus of the activity), are used to explain our intuitive understanding that we will not use language in the same way to write as to speak (mode variation), to talk to our boss as to talk to our lover (tenor variation) and to talk about linguistics as to talk about jogging (field variation)". Socio-cultural systems are cultural norms and values adopted by societies, and are conceived as resources for people to make meaning through language; the systems and functions work simultaneously to unfold the meaning (Halliday, 2003, pp.2-4, 7-18; Halliday & Matthiessen, 2004, pp.586-593; Martin & Rose, 2007, pp.6-7, 263-264).

Critical Discourse Analysis is a socio-cultural approach to language study; it is a multidisciplinary framework for the study of discourse that analyses social phenomena in social discourse (language in use). It developed in the late 1980s and in the 1990s thanks to the work of scholars such as Norman Fairclough, Teun A. van Dijk, Ruth Wodak and Paul Chilton, and it stemmed from the field of Critical Linguistics. Critical Linguistics dates back to the 1970s, pioneered by the scholars Roger Fowler and Gunther Kress, and it is based on Systemic Functional Linguistics; Critical Linguistics displays a marked socio-cultural approach to language and discourse analysis (Flowerdew, 2008, p.195; Martin, 2004, p.2).

The main frameworks for discourse analysis are socio-cognitive linguistic approaches, among which Cognitive Linguistics, and socio-cultural approaches, among which Discourse Analysis (DA), Critical Discourse Analysis (CDA), and more recently Positive Discourse Analysis (PDA). The socio-cognitive framework in relation to Critical Discourse Analysis was explored by Teun A. van Dijk and Paul Chilton among others, who establish the relationships between social systems and individual cognition (Benwell & Stokoe, 2006, p.105). Some scholars (i.e. for instance, Christopher Hart) do not see Critical Discourse Analysis and Cognitive Linguistics as incompatible approaches to discourse studies; rather, they underline the benefits that come from a collaboration between these two disciplines (Hart, 2010, pp.6-7).

Socio-cultural approaches in discourse analysis conceive language, discourse and social structure as closely related and influencing one another. On the one hand, discourses are socially and contextually shaped -the context includes the physical setting, people's beliefs, and the historical,

institutional and cultural setting. There are webs of relations between discourse and other social elements such as power relations, ideologies, institutions that shape ideologies, and social identities that need to be taken into account for a thorough analysis of discourse (Gee & Handford, 2014b, pp.3-4; Fairclough, 2014, p.9; Jaspers, 2014, p.136). On the other hand, it is through discourse that language users transform their environment into a socially and culturally meaningful context; discourse is therefore a means for meaning-construction within societies (Blommaert, 2005, p.4; Fairclough & Wodak, 1997, pp.272-273). Socio-cultural and socio-cognitive approaches to language conceive language as the product of societies and cultures: language constructs and is constructed by social relationships and it is ideologically committed.

Critical Discourse Analysis sees language as a form of ideological practice that mediates and constructs experiences, identities, and worldviews. Discourse is conceived in Foucaltian terms as a way of talking about the world which is related to ways of seeing and understanding the world; also, it is intertwined with the context of communication, so it represents the meaning made in interaction with features of the context (Coffin *et al.*, 2010a, pp.3-5). Critical Discourse Analysis investigates the ideological nature of language and the relationships of power entrenched in language which emerge from representations of the world. It analyses the relationship between language and the socio-cultural context, and the way texts are ideologically shaped by relationships of power. It studies how language is a vehicle for ideologies and, as such, how language use tends to reproduce and reinforce the ideologies, perspectives, and values of powerful groups.

Critical Discourse Analysis conceives ideologies as representations of aspects of the world which contribute to establishing and maintaining (problematic) social relations. In order to impact on these social issues, it analyses how they are represented in language, with a critical focus on misrepresentations. Critical Discourse Analysis aims at raising awareness on the ideological frameworks informing language use. Critical Discourse Analysis analyses the wider discourses in which single texts are situated, the discoursive practices of language users and/or communities; in so doing, it also investigates the context of socio-cultural practice (Benwell & Stokoe, 2006, pp.44-46).

Critical Discourse Analysis developed from the field of Discourse Analysis (DA), which investigates the relationship between text and discourse and conceives text as a manifestation of discourse; mainly, it studies the negotiation of meaning and relations in communication. Critical Discourse Analysis differs from Discourse Analysis as it puts greater emphasis on considering the impact that power relationships have on societies; for its part, Discourse Analysis studies the organisation of language in use in social contexts. In particular, Discourse Analysis focuses on the language of texts and/or conventional exchanges, and on language in use in social interaction; it is

based on the premise that language, action and knowledge are inseparable and they influence and inform each other. Discourse Analysis is an approach to language that emerged as a functional account of language: it investigates the range of functions served by language in specific contexts. According to discourse analysts, Discourse Analysis overcomes the limitations of Chomskian and Saussurian structuralism in describing language in use, and it adopts more flexible and complete descriptive categories to analyse discourse in natural situations (Stubbs, 1983, pp.1, 6-7).

Critical Discourse Analysis goes even further: the interest of Critical Discourse Analysis lies in revealing how language is used to act upon reality, and hegemonic discourses are seen as the outcome of power dynamics. Critical Discourse Analysis problematises and comments on discourse: it looks at ways in which social structures relate to specific discourses by describing discourse in texts; it provides an interpretation of such descriptions in terms of power relations; and it comments on their potential ideological effects. Finally, Critical Discourse Analysis is committed to making proposals for change and intervention in social practices, and it displays an interest in human action as the root for social as well as individual change (Blommaert, 2005, pp.25-26; Wong Scollon & de Saint-Georges, 2014, pp.68-69).

The idea that communication is based on shared knowledge between participants became relevant during the 1950s with the work, among others, of J. L. Austin (*How to Do Things with Words*, 1962): language and situation -immediate context and wider cultural context- are necessary for language analysis (Stubbs, 1983, p.1). During the second half of the twentieth century, new approaches to language and discourse analysis gradually became prominent in the linguistic landscape. These approaches went against the idea of analysing idealised or purposefully constructed examples of language as this does not correspond to actual language in use; among them, sociolinguists like pioneer scholar William Labov (Stubbs, 1983, p.11). Sociolinguistics studies how people actually communicate with each other in everyday discourse, and explores the social roles that are sustained and recognised by others through discourse. It is grounded on the idea that there is a correlation between linguistic features and large-scale socio-economic, political and cultural setting and variables (Stubbs, 1983, pp.7-8). Critical Discourse Analysis partly intersects Sociolinguistics as it is grounded on the idea that social life at the same time influences and is influenced by social structures (Benwell & Stokoe, 2006, p.116).

More recently, Positive Discourse Analysis developed as a complementary strand to Critical Discourse Analysis, mainly thanks to the work of linguist James R. Martin. In the 2000s, Martin aimed at providing an innovative perspective on language and semiosis within the field of discourse analysis; the aim was to overcome some limitations of Critical Linguistics and Critical Discourse Analysis and offer accounts of alternative forms of social organisation that may energise social

change. More specifically, Positive Discourse Analysis focuses on progressive discourses of resistance, rather than oppressive discourses, so it highlights mechanisms of social change, resistance and empowerment. Positive Discourse analysts claim that the main focus of Critical Discourse Analysis has been exposing rather than resisting power in discourse, in a deconstructionist perspective; instead, the focus of Positive Discourse Analysis is on social processes which promote shared wellbeing, according to a constructionist view (Martin, 2004, pp.4-6; Stibbe, 2018, pp.168-170, 174-176). The difference between these two approaches to discourse analysis is that the former focuses on the critique of processes which disempower and oppress, while the latter on accounts of how change happens, and its implications in processes of individual and social change.

Positive Discourse Analysis scholars seem to use positive critique to refer to analyses of progressive discourses, and negative critique to refer to analyses of oppressive discourses. However, this dichotomy is problematic because it simplifies the differences between positive and negative, and it does not account for the interrelationship between negative and positive critique. Other critical aspects of Positive Discourse Analysis include the complex identification of progressive and oppressive discourses, and the fact that, as Martin says, "getting positive of course depends on taking a stand, and positively valuing some aspect of social change" in ways that may be normative (2004, pp.7-8; Hughes, 2018, pp.193-194; Flowerdew, 2008, p.204). As such, Positive Discourse Analysis is sometimes considered to be liable to subjective criticisms of discourse and so less scientific than required; more specifically, it is blamed for being too normative (see Section 2.1.1.1.). Positive Discourse Analysis is adopted by some scholars working within Ecological Discourse Analysis, namely discourse analysis based on an ecolinguistic framework. Ecological Discourse Analysis combines features of socio-cultural and socio-cognitive approaches to language analysis, and it is the main theoretical frame adopted in this study (Alexander & Stibbe, 2013) (see Section 2.1.1.).

To analyse representations of environmental migration, the present study relies on the concept of "framing" (see Section 2.2.3.). Framing is a discursive strategy that stems from the field of Cognitive Linguistics. Cognitive Linguistics (CL) is a branch of linguistics that dates back to the 1980s and studies how cognition and language create each other. According to Cognitive Linguistics, language is grounded on perceptual experience, and it organises and conveys information. People have generalisations of areas of reality (conceptual schema) in their mind, and they use these cognitive models in thinking and communicating processes. Cognition, consciousness, experience, interaction, society and culture are conceived as deeply intertwined in language, informing and influencing each other. Frames and ideas about an area of reality can be

transformed and replaced by new ones: the intention of the speaker/writer and the functions s/he intends to accomplish shape language structures. Also, Cognitive Linguistics tries to explain how language interfaces with conceptual structures: it relates the analysis of linguistic representations (the grammar of language) to specific conceptual structures (the semantics of language). Representations are therefore conceived as constructions (or form-meaning mappings) which are conventionalised and entrenched in each language and culture (Ellis & Robinson, 2008, pp.3-4).

Overall, Discourse Analysis, Critical Discourse Analysis and Positive Discourse Analysis highlight the importance of discourse and of its context, and they analyse meaning-making in society in an attempt to leave space for alternative representations. What these different strands have in common is their awareness-raising and, for Critical Discourse Analysis and Positive Discourse Analysis in particular, interventionist political goal. Another commonality, which has also been the focus of debate and critique against Critical Discourse Analysis, is the allegedly subjective nature of the analysis. In order to provide critical points of view for the discourses analysed, the analyst needs a set of principles to judge those discourses against; in some studies, these principles have been deemed to be subjective. Also, if the linguistic features of a text reveal the underlying discourses, then the boundary between analysis and interpretation is blurred. As such, any criticism made by the analyst would be based on the analyst's perspective, and it would be impossible to exclude the analyst's values from the research study (Benwell & Stokoe, 2006, p.106). The innovative perspective offered by Positive Discourse Analysis is its interest in propelling marginal and/or alternative discourses into the mainstream, reframing issues that are deemed to hamper social change and equality, rather than simply identifying injustices in discourse (Macgilchrist, 2007, pp.74-75).

To sum up, the object of study of Critical Discourse Analysis is discourse and its social nature, namely the fact that discourses are socially, culturally, and historically situated. Critical Discourse Analysis analyses discourse in text and in context, including identities, social structures and relationships between social groups. Also, it investigates how to contribute to maintaining or changing such contexts, relationships, etc. to the (dis)advantage of particular sets of people. It focuses on the actions performed via language use, the purposes underlying a particular use of language, and the goals achieved through language. In the words of Bhatia, the analysis of discourse is the study "of the meanings we give language and the actions we carry out when we use language in specific contexts" (2014, p.247). More specifically, Critical Discourse Analysis aims to assess the wellbeing and equity dynamics of a society via language analysis: it focuses upon a social wrong or aspect of the social system that is detrimental to human well-being; it identifies obstacles to address that particular social wrong; and it finds ways past the obstacles. Eco-Critical Discourse

Analysis goes even further because ecolinguistics accounts also for the wellbeing of non-human beings and all elements of the environment (Fairclough, 2014, pp.9, 13-14; Stibbe, 2015, pp.8-9; 2013, p.1).

2.1.1. Ecolinguistics: overview and state of the art

Environmental migration is a social, ecological and political issue: what is happening to the environment is the product of social behaviour and political decisions; this socio-cultural and political background is therefore necessary to understand the phenomenon. Discourse analysis may help to assess environmental migration because discourse sheds light on the propensity to construe reality in specific ways and according to specific ideologies, which in turn influence social behaviour, including dealings with the environment (Li *et al.*, 2020, pp.8-9; Zhou, 2017, p.133; Steffensen & Fill, 2013, pp.4-6).

The present study refers to the theoretical framework of Ecolinguistics to investigate the phenomenon of environmental migration through its discoursal dimension. Ecolinguistics deals with at least two main fields of interest: linguistics and language, and ecology and the environment. On the one hand, Ecolinguistics consists of a set of frameworks that employ the metaphor of the ecology to analyse the relationship between languages and the space they occupy, be it either physical (i.e. a geographical area) or psychological (the mind of an individual). On the other hand, Ecolinguistics analyses the relationship between language use and socio-cultural behaviour, with a major focus on the impact of language use on representations of the environment. Ecolinguistics in the present study refers to the latter, it derives its founding principles from Systemic Functional Linguistics and is based on Critical Discourse Analysis. The main advantage of working within the framework of Ecolinguistics is that it provides tools for analysis which are functional to identifying how environmental issues are framed. Although there are different schools of thought that conceptualise and delimit Ecolinguistics in very specific ways (see for instance Ecosystemic Linguistics in Do Couto, 2015), today Ecolinguistics is mainly referred to in terms of a set of frameworks for studying language diversity and investigating how language construes our view of nature and the environment (Fill, 2018, p.1; Stibbe, 2015, pp.9-10).

Ecolinguistics emerged in the field of linguistic studies during the 1970s as a response to the ecological movement of the 1960s, and it consolidated as an emerging discipline distinctive from sociolinguistics in the 1990s. It is a discipline that has evolved in time and its definition and scope have changed and accommodated to the needs and aims of research in this field. First named "ecology of language" and "language ecology" by Einar Haugen (1972), Ecolinguistics

was conceptualised as "the study of interactions between any given language and its environment" and the interactions of languages and their users (Li *et al.*, 2020, p.2; Do Couto, 2014, pp.122-124; Fill, 2018, pp.2-3; Stibbe, 2015, pp.7-8; Chen, 2016, p.109; Eliasson, 2015, p.88). The research object of Ecolinguistics is the relationship between language and ecology: Ecolinguistics "studies language from the perspective of ecology and deals with ecological issues from the perspective of language" (Li *et al.*, 2020, p.2). However, there are different understandings of this relationship, and so there is still not a definition of Ecolinguistics shared by all ecolinguists. These different strands of Ecolingustics are based on diverse philosophical, theoretical and methodological principles, so Ecolinguistics is defined either a branch of linguistics, a discipline in itself, or a paradigm or platform for research (Li *et al.*, 2020, pp.2-3, 10; Zhou, 2017, pp.125, 128; Chen, 2016, pp.108-109; Do Couto, 2014, p.127).

Ecolinguistics is both concerned with protecting and promoting language diversity, and with exposing ecologically problematic or ambiguous language use by analysing discourse through the method of Ecological Discourse Analysis (Li *et al.*, 2020, p.4). The latter results from the combination of "the analysis of ecological discourse" and "the ecological analysis of discourse", that is, it is an analysis of discourse on ecological issues and of discourses which have an impact on ecology (Chen, 2016, p.110). Ecolinguistics as "ecology of language", instead, explores the relationships between languages in a given context. The languages investigated include official languages as well as dialects and language varieties; the focus of research is centered on the relationships of power between different languages, some of which have a dominant status and are more stable and resistant to gradual decay, underuse and disappearance than others. Power difference between languages is metaphorically represented with the concept of "ecology": language minorities and language varieties that become underused or disappear because superseded by other languages or language varieties are represented as species in conditions that threaten their very survival, thus "risking extinction". Also, language ecologies reveal how groups of people that move from one place to another spread their language varieties, world views and ways of naming reality.

In this respect, it is interesting to see how the two main strands of Ecolinguistics are actually closely related. Research has showed that linguistic diversity and biodiversity correlate and a higher degree of linguistic diversity corresponds to greater biological diversity (Gorenflo *et al.*, 2012). Languages offer diverse representations of the environment: the way the environment is represented in discourse and in the mind of individuals influences the way it is preserved. There are deep connections between language varieties and the environment in which they are used: a particular view of the environment instantiated in language may either encourage or discourage

the preservation of nature, and represent it as an absolute value or a commercial asset. The study of the relationship between languages and their place would then combine with the study of the relationship between language use and environmental preservation; these are the object of study of the two main branches of Ecolinguistics. For example, it has been shown that local language varieties of indigenous communities generally promote the preservation of the environment these communities depend on. This fragile equilibrium is currently threatened by the spreading of some prevailing languages due to processes of globalisation (Gorenflo *et al.*, 2012). Space interacts with cognitive, moral, emotive frames within which people situate themselves (Blommaert, 2003, in Blommaert, 2005, pp.223-224); in turn, these frames establish specific relationships between people and the space they occupy and represent in language (see Section 2.2.3. on frames).

Since Ecolinguistic Discourse Analysis stemmed and developed from Critical Discourse Analysis, they both are committed to making real world improvements, with a particular focus on socio-cultural issues. The step forward of Ecolinguistics is that it operates within a wider framework in which ecological aspects of socio-cultural issues are re-considered as worthy of attention: Ecolinguistics asserts that "macrosocial issues can be reconnected with biological, human and linguistic concerns" (Stibbe, 2013, p.1; 2012, p.1; Cowley, 2014, p.60; Do Couto, 2014, p.124) (see Section 2.1.1.). Ecolinguistics aims to integrate ecological principles within the critical analysis of discourse, taking into consideration the relationships between members of the natural environment and the social environment. More specifically, Ecolinguistics is concerned with ecological relationships and it addresses key socio-ecological issues, with a specific focus on "the erasure of the relations of humans with other species and the physical environment" (Stibbe, 2014, p.584). It deals with the critique of particular discourses and the search for alternative discourses based on different assumptions and sets of values. The aim is to analyse the impact that discourses have on the systems that support life even if discourses are not specifically about the environment or ecology.

Ecolinguistics is therefore an appropriate framework to analyse environmental change, degradation and consequent migration: ecological destruction is also part of the oppressive relations between humans and other humans since "failure of ecological systems affects first and hardest the already oppressed groups" (Stibbe, 2014, pp.584-585). Ecolinguistics helps understanding the process of environmental degradation as the outcome of a diffused disregard for the environment: the fundamental role played by the ecosystem in the preservation of life on earth is dismissed, as well as the wellbeing of others -be they human beings, animals, etc. This is especially typical of industrialised affluent societies, but it also occurs as intra-society

dynamics. This disregard is the consequence of a widespread mindset which prioritises mainstream neoclassical capitalist economics and its core principles; it overestimates the concept of economic growth and its unecological, unfair and often procedurally illegal patterns of production.

As a discipline which is mainly centered on linguistic study, Ecolinguistics primarily looks at ways of using language, but its scope is predominantly social, as it ultimately analyses life in society, demanding that people recognise and respect the important and unique role of the ecosystems and the more-than-human world. In Stibbe's words there should be no need for "the term 'ecolinguistics', in fact, since it should be a matter of course that linguistics considers the embedding of human societies in larger natural systems, but it exists because of the erasure of nature in mainstream linguistics, as a movement to remind linguists of something important which has been overlooked" (2014, p.584) (see Section 2.1.1.1). However, ecological issues are somewhat different from those typically analysed in Critical Discourse Studies "because there is a time and space gap between oppressive acts (overconsumption, ecological destruction and waste) and the suffering caused to groups of humans", animals and life forms without a voice (2014, p.599).

Ecolinguistics tries to reintegrate into everyday life the interest and will to preserve the planet we depend on and belong to. As Eisler mentions in her essay *The Chalice and the Blade. Our History, our Future* (1988) we now are at a crossroads: we are at a time of either potential radical change towards a new fair and equitable social asset, or backing off towards a potentially exacerbated version of our old and profoundly unequal social structures. Our behaviour towards nature can be turned into protecting our planet and its creatures, but in times of global environmental changes and widening social injustices, fear and reluctance to change habits, lifestyles and social systems of coexistence may prevail. This would lead to catastrophic consequences for the planet's health and integrity and the wellbeing of its future inhabitants.

Despite the impending potential threat to life on Earth, strangely enough, protecting the environment does not seem to be a popular official narrative. Also, when the issue of environmental change is discussed by official authoritative sources, human beings are often presented as separate from nature. This narrative does not help conceptualising how the ecosystem works and human beings are part of it, not a separate element which can manipulate and manage it from the outside. Ecolinguistics is therefore of paramount importance for present-day research: it foregrounds the need that the ecosystems should be protected, it acknowledges human research on environmental change, and it promotes active intervention to halt further human-made emissions in the environment, changing the way we relate to it. Ecolinguistics

reassesses ecology as worthy of consideration and has the potential to raise awareness of the fact that human beings care about nature, are part of its vital cycles, and can trigger a shift in the list of priorities our society is based on by promoting a worldview of wellbeing for everybody.

2.1.1.1. "Ecosophy"

The innovative aspect of Ecolinguistics is seeking to change the stories, representations, ideologies and discourses that are considered to contribute to "negative", environmentally and socially dangerous encodings of reality. These are generally assessed as negative when they do not align with a set of criteria (sometimes called "ecosophy") that are generally normatively oriented towards the preservation of ecological balance and life on earth. The term "ecosophy" ("ecological philosophy") was first introduced by Arne Naess and it identifies a system of principles which values ecological harmony, is openly normative, and is valued by the analyst (Stibbe, 2018, pp.175-176). Ecosophy therefore is a set of assumptions that help to judge whether a story, frame, representation, ideology, etc. is relatively beneficial or harmful for the wellbeing of the environment and human beings. A story or ideology is broadly defined as "positive" and beneficial for the environment and society when it agrees with the value system used by the researcher to judge discourses (Stibbe, 2015, pp.10-13).

The need for environmental ethics to be introduced derives from the fact that the systems of principles adopted in critical analyses of discourse allegedly lack what Arne Naess would refer to as "biospherical egalitarianism" (Naess, 1972, pp.95-96): discourses are usually critiqued on the basis of social equality; however, they often dismiss or do not take into account the rights of the more-than-human members of the ecology, with the result that respect of the natural world is not included in the analysis. Eco-Critical Discourse Analysis embraces the value frameworks used in Critical Discourse Analysis and it integrates them with the ecological principles and concerns that are considered missing (see Section 2.1.1.).

The concept of ecosophy opens up the question of normativity in socially relevant research: ecosophy establishes a set of moral values identified by the researcher as necessary for the interpretation of data, and so it may be liable of pushing Ecolinguistics beyond the border of scientific enquiry and impartiality. However, normativity does not go against accuracy and evidence-based comments; also, a values-framework based on relevant literature and/or practical experience may contribute to tapping into sources of knowledge alternative to mainstream knowledge. Ecolinguists who choose to adopt a framework of analysis based on ecosophy justify its normative nature: ecosophy is a set of rules or principles which is concerned with wellbeing, equality, respect, and life for all beings. Given the complexity of notions such

as "being", "life", "wellbeing", ecosophy may remain for some a controversial aspect; however, a clear outline of the values-framework on which research is grounded is necessary as it justifies the goals of the research. This is especially true in the case of socially relevant research: research that supports fundamental social goals and the wellbeing for everyone needs its ecosophy to be to clearly stated, as values tend otherwise to be personal and subjective; in this way, the recipient of and participants in the research studies understand basic tenets, and can appreciate how the research unfolds. Also, official mainstream "voices" are unlikely to provide sources which explicitly and widely promote the rights and wellbeing of everybody. The importance of a values-framework lies also in the fact that it justifies and supports the analytical and methodological choices of the researcher, such as the linguistic and discoursal aspects s/he decides to focus on in her/his study. Overall, ecosophy may be regarded as a tool which supports the understanding of environmental and socio-cultural problems and works towards their improvement; as Critical Discourse Analysis does, it works towards finding a solution for "real-world" problems (McEntee-Atalianis, 2019, p.245).

The ecosophy for the present study integrates human rights with an environmental justice framework. More specifically, the values-framework for this study aims at encouraging people to a transition towards ethical lives, social structures and equal social relationships and it includes: social, ecological, physical and spiritual wellbeing for all; relationships of equality, respect, partnership, mutuality and care; and quality life for all beings, with a specific focus on the quality of the social and ecological environment. More specifically, given the context of environmental change and migration of this study, care is re-valued as a core principle upon which we need to establish relationships among living beings and nature, and so ethical lives and the role of care and caring activities in our society and natural environment should be supported and empowered (on the potentialities of empowering the role of care and caring activities in our society, see Eisler 1988, 2012, 2015). For instance, industrial countries which bear responsibility for environmental destruction should deal with displaced people with kindness, respect, and compassion.

Also, the values-framework supports the idea that the wellbeing of the environment and human beings requires the preservation of ecological balance, life on earth, and ecological harmony as a means to safeguard the rights of human beings and the more-than-human members of the ecosystem. Therefore ecocentric cultures are important as they find inherent value in nature, in its creatures and relationships, and acknowledge the nestedness of human beings in ecology: human beings tend to conceive themselves and act as if they are separate from the rest of the environment, while instead they are members and part of it. Nature and its appreciation have an

intrinsic value that goes well beyond its usefulness as a stock of resources for human beings. Valuing nature and other human beings for who and/or what they are and not for their usefulness is best synthesised by the Japanese concept of *sonomama*: the appreciation of things as they are with no need to change them. This falls easily within an ecocentric perspective which finds inherent value in nature as a whole.

Lastly, the activities people engage in should be humanely rewarding, targeted to the whole of the world's population, and respond to humans' innate potential, aspirations, values and real needs. Indeed, growthism[1] should be opposed as it goes against the preservation of the environment, and of human rights and equality: ever-growing and infinite growth is impossible within the limits of a finite planet. Also, the pursue of growthism may dull humans' innate potential, aspirations and values: for the sake of economic growth, socio-economic life is often reduced to engaging in activities and jobs that may be not humanely rewarding; in turn the ever-growing production of goods is often targeted to a small percentage of the world's population and does not always respond to real needs. The idea of growthism therefore can be considered an impediment for both social and ecological wellbeing.

This study assesses the degree in which representations of environmental migration drawn from the discourses analysed align with the most recent scientific information available on the topic of environmental change and migration. The assessment is based on scientific information on the state of the environment provided by two environmental reports published by the Intergovernmental Panel on Climate Change and the United Nations: the summary for policymakers of the *Global Environment Outlook 6 (GEO6)* (UNEP, 2019); and the summary for policymakers of the *Global Warming of 1.5°C* (IPCC, 2018). Also, the study takes into account two main official documents on human rights published by the European Union and the United Nations. The documents are the following: the *Charter of Fundamental Rights of the European Union* (EU, 2012), published in 2000 and edited in 2012; the *Universal Declaration of Human Rights (UDHR)* (UN, 1948) first proclaimed by the United Nations in 1948. Publications by the United Nations, the European Union and the Intergovernmental Panel on Climate Change (not included in the corpora of data) have also been chosen as an appropriate and coherent standpoint to assess whether the values promoted by the institutions and organisations included in this analysis are met in their discourse on environmental migration

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[1] M.A.K. Halliday defines "growthism" as a persistence in texts of "the motifs of growth versus shrinkage, of the unboundedness of our material resources, of the passivity of our inanimate environment and of the uniqueness of humankind instead of our continuity with creation" (Halliday, 2001, p.198).

and are part of the institutions' plans for dealing with environmental migration, the people involved in it, and its ecological and social consequences.

The study acknowledges that an agreement on what human and environmental rights are is complex; it is a transcultural topic of fundamental importance which influences official institutions. However, in this study, the definitions of these concepts follow the documents mentioned above and written by international organisations (see Appendix, Section 3). Among other important topics, the principles set out in these documents which concern environmental migration more directly include the right people have of movement. It is the case of Article 13 of the *Universal Declaration of Human Rights:*

"1. Everyone has the right to freedom of movement and residence within the borders of each State.

2. Everyone has the right to leave any country, including his own, and to return to his country".

They also state the right to security:

Article 22: "Everyone, as a member of society, has the right to social security" (*UDHR*).

Moreover, they also mention environmental protection, as in Article 37 of the *Charter of Fundamental* Rights:

"A high level of environmental protection and the improvement of the quality of the environment must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development".

Since these reports are continuously updated, they are used as guidelines to navigate the environmental- and human-justice aspects of the representations analysed without any normative intention.

2.1.2. Corpus-assisted discourse analysis and corpus approaches to discourse analysis

This study adopts the qualitative methodology of Eco-Critical Discourse Analysis to analyse the dataset, and supports it with corpus-assisted approaches to discourse analysis; the aim is to make the analysis solid and consistent. Corpus linguistic analysis is a way of using computer programmes to assist the quantitative analysis of language based on examples of real life language use (Baker, 2006, pp.1-2). The analysis of language and discourse is based on a set of procedures, or methods, that rely on a corpus or more corpora. Corpora are sets of machine-readable texts in electronic form that function as a body of data which is often designed to represent a specific variety of language, or a particular discourse used in authentic settings over a specific span of time. Corpora, by their very nature, are incomplete: they are composed of a finite set of texts and can only show a finite set of rules and/or features of a discourse (McEnery

& Hardie, 2011, pp.1, 8; McEnery & Wilson, 2001, pp.9-10) (see Section 3.1. on corpora). Corpus linguistic analysis explores recurrent patterns of words, collocations, and other constructions and shows that syntax and semantics are inextricably linked (Ellis & Robinson, 2008, p.5) (see Section 4.2.). Corpus tools can also be used to confirm or disconfirm the findings retrieved by qualitative analysis. In this study, corpus-assisted approaches are also used to lay the foundation of the analysis before a qualitative approach to the data: corpus tools are used to select the texts for qualitative analysis, and gain a first overview on the "aboutness" of the corpora and some preliminary insights into frequency counts and concordancing (see Sections 3.1., 4.1. and 4.2.).

Techniques from Corpus Linguistics and corpus-assisted Discourse Analysis integrate and complement qualitative analysis of discours(es) on environmental migration, and make it as comprehensive as possible; also changes happening overtime in how the topic of environmental migration is represented are identified. The aim is to avoid carrying out a study which draws conclusions from too narrow a dataset as it would be unreliable. The need to blend qualitative and corpus-assisted approaches in the analysis of discourse has been supported by several scholars. McEntee-Atalianis (2019) writes:

> "there is a need to be open to a range of data sets, for example, comparisons of large corpora of data with small-scale, contextualized studies of language in use, and to recognize the importance of extending our purview to communities, settings and individuals beyond the predominantly Western and those who move in and out of different political/spatial/social/cultural networks, contexts and communities" (p.247).

The two methodological approaches are complementary in the analysis of discourse: corpus-assisted approaches validate the description of language made via qualitative analysis. A combination of methodological approaches which support and complement each other reduces the possibility of bias on the part of the researcher and relieves the latter from the criticisms that Critical Discourse Analysis assigns ideological significance to discourse and text on the basis of limited evidence (Gries & Newman, 2014, p.1; personal conversation with professor Robert Poole).

The present analysis is based on a selection of texts as samples of the discourse on environmental migration; it is therefore necessary to make the analysis more generally valid by looking at reasonably large and representative corpora of examples. Corpus Linguistics identifies statistically salient language patterns and allows the researcher to make statements, not just suppositions (Flowerdew, 2014, pp.174, 179; Bhatia, 2014, p.239). More specifically,

corpora are used to explore the language used to discuss environmental migration at both word level (keywords, frequent words) and semantic level (key concepts and key domains) - and provide statistical evidence of qualitative analysis findings (see Section 4.2.). Corpus linguistics has been increasingly incorporated into Critical Discourse Studies to remove the critique of "cherry-picking" data for confirming *a priori* beliefs. In this study, selection criteria have been set in order to mitigate such concerns, and texts that underwent qualitative close reading were chosen empirically by using *ProtAnt* (see Sections 3.1.5. and 5.1.).

The potentialities that corpus approaches offer to discourse analysis lie in its hybrid methodology between corpus work and close reading of individual texts: the researcher can get to the broader context and go back and forth between quantitative and qualitative to inform the qualitative observations s/he makes. Moreover, corpora can direct the researcher's attention to things that maybe s/he wouldn't have considered (Baker & McEnery, 2015b, pp.9-10). However, the qualitative approach to discourse analysis is as important: the researcher does not rely solely on an automated analysis of the texts, but rather s/he informs it with findings from closer reading of the texts. Critical Discourse Analysis of selected texts helps looking at specific instances of the discourse on environmental migration in context in order to explore it more fully and make claims about their significance. Looking outside the corpus and into the society that created the discourse helps explaining the observations made within the corpus.

In conclusion, this study combines methodological approaches in a corpus-assisted qualitative analysis which uses corpus-techniques to prepare the ground for the qualitative and manual analysis. Using Corpus Linguistics is part of a triangulation of methodological approaches for double-checking findings and approaching data from different perspectives.

2.2. Discourse, stories and identities

In this section I introduce the concept of discourse and discuss its relationship with the power relations it shapes and is shaped by. Discourses instantiate and promote specific ideologies; in this way they help constructing and maintaining particular power relations within society. Discourses include "stories", namely ideological constructs of an area of reality; through these stories, discourses can convey specific ideologies (Section 2.2.3.). Organisational and media discourse, which are the focus of the present study have a major role in spreading ideologies and moulding power relations and interests in society because of their authoritativeness (Section 2.2.2.).

This section also introduces the concept of identity and its representations, with a particular focus on ecological identities. Two main theoretical frameworks for analysing identity are surveyed: the psychological framework and the constructionist framework. Also, postmodern sociolinguistic-

oriented theories of identity are introduced. Postmodern accounts claim that identity is not fixed but has a mutable and multi-faceted nature; identity escapes the limitations of strictly univocal social positionings, and conceives identity as multi-positioning of the individual within a society. Finally, this section discusses the role of organisations and powerful social groups in shaping identities, and outlines the critical analytical approaches for the analysis of identity representation (Section 2.2.4.). The importance to analyse official authoritative discourses on environmental migration lies in the potential impact and influence they may have on the way this phenomenon is understood. Meaning and values attached to representations of environmental migration vary according to factors like political priorities and worldviews: representations of environmental migration may vary depending on the intrinsically political point of view of the group whose "voice" informs representations (Bevitori, 2014, pp.603, 621; 2010, pp.24-25, 32, 36) (see Section 2.2.1. on "voice"). Since different "ingroups" (see Sections 2.2.4. and 3.2.) hold different systems of values by which they construct and understand the world, representations of environmental migration may diverge and present discrepancies, providing different keys of interpretation to the readers, and so influencing their opinion towards the phenomenon, its triggers, participants, and consequences. "[C]ultural articulations" explain which processes have produced specific events and phenomena (Jensen, 2011, p.92).

2.2.1. Discourse and power

Discourse is "a way of constructing aspects of the world associated with a particular social perspective" (Fairclough, 2014, p.11); it refers to "semiotic ways of constructing aspects of the world (physical, social or mental) that can generally be identified with different positions or perspectives of different groups of social actors" (Fairclough, 2014, pp.15-16). Discourses imply an encoded point of view as part of a viewing arrangement by which people, entities and processes are represented; the so-called "deictic centre" corresponds to the point of view of the speaker/writer from which distance is created spatially (for instance: "here"), socially (for instance: "we"), temporally (for instance: "now") and evaluatively (for instance: "acceptable") (Hart, 2014, pp.163-164). Specific perspectives and the values they encode attribute evaluative connotations to participants, entities and processes, and have entailments in terms of legitimation (Hart, 2014, pp.110-111, 124). In this respect, discourses bear a great social and ideological potential as they narrate the story of who/what we were, are and "what we might become, how we have been represented and how that bears on how we might represent ourselves" (Hall, 2000, p.4).

More specifically, in this study discourse is intended as a social practice enacted by people of a community or group as a means to understand reality and interact in specific contexts. Discourse is a construct: it is grounded on a set of ideologies and organised in "stories", "frames" and "representations" (see Section 2.2.3.) that provide a particular conceptualisation of the world; it is looking at the world from a specific perspective. As mentioned above (Section 2.1.), discourse is a socio-cultural construct and as such it is context-sensitive, it needs to be interpreted within its historical, physical and socio-cultural context in order to be understood (Blommaert, 2005, p.39). Discourses that have an impact on society are often the product of powerful groups; as such, the stories about the world and the representations of identities that they convey need be questioned critically and changed with more appropriate ones if need be (McEntee-Atalianis, 2019, pp.187-188). Since discourses are embedded in the culture that shapes them, the dominant discourses of powerful groups can be challenged by alternative cultures and subcultures through innovative re-interpretations of discourses; by changing discourses, the identities of represented participants change too (McEntee-Atalianis, 2019, pp.33-34, 191-192).

This study adopts a postmodern sociolinguistic constructionist understanding of discourse as a dynamic discursive construction that is socio-culturally dependent. Discourse is a socio-cultural construct, therefore it is context-dependent. It is a knowledge system about a topic, practice, or area of reality: it represents how things are or are perceived to be, it is linked to the context of specific communicative events, and it materialises in texts or other semiotic resources. Discourse is ideological: each discourse is grounded on a set of ideologies, namely normalised ideas, rationalisations of reality, worldviews, or beliefs characterising a social formation (Blommaert, 2005, pp.161-162). van Dijk refers to ideologies as shared social representations and interpretative frameworks, "cognitive representations underlying discourse and action", and "systems of principles that organise social cognition" (1995a, p.18). Ideologies are located in the minds of members of a group and organise the way in which they think and act; they are cognitive structures that underlie thought behaviour and therefore social behaviour (van Dijk, 1995b, p.245).

Every act of communication implies the use of social language, of language understood within a socio-cultural and political community. Communication is influenced by the kind of speech act performed, the relationship between participants, and the social context of production. The geographical, historical and social situation of use becomes a determining factor for the act of communication to be understood and accomplish its function(s). Also style (degree of formality) and format of communication (media discourse, for instance) are important characteristics of

discourse and reflect identities, elements of the social structure, and expectations as to what speakers intend to accomplish. The meaning of an act of communication can be grasped only if the act is contextualised (Blommaert, 2005, pp.4, 10-11, 27, 73-77).

Language and discourse are deeply entrenched with relationships of power: dominant discourses are often the product of powerful groups which have access to contextual spaces in which forms can be attributed meaning. Often the transformation of meaning and discourse is in the hands of socially prominent and powerful groups: they can shape discourse according to the worldview they want to promote, generate an uptake of their words as close as possible to the one desired, and so accomplish the function(s) desired via language. Blommaert refers to this capacity to make oneself understood and create favourable conditions for a desired uptake to be picked up by the interlocutor as "voice" (Blommaert, 2005, pp.4-5, 34, 68-69, 75-77, 142; Wodak & Meyer, 2009, pp.7-9).

The different access to literacy and so the different access to contextual spaces in which forms are attributed meaning is a problematic issue for several reasons. First, different access to literacy means that different audiences may have different understanding of texts; for instance, experts understanding and general public understanding of official communication on environmental migration might be discrepant (Deignan *et al*., 2017, pp.1, 3). Secondly, unequal access to literacy and meaning-making spaces may result in an erasure (absence from discourse, see Section 3.2.) of particular areas of life and participants, and it may determine that particular concepts are privileged in discourse while others are backgrounded. This is especially true of official authoritative bodies: they have the power and means to produce believable and coherent versions of events and transform them into institutionally functional discourses which serve specific interests. Also, in the era of globalisation these official discourses are of great influence as they are supposed to accomplish functions trans-locally (Thornborrow, 2014, pp.62-64; Blommaert, 2005, pp.34-69). At the same time, social life is becoming increasingly centred on media and social media, which function as mediation tools for real-world events and practices and shape them through their mediated discourses. Therefore, issues related to environmental change and migration are mainly disseminated through media and social media coverage, which tend inevitably to impose their own frames for understanding (Fairclough & Wodak, 1997, p.259; Nerlich *et al.*, 2012, pp.45-46).

People from diverse "contexts", or social-cultural backgrounds, prioritise different concepts and so they mould discourses differently; dominant discourses may background what people from less powerful groups assume is important (Blommaert, 2005, pp.76-79; Jaspers, 2014, p.135). Consequently, discourses that underpin social differences may often be the outcome of the work

of powerful groups, such as institutions and the media. Official discourses may be difficult to challenge as they imply unequal social relationships and do not presuppose interaction generally. In the context of environmental change and migration, dominant discourses are of paramount importance as they shape texts which become policy and practice: authors of policy-informing material and the media present a problem, solution, debate which impacts on the opinions and actions of the general public. The wellbeing of origin communities, migrants, receiving communities and the environment is at stake, so dominant official discourses should be examined to see whether alternative discourses about these social issues would be possible and more appropriate to deal with them (Wong Scollon & de Saint-Georges, 2014, pp.71, 75; Lemke, 2014, p.80; Deignan *et al.*, 2017, pp.5-6). This is why it is relevant to analyse discourses produced in official international and authoritative contexts for the general public; identify the roles and functions participants are attributed to or expected to perform; and understand the consequences for participants.

People make meaning as part of social groups which agree on, contest or negotiate norms and values about how language ought to be used and what it ought to mean; in this way, they make the world meaningful in certain ways and not in others, with practical consequences on people's lives (Gee & Handford, 2014b, p.5). As Shi-Xu states,

> "[d]iscourse[s], i.e. texts and their contexts, do not stay the same through time. Nor will a dominant communal discourse continue to repress alternative discourses unopposed and unchanged. Each speaking community, hence its discourse[s], has the internal spirit to reflect upon itself critically in order to create a historically better discourse" (Shi-xu, 2014, pp.649-650).

The ideological character of discourse is of particular interest as it allows individuals to transform social realities. Discourses are not fix and stable: individuals may take up or challenge certain worldviews embedded in discourse that are perceived as constraining or dysfunctional to the wellbeing of any group, community, society at large, etc. in order to re-appraise the social order (McEntee-Atalianis, 2019, pp.187-188). Examples of changes in discourse are feminist discourse and anti-racist discourse (Shi-xu, 2014, pp.649-650), as well as the increasingly widespread ecological discourse. Subjects may assume positions for themselves and others by (dis)aligning with dominant discourses and their underlying ideologies: this process is often referred to as "positioning". The subject's alignment in turn determines a shift in perspective and so a re-fashioning of discourse (McEntee-Atalianis, 2019, pp.15-16; Thornborrow, 2014, p.51). The way discourses are contested and replaced by alternatives

impacts on the way relationships of power are maintained or changed: by aligning to particular worldviews and sets of beliefs and values, individuals and social groups have the power to support and enhance wellbeing for everybody (Fairclough, 2014, pp.10-11, 15).

There are two main ways to oppose a dominant discourse that is deemed to be unfit for an equal and just society: re-contextualisation and interpretation. On the one hand, discourses, topics, arguments that originated in one social field may be re-contextualised in a new context which can serve the interests of the many. The process of re-contextualisation implies taking a topic out of its original context and restating/realising it in a new context, and makes the topic acquire a new meaning. The limits to the re-contextualisation of discourse have to do with allocation of resources and power: the means to shape discourse and communication are not accessible to everybody (Fariclough, 2014, pp.12; Wodak, 2014, p.529; Blommaert, 2005, p.62). On the other hand, there is interpretation: it is not the speaker alone who offers context for interpretation; rather, the interpretation of the text is subjected to the process of decodification ("uptake") enacted by the reader or listener, who may attach their own meaning to the text, resulting in an unexpected uptake. Meaning derives from the meeting of two minds and consciousness, and not necessarily two that are similar. The "responsive meaning" (the meaning provided by the receiver of the message) is active and transformative; the contextualisation provided by the sender of the message is not necessarily supposed to meet the decodification process of the receiver. Therefore, the question is not which perspective is true, it is whose we adopt and grant authority when we accept a version of events in order to understand real-life events (Blommaert, 2005, pp.43-46, 156).

Summing up, discourse is a socio-culturally and politically-embedded conventional way of organising knowledge; it represents one version of events (often the outcome of powerful groups if influential and widespread) and it can be changed. Also, discourse can be seen as a way of constructing aspects of the world which are associated with a particular social perspective; as such, it influences how people who hold it as valid see, think of and act in real-life contexts. In other words, discourse does ideological work as it can help sustain particular ideologies as common-sense specific beliefs which are "naturalised" into people's way of using language and thinking about the world. Communities may affiliate to new non-dominant sets of beliefs and ideologies and bring them to the fore as important and worthy of prioritisation in social life; in turn, new ideologies would help new discourses to emerge, represent and reflect a renewing socio-cultural reality (McEntee-Atalianis, 2019, pp.147, 151-152). Worldviews and language go hand in hand: whenever cultural, ideological and social properties of a culture emerge, they do through and together with their linguistic and discoursal practices, and they

favour specific social behaviours (Blommaert, 2010, pp.1-3; McEntee-Atalianis, 2019, pp.191-192).

It is worth analysing discourse that is open to new concepts and associative connections in an environment which is changing, or one which has a great potential to change, at least (Eisler, 1988, pp.xv-xx; Blommaert, 2005, p.47). It is important to investigate new themes, phenomena and events as they are unfolding before their representations become permanent in the mind of people, and power-regulating institutions turn them into legitimate knowledge (Blommaert, 2005, p.63). This is why environmental migration is worth investigating now that the phenomenon has not been thoroughly legally defined yet; also it is possible to say that it has not yet been understood in its many controversial aspects and constituting elements. Since, "[i]t is an important characteristic of the economic, social and cultural changes of late modernity that they exist as discourses as well as processes that are taking place outside discourse, and that the processes that are taking place outside discourse are substantively shaped by these discourses" (Chouliaraki & Fairclough, 1999, in Blommaert, 2005, p.25; Wodak & Meyer, 2009, p.10), innovative humane and equal discourses –or "packages of representations" and practices need to replace old unequal ones. This is especially true in times of cultural transformation like the present time, which could either make us gradually move towards more perilous situations, or lead us through a process of transition to more equitable and sustainable forms of civilisation (Eisler, 1988, pp.xv-xx; Blommaert, 2005, p.163; 2010, pp.3-4; Flowerdew, 2008, p.205).

The process of re-making of an inherited consciousness is likely to be long and difficult: it requires the emergence and reproduction of subordinated models; and the performance of experiences which are connected to them, and so are not the prominent or hegemonic ones. New worldviews shall emerge in order to challenge the problematic and dysfunctional worldviews that are putting at risk the wellbeing of many populations, living beings and environments, and they shall lead to concrete measures in social behaviour (Blommaert, 2005, p.105; Williams, 1997 in Blommaert 2005, p.105; Eisler, 2012, pp.45-49).

In the words of Blommaert (2005) "[p]ower resides in the interplay between an ideology and practices of re-interpretation, for in this way authority […] can be managed" (p.202). With processes of globalisation, new patterns of communication should emerge which enable all participants to represent themselves and their worldview in international discourses.

2.2.2. Organisational and news discourse

The texts of the two specialised self-collected corpora for the present analysis are representative of two different types of discourse: institutional discourse and news discourse. A text is a unit of

language in use, a passage of discourse; it is an instance of language used for communication (Halliday & Hasan, 1976, pp.1, 23; Biber & Conrad, 2009, p.5). A text variety refers to texts that share common social and situational characteristics. Text varieties can be identified and described on the basis of register and genre. Register refers to the linguistic features used in the text as related to the situation of use: linguistic features are functional to and associated with the communicative purposes and situational context of texts. The situation includes all extra-linguistic factors which have some bearing on the text itself and set the boundaries of the text, affecting the linguistic choices made (i.e. for instance: implied audience, medium, purpose of communication). Genre refers to the purposes and situational context of text production and consumption by focusing on the conventional structures of a text; it is defined as a category assigned on the basis of external criteria such as intended audience, purpose, and activity type. Genres refer to whole texts, while registers are about linguistic patterns which respond to situational parameters; registers can be conceived as a communicative situation and genre as a message type. Register refers to a text as language related to specific social situations and its use. Genre refers to texts that follow some conventionally recognised criteria and purposes (Biber & Conrad, 2009, pp.2, 5, 18, 71; Halliday & Hasan, 1989, pp.12, 38; 1976, pp.21, 293-294; Martin & Rose, 2007, pp.206, 242-243; Lee, 2001, pp.38, 42-43, 46-47).

The texts included in the IOC (International Organisations Corpus) are an instance of written organisational discourse, which is part of institutional discourse. Institutions are established organisations, especially those devoted to public service, with socially legitimated expertise (Mayr, 2008, p.4). Organisational discourse is carefully planned, revised and edited; it is goal-oriented, namely it aims at the accomplishment of activities in socially competent ways; and it addresses an audience of professionals as well as ordinary readers, with the main purpose of presenting and explaining information on specialised topics (Roberts, 2011, p.82-85, 92; Thornborrow, 2002, pp.2-4; Mayr, 2008, pp.2, 4-5). Given the complexity of the topics it discusses, this discourse type is generally characterised by long sentences and specialised terminology used for the sake of clarity and precision (Biber & Conrad, 2009, p.14). The length of the texts can vary according to the purpose of the text (i.e. for instance, report, briefing, etc.) (see Section 3.1.2. for a description of the dataset).

Organisational discourse can be considered a subgroup of institutional discourse on social policy: it is a type of institutional prose written by experts whose expertise is generally socially legitimated and recognised by consent and persuasion (Mayr, 2008, p.4). The register is professional and informative: the texts target publics of both experts and non-experts, so the

texts aim at being fair and accessible to all while maintaining the complexity in text and topic (Roberts, 2011, pp.84-85, 92; Thornborrow, 2002, p.3; Mayr, 2008, p.4). These texts can be accessed by a public of non-experts because the readers are offered background knowledge to understand technical terms and specialised terminology used in the discourse of environmental migration, like "adaptation" and "resilience"; also, there may be distinctive linguistic constructions used for condensing information and preserving precision.

More specifically, texts of organisational discourse are institutional prose publications situated halfway between professional technical texts and informative texts for dissemination of public information. They discuss specific topics using complex terminology for the sake of precision, but they also contain more general descriptive passages with few complex terms and concepts, with great emphasis on the explanation and exemplification of concepts (Biber & Conrad, 2009, pp.126-128). In this respect, figures and tables summarise and emphasise key points, improve clarity and reduce narrative length (De Castro & Salinetti, 2006, p.11). Organisational discourse depends on specific situational characteristics: the authors (usually representing the organisations or writing on their behalf) produce a written text for a large number of readers which are separated in place and time from the authors and the organisations they represent or write for, and the primary communicative purpose is that of presenting and explaining information about a topic, often the result of research studies or policy measures. The communicative purpose for some of these texts is also persuasive and aims to convince the readers of the significance of the topic and the perspective endorsed in the text (Roberts, 2011, pp.81-83; Biber & Conrad, 2009, pp.31-32, 37-38, 41, 51, 53, 68).

More specifically, the place of communication of organisational discourse is public (as available for others to view). The participants in organisational discourse of environmental migration are the addressers (authors) who are affiliated to institutions and generally (at least for the data in the present study) belong to wealthier powerful societies and are experts in the field (Roberts, 2011, p.81; Mayr, 2008, p.2). The relation of interaction among the participants is asynchronous (it is impossible to have a direct and immediate dialogue with the authors, virtually) and there generally is unbalance in status and power between a specialist addresser and the readership, which includes both experts and non-experts. Therefore there may be unbalance in the degree of shared background knowledge, as the authors have a specialist background knowledge, are experts or a group of experts in the field, and are further legitimised by the fact that they are affiliated to an authoritative organisation. However, this is not always the case as the reading public includes also experts (Roberts, 2011, p.81, 83-85, 92; Thornborrow, 2002, pp.3-4; Mayr, 2008, p.4). The language used for communication is influenced by the fact that publications of

organisations aim to be accessible to all while maintaining their character as representative of professional and accredited institutions (Roberts, 2011, p.92). Most organisational reports are distributed in electronic form as well as print versions, and some are published in electronic form only to disseminate them easily at a global level. Also, electronically conveyed texts are generally permanent but can be modified and updated (Roberts, 2011, p.89; Biber & Conrad, 2009, pp.37, 40; De Castro & Salinetti, 2006, p.4).

Organisational discourse generally has an explanatory-argumentative function: the communicative purposes are generally to explain a specialised topic and report and describe the current state of affairs on that topic. These texts can also be persuasive, procedural, and goal-oriented; as such, they argue the trustworthiness, significance and reliability of the point of view endorsed in the texts, and propose ways to deal with the topic discussed (Roberts, 2011, pp.82-83, 85, 87; Thornborrow, 2002, pp.2-3; Mayr, 2008, pp.2, 5). The texts can also summarise information from studies and present new information: the addresser wants to convey information which is reliable and/or generalisable. Institutional discourse conveys a specific point of view, but overt markers of stance are generally limited to statements of the source (i.e. for instance "according to"). The topic is generally about policy-making and scientific research applied to policy, thus between governmental and scientific topics (Roberts, 2011, pp.82-83, 87; Mayr, 2008, p.2).

The social status of the people being referred to in the texts generally reflects the distinction into more- and less-privileged societies (Biber & Conrad, 2009, pp.40-42, 45-46, 68, 109, 112-113). In the case of the IOC, the texts combine explanations of the phenomenon of environmental migration, its circumstances, and the outline of policies, with a rather generic argumentative purpose to persuade the reading public of the trustworthiness of the representations provided in the text. It is worth noticing that these documents are issued under the entire responsibility of the issuing organisation which shall guarantee that the documents are reliable and readable (De Castro & Salinetti, 2006, p.2).

From a genre perspective, organisational publications usually open with the description of the significance of the topic discussed and summarise it briefly; each section describes aspects of the event or situation (i.e., for instance, how it came about, the background, main participants, consequences, etc.) (Biber & Conrad, 2009, p.17). The texts of the IOC generally include an outline of environmental migration, an interpretation of the causes and consequences of this phenomenon, a description of the policies adopted to the present day and new policies proposed, and an explanation of the role played by a specific organisation in addressing the phenomenon; some texts privilege one aspect over another (see Section 3.1.2.). The standard format of

organisational texts is as follows: the report is generally divided into 3 parts, which are front matter, body of report, and end matter. More specifically, the front matter generally includes front cover, title page, back of the title page (often including an abstract), table of contents, list of abbreviations, acronyms or terms, and preface; the body of report includes introduction, core of report/discussion, conclusions, acknowledgements, and list of references; and the end matter includes appendices, indexes, and back cover (De Castro & Salinetti, 2006, p.5). The introduction describes what is known so far about this area of research, reviewing previous knowledge and claiming the centrality of the issue; the discussion presents the state of affairs, problematic issues, and possible policies for action, arguing their significance (Biber & Conrad, 2009, pp.129,131). The documents of the dataset for this study present the problematic phenomenon of environmental migration and detail what must be done to intervene.

To sum up, the organisational discourse on environmental migration analysed in this study is an explanatory-argumentative type of discourse and it is produced by a public organisation for a public of experts and non-experts; it aims at presenting and disseminating newly-acquired competences and knowledge from the research field of environmental migration, discuss theses, provide data, and present opinions (see Section 3.1.2.).

The texts included in the NC are instances of news discourse; a written variety that addresses a varied and wide general public with the main purpose of reporting on current facts and events; also, news stories may sometimes seek to persuade the reader, even though stance is not expected to be overt. It is a type of asynchronous public discourse (van Dijk, 1988, pp.9, 11; Biber & Conrad, 2009, pp.112-113). In the data for this study, news discourse is written and printed or electronically conveyed; it is multimodal communication since it includes both verbal communication, images, graphic layout, and links to other webpages or media and social media; images may serve explanatory functions, but they may also be included for sensationalism, aesthetic or other reasons (Bednarek & Caple, 2012, pp.14, 114-117). However, in the present study I only analyse verbal communication in these texts. The language of news discourse may vary; in the case of written texts on controversial topics the language tends to be charcaterised by the use of technical words and compounds; also, social factors like the status and background knowledge of the author of the text (addresser) influence language (Nerlich & Koteyko, 2009, pp.345-346). News reports may use expressions that function as hyperboles (overstatements, exaggerations) for enhanced persuasion (van Dijk, 1988, pp.10, 16). In this respect, the language may be evaluative, there is reference to emotions and the use of negatively-connoted vocabulary, but there also is reference to figures and numbers that allow news to appear reliable

and impartial (Bednarek & Caple, 2012, pp.46-48, 91). Terminological choice is also influenced by the fact that news articles aim at "newsworthiness", namely at being perceived as worth reading by the readership. Newsworthiness is achieved by constructing discourse according to specific news values or beliefs about the aspects that make a piece of news relevant for the reader (i.e. for instance, the negativity and unexpectedness of the event reported) (Bednarek & Caple, 2012, pp.39-44).

News discourse is "discourse that reports on newsworthy events, happenings and issues"; it refers to the discourse of news bulletins, news programmes, news website and newspapers; this study only focuses on written articles in newspaper, and more specifically on informative articles that blend features of a specialist report and an opinion article (Bednarek & Caple, 2012, pp.2, 27) (see Section 3.1.3.).

News reports are written under time and space constraints. The structure of a news story can be conceived of three main parts and is as follows: headline (summarises the story or event to attract readers), introduction/lead (summarises the most important elements of the story or event and describes newsworthy aspects, including place, time, participants and background information), and body/lead development (elaborates on the background and context, adding details, verbal reactions, or comments and evaluation) (Bednarek & Caple, 2012, pp.96-98; van Dijk, 1988, pp.14-15).

The news articles included in the NC were published electronically by broadsheet newspapers. I selected informative articles that blend features of specialist reports and opinion articles in different varieties of English: they present the topic discussed in a critical and factual way and sometimes include argumentative sections that reflect the personal stance of the journalist or newspaper outlet (see Section 3.1.2. for a description of the dataset).

Overall, the discourses of the IOC and NC share similarities in the content of the texts and present differences in the way the content is elaborated and proposed to the reading public. The communicative purpose is similar among the different texts: it is informative, but news discourse is more oriented towards reporting, while institutional discourse is oriented towards explanation and interpretation; also, the latter is expected to "go further", including new information on the topic and encouraging research and study (Biber & Conrad, 2009, p.37). The addressees of organisational discourse tend to be more specialised than the addressees of newspaper. Both discourses imply asynchronous interaction as they are either printed, or published on-line; also, stance is not expected to be overt. In both discourses, the communicative focus is on facts of relevance, informing readers on current knowledge and policies about the topic (Biber & Conrad, 2009, pp.111-113, 120).

Organisational and news discourse represented by the IOC and NC include policy communication. The decision to analyse these discourses lies in the relevant role media and institutions play in spreading information and encouraging certain understandings of socio-economic, political and cultural phenomena, thus contributing to the social positioning of the readership: they suggest how readers are supposed to position themselves with respect to the issue being discussed. Media and institutions have a major impact on influencing public opinion and consequently on the management of the perception of environmental migration. The importance of news and organisational discourse lies also in the potential they hold for the representations of this phenomenon and the legitimation of social action. In this study, organisations and media are sites of contested representations that (re)produce, challenge, and amplify ecocultural perceptions, practices and identifications (Milstein & Castro-Sotomayor, 2020c, p.223; Mayr, 2008, pp.2-3, 5).

2.2.3. Framing, stories and representations

We live in a story-telling society, we use stories to make sense of our lives and construct identities. Discourses can therefore be understood as "cultural narratives" that construct, organise, or present events, participants and practices in a way that emphasises some aspects, participants and practices and excludes or de-emphasises others; this process is often described as "framing" (Benwell & Stokoe, 2006, pp.8-9;). "Frame analysis" was first developed by Goffman (1974) and it assumes that frames establish "the fundamental categories in which thinking can take place, frames call attention to some aspects of a […] story while simultaneously directing attention away from others (Dreher & Voyer, 2015, p.60).

Discourse is organised in sub-structures called "frames". Framing involves the endeavour to make knowledge coherent; it is both a linguistic and a cognitive process, as well as a social and cultural one. Frames can be thought of as systems of contextualisation conventions, namely contextualisation practices: they are typically unconscious structures which include semantic roles, relations between roles, and relations to other frames, and which are used to conceive and refer to reality (Blommaert, 2005, p.41; Goffman, 1974, pp.10, 21, 24, 27, 345, 347).

In this study, "frame" draws on Cognitive Linguistics and media studies: Cognitive Linguistics sees a frame as the background knowledge "activated" by particular discourses. Media studies extend this to say that facts make sense only when "embedded in a frame or story line that organizes them and gives them coherence, selecting certain ones to emphasize while ignoring others" (Macgilchrist, 2007, p.75).

A set of interrelated frames informs a "story", which can become shared by a community. When exposed to a story, people can decide whether to reject it or embrace it and eventually spread it. Stories which are commonly shared and agreed upon tend to be difficult to identify and challenge as they may be perceived as ordinary and commonsense representations of reality or, at worst, they may be believed to be the only possible way for things to be (Stibbe, 2015, pp.22-24, 188; Eisler, 1988, pp.xii-xv).

Stories can be thought of as cultural ways of organising knowledge and they display a connection between language and context. Stories display our understanding of our experience of the world; they are organised together, connecting events in specific renderings and defining our everyday realities (McEntee-Atalianis, 2019, pp.15-16; Thornborrow, 2014, p.51; Blommaert, 2005, p.84). As such, they influence the way people think and feel about events, actions, and representation of specific persons; in turn, thoughts and feelings influence how people understand and behave with respect to these events and actions (Lemke, 2014, p.86; Lakoff, 2003, pp.3-6, 229-230).

Some stories are prevalent in our societies, but they are not necessarily so permanently: they may change as the context changes, displaying some information and values that were previously left unsaid or effaced (McEntee-Atalianis, 2019, pp.214, 218, 234). For instance, reassessing and bringing to the fore discourses on environmental protection would go against the prevailing profit-oriented discourses that are leading us towards ecological destruction and collapse, and it would reshape many of the concepts that permeate our everyday life in society. Reshaping concepts and the discourses they belong to implies that the very activities in which we engage everyday are re-fashioned. New basic stories about work and lifestyle that oppose "growthism" (economic growth for its own sake, see Section 2.1.1.1.) should emerge. Environmental discourses are sometimes biased and can increase the alienation of humans from nature. For instance, official discourses on environmental change and migration often investigate the implications of this phenomenon for present-day economic systems, and rely too much on the resolutive role of economy (see, for instance, the controversial concept of "development" in Sections 6.4.2. and 8.3.2.). Alternative discourses and stories need to emerge and represent the natural world in ways which encourage closer and more respectful relationships between humans and other human beings, and all members of the environment.

Very often anthropocentrism -namely the worldview which places human beings on top of a hierarchical pyramid of importance- seems to be the privileged viewpoint from which events related to our everyday social life are understood and presented. Anthropocentrism, though, is often disquietingly reduced to economy, thus presenting the latter as one of the pivotal aspects

of people's lives. Anthropocentrism needs to be challenged and re-dimensioned to an appropriate size, so that new values and aspects of human life can be introduced as worthy of consideration when representing people's identity. A worldview which promotes new partnership understandings of human beings and their relations to the environment would contribute to re-positioning human beings within the ecology and oppose unecological and unjust anthropocentrism (Stibbe, 2015, pp.183-184, 192-193; Eisler, 1988, pp.xviii-xxiii; 2012, pp.45-49; 2015, pp.30-42).

This research project focuses on verbal written representations in discourses on environmental migration; these representations can offer insights into the way environmental migration is conceived by the authoritative "voices" under investigation. As discussed in Section 2.1., this study approaches the analysis of representations from a socio-cognitive perspective: the socio-cognitive approach puts particular emphasis on the mediatory role of social cognition, stating that textual and social structures are mediated by social cognition, namely a system of mental representations shared by groups of people (van Dijk, 2015, pp.468-469; 2014b, pp.121-122; Fairclough, 2003, p.124). The world is understood via representations, cognitive tools built through text that influence the perception and understanding of reality and "affect the cognitive processes involved in the production and interpretation of discourse"; in turn, "representations of language users as social actors" affect social structures (van Dijk, 2014b, pp.121-122; Koller, 2014, p.151).

Therefore, if frames refer to the way knowledge is organised and shared, representations indicate how cultural groups and their members represent themselves and others. Practices of representation are related to the ideational metafunction of language and refer to the ability to represent aspects of the world and their relations (the material world, the mental world of thoughts and feelings, and the social world) (see Section 2.1.) (Kress, 1996, pp.18-19; Kress & van Leeuwen, 2006, p.47; Fairclough, 2003, pp.26-27, 124). Representations depend on worldviews which influence social action and may give rise to different emotions and practices towards the issues discussed (Hart, 2014, p.3; Hallgren *et al*., 2020, pp.261-262).

Particular aspects of the world may be represented differently by different discourses, which encode different perspectives on the world and "are associated with the different relations people have to the world, which in turn depends on their position in the world, their social and personal identities, and the social relationships in which they stand to other people" and others (Fairclough, 2003, p.124). Also, different representations emerge from different linguistic choices, so different linguistic choices have the potential to activate different representations

and the sets of values and beliefs representations are influenced by (Schleppegrell, 2014, p.22; Hart, 2010, p.108; Kuha, 2018, p.251; Fairclough, 2003, p.124).

Representations are the result of processes of thinking, feeling and talking about the world; they imply the foregrounding of particular aspects and the backgrounding of others; for instance, social actors can be represented individually or collectively, they can be given prominence or be backgrounded (see Section 3.2. for further criteria for the analysis of representations). As such, representations entail choice (not necessarily conscious): they can include or exclude participants and social actors, and they can assign specific roles to the latter to suit specific interests and purposes. Motivations for exclusion from a representation can be related to redundancy and (perceived) irrelevance, but they can also be deliberate and politically and socially significant, for the purpose of achieving specific representational effects (van Leeuwen, 1996, pp.32-33, 38, 42, 67; Fairclough, 2003, pp.136, 144, 149). It is worth highlighting that representations are always biased by the perspective of those who convey them and interpret them: they represent aspects of the world and social actors as they are experienced by humans with a specific point of view (Kress & van Leeuwen, 2006, p.42). Also, the medium of representation (i.e. for instance, written or spoken language; the visual; the gestural) impacts on interpretation, as it has inherent possibilities and limitations (Kress, 1996, p.18).

Since representations encode particular perspectives and sets of values, linguistic constructions "invoke a particular vantage point from which they invite the reader/viewer to construe the scene described", encouraging to view and understand an issue, event, entity, etc. from a specific perspective (Hart, 2014, p.124). There usually are more or less intentional and institutionalised representations of reality which "ultimately leads to the legitimation and/or mobilization of social action": the speaker/writer (intentionally or not) endorses a particular representation "which constitutes our basic understanding of the internal structure of an entity, event, situation or relation" and attributes qualities and evaluative connotations to participants, entities and processes (Hart, 2014, pp.110-112). Since powerful social groups tend to shape discourse (see Sections 2.2.1. and 2.2.2.), representations may be ideologically biased in favour of those who has the power to control a specific discourse (van Dijk, 2014b, p.133).

Language is therefore crucial in creating an awareness of environmental problems and the processes which lead to environmental change and migration: looking at language we can argue who/what is culturally salient, what is being problematised, and so which are the prominent ideas, or rather, what is deemed to be salient in a given time and society (Fill & Penz, 2018b, p.438). The analysis of representations sets a solid ground for the interrogation of the social values we hold at the present time, convey through language use and share through discourse.

On this ground, representations of environmental change and human mobility which are and/or are becoming habitually used may provide insights into the ideologies and values behind them and into the consequences of their use. For instance, environmental migration can be represented in a way that is founded on "the fear of loss of livelihood and the fear of loss of cultural identity as a result of the 'influx' of immigrants who are perceived as 'other', 'different' and 'threatening'" (van Leeuwen, 1996, p.32). Representations can help reveal how the interests of various parties, including nonhuman life, are represented, bearing in mind that within these groups there might be variety and a multiplicity of subgroups supporting and promoting their own interests and values. Also, the analysis can contribute to underline the role of language in the development and aggravation of environmental and social problems (Kuha, 2018, p.253; Fill & Muhlhausler, 2006, p.43).

The decision to analyse media and organisational representations is due to the major role they play in influencing "common sense" and encouraging specific understandings of issues and phenomena; also, they suggest how the readers are supposed to react to the issue discussed. In this respect, representations can be considered an instantiation of a particular perspective on the theme of environmental change and migration, and as such they might involve interests of the groups that use these representations. Indeed, media representations (of environmental issues as of other topics) reflect and negotiate power relations and can be seen as "shaping knowledge and discourses between individuals and communities" (Boykoff, 2008, p.281). Our understanding and actions are influenced by media representations and discourse viewpoints: "media cultivate feelings along with meanings", so how we feel influences how we interpret a representation of a person, event, action (Lemke, 2014, p.86).

Media have the power to inform influential representations of environmental migration by means of repetition of the same sets of representations and attached values; these may influence social response to environmental migration and migrants. If representations become "standardised" and are normalised, their ideological nature is concealed, they are taken as commonsensical and accepted face-value. But discourse can also represent possible worlds which are different from the present one and related to projects of change: representations can be used to either keep people and other living beings separate from one another, or to cooperate and seek to "change the ways in which they relate to one another" (Fairclough, 2003, p.124). Representations and systems of values promoted in official discourses can be questioned, changed and reformulated, especially if they are inadequate for understanding phenomena (Hart, 2014, pp.4-5; Fairclough, 2003, p.124).

Official, authoritative and widespread representations of environmental migration, the environment and the people involved in this phenomenon influence human behaviour: they might for instance influence the degree of willingness with which people engage in specific behaviours and/or dismiss others. Also, in an equitable society, representation practices should include "the linguistic and cultural resources of minority groups"; if these are not available, mainstream groups should see it as "essential to have access to and demand such access as a matter of equity" (Kress, 1996, p.18).

2.2.4. Identity: alternative identities, alternative discourses

Discourses include representations of identities and the relationships that tie them together ("positionings") (McEntee-Atalianis, 2019, pp.20-21) (see Sections 2.2. and 2.2.1. and below in this Section). Identity is the social positioning of "Self" and "Other", it depends on the context, emerges in discourse, and involves processes of representation which situate the individual in relation to groupness, and groups in relation to other groups. Official and authoritative representations can inform a shared story about the Self and Other and how they relate (Blommaert, 2005, pp.203-205; Bucholtz & Hall, 2005, p.585; McEntee-Atalianis, 2019, p.11; Brubacker & Cooper, 2000, p.12). Identity is multiple, hybrid and multifaceted (Stamou, 2018, p.5; Iedema & Caldas-Coulthard, 2008, pp.1; Lemke, 2008, p.17). In the words of Joseph, "identities concern where we come from and where we are going, they give profound meaning to the 'names' we identify ourselves by, they supply the plot for the stories of our lives and are bound up with our deepest beliefs about life, the universe and everything" (2004, p.172; McEntee-Atalianis, 2019, p.138). More specifically, identities are socio-cognitive representations of a group or individual and they represent "attributes, relational behaviour, goals and values, which are constituted and negotiated by the interactions within a discourse community"; identities are shaped by texts that are linked to socio-political contexts and their ideologies (Koller, 2014, p.148). Identity it is the product of multiple and competing discourses and it results from the interplay between the individual, the social and the political (Stamou, 2018, p.5; Brubacker & Cooper, 2000, pp.8-9). The identities and relationships established within a society are reflected in language use; through language use speakers can either reinforce dominant social positions, or challenge and redefine them (McEntee-Atalianis, 2019, pp.25-26). Identities are constructed and expressed via a variety of means which go well beyond discourse; anyway, discourse is a major and powerful tool to shape identity (Benwell & Stokoe, 2006, pp.42-46, 116).

Among the several main theoretical approaches to identity, I will focus on the following: the "essentialist"/cognitive/psychological paradigm and the constructionist and socio-cultural paradigm. "Essentialist"/cognitive theories conceive identity as being "inside" persons, as a product of the mind and socialisation practices; identity is seen as a feature of a person and therefore is pre-discursive. Constructionist theories, instead, conceive identity as a socially-constructed category which reflects what people agree to be (or are perceived to be) in a given historical and cultural context, and identity is reflected and constituted in discourse. Constructionist approaches to identity stress the participatory nature of identity construction and the active role played by individuals in building their own identity and assigning identities to others (Benwell & Stokoe, 2006, pp.3-5, 9-10). In both approaches, identity is conceived as something people (and groups) can have without being aware of it (Brubacker & Cooper, 2000, p.10).

Gramsci and Foucault, among others, argue that individuals internalise social relations and norms through language, and so the individual is an effect of discourse and ideology. Theorists such as Butler, instead, see identity as discoursal but also performative: they highlight the performative agency of the individual. The idea of identity as performative emerged during the late twentieth century and it is the predominant view in the postmodern era (Benwell & Stokoe, 2006, pp.29-34).

Postmodern accounts of identity, like constructionist approaches, represent identity as fluid, multiple, fragmentary, unstable, fragile, an ongoing process of re-formulation constituted in discourse, also through interaction. This understanding of identity may be a response to the fragmentation, relativism and consequent intensification and speed of identity (re)formation in the "liquid society" of postmodernity (see Bauman, 2000; Stamou, 2018, p.1; Iedema & Caldas-Coulthard, 2008, p.1; Brubacker & Cooper, 2000, pp.8-9). Constructionist and performative approaches claim that identity is performed within cultural constraints, including social institutions and formal organisations. Postmodern accounts of identity instead state that people can cross boundaries and challenge the predefined structures used to understand and explain reality: identities may blend with one another and be transgressive of cultural norms.

The postmodern sociolinguistic view of identity adopted in this study argues that people perform diverse situated identities in relation to their interaction with different social groups and different social situations. Identity is conceived as involving both "private", psychological (intrapersonal) dimensions and "public", social (interpersonal) dimensions: identity includes individual experiences, values and beliefs as well as social dimensions constructed in social interaction. Individual (or intrapersonal) dimensions consist in personal, experiential and

psychological-cognitive characteristics of the subject, such as memory, affect, attitudes, beliefs, dispositions, values, motivation; social (or interpersonal) dimensions consist in macro socio-political and socio-cultural discourses and ideologies and micro context-dependant social practices. These dimensions are interlaced and mediated via language and they emerge through language as a comprehensive whole (McEntee-Atalianis, 2019, pp.12). Identity is therefore relational (it is achieved in social interaction), linguistic-discursive (it is constructed and manifests itself in discourse), and multi-modal or semiotic (it manifests itself in extra-linguistic/discursive semiotic symbols such as gesture, posture, clothes, etc.) (Iedema & Caldas-Coulthard, 2008, pp.1-2, 6-7, 9-10).

Identity is multi-level as it involves both active self-identification to a group characterised by a set of values, practices, etc.; and recognition of belonging to that group on the part of others. One does not simply define her/his own identity autonomously, but rather s/he is also grouped by and with others, often in processes of institutionalised social categorisation; these categorisations generally imply processes of negotiation of power between the groups (Krzyżanowski & Wodak, 2008, pp.98-99). Identities of opposing groups are often constructed in an ingroup/outgroup-dichotomy: identity construction is a process of social categorisation in ingroups and outgroups, namely in groups of "affiliation" and groups of "difference", and it depends on discursive strategies of self- and other-representation. Identities are the result of perceived similarity or difference between self and others; the "others" are recognised as either "belonging" or "not belonging" to the ingroup (Stamou, 2018, p.4; Krzyżanowski & Wodak, 2008, p.105). Self- and other-representation are interrelated: self-representation has implications for how others are perceived, with minor or dramatic changes in affect and behaviour. Also, self-representation evokes and reflects different worldviews: changes in representations of the Self are associated with "significant changes in salient values, beliefs, and cognitive representations of the social world" (Brewer & Gardner, 1996, pp.91-92).

In discourses about migration, the creation of sameness and difference often revolves around the idea of national identity which may legitimate practices of inclusion and exclusion of particular social groups (Stamou, 2018, p.4). Migration is a controversial issue which is often handled through a Manichean opposition between the tendencies to "welcome" and "reject" (Orrù & Mamusa, 2018, p.61). These tendencies are based on perceived and constructed "incompatibility"; in the case of migration, for instance, migrants are often represented as having sociocultural characteristics and ideological predispositions which preclude or render difficult their inclusion in the receiving society (Cap, 2018, pp.11-12). However, the concept of distance is constructed in discourse and it is therefore relative: in- and outgroups do not reflect

social reality, but are ambiguous and contested. Representations of identity suit the perspective and goals of particular social groups, so the concepts of "closeness and remoteness are manipulated in the service of specific constructions" (Cap, 2018, pp.1, 4-5; Brubacker & Cooper, 2000, pp.33-34).

As Bucholtz and Hall state, identities may be in part intentional, in part habitual and less conscious, in part the outcome of interactional negotiations, in part a construct of others' perceptions and representations, and in part an outcome of larger ideological processes and structures (2005, pp.585-586, 588). Identity construction can therefore be considered a kind of interactional social action that is not always intentional or conscious and that derives from the interplay between individual/group agency and social structures (Bucholtz & Hall, 2005, pp.606-607).

Poststructuralist and sociolinguistic theories conceive identity as based on multi-positioning; they claim that an individual belongs to multiple communities and not only to a single group. Identity categories are not clear-cut, but rather their borders are blurred and overlapping, and there is diversity within and across identity categories; subjects have multiple, contextually dependant identities, and as context changes, identities change (McEntee-Atalianis, 2019, pp.141-142) Hybridity is the outcome of the interplay of these multiple identities, and it is the result of compromise among pressure of different cultures and institutions (Iedema & Caldas-Coulthard, 2008, p.8; Lemke, 2008, p.33).

As discussed in Section 2.2.1., this study adopts a postmodern sociolinguistic constructionist understanding of identity as a discursive dynamic construction: identities are actively constituted in discourse, and people represent and evaluate identities by making specific aspects of these identities salient or backgrounded. There is interdependency between personal stories and cultural plotlines (discourses) because we position ourselves and others in relation to social and cultural expectations (Benwell & Stokoe, 2006, p.139).

The analysis of identity can be investigated through Positioning Theory (PT): Positioning Theory analyses the patterns of identity construction by which people position themselves and others. These "positions" are the possible identities made available by social power relations and powerful institutions, so positionality in the social system is determined by power, access to resources, opportunities, etc. Positionality is not only related to the position occupied in the social system, but it is also determined by an individual's particular experience: it is possible for an individual to negotiate, modify and refuse specific positions in the process of identity construction (Stamou, 2018, p.3; Iedema & Caldas-Coulthard, 2008, p.8; Lemke, 2008, pp.21, 25). Also, positionality implies that a person positions her/himself and others as well as is

positioned by others in interaction; it emphasises that the construction of identity acquires meaning in relation to the identities of other people. Ultimately, identity has implications in real-life contexts: attitudes, beliefs and behaviours predispose people to think and act in relation to Self and Other in particular ways, so representations of identities impact on social relationships and structures of power (McEntee-Atalianis, 2019, pp.233, 245; Stamou, 2018, p.7).

Critical Discourse Analysis adopts a constructionist understanding of identity, and it aims at identifying and raising awareness on the ideological frameworks informing identity representation in discourse, particularly in institutional contexts (Benwell & Stokoe, 2006, pp.42-46). Also, Critical Discourse Analysis accounts for the tension between identity as passively controlled by forces such as institutional power structures and identity as actively constructed by people, and it seeks to empower and encourage people to be aware and active identity builders (Benwell & Stokoe, 2006, pp.8-12).

Institutional bodies, like the media and organisations, and politics have the power to represent identities; often they do so in written texts (Stamou, 2018, p.3). They offer *representations* of events and they prioritise particular aspects of events, as well as certain perspectives or opinions; it is inevitable that they convey points of view (Baker *et al.*, 2013a, pp.3-8). These bodies are "powerful means for sharing information and opinions, playing a considerable part in everyday political communication" (Orrù & Mamusa, 2018, p.53); they do so while reaffirming and preserving their positive image and or the positive image of groups they support of that include their public.

Since the organisational and media environments are contexts of discourse construction, representations of identities are influenced by the knowledge established by power: powerful agents can use discourse to generate and propagate systems of ideologies which become dominant, "naturalised", and are often left unquestioned; these discourses in turn construct and regulate particular representations of identities (Benwell & Stokoe, 2006, pp.3-5; Hall, 2000, p.13). Identities may be problematic as social relationships are pre-inscribed in them and so identities condition interaction: an identity which does not favour access to identity-building resources does not offer people the capacity for articulating identity (Blommaert, 2005, p.206). Indeed, power differences do not guarantee that all interactants have the same opportunities and means for identity negotiation. The risk is that identities are the product of a system of social inequalities and are produced by powerful actors only (Bucholtz & Hall, 2008, p.407; Stamou, 2018, p.5; McEntee-Atalianis, 2019, p.13).

This is especially true of identities constructed and controlled by official organisations, like identities of migrants and people living in countries most affected by environmental change. Organisations are intrinsically related to power and are often seen to promote the interests of powerful groups, like the government or the media. Organisational expertise is socially recognised and legitimised through persuasion and consensus. With the power granted to them they may produce binary asymmetrical roles: the expert (organisational representative) invested with authority, and the non-expert (general public) who accommodates to the norms of the organisation (Benwell & Stokoe, 2006, p.89). Consequently, organisational bodies may represent identities and social groups in ways that have implications on people's agency, especially when there is no possibility for participants to negotiate their own identity (Stamou, 2018, p.3; Benwell & Stokoe, 2006, p.89). As a result, "ascribed identity" (namely identity attributed to someone by others) and "avowed identity" (namely group affiliation) may not coincide: individuals may be forced to embrace representations of their identity despite finding contradictions between it and their own perception of themselves (Wong Scollon & de Saint-Georges, 2014, p.67; Spencer-Oatey *et al*., 2014, p.580). The possibility to negotiate identity would enable new socio-cultural positionings (identities) to emerge and acquire social significance, especially in times of cultural and social change.

In this respect, postmodern accounts of identity claim the possibility to innovate and perform new kinds of identity and subvert normative identities. Individuals have the power to position themselves in a group and call into question established identities and creatively rework, reconfigure or transform them (Jaspers, 2014, pp.140-141, 144). Transgressive identities play a major role in socio-cultural change: since they overcome the borders of cultural norms, identities in socio-cultural system can be reconstructed. Also, they may help spreading discourses that do not advance the interests of small élites, resulting in a diminished dependence of individuals and their identities on organisations and institutions (Lemke, 2008, pp.18, 22). In this respect, ingroups are expected to work in solidarity and act collectively, so "groupness" can make collective action possible (Brubacker & Cooper, 2000, pp.7-8).

The opportunities for identity construction depend on institutional and social configurations and arise from conflicting demands from different social groups. In turn, social change depends on non-dominant discourses, practices, identities and how these are strategically used (Lemke, 2008, pp.39, 41; Machin & van Leeuwen, 2008, p.56). By modifying their linguistic behaviour, "naturalised" knowledge is weakened or undermined with innovations and alternatives, and new identities can emerge in relation to contextual circumstances, momentary exigencies, and social goals (McEntee-Atalianis, 2019, pp. 2, 22, 98, 101, 112, 220-221, 229, 231-235, 244).

Linguistic representations and their ideological background can be challenged in two main ways: either by promoting alternative linguistic features to be used, or by appropriating the linguistic features already in use and re-interpreting them in a way that challenges dysfunctional ideologies. Re-interpretation is especially useful when linguistic features are already established in discourse and use, and it would be difficult to replace them with new linguistic features. Indeed, re-interpretation would only change the connotative meaning of the linguistic feature in use, not its denotative meaning (McEntee-Atalianis, 2019, pp.31-32). For instance, in the context of environmental change and migration, re-interpretation could be used to propose an innovative idea of "wellbeing" which values shared benefit and rights rather than economic profit.

Given the active role of people in identity construction processes, identity is a product of socio-cognitively motivated, purposeful and meaningful decision, rather than a mere response to pre-determined social and institutional constraints (McEntee-Atalianis, 2019, pp.33-34). New identities can oppose and destabilise old perspectives, and fashion new intellectual trajectories and viewpoints, resulting in the performance of an identity which is different from the expected (McEntee-Atalianis, 2019, pp.2, 22-23, 49, 75-78, 98, 112, 233). New identities may impact on perceptions of in- and outgroups, leading to processes of reconfiguration of groups; the latter may eventually impact on larger-scale social patterns and on the way subjects perceive themselves and others (Jaspers, 2014, pp.140-141, 144).

Since identity involves deeply held values and beliefs, exploring identity in its ecological aspects and entailments can shed light on the causes of constructive action and care, or destructive action and disregard towards ecology. People's behaviour towards the environment has social and humanitarian implications as well. The investigation of the ecological dimension of identity can bring into question the environmentally problematic aspects of identity that are supported by the social system, and introduce alternative aspects which are environmentally considerate (Stibbe, 2015, p.103; Stibbe, 2018, pp.165, 168-170; Kuha, 2018, p.249). Generally, identity involves ingroup and outgroup distinctions which rely respectively on similarities among the members of a group and difference between the members of other groups; an ecological identity would likely emphasise commonality between the human sphere and the rest of the environment rather than difference, by means of establishing inclusion within groupings (Stibbe, 2015, pp.116-117; Heuberger, 2018, pp.347-348).

The representation of identity of environmental migrants is likely to refer to a (at least partly) de-territorialised self, even though it is possible to perform multiple and multifaceted identities at once (Blommaert, 2016, pp.1-3). A new concept in health and identity studies which is used

to refer to the sense of de-territorialisation and dislocation people experience as a result of environmental injustice is "solastalgia", a form of melancholia related to the distress caused by environmental change. This concept sheds light on the connection between human and ecosystem health: solastalgia can be described in terms of a feeling of pain, sickness and isolation caused by the state of one's home and territory and the inability to recognise it any longer because of change that has altered it (Albrecht *et al.*, 2007, pp.41-42, 44-45; Iedema & Caldas-Coulthard, 2008, p.2; Lemke, 2008, p.29). Innovation guarantees flexibility to a social system, which is fundamental to respond to large-scale phenomena like environmental change and migration. According to postmodern accounts of identity, identity is a moral site of power struggle against predefined roles, which can be transformed (Stibbe, 2015, pp.105-124).

This is of particular interest for the purposes of the present study, which focuses on identity representation in changing ecological and socio-cultural scenarios. The importance of questioning dominant representations of identity lies in the fact that such representations may run counter to the experience and interests of those who are represented, especially less-powerful groups like migrants and origin communities (McEntee-Atalianis, 2019, p.50). Negotiation and refashioning are powerful instruments to decide what should be given salience and importance in society, and in authenticating and legitimising identities (McEntee-Atalianis, 2019, pp.133, 136).

In this respect, it is worth investigating representations of environmental migration and the identity attributed to all participants in this phenomenon and see whether they can be represented in a way that does not go against the interests of the less powerful and helps approaching environmental migration positively and purposefully (McEntee-Atalianis, 2019, p.8). It is especially interesting to investigate how identity categories in the context of environmental migration are used to categorise and/or label participants, and whether participants themselves have the possibility to either draw on or challenge these categorisations (McEntee-Atalianis, 2019, pp.10, 14-15).

To conclude, a critical analysis of representations of identity and the ideologies and power relations underlying them in official discourses of environmental migration needs to be carried out before these discourses emerge as hegemonic. The analysis needs to be contextualised as a product of a particular historical viewpoint in time and space, an "interdiscursive pattern […] of sociocultural and historical influence", in order to be critically assessed (Blommaert, 2005, p.234; McEntee-Atalianis, 2019, p.14).

Chapter 2 has provided an overview of the theoretical approach adopted in this study, discussing its innovative as well as its controversial aspects, and contextualising it in its linguistic background. On the grounds of the theoretical framework exposed in this chapter, Chapter 3 introduces the methodological approach for the analysis of data.

3. DATA AND METHODOLOGICAL APPROACH

Chapter 3 presents the methodological framework for the study. More specifically, it introduces and discusses the two main components of the methodological approach, namely corpus-assisted analysis and eco-critical discourse analysis; it explores the data for the analysis in terms of text type (see also Section 2.2.2.), source and criteria for selection (Section 3.2.); it describes the corpora built and adopted for the analysis; and it presents the criteria for qualitative analysis.

3.1. Data and methodological approach

3.1.1. Data and criteria for selection

The analysis is based on two specialised corpora built *ad-hoc* for this study and representing the discourse of environmental migration: a corpus of publications of international organisations which is the primary focus of this study and, as such, is the main corpus, the "node corpus" (Gries & Newman, 2014, p.11) (International Organisations Corpus, IOC) (see Section 3.1.2.); and a corpus of news articles published internationally as a means of comparison to the node corpus (News Corpus, NC) (see Section 3.1.3.). These two corpora are compared to the corpus English Web 2015 (enTenTen15) which is a corpus of contemporary up-to-date English language; in this study it is used as reference corpus to compare language use in the other corpora (see Section 3.1.4.). The texts of the node corpus were selected to guarantee that the corpus be representative for the purposes of this study in terms of quantity and content of material (see Section 3.1.2.). The News Corpus was built to match the characteristics of the node corpus (International Organisations Corpus) and be comparable to it. The News Corpus was built with a selection of news articles retrieved from a query search in LexisNexis Academia (see Section 3.1.3.).

The International Organisation Corpus and News Corpus are further subdivided into sub-corpora in order to gain better evidence of how linguistic patterns of interest are distributed across the corpora and therefore are representative of each corpus or sub-corpus. The corpora are relatively small-sized -they contain respectively 817.140 (IOC) and 64.233 words (NC) - but their dimension guarantees representativeness of the discourse they stand for (see Sections 3.1.2. and 3.1.3.). Each corpus is a representative collection of texts from each "voice" selected (organisation, newspaper outlet) (see Section 2.2.1.) considered within the time span chosen (see below in this Section); so the size of the corpora is determined by the amount of text produced by each organisation or news outlet. The size of the corpora and difference in size between the corpora respond to the purposes of the study, so selection and compilation

procedures justify them. Koester (2010, pp.67-68) and Flowerdew (2004) argue that a 250.000 words corpus is commonly agreed to be a suitable dimension for a small-sized corpus, even though there is no ideal corpus size. Corpus size depends on the purposes of the study and what is being investigated: it is important that the corpus is designed to be representative.

The texts analysed in the present study were first published during the decade 2008-2018 which saw the development of discourse about environmental migration. Environmental migration is a topic that has developed relatively recently and only became relevant for organisations and media from the late '00 (see Section 1.1.). Therefore, choosing to analyse documents and articles published from 2008 is a way to gain insights into this topic as object of debate in the international official agenda. The gradual interest and growing concern about environmental migration had an influence on media discourse: news discourse on environmental migration is investigated during the same period of time. The texts of the News Corpus show how representations of environmental migration are dealt with by mainstream news media players and communicated to general publics. Representations of environmental migration in news are of great interest because they capture dominant media views which might promote particular ways for people to respond to the issue of environmental migration (see Section 2.1.).

The methodology for the study involves a combination of corpus-driven and corpus-based approaches, "the former lets the analysis be driven by whatever is frequent or salient in the data, the latter allows users to test pre-existing hypotheses" (Baker *et al*., 2013b, p.259): corpus-assisted analysis is complementary to qualitative analysis (see Section 2.1.2.). Qualitative analysis will be carried out on a limited selection of texts from the corpora which is chosen as representative of each corpus and is investigated in depth through close manual analysis. The texts for qualitative analysis will be retrieved using ProtAnt, a freeware tool "designed to profile corpus texts and rank the texts by the degree to which they are prototypical of the corpus as a whole" (Anthony & Baker, 2015, p.277) (see Section 5.1.). The manual analysis will focus on texts representative of the corpora: the texts will provide a representation of the discourse on environmental migration published by international organisations and by newspaper outlets in a variety of countries in the world. Qualitative analysis will be tested on and supported by evidence emerging from corpus-based analysis (see Chapters 6 and 7).

3.1.2. The International Organisations Corpus (IOC)

The IOC was built with 51 texts retrieved manually from the web and saved in pdf format; data were collected according to thematic relevance and text-typology and all texts collected make explicit mention of the migration-environmental change nexus.

Various types of publications were selected as data in order to provide a comprehensive and representative outline of the discourse of organisations. ProtAnt was used to verify that the texts selected for the analysis belonged to the same or a similar text typology and therefore could be collected in one single corpus. The programme ProtAnt analyses a large collection of texts and generates a list of "most prototypical" to "least prototypical" text based on their number of keywords (see Section 4.2. for a definition of keyword) (Anthony & Baker, 2015, p.277). Once verified that the texts could be considered as prototypical (or representative) of the same text typology (see below in this Section and Sections 2.2.2. and 3.1.3.), with only slight differences between them, they were collected in a single corpus, the International Organisations Corpus (IOC).

Text type slightly vary in genre, discoursal function, and interpretative typology (register); nevertheless, I have chosen to collect all texts in one single corpus because they are representative of the discourse on environmental migration shaped by organisations. This choice is also justified because the present study is not concerned with doing genre analysis but rather with analysing the representations from a particular social group across its communication. Texts share content topics, but differ in terms of length or size and priority of topic or topic organisation. They generally include an outline of the phenomenon of environmental migration, a description of the policies adopted to the present day and new policies proposed, and an explanation of the role played by a specific organisation in addressing the phenomenon; some texts privilege one aspect over another (see Section 2.2.2. for a thorough discussion of text types).

The texts were selected not only because they discuss the same topic: there is also an official relationship between the organisations that commissioned the texts. The UN is a rather loose organisation which includes and/or collaborates with "smaller" bodies like the IOM. Therefore, possibly, the texts selected also share some linguistic features, information organisation and discourse startegies. In this respect, each document was checked before including in the IOC to make sure that each text covers similar themes and is organised in a similar way as mentioned here below.

The texts selected share:

(i)   the same or a similar informative and explanatory-argumentative function:

-   they combine the transmission of explanations of the phenomenon of environmental migration, its circumstances, and the outline of policies with a rather generic argumentative purpose to persuade the reading public of the representations provided in the text;

- they are complementary texts, namely texts that combine with paratextual elements, tabs and figures, and they are subdivided into thematic blocks; there is a gradual increase in the information related to the main theme by means of subthemes and elaboration via exemplifications and/or images;

- they provide an evaluation of the policies discussed and proceed by logical argumentations, often related to empirical evidence, authoritative references, examples and facts.

(ii)   the same or similar participants in the communicative exchange and a similar output:

- the same sender: the texts are formulated or commissioned by a public authority; thus they are official and formal texts produced by an expert, committee, institution or organisation;

- a similar receiver: the receiver is a general public as can be inferred from the output and structure of the publications which aim to ease its fruition from a public of non-experts.

(iii)   the same or a similar interpretative modality required by the texts: the texts are not-binding texts, namely they aim to inform the general public and provide explanations about the interrelatedness of environmental change and human mobility without proposing a binding interpretation of it.

To sum up, these are not-binding informative and explanatory-argumentative texts and are produced by a public authority to target a public of non-experts; they present and disseminate newly-acquired competences and knowledge from the research field of environmental change and human mobility, discuss theses, provide data, and present opinions. All texts are written in an early 21st century international English variety, within the sub-domain of organisational discourse (see Section 2.2.2.)

The sampling frame used to select the publications included in the IOC guarantees that the corpus responds to the three fundamental criteria of representativeness, sampling and balance. Representativeness indicates that the corpus is designed to represent a particular language or language variety; in order for a corpus to be representative it needs to relate to the principle of balance. The principle of balance states that the range of text types included in a corpus should be justifiable and appropriate for the purpose of the corpus. Finally, sampling means that the texts are selected as "samples" of a text type (Baker & McEnery, 2015b, p.5). Texts were collected manually from the web; manual selection does not guarantee that all texts published during the span of time considered for the analysis have been taken into consideration. Nevertheless, this choice is likely to be the most reliable to build a solid and consistent corpus: manual selection enables the analyst to exclude irrelevant publications and guarantee that all texts are thematically-relevant. No data from the time period of interest has been disregarded. Some texts have been excluded from the corpus as they were either too thematically wide-

ranging and exceeded the boundaries of the topic of analysis; or they were part of a series of publications, so their similarities in terms of style and linguistic choices might have skewed the results of the analysis.

All texts underwent a process of "cleaning". "Cleaning" a corpus is part of the process of corpus-based discourse analysis; it means eliminating consistently all those textual features, such as indexes, tables, etc., that do not contribute to answering the research question of the study. To do so, all 51 pdf files were uploaded in Laurence Anthony's AntfileConverter, a freeware tool which converts pdf and Microsoft Word (.docx) files to plain text (UTF-8 encoding), and they were converted to plain text format files. Then, the texts were reviewed individually to remove all elements that could skew counts, condition the analysis and alter the data and whose removal has no consequence on the analysis. A breakdown of what was removed from the IOC texts follows: references to publishing organisation(s), title and frontispiece, page number, technical references to the document such as language adopted, copyright, name of authors, editorial information, disclaimers, list of contents, lists of abbreviations, list of tables, list of figures, headers, footnotes and numbers of footnotes, tables, boxes, diagrams and graphs, references, appendices, endnotes, annexes, acknowledgements, workshop activities, cover and final page; sometimes section numbers and forewords were removed too when not informative. These elements were removed because they can corrupt counts derived from the corpora, which are an important support for qualitative statements and comments. Moreover, sentences that were divided during the process of conversion were re-organised in order to visualize them properly as in the original text.

The IOC was created on 17th September 2019 and it includes 51 documents (see Table 3.3.); Table 3.1. provides the details of the corpus.

	sentences	lemmas	words	tokens
IOC	28.986	21.671	817.140	950.189

Table 3.1.: breakdown of the IOC: number of sentences, lemmas[2], words, tokens[3].

The three international organisations whose publications are included in the corpus are listed in Table 3.2. in alphabetical order; the number in brackets indicates the number of texts per organisation selected for the analysis.

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[2] Lemma is the **basic form** of a word, typically the form found in dictionaries (Sketch Engine 1).
[3] Token is the smallest unit that each corpus divides to (word form, punctuation, digit, etc.) (Sketch Engine 2).

International organisation	Number of texts
EU	5
IOM	30
UN	16

Table 3.2.: breakdown of the international organisations whose texts are included in the IOC: number of texts for each organisation.

A breakdown of the number of publications selected for each organisation for each year of the decade 2008-2018 can be found in Table 3.3. which provides an outline of the amount of material published each year of the decade by each organisation; this table helps contextualise the development of the discourse of environmental migration as distributed in time.

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOT
EU				1	1	1		1			1	5
IOM	4	1			1	1	6	5	6	5	1	30
UN	1	1		1	2	2	4	1		3	1	16
												51

Table 3.3.: breakdown of the IOC: number of articles collected from each international organisation website.

The corpus is organised into sub-corpora (sub-sections) that allow a more fine-grained analysis. More specifically, the IOC is subdivided into three sub-corpora, each containing the publications of one organisation, namely IOM (International Organisation for Migration), UN (United Nations), and EU (European Union). The sub-corpora differ in size because the discourse of environmental migration is developed quantitatively differently by each organisation: each organisation contributes with a different number of publications on the topic, making the amount of texts produced by each of them uneven.

For the purposes of the present study, I thought it best to collect all relevant texts published in the time span considered; whereas I decided not to collect the same amount of material for each sub-corpora because it is unnecessary in terms of statistical counts, as these can be normalised; also the process of further selection of the texts collected might have compromised the validity of the data and resulted in a "cherry picking" process. Sub-corpora allow the analyst to see whether there are differences between them and whether the variation between them is random

or "socially" significant; they help identify variation and regularities in language use by different "voices", giving evidence of linguistic findings. More specifically, sub-corpora allow a more complete investigation of language use in the discourse of environmental migration by the three international organisations represented in the IOC.

Table 3.4. provides the details and statistical measures of the sub-corpora of the IOC.

	tokens	% of IOC
EU	102.498	10,787
IOM	560.618	59,001
UN	287.073	30,212

Table 3.4.: breakdown of the statistics of the sub-corpora of the IOC: number of tokens and percentage for each sub-corpora.

The IOC was uploaded and tagged in Sketch Engine using the English 3.3 TreeTagger pipeline v2 which consists of a "Part of Speech" (PoS) tagset with modifications that are specific of the Sketch Engine tool. The tagset[4] that derives from the tagging procedure enables term extraction and the analysis of collocations (Section 4.2.).

ProtAnt will be also used to empirically choose the texts selected from the IOC for close individual analysis. Ten texts will be selected to be analysed individually as discussed in Section 5.1.

3.1.3. The News Corpus (NC)

The News Corpus was created with 88 texts collected from the dataset LexisNexis Academic and saved in plain text format; texts were retrieved by searching for relevant words and phrases on environmental migration (see below in this Section). LexisNexis Academic was chosen as a database for collecting news items as it is a large collection of material from different domains; it contains over 15.000 sources and it is constantly updated. More specifically, Lexis Nexis Academic contains a great number of newspaper outlets and provides news articles in full-text.

The NC is a collection of news items of major international newspapers. It was compiled with articles published by media outlets from diverse geographical areas of the world in order to build a representative and comprehensive corpus of news discourse on environmental migration.

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[4] Tagset a list of part-of-speech tags used in a corpus (Sketch Engine 3).

The NC focuses on written news in order to provide some boundaries of appropriateness to the study and establish a coherent comparative and contrastive analysis focusing on written-to-be-read discourse (see Section 2.2.2.). The news articles included in the NC were published by broadsheet newspapers (online version). They are informative articles that blend features of a specialist report and an opinion article: the critical and "factual" description of events is sometimes intertwined with argumentative sections that reflect the personal stance of the author or newspaper outlet (see Section 2.2.2.).

To ensure that the news articles were collected according to thematic relevance, the number of terms used to retrieve the data from the database (query or search terms) was limited. The string of query terms chosen to retrieve news texts from LexisNexis Academic is the following:

"climat! OR environment! AND migra! OR refuge!"

Query terms were chosen as to include in the results almost all their possible variants (! symbol). The aim was to build a representative corpus of news discourse on environmental migration with articles that include at least one of the words "climate", "migration", "environmental" and "refugee" (even though to the present day the concept of refugeeism cannot be legally applied to any type of migration triggered by environmental reasons). Most texts include all four query terms. Establishing an amount of search terms to retrieve the texts was a challenging task: the specific topic can be referred to using a variety of terms and labels. The query words used to retrieve the material for analysis were chosen on the basis of the academic literature on environmental migration and its context.

Within the results retrieved in the newspaper section of the Lexis Nexis Academic database, I selected the first ten newspaper outlets that published the highest number of news articles on environmental migration. This process does not guarantee that the outlets selected are those that published the highest number of news articles on environmental migration in absolute terms, but it guarantees relevance to this research topic and it is likely to select outlets that display a concern towards environmental migration. One of the retrieved outlets, *European Union News*, was replaced by the next one in the list of outlets because the material it provides diverges visibly from the genre of news discourse needed for the NC and it is more similar to the organisational language of the IOC (see Section 2.2.2.). Also, the texts are more similar to the EU discourse included in the IOC than to news items, and therefore not suitable for the NC, as it would have likely misled the data analysis.

The texts were selected in order for the corpus to respond to the criteria of representativeness, sampling and balance reported in the previous section (Section 3.1.2.). The number of news articles retrieved from the query search was by far quantitatively superior to the number of texts

included in the IOC and needed to be selected: data were selected as evenly as possible according to thematic relevance in order to let the patterns emerge from the texts, rather than choosing the texts that aligned to a specific worldview. In order to build a corpus of news articles that could be compared to the node corpus IOC, I calculated the average length (number of words per article) of ten articles from each of the ten outlets selected for analysis and collected a number of news articles to build a corpus whose dimension is comparable to that of the node corpus. I collected almost ten articles for each news outlet, which made the NC roughly 1/10 of the IOC in terms of number of words; normalisation[5] of data extracted from the IOC and NC accounts for differences in the size of the two corpora. Articles from almost each year of the decade 2008-2018 were selected whenever possible. All articles were checked to make sure that only relevant ones were included in the corpus. Sometimes absence of articles on the topic or thematic irrelevance of the articles excluded them from the corpus; for instance, news items dealing with the topic of environmental migration of animals were obviously excluded from the selection.

All texts gathered as material for analysis underwent a process of cleaning, as was done for the IOC. Here is a list of what was removed as unnecessary and/or potentially misleading for the data analysis: information about the source of the texts and/or name of the publishing outlet, length of articles in number of words, publication type (proposed categorisation), language of published material, copyright statement.

The data were collected from major international mainstream English-language press media, thus including different varieties of English. A 3-3 balance between the number of international organisations and newspapers outlets included in the IOC and NC was avoided because it would limit the analysis to selected "voices" only, and therefore it would not provide an outline of the representations of environmental migration that are most typical of prevailing news discourse. A general news corpus with texts from a range of international sources seems most effective for answering general questions and make general claims about representations of environmental migration worldwide. Summing up, the corpus takes into account as many relevant voices as possible among outstanding authoritative news broadcasters in order to provide an outline of the discourse of environmental migration as internationally representative and comprehensive as possible.

The NC was created on 17th September 2019 and it includes 88 documents (see Table 3.7.); Table 3.5. provides the details of the corpus (see Section 3.1.2. for a definition of the terms).

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[5] Normalisation refers to statistical testing for measuring variation between differently sized corpora (Gries, 2010, p.7; personal conversation with prof. Robert Poole).

	sentences	lemmas	words	tokens
NC	2.577	6,629	64.233	73.918

Table 3.5.: breakdown of the NC: number of sentences, lemmas, words, tokens.

All news articles were published between 1 January 2008 and 31 December 2018 in order to match the period of publication of the IOC texts. The ten newspaper outlets whose articles are included in the corpus are listed in Table 3.6. in terms of decreasing number of articles published on environmental migration as retrieved through the query terms search; the number in brackets indicates the number of articles per outlet retrieved in Lexis Nexis Academic.

News outlet	Number of articles
US Official News (US)	82
The Guardian (London)	79
[*European Union News*] (excluded from the corpus, see above in this section)	21
BBC Monitoring: international reports	20
The New Nation (Bangladesh)	19
The New York Times (US)	18
Right Vision News (Pakistan)	18
Sydney Morning Herald (Australia)	16
IBSN (India)	15
The Toronto Star (Canada)	15
Camberra Times (Australia)	13

Table 3.6.: breakdown of the newspaper outlets whose articles are included in the NC: number of articles for each outlet.

A breakdown of the number of news articles selected for each outlet for each year of the decade 2008-2018 can be found in Table 3.7.; for the sake of clarity, each newspaper outlet is reported with the number assigned to it in the above list, not with its full name. Table 3.7. provides an outline of the amount of material published each year of the decade by each outlet, along with the distribution in time in the diverse geographical areas considered for the analysis; this helps contextualise the development of the discourse of environmental migration in time and space.

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOT
1							1	2	3		4	10
2	1	1	1	2				2	1	1	1	10
3	3	1			1	1		1	3			10
4				2	1	2	1	1	2	1		10
5						1	1	1	2	1	2	8
6		6	3	1								10
7		3	1			1		2		1		8
8								1	3	2		6
9	1		1		1	2	2	1	1		1	10
10	1	1						1	1	2		6
												88

Table 3.7.: breakdown of the NC: number of articles collected from each newspaper outlet.

In order to make claims (or have the option to do so) about particular media outlets, the corpus is organised into multiple sub-corpora, each representing the discourse of each news outlet selected as source of data. The broad geographical areas represented by the sub-corpora are: Europe (*BBC*; *The Guardian*); North America (*The New York Times*; *US Official News*); Asia (*The New Nation*; *Right Vision News*; *IBNS*); Australia (*Sydney Morning Herald*; *Camberra Times*); and Canada (*The Toronto Star*).

Sub-corpora allow the analyst to investigate the lexical choices made by each newspaper outlet and the extent to which each newspaper aligns with the official terminology of international organisations.

Table 3.8. provides the details and statistical measures of the sub-corpora of the NC.

The NC was uploaded and tagged in Sketch Engine using the English 3.3 TreeTagger pipeline v2 (see Section 3.1.2 for more details on this tagging procedure).

ProtAnt will be further used to choose empirically the texts selected from the NC for close individual analysis. Ten texts will be selected to be analysed individually; the ten text selected for individual analysis are reported in Section 5.1.

	tokens	% of NC
US Official News	7.039	9,523
The Guardian	9.416	12,738
BBC Monitoring	6.885	9,314
The New Nation	8.075	10,924
The New York Times	9.423	12,748
Right Vision News	7.076	9,573
Sydney Morning Herald	5.656	7,652
IBSN	6.942	9,391
The Toronto Star	9.094	12,303
Camberra Times	4.312	5,833

Table 3.8.: breakdown of the statistics of the sub-corpora in the NC: number of tokens and percentage for each sub-corpora.

3.1.4. The reference corpus

The English Web 2015 corpus (enTenTen15) is a corpus of English made up of texts collected from the Internet. The corpus belongs to the TenTen corpus family: the corpora are built collecting only linguistically valuable web content and discarding duplicated or unwanted content. enTenTen15 was chosen as reference corpus for the present analysis because of three main criteria (Sketch Engine 4):

(i)   representativeness of many varieties of English;

(ii)   size;

(iii)   updating.

More specifically, enTenTen15 is a large-sized corpus of nearly 15 billion words of 20th and 21st-century English and it includes many types of English (Sketch Engine 4). Possibly, its representativeness in terms of language variety makes it the most apt corpus available for an analysis of texts that are likely to be written by a great variety of language users (native-speakers as well as non-native speakers). enTenTen15 is therefore appropriate for an analysis of publications written in nearly-technical international English by organisations operating internationally, as well as news discourse from world Englishes.

Since the present study investigates language use about environmental migration between 2008-2018, it is fundamental that the reference corpus covers this span of time as much as possible and is representative of the most recent tendencies in language use. enTenTen15 is a recent corpus built with texts published up to December 2015, when the corpus was collected. The

texts collected in enTenTen15 were downloaded in November and December 2015, so the most recent texts date back to that time. However, it is not possible to tell how old the oldest texts are: the tools used to build the corpus downloaded from the web all relevant material in English that was available in November and December 2015, but information about the date of publication is not provided on websites in most cases and when it is provided it cannot be processed in an automatic way by the tools. Therefore, only the crawl date (i.e. when a particular page was downloaded) can be processed (personal conversation with the Sketch Engine staff).

Overall, enTenTen15 is almost updated to present day in terms of language use, and this makes it possible to trace both language change over time and the emergence of new linguistic features and meanings related to the topic of environmental migration. Since enTenTen15 is recent and updated, it is likely that new and innovative linguistic features, like those referring to phenomena such as environmental migration, are included.

enTenTen15 is accessed through the text analysis tool Sketch Engine, which is also the chosen tool for the analysis of the corpora for the present study (see Section 3.1.5.).

3.1.5. Corpus tools and variables for analysis

The study relies on three main corpus analysis tools: Sketch Engine, AntfileConverter and ProtAnt. As discussed in Section 3.1.1., 3.1.2. and 3.1.3., AntfileConverter and ProtAnt are used to prepare the material for analysis; more specifically, AntfileConverter is used to convert all files to plain text format, and ProtAnt is used to verify that all files belong to the same or a similar text typology and to produce a selection of prototypical texts for close individual analysis.

The main tool used to carry out the corpus-based analysis of data is Sketch Engine. Sketch Engine was chosen because it allows access to the huge corpus of international contemporary English mentioned above: the reference corpus enTenTen15. Also Sketch Engine enables a thorough, comprehensive and informative text analysis, including the possibility for the user to build one's own corpus/corpora and create sub-corpora to get further insights into the corpora analysed. More specifically, the set of corpus-analysis tools available in Sketch Engine are:

- Word Sketch: to process the collocates of a word or phrase (multi-word) and other words in the co-text (Sketch Engine 5);
- Keywords: to extract one-word and/or multi-word units which are typical of a corpus/document/text and define its content (Sketch Engine 6);

- Word Lists: to extract frequency lists of parts of speech, word forms, or words containing specific characters (Sketch Engine 7);
- N-grams: to extract frequency lists of multi-word units (Sketch Engine 8);
- Concordance: to find particular examples in context (words, phrases, tags, documents, etc.) (Sketch Engine 9).

The focus of analysis are linguistic features that characterise the corpora; the aim is to provide an illustrative outline of the discourse and voices represented.

Entry point to the data which were used for this study include:

- keyword analysis: keywords include both the search terms used to retrieve the data from the web and the most typical terms in the corpora, retrieved through keyword extraction;

- frequency analysis: the most frequent words of the corpora are analysed to see which themes reoccur, also comparing word frequency lists from one corpus against another;

- collocational analysis of salient terms;

- comparisons between corpora to reveal preferences in language use (i.e. for instance, words or phrases which are not widely used or understood; newspaper choices and how they align with official terminology, etc.) (see Sections 4.1. and 4.2. for a more detailed description).

ProtAnt will then be used to select a sample of texts for close manual analysis; the data for the analysis will be selected by comparing and downsizing the IOC and NC, namely the two specialised corpora (Anthony & Baker, 2015, pp.278-279; personal communication with prof. Robert Poole). ProtAnt does a keyword analysis of the texts included in the IOC using the NC as reference corpus and then ranks them from most to least prototypical; the same, but reversed, procedure applies for narrowing down the NC (see Section 5.1.). The texts that are "most prototypical" are those which include the highest frequency of keywords: the texts where keywords appear most frequently are viewed as the most illustrative of the corpus. The top ten most prototypical publications and articles from each corpora will be selected for qualitative analysis. This procedure allows a certain degree of objectivity in the process of data selection because no pre-determined list of keywords is obligatory in ProtAnt; rather, the programme determines the keywords automatically and then ranks the texts accordingly (see Section 4.2. for a definition of keyword).

3.2. Corpus-based qualitative analysis: questions and criteria to interrogate the dataset

The corpus-based qualitative analysis is concerned with representations of social actors, situations and events (see Sections 2.2.3. and 2.2.4.). This section provides a description of the aspects of representation that are analysed in this study and it specifies the criteria that will be used to examine

representations of environmental migration, the participants involved in it and the actions they perform. More specifically, the analysis focuses on representations that are relevant to the topic of environmental migration, namely those of environmental migrants and communities of origin, communities of destination, and the environment.

From a linguistic point of view, the analysis investigates what is expressed in discourse and what is eliminated or backgrounded, focusing on the way something is expressed in text with other options available in the grammar and bearing in mind that linguistic choices influence understanding and action (Hart, 2014, p.2) (see Section 2.1.). Special attention is paid to the register and genre features (see Section 2.2.2.) adopted by international organisations and newspapers to communicate environmental migration to a general public. More specifically, the analysis investigates the repertoire of linguistic features related to particular represented identities, connecting the function of micro-level linguistic structures and features to macro-level representations of identities (Bucholtz & Hall, 2005, p.597). It explores representations in terms of text construction; linguistic features and the potential functions they perform; and rhetorical "moves" that contribute to building representations (Biber, 2014, p.239; Bhatia, 2014, pp.191-193; Fairclough, 2003, p.12).

The concept of genre refers to ways of "interacting discoursally" and it includes the setting of the events described; the participants and their role in the setting; the relationships between participants; and how they are formulated through language conventions and non-linguistic conventions (for instance, symbolism) -all such features are used as they serve particular goals in a given society. The notion of style refers to specific ways of using language to constitute and identify with particular identities (Fairclough, 2003, pp.26, 70, 159) (see Section 2.2.2.).

In order to answer the research questions of this study, a set of sub-questions is used to interrogate the texts of the dataset and explore the discoursal practices that characterise them. These sub-questions are: how do powerful "voices" -where "voice" is intended as a discursive means someone has at their disposal in specific contexts and conditions of use (Blommaert, 2005, pp.4-5, 68) (see Section 2.2.1.)- formulate their role and identity as well as others' role and identity? (see below in this Section and Section 2.2.4.); how is reference made to environmental migration and all participants in this phenomenon (environmental migrants, origin communities, host communities, etc.)?; how is the phenomenon of environmental migration related to the larger context in which it occurs?; how are causal relationships between environmental migration and its related events conceived? Given the influence these texts may have on the reading public, it is also interesting to see how audiences are addressed.

This critical analysis of discourse follows Fairclough's (1992, pp.64-65, 73-96) tripartite complementary division of discourse-as-text; discourse-as-discursive-practice; and discourse-as-

social-practice (see Sections 2.1. and 2.2.1.). Discourse-as-discursive-practice and discourse-as-social-practice rely on the interpretation and explanation of the way discourse is circulated and consumed by society and the ideological effects it has on it; while discourse-as-text focuses on the organisation of linguistic features in discourse. At the level of text, the research questions are: what identities are constructed? How? What are the linguistic devices and discourse features employed? At the level of discourse practice they are: why are these particular identities constructed and why in this way? Who is involved in the discursive practices and in what role? What discourse functions does the text realise? And at the social level they are: why are these particular identities constructed and why in this way? What ideologies are relevant? (Koller, 2014, pp.153-154).

The analysis will begin with a description of items of vocabulary and grammar, as well as the text structure and organisation of the information of the data selected (linguistic and discourse features for each aspect of representations are defined below in this Section), and it explores how these linguistic features and meanings are organised in "stories" and "representations" which appear to be typical or prominent in the dataset (see Section 2.2.3.). More specifically, I will examine the semantic relations (between elements of a clause, or higher-level semantic relations in a text), grammatical relations (between words in a phrase, phrases in a clause, clauses in a sentence), and lexical relations (co-occurrence between items of vocabulary, significant absences, etc.) occurring in the texts (Fairclough, 2003, pp.36-37, 89, 91; Martin & Rose, 2007, p.188, 261). The analysis will proceed with an interpretation of the potential ideological impact these aspects have for "stories" and "representations", and how these "stories" and "representations" might influence the public's understanding and social behaviour. The process of interpretation will be supported by corpus-based data.

The discoursal aspects of identity representation which this study investigates are: role, salience, erasure, identification/otherisation, legitimation/illegitimation, and evaluation. These aspects have been chosen as the most suitable to shed light on the modalities by which identities are represented and particular identities are privileged while others are silenced or disadvantaged (McEntee-Atalianis, 2019, p.104). While analysing certain features in discourse may be of help, there is no definitive list of features, and any list should be handled flexibly enough to incorporate features that are particularly important for the texts under investigation (Koller, 2014, p.154).

1) **Role**: participants in social practices are participants in a role or multiple roles, and representations establish the roles or social relations between participants. Participants can be involved in social practices (or activities) in different ways, and transitivity expresses the role (and relationships between the roles) participants take up in a process (Bartlett, 2014, pp.44-45; van Leeuwen, 2007b, pp.42-43). Therefore, representations of roles deal with the

kind of activities undertaken by participants and how participants undertaking these activities are described and classified (Martin & Rose, 2007, pp.16-17). The grammatical role attributed to participants may not always coincide with their sociological role in a given activity; it is important to investigate patterns of transitivity -namely who does what to whom, and how and why- in order to understand the roles participants take up in a process (Bartlett, 2014, pp.44-45; van Leeuwen, 2008, pp.23-24).

Participants can be represented in terms of agentivity according to the semantic role they are attributed: they can be represented as "agent" or "patient" with respect to an action, that is, they either perform or are the recipient of an action. As active agents, participants are "intentional agents who perform actions in a deliberate manner and therefore are in control of their actions"; as passive agents, they are "powerless agents on whom actions are performed thus not being in control of what they do" (Fetzer, 2014, p.378). More specifically, the main roles a participant can take up are: "agent", "affected", "beneficiary", and "instigator" (van Leeuwen, 2008, pp.7-9, 33-34). The agent is the performer of an action, the affected is the goal or recipient of an action, the beneficiary is someone who positively or negatively benefits from an action, and the instigator is someone who spurns somebody to perform an activity.

The way actions are represented may either contribute to specifying or erasing agency of participants (Fairclough, 2003, p.135; Bartlett, 2014, pp.44-45); in these terms, there can be either activation or passivation. Activation happens when the participant is represented as playing an active role in an activity; while passivation happens when the participant plays a passive role in relation to an activity, either as subjected to it or as its recipient ("beneficiary"). When passivated, the participants' capacity for agentive action is limited and their subjection to processes is accentuated (Fairclough, 2003, p.150). Passivation includes processes that have an inherently passive sense (for instance, "undergo", "experience", "suffer"), even though grammatically they are active processes. As there is no neat fit between sociological and linguistic categories, the grammatical agent can be sociologically patient, so activation and passivation need be analysed in the ways they are realised linguistically (Fairclough, 2003, p.89).

According to the Hallidayan categorisation of processes, there are three main types of activities participants can be involved into: material processes, mental processes, and relational processes. With respect to such categories of activity, an activated participant can be an "actor" in a material process, a "senser" in a mental process, and an "assigner" in a relational process; while a passivated participant can be a "goal" in material processes, a

"phenomenon" in mental processes, and a "carrier" in a relational process (Halliday & Matthiessen, 2004, pp. 170-171; van Leeuwen, 2008, pp. 7-9, 32-34, 37, 56-59; Fairclough, 2003, pp.141-145). So, material, mental and relational processes convey how participants are involved in events and activities (social practices) (Bartlett, 2014, pp.44-45).

A further distinction between representations of activities includes material action and semiotic action: material action is represented as a process of doing (i.e., rebelling, resisting, attacking etc.), while semiotic action is represented as a process of meaning by which an action is described instead of explicitly named. Material and semiotic representations are likely to convey a different attitude towards the action and participants described (van Leeuwen, 2008, p.59).

Agency and roles are ascribed through the perceptions and representations of others; they can be assigned in conformity to specific ideologies and social structures. Participants may therefore disagree with the role they are attributed and might perceive it as unintentional or unconscious (Bucholtz & Hall, 2005, pp.606-607). Nevertheless, agency may also include potential reactions to given activities and identities: linguistic features do not necessarily correlate to pre-specified social categories, but "can represent a construction of and (dis)alignment from, or to, the traits/qualities/values of others who are positioned in ideological space", so the way in which a role is performed may express a particular identity (McEntee-Atalianis, 2019, p.235; Goffman, 1974, p.573; Stibbe, 2015, pp.107-108). In other words, participants may resist the role attributed to them, object to it, and take up alternative roles.

Representations can reallocate roles and rearrange social relations between participants in accordance to particular purposes and goals. More specifically, activities may be sequenced and ordered in particular ways to attribute specific roles and responsibilities to participants; semantic relations express the way information is organised. Mainly, semantic relations are instantiated via conjunctions that can be additive ("and"), causal ("because", "so", "in order to"), conditional ("if"), temporal ("then"), related to elaboration, exemplification, explaining and rewording ("because"), and contrastive/concessive ("but") (Fairclough, 2003, pp.89-139; Martin & Rose, 2007, pp.16-17, 112-113).

2) **Salience**: salience has to do with noticing things and have them prominent in our minds by recognising or attributing them value. Salience patterns are linguistic representations of an individual or group, an area of life, an activity, a phenomenon etc. as salient, important and worthy of consideration (Stibbe, 2015, p.162). Salience and erasure (see below in this Section) can be thought of as the extremes of the same line: the more linguistic

representations of an individual or group, an area of life, an activity, a phenomenon etc. move from salience towards erasure, the lower the salience attributed to that particular individual or group, area of life, etc. The lowest degree of salience can be associated to erasure, namely when a particular area of life is not even mentioned or is only alluded to in discourse. Drawing from the work of Kress & van Leeuwen on multimodality, salience refers to "the degree to which an element draws attention to itself", due for instance to its size, its detailed or blurred definition/description, its contrast to other elements, and its foregrounding or backgrounding (2006, pp.177, 210). Participants are endowed with specific information values (that is, they are represented as more or less worthy of attention in relation to other participants) based on the way in which they "are made to relate to each other, the way they are integrated into a meaningful whole", selecting some as more important, more worthy of attention than others. Indeed, participants and elements of a representation are considered to be "items of information" which are more or less important: the element or participant which is in the foreground, and is the largest element in the representation, in sharper focus, in contrast with other elements, is likely to be the most salient and worthy of attention (2006, pp.176, 201). So salience relates, for instance, with the distribution of information in a clause (see "thematisation" below in this Section); but also with representations in terms of "quantity" and intensity.

Salience patterns help identifying the main aspects of the world and themes that are vividly represented in a text; also, they can be revealing of social differences, with particular social identities being prominent in text and not others (Fairclough, 2003, pp.40, 129, 135; Stibbe, 2015, pp.162.163). Salience, as well as erasure, is also concerned with voices included and excluded from the text (see Section 2.2.1.) and to the relation established between the authorial voice and other voices (Fairclough, 2003, p.192). Therefore, the analysis of salience patterns relies on the investigation of lexical items that emphasise specific participants or activities (Stibbe, 2014, p.167).

There are many ways to formulate salience in written texts. First of all, social actors can be included or excluded from the text; they can be referred to with either nouns or pronouns; and their role can be activated or passivated. More specifically, linguistic modalities to formulate salience include the arrangement of events (thematisation and position within the sentence); individualisation; specification; and forms of address. As far as thematisation is concerned, fronted material (namely linguistic material put at the beginning of a sentence, period, etc.) is considered thematically important, salient and prominent; for instance, it might refer to contextual information which is necessary to understand what comes after

(Gee & Handford, 2014b, p.2; Fairclough, 2013, p.19; 2003, pp.145-146; Martin & Rose, 2007, pp.139, 177, 190; Gee, 2011, pp.65-66). More generally, thematisation is concerned with the organisation of the clause as a message, of text into units of information (the information structure) (Halliday & Hasan, 1976, pp.27, 299, 325). Specification has to do with how much an individual or group, an area of life, an activity, a phenomenon etc. is closely described: the more someone or something is determined and concrete, namely is represented through fine-grained description, the more s/he/it acquires salience within the text. Individualisation is similar to specification: it refers to participants and how much they are singled out from the mass and described as individuals with very specific characteristics, experiences, ideas, etc. (van Dijk, 2014a, p.598; Fairclough, 2003, pp.137-139; van Leeuwen 2008, pp.35-37). Forms of address provide details about the person being talked about: for instance, reference to social actors can be made in terms of an activity they do, an occupation, etc. ("functionalization"), using personal or possessive pronouns, proper names, or nouns ("nomination") (Fairclough, 2013, p.46; van Leeuwen 2008, pp.40-42, 46-48; van Leeuwen, 2007b, pp.52-55). Also, references to the emotions of participants and description of their behaviour, contribute to individualisation (Bednarek & Caple, 2012, p.48).

Legitimation of participants and social practices can be used to give them salience by making them stand out as commonly acknowledged; also, evaluation can add salience to a representation, if positive in a positive way, if negative exaggerating its negativity (Fairclough, 2013, p.19; van Leuuwen, 2007, pp.94-100).

Salience can also be used as an instrument for re-minding, that is, calling that someone or something that is backgrounded is brought to the fore as important or worthy of consideration; in this sense, salience can be a means for questioning and resisting imposed categories of value (van Leeuwen, 2008, pp.35-37, 39-42, 46, 48-50; Stibbe, 2015, pp.161-162).

The main linguistic features contributing to salience are: the use of nouns and pronouns; repetition and synonyms referring to the same concept; the presence of titles and credentials to refer to specific individuals or groups; nomination with proper nouns; categorisation, typically realized by a noun formed through suffixes such as -er, -ant, -ent, -ian, -ee, -ist, -eer; active verbs and speech act verbs. "Identifying a specific person by name [...] is arguably more personalizing than referring to individuals by a more generic label" (Bednarek & Caple, 2012, pp.53-54): this may include proper names, social categories (such as age, gender, ethnicity, sexual orientation, religion, etc.), activity/job, kinship relations, and physical characteristics among other (Fairclough, 2013, pp.19, 36, 41-42, 56; 2003,

pp.145-146). The granularity of description is another relevant instrument for salience: fine-grained, specific descriptions are likely to convey more salience to the subject represented (van Dijk, 2014a, pp.598-599). Also, the so called "list of three" or tricolon (i.e. a list of three elements mentioned in sequence) is often used to highlight the topic dealt with, creating salience, memorability and persuasiveness (Goddard & Carey, 2017, pp.81-82).

3) **Erasure**: erasure is the dismissal of aspects or people as unimportant or unworthy of consideration and implies that they are backgrounded in our minds. It refers to the absence of certain events, participants, areas of life, etc. from discourses and the texts they shape; it can therefore be applied both to participants and to their actions. When something is erased, it is present in reality but it is overlooked, sidelined, denatured, or deliberately ignored in a particular discourse (Stibbe, 2015, p.146; 2014, pp.585-586). More specifically, erasure patterns either refer to linguistic representations of someone or something as backgrounded, when mentioned; or to the absence of any such representation from the text. Because of its very nature, erasure can hardly be identified in text by particular linguistic elements (van Leeuwen, 2008, p.18; Hart, 2014, p.40). As far as backgrounding is concerned, the individual, group, area of life, activity, etc. is not completely excluded from the text, but rather s/he/it is de-emphasized.

The main linguistic and discursive ways to erase someone or something from a text include the arrangement of events; ellipsis or absence/exclusion from the text; backgrounding via generalisation and indetermination; abstraction; the use of rhetorical tropes like metaphors (see below in this Section); and processes of objectification. For instance, there is a high degree of erasure (or low degree of salience) whenever something/someone is not mentioned; is mentioned at the end of the list in a list order; is rendered through coarsely-grained description; is depicted as worthy of attention only in terms of her/his/its usefulness for others (especially humans); or when anthropocentrism becomes the preferred viewpoint from which to describe, think and talk about other areas of reality (Martin & Rose, 2007, p.139; van Dijk, 2014a, p.598; Fairclough, 2003, pp.137-139; Stibbe, 2015, pp.145-146, 149-150). For instance, nameless characters can be considered non-individualised participants that fulfill passing, unimportant roles; this process of impersonalisation may serve the purpose of backgrounding their identity and deprive them of authority (van Leeuwen, 2008, p.47).

More specifically, linguistic features contributing to erasure are: pronoun and noun use; collectivisation (or collective representations of social actors) that may impersonalise specific social actors (Fairclough, 2003, pp.145-146; Hart, 2014, pp.34-35); hyponyms,

metonymies, mass nouns, abstractions; grammatical embedding (compact lexical and grammatical structures like "human movement") (Stibbe, 2014, p.587); passivation, agentless passives, and passivation where social actors are represented as things; non-finite clauses which function as a grammatical participant ("to stop"); nominalisations and processes realised by nouns ("support") and -ing forms ("stopping") which enable the concealment of agency, the expression of causality and the attribution of responsibility (Fairclough 1992, p.236; Hart, 2014, p.36; Schleppegrell, 2014, pp.23-24); reifications, abstractions and exclusions; genericisation (or generic representations of social actors) (plural nouns without article, a noun denoting a group of people treated as "statistics") ("immigrants", "a child"); indetermination (indefinite pronouns and nameless characters) (van Leeuwen, 2008, pp.25, 29, 32, 36-40, 46, 71); presuppositions and implications (Wodak, 2014, p.527; van Dijk, 2014a, pp.596-597); the use of positively sounding, positively associated or euphemistic words ("purr-words") that can be used to conceal certain aspects of reality and direct attention at others (Alexander, 2018, pp.199-203); and deixis of person, place and time (Gee, 2011, pp.8-9).

Patterns of erasure relate to structures of power: a particular point of view imposes a foreground-background alignment in discourse which may privilege specific representations (Croft & Cruse, 2004, p.128). Erasure patterns therefore depend on access to contextual spaces in which forms are attributed meaning, which in turn derives from access to resources such as literacy -especially literacy in dominant language varieties (Blommaert, 2005, p.77; van Leeuwen, 2008, pp.28-30, 33, 39-41, 46-47, 63). Participants and their identities can be included or excluded from discourse to suit specific purposes; exclusion entails that someone or something is deemed irrelevant. Represented identities (as well as discourses and perspectives) can be silenced, subverted, appropriated and distorted, and the importance and value of participants, events, areas of reality etc. may be denied (McEntee-Atalianis, 2019, p.156). Also, the exclusion of agents can be done consistently throughout the text or they can be suppressed or backgrounded temporarily (Fetzer, 2014, p.379).

However, erasure is not always a means for dismissal with the purpose of suppression: there are particular types of communicative contexts in which erasure is an instrument of clear communication. For instance, organisational discourse (see Section 2.2.2.) may require "strategic essentialism" for the sake of clarity: repetitions are avoided and participants and events may be considered as already assumed by the public if reference is made elsewhere in the text (McEntee-Atalianis, 2019, pp.156,189).

4) **Identification/Otherisation:** role, identities and activities that participants take up can be either perpetuated or questioned, resisted and re-elaborated. Identification and otherisation have to do with practices of self and other presentation, association or dissociation with particular identities and/or social practices. More specifically, these processes concern respectively the acceptance of predetermined normalised identities or activities as natural or simply the way things are; and the "destabilisation or rupture of essentialized ideologies/naturalized identities which may lead, for example, to the performance of an identity which is different to the expected" (McEntee-Atalianis, 2019, p.22).

"Ascribed identity" (namely the identity attributed by others) and "avowed identity" (namely identity based on personal group affiliation) may not coincide (Spencer-Oatey *et al.*, 2014, p.580). Definitions of "Self" and "Other" are based on socio-cultural and interactional constraints and they often are the product of those who have enough power to intervene in meaning-making processes. As a result, identity is not necessarily intentional or conscious, especially for those who lack the power and resources to shape knowledge. However, these constraints can be questioned and challenged, and individuals and groups can take up an identity that they perceive as authentic (van Leeuwen, 2008, p.124; Bucholtz & Hall, 2005, p.606). Therefore, identification and otherisation concern how identities are either performed or challenged and replaced with innovative identities; and what activities are done as aligning to or opposing particular identities.

Identification and otherisation depend on processes of ingroup and outgroup construction: individual and group identities are co-constructed depending on "the emergence of symbolic processes that tie individuals to groups, and groups to the social context in which they gain meaning" (McEntee-Atalianis, 2019, p.75). In other words, individuals define and position themselves and others in groups that identify to particular social purposes, symbolic meanings and set of values and dis-align with others, so that "one might most profitably think of identity as a process of engagement (and disengagement)" (Eckert in McEntee-Atalianis, 2019, p.75; van Leeuwen, 2008, pp.38-40, 124-125; Stibbe, 2015, p.115; McEntee-Atalianis, 2019, pp.22, 112, 165): ingroups and outgroups represent individuals occupying different ideological spaces and can be used strategically to mark particular identities and resist others (McEntee-Atalianis, 2019, pp.80-81, 84, 86, 95, 112, 125, 207; Wodak, 2014, p.531; Spencer-Oatey *et al.*, 2014, p.580; Hart, 2010, p.49). Therefore, an individual or group is represented as either affiliated or disaffiliated to a group, as either aligning to or opposing identities of particular groups; members of an ingroup are likely to engage in similar practices and act in similar ways, so practices become markers of

affiliative or oppositional stance. In order to analyse representations of ingroups and outgroups one might consider what does a group's sense of identity hinge around.

The outcomes of self-identification for particular groups hinge around building strategies of sharing and support, alongside resistance to imposed identities; the outcomes of otherisation on the part of powerful or dominant groups might be discriminatory. Both of them can serve the purpose to reallocate roles or rearrange social relations between the participants (McEntee-Atalianis, 2019, p.112).

The processes of identification and otherisation manifest themselves in discourse, so discourse becomes a crucial site for the ongoing process of negotiation of identity and positioning within the social system. Indeed, identification is active and agentive and so it may be a means for resistance to imposed identities and refashioning of new ones (McEntee-Atalianis, 2019, p.12). The discursive means to build ingroups and outgroups include strategies of positive self- and negative other presentation with recurrent themes of usefulness, danger, threat, economy, finances, burden, numbers, law, history; processes of naturalisation and normalisation of discourses so that their ideological nature is concealed and they are taken as common-sensical; and rapport-building strategies based on shared attitudes and support (KhosraviNik, 2014, pp.506-507; Hart, 2014, p.5; Alexander, 2018, p.208).

The main linguistic features contributing to identification and otherisation are: possessive pronouns; clauses with verbs like "have" and "belong" which can make an association to social grouping; categorisation (van Leeuwen, 2008, pp.39, 45; Bevitori, 2014, p.614); personal pronouns, also used to build consensus with the reading public ("we", "you") (Fairclough, 2013, p.102); rhetorical tropes (metaphor, metonymy, personification); argumentative strategies such as insinuation, implicature, presupposition; sociolinguistic-discursive means such as forms of address; strategies for building solidarity (for instance, through allusions to shared experiences) (Wodak, 2014, pp.531-535); inclusive terms such as "community", "together" (Stibbe, 2014, p.174); positively sounding, positively associated or euphemistic words ("purr-words") (Alexander, 2018, pp.199-200); antithesis to create polarity (Goddard & Carey, 2017, pp.81-82); and deixis of person, place and time (Gee, 2011, pp.8-9; Hart, 2010, pp.58-59). Another important feature is the use of verbs which normally take humans/animals as subject as applied to other: anthropomorphising may imply "a moral responsibility in our dealings with nature" or suggest "a blurring of the human-nature divide"; it also has to do with patterns of erasure where "a human actor

provides the energy to act upon a passive (perhaps nonhuman) affected nature in a setting/environment which is marginalized as unimportant" (Goatly, 2018, pp.231,234).

Legitimation and evaluation can also be used to create similarity or difference: strategies for self- and other presentation may be emotively coercive and involve cognitive associations that elicit the readers' emotive reaction; for instance, migrants can be represented as a threat (Hart, 2014, pp.62-63, 87).

Among the tools for social positioning there is "affect", which relates to the expression of emotions and feelings (attitudes, beliefs, feelings, emotional states, judgements) in text; to how speakers/writers portray their own (authorial) or others' (non-authorial affect) emotions; and to the creation of an emotional response or atmosphere in the text or listener/reader. It is concerned with the use of emotion-charged terms, that is language that denotes affect, be it linguistic expressions denoting emotions or linguistic expressions as reflexes or indices of someone's emotions, including evaluative expressions (Bednarek, 2008, pp.2, 10, 12, 16-17, 146; 2006, pp.19-20). Affect is used to position oneself and express evaluations; it can also be used as an engagement system to adjust the readers' perspective; this can be achieved, for instance, by evaluating propositions, behaviours, entities, thus suggesting what kind of emotions are supposed to be appropriate (culturally "positive" or "negative") in certain situations. Through affect, the writers of the texts included in the IOC and NC can mediate the emotional responses of the readership (Bednarek, 2008, pp.2, 33, 49; 2006, p.30). Affect can be concerned with, for instance, the description of physiological states, antecedent events, actions, situational circumstances, etc. which trigger inferences about the emotional response involved. Emotions such as un/happiness, dis/satisfaction, in/security, and feelings that relate to future states of affairs, can be portrayed either by labelling emotions directly, or by referring to "symptoms" or "conditions" concerned with specific emotions (Bednarek, 2008, pp.149, 154, 171).

Emotive values are used to attract a certain implied readership (target audience) in line with particular opinions, attitudes, believes, feelings, creating a system of shared values and ideologies and, in turn, ingroups and outgroups that identify with a certain set of values (Bednarek, 2008, p.2; 2006, pp.203-204). In this respect, "bonding" is described as a set of ways to build inclusiveness and affiliation with the readers, impacting on their feelings in order to align them to particular attitudes towards specific topics, sharing values to share solidarity. In this way, a bond is created between the author and the reader of the text which might have an "impact on the way the reader subsequently evaluates" the topic discussed (Caple, 2010, pp.112, 116-117, 127-129).

5) **Legitimation/Illegitimation**: (il)legitimation is the representation of an individual or group, an area of life, an activity, a phenomenon etc. as either legitimate and acceptable or illegitimate and under-recognised. More specifically, legitimation can be defined as the process of "affirmation or imposition of an identity through structures of institutionalized power and ideology" seeking social approval or accreditation; while illegitimation happens whenever "identities are dismissed, censored or simply ignored" by structures of institutionalised power and ideologies and it often targets the "Other" (Bucholtz & Hall, 2005, pp.603-604; Fairclough, 2014, pp.17, 600; Hart, 2014, pp.4, 8).

Legitimation and illegitimation are processes that relate to evidentiality, namely providing sources of knowledge, morality and/or authority to underpin particular identities and activities as either acknowledged and reliable, or questionable and unreliable. More specifically, il/legitimation is built through references to common sense, authority, studies, researches, domains of knowledge, role models, impersonal authority (law, regulations), custom, recommendation as forms of authority and references to morality (Fairclough, 2013, pp.20-21, 106-109). Participants may be legitimised or delegitimised whenever they engage in social practices that are legitimised or delegitimised, and vice versa social practices could be legitimised or delegitimised by legitimising or delegitimising their participants (van Leeuwen, 2008, pp.51, 97, 105-119, 123).

Official institutional and social structures play an important role in building legitimate and illegitimate representations of people and activities because their discourses may include (il)legitimising narratives: official discourses can produce representations which empower particular participants and delegitimate others. Also, institutionalised processes of delegitimation can have emotional as well as practical and material consequences for members who do not have the resources and power to gain access to processes of meaning-making; the outcome of delegitimation is that one is likely to be judged negatively and marginalised from the mainstream (McEntee-Atalianis, 2019, pp.8, 117, 155; Hart, 2014, p.4). However, illegitimation may also be a means to oppose specific social structures and powerful authorities, and let new identities and cultural ideologies emerge, thus impacting on power dynamics (McEntee-Atalianis, 2019, p.22).

According to van Leeuwen (2008, pp.105-119; 2007a, pp.92-106) there are four main ways to formulate (il)legitimation: authorisation, moral evaluation, rationalisation, and mythopoesis. Authorisation accounts for sources of knowledge in terms of "custom" (the authority of tradition and the authority of conformity); "authority" (personal authority and impersonal authority like laws, rules and regulations); and "commendation" (expert

authority and role model authority). Moral evaluation provides a positive or negative evaluation of someone or something based on particular value systems and/or values that are taken as commonsense; for instance, it may involve analogies and comparisons to something that is positively or negatively connoted "by troublesome words such as 'good' and 'bad' […] 'healthy', 'normal', 'natural', 'useful'" (van Leeuwen, 2007a, p.97). Rationalisation is legitimation by reference "to the goals and uses of institutionalized social action, and to the knowledge society has constructed" (van Leeuwen, 2007a, p.92), so it refers to desirable social action and shared knowledge by members of a society. Rationalisation includes "instrumental rationalization", namely legitimation by reference to the goals, uses and effects of given activities (i.e. the purpose of particular practices), and "theoretical rationalization", namely legitimation by reference to the idea of a natural order of things. Mythopoesis is legitimation conveyed through storytelling and narratives whose outcome reward legitimate action and lead to unhappy endings for engaging in deviant "illegitimate" activities; narratives include moral tales, cautionary tales, and models of moral action (Wodak, 2018, pp.31-47; McEntee-Atalianis, 2019, pp.20-21; Bucholtz & Hall, 2005).

The main linguistic features contributing to il/legitimation are: evaluative adjectives and attributes (for instance, "useful", "normal", "natural"); epistemic modality and obligational meaning; abstractions which foreground qualities ("cooperation", "independence"); purpose clauses with "to", "in order to", "so as to"; clauses with "facilitating" processes, such as "allow", "promote", "help", "teach", "build", "facilitate" (Fairclough, 2013, pp.106-107, 110-111, 114-115); generalisations instead of overt reference to authority ("The main requirement is") (Schleppegrell, 2014, p.27); rhetorical questions that aim at persuasiveness (Goddard & Carey, 2017, pp.81-82); adjectives and relative clauses that ascribe qualities; cohesive devices ("therefore", "but"); evidentiality ("appear", "visibly", "held view", "statistics show", "clearly") (Hart, 2010, pp.66, 92-93, 95-98); and metaphors that construct in- and outgroups or activate emotive reactions (for instance by referring to war) (Hart, 2010, p.125 derived from Reisigl & Wodak 2001; Hart, 2010, pp.128, 144-147).

Evaluation can also be a means for (il)legitimation: patterns of facticity (see below in this Section) can either provide descriptions of someone/something as certain, true and commonly acknowledged; or they can describe someone/something as uncertain, false, unreliable and questionable (van Leeuwen, 2008, pp.106-119).

6) **Evaluation**: evaluation is the representation of an individual or group, an area of life, an activity, a phenomenon etc. as relatively positive or relatively negative, true or false, certain or uncertain with respect to someone or something else. It states what is desirable or

undesirable, good or bad, true or false, certain or uncertain, often with the intention of aligning people to the values sourced for them. In the words of Hart, representation is a means to reflect on the world, evaluation to react to it (2014, p.43). Indeed, evaluation may express assumptions, hypotheses, interpretations, possibility, necessity, importance, expectedness, emotivity, comprehensibility and reliability (Hunston & Thompson, 2000, pp.187-191; Bednarek, 2006, p.42). Since evaluative language can be used to express opinions, assessment of positivity or negativity, expectedness or unexpectedness, negative evaluations of events or participants, significance, etc. it can be also a means to contribute to salience and erasure, legitimation and delegitimation, as well as identification and otherisation (Bednarek & Caple, 2012, p.46). More specifically, evaluation is used to attribute degrees of importance to participants and activities; strength of the feelings involved; and values to align readers to. It can be used to construct relations with the participants of a communicative event and organise the discourse in order to promote a specific point of view (Hunston & Thompson, 2000, p.6; Martin & Rose, 2007, pp.16-17).

Writers adopt stances towards the material they present and those with whom they communicate: they disapprove, approve, applaud, criticise, etc. and try to position the reader to do likewise. Evaluation can construct alignment with particular value positions and, thereby, with communities of shared values (in- and outgroups) (Martin & White, 2005, pp.1-2, 4, 36, 94). More specifically, evaluation is not only concerned with affect (whether someone or something is represented as "positive" or "negative"), but also with epistemic modality and evidentiality. These relate to opinions about propositions in terms of their "facticity", the degree of certainty with which they are presented and the degree with which the writer commits to a proposition presenting it in terms of its veracity (as true, certain, credible, etc.) (Martin & White, 2005, pp.38-39, 54). More specifically, facticity refers to the degree to which a description is presented as true, certain, uncertain or false, for instance through the use of modality (modals, references to authority, hedges, presuppositions) (Stibbe, 2015, p.129; Martin & White, 2005, p.108). Facticity can be rendered via modal expressions, namely all wordings and formulations by which the writer modulates their attachment to a specific proposition. It may be expressed through modals of probability, modal auxiliaries ("may", "might"), modal adjuncts ("perhaps", "definitely"), modal attributes ("it's possible that"), factive attributive expressions ("know"), counter-factive expressions ("pretend"), and non-factive expressions (no clear judgement is identifiable); also, it may include the nominalisation of attributing expressions ("it is belived"), which allows the writer not to take responsibility for the correctness of the statement (Martin &

White, 2005, pp.95, 104-105; Bednarek, 2006, pp.156, 164-165; Stibbe, 2015, pp.130, 134, 136-138). The degree to which someone or something is presented as reliable knowledge (either contentious, uncertain or correct and certain) might be a way to position oneself as more or less aligned to a specific value system, thereby encouraging the others to do the same. The highest level of facticity corresponds to the absence of modal markers, which makes a statement a categorical assertion and it may be used in order to build reliability and influence the convictions of readers, fostering either endorsement or distancing from a certain set of values (Martin & White, 2005, p.105; Stibbe, 2015, p.134).

Evaluation concerns three main fields, namely "affect", "judgement" and "appreciation": it can provide an evaluation of people's feelings and emotions and construct emotional reactions (affect); it can be an assessment of people's character and behaviour (judgement); or it can be either a form of appreciation to construct and recognise the value of particular things, or a statement of what is true and necessary (appreciation) (Martin & Rose, 2007, pp.17, 29; Martin & White, 2005, pp.35-36).

Evaluation plays a crucial role in legitimation processes as it "concerns the way that speakers code or implicitly convey various kinds of subjective opinion in discourse and in so doing attempt to achieve some intersubjective consensus of values with respect to what is represented" (Hart, 2014, p.43). It can represent social actors, activities and social practices, and social relations as either beneficial or detrimental, true or false, certain or uncertain according to someone's perspective (van Leeuwen, 2008, p.45; Fairclough, 2003, pp.164, 166; Stibbe, 2015, pp.83-84, 127-129).

Discursive ways to formulate evaluation in text include evaluative statements; the use of value assumption (assumed values) about what is good, desirable, true, certain, and what is not; the use of modality to state what is true and necessary; and the use of statements with deontic modality indicating obligation (because the outcome would be un/desirable), or with affective mental processes (statements about liking and disliking, for instance) (Fairclough, 2003, pp.55, 164, 172-173; Martin & Rose, 2007, p.53).

The main linguistic features contributing to evaluation are: epistemic modal markers (including imperatives) such as "could", "must", "will", "will probably" and the degree of certainty they convey (Hart, 2010, pp.169-170); adverbials and the degree of certainty and/or affect (positive/negative) they convey; adjectives and attributes used to provoke an emotional, moral, evaluative reaction (Bednarek, 2006, pp.21-22, 25-28); verbs, adjectives and nouns that bear a particular connotation; conjunctions that imply an evaluation; intensifiers/quantifiers (linguistic means include expressions to highlight number or amount,

size, duration, degree, the effects or consequences of an event as maximised, like indefinite determiners or pronouns such as "some", "any", "none" which indicate some proportion of a whole class, and other kinds of words with similar meaning) (Bednarek & Caple, 2012, p.47); comparatives/superlatives; repetitions (Hunston & Thompson, 2000, pp.6, 9-11, 14, 18-19); euphemisms and dysphemisms (Wodak, 2014, p.527; Penz, 2018, p.278); categorisation ("racists", "migrants") (van Leeuwen, 2008, p.45); and the semantic prosody of a word, namely the "positive or negative orientation 'aura' about it" (Hart, 2014, pp.66). Other important features include metaphors that invoke evaluations. This study employs the cognitive-linguistic definition of metaphor which sees metaphors as fundamentally conceptual, a mapping across two conceptual domains. Thinking and talking metaphorically means employing one conceptual domain which functions as the "source domain" to think and talk about another domain which functions as the "target domain". Therefore, metaphors are considered to be an expression of a cross-domain mapping in thought, namely a mapping across two conceptual domains that are distinct from each other but that can be connected by a set of correspondences -the source domain functioning as a means to provide comparable conceptual structure to the target domain (Lakoff & Johnson, 2003, pp.3-6, 52; Steen 2017, pp.74-77).

Among the metaphors used in immigration discourses there are metaphors of aliens, water, natural disasters, pollution and impurity, war/fight and disease/infection. These metaphors evoke a negative attitude about immigrants, maybe biased on a racist ideology, and they are likely to stimulate fear, reproduce racism and persuade people to act in specific ways (Hart, 2014, pp.66, 143, 160; KhosraviNik, 2014, p.507; van Dijk, 2014b, p.135).

3.3. Concluding remarks

This chapter has provided an overview of the methodological aspects adopted in the present study. More specifically, Section 3.1. of the Chapter has outlined the dataset and criteria for selection of data, focusing on sources of data and data gathering modalities. It has presented the two specialised corpora built *ad-hoc* for the study (IOC and NC) and the corpus of English language adopted as reference corpus (enTenTen15) and has defined the text typologies included in the corpora, namely organisational discourse and news discourse.

It has then described the corpus-analysis tools used to analyse the dataset (ProtAnt, AntFileConverter and Skecth Engine) and has defined their function(s) in the analysis of the data. Since Sketch Engine is the corpus-analysis tool that is used the most in this study and it plays a fundamental role in the analytical process, the set of instruments available in Sketch Engine and

adopted for the analysis of the data were described (i.e. Word Sketch, Keywords, Word Lists, N-grams and Concordance).

Section 3.2. of the Chapter has presented and described the methodological approach for the study, namely the corpus-based qualitative approach to the data. More specifically, it has defined the set of research sub-questions of the study that are used to interrogate the dataset and has defined the criteria for analysis. The discoursal aspects of identity representation that are analysed are: role, salience, erasure, identification/otherisation, legitimation/illegitimation, and evaluation; they are used as criteria to investigate representations of environmental migration and the participants involved in it. Linguistic and discoursal features that convey specific representations of identities and are the object of investigation are specified for each criterion.

4. CORPUS-ASSISTED ANALYSIS OF ENVIRONMENTAL MIGRATION

Chapter 4 presents the step-by-step methodological approach with which data are investigated both quantitatively and qualitatively and displays the preliminary findings of the quantitative analysis. More specifically, Section 4.1. of the chapter provides a brief overview to the analysis and presents all the steps that are taken both in the quantitative and qualitative analysis. Section 4.2. further explains in a detailed way the choices at the basis of the methodological approach adopted to analyse the data, both in the quantitative corpus analytical dimension and the corpus-assisted qualitative eco-critical discourse analytical aspect; also, it presents the procedure adopted to carry out the investigation of the data. Finally, Chapter 4 describes and discusses the findings of the quantitative analysis of data, with a specific focus on a comparative overview of the topicality of the IOC and NC; also, it identifies the selected search terms to be further investigated in Chapter 5.

4.1. Methodological procedures for the quantitative and corpus-assisted qualitative analysis

The analysis of the representations of environmental migration is based on a triangulation of two specialised corpora, the International Organisations Corpus (IOC) and News Corpus (NC), and the reference corpus enTenTen15. enTenTen15 is a more than 15-billion words corpus of general English made up of texts collected from the Internet; it relies on a sophisticated system of spam removal to collect only linguistically valuable web content and exclude duplicated content and machine-generated content unsuitable for linguistic analysis, such as texts made up of incomplete sentences, advertisements, or repetitive content found on the websites (navigation menus, for example) (Sketch Engine 10).

The procedure to analyse the two specialised corpora begins with a comparison between the IOC and the NC in terms of their "aboutness": the aboutness of a corpus is a description of the content of a corpus; it indicates the meaning units of the corpus, the concepts underlying text, and tells us what the corpus is about. Keywords usually give a reasonably good clue to what the text is about (Scott, 2015, p.235), so I first produced a keyword list of the node corpus IOC (for a definition of "node corpus" see Section 3.1.1.) including both single-word and multi-word keywords and using the News Corpus as reference corpus; the aim was to discover features that distinguish one corpus from the other and describe them in terms of their topicality (or aboutness). I then compared the IOC with the general corpus of English enTenTen15 and extracted the single- and multi-word keyword lists in order to explore the topicality of the IOC in relation to the use in "general English"; in this way I

could integrate previous comments on the topicality of the IOC and provide a description which is more detailed and precise. I also compared the IOC and NC to establish the topicality (or aboutness) of the NC and discover any potential similarity or discrepancy with the topicality of the IOC.

I then generated the frequency lists (i.e. a list of the most frequent words in a corpus) of both the IOC and NC; both lists include the top 100 most frequent lemmas (see Section 3.1.2.) of the two corpora. Frequency lists were used to further integrate comments on the topicality of the corpora: the fact that certain words (and so themes and topics) are frequent both in the node corpus and in the reference corpus does not make them any less characteristic of the node corpus.

Eventually, the IOC and NC are downsized using the software tool ProtAnt (see Section 5.1.) in order to obtain a selection of documents from the IOC and NC to analyse with corpus-assisted qualitative methods: the IOC and NC are cross-analysed in order to rank the documents of the two corpora according to their prototypicality (see below in this Section) and then the top 10 documents of both corpora are selected as data for corpus-assisted qualitative analysis. Of the resulting 20 texts, newspaper articles are analysed in their entirety, and an average amount of 878,7 words are analysed for IOC publications in order to have the same amount of text from both corpora for the corpus-assisted qualitative analysis (see Section 5.1.).

The concept of prototypicality derives from the fact that a corpus is regarded as a sample of language built around a prototype according to the principles of representativeness and balance (see Section 3.1.1.) (Gries & Newman, 2013, p.1); so, the text that comes the closest to the characteristics of the corpus is said to be the most prototypical. In this case, prototypicality does not refer to text structure and organisation, but rather to the conceptual domains it deals with. The hypothesis is that "a text which contains a greater number of keywords from the corpus as a whole is also likely to be a more central or typical text in that corpus" (Anthony & Baker, 2015, p.277). The analysis has the aim of investigating the terminology related to the phenomenon of environmental migration. For this purpose, two main tools of the Sketch Engine software are used: Concordance and Wordlist (Sketch Engine 7 and 9) (see Section 4.2.).

4.2. The corpus-assisted quantitative approach to the data

The corpus-assisted quantitative analysis began with a comparison of the keywords of the IOC and NC; the aim of the analysis was to determine the aboutness of the two corpora and the typical themes they deal with, as well as discover any potential similarity or discrepancy between the topicality of the IOC and NC.

A keyword is a word which occurs not just with high frequency, but with an unusual and statistically significantly higher frequency (number of occurrences or hits) in a node corpus by

comparison with a reference corpus. In this sense, the keyword can be considered as distinctive of the node corpus (Scott, 1997, p.236; Anthony & Baker, 2015, p.277); a statistical measure displays that a word which is key appears at a higher frequency than usual in a node corpus when compared to a reference corpus (Anthony & Baker, 2015, p.277). Therefore, a keyword list results from a process of terminology extraction from a corpus, and the list displays words that are typical of a node corpus in contrast to a reference corpus (usually of general language use) (Baker & McEnery, 2015b, p.2; Lexical Computing Ltd., 2015, p.3). Also, keywords are a way of identifying salient terms which can then be subject to more qualitative, interpretative analyses of collocates and concordance lines (Baker & McEnery, 2015b, p.2; Anthony & Baker, 2015, p.278).

Once identified in my corpora, keywords were ranked according to their "keyness" value; the keyness value is the metrics used to calculate the level of keyness, namely how characteristic of a corpus the keywords are. Keyness provides the analyst with an indicator of the importance of a keyword as a content descriptor; a word is key if its frequency in a node corpus compared to a reference corpus "is such that the statistical probability as computed by an appropriate procedure is smaller than or equal to a p value specified by the user", were the p value is a standard parameter that ranges from 0 to 1 (Scott, 2015, pp.235-236). The keyword list is sorted by the resulting keyness scores of each keyword, with keywords at the top of the list representing the words which have the most significant relative frequency difference between the two corpora and distinguish one corpus from the other the most; keywords at the bottom representing the words which have the least significant relative frequency difference between the two corpora and distinguish one corpus from the other the least. In this way, the words most indicative (or characteristic) of one corpus as compared to the other corpus appear at the top of the list, and the words which appear with roughly similar relative frequencies in the two corpora appear lower down the list (Rayson & Garside, 2000, p.3). In other words, the top keywords reflect the content of the node corpus and can also be used to explore differences and similarities between corpora (Hunt & Harvey, 2015, p.139; Lexical Computing Ltd., 2015, p.3).

The software for the analysis of corpora Sketch Engine can extract both "keywords" (single-words) and "terms" (multi-words, typically noun phrases, but not only) that are typical of a corpus. Sketch Engine adopts the terminology of "keyword" and "term" to refer respectively to single-word and multi-word keywords; henceforth, for the sake of clarity, the term "keyword" is used to refer to both of them comprehensively.

The keywords-based method was adopted as the most useful and straightforward to obtain a summary of the conceptual domains characteristic of the corpora of interest (here IOC and NC) (Kilgarriff, 2012, p.9). This method is based on summarising the domain of the corpora using

keywords: a keyword list summarises the aboutness of a node and a reference corpus and displays the most contrasting items (Kilgarriff, 2012, p.11; Rayson & Garside, 2000, p.2). Therefore, keywords help understand what the content of a corpus is or how it differs from a reference corpus; by default, general language corpora are used as reference corpora to represent non-specialised language.

The frequency range of keywords varies a lot according to the scope of the analysis. When words are high frequent they are more common (i.e. Simple Maths threshold parameter such as 100, or 1000) (for a definition of Simple Maths, see Section 4.1.1.), while if they are low frequent they are rare words (i.e. Simple Maths threshold parameter such as 0.1, or 1) (Sketch Engine 11). While default settings of the software Sketch Engine for the retrieval of keywords cannot be altered in any way, the threshold value can be changed if need be; for the present analysis a threshold parameter of 100 (see Kilgarriff, 2012, p.3) was set (see Section 4.1.1.).

All results of both single- and multi-word lists highlighted by this technique were qualitatively examined using standard corpus techniques such as KWIC (key-word in context) to better establish their main thematic area and their interrelatedness with other themes. KWIC displays a word of interest in its immediate co-text (including the concordances of a word, namely the words it associates with most often); neighbouring words help understand the context of a word (Gries & Newman, 2013, p.13). The top 100 keywords were analysed both for single-word and multi-word lists; the choice to analyse the top 100 keywords is based on the fact that the majority of studies analyses the top 100 keywords as a standard amount (Kilgarriff, 2012, p.1; Gabrielatos & Marchi, 2011; O'Halloran, 2014, p.248). Given the theme of the present study, that is environmental migration, multi-word keywords were of special interest as they are likely to include noun phrases and compounds used as technical terminology by institutions and organisations to identify the intertwining phenomena here investigated (i.e., for instance, "climate change", "environmental change", "environmental migration", "climate induced migration", "refugee crisis", etc.).

The following step of the analysis was a comparison between the corpus of general English enTenTen15 and the IOC. The aim of the comparison was to describe more accurately the aboutness of the node corpus by examining the features of the IOC with significantly different usage to that found in general English language use.

Finally, the topicality of the IOC and NC was further investigated by analysing the most frequent lemmas of the two corpora via a frequency analysis. A frequency list was extracted for both the IOC and NC using the Wordlist tool of Sketch Engine (Sketch Engine 7); the top 100 most frequent lemmas were considered for both corpora. All lemmas selected by this technique were qualitatively examined using standard corpus techniques such as KWIC (key-word in context) to better establish

their main thematic area and their interrelatedness with other themes; findings from frequency analysis were then integrated to the results from keyword analysis.

Once the topicality of the IOC and NC is established using a combination of keywords and frequency lists, the most significant search terms of the IOC and NC for the purpose of representing environmental migration will be selected as the starting point to begin the corpus-assisted qualitative analysis (Chapter 5). The corpus-assisted qualitative analysis will focus on the context and co-text of these search words; these words are identified both via a comparison between the keywords and most frequent words of the IOC and NC and on the basis of the literature on the theme of environmental migration, and are the search terms from which the corpus-assisted qualitative analysis will start off. These search terms will be analysed in their context and co-text to see how they participate in contributing to the representations of environmental migration together with surrounding text and themes in that specific context and genre (see Section 2.2.2.). The search words will set the start for an analysis of the terminology related to the multifarious aspects of the phenomenon of environmental migration; the aim is to reveal how these aspects contribute to representations of all participants of environmental migration. Also, attention will be paid at morphosyntactic constructions (passive voice, nominalisations, semantic roles, etc.) which contribute to constructing these representations.

The analysis will proceed with an exploration of the terminology related to the phenomenon of environmental migration (Chapter 5). For this purpose, two main tools will be used: Concordance and Wordlist.

The Concordance function in Sketch Engine is a "tool with a variety of search options" which displays a word in the context in which it appears in the corpus (Sketch Engine 9). The Concordance search will be conducted on the IOC and NC.

A Concordance search highlights synonyms of a word that might not be revealed by keywords or frequency lists; these synonyms might be of high interest for the purposes of the study in terms of topicality, i.e. the concepts they refer to. For instance, due to the current situation of unstable terminology used to refer to environmental migration, synonyms such as "environmentally induced migration", "climate migration", "climate induced migration", "human induced climate migration", "climate refugees", "environmental refugees", and so on, might all be used to refer to the same concept, but show a lower frequency than expected due to the fact that they alternate and therefore occur less often; still all these expressions will be of paramount interest for the representations of environmental migration.

The Wordlist tool (Sketch Engine 7) will be applied on the IOC and NC in order to produce wordlists of lemmas (see Section 3.1.2.) and explore the main themes that contribute to the

discourse about environmental migration in the corpus. The Wordlist tool generates frequency lists of specific words with specific patterns that are known to be relevant for the theme investigated; they will be searched for in the two corpora in order to verify their use and function in context; for this purpose, regular expressions or regex will be used. Regular expression are conventionalised characters that set the criteria used to identify particular strings of characters, e.g. words which have a common pattern, words which start the same way, finish the same way or contain certain characters (for instance, the part of word "migr." will be searched for in order to retrieve all terms related to the theme of migration) (Gries & Newman, 2013, p.14; Sketch Engine 12). The analysis takes into account the fact that the frequency of words does not necessarily tell us much about their relevance and differences in statistical terms; for this reason, rare words will be also considered important. Also, there might be many synonyms for the same concept: they would of course have a low frequency if compared with other occurrences, but they all refer to the same concept, which implies that a concept is actually frequently summoned in the discourse analysed and so it is worthy of consideration. This operation will complement the Concordance search in finding synonyms of concepts relevant for the study.

The corpus-assisted qualitative analysis will proceed with a distribution analysis of selected search words of the IOC and NC obtained from the previous steps of the analysis and on the basis of the literature on environmental migration, and considered worth investigating because of their relevance for the theme of environmental migration. This analysis enables the analyst to see the distribution of these relevant search words in the two corpora. More specifically, a distribution analysis of search words enables the analyst to see whether they are evenly distributed throughout the two corpora, or how unevenly distributed they are; thus it is possible to investigate the potential motivations at the basis of such distribution. Also, the degree to which a word occurs either in a corpus or in part of a corpus is revealing of the degree of representativeness of the corpus (Brezina *et al.*, 2015, p.140; Gries, 2010, p.5). Sketch Engine produces a chart that shows the parts of the corpus where a word of interest is found, indicating whether it is distributed evenly across the whole corpus or only in certain parts or documents (Sketch Engine 13); this will be discussed in Sections 5.3., 5.3.1. and 5.3.2.

Also, distribution of search words in the sub-corpora of each corpus (see Section 3.1.) will shed light on the patterns of terminological use adopted by each organisation and newspaper outlet whose publications and articles are included in the IOC and NC; in this way, it will be interesting to verify how institutional and organisational patterns are reflected in newspaper language use and so how the general public is informed about the issue and invited to reflect about environmental

migration. Distribution will also be useful because it identifies where a specific term is used in discourse and so it helps identify where frames are potentially activated.

Finally, selected search terms will be investigated in terms of their collocates. Collocations are co-occurrences of words, constructions, patterns, and are identified on the basis of several criteria. The two basic criteria are distance (the span around a search word or node word, named "collocation window", which can be of one of more words) and frequency (the indicator of typicality of a word association, namely how much two or more words associate and how strong the collocation is) (Brezina *et al.*, 2015, p.140). Collocations and concordances (see above in this Section) reveal how often linguistic expressions occur in close proximity to other relevant linguistic expressions. Collocations provide some information on where specific words are used, not as location in the corpus, but in terms of words that are most frequently found around them (Gries & Newman, 2013, p.12); they show the words in their immediate context and thus provide insights into their semantic prosodies and how linguistic elements are used in their context.

This is why a collocation analysis of salient words will be used to analyse the two corpora and counter-verify qualitative findings. For the purpose of this analysis, function words (such as "the", "and",…) displayed among the collocates will not be taken into account in the analysis as they are unlikely to be as informative as nouns, verbs and other types of substantively more significant collocates. Many approaches to collocation adopt a window-based approach in which all words in a window of usually four or five words around the relevant node word are taken into consideration (Gries, 2010, p.14).

The analytical process will be based on an iterative process of constant monitoring and counter-verifying of findings that leaves room for the analysis of new patterns and features appearing during the analysis. All qualitative comments based on the close analysis of texts will therefore be supported and integrated by quantitative data referring to the whole corpora (specialised and reference).

4.2.1. Topicality of the IOC: keywords comparison with the NC and enTenTen15 and frequency list

4.2.1.1. Keyword analysis

I produced a keyword list of the node corpus IOC using the NC as reference corpus (see Section 4.1.) both for single-word and multi-word keywords extraction; I set a maximum of 100 items to be extracted and I chose that they should be displayed as lemmas, so that different word forms of the same lemma (see Section 3.1.2.) were treated as the same item. Lemmas, as opposed to word forms, allow the analyst to obtain the general view of, for example, singular and plural

form of the same noun. The minimum frequency for keywords and terms was set as 1, so that only words whose frequency in the node corpus was equal or higher than this setting were included in the results.

The keyword extraction in Sketch Engine uses a method called Simple Maths, which identifies keywords of one corpus vs another. It includes a variable which allows the user to turn the focus either on more common, or rarer words (Kilgarriff, 2009, p.1). The method of computing and identifying keywords cannot be changed in Sketch Engine; however, the threshold to prefer rarer words to more common words (or vice-versa) can be changed. Generally, a higher value (100, 1000, …) of Simple Maths focuses on higher-frequency words (more common words), whereas a lower value (1, 0.1, …) of Simple Maths focuses on low frequent and rarer words (Sketch Engine 11, 14). More specifically, the keyness score of keywords is calculated according to the normalised per million frequency of the word in the node corpus, the normalised per million frequency of the word in the reference corpus and a smoothing parameter called Simple Maths, whose default value is 1; the "adding one" technique of the Simple Maths procedure is widely used as a solution to a range of problems associated with low and zero-frequency counts (Kilgarriff, 2012, pp.4-5; 2009, pp.1-2). The smoothing parameter can be lowered whenever rarer linguistic phenomena are the object of the analysis, or raised if the analysis focuses on more common keywords. Therefore, changing the value of the parameter allows the analyst to focus on either more common words or rarer words.

For the purposes of the present analysis, I chose to focus on relatively common words, so settings for keyword extraction were specified to retrieve relatively common words: rare words are unlikely to be helpful for the purpose of identifying usual linguistic features in the discourse of environmental migration. A useful value to use the Simple Maths formula for the purposes of this analysis is 100, so the default setting of 1 for Simple Maths was changed to 100 (Kilgarriff, 2012, p.3). The decision not to focus strictly on rarer words, but rather to select a Simple Maths value that included more common words has a twofold motivation: on the one hand, it helps identify those words that are likely to be characteristic of the corpus and therefore those that can be considered commonly used words of the corpus and not rare words; on the other hand, it solves the problem of too many letters and abbreviations appearing in the result tab of the keyword lists if focusing on rare words. Also, to avoid chunks of words or shorter words from appearing in the results, it was specified that keywords should be at least 3 characters long using the regex .{3,}. This criterion seemed appropriate because it sets a length of words for the results which is long enough to avoid single digits or two-digits words (which are not informative in terms of content of the corpus), and brief enough to include all acronyms and

initials (for instance, of organisations like "IOM", or phenomena and themes like "DRR"). Sketch Engine works on the basis of the "Average Reduced Frequency" criterion, which is used in order to identify words with an even distribution across the corpus; in this way, the frequency of words that are condensed in single texts of the corpus and are not evenly spread is lowered. With these settings, I obtained a set of two keyword lists: a list of single-words and a list of multi-words. Table 4.1. and Table 4.2. report the top 100 single-word keywords and the top 100 multi-word keywords extracted from the IOC. The chunks of words "tion", "ment" and "ing" have remained from the cleaning process of the corpus and do not count for the purposes of the present analysis.

	Term	Score	Freq	Ref freq
1	relocation	9.810	1467	5
2	tion	7.270	596	0
3	planned	7.050	666	1
4	vulnerability	6.730	1150	7
5	household	6.560	950	5
6	IOM	6.240	1942	18
7	hazard	6.020	709	3
8	DRR	5.080	388	0
9	ment	4.570	339	0
10	activity	4.560	866	9
11	adaptation	4.360	1383	19
12	site	4.260	364	1
13	objective	4.080	293	0
14	capacity	4.030	1013	14
15	principle	3.990	284	0
16	assessment	3.920	429	3
17	management	3.910	879	12
18	service	3.700	590	7
19	mobility	3.690	1061	17
20	evacuation	3.620	342	2
21	information	3.620	667	9
22	improve	3.580	568	7
23	authority	3.550	470	5
24	resettlement	3.530	649	9
25	conduct	3.530	240	0
26	census	3.490	237	0
27	recovery	3.460	278	1
28	process	3.450	1119	20
29	relevant	3.370	441	5
30	exposure	3.340	265	1
31	furthermore	3.340	222	0
32	provision	3.310	262	1

33	access	3.300	812	14
34	actor	3.290	345	3
35	programme	3.290	683	11
36	settlement	3.250	423	5
37	income	3.250	422	5
38	local	3.220	1579	33
39	remittance	3.210	251	1
40	strategy	3.170	940	18
41	datum	3.170	898	17
42	community	3.150	2879	66
43	Diaspora	3.150	245	1
44	thus	3.120	402	5
45	ing	3.080	198	0
46	understanding	3.060	314	3
47	preparedness	3.050	273	2
48	regard	3.000	422	6
49	risk	2.980	2105	50
50	section	2.930	221	1
51	livelihood	2.900	1001	22
52	reduction	2.890	551	10
53	development	2.890	1702	41
54	emergency	2.860	471	8
55	identify	2.860	654	13
56	page	2.850	176	0
57	environmentally	2.850	359	5
58	follow	2.850	578	11
59	durable	2.840	175	0
60	individual	2.840	612	12
61	landslide	2.830	174	0
62	relationship	2.800	207	1
63	stakeholder	2.790	206	1
64	distribution	2.790	170	0
65	woman	2.770	418	7
66	training	2.770	310	4
67	origin	2.760	416	7
68	implement	2.760	451	8
69	resilience	2.760	557	11
70	example	2.760	805	18
71	location	2.750	273	3
72	specific	2.750	449	8
73	operational	2.750	166	0
74	affected	2.740	587	12
75	induce	2.730	446	8
76	guideline	2.730	164	0
77	context	2.720	689	15
78	sector	2.710	336	5
79	further	2.700	577	12

	Term	Score	Freq	Ref freq
80	knowledge	2.690	333	5
81	order	2.680	712	16
82	Management	2.650	157	0
83	however	2.640	870	21
84	scheme	2.640	190	1
85	consideration	2.630	222	2
86	workshop	2.600	152	0
87	project	2.600	1054	27
88	mechanism	2.580	416	8
89	response	2.560	1202	32
90	disaster	2.560	3209	93
91	policy	2.560	2286	65
92	property	2.550	213	2
93	facilitate	2.550	311	5
94	housing	2.540	343	6
95	measure	2.540	800	20
96	nexus	2.530	145	0
97	Jakarta	2.530	145	0
98	Cerrejón	2.520	144	0
99	seasonal	2.500	143	0
100	effective	2.500	400	8

Table 4.1.: the top 100 single-word keywords extracted from the IOC with comparison to the NC: keyness score, frequency in the node corpus and frequency in the reference corpus of each keyword.

	Term	Score	Freq	Ref freq
1	planned relocation	5.650	514	1
2	disaster risk	4.990	507	2
3	environmental migration	4.060	499	4
4	risk reduction	4.020	390	2
5	environmental change	3.630	343	2
6	disaster risk reduction	3.000	267	2
7	human mobility	2.800	495	9
8	risk management	2.680	160	0
9	disaster displacement	2.380	162	1
10	change adaptation	2.150	165	2
11	disaster management	2.150	109	0
12	climate change adaptation	2.140	163	2
13	environmental degradation	2.110	486	14
14	disaster risk management	2.090	104	0
15	adaptation strategy	2.090	130	1
16	early warning	1.970	92	0
17	disaster preparedness	1.950	90	0
18	labour migration	1.880	84	0
19	local level	1.870	83	0
20	human security	1.870	107	1

21	adaptive capacity	1.850	105	1
22	migration management	1.850	105	1
23	natural disaster	1.750	94	1
24	emergency response	1.730	69	0
25	displacement risk	1.730	69	0
26	national adaptation	1.670	64	0
27	social capital	1.670	64	0
28	national level	1.630	81	1
29	relocation process	1.620	59	0
30	humanitarian assistance	1.620	100	2
31	rural-urban migration	1.610	58	0
32	disaster response	1.610	58	0
33	sustainable development	1.550	152	5
34	important role	1.550	52	0
35	food security	1.540	131	4
36	other hand	1.530	70	1
37	water supply	1.530	50	0
38	long term	1.520	69	1
39	disaster displacement risk	1.490	47	0
40	health care	1.470	64	1
41	land degradation	1.470	64	1
42	labour mobility	1.460	63	1
43	poverty reduction	1.460	44	0
44	coping strategy	1.460	44	0
45	climate variability	1.460	62	1
46	economic development	1.450	43	0
47	new site	1.450	43	0
48	development cooperation	1.440	42	0
49	community level	1.440	42	0
50	affected population	1.440	42	0
51	context of climate change	1.430	78	2
52	mate change	1.430	41	0
53	sea-level rise	1.420	131	5
54	adaptation planning	1.420	58	1
55	wide range	1.400	56	1
56	case study	1.390	55	1
57	urban growth	1.390	37	0
58	seasonal migration	1.390	37	0
59	civil protection	1.390	37	0
60	humanitarian response	1.390	37	0
61	financial support	1.390	37	0
62	disaster prevention	1.380	36	0
63	water stress	1.370	53	1
64	urban development	1.370	35	0
65	thematic brief	1.360	34	0
66	development planning	1.360	34	0
67	camp management	1.350	33	0

68	resettlement process	1.350	33	0
69	land tenure	1.350	33	0
70	human capital	1.340	32	0
71	policy dialogue	1.340	32	0
72	climate policy	1.340	32	0
73	community-based disaster	1.330	31	0
74	soil erosion	1.330	31	0
75	local government	1.320	47	1
76	host community	1.320	30	0
77	policy framework	1.320	30	0
78	knowledge base	1.310	29	0
79	capacity building	1.310	29	0
80	community stabilization	1.310	29	0
81	population density	1.300	45	1
82	circular migration	1.290	28	0
83	gender-based violence	1.290	28	0
84	social vulnerability	1.290	28	0
85	cross-border displacement	1.280	27	0
86	local population	1.280	27	0
87	decision-making process	1.280	27	0
88	migration process	1.280	27	0
89	voluntary migration	1.280	43	1
90	climate adaptation	1.270	26	0
91	soft law	1.270	26	0
92	information management	1.270	26	0
93	rainy season	1.270	26	0
94	climate vulnerability	1.270	26	0
95	diaspora engagement	1.260	25	0
96	population movement	1.260	25	0
97	risk assessment	1.250	24	0
98	institutional capacity	1.250	24	0
99	gradual environmental change	1.250	24	0
100	income diversification	1.250	24	0

Table 4.2.: the top 100 multi-word keywords extracted from the IOC with comparison to the NC: keyness score, frequency in the node corpus and frequency in the reference corpus of each keyword.

In the next section I present further data that, together with those drawn from the dataset in this section, are necessary for the interpretation of the global data of the IOC presented in Section 4.2.1.3.

In order to provide a refined description of the topicality of the node corpus IOC, a comparison with a reference corpus of general English language was needed; the resulting lists of keywords helped identify the themes that characterise the IOC as a specialised corpus in English. Also, this analysis highlighted the linguistic features that distinguish the discourse on environmental

migration of the IOC from general discourse about environmental change and migration that can be found in the enTenTen15 reference corpus.

The following keyword lists were generated comparing the IOC as node corpus to the enTenTen15 corpus; both single-words and multi-words were extracted. Multi-word keywords brought to the fore lexical patterns used in the discourse of environmental migration. With the same settings of the IOC-NC keyword extraction process, I obtained a set of two keyword lists: a single-word list and a multi-word list. Table 4.3. and Table 4.4. report the top 100 single-word keywords and the top 100 multi-word keywords extracted from the IOC compared to enTenTen15. The chunks of words "tion" and "ment" have remained from the cleaning process of the corpus and do not count for the purposes of the present analysis.

	Term	Score	Freq	Ref freq
1	migration	46.470	5514	497196
2	disaster	23.550	3209	875912
3	climate	22.690	5146	2630877
4	displacement	21.020	2043	129385
5	IOM	20.940	1942	43394
6	environmental	16.420	3470	2363798
7	migrant	16.190	1779	401020
8	relocation	15.510	1467	110012
9	displace	14.000	1402	230043
10	adaptation	12.830	1383	390420
11	vulnerability	11.420	1150	270748
12	population	10.360	2499	3007677
13	livelihood	10.230	1001	234595
14	mobility	9.890	1061	422685
15	flood	9.680	1119	587833
16	vulnerable	7.940	904	596084
17	risk	7.860	2105	3577238
18	resettlement	7.630	649	48097
19	degradation	7.470	683	175548
20	household	7.310	950	929292
21	hazard	7.250	709	307525
22	tion	7.160	596	29934
23	planned	6.920	666	290384
24	urban	6.490	966	1326313
25	affected	6.400	587	224231
26	change	6.310	4677	12799378
27	drought	6.140	575	273659
28	resilience	6.120	557	223708
29	Migration	6.020	505	90665
30	humanitarian	5.970	585	365380
31	policy	5.940	2286	5915640

32	affect	5.870	1206	2450626
33	impact	5.780	1707	4190942
34	capacity	5.750	1013	1893647
35	refugee	5.640	672	793760
36	protection	5.620	969	1823533
37	human	5.510	2040	5658438
38	natural	5.400	1244	2958662
39	response	5.140	1202	3047625
40	migrate	5.100	441	196441
41	DRR	5.050	388	10497
42	framework	4.810	704	1374138
43	induce	4.810	446	337172
44	factor	4.810	911	2209050
45	Change	4.640	480	560613
46	ment	4.520	339	18776
47	assistance	4.450	653	1414684
48	reduction	4.370	551	1021604
49	evacuation	4.360	342	101186
50	environmentally	4.320	359	195682
51	land	4.300	1173	3862884
52	relocate	4.210	346	186229
53	context	4.180	689	1791118
54	international	4.130	1316	4780329
55	shelter	4.120	419	573491
56	settlement	4.120	423	594365
57	national	4.110	1230	4406542
58	temporary	4.100	412	553250
59	conflict	4.070	619	1553978
60	flooding	4.000	316	151032
61	cent	3.990	479	946026
62	community	3.980	2879	12623102
63	area	3.940	2575	11280380
64	mitigation	3.890	310	175575
65	country	3.890	2369	10420531
66	strategy	3.880	940	3329675
67	rural	3.860	493	1105933
68	origin	3.860	416	726264
69	labour	3.840	379	551291
70	UNHCR	3.840	283	68708
71	Nations	3.810	399	670297
72	emergency	3.710	471	1112559
73	preparedness	3.660	273	109177
74	lack	3.650	635	2028730
75	Organization	3.610	342	506737
76	coastal	3.600	320	393834
77	remittance	3.550	251	47574
78	regional	3.530	564	1774794

79	address	3.470	1044	4507652
80	earthquake	3.420	293	359965
81	level	3.400	1569	7635583
82	coordination	3.400	302	422842
83	environment	3.390	929	4006974
84	particularly	3.380	592	2092041
85	measure	3.380	800	3292629
86	Diaspora	3.340	245	132631
87	rainfall	3.330	249	158156
88	programme	3.330	683	2680195
89	economic	3.300	868	3816721
90	extreme	3.280	332	677237
91	UNFCCC	3.280	222	30061
92	reduce	3.280	849	3730800
93	cope	3.280	272	327918
94	poverty	3.270	387	1012843
95	mechanism	3.240	416	1210051
96	movement	3.230	652	2641462
97	census	3.210	237	160146
98	sustainable	3.210	476	1602494
99	increase	3.190	1475	7681179
100	actor	3.190	345	831579

Table 4.3.: the top 100 single-word keywords extracted from the IOC compared with the enTenTen15 corpus: keyness score, frequency in the node corpus and frequency in the reference corpus of each keyword.

	Term	Score	Freq	Ref freq
1	climate change	23.540	3360	1001385
2	planned relocation	6.410	514	268
3	disaster risk	6.250	507	25041
4	environmental migration	6.250	499	371
5	human mobility	6.200	495	2047
6	environmental degradation	6.030	486	25928
7	risk reduction	5.020	390	31474
8	environmental change	4.560	343	19684
9	disaster risk reduction	3.780	267	15240
10	change adaptation	2.710	165	20595
11	disaster displacement	2.700	162	50
12	climate change adaptation	2.690	163	20510
13	risk management	2.510	160	124485
14	sea level	2.400	145	94689
15	adaptation strategy	2.370	130	1872
16	sea-level rise	2.370	131	10388
17	sustainable development	2.320	152	217716
18	food security	2.220	131	135086

19	international migration	2.180	113	6625
20	extreme weather	2.130	112	39353
21	level rise	2.130	110	27631
22	disaster management	2.120	109	22196
23	human security	2.110	107	12383
24	migration management	2.100	105	2067
25	adaptive capacity	2.100	105	6062
26	disaster risk management	2.090	104	4049
27	humanitarian assistance	2.030	100	22312
28	sea level rise	1.990	97	25735
29	natural disaster	1.960	94	32106
30	early warning	1.940	92	29481
31	disaster preparedness	1.930	90	18916
32	population growth	1.910	93	70875
33	labour migration	1.880	84	4408
34	context of climate change	1.820	78	2372
35	climate migration	1.810	77	195
36	international community	1.800	93	179976
37	local level	1.790	83	90756
38	national level	1.740	81	116560
39	civil society	1.740	104	374506
40	food insecurity	1.740	73	30037
41	legal framework	1.730	73	43608
42	displacement risk	1.730	69	61
43	emergency response	1.690	69	42095
44	national adaptation	1.670	64	999
45	land degradation	1.660	64	9534
46	urban population	1.660	64	10724
47	labour mobility	1.660	63	2319
48	internal migration	1.660	63	2890
49	social capital	1.640	64	35388
50	climate variability	1.640	62	14062
51	relocation process	1.620	59	1510
52	impact of climate change	1.610	59	12837
53	rural-urban migration	1.610	58	1191
54	adaptation planning	1.610	58	2903
55	disaster response	1.600	58	16024
56	land use	1.580	68	155678
57	internal displacement	1.560	53	2299
58	water stress	1.550	53	5758
59	small island	1.520	51	20019
60	migration policy	1.510	49	4923
61	population displacement	1.500	48	967
62	international law	1.500	59	144993
63	disaster displacement risk	1.490	47	0
64	human displacement	1.480	46	405
65	economic growth	1.480	68	292522

66	rising sea	1.470	46	13724
67	coping strategy	1.460	44	1263
68	population density	1.460	45	20803
69	voluntary migration	1.450	43	292
70	affected population	1.440	42	2586
71	poverty reduction	1.440	44	33457
72	mate change	1.430	41	40
73	regional level	1.430	43	31749
74	development cooperation	1.430	42	18865
75	water supply	1.430	50	128912
76	community level	1.420	42	22469
77	case study	1.420	55	200196
78	new site	1.420	43	44362
79	global climate	1.410	43	54478
80	same time	1.400	118	1104664
81	carrying capacity	1.400	39	13595
82	forced migration	1.400	38	1024
83	long term	1.390	69	437517
84	seasonal migration	1.390	37	972
85	urban migration	1.390	37	1573
86	civil protection	1.390	37	4436
87	humanitarian response	1.390	37	5817
88	urban growth	1.380	37	8559
89	political will	1.380	39	40939
90	important role	1.380	52	223406
91	international level	1.380	40	55333
92	disaster prevention	1.380	36	4513
93	last resort	1.380	38	33280
94	result of climate change	1.370	35	2740
95	coastal erosion	1.360	35	6394
96	humanitarian aid	1.360	37	35134
97	thematic brief	1.360	34	32
98	water management	1.360	38	59500
99	development planning	1.350	34	9792
100	slow onset	1.350	33	589

Table 4.4.: the top 100 multi-word keywords extracted from the IOC compared with the enTenTen15 corpus: keyness score, frequency in the node corpus and frequency in the reference corpus of each keyword.

As already mentioned, multi-word keywords, such as complex noun phrases, sometimes give a richer overview of the topicality of the IOC than single-word keywords. In the single-term list there are some words referring to the very same theme that have been split into distinct words, but that are part of an originally longer complex noun phrase (i.e. "disaster risk reduction", for

instance), as can be seen in the multi-word keywords list. On the other hand, in the multi-word list there are several repetitions of chunks of terms referring to the very same multi-word keyword, i.e. "sea level"; "level rise"; "sea level rise", for instance. In the analysis, these chunks of terms are not investigated, and I analyse only the complex noun phrases these chunks of words are part of.

The analysis of the topicality of the IOC was partly based on the classification of its keywords in word-sense categories according to their meaning in the context of use; in this way, some of the main specific themes of the corpus represented by keywords emerged. For this analysis I grouped all results into major thematic areas. The classification proceeded inductively, grouping together the nouns that expressed similar kinds of meaning according to their context and co-text. The co-text (key-word-in-context) was analysed, then assigning a label to the thematic area for that specific occurrence. The goal was to identify major thematic areas that could be used to describe the main themes dealt with in the discourse of the node corpus. Thematic areas are word-sense categories established by the analyst on the basis of an analysis of keywords and frequent words in their context of use; they are not fixed categories of meaning, but rather contextually appropriate ones (Rayson & Garside, 2000, p.1; Rayson *et al.*, 2004, pp.1-4). On the total amount of 100 single-word and 100 multi-word keywords generated as lists by comparison of the IOC and NC, and 100 single-word and 100 multi-word keywords generated as lists by comparison of the IOC and enTenTen15, the first 20 KWIC of each keyword were analysed in order to establish the thematic area they belong to. The decision to focus on the first 20 contexts of each keyword was a procedural decision of the analyst; 20 was thought to be an adequate amount of contexts to identify the thematic area of each keyword. The KWIC of function words and chunks of words that remained after the cleaning process of the corpus (see Sections 3.1.2. and 3.1.3.) was not analysed as it was irrelevant in terms of content for the definition of the topicality of the IOC.

Overall, it can be said that the topicality of the IOC that emerged from its keywords analysis revolves around the themes which are reported in Table 4.5. below. All keywords were grouped in the thematic areas they refer to in the context of the corpus; many keywords fall under more than one thematic area as themes merge and combine in discourse and in real-life contexts. Also, sometimes a theme falls under two (or more) thematic areas which are interdependent and one of them is hierarchically dominant: it is the case of "management", for instance, which combines with both "Capacity building" and "Knowledge and information", being the latter a core component of the former in the corpus context. So, subdivision of results and boundaries

between keywords are approximate as themes intertwine vastly and are co-dependent and complementary.

The labels assigned to each thematic area are drawn from the literature on the topic of environmental migration (Section 1.1.) and the publications of the international organisations included in the IOC. Some issues that tend to be mentioned together in the corpus texts and show a certain degree of correlation are included in a comprehensive theme (i.e., for instance, "Protection and wellbeing"); issues are grouped together on the basis of their meaning, which is inferred by an analysis of the context of keywords and explained below. The themes are:

- Adaptation and response measures;

- Migration and displacement;

- Vulnerability;

- Environment and climate;

- Protection and wellbeing;

- Capacity building;

- Policy-making and legal frameworks;

- Human rights;

- Knowledge and information;

- Partnership and coordination;

- Participation;

- Research and understanding;

- Responsibility of countries.

"Adaptation and response measures", "Vulnerability", and "Capacity building" are technical expressions used in the literature on environmental migration (Section 1.1.). "Adaptation and response measures" refers to activities and practices that aim at anticipating or coping with the effects of environmental change (EU, 2020a), while "Capacity building" (or "capacity development") refers to activities and practices that aim at strengthening the existing skills and knowledge management abilities of people (their "capacity") (EU, 2020b); "Vulnerability" refers to a "property" of a "human-environment system" and how it "responds to outside pressures such as perturbations or stressors" in terms of "exposure, sensitivity and response".

The label "Migration and displacement" was chosen to be representative of both voluntary ("migration") and involuntary ("displacement") movements of people (UN 11, 2014); "Environment and climate" includes the two major elements of the natural sphere that are mentioned most frequently in the discourse on environmental migration; "Protection and wellbeing" refers to guaranteeing protection of origin communities and migrants before,

throughout and after the process of migration. "Policy-making and legal frameworks" refers to processes of implementation or formulation of policies and legal frameworks to deal with the non-legally recognised phenomenon of environmental migration; "Human rights" refers to the need for protection and implementation of human rights related to issues of environmental change and migration. "Research and understanding" refers to scientific studies and data about environmental change and migration that can promote understanding of the dynamics underlying these two interrelated phenomena, while "Knowledge and information" is concerned with mainstreaming such knowledge to laypersons to enhance preventive and adaptive capacities. "Partnership and coordination" is concerned with the need for wealthier countries to be committed to responding to environmental change and migration in a cooperative and collaborative way, while "Participation" refers mainly to affected (and often poorer) countries and/or less-powerful social groups and the need to include them in decision-making processes. Finally, "Responsibility of countries" refers to allocating the responsibility of mitigation strategies to least affected countries and the responsibility of managing local responses to affected countries (Section 1.1.) (see the end of Section 4.2.1.2. for an explanation of each area). The order assigned to the thematic areas is guided by the order of appearance of keywords in the lists extracted from the corpus: keywords were considered representative of the importance attributed to each thematic area and of the representativeness of each area in the corpus according to their decreasing order of appearance in the lists, so keywords which were ranked top-level were considered representative of the most important thematic areas of the corpus.

The rationale behind the subdivision of keywords into appropriate thematic areas is based on the analysis of 20 occurrences of each keyword in their context of use: keywords were categorised according to the themes they were included into in the corpus. There was an issue on how to categorise single-word keywords that formed part of an originally complex noun-phrase and that, if left alone, made little sense from the point of view of the topicality of the corpus; they were nonetheless included in the tables in their respective thematic area. Many keywords fall within more than one thematic area: they are related to a multiplicity of themes as themes merge and combine in discourse and in real-life contexts. Keywords are reported in alphabetical order for each theme, and are grouped together on the basis of their context of use in the corpus.

THEME	KEYWORDS
Adaptation and response measures	access, activity, adaptation, adaptation strategy, adaptation planning, adaptive capacity, affected population, capacity, capacity building, change adaptation, circular migration, climate adaptation, climate variability, climate vulnerability, community, community level, community stabilization, context of climate change, cope, coping strategy, country, cross-border displacement, development, development cooperation, development planning, diaspora, diaspora engagement, disaster, disaster displacement, disaster displacement risk, disaster preparedness, disaster prevention, disaster response, displacement risk, DRR, durable, early warning, effective, emergency, emergency response, environmental change, environmental degradation, environmental migration, evacuation, exposure, facilitate, financial support, food security, gradual environmental change, guideline, hazard, host community, household, housing, human security, humanitarian assistance, humanitarian response, implement, improve, income, income diversification, individual, institutional capacity, knowledge, knowledge base, labour migration, labour mobility, land degradation, landslide, last resort, local, local government, local population, long term, management, measure, migration management, migration process, mitigation, mobility, national adaptation, natural disaster, new site, planned, planned relocation, preparedness, policy dialogue, population, population movement, poverty reduction, programme, project, recovery, reduction, relocate, relocation, relocation process, remittances, resilience, risk, rural-urban migration, sea-level rise, seasonal, seasonal migration, sector, service, site, social capital, soft law, strategy, urban, vulnerability, voluntary migration, wide range.
Migration and displacement	adaptation planning, adaptation strategy, address, affected, affected population, area, camp management, capacity building, carrying capacity, change adaptation, circular migration, climate adaptation, climate migration, climate policy, climate variability, climate vulnerability, community-based disaster, community stabilization, context, context of climate change, coping strategy, country, cross-border displacement, development cooperation, development planning, diaspora, diaspora engagement, disaster, disaster displacement, disaster management, disaster preparedness, disaster prevention, disaster response, disaster risk management, disaster risk reduction, displace, displacement, displacement risk, economic, economic development, economic growth, emergency response, environmental change, environmental degradation, environmental migration, environmentally, financial support, food security, forced migration, gender-based violence, gradual environmental change, host community, human capital, human displacement, human mobility, human security, humanitarian response, important role, income, income diversification,

	increase, individual, induced, institutional capacity, internal displacement, internal migration, international migration, knowledge base, labour, labour migration, labour mobility, land degradation, land tenure, landslide, last resort, level, local, local government, local population, location, migrate, migrant, migration, Migration, migration management, migration process, mobility, movement, national adaptation, national level, new site, nexus, origin, planned, population, planned relocation, policy dialogue, policy framework, population density, population displacement, population growth, population movement, poverty reduction, rainy season, refugee, relevant, relocation process, resettlement process, resilience, risk assessment, risk management, risk reduction, rural, rural-urban migration, sea-level rise, seasonal, seasonal migration, schemes, social capital, social vulnerability, soft law, soil erosion, strategy, urban development, urban growth, urban migration, voluntary migration, water stress, wide range.
Vulnerability	access, adaptive capacity, affect, affected, affected population, camp management, capacity building, change adaptation, climate variability, climate vulnerability, community level, community stabilization, community-based disaster, context of climate change, coping strategy, development cooperation, development planning, disaster, disaster displacement risk, disaster preparedness, disaster response, disaster risk, disaster risk management, disaster risk reduction, displacement risk, economic development, environmental change, exposure, gender-based violence, host community, human capital, human mobility, humanitarian assistance, income, labour migration, land degradation, level, local, local population, measure, migration process, natural disaster, policy framework, population density, reduce, resilience, risk assessment, risk management, sea-level rise, small island, social capital, social vulnerability, soil erosion, sustainable development, urban development, urban growth, vulnerability, vulnerable, water supply.
Environment and climate	access, adaptation planning, adaptive capacity, affected, affected population, area, assessment, camp management, capacity building, carrying capacity, change, Change, change adaptation, circular migration, climate, climate change, climate variability, climate vulnerability, coastal, coastal erosion, community stabilization, community-based disaster, context of climate change, coping strategy, country, cross-border displacement, decision-making process, degradation, development cooperation, development planning, disaster, disaster management, disaster prevention, disaster response, disaster risk management, displacement risk, drought, early warning, earthquake, economic development, emergency response, Environment, environmental, environmental change, environmental degradation, environmental migration, environmentally, exposure, extreme, extreme weather,

	factor, financial support, flood, flooding, food security, gradual environmental change, global climate, hazard, host community, human capital, human mobility, human security, humanitarian assistance, humanitarian response, impact, impact of climate change, important role, improve, income diversification, increase, induced, institutional capacity, knowledge base, landslide, labour migration, labour mobility, land, land degradation, land tenure, land use, level rise, livelihood, local population, management, migration management, migration process, mobility, national adaptation, natural, natural disaster, nexus, origin, policy dialogue, population density, population growth, population movement, process, rainfall, rainy season, reduce, result of climate change, rising sea, risk, risk management, rural-urban migration, sea level, sea level rise, sea-level rise, seasonal, seasonal migration, settlements, site, slow onset, social vulnerability, soil erosion, sustainable development, urban, urban development, urban growth, voluntary migration, water management, water stress, water supply.
Protection and wellbeing	activity, actor, adaptation planning, address, affected, affected population, assistance, camp management, capacity building, civil protection, climate adaptation, climate policy, climate variability, community level, community-based disaster, community stabilization, conflict, context, cross-border displacement, development cooperation, disaster displacement, disaster preparedness, disaster prevention, displacement risk, disaster risk management, durable, economic, effective, emergency response, environmental change, environmental degradation, environmental migration, financial support, food insecurity, food security, gender-based violence, gradual environmental change, guideline, health care, host community, human capital, human security, humanitarian, humanitarian aid, humanitarian assistance, improve, income, increase, individual, induced, knowledge base, labour mobility, level, livelihood, local, local level, measure, mechanism, migration management, migration process, national level, natural disaster, origin, planned relocation, population growth, poverty, poverty reduction, project, protection, rainy season, reduce, relevant, resilience, risk, risk management, schemes, sea-level rise, shelter, social capital, social vulnerability, soft law, sustainable development, urban development, urban growth, urban population, water stress.
Capacity building	access, activity, adaptation planning, adaptation strategy, affected population, authority, camp management, capacity, capacity building, change adaptation, circular migration, civil protection, climate adaptation, climate policy, climate variability, climate vulnerability, community-based disaster, community level, community stabilization, context of climate change, country, decision-making process, development, development planning, diaspora engagement, disaster displacement,

	disaster displacement risk, disaster management, disaster preparedness, disaster prevention, disaster response, disaster risk, disaster risk management, disaster risk reduction, displacement risk, early warning, economic development, economic growth, emergency response, evacuation, exposure, food security, gender-based violence, gradual environmental change, host community, human capital, human mobility, human security, implement, income diversification, information, information management, institutional capacity, labour mobility, land degradation, land use, local, local level, local population, long term, management, migration management, migration process, national level, natural disaster, nexus, operational, policy dialogue, policy framework, population movement, poverty reduction, programme, reduce, relocation process, resilience, risk, risk assessment, risk management, risk reduction, sea-level rise, seasonal migration, sector, service, settlements, social capital, social vulnerability, sustainable, sustainable development, training, urban development, voluntary migration, water stress, workshop.
Policy-making and legal frameworks	adaptation planning, adaptation strategy, adaptive capacity, address, affected, assessment, authority, capacity building, census, change adaptation, civil protection, climate adaptation, climate change, community level, conduct, context, context of circular migration, cross-border displacement, country, development, development cooperation, development planning, diaspora engagement, disaster, disaster displacement, disaster displacement risk, disaster prevention, disaster response, disaster risk, disaster risk management, disaster risk reduction, economic, economic development, economic growth, effective, emergency response, environmental degradation, environmental migration, facilitate, financial support, framework, gradual environmental change, health care, host community, housing, human capital, human mobility, human security, humanitarian assistance, humanitarian response, identify, implement, improve, individual, induced, information, institutional capacity, international law, IOM, knowledge, knowledge base, labour migration, labour mobility, lack, land degradation, land tenure, legal framework, level, livelihood, local government, local level, long term, management, measure, mechanism, migration management, migration policy, migration process, national adaptation, national level, natural disaster, objective, operational, origin, policy, policy framework, poverty reduction, principle, process, programme, provision, relevant, relocation process, response, risk management, rural-urban migration, scheme, seasonal migration, sector, service, social vulnerability, soft law, specific, strategy, sustainable development, understanding, urban development, urban growth, voluntary migration, wide range.
Human rights	access, assessment, capacity building, change adaptation, climate policy, context of

	climate change, datum, decision-making process, disaster prevention, distribution, effective, environmental migration, gender-based violence, health care, host community, housing, human, human mobility, human security, improve, information, land tenure, land use, long term, migration process, poverty reduction, process, property, provision, relationship, relocation process, resettlement process, risk, seasonal migration, soft law, strategy, sustainable development, voluntary migration.
Knowledge and information	access, adaptation planning, affected population, capacity building, census, change adaptation, circular migration, climate adaptation, climate policy, climate variability, climate vulnerability, community-based disaster, community level, conduct, cross-border displacement, datum, decision-making process, development cooperation, diaspora, diaspora engagement, disaster displacement risk, disaster preparedness, disaster risk management, displacement risk, emergency response, environmental change, facilitate, gender-based violence, guideline, human capital, human security, humanitarian response, implement, important role, improve, induced, information, information management, institutional capacity, knowledge, knowledge base, labour mobility, lack, land tenure, local, local government, local population, management, migration process, national adaptation, policy dialogue, population density, population movement, process, risk assessment, service, social vulnerability, stakeholders, understanding, urban development, water stress, workshop.
Partnership and coordination	access, actor, adaptation planning, affected population, authority, camp management, capacity building, change adaptation, circular migration, civil protection, civil society, climate adaptation, climate policy, community, community-based disaster, community stabilization, context of climate change, coordination, cross-border displacement, decision-making process, development cooperation, development planning, diaspora engagement, disaster displacement risk, disaster management, disaster prevention, disaster response, disaster risk management, displacement risk, distribution, durable, early warning, effective, emergency, environmental migration, facilitate, financial support, global climate, gradual environmental change, human mobility, humanitarian assistance, humanitarian response, implement, important role, improve, information management, international, international community, international level, institutional capacity, knowledge base, lack, land degradation, land tenure, level, local government, local level, long term, measure, mechanism, migration management, mobility, national, national level, Nations, operational, Organization, planned relocation, political will, poverty reduction, process, programme, regional, regional level, relocation process, risk assessment, risk management, sector, settlements, social capital, soft law, stakeholders, sustainable development, UNFCCC, UNHCR, voluntary migration, water stress.

Participation	actor, adaptation planning, affected population, authority, capacity building, census, climate policy, community, community level, community stabilization, conduct, cross-border displacement, decision-making process, disaster management, disaster prevention, disaster risk management, effective, facilitate, financial support, host community, important role, improve, information, institutional capacity, knowledge, lack, level, local, local government, local level, long term, policy dialogue, poverty reduction, process, relocation process, resettlement process, social capital, social vulnerability, stakeholders, wide range, workshop.
Research and understanding	climate adaptation, climate vulnerability, context, cross-border displacement, disaster displacement risk, environmental change, environmental migration, identify, improve, information management, income diversification, knowledge, labour migration, land degradation, local level, long term, nexus, planned relocation, policy, poverty reduction, relationship, social vulnerability, understanding, voluntary migration, water stress.
Responsibility of countries	adaptive capacity, context of climate change, displacement risk, human security, humanitarian response, local government, local level, migration management, process, reduction, relocation process, resettlement process, scheme, urban development, water stress.

Table 4.5.: the themes making up the topicality of the International Organisations Corpus according to the analysis of its keywords.

Focusing on the keywords that emerged from the comparison between the IOC and the corpus of general English enTenTen15, but that did not emerge from the comparison between the IOC and NC, it can be said that the topicality of the IOC revolves around common themes that emerged from both comparisons, but the order of typicality assigned to the themes is different; this means that the themes dealt with are the same, but they are given a different degree of relevance when the reference corpus changed. Therefore, the keywords that are not shared by the IOC-NC and IOC-enTenTen15 comparisons reinforce the representation of the topicality of the IOC outlined thus far; non-shared keywords are reported in brackets for each theme.

- Migration and displacement (migration, displacement, migrant, displace, population, Migration, refugee, migrate, area, country, rural, labour, address, level, economic, movement, increase, international migration, climate migration, internal migration, internal displacement, population displacement, human displacement, forced migration, urban migration, population growth, economic growth, carrying capacity, last resort);

- Environment and climate (climate, environmental, flood, degradation, urban, change, drought, impact, natural, factor, Change, land, flooding, area, country, coastal, earthquake, Environment, rainfall, extreme, reduce, climate change, sea level, extreme weather, level rise, sea level rise, impact of climate change, rising sea, result of climate change, coastal erosion, water management, slow onset, increase, population growth, land use, global climate, carrying capacity);
- Vulnerability (vulnerable, affect, level, reduce, small island);
- Protection and wellbeing (humanitarian, protection, assistance, shelter, conflict, poverty, address, level, economic, reduce, increase, food insecurity, humanitarian aid, population growth, urban population);
- Human rights (human, land use);
- Policy-making and legal frameworks (framework, country, lack, address, level, economic, legal framework, migration policy, international law, economic growth);
- Partnership and coordination (international, national, UNHCR, Nations, Organization, regional, coordination, UNFCCC, lack, level, international community, civil society, regional level, political will, international level, global climate);
- Adaptation and response measures (relocate, mitigation, cope, population, urban, country, last resort);
- Capacity building (country, reduce, sustainable, land use, economic growth);
- Participation (lack, level);
- Knowledge and information (lack).

Overall, the topicality of the IOC emerging from this analysis does not differ substantially either in terms of themes mentioned, or in the hierarchical order of "importance" or typicality attributed to them; in fact, they almost follow the same order of the IOC-NC results:
- "Migration and displacement", "Environment and climate", and "Vulnerability" at the top of the list, namely very salient;
- "Protection and wellbeing", "Human rights" and "Policy-making and legal frameworks" in the central part;
- "Knowledge and information", "Partnership and coordination" and "Participation" at the bottom of the list and therefore less salient.

Looking at non-shared keywords, the themes "Adaptation and response measures" and "Capacity building" seem to lose a degree of their salience in the IOC, but they actually regain it if shared keywords are taken into consideration too: shared keywords often relate to

"Adaptation and response measures" and "Capacity building", so their keyness for the topicality of the IOC is confirmed.

Looking at keywords that are shared by both the IOC-NC and the IOC-enTenTen15 lists, it is worth noticing that most keywords retain almost the same or a very similar position in the list, and only a small number of keywords appear in a relevantly different position. The representation of the topicality of the IOC is therefore further reinforced by the analysis of non-shared and shared keywords emerging from the IOC-NC and IOC-enTenTen15 comparisons. More specifically, shared keywords can be divided into those that retain almost the same position, those that retain a relatively close position, and those whose positioning differs the most, but that are still included in the top 100 keyword lists. The analyst decided to group keywords according to their degree of similarity since she compared the keyword lists of the IOC and noticed that they shared very similar keywords. The three groups account for the different degree of keyness attributed to the keywords in the two keyword lists. Keywords were divided into three groups in order to account for the varying degree of keyness conveyed by the position of keywords in the lists; a binary distinction of keywords into two groups only (one for keywords with a similar positioning and one for keywords with a non-similar positioning) was avoided as it would not have been representative enough of keywords keyness and therefore topicality of the IOC. In the three following lists of shared keywords, the numbers within brackets represent the ranking of the keyword in the IOC-NC keyword lists and the IOC-enTenTen15 lists respectively.

- Keywords with the same or a very similar positioning - the distance between keywords is of no more than 10 positions in the keyword lists: IOM (5-7), relocation (2-8), adaptation (10-11), vulnerability (11-4), mobility (14-19), resettlement (18-24), reduction (48-52), environmentally (50-57), origin (68-67), measure (85-95), mechanism (95-88), planned relocation (2-1), disaster risk (3-2), environmental migration (4-3), human mobility (5-7), environmental degradation (6-13), risk reduction (7-4), environmental change (6-13), disaster risk reduction (9-6), change adaptation (10-10), disaster displacement (11-9), climate change adaptation (12-12), risk management (13-8), adaptation strategy (15-15), human security (23-20), migration management (24-22), adaptive capacity (25-21), disaster risk management (26-14), humanitarian assistance (27-30), natural disaster (29-23), national level (38-28), land degradation (45-41), labour

mobility (47-42), climate variability (50-45), adaptation planning (54-54), water stress (58-63).

- Keywords with a relatively close positioning - the distance between keywords ranges between 10 and 30 positions in the keyword lists: risk (17-49), household (20-5), hazard (21-7), planned (23-3), capacity (34-14), evacuation (49-20), context (53-77), settlement (56-36), temporary (58-36), community (62-42), strategy (66-40), emergency (72-54), preparedness (73-47), sustainable development (17-33), food security (18-35), disaster management (22-11), early warning (30-16), disaster preparedness (31-17), labour migration (33-18), context of climate change (34-51), local level (37-19), displacement risk (42-25), emergency response (43-24), national adaptation (44-26), social capital (49-27), relocation process (51-29), rural-urban migration (53-31), disaster response (55-32), disaster displacement risk (63-39), coping strategy (67-44), population density (68-81), voluntary migration (69-89), affected population (70-50), poverty reduction (71-43), development cooperation (74-48), community level (76-49), seasonal migration (84-58), civil protection (86-59), humanitarian response (87-60), disaster prevention (92-62).

- Keywords with different positioning - the distance between keywords is of more than 30 positions in the keyword lists: disaster (2-91), livelihood (13-51), affected (25-74), resilience (28-69), policy (31-91), response (39-89), DRR (41-8), induce (43-75), remittance (77-39), Diaspora (86-43), programme (88-35), census (97-26), actor (100-34), sea-level rise (16-53), water supply (75-37), new site (78-47), long term (83-38), urban growth (88-57), important role (90-34), thematic brief (97-65), development planning (99-66).

As emerging from the three lists of keywords, most of the keywords maintain a similar or close position in the lists extracted from the IOC-NC and IOC-enTenTen15 comparison, thus reinforcing the representation of the topicality of the IOC: these keywords retain the same degree of keyness in both keyword lists, so they convey a very similar representation of the topicality of the IOC.

Also, some of the non-shared keywords actually have a corresponding term with a similar meaning; it is the case of: environmental/Environment - environmentally (6/83-57), vulnerable - vulnerability (16-4), affect - affected (32-74), relocate - relocation (52-1), climate change - context of climate change (1-51), food insecurity - food security (40-35), population displacement - population movement (61-96), human displacement - human mobility (64-7), economic growth - economic development (65-46), urban migration - rural-urban migration (85-

31), humanitarian aid - humanitarian assistance (96-30). The presence of keywords with a similar meaning in the keyword lists of the IOC further reinforces the topicality of the corpus: both keyword lists converge towards a similar representation of the key concept dealt with in the IOC.

4.2.1.2. Frequency list

In order to refine the analysis of the topicality of the IOC, the data from keywords analysis were complemented by an analysis of the frequency word list. A frequency list is a list of various kinds of tokens (in this specific case lemmas) that can be defined by regular expressions ("regex"; see Section 4.2.); the frequency can be limited by a minimum and maximum setting (i.e. for instance, setting a minimum of 5 occurrences for a word to be included in the frequency list) (see Section 4.1.) to include particular lexical items in the frequency list; the list indicates how frequent a word is in (part of) a corpus (Gries & Newman, 2013, p.11; Sketch Engine 14). For the purposes of the present analysis, there was no need to set any minimum- and maximum-frequency setting as the aim of the analysis was to extract the most frequent words of the corpus, no matter how many times they occurred in it; a dispersion analysis of selected search terms will integrate frequency counts in Chapter 5 (see Sections 5.3., 5.3.1. and 5.3.2.). The analysis of the most frequent words in the IOC corpus shed light on the presence of themes in the corpus that did not emerge from the analysis of keywords; however, the fact that the themes represented by these words are in common between the IOC, NC and enTenTen15 corpus does not make them any less significant in the definition of the topicality of the IOC because of their high frequency of occurrence. Therefore, a compendium of both frequent words and keywords was thought to be the most effective way to obtain the main themes of the IOC. The word frequency serves as a first approximation of the word commonness and a distribution analysis is anyway necessary since some words occur in one or a few part(s) of the corpus only (Savický & Hlavácová, 2010, p.2; Gries & Newman, 2013, pp.11-12; Gries, 2010, p.10). For this reason, selected search words will be analysed in terms of their distribution across the corpora in Sections 5.3.1. and 5.3.2.

For the present analysis I selected all lemmas matching the regex .{3,}, which specifies that words should be at least 3 characters long, so that chunks of words or shorter words are not included in the results. As with keywords, the first 100 most frequent lemmas of the IOC were selected in order to be compared to keywords and are reported in Table 4.6.; out of these, the first 20 were examined in order to establish the thematic area they belonged to (using KWIC). The KWIC of chunks of words that remained from the cleaning process of the corpus and

function words was not analysed as it was irrelevant in terms of content for the definition of the topicality of the IOC.

The classification proceeded inductively, grouping together the nouns that expressed similar kinds of meaning according to their context and co-text. Lexical words (noun, verbs, adjectives, adverbs) were the focus of this analysis for further concordance analysis and grammatical words were excluded since they would not add information from the point of view of content (Baker, 2006, p.54). The co-text of each word was analysed and then assigned a label. The lemmas highlighted in red in Table 4.6. were the focus of analysis in their co-text.

	Term	Freq			Term	Freq
1	the	50459		35	migrant	1779
2	and	35985		36	need	1775
3	[number]	13658		37	include	1756
4	for	8693		38	impact	1707
5	that	7122		39	development	1702
6	have	6657		40	they	1605
7	migration	5514		41	local	1579
8	climate	5146		42	level	1569
9	with	4780		43	right	1527
10	change	4677		44	government	1488
11	this	3612		45	increase	1475
12	environmental	3470		46	relocation	1467
13	their	3312		47	its	1433
14	disaster	3209		48	displace	1402
15	from	3181		49	adaptation	1383
16	community	2879		50	may	1378
17	people	2833		51	provide	1359
18	not	2662		52	support	1350
19	area	2575		53	international	1316
20	population	2499		54	between	1305
21	can	2472		55	there	1300
22	which	2429		56	natural	1244
23	country	2369		57	but	1230
24	also	2345		58	national	1230
25	policy	2286		59	water	1215
26	risk	2105		60	well	1215
27	more	2076		61	issue	1213
28	such	2052		62	affect	1206
29	displacement	2043		63	response	1202
30	human	2040		64	most	1199
31	will	1986		65	land	1173
32	other	1958		66	some	1172
33	IOM	1942		67	into	1153
34	these	1928		68	vulnerability	1150
				69	social	1147

70	flood	1119		87	all	1001
71	process	1119		88	resource	997
72	use	1104		89	one	979
73	should	1071		90	protection	969
74	through	1062		91	those	968
75	mobility	1061		92	urban	966
76	project	1054		93	take	959
77	address	1044		94	household	950
78	many	1041		95	state	949
79	make	1025		96	new	944
80	result	1022		97	strategy	940
81	case	1015		98	environment	929
82	capacity	1013		99	factor	911
83	develop	1003		100	than	910
84	work	1002				
85	who	1002				
86	livelihood	1001				

Table 4.6.: the top 100 most frequent lemmas extracted from the IOC with their raw frequency.

The topicality of the IOC was further analysed via the classification of its most frequent lemmas in themes (word-sense categories) according to their meaning in the context of use; in this way, the main relevant themes of the corpus represented by the lemmas emerged. Since not all the lemmas appearing in the results were worth analysing because they were not informative from a content point of view, only relevant lemmas such as nouns, adjectives and some verbs and adverbs were analysed.

Overall, it can be said that the topicality of the IOC that emerged from the analysis of the most frequent lemmas revolves around the themes reported in Table 4.7. All lemmas were grouped in thematic areas; many lemmas fall under more than one thematic area as themes merge and combine in discourse and real-life contexts as well. Also, sometimes a theme falls under two (or more) thematic areas which are interdependent and one of them is hierarchically dominant. So, subdivision of results and boundaries between lemmas are approximate as themes intertwine vastly and are co-dependent and complementary.

As mentioned above in Section 4.2.1.1., the labels assigned to each thematic area are drawn from the literature on the topic of environmental migration (Section 1.1.) and the publications of the international organisations included in the IOC. Some issues that tend to be mentioned together in the corpus texts and show a certain degree of correlation are included in a comprehensive theme; issues are grouped together on the basis of their meaning, which is

inferred by an analysis of the context of the most frequent words and explained below. The themes are:

- Migration and displacement;

- Environment and climate;

- Rights, protection and wellbeing;

- Policy-making and legal frameworks;

- Adaptation and response measures;

- International and institutional support and responsibility;

- Capacity building;

- Knowledge and information;

- Security and securisation;

- Participation, partnership and coordination;

- Vulnerability;

- Social issues.

In the case of "Rights, protection and wellbeing" and "Participation, partnership and coordination" the analyst decided to include these issues which had previously been subdivided into distinct thematic areas because of the marked interrelatedness in the specific co-texts of use of frequent words. The theme "International and institutional support and responsibility" refers to the responsibility of least affected countries to mitigate their impact on environmental changes and increase their assistance towards affected countries; the theme "Security and securisation" includes issues of "securisation" of borders on the part of least effected countries mainly towards incoming migration and other issues that may arise from the encounter of host societies and migrants and may cause social tension and insecurity. Finally, "Social issues" is concerned with a variety of issues either causing migration or arising from it (see the end of Section 4.2.1.2. for an explanation of each area).

The order assigned to the thematic areas is guided by the order of appearance of frequent words in the list extracted from the corpus: frequent words were considered representative of the importance attributed to each thematic area and of the representativeness of each area in the corpus according to their decreasing order of appearance in the lists, so words which were ranked top-level were considered representative of the most important thematic areas of the corpus. The rationale behind the subdivision of frequent words into thematic areas is based on the analysis of 20 occurrences of each word in their context of use: words were categorised according to the themes they were related to in the corpus. Many words fall within more than one thematic area: they are related to a multiplicity of themes as themes merge and combine in

discourse and real-life contexts. Words are reported in alphabetical order for each theme and are grouped together on the basis of their context of use in the corpus.

THEME	FREQUENT WORDS
Migration and displacement	adaptation, address, affect, area, capacity, climate, change, community, country, develop, development, disaster, displace, displacement, environment, environmental, factor, flood, government, household, human, impact, increase, international, IOM, issue, need, new, national, natural, land, level, livelihood, local, migrant, migration, mobility, people, policy, population, process, protection, provide, relocation, resource, response, result, right, risk, social, state, strategy, support, urban, use, vulnerability, water, work.
Environment and climate	address, affect, area, capacity, change, climate, community, country, development, disaster, displace, displacement, environment, environmental, factor, flood, government, household, human, impact, increase, international, IOM, issue, land, level, livelihood, local, migrant, migration, mobility, national, natural, need, new, people, policy, population, process, project, protection, provide, relocation, resource, response, result, right, risk, social, state, strategy, support, urban, use, vulnerability, water, work.
Rights, protection and wellbeing	adaptation, address, affect, area, capacity, climate, community, country, develop, development, disaster, displace, displacement, environment, environmental, factor, flood, government, household, human, impact, include, increase, international, issue, land, level, livelihood, migrant, migration, mobility, national, natural, need, new, people, policy, population, process, project, protection, provide, relocation, resource, response, result, right, risk, social, state, strategy, support, urban, use, vulnerability, water, work.
Policy-making and legal frameworks	adaptation, address, affect, area, change, climate, community, country, develop, development, disaster, displace, displacement, environment, environmental, factor, government, human, impact, include, increase, international, IOM, issue, land, level, livelihood, migrant, migration, mobility, national, natural, need, new, policy, population, process, project, protection, provide, relocation, resource, response, result, right, risk, social, state, strategy, support, urban, use, water, work.
Adaptation and response measures	adaptation, address, area, capacity, change, climate, community, country, develop, development, disaster, environment, environmental, factor, flood, government, household, impact, include, increase, international, IOM, land, level, livelihood, local, migration, mobility, natural, need, people, population, project, resource, response, result, right, risk, social, state, strategy, support, urban, use, vulnerability,

	water, work.
International and institutional support and responsibility	address, affect, area, capacity, change, climate, community, country, develop, development, displace, displacement, environmental, flood, government, increase, international, IOM, issue, level, local, migrant, migration, mobility, national, natural, need, new, people, policy, process, project, protection, provide, relocation, resource, result, right, risk, strategy, support, use, work.
Capacity building	adaptation, address, affect, area, capacity, country, develop, disaster, displacement, environment, factor, flood, government, include, increase, IOM, issue, livelihood, migration, natural, population, process, project, protection, relocation, resource, response, result, risk, social, strategy, support, use, vulnerability, water, work.
Knowledge and information	adaptation, affect, capacity, change, country, develop, environment, environmental, factor, impact, include, increase, IOM, issue, local, migrant, migration, mobility, national, natural, need, new, people, population, process, project, provide, resource, response, right, risk, social, state, strategy, support, urban, work.
Security and securisation	affect, community, country, disaster, displacement, environment, flood, household, human, include, land, livelihood, migrant, migration, mobility, natural, need, people, project, resource, result, risk, social, state, urban, vulnerability, work.
Participation, partnership and coordination	adaptation, address, affect, capacity, community, country, develop, displace, environment, government, human, include, increase, international, IOM, issue, local, level, migrant, mobility, national, population, process, project, relocation, resource, response, result, right, risk, social, strategy, support, use, vulnerability, work.
Vulnerability	adaptation, capacity, change, community, country, develop, development, disaster, government, household, human, impact, international, livelihood, migrant, mobility, natural, need, people, population, resource, risk, social, vulnerability, water.
Social issues	address, affect, area, capacity, community, development, environment, factor, household, human, impact, land, livelihood, local, migrant, migration, natural, new, population, process, resource, result, risk, social, urban, vulnerability, water, work.

Table 4.7.: the themes contributing to the topicality of the IOC according to the frequency list.

As emerging from Tables 4.6. and 4.7., the most frequent words deal with the same themes that emerged from the keywords analysis, even though the themes have a different degree of relevance according to the frequency list. The frequency word list analysis thus reinforces the representation of the topicality of the IOC: keywords and frequent words convey a very similar representation of the topicality of the IOC.

4.2.1.3. The topicality of the IOC: a "wishful list"

Overall, from the occurrences reported in Tables 4.1., 4.2., 4.3., 4.4., 4.5., 4.6. and 4.7., the topicality of the IOC seems to revolve around the themes listed below; themes are listed in decreasing order of relevance for the topicality of the IOC, as inferrable from the corpus-assisted analysis:

- Adaptation and response measures;

- Migration and displacement;

- Vulnerability;

- Environment and climate;

- Protection and wellbeing;

- Capacity building;

- Policy-making and legal frameworks;

- Human rights;

- Knowledge and information;

- Partnership and coordination;

- Participation;

- Research and understanding;

- Responsibility of countries;

- Social issues;

- Security and securisation.

For an explanation of the themes, see above in Sections 4.2.1.1. and 4.2.1.2.

In the following sections I will discuss the themes addressed in the IOC. The discussion of the themes is based on the context of use and contextualisation of the keywords and most frequent words as a result of the corpus-assisted analysis: the co-texts of relevant keywords and frequent words were analysed for each theme to verify how each theme is dealt with in the IOC.

Technical and specific terms used in the IOC are reported and used in the discussion of data as they capture salient aspects of the data with the specific turn of phrase chosen by the authors of the texts; technical expressions used in the IOC are reported in inverted commas. For each theme discussed in the analysis, examples drawn from the IOC are reported; the examples chosen exemplify the typology of instances than can be found in each specific thematic area and include either keywords or frequent words. For the sake of clarity, keywords and frequent words included in the examples reported are in bold characters.

1. **Adaptation and response measures**

The theme "Adaptation and response measures" is dealt with mainly in terms of the need to have response measures to climate and environmental events clearly spelled out in order for them to be effective and be taken in anticipation of worsening conditions in a context of declining quality of life. Adaptation strategies consist in measures of response and recovery from natural events-driven and human-driven changes that aim to enhance the protection of affected communities and their rights. It is stated that it would be desirable to collectively and collaboratively shift from the traditional post disaster recovery response to preventive security measures. Development cooperation is regarded as the main tool to implement adaptive capacities of affected populations and reduce vulnerability: "[b]esides the debated options on how to accommodate **climate** in a legal framework, two other main approaches are considered at **international level**: **planned** resettlement and reducing the **vulnerability** of **affected populations** through tailored **development cooperation measures**" (EU 1, 2011); "[m]igration as **adaptation strategy** could also be supported through **development cooperation** for example through the establishment of **service** centres for (potential) migrants in order to maximise the **impacts** of **migration** on human **development**" (EU 1, 2011). In both examples "development cooperation" is presented as a hypothetical approach. In the first occurrence, "development cooperation measures" are only "considered" but not in force, even though their effectiveness is legitimised as common-sense because they are taken into consideration at an international level. In the second occurrence the modal expression "could also be" indicates that "development cooperation" is still only a possible option, and not implemented reality.

Adaptation includes planned strategies to minimise the effects of environmental events on people and the ecosystems, and comprises manifold measures: economic funding, humanitarian aid, development and reconstruction, protection of human rights, the training of local authorities, and the implementation of policies and instruments to deal with response measures.

Migration as resettlement is often referred to as a response measure to deal with environmental change and reduce population pressures in areas with a fragile environment; at the same time, though, environmental disasters constitute an obstacle to migration as an adaptation strategy: "**migration** remains one of the most ancient **strategies** to face hard **environmental** conditions and can represent an **adaptation strategy** with a positive potential" (IOM 12, 2014); "although most **countries** would prefer that their **populations** would be able to remain in place" (EU 1, 2011). In these examples, migration is legitimised

as effective for adaptation purposes: it is defined as a "strategy", a plan to achieve something successfully, and the unmodalised verb "remains" expresses with high modality that this is commonly accepted as such; the adjective "positive" and the connoted noun "potential" point at the possibility of a successful and useful outcome of migration and so legitimise it mentioning its positive aspects.

The variable coping capacities of the local social, political and economic structures make it difficult a prediction of the environmental change impact on migration and thus deeper understanding of their interlinkages is required.

2. Migration and displacement

Migration is a response in a context of declining quality of life, thus intersecting with issues of human security; it is often mentioned as an adaptation strategy to environmental events and so-called "degradation" of the environment, though the impacts of environmental change on migration also depend on the social and cultural context of occurrence.

Migration can be a source of vulnerability as well as a "mechanism for **resilience**"; indeed, it can reduce vulnerability to environmental stressors and prevent the loss of livelihood associated with environmental degradation and natural hazards, but it also has potentially dangerous impacts on the receiving environment, especially if already affected by environmental degradation, in turn impacting on human security. For instance, in "**climate change adaptation** occurs through a combination of multiple actions, including: **strategies**, initiatives, **individual** and collective measures and reactive and proactive measures, to strengthen the **capacities** and **resilience** mechanisms of **populations** and ecosystems by reducing the **vulnerability** of **natural** and **human** systems" (EU 2, 2012), the verbs "strengthen" and "reducing" used in context (they refer to "resilience mechanisms" and "vulnerability" respectively) acquire a connotation of usefulness and are used to convey a positive representation of migration as adaptation. In "[a] range of activities throughout the **migration** cycle aim […] [at] focusing on **human mobility** as a cause of **vulnerability** or as a mechanism for building **resilience**, and taking account of how different types of slow-onset and rapid-onset events have different links to **human mobility**" (IOM 11, 2014) migration is negatively connoted as harmful when it is associated to "vulnerability" and evaluated as "good" and desirable when it is represented as a way to build resilience. Also, in "[t]here is now wide recognition that **human mobility**, in both its forced and voluntary forms, is increasingly **affected** by **environmental** and climatic **factors**, while migratory **movements**, in turn, may have an **impact** on the **environment**" (IOM 14, 2015) the

reciprocal connection between migration and the environment is legitimised through "authorisation" (Section 3.2.) ("there is now wide recognition") in the example.

Environmental forms of mobility lack of a univocal terminology, or rather they are named in a variety of ways that bear different connotations. Among key drivers to migration there are environmental, safety and economic factors, which make it difficult to tell these forms of mobility apart from others as it is not always possible to isolate environmental change as a trigger cause; also, a distinction between forced displacement and voluntary migration can be as challenging. Examples of this problematic issue can be found in the following occurences: "[w]hile there is agreement that **environmental factors** can, and in fact do play an **important role** in relation to patterns of **mobility**, **migration** and **displacement**, there has been no agreement on terminology, nor on how **environmental factors** precisely **impact migration** and specifically, how environmental events may engender **forced migration** and **displacement**" (EU 1, 2011); "[w]hile there has always been a link between **environmental factors** and **human mobility**, it is important to note that it will not always be possible to isolate **climate change** as a cause of **displacement** or **migration**" (IOM 10, 2014). In both the first and second examples, lack of agreement over issues related to environmental migration is expressed through impersonalisation: "there has been no agreement"; "it will not always be possible to" and so obfuscating agency and responsibility. The whole discourse on human mobility revolves around the need to facilitate migration while ensuring that the rights of migrants are protected during the whole migration cycle; effective management of environmental migration through coordination and partnership is key to the benefit of human security and the environment, and there is a wish for a mobility partnership framework to be established for this purpose. A prevention perspective is to be preferred for migration to be a viable adaptation strategy to deal *ex ante* with potential environmental displacement: "[t]he EU should consider **providing support** to **local governments** to **address migration** as an **adaptation strategy** and to facilitate **migration** while ensuring that the **rights** of the **migrants** are protected during the whole **migration** cycle" (EU 1, 2011); "[t]he **social**, **economic** and cultural **rights** of **individuals** have to be protected during the **relocation process**" (Bronen cited in IOM 12, 2014); "it is through the prevention of damage due to **climate change** consequences that damage to the exercise of human **rights** can also be prevented" (EU 2, 2012). In the three examples, the preservation of human rights is presented through structures where the subject is implied, and it is attributed a different degree of importance: in the first occurrence the issue of protection of rights is relegated to a subordinate clause at the end of the passage; in the second occurrence

its importance is stated with deontic modality ("have to be protected"); and in the third example the negatively connoted term "damage" is mitigated by the verb "prevented". As shown by these examples, responsibility for action is often left implicit; in this way, action might be delayed or avoided since who is supposed and/or expected to engage into it is not explicitly mentioned.

3. **Vulnerability**

Vulnerability is an issue that affects human security and depends on the specifics of local communities in terms of exposure to climate and environmental change and adaptive capacities of affected populations. It determines how environmental change will be unevenly experienced: countries that combine high exposure to environmental changes with a low "**adaptive capacity**" will be most affected (IOM 12, 2014); "[c]limate **change** will be experienced very differently depending on the **vulnerability** and **adaptation capacities** of the **affected populations** and the rapidity and severity of events" (EU 1, 2011). In this example, the modal verb "will" expresses high epistemic modality and the adverb "very" stresses the fact that different people will experience environmental change differently.

The scenario outlined in these examples highlights the fact that less industrialised countries are likely to be those suffering the worst consequences and effects of environmental change. Therefore, vulnerability often depends on relationships of inequality: populations that lack the resources for "**capacity building**" and "**adaptation**" activities will experience higher exposure to environmental-driven and human-driven risks. Lower middle-income countries and poor agrarian communities are disproportionately affected because their livelihood systems are rooted in land-based activities and climate-sensitive sectors.

It is argued that vulnerability should be reduced via "policy implementation", which is part of the international agenda to address environmental change and migration.

4. **Environment and climate**

The natural sphere is mainly addressed in terms of the unfavourable natural conditions, the effects and the risks of climate and environmental change and degradation that affect the wellbeing of human societies and/or trigger migration, sometimes exacerbated by social and economic factors.

The theme of nature also relates to issues of preservation, stating the need to preserve and improve the quality, relief and recovery processes of the environment from both "stress" and "anthropogenic activities", especially in ecologically fragile zones that might be sensitive to population pressure. Also, in terms of environmental protection and equity, the "sustainable **management**" and sharing of global natural resources needs improvement. In "[a] high

level of **environmental** protection and the improvement of the quality of the **environment** must be integrated into the **policies** of the Union and ensured in accordance with the principle of sustainable **development**" (EU 2, 2012), the preservation of the environment is legitimised as righteous through authorisation further reinforced by the deontic modal verb "must" and the reference to impersonal authority mentioned as "the principle".

Data report that policies need to be either implemented or created *ex-novo* to address the phenomenon of migration driven by "**natural** triggers".

5. **Protection and wellbeing**

The theme "Protection and wellbeing" revolves around environmental and human security in terms of reducing loss of life, minimizing suffering and facilitating recovery, also during the process of "**relocation**".

The issue of protection further develops into the debate on policy-making for the protection of environmental migrants, demanding that a human security approach is undertaken as opposed to an economic one, putting the individual and their vulnerabilities as well as context-specific vulnerabilities at the centre of the debate. The wellbeing of people includes physical integrity, as well as psycho-social wellbeing deriving from access to social networks, emotional bonding, and moral support; also, it depends on environmental protection and preservation of livelihoods, sustainable development contributing to the welfare of populations, and protection from any risk of violence. Some environmental NGOs have chosen, in this sense, "to communicate more the 'encompassing' concept of **climate** justice that puts the emphasis of the **human rights** and **climate** change theme on to values and ethics" (EU 2, 2012) as "a **human rights**-based approach to **migration** in regards to **climate** change is key" (UN 14, 2017) and "**economic climate** negotiations have been renewed by these ethical and legal approaches" (Limon cited in EU 2, 2012). In these occurrences, protection is evaluated as rightful through the frequent use of ethically connoted words like "justice", "human rights", "values and ethics", "ethical and legal".

Flexible and immediate protection mechanisms need be established to guarantee the wellbeing of both displaced people and host populations, as well as local, national and international response measures, and an official and shared terminology to refer to environmental migration and migrants. The protection gap is frequently mentioned, lamenting the lack of harmonised protection statuses in the context of environmental migration and the scarce political will to realise them. International policy coordination and human rights-based approaches are key to ensure protection. For instance, "the expansion of the 1951 Geneva Convention relating to the status of Refugees and its 1967 Protocol is often

143

cited as a possible option in the **context** of **environmental displacement**" and "[t]he Lisbon Treaty provides for the necessary grounds for a revision of asylum and immigration **policy** in order to regulate the status of the '**environmentally displaced individuals**'" (EU 1, 2011). Still, "[w]hile the academic debate on **environmentally induced migration** has considerably evolved over the past decade, the **policy** debate still lags behind" (EU 1, 2011). In these examples, the lack of a protection status for environmental migrants is expressed using a variety of linguistic items: specific policies are presented as an "option" whose uncertainty is highlighted by the evaluative adjective "possible". Also, it is implied that policies need be revised ("provides the necessary grounds for"); but their revision and implementation has not been carried out yet as policy debate "lags behind"; the verb "to lag behind" highlights the slowness of the process and the adverb "still" implies that the situation is expected to change some time.

6. **Capacity building**

The theme "Capacity building" refers to strategies for "structural and knowledge preparedness" to enhance "**resilience** mechanisms" of populations and ecosystems by reducing their vulnerability to change -and thereby migratory movements. It is dealt with mainly in terms of the need to implement capacities at both institutional and community level, promote "preventive measures" and enhance "**protection** measures"; also, it addresses the coping capacities of host societies. Therefore, "**governments** in **developing countries** could benefit from **capacity building activities** on better **management** of **migration** flows" (EU 1, 2011). Furthermore, "**development** agencies can **support** communities to implement **disaster risk management** through **capacity building**, building **disaster management** committees and establishing **local early warning** systems" (EU 1, 2011). In the first occurrence the modal verb "could" implies that these activities have not been put into practice yet, and in the second example the modal verb "can" might mean that development agencies can support communities -they either are allowed to or have the means for it, so they seem to be encouraged to do it.

The theme is related to processes of knowledge sharing and management, communication, coordination, information delivery and data collection to "inform policies"; it includes services and training for local authorities and communities, "managing of **natural resources**" and services, and environment- and migration-sensitive development and "infrastructural **projects**".

"Socio-economic **sustainable development**" seems to lay at the foundations of building sustainable resilience for humanitarian and development assistance: there is a need for long-

term measures to cope with the natural or human-made deterioration of environmental conditions. While "**response** measures may be shown to be of undeniable value to the **environment** in the short term, they are not always relevant over the **long term** in terms of human rights" (EU 2, 2012): here short-term response measures are presented with the evaluative expression "not always relevant", so their usefulness over long periods of time is questioned (delegitimation, see Section 3.2.).

In the corpus, "small investment in prevention" is lamented, as well as lack of "operational capability" and knowledge, which results in unpreparedness to environmental change; scarce resilience depends on patterns of inequality as well as lack of "political engagement".

7. **Policy-making and legal frameworks**

The theme "Policy-making and legal frameworks" revolves around the demand of "**policy** implementation": new legal measures and instruments specifically addressing "**protection needs**" of environmentally displaced individuals and their rights need be adopted by means of creating an adequate legal framework and/or implementing the existing one. Policies must be informed by a "**rights**-based approach" in order to arrive at more comprehensive responses to climate and environmental related displacement.

The texts address the failure or the poor capacity of the international community's negotiations to address environmental migration because of the lack of a shared strategy on "**development** and **adaptation policies**", legislative gaps, non-harmonised "**protection** statuses", and restrictive regulations that go against the protection of rights. Also, the debate on environmental and migration policies is presented as in need to be re-framed by replacing the economic perspective with a renewed ethical and legal approach in policy-making that includes social justice and environmental justice issues. A holistic approach to environmental change and mobility is presented as required; more specifically a comprehensive and strategic approach across a variety of policy areas is required. A mobility partnership framework based on uniform cross-cutting policies, participation and responsibility sharing would be in line with such an approach: "[t]he benefits for Europe of a **human rights** approach to **climate change**"; "European **environmental policy** is exemplary in many accounts, but the implementation of a comprehensive **policy** to combat **climate change** still fails due to the **lack** of supranational **authority** to **implement** appropriate instruments, and also due to the discrepancies between sovereign **States**" (EU 2, 2012); "[t]he problem with regulating the status of **environmental migrants** with a global **policy** and common terminology lies in the difficult identification of **environmental change** as the root cause of these forms of **mobility**" (EU 1, 2011). In these examples, the lack of a

univocal framework of reference to address environmental migration is presented as a problematic situation through linguistic items which either are negatively connoted, or contribute to the reinforcement of connoted words. These words are: "discrepancies"; "problem"; "difficult"; "still" which reinforces the verb "fails"; and "lack of" which acquires a connotation of disorganisation in the context of use (it refers to "supranational authority").

Finally, policies should also target the so-called "developed" countries in terms of responsibility-sharing through "mitigation **strategies**", and refer to the promotion of "the acceptance of the efforts **needed** to reform lifestyles, production modes and consumption trends towards a **sustainable development** for all" (EU 2, 2012). Here, changes in patterns of lifestyle acquire a connotation of desirability in the context of use, but are also presented in evaluative terms as "efforts" on the part of industrialised countries; their importance is stressed by the verb "needed", and their intensity by the noun "reform". Also, it is presupposed that the current situation is one where development is "sustainable" only for some and not "for all".

8. **Human rights**

"Human rights" is a dominant theme and it mainly refers to "**environmental** justice **rights**" and the need to mainstream human rights into "**environmental** change **policy responses**"; so, the economy and "development"-based approach to environmental change and migration needs be innovated towards a human rights-based approach. In "the climatic risk supposes an evolutionary, modernized and voluntaristic interpretation of **human rights**, so that a true **right** to the environment will emerge" (EU 2, 2012), human rights acquire a connotation of development and ethics through the three attributes "evolutionary, modernized and voluntaristic" and the evaluative adjective "true".

Improving protection of rights is expressed in manifold ways, from policy-making, to activities in both origin and destination areas, participation and dialogue, the need for durable "sustainable **adaptation** solutions" and sustainable development. The texts contain a global human rights-based approach to environmental migration which includes a more encompassing concept of environmental justice emphasising human rights, and depending on cooperation and unity in international policy-making processes: international stakeholders should work in synergy with the civil society, NGOs and other private actors.

Another aspect of human rights protection entails the participation of migrants in the host community and its rights: "the **environmental human right** to public **information** and participation in decision-making, which is transversal by nature, appears and may evolve in

both EU internal and external **climate policy** […] in order to build, beyond the simple **right** to **information**, a '**right** to **environmental** knowledge'" (Ghezali cited in EU 2, 2012). Here the right to environmental knowledge is mentioned as an aspiration but not realised yet as indicated by the modalised verb "may evolve", thus confirming the "wishful list"-like attitude towards environmental migration displayed in the IOC.

9. **Knowledge and information**

This theme is mainly concerned with the issue of mainstreaming human rights into capacity building and adaptation projects, and knowledge management is represented as essential. Improving knowledge, information and data collection is key to understand the link between migration and environmental change and ensuring human and human rights security through policy development. In "[d]isposing of reliable **data** on the likely **impact** of climate **change**, the associated socio-economic aspects and the costs and benefits of various **adaptation** options is indeed essential for strengthening the mainstreaming of a human **rights** approach into **adaptation** policies" (EU 2, 2012), the process of spreading knowledge is deemed "essential". The use of this evaluative adjective contributes to legitimising the process of information delivery as rightful and desirable; the use of unmodalised verbs and the intensifier "indeed" reinforce this idea.

Information sharing, sensitisation and participation are three closely related domains as they play a fundamental role in "capacity building programs" and "effective response policies". They refer to the right of people to environmental knowledge, namely public transparent information, awareness-raising programmes and inclusive participation in decision-making processes. In this respect, there is a need to promote the environmental human right to public information as part of the protection of human beings and rights: "[s]ome preconditions to make durable solutions sustainable include the representative consultation with and inclusive participation of the **affected** communities as well as transparent **information** on the **process**" (EU 1, 2011). Consultation, participation and information are defined "preconditions": they are legitimised since it is stated that they cannot be disregarded; unmodalised verbs reinforce the unquestionability of the statement. Information is also a support for migrants in destination areas.

International partnership, including the role of the media, is fundamental to increase understanding and raise awareness on environmental mobility and security dynamics.

10. **Partnership and coordination**

The theme "Partnership and coordination" revolves around the creation of an international partnership to tackle environmental change and migration, urging authorities to cooperate.

What seems to be relevant is a holistic engagement to governance that covers all possible aspects of environmental migration and is based on an interdisciplinary common agenda; what is lamented, instead, is a state of absence of structured organisation and systematic dialogue and an unclear distribution of competencies. Coordination, commitment, balanced efforts in burden-sharing processes and partnership are wished for, as well as support to enhance policy measures funds and aid assistance: "[a] holistic approach covering all the aspects of environmentally induced migration is a more relevant approach, engaging a comprehensive instrument for environmentally **displaced** individuals" (EU 1, 2011). Here, a holistic approach to environmental migration is legitimised through the evaluative adjective "relevant", the intensifier "more" and the high facticity of the statement.

Participants, including scholars, think tanks, governmental and non-governmental organisations (NGOs) and communities, should collaborate, dialogue and find agreement and should all be included in policy-making and information-delivery processes. In turn, multi-level collaboration and coordination are essential to effective data collection for policy-making, capacity building and response measures.

A proactive approach would produce beneficial outcomes for migrants and societies alike, and it requires transboundary cooperation among a wide range of actors in different domains: "the participation and cooperation of 'third' **actors**, must be encouraged and **facilitated** at both **national** and EU **levels**" (EU 2, 2012); "**IOM** is strengthening cooperation with key **actors** in **human mobility processes** and forums <sic> through common initiatives" (IOM 11, 2014). In these examples, "must" expresses deontic modality (though through the impersonalisation of agentless passive forms which obfuscate the agents of the promotion of cooperation), and it implies that the process has yet to be done; in the second example, the present continuous "is strengthening" implies that the process is in progress and has not been achieved yet.

The "**soft law** approach" (the adoption of non-binding law) is deemed as an interim step before there is broad global consensus on a shared policy framework. The aim seems to develop a support mechanism at national, regional and local level for ensuring protection of the affected population and their rights, and the effective delivery of aid.

11. Participation

Participation represents one of the most relevant social issues in addressing questions related to environmental migration: vulnerable countries should be given voice and local authorities and populations should be consulted and involved in knowledge-sharing and decision-making processes on environmental management. The environmental human right to public

information and inclusive participation of communities in decision-making processes is represented as needed to make durable solutions sustainable and therefore strengthen human security and rights: "[t]he implementation of the principle of participation in the fight against climate change requires the establishment […] of interconnected structures that allow full **support** of the public concerned" taking into consideration "what means of communication the public is most familiar with; what would be the most direct and efficient way of relaying **information**; what **local** contacts can be used to assist in the transmission of **information**; and what language would be the most appropriate" (EU 2, 2012) in order to structure "mechanisms for the **effective** participation of **affected communities**" (UN 5, 2012). Here, the verb "requires" implies that processes of participation are needed but still to be achieved since infrastructural and organisational means have to be established yet, as expressed through the reiterated use of modal verbs expressing desirable but not yet achieved situations. Also, the evaluative adjective "effective" implies that current processes of participation of affected communities are not well-functioning and need be implemented.

12. Research and understanding

The theme "Research and understanding" mainly refers to the actual scarce or fragmented knowledge and consequent uncertainty about the effects of environmental change on geopolitical security. A better understanding of the complexities and links between environmental factors, human agency, mobility, human rights, development and other socio-cultural and ecological dynamics is presented as necessary to enable good practices and effective policies. Indeed, "one of the major obstacles to the development of successful climate change adaptation responses is the lack of **knowledge**" (EU 2, 2012); "[t]he limited availability of data and resulting **knowledge** gaps in the **understanding** of the links between the movement of people and environmental factors therefore present an important obstacle to moving forward in this area" (IOM 1, 2018). In these examples there are negatively connoted terms or terms that acquire a connotation of difficulty or obstruction in the context of use: "obstacles" reinforced by the attributes "major" and "important"; "lack of"; "limited"; and "gaps". In the first example quoted, the evaluative adjective "successful" implies that current adaptation measures are not effective. Also, lack of knowledge is metaphorically represented twice as an "obstacle" than hampers a "movement ahead" ("development", "moving forward").

Understanding is meant at implementing both "adaptation" and "capacity building" measures and policies, and it therefore includes the identification of the concerns of vulnerable countries, their participation and "voice" to be heard.

13. Responsibility of countries

In the IOC data, responsibility mainly refers to the process of adopting "mitigation strategies" on the part of the so called "developed" countries in order to reduce their impact on environmental change and degradation and consequent displacement and poverty; it also refers to burden-sharing processes and support and assistance in the context of adaptation to environmental change and migration. In the example "**developed countries** acknowledge the responsibility that they bear in the **international** pursuit of sustainable **development** in view of the pressures their societies place on the global environment and of the technologies and financial **resources** they command" (EU 1, 2011), various connoted terms appear. "Responsibility" and "pressures" point to the role of industrialised countries as perpetrators; "command" acquires a connotation of unjust exclusiveness in this context as it refers to processes of control and possession of resources instead of equal distribution and fruition. It is interesting to notice that developed countries are referred to in the third person plural through the use of personal pronouns and possessive adjectives, thus creating an "outgroup" (see Section 3.2.) that seems to exclude the authors and audience of the text from the processes which are mentioned.

The "reallocation of responsibility and **resources**" (IOM 12, 2014) to local authorities is presented as fundamental to support at-risk states in enhancing their capacities to adapt to environmental change and minimise consequences on human security. For this purpose, support and multilateral responses are required as well as a global and international response and "responsibilisation".

14. Social issues

In the IOC data, this theme includes a diversity of social issues that can be either the drives to migratory movements, or the consequences of such movements. Among the social push factors to migration there are: the degree of dependence of to-be migrant populations on the environment and the impossibility to live out of it once spoiled; and the lack of skills to either prepare or adapt to climate and environmental changes and the impact they have on the socio-economic systems of sustenance. Among the social issues arising from migratory movements there are demographic issues that further affect the wellbeing of people and the environment such as overpopulation and consequent growing poverty. Also, there is concern about the changes in the populations of origin caused by migratory movements: the loss of many young members of the society may foster a potential rupture of the internal cohesion and wellbeing of origin communities.

It is stated that people who are most affected by vulnerability to social and environmental issues are ethnic minorities and people who suffer from patterns of discrimination in terms of distribution of resources; a fair re-distribution of resources would reduce inequalities and vulnerability of affected populations: "the most **vulnerable** members of society such as women, children, the elderly, disabled persons, minorities and indigenous peoples are the most directly concerned" (EU 3, 2013). Also, "[t]he World Bank has denounced the way in which women and the poorest indigenous peoples are rarely consulted on issues, particularly in relation to climate change" (EU 2, 2012). The exclusion of women and ethnic minorities from decision-making processes is delegitimised as wrong by the evaluative verb "denounced", which bears a connotation of illegitimacy and criticism. Also, in the first example the structure of the sentence and the repetition of the intensifier "most" establishes a correlation between vulnerability and the social impact of environmental change.

Finally, the theme of social issues also relates to host communities in terms of the responsibility of human agency in environmental changes; it is emphasised that so-called "developed" countries are to be blamed the most.

15. Security and securisation

The issue of security is mainly approached from the perspective of the host communities, and deals with the theme of immigration as a potential threat to the host community itself, calling for "defense measures" to better protect the receiving country/ies from the arrival of migrants; this type of representation includes references to "illegal" forms of immigration. In "[t]he potential effects of environmental change on conflicts and geopolitical security are an increasing concern of both researchers and policymakers" (EU 1, 2011), the impact of environmental change and its consequences is hedged by "potential", but it is also defined with the appraisal pattern "increasing concern", where the attribute reinforces the concept expressed by the noun.

Also, changes in the social fabric are likely to create tensions both in the country of origin and in the country of destination, causing potential future conflicts: "[e]nvironmental degradation normally forms only one of the causes, closely linked to other factors such as […] inter-group tensions and conflict in **countries** of origin as well as several factors in **countries** of destination" (EU 1, 2011). In this example the role of environmental change as a driver to migration is mitigated by the adverb "only" and it is represented in its close interrelatedness with other factors ("closely linked").

The topicality of the IOC seems to revolve around the discussion of strategies to prevent and/or respond to climate and environmental events, and the need to better understand the correlation between these phenomena in order to address them correctly and collaboratively and provide adequate protection to those affected by them.

The discourse represented in the IOC converges towards two macro-thematic areas: "Capacity building" and "Adaptation and response measures". There are interrelationships between the themes of the list above because these themes merge also in real-life contexts; since themes overlap, it is sometimes difficult for the reader to tell apart one from the other. For instance, the theme of "Migration and displacement" intertwines with other themes and it sometimes falls within the thematic area of response measures as a form of adaptation; while in other instances, it relates to the theme of environmental triggers to mobility deriving from the natural sphere (climate change, environmental change, or related natural hazards) such as, for instance, desertification, floods and coastal erosion.

These two macro-thematic areas, namely "Capacity building" and "Adaptation and response measures", fall within a higher all-comprehensive theme, a *file rouge* to the whole discourse on environmental migration in the IOC: it is the theme of protection and the need for partnership collaboration to achieve it. In the corpus, there is a pervasive underlying reference to the need to grant the respect of human rights for everyone in the world; because of this utmost objective there is a need to better understand the phenomenon of environmental migration and its root causes and linkages with other factors. Also, the IOC texts mention that existing policies should be implemented and/or new *ad-hoc* policy responses formulated in order to decrease the vulnerability of the populations that are most likely to be affected by environmental change and migration, using both "capacity building" and "response measures". Most of all, the data show that a behavioural change is needed: it is necessary for non- or less-affected countries to collaborate among themselves and with affected countries, coordinate their actions, work in partnership, find agreements in order to make all the above necessities potentially achievable and take their fair share of responsibility. From the analysis of the co-texts of the keywords, the need for inclusion and participation of the affected or likely to be affected populations, as well as other stakeholders such as NGOs, emerges as fundamental to find the most adequate responses possible. There is a frequent call for improvement of protection measures for everyone involved in the phenomena related to climate and environmental change and migration via an information-based approach. According to the co-texts analysed, there seems to be a general call for a holistic approach based on cooperation and partnership that are missing, but

that are also identified as the most appropriate way to address environmental change, environmental migration and their developments.

Overall, the whole discourse of the IOC seems to be underpinned by a call to action; the problem is that all these issues of equity, partnership, collaboration, protection of basic human rights and responsibility are stated as aspirations and wishful thinking but not as achieved yet, which gives the discourse of the IOC the appearance of a "wishful list", more than a programmatic agenda. Examples of this way of presenting issues in the IOC discourse are the following among many: "[s]ince its origins, the development-migration nexus has experienced the recurrent problems of understanding and collaboration between the parties involved" (EU 2, 2012) (lack of cooperation is expressed in negatively connoted terms ("problems") further exacerbated by their frequency ("recurrent").; "[t]he mobility partnerships would be, in principle, a relevant instrument to bilaterally cooperate on all sorts of measures regarding environmentally displaced" (EU 1, 2011) (lack of instruments of cooperation to address environmental migration is clearly stated with a hypothetic clause where the use of the modal verb "would be" is further hedged by the expression "in principle"); "[o]ne pragmatic argument against the creation of a new protection treaty is the potential lack of political will to realize protection for people displaced by climate change since millions of refugees have no durable solutions in sight due to a lack of implementation of the principle of burden sharing" (EU 1, 2011) ("lack of" is repeated twice, once hedged by "potential", to say that countries are not willing to and in fact do not cooperate). Each example contributes to the outline of an international scenario were cooperation is missing at different levels: lack of understanding and collaboration on the topic of environmental migration in the first example; lack of instruments of cooperation in the second example; and lack of will to cooperate in the third example.

4.2.2. Topicality of the NC: keywords comparison with the IOC and frequency list

4.2.2.1. Keyword analysis

In order to explore the topicality of the NC, I produced a keyword list of the node corpus NC using the IOC as reference corpus both for single-word and multi-word keywords extraction; I set a maximum of 100 items to be extracted and I chose that they should be displayed as lemmas.

The settings for this comparison are the same adopted for the IOC-NC and IOC-enTenTen15 comparisons: the minimum frequency for keywords and terms was set to 1, the Simple Maths parameter was set to 100, and it was specified that keywords should be at least 3 characters long

with the regex .{3,}, in order to avoid chunks of words or shorter words from appearing in the results.

With these settings, I obtained a set of two keyword lists: a list of single-words and a list of multi-words. Table 4.8. and Table 4.9. report the top 100 single-word keywords and the 6 multi-word keywords extracted from the NC respectively; multi-words are fewer in number as only 6 of them matched the criteria established for the keyword extraction.

	Term	Score	Freq	Ref freq
1	say	24.240	415	129
2	Syria	10.190	83	19
3	you	7.060	64	35
4	warming	6.380	68	57
5	Australia	6.240	64	52
6	Canada	5.940	43	14
7	our	5.730	112	173
8	refugee	5.640	329	672
9	she	5.530	49	36
10	Syrian	5.310	36	10
11	Bangladesh	5.110	131	253
12	scientist	5.100	41	27
13	Europe	4.950	72	111
14	carbon	4.940	41	31
15	President	4.900	41	32
16	summit	4.590	28	4
17	his	4.570	68	117
18	world	4.560	163	385
19	tell	4.370	30	15
20	nation	4.310	58	100
21	Kiribati	4.290	41	50
22	Monday	4.250	24	0
23	war	4.180	46	69
24	just	4.120	66	134
25	Thursday	3.980	22	0
26	warn	3.960	28	20
27	leader	3.830	48	91
28	percent	3.810	38	58
29	emission	3.800	57	123
30	sea	3.780	100	270
31	temperature	3.750	53	112
32	get	3.670	44	85
33	Australian	3.670	24	15
34	Aids	3.670	20	1
35	Israel	3.630	20	2
36	talk	3.580	28	32

37	urge	3.560	22	11
38	president	3.480	21	10
39	flee	3.450	53	130
40	rise	3.420	147	486
41	New	3.380	57	150
42	planet	3.370	22	17
43	now	3.340	91	284
44	greenhouse	3.270	27	40
45	million	3.250	194	702
46	happen	3.240	33	65
47	global	3.240	167	596
48	immigration	3.240	39	89
49	like	3.230	69	209
50	gas	3.180	29	52
51	asylum	3.140	32	66
52	next	3.130	42	108
53	think	3.130	32	67
54	News	3.120	20	18
55	University	3.020	34	81
56	week	3.020	26	47
57	add	2.980	42	118
58	billion	2.970	43	123
59	York	2.960	20	24
60	immigrant	2.930	20	25
61	Minister	2.850	21	33
62	hope	2.830	25	52
63	century	2.820	35	98
64	Assembly	2.770	20	32
65	big	2.760	31	84
66	here	2.740	32	90
67	believe	2.720	26	63
68	call	2.710	65	248
69	conference	2.700	34	102
70	North	2.700	22	45
71	Paris	2.700	31	88
72	researcher	2.670	29	80
73	rich	2.660	21	42
74	hundred	2.630	21	44
75	ask	2.590	24	61
76	crisis	2.580	82	350
77	East	2.570	23	57
78	year	2.520	185	886
79	real	2.500	23	61
80	come	2.500	65	277
81	push	2.470	28	89
82	too	2.450	30	101
83	bad	2.450	36	133

84	want	2.440	26	81
85	conflict	2.440	128	619
86	weather	2.390	49	208
87	nearly	2.390	24	74
88	mass	2.340	32	121
89	wave	2.340	21	61
90	will	2.330	370	1986
91	report	2.310	104	526
92	demand	2.290	32	126
93	fuel	2.290	20	59
94	but	2.260	226	1230
95	December	2.260	29	112
96	expert	2.260	49	226
97	last	2.240	53	251
98	General	2.240	22	74
99	thousand	2.220	22	75
100	predict	2.200	26	100

Table 4.8.: the top 100 single-word keywords extracted from the NC compared with the IOC: keyness score, frequency in the node corpus and frequency in the reference corpus of each keyword

	Term	Score	Freq	Ref freq
1	global warming	5.100	47	42
2	refugee crisis	3.920	24	8
3	rising sea	3.130	27	46
4	sea level	2.220	34	145
5	extreme weather	1.890	23	112
6	climate change	1.840	487	3360

Table 4.9.: the 6 multi-word keywords extracted from the NC compared with the IOC: keyness score, frequency in the node corpus and frequency in the reference corpus of each keyword.

The analysis of the topicality of the NC was partly based on the classification of its keywords in themes (word-sense categories) according to their meaning in the context of use; in this way, the main representative themes of the corpus emerged. For this analysis I grouped all results into major thematic areas. The classification proceeded inductively, grouping together the nouns that expressed similar kinds of meaning according to their context and co-text. The co-text was extracted via KWIC (key-word-in-context) and then a label was assigned to each category. The goal was to identify major thematic areas that could outline the discourse of the NC and check whether the official discourse of international organisations is or is not reflected in news discourse. On the total amount of 100 single-word and 6 multi-word keywords generated as lists

by comparison of the NC and IOC, the first 20 co-texts of each keyword were examined in order to establish the thematic area they belong to. Function words were not analysed as they are irrelevant in terms of content for the definition of the topicality of the NC.

Overall, it can be said that the topicality of the NC that emerged from its keywords analysis revolves around the themes which are reported in Table 4.10. All keywords were grouped in thematic areas; many keywords fall under more than one thematic area as themes merge and combine in discourse and real-life contexts. Also, sometimes a theme falls under two (or more) thematic areas which are interdependent and one of them is hierarchically dominant. Therefore, subdivision of results and boundaries between keywords are approximate as themes overlap and are co-dependent and complementary.

As mentioned above in Section 4.2.1.1., the labels assigned to each thematic area are drawn from the literature on the topic of environmental migration and the publications of the international organisations included in the IOC (Section 1.1.). Some issues that tend to be gathered together in the corpus texts and show a degree of correlation are included in a comprehensive theme; issues are grouped together on the basis of their meaning, which was inferred by an analysis of the context of keywords. The themes are:

- Research and understanding;
- Environment and climate;
- Social issues;
- Protection and wellbeing;
- Migration and displacement;
- Policy-making and legal frameworks;
- Responsibility of countries;
- Security and securisation;
- Capacity building and adaptation measures;
- International and institutional support and responsibility;
- Emotional response;
- Rights and assistance.

For a definition of the themes, see above in Sections 4.2.1.1. and 4.2.1.2.

In the case of "Rights and assistance" the analyst decided to include these two issues which had previously been subdivided into two different thematic areas because of the marked interrelatedness that can be seen in the contexts analysed. The theme "Emotional response"

includes issues of either xenophobic reaction to migration or welcoming acceptance and integration of migrants.

The order assigned to the thematic areas is the order of appearance of keywords in the lists extracted from the corpus. The rationale behind the subdivision of keywords into thematic areas is based on the analysis of 20 occurrences of each keyword in their context of use. Many keywords fall within more than one thematic area: they are related to a multiplicity of themes as themes merge and combine in discourse and real-life contexts. Keywords are reported in alphabetical order for each theme, and are grouped together on the basis of their context of use in the corpus.

THEME	KEYWORDS
Research and understanding	add, ask, bad, Bangladesh, believe, call, climate change, come, expert, extreme weather, last, leader, mass, Minister, nearly, next, now, predict, President, real, refugee, refugee crisis, report, researcher, say, sea level, she, scientist, temperature, think, University, warming, weather, York.
Environment and climate	add, Aids, ask, asylum, Australia, bad, Bangladesh, believe, big, billion, century, climate change, come, conference, conflict, crisis, demand, East, emission, expert, extreme weather, flee, fuel, gas, General, global, global warming, greenhouse, happen, here, hundred, immigration, Israel, Kiribati, mass, million, nation, nearly, next, North, now, Paris, planet, predict, president, push, real, refugee, refugee crisis, report, researcher, rich, rise, rising sea, scientist, sea, sea level, she, summit, Syria, Syrian, talk, temperature, think, thousand, urge, war, warming, warn, wave, weather, world, year.
Social issues	add, Assembly, bad, big, call, conference, conflict, crisis, East, emission, Europe, expert, extreme weather, flee, fuel, General, global warming, happen, hope, mass, million, nation, North, now, planet, President, push, refugee crisis, researcher, rise, war, warming, warn, wave, weather, year.
Protection and wellbeing	add, Aids, assembly, asylum, Bangladesh, believe, big, billion, Canada, carbon, century, climate change, East, Europe, extreme weather, flee, General, global, global warming, gas, greenhouse, here, hope, hundred, immigration, Kiribati, mass, million, Minister, nearly, next, North, now, planet, predict, President, push, rise, rising sea, scientist, sea, sea level, Syrian, talk, think, thousand, want, war, warming, warn, world, year.
Migration and displacement	add, Aids, ask, Assembly, asylum, Australia, bad, Bangladesh, big, billion, call, Canada, carbon, century, climate change, come, conference, conflict, crisis, demand, East, emission, Europe, expert, extreme weather, flee, fuel, gas, General, global,

	global warming, greenhouse, happen, here, hope, hundred, immigrant, immigration, Israel, mass, million, nation, nearly, next, North, now, our, planet, predict, push, real, refugee, refugee crisis, report, rich, rise, rising sea, scientist, sea, sea level, summit, Syria, Syrian, talk, temperature, think, thousand, urge, want, war, warming, warn, wave, weather, world, year.
Policy-making and legal frameworks	Aids, Assembly, asylum, Australia, bad, Bangladesh, believe, big, call, Canada, carbon, climate change, come, conference, conflict, crisis, demand, East, emission, expert, extreme weather, flee, gas, General, global, global warming, greenhouse, hope, immigrant, immigration, last, leader, mass, Minister, nation, nearly, next, North, now, our, Paris, planet, predict, President, push, real, refugee, refugee crisis, rich, rise, sea, summit, Syrian, talk, temperature, think, urge, warming, warn, wave, York.
Responsibility of countries	ask, asylum, bad, Bangladesh, big, call, Canada, carbon, demand, emission, expert, fuel, gas, global, global warming, greenhouse, hope, immigrant, immigration, mass, nation, nearly, North, now, Paris, planet, refugee crisis, rich, scientist, sea level, temperature, urge, want, warming, warn, world, year.
Security and securisation	Assembly, Australia, Bangladesh, big, call, century, climate change, come, Europe, expert, flee, global, here, hope, hundred, immigrant, immigration, Israel, million, Minister, nation, next, now, our, real, refugee, sea, she, talk, think, urge, want, wave, warn, world.
Capacity building and adaptation measures	Aids, ask, Assembly, bad, Bangladesh, big, billion, call, Canada, carbon, century, climate change, crisis, demand, East, emission, expert, flee, gas, General, global, global warming, greenhouse, here, hope, Kiribati, leader, Minister, nearly, next, North, now, planet, predict, President, push, real, refugee crisis, rich, rise, scientist, sea, sea level, summit, temperature, think, thousand, urge, want, warn, wave, world.
Emotional response	climate change, flee, fuel, hundred, immigrant, mass, million, real, refugee, rise, think, wave.
Rights and assistance	ask, asylum, Bangladesh, believe, big, billion, Canada, climate change, come, conference, crisis, demand, flee, gas, General, global, global warming, hope, immigrant, million, Minister, nation, nearly, North, our, real, refugee, refugee crisis, rich, rise, rising sea, she, summit, Syrian, think, urge, want, warn, York.

Table 4.10.: the themes making up the topicality of the News Corpus; keywords referring to each theme are reported.

In the next section I present further data that, together with those drawn from the dataset in this section, are necessary for the interpretation of the global data of the NC presented in Section 4.2.2.3.

4.2.2.2. Frequency list

In order to refine the analysis of the topicality of the NC, the findings from keywords analysis were complemented by an analysis of the frequency word list.

The settings for the extraction of the frequency list are the same adopted for the extraction of the IOC frequency list: lemmas are selected as at least 3 characters long using the regex .{3,} so that chunks of words or shorter words are not included in the results.

As with the IOC, the first 100 most frequent lemmas of the NC were selected and compared to keywords as reported in Table 4.11.; of these, the first 20 co-texts were examined in order to establish the thematic area they belong to. The co-text of function words was not analysed as it was irrelevant in terms of content for the topicality of the NC.

The classification proceeded inductively, grouping together the nouns that expressed similar kinds of meaning according to their context and co-text. As with the IOC frequency list, lexical words (noun, verbs, adjectives, adverbs) were the focus of this analysis for further concordance analysis while grammatical words were not included because they would not be much significant for the purpose of this analysis (Baker, 2006, p.54). The co-text was analysed and then assigned a label. The lemmas highlighted in red in Table 4.11. were the focus of analysis with their co-text.

	Term	Freq
	Term	Freq
1	the	3970
2	and	2001
3	[number]	963
4	climate	823
5	that	782
6	for	638
7	have	628
8	change	574
9	say	415
10	people	392
11	from	375
12	will	370
13	with	347
14	country	331
15	refugee	329
16	not	313

17	migration	282
18	this	270
19	their	227
20	but	226
21	more	216
22	million	194
23	year	185
24	they	169
25	global	167
26	world	163
27	also	161
28	migrant	161
29	which	160
30	there	153
31	rise	147
32	can	146
33	need	138

34	most	131		68	now	91
35	one	131		69	include	91
36	Bangladesh	131		70	area	88
37	conflict	128		71	right	88
38	water	125		72	already	87
39	its	125		73	force	87
40	would	123		74	these	87
41	who	123		75	because	87
42	all	122		76	cause	86
43	other	122		77	drought	85
44	could	121		78	Syria	83
45	international	119		79	home	82
46	our	112		80	crisis	82
47	many	111		81	land	81
48	environmental	111		82	over	80
49	population	110		83	move	79
50	new	110		84	where	78
51	those	107		85	time	78
52	increase	106		86	into	78
53	report	104		87	displacement	75
54	than	104		88	some	75
55	level	103		89	security	74
56	make	102		90	address	74
57	government	102		91	problem	72
58	sea	100		92	Europe	72
59	human	100		93	become	72
60	issue	98		94	United	72
61	impact	97		95	develop	71
62	about	96		96	should	71
63	such	96		97	may	70
64	take	96		98	lead	70
65	displace	93		99	region	70
66	disaster	93		100	political	69
67	number	91				

Table 4.11.: the top 100 most frequent lemmas extracted from the NC: frequency in the corpus of each lemma.

The topicality of the NC was further analysed via the classification of its most frequent lemmas in themes (word-sense categories) according to their meaning in the context of use; in this way, the main characteristic themes of the corpus represented by the lemmas emerged. Since not all the lemmas appearing in the results were worth analysing because they were not informative from a content point of view, only relevant lemmas such as nouns, adjectives and some verbs and adverbs were analysed.

Overall, it can be said that the topicality of the NC that emerged from the analysis of the most frequent lemmas revolves around the themes which are reported in Table 4.12. All lemmas were grouped in thematic areas; many lemmas fall under more than one thematic area as themes merge and combine in discourse and real-life contexts as well. Also, some themes fall within two (or more) thematic areas which are interdependent and one of them is hierarchically dominant. So, subdivision of results and boundaries between lemmas are overlapping as themes are co-dependent and complementary.

As mentioned above in Section 4.2.1.1., the labels assigned to each thematic area are drawn from the literature on the topic of environmental migration and the publications of the international organisations included in the IOC (Section 1.1.). Some issues that tend to be gathered together in the corpus texts and show a degree of correlation are included in a comprehensive theme; issues are grouped together on the basis of their meaning, which was inferred by an analysis of the context of the most frequent words. The themes are:

- Migration and displacement;

- Environment and climate;

- Social issues;

- Security and securisation;

- Protection, wellbeing and rights;

- International and institutional support and responsibility;

- Capacity building;

- Knowledge and information;

- Policy-making and legal frameworks;

- Adaptation and response measures;

- Vulnerability;

- Partnership and coordination.

For a definition of the themes, see above in Sections 4.2.1.1., 4.2.1.2. and 4.2.2.1.

The order assigned to the thematic areas reflects the order of appearance of frequent words in the list extracted from the corpus. The rationale behind the subdivision of frequent words into thematic areas is based on the analysis of 20 occurrences of each word in their context of use. Many words fall within more than one thematic area: they are related to a multiplicity of themes as themes merge and combine in discourse and real-life contexts. Words are reported in alphabetical order for each theme and are grouped together on the basis of their context of use in the corpus.

THEME	FREQUENT WORDS
Migration and displacement	address, area, Bangladesh, cause, change, climate, conflict, country, crisis, develop, disaster, displace, displacement, drought, environmental, Europe, force, global, government, home, human, impact, include, increase, international, issue, land, lead, level, many, migrant, migration, million, most, move, need, new, number, people, political, population, problem, refugee, region, report, right, rise, sea, security, Syria, United, water, world, year.
Environment and climate	address, area, Bangladesh, cause, change, climate, conflict, country, crisis, develop, disaster, displace, displacement, drought, environmental, Europe, force, global, government, home, human, impact, include, increase, international, issue, land, lead, level, many, migration, million, most, need, new, number, people, political, population, problem, refugee, region, report, rise, sea, security, Syria, United, water, world, year.
Social issues	address, area, cause, change, climate, conflict, country, crisis, displace, displacement, drought, environmental, Europe, force, global, government, home, human, impact, include, increase, international, issue, land, lead, level, many, migrant, migration, most, move, need, new, number, people, political, population, problem, region, report, right, rise, Syria, water, world, year.
Security and securisation	address, area, Bangladesh, cause, change, climate, conflict, country, crisis, displace, displacement, drought, environmental, Europe, force, global, government, home, human, impact, include, increase, international, issue, lead, level, many, migrant, migration, million, most, move, need, new, people, political, population, problem, refugee, region, report, right, rise, sea, security, Syria, time, United, water, world, year.
Protection, wellbeing and rights	address, area, Bangladesh, cause, change, climate, conflict, country, disaster, displace, displacement, drought, global, government, human, impact, increase, international, issue, land, lead, level, migrant, migration, million, most, move, need, number, people, political, refugee, region, report, right, rise, sea, security, Syria, time, United, water, world.
International and institutional support and responsibility	address, Bangladesh, cause, change, climate, country, crisis, develop, disaster, displace, displacement, environmental, force, global, government, human, impact, include, increase, international, issue, level, migrant, migration, most, need, new, number, people, political, problem, refugee, region, right, sea, security, time, United, world.
Capacity building	address, Bangladesh, change, climate, conflict, crisis, develop, disaster, displace, displacement, drought, environmental, force, global, human, include, increase, issue, level, migrant, most, need, new, number, political, problem, region, report, right,

	security, United, water, world.
Knowledge and information	area, Bangladesh, change, climate, conflict, country, disaster, displace, displacement, drought, environmental, global, government, home, impact, increase, issue, land, level, many, migrant, million, move, new, number, people, population, refugee, region, report, rise, sea, time, water, world, year.
Policy-making and legal frameworks	Bangladesh, change, climate, conflict, develop, disaster, displace, displacement, drought, environmental, force, global, government, human, impact, include, international, issue, lead, migrant, migration, million, most, need, new, political, problem, region, report, right, rise, United, world, year.
Adaptation and response measures	address, area, climate, change, develop, displace, displacement, environmental, global, home, impact, increase, issue, many, move, need, region, report, security, water, world.
Vulnerability	area, Bangladesh, change, climate, conflict, country, crisis, develop, disaster, displace, environmental, global, home, human, impact, level, many, most, new, number, people, region, report, rise, sea, water, world.
Partnership and coordination	address, country, develop, displace, force, global, government, human, include, international, issue, lead, many, migrant, migration, most, move, need, new, number, political, problem, region, refugee, right, rise, United.

Table 4.12.: the themes making up the topicality of the NC according to the frequency list; lemmas referring to each theme are reported.

As emerging from Tables 4.11. and 4.12., the most frequent words of the NC deal with the same themes that emerged from the keywords analysis, even though the themes have a different degree of relevance according to the frequency list. The frequency word list analysis thus reinforces the representation of the topicality of the NC: keywords and frequent words convey a very similar representation of the topicality of the NC.

4.2.2.3. The topicality of the NC: a "looming catastrophe"

Overall, from the results reported in Tables 4.8., 4.9., 4.10., 4.11. and 4.12., the topicality of the NC seems to revolve around the following themes listed in decreasing order of importance as inferred from the corpus-assisted analysis:
- Research and understanding;
- Environment and climate;
- Social issues;
- Protection and wellbeing;

- Migration and displacement;
- Policy-making and legal frameworks;
- Responsibility of countries;
- Security and securisation;
- Capacity building and adaptation measures;
- Emotional response;
- Rights and assistance;
- Vulnerability.

For a definition of the themes, see above in Sections 4.2.1.1., 4.2.1.2. and 4.2.2.1.

In the following sections I will discuss the themes addressed in the NC. The discussion of the themes is based on the context of use and contextualisation of the keywords and most frequent words investigated in the previous steps of the analysis: the co-texts of relevant keywords and frequent words were analysed for each theme to verify how each theme is dealt with in the NC. Technical and specific terms used in the NC are reported and used in the discussion of data as they capture salient aspects of the data with the specific turn of phrase chosen by the authors of the texts; technical expressions used in the NC are reported in inverted commas. Examples drawn from the NC are reported to show how salient issues of the NC are dealt with in the corpus. For the sake of clarity, keywords and frequent words appearing in the examples reported are in bold characters.

1. **Research and understanding**

   Throughout the NC, there is a pervasive reference to studies and research as well as to authoritative figures such as scientists, experts and political leaders to justify statements about environmental change and its relation with the phenomena of migration and conflict.

   If reference to studies is frequent, data are rarely explicitly mentioned and cited, and lack of data is often lamented in news. For instance, in "[i]t is unclear how much more **warming** will occur between **now** and the end of the century, but the study clearly demonstrates just how much **climate change** acts as a threat multiplier" (IBNS 6, 2017), the expression "it is unclear" states with high facticity (unmodalised verb) that clear and reliable information is lacking. The role of knowledge is closely linked to that of security as data are the foundations to implement decisions, policies and measures, incorporating information into adaptation plans to ensure human security.

2. Environment and climate

"Environment and climate" form a fundamental theme in the discourse of the NC; they are dealt with especially in terms of global warming, loss of natural resources, and their interrelatedness and effects as well as their links with migration patterns and international security. With comparison to the IOC, there seems to be greater emphasis on human responsibility and agency in contributing to ecological changes; also, the intensity and frequency of environmental and climate events is mentioned frequently: "[a]ny balanced assessment of the **climate** science and evidence accepts that **global warming** is driven primarily by **human** carbon **emissions** from fossil **fuel** combustion, agriculture and **land** clearing, superimposed on natural climate variability, and that it is **happening** faster and more extensively than previously anticipated" (CT 4, 2016); "[t]he **report** outlines the effects of **human**-induced **climate change** to be expected this **century**" (SMH 4, 2010); "[w]ealthier **countries** can expect to feel the direct and indirect effects of **weather** shocks from manmade **climate change** in poorer, less resilient **countries**" (IBNS 6, 2017). In these examples, the attribution of responsibility to human beings is legitimised via both authorisation and evaluation: it is based on "balanced assessment" of "science and evidence" and studies ("report"). Human beings are attributed different degrees of responsibility: in the first example they are mentioned as the attribute to activities that their perform ("human"); while in the second and third examples "human-induced" and "manmade" express a higher degree of causality due to the verbs "induced" and "made", leaving no room for doubt on the root cause of environmental change.

3. Social issues

The theme "Social issues" is pervasive in the discourse of the NC and sources of instability seem to be varied and manifold: migration and the potential cultural clashes that may stem from it; lack of resources both in the country of origin -causing emigration- and in host societies; population growth and consequent growing poverty, as well as unfair distribution of resources; and processes of responsibility-sharing mostly among hosting and/or wealthier countries.

Among the social issues represented in the NC which are related to environmental changes and consequent patterns of migration there are discrepancies, disparities and demographic issues such as population growth, especially in urban contexts. These issues are represented as putting extra pressure on already overcrowded cities: "a mixture of drastic **climate changes** and demographic explosions are **pushing people** northward" (BBC 5, 2012) "**adding** to pressures on communities already living with other stresses and where

population is **increasing**" (CT 3, 2015). Here population growth is represented through the metaphor "explosion" and as the cause of migration ("pushing") which adds up to other "pressures" and "stresses", therefore it is evaluated in terms of undesirability and worry; also, the present continuous "is increasing" indicates that this process is ongoing.

As far as host communities are concerned, the social issues addressed include the need for inclusion of young migrants in ageing host societies, and the inability of host communities to deal with the high number of incoming migrants appropriately and efficiently. In "**[n]ow** we are in a situation in which we are being told very clearly that Latvia must open its doors to **migrants**" (BBC 8, 2016) it is interesting to notice that there is a process of identification on the one hand and otherisation on the other hand: host communities are included in an ingroup which is referred to with the first person plural, thus encouraging a sense of inclusion and belonging with the audience, and distancing themselves from "migrants". Also, the metaphor "open its doors" introduced by the verb "must", which expresses deontic modality, evokes a sense of generosity and welcoming on the part of receiving communities; but actually this attitude is not justified by a sense of responsibility to help migrants, but rather by the needs of host communities, thus masking self-interest as generosity.

4. **Protection and wellbeing**

In the NC the theme "Protection and wellbeing" is mainly represented as related to: food insecurity and poverty; health and epidemics deriving from conditions of poverty; safety issues related to the impacts of environmental change and potential conflicts stemming from it; and availability of resources for people to subsist.

Among the challenges to wellbeing and harmony, demographic issues are clearly present in the NC: environmental changes and migration are feared to cause uncontrollable population growth and urbanisation in affected countries, and overpopulation and redistribution of already scarce resources in host communities. For instance, it is said in the NC that "the **report** found the **displaced people** were **moving** in droves to already-crowded cities - putting extra pressure on the poorer **countries** at highest risk from environmental stress and degradation associated with climatic shifts" (RVN 2, 2009). In this example references to studies ("report") legitimise the statement through authorisation; attributes and nouns such as "already-crowded", "extra pressure", "stress" and "degradation" are evaluative and express the intensity of the issues discussed.

5. **Migration and displacement**

One of the main thematic areas of the NC corpus has to do with migration, "refugeeism", affected populations and victims of climate and environmental changes. This theme includes

issues of asylum applications, migration management, refugees quotas, "illegal" migration, rural-urban migration, and migration as an adaptation strategy. Also, migration is dealt with mainly in terms of its forecast increase in intensity and frequency in the near future. In "**sea level rises**, erosion and intense natural disasters would result in **climate refugees**" (CT 5, 2017), the forecast consequences of environmental change are interestingly hedged by the modal marker "would", as if the reliability of studies is mitigated instead of used as a legitimation strategy.

6. **Policy-making and legal frameworks**

In the NC the inability on the part of the global community to react in a timely and effective way to the interrelated questions of environmental change and migration exacerbates existing humanitarian risks and unstable situations. Failure to collaborate and take action is often paired with issues of responsibility: the lack or inefficiency of international agreements, negotiations, gatherings and honouring already signed agreements to protect people, the urge to take action and the difficulty of building consensus and coordination are blamed on the least affected, wealthier and more powerful countries. Instead, collaboration is required to maximise support to both origin and destination areas and populations, in terms of internationally recognised agreements and policies. In "[w]hoever **believes** the **problems** of this **world** can be solved by isolationism and protectionism is making a tremendous error" (SMH 8, 2017), the idea of addressing environmental migration in isolation is defined as an "error" and its delegitimation is further reinforced by the emphatic evaluative adjective "tremendous".

Furthermore, the most effective way to take action would be for wealthier polluting nations to reconsider their own actions and living patterns and/or push governments to do so, which would contribute to limiting temperature increase and helping conflict resolution, so that more people can remain safely in their homes and communities. In the passage "we must mount a similarly forceful response and create a **new** legal framework for **climate refugees** alongside the essential action to curb our **carbon emissions**" (RVN 6, 2009), industrialised nations are included in an ingroup which the audience is invited to identify with due to the inclusive first person plural pronoun "we" and the possessive adjective "our"; the paramount importance to act swiftly is "essential". Instead, it appears that the global response is happening mainly in terms of "securisation of borders".

7. **Responsibility of countries**

Wealthier countries are also liable of lacking accountability and are asked to take responsibility for their environmentally inconsiderate behaviour and provide compensation

for affected countries both legally and financially: "**people** in **countries** like **Bangladesh** unfortunately fall prey to the **global greenhouse emission**, **caused** mainly by the **developed nations**, and they should pay adequate compensation to the poor people living in the **developing countries**" (BBC 1, 2008). Here, affected communities and industrialised societies constitute two different and opposing groups. The process of causing environmental changes is metaphorically represented as a hunting scene ("fall prey"): industrialised societies and the environmental change they cause are the predator and affected communities are the prey. Also, affected communities are defined "poor people" an evaluative expression that contributes to an overall representation that legitimises the need for industrialised countries to take responsibility for their actions and assist affected communities. With comparison to the IOC, here responsibility is not mentioned in terms of care but rather of "**climate** debt" ("reparations from the industrialised **countries**"; RVN 1, 2009), with the wealthier countries being the most responsible for emissions and consequent environmental change.

Responsibility also includes setting forth preventive measures, but lack of coordination, international commitment and political engagement seems to prevent nations from informing a successful environmental diplomacy, providing funds to protect people, and sharing the responsibility of assistance.

Finally, responsibility and compensation for carbon and gas emissions is not mentioned in terms of care; rather, it is mentioned as a call to reduce fossil fuels use and reach an agreement on sustainable development, bearing in mind the link between environmental change and migration. In "we need to take historical responsibility for **climate change**, and should take into account our historical **carbon emissions** and their effects when responding to **mass climate migration**" (G 6, 2015), the responsibility of industrialised nations is expressed through the modal verbs "need to" and "should" which indicate that the process of responsibilisation is aspired to but still has to take place.

8. **Security and securisation**

The theme "Security and securisation" revolves around the geostrategic implications of climate and environmental change, such as potential risks to security, and integration and cultural issues.

Human security is an issue concerning both affected and host communities and in the NC it is mainly mentioned in terms of invoking humanitarian grounds to deal with migrants, and maintaining harmony between countries as well as national internal cohesion. The theme of security focuses on providing safety conditions to host communities ("humanitarian grounds

could be invoked to deal with the **waves** of **displaced migrants** due to **climate change**"; TS 5, 2013); hence, the process of securisation of borders is linked to protection and defence as well as peacekeeping and building security, and aims at guaranteeing national security and global stability, averting the risk of terrorism and criminality. The aspect of security and "securisation" is frequently mentioned in the NC: "[d]o these **leaders** understand that a key component of national security and **global** stability is **climate change** and the instability it is already **causing** around the **world**?" (CT 6, 2017); "**global** warming is the greatest security threat of the 21st **century** and [..] mass **migration** will become the '**new** normal'"; "**global** warming could multiply and accelerate security threats around the **world** by provoking **conflicts** and **migration**" (G 8, 2016); "[a]s far as **international** security is concerned, the **report** finds, **global** warming makes a bad situation worse" (G 1, 2008). In these examples "national security", "global stability" and "international security" are juxtaposed to or at least questioned by terms like "insecurity", "greatest global threat", "security threats", "conflict" and "a bad situation"; also, there are many references to frequency and intensity of risks related to environmental change scenarios ("greatest", "mass", "multiply and accelerate" and "worse").

9. **Capacity building and adaptation measures**

As already mentioned, human security is an issue that concerns both affected and host communities. It is dealt with mainly in terms of "preventive and adaptive measures", and the capacity for the communities to receive migrants: "UNHCR has renewed its **call** for states to reach an accord that takes into account the growth of **climate-change** related **human** mobility and the **need** to take proactive measures in response" (IBNS 1, 2015). In this example preventive measures are deemed necessary ("need") but as such they are aspired to and still missing.

10. **Emotional response**

The theme "Emotional response" includes references to themes such as conflict, crisis, xenophobic violence and invasion that might somehow be linked to migratory movements: "wide-spread and growing anti-migrant sentiment and policies has led to the cruel irony that those **fleeing** terror and conflict are themselves being accused of terrorism and criminality" (IBSN 2, 2016); "[a] **wave** of anti-**immigrant** sentiment elsewhere in Europe has led to Hungary building a wall to keep **refugees** out and influenced Great Britains <sic> decision to leave the European Union" (IBSN 6, 2017). In these occurrences migrants are represented as an outgroup within host societies. This process of exclusion is rendered both linguistically via the prefix "anti-" which expresses opposition and (possibly) strong dislike;

and with reference to concrete actions such as "building a wall" to prevent migrants from mingling with the members of host communities. Hostile attitudes towards migrants are rather common ("wide-spread", "wave of", "elsewhere in Europe") but they are also delegitimised by the author(s) of the texts: indeed, they are negatively evaluated as attitudes that would result in a situation of "cruel irony" against migrants "fleeing terror and conflict". Therefore, members of the host societies who engage in hostile behaviours towards migrants are delegitimised, and their actions are neither encouraged nor supported.

The coping capacity of host countries seems to be also linked to building a cohesive socio-cultural structure based on tolerance and understanding, where migrants are included through patterns of integration, respect and inclusiveness, thereby averting xenophobic and anti-immigrant sentiments. With comparison to the IOC, it seems that there is greater emphasis on the emotional response of host societies to incoming people, with host societies being asked for a sort of "emotional effort" for effective reception, instead of representing reception as a duty and responsibility. The idea of an "emotional effort" is delegitimised too ("I regret") as "lack of empathy" for those "fleeing from conflict, persecution, or climate change": "I regret the evidence of widespread lack of empathy for people on the move, many of whom are **fleeing** from conflict, persecution, or **climate change**" (IBSN 4, 2016). The abundant reference to the emotional attitude of host societies may be justified in terms of newsworthiness: writing about expressions of emotions and feelings generally increases the newsworthiness of a piece of news (parameter of "affect") (Bednarek, 2006, p.19) (see Sections 3.2. and 5.4.1.).

11. Rights and assistance

Environmental changes and human rights are closely linked, as "**climate change** will have a profound effect on the enjoyment of **human rights**" (TS 8, 2015). The need for assistance and protection of migrant people and their rights is highlighted, stating that policies and legal frameworks for migration management and protection, as well as development policies and humanitarian aid are necessary. In the NC preparation also targets host communities to avoid potential subsequent conflicts.

It is worth noticing that assistance to migrants is also represented as an issue of self-protection, rather than just protection of others; in the passage "[f]or harmony across our diverse societies, protection and promotion of the **rights** of **migrants** and **refugees** are equally essential" (BBC 10, 2016), the wellbeing of all societies is deemed relevant and it is legitimised as a rightful situation to pursuit. Legitimation is achieved through the use of the word "harmony" which evokes the idea of something that is effective, especially a

171

combination of parts that work well together, the high facticity of the statement which is not mitigated by any modal marker or hedge, the evaluative adjective "essential", and the inclusive pronoun "our", which points at a commonly shared destiny.

12. Vulnerability

In the NC the theme "Vulnerability" mainly deals with the precarious and risky living conditions of populations affected by environmental changes and their consequences, or likely to be affected by them. Reference is made to the fact that vulnerability issues do not solely derive from social and environmental factors, but they are often the consequence of "**developed** nations" lifestyles and abuses: "[i]f those who are causing the greenhouse gas emission**s** are unable to control carbon emissions, the **people** in the vulnerable **areas**, **many** of the coastal **areas**, are going to be inundated" (RVN 5, 2009). Here causality is clearly expressed by the present continuous "are causing", which also indicates that the process is ongoing.

The topicality of the NC by comparison with the IOC seems to revolve around the discussion of the risks to security related to environmental and climatic changes. Unlike the IOC, the emphasis is not on strategies and measures to prevent and prepare for the impacts of ecological changes, but rather on the looming and impending risk of instability, loss of wellbeing, insecurity and conflict that is likely to arise from an already altered situation.

With comparison to the IOC, there seems to be greater emphasis on human responsibility and agency in contributing to ecological changes, but at the same time the role of human agency in providing relief and security from mounting ecologically-altered conditions is disregarded as having potentially little or no efficacy.

The looming catastrophic situation represented in the NC depends on rising migration and "refugeeism" due to environmental changes as well as increasing numbers of asylum seekers, affected populations and victims, and it is represented as having consequences on the stability and wellbeing of all participants involved in these phenomena, be it host communities, communities of origin and migrants; also, this situation is portrayed as likely to stir international and intra-national disharmony and conflict. The situation prompts a twofold response of "migration management" (and "mitigation strategies") on the one hand, and "securisation of borders" against ("illegal") migration on the other hand.

According to the representation emerging from the data, the inability on the part of the global community to react in a timely and effective way exacerbates existing humanitarian risks and unstable situations. Failure to collaborate and take action is often paired in news with issues of

responsibility: the lack or inefficiency of international agreements, negotiations, gatherings and honouring already signed agreements to protect people, the urge to take action and the difficulty of building consensus and coordination is blamed on the least affected, wealthier and more powerful countries. In NC, wealthier countries are also represented as liable of lack of accountability and are asked to take responsibility for their environmentally inconsiderate behaviour and provide compensation to affected countries both legally and financially. With comparison to the IOC, here responsibility is not mentioned in terms of care but rather of debt, with the wealthier countries being the most directly responsible for emissions and consequent climate change.

If the IOC demands partnership and collaboration as the core components of a "wishful list" for addressing ecological changes and their implications, the NC seems to provide a picture of the actual state of affairs by turning the "list" upside down: irresponsibility and lack of coordination and partnership, lack of commitment and engagement, and failure of a successful climate diplomacy seem to be the standard.

Human security is an issue concerning both affected and host communities and is dealt mainly in terms of maintaining harmony necessary to guarantee national security and global stability. Nevertheless, protection and defence seem to be two sides of the same coin, and peacekeeping and "security building" alternate with the theme of "securisation of borders". In this respect, a cohesive socio-cultural structure based on tolerance and understanding is represented in the NC as fundamental to avert xenophobic and anti-immigrant sentiments fostering conflict. With comparison to the IOC, it seems that in the NC there is greater emphasis on the emotional response of host societies to incoming people: instead of representing reception as imperative and dutiful, wealthier nations are asked to face a sort of "emotional effort" to guarantee an effective reception process.

This peculiarity may be due to the fact that the NC is not a balanced corpus, even though NC texts were selected to be as representative as possible of different geographical areas. The media outlets included in the NC are predominantly published by affluent countries; therefore, it is possible that the dominant point of view in the NC is that of affluent countries news outlets. Those are also the countries that mostly receive migrants, rather than nations migrants come from. Nevertheless, one might think that news outlets should be pluralistic enough as to include and/or take into account other points of view, but that is not always done. Also the IOC is a corpus that displays the point of view of specific centres of power (namely, international organisations), but which also has a careful consideration for migrants, even though their voice is rarely included in the documents.

Overall, the whole discourse of the NC seems to be underpinned by a sense of alarm and worry grounded on the idea that it is too late to take action; and action undertaken can only minimise the impacts of a generalised catastrophic situation in the near future. With comparison to the discourse represented in the IOC that embodies a list of to-do's aimed at a fair management of future events, the discourse of the NC is in contrast with the proactive attitude and agenda displayed in the IOC and appears to be a realistic and concerning picture of what will happen in real-life contexts; also, any possible response to this situation is represented as having little effectiveness.

4.3. Concluding remarks

Chapter 4 has presented the methodological procedures adopted for corpora-assisted analysis and discussed the process of selection of search terms and texts from the corpora; search terms and selected texts from the two corpora IOC and NC are the focus of analysis in Chapter 5. More specifically, Chapter 4 has analysed the topicality of the two corpora IOC and NC using keyword lists and frequency lists. The analysis of the topicality of the IOC was based on the keywords extracted from a comparison between IOC-NC and IOC-enTenTen15, and the analysis of the topicality of the NC was based on the keywords extracted from a comparison between NC-IOC; data from keywords analysis were refined and complemented with an analysis of the topicality of the two corpora based on their frequency word lists.

Chapter 5 will deal with the corpus-assisted qualitative analysis in context of selected search terms and selected texts from the IOC and NC; it will comment on relevant linguistic phenomena that contribute to the representations of environmental migration, environmental migrants and the environment.

5. THE ANALYSIS OF KEY DATA OCCURRENCES AND SHARED COLLOCATIONS IN ENVIRONMENTAL MIGRATION DISCOURSE

Chapter 5 presents the main corpus-related aspects of the corpus-assisted qualitative analysis of data. The corpus-assisted qualitative analysis of texts is based on the close-reading of a selection of texts from the IOC and NC (see Appendix, Sections 1 and 2). It deals with the investigation of representations of environmental migration through the corpus-assisted investigation of particular terms and their co-text. This analysis captures and discusses representations of environmental migration; the participants involved in the phenomenon; and the environment and its role in environmental migration. More specifically, the co-text and distributional patterns of the terms are explored in order to reveal the aspects that characterise these representations. Section 5.1. describes the process of selection of the texts from the IOC and NC to create two sub-corpora (the IOCS and NCS) investigated with corpus-assisted qualitative analysis methods. Section 5.2. describes the process of selection of significant "shared collocations" used in the IOC and NC to represent environmental migration; shared collocations were retrieved with concordance searches. Section 5.3. reports a selection of terms which are particularly relevant for the purpose of representing environmental migration and that emerged from close reading of the texts of the IOCS and NCS. Sections 5.4., 5.5. and 5.6. present the analysis of the shared collocations, key data occurrences in the IOC, and key data occurrences in the NC respectively.

5.1. Selected texts for corpus-assisted qualitative analysis

The selection of the texts from the IOC and NC to be analysed qualitatively through close reading was made using ProtAnt and comparing IOC to NC and NC to IOC, in which the second corpus functions as reference corpus.

I loaded my target corpus (IOC or NC) to ProtAnt in plain text files, chose the reference corpus (NC or IOC) and specified the statistics and settings to be used for the analysis. ProtAnt "compares the frequencies of words in the target corpus with those in the reference corpus and calculates the complete set of keywords for the entire target corpus. Based on this list, it next calculates how many keywords from the entire corpus are in each target corpus text and then ranks the texts by the number of keywords in them"; in other words, ProtAnt first identifies "keywords that are distinctive of the target corpus as a whole", and then counts "how many of these keywords appear at the individual text level" (Anthony &

Baker, 2015, pp.278-279). Once the corpora were loaded, ProtAnt ranked the texts of the IOC and NC by the number of their keywords; in this way, if a text has many keywords, it can be considered representative of the whole corpus.

It was specified that the frequencies of keywords used by ProtAnt to select the texts for corpus-assisted qualitative analysis should be normalised per 1000 words. The resulting list in terms of prototipicality of the texts of the IOC is presented in Table 5.1.; the top texts represent the most prototypical texts and the texts at the bottom of the list the less prototypical.

	File					
1	IOM 8	18	UN 8	36	UN 6
2	IOM 11	19	IOM 17	37	IOM 29
3	UN 11	20	EU 4	38	IOM 4
4	IOM 19	21	EU 3	39	EU 1
5	IOM 15	22	UN 13	40	IOM 3
6	IOM 1	23	UN 2	41	IOM 2
7	IOM 16	24	IOM 25	42	IOM 13
8	IOM 30	25	UN 5	43	IOM 28
9	IOM 26	26	UN 16	44	UN 4
10	UN 1	27	EU 5	45	IOM 7
11	IOM 20	28	UN 9	46	IOM 5
12	IOM 21	29	IOM 10	47	EU 2
13	IOM 22	30	IOM 24	48	UN 3
14	UN 12	31	UN 14	49	UN 7
15	IOM 23	32	IOM 6	50	IOM 18
16	IOM 27	33	IOM 9	51	IOM 12
17	IOM 14	34	UN 15		
		35	UN 10		

Table 5.1.: list of texts extracted from the IOC and ranked according to their prototypicality using ProtAnt.

Texts for corpus-assisted qualitative analysis were chosen on the basis of their prototypicality: the texts that are most prototypical of a corpus are those which include the highest frequency of keywords; so, the texts where the keywords appear most frequently are viewed as most illustrative on a particular topic. No pre-determined list of keywords was set for ProtAnt to work with; it was ProtAnt that determined the keywords of the corpora to rank the texts by. This process makes it

easier to identify relevant texts that would be analysed in detail later on. Selection criteria are based on both frequency (number of times X occurs) and range (number of texts where X occurs) of keywords; therefore, it is not sufficient for a keyword to occur many times, but it should also occur in many texts in order to be representative (Baker, 2006, p.49).

On the basis of this list, the first 10 texts of the IOC were selected to be examined through corpus-assisted qualitative analysis as prototypical of the whole corpus. These texts were collected in a sub-corpus called IOCS ("IOC Selected texts"). The texts are:

- IOM 8 (2014) *IOM Perspectives on Migration, Environment and Climate Change*;
- IOM 11 (2014) *IOM's Role and Activities Relating to Migration, the Environment and Climate Change*;
- UN 11 (2014) *Human Mobility in the Context of Climate Change*;
- IOM 19 (2016) *Data on Environmental Migration: How Much Do We Know?*;
- IOM 15 (2015) *IOM Contributions to the "Year of Climate" - Paris 2015. 21st Conference of Parties of the United Nations Framework Convention on Climate Change (UNFCCC)*;
- IOM 1 (2008) *Migration and the Environment*;
- IOM 16 (2015) *Contributions to the United Nations Convention to Combat Desertification (UNCCD)*;
- IOM 30 (2018) *IOM's Engagement in Migration, Environment and Climate Change*;
- IOM 26 (2017) *The Climate Change - Human Trafficking Nexus*;
- UN 1 (2008) *Research Workshop on Migration and the Environment: Developing a Global Research Agenda*.

It is worth noticing that the IOM sub-corpora constitutes the 71.94% of the IOCS in terms of number of publications included in the corpus, so data extraction might be biased towards the lexical and thematic choices that are characteristic of the discourse of the IOM on environmental migration. This will be taken into consideration in the discussion of data.

The texts of the NC were ranked according to their prototypicality with the same settings used to rank the texts of the IOC. The resulting list of prototypical texts of the NC is presented in Table 5.2.; the top texts represent the most prototypical texts of the corpus and the texts at the bottom of the list the less prototypical.

	File		File		File
1	SMH 1	30	TS 6	60	TS 10
2	NYT 6	31	CT 2	61	SMH 4
3	NYT 2	32	SMH 3	62	NN 3
4	SMH 2	33	RVN 9	63	RVN 10
5	US ON 5	34	TS 4	64	RVN 8
6	NYT 7	35	CT 6	65	CT 1
7	G 10	36	TS 8	66	NN 6
8	TS 2	37	US ON 4	67	TS 5
9	NYT 8	38	BBC 1	68	NN 10
10	NYT 1	39	CT 3	69	NYT 3
11	US ON 6	40	SMH 6	70	BBC 6
12	NYT 4	41	RVN 2	71	BBC 10
13	CT 5	42	TS 9	72	G 3
14	US ON 1	43	NN 4	73	G 1
15	BBC 2	44	NYT 5	74	CT 4
16	SMH 5	45	BBC 9	75	G 6
17	TS 3	46	G 5	76	BBC 8
18	IBSN 1	47	IBSN 5	77	G 7
19	RVN 3	48	NN 8	78	US ON 10
20	IBSN 4	49	BBC 3	79	BBC 4
21	US ON 9	50	G 4	80	RVN 6
22	G 2	51	IBSN 2	81	US ON 7
23	RVN 4	52	NN 7	82	US ON 8
24	TS 7	53	US ON 3	83	RVN 5
25	TS 1	54	SMH 8	84	G 9
26	NN 5	55	IBSN 3	85	RVN 7
27	NN 2	56	SMH 7	86	NN 9
28	BBC 7	57	IBSN 6	87	US ON 2
29	G 8	58	RVN 1	88	NN 1
		59	BBC 5		

Table 5.2.: list of texts extracted from the NC and ranked according to their prototypicality using ProtAnt.

On the basis of this list, the first 10 texts were selected to be examined through corpus-assisted qualitative analysis as prototypical of the whole NC. These texts were collected in a sub-corpus called NCS ("NC Selected texts"). The texts are:

- SMH 1 (2009) *Business and Environment Go Head-to-Head in Migration Debate*;
- NYT 6 (2017) *How a Warming Planet Drives Human Migration. The Climate Issue*;
- NYT 2 (2014) *WikiLeaks, Drought and Syria*;
- SMH 2 (2009) *Plan Now for a Sensible Limit to Our Population. Growing Pains*;
- US ON 5 (2016) *Migration Should Be an Act of Choice and Not a Desperate Last Resort*;
- NYT 7 (2018) *A Warming World Creates Desperate People*;
- G 10 (2018) *'We Feel Like Hermit Crabs': Myanmar's Climate Dispossessed. In the Coastal Town of Khindan, the Catastrophic Effect of Rising Sea Levels Is All Too Apparent*;
- TS 2 (2010) *Climate Change Prosperity or Disparity? The Idea That We Can Prosper in a Time of Climate Change Distorts a Threatening Reality*;
- NYT 8 (2018) *We Need a High Wall With a Big Gate*;
- NYT 1 (2013) *The Bay of Bengal, in Peril From Climate Change*.

It is worth noticing that the *New York Times* (NYT) sub-corpora constitutes the 59.41% of the NCS in terms of number of tokens included in the corpus, so data extraction might be biased towards the lexical and thematic choices that are characteristic of the discourse of the NYT on environmental migration. This will be taken into consideration in the discussion of data.

The ten newspaper articles selected from the NC were short enough to be analysed qualitatively in their entirety; in this way the textual structure, messages and issues dealt with in each article are preserved. As for the texts selected from the IOC, only a section per text was chosen for corpus-assisted qualitative analysis due to the length of the publications included in the IOC. The amount of words of each IOCS text to be analysed qualitatively was determined on the basis of the length of the NCS articles, in order to match the average amount of words of the selected newspaper articles; in this way a similar amount of words is analysed for both NCS and IOCS texts. More specifically, the amount of text of the IOCS publications was selected starting from the introductory section: introductory sections are likely to offer a compendium of the publication's contents. In this case, they are likely to be informative enough on the issue of environmental migration.

The length of the sections of text selected from each IOCS publication varies and is not necessarily the same as the average length of selected newspaper articles. Thus, the selected sections of the IOCS texts were chosen in such a way as to preserve the structure of the texts from which they were drawn (i.e. for instance, sections, sub-sections, etc.) and therefore the general meaning of text

selected. The amount of words of each IOCS text was determined for approximation to the nearest number above or below the average length of the NCS texts.

The average length of the NCS texts is of 805,3 words per text and it is calculated on the length (number of words) of the NCS texts selected for qualitative analysis. The average length of the IOCS texts is of 878,7 words and it is calculated on the length (number of words) of the IOCS texts selected for qualitative analysis (see Table 5.3.).

	Length of each text (number of words)	Average length of texts
NCS	273, 487, 847, 547, 457, 1230, 1051, 907, 1195, 1059	805,3
IOCS	795, 817, 916, 726, 1121, 569, 1092, 815, 896, 1040	878,7

Table 5.3.: length (number of words) of each text of the NCS and IOCS and their average length.

5.2. Significant shared collocations on environmental migration

As mentioned in Section 4.2., the corpus-assisted qualitative analysis (Chapters 5, 6 and 7) includes an analysis of the most significant shared collocations of the IOC and NC for the purpose of representing environmental migration.

Shared collocations were identified using the CQL language in the Concordance tool from Sketch Engine (Sketch Engine 9). The CQL (Corpus Query Language) is a special code used to search for complex grammatical or lexical patterns, or to use search criteria which cannot be set in other ways; it is used for complex searches including those with optional criteria or containing regular expressions ("regex", see Section 4.2.) (Sketch Engine 14; Sketch Engine 12). The Concordance tool generated six lists of specific words with specific patterns, that are known to be relevant for the theme investigated; for this purpose, regular expressions were used.

More specifically, the decision to use CQL searches was for complex expressions that alternate in text such as "environmental migration", "environmentally induced migration", "climate migration", "climate induced migration", "human induced climate migration", "climate refugees", "environmental displacement", etc., to be included in the results. In order to identify all words relevant to the representations of environmental migrants and migration, the CQL expressions searched for include a combination of five main significant and meaningful words or parts of words: "environmental", "climate", "migr.", "ref.", "displ.". More specifically, it was specified that all results should begin with either the word "environmental" or "climate", that it should end with

any word starting with either "migr.", "ref." or "displ.", and that an optional word could be included between the two.

These words were selected on the basis of the relevant literature on the topic. Baker & McEnery raise the controversial issue of bias related to corpus approaches to discourse analysis and the problematic question of scientific data analysis: they conclude that the researcher needs to make choices about which words should receive the most attention, but the "process […] can end up being somewhat subjective" (2015b, pp.8-9) as the analyst inevitably needs to make some arbitrary choices (O'Halloran, 2014, p.264).

The six CQL expressions searched for are:

1. [word="environmental"] [ ]? [word="migr.*"]
2. [word="environmental"] [ ]? [word="ref.*"]
3. [word="environmental"] [ ]? [word="displ.*"]
4. [word="climate"] [ ]? [word="migr.*"]
5. [word="climate"] [ ]? [word="ref.*"]
6. [word="climate"] [ ]? [word="displ.*"]

For each of the above CQL expressions, the expressions related to environmental migration that emerged from the CQL-based concordance searches are reported from most to least frequent in Tables 5.4. and 5.5. with the number assigned to the CQL expression they derive from. In order to identify the salient shared collocations, all words retrieved from the CQL-based concordance searches were analysed in their frequency per million in the IOC and NC in order to see which ones were more frequent and therefore more likely to be the most relevant and meaningful to the purpose of representing environmental migration, migrants and the environment. Frequencies per million for each expression are reported in Tables 5.4. and 5.5.; frequencies were extracted using the Concordance tool in Sketch Engine (Sketch Engine 9).

The expressions related to environmental migration that emerged from the CQL-based concordance searches in the IOC are (Sketch Engine 14):

	Terms	Frequency per million
1.	Environmental migration	592.51
	Environmental migrant	203.12
	Environmental emergency migrant	8.42
	Environmental induced migration	4.22
	Environmental migrant	2.1
	Environmental forced migration	1.05
2.	Environmental refugee	79.98
3.	Environmental displacement	31.57
	Environmental displace	22.1
	Environmental human displacement	6.31
	Environmental induced displacement	3.16
	Environmental human displace	1.05
	Environmental related displacement	1.05
4.	Climate migration	82.09
	Climate migrant	47.36
	Climate change-induced migration	20
	Climate induced migration	11.58
	Climate change migration	10.52
	Climate change-related migration	4.21
	Climate change migrant	3.16
	Climate change-induced migrant	2.1
	Climate related migration	2.1
	Climate induced migrant	2.1
5.	Climate refugee	86.3
	Climate change refugee	17.89
6.	Climate change displacement	16.84
	Climate displacement	12.63
	Climate change-related displacement	8.42
	Climate change-induced displacement	7.37
	Climate displace	6.31
	Climate induced displacement	6.31
	Climate change displace	3.16
	Climate change-induced displace	2.1

Table 5.4.: salient expressions retrieved from the IOC and their frequency of occurrence per million.

	Terms	Frequency per million
1.	Environmental migrant	121.76
	Environmental migration	97.4
2.	Environmental refugee	284.1
3.	Environmental displacement	27.06
4.	Climate migrant	270.57
	Climate migration	216.46
	Climate change migrant	40.59
	Climate induced migration	40.59
	Climate change-induced migration	27.06
	Climate related migration	13.53
	Climate induced migrant	13.53
	Climate change-related migration	13.53
5.	Climate refugee	1122.87
	Climate change refugee	121.76
6.	Climate change-related displacement	40.59
	Climate displacement	40.59
	Climate change displacement	27.06
	Climate displace	13.53

Table 5.5.: salient expressions retrieved from the NC and their frequency of occurrence per million.

In order to identify the shared collocations for the corpus-assisted qualitative analysis, the top most frequent salient expressions shared by the IOC and NC were selected. The decision to select the most frequent expressions is based on the fact that they are likely to be the ones which influence communication and understanding of the phenomenon of environmental migration the most.

The shared collocations are reported in order of frequency of occurrence per million; all fourteen words in common between the IOC and NC were selected and ranked according to their average frequency of occurrence per million, which is reported in Table 5.6. These shared collocations are analysed together with key data occurrences that emerged from close reading of the texts of the IOCS and NCS during the previous steps of the analysis; key data occurrences are reported in Sections 5.1.1. and 5.1.2.

Shared collocations	Average frequency per million
Climate refugee	604.58
Environmental migration	344.95
Environmental refugee	182.04
Environmental migrant	162.44
Climate migrant	158.96
Climate migration	149.27
Climate change refugee	69.82
Environmental displacement	29.31
Climate displacement	26.61
Climate-induced migration	26.08
Climate change-related displacement	24.5
Climate change-induced migration	23.53
Climate change displacement	21.95
Climate change migrant	21.87

Table 5.6.: shared collocations shared by IOC and NC and average frequency of occurrence per million.

Shared collocations are particularly relevant for the analysis of representations of environmental migration: they are collocates that are shared by both the discourse of international organisations and news discourse to refer to one of the three aspects investigated (the phenomenon of environmental migration, its participants, and the environment). They are significant because they are shared by both discourses and so can be considered representative of the discourse of environmental migration: they are preferred expressions to represent the three aspects analysed in the texts and text typologies of the data. They are retrieved via the Concordance tool in Sketch Engine, but they are more than mere concordances: they are collocations derived from the combination of specific words that are known to be relevant for the theme investigated.

5.3. Key data occurrences on environmental migration

As mentioned in Section 4.2., the corpus-assisted qualitative analysis includes an analysis of the most significant shared collocations of the IOC and NC for the purpose of representing environmental migration. To these shared collocations, key data occurrences that emerged from close reading of the texts during the previous steps of the analysis of the two corpora IOCS and NCS are included. These expressions are reported in Sections 5.3.1. and 5.3.2. Significant shared

collocations on environmental migration and key data occurrences retrieved from close reading of the IOCS and NCS are analysed in Section 5.4. Distribution of the terms is analysed via the Concordance tool in Sketch Engine (Sketch Engine 9) and it is reported and discussed in Sections 5.3.1. and 5.3.2.

Key data occurrences and their co-text are analysed using the Word Sketch tool in Sketch Engine (Sketch Engine 5). The co-text can include: modifiers of the term; nouns that co-occur with the term; verbs that co-occur with the term (both with the term as subject and with the term as object of the sentence); association to other phrases of clauses via additive or disjunctive conjunction ("and/or" or a comma); and the definitions of the term given by the expression "x (where x is the term) is a" (see rules of the sketch grammar used by the Word Sketch tool in Sketch Engine, Sketch Engine 5).

Together with key data occurrences, the co-text is a network of words that are associated and can be considered concordances that contribute to our understanding of key data occurrences and that affect their meaning. This definition is inspired by the concept of "collocation network" of Brezina *et al.*, who define "collocation networks" as networks of words that are identified starting from specific nodes of interest and that create a complex network of semantic relationships which is ultimately revealing of meaning connections in text and discourse (2015, pp.141-143; 153); in this case, the node of interest is represented by key data occurrences.

5.3.1. Key data occurrences of the IOC

The texts selected for the corpus-assisted qualitative analysis were collected in a sub-corpus called "IOCselected" (IOCS); the sub-corpus consists of 26.604 tokens, 22.878 words and corresponds to the 2.8% of the IOC.

After close-reading the texts of the IOCS, key data occurrences retrieved from the texts were selected to be analysed via corpus-methods; more specifically, their patterns of occurrence were analysed in both the IOC and IOCS. The terms selected emerged from the close reading of the texts of the IOCS as relevant words of the IOC for the representations of environmental migration: they either refer to the manifold forms of the phenomenon of migration; to the people involved in the phenomenon as either members of countries of origin, destination countries or people on the move; or to the environment and the ways it allegedly contributes to migration. Key data occurrences are particularly relevant for the analysis of representations of environmental migration: they are words that are used in the discourse of international organisations and in news discourse to refer to one of the three aspects investigated (the phenomenon of environmental migration, its participants, and the environment). They are key

185

because they are recurrent in the discourse of the corpus they belong to and reveal preferences in the way the three aspects are represented; in this sense, their "keyness" is an indicator of the importance of the terms as descriptors.

Key data occurrences are reported in Table 5.7. All terms retrieved with the Word Sketch tool in Sketch Engine underwent a process of cleaning, so that only relevant occurrences of the terms were retained for corpus-assisted analysis.

Key occurrence	IOC x million	IOCS x million	Household	1,011.38	601.41
Climate	5,415.76	10,186.44	Land	1,257.64	1,804.24
Community	3,096.23	1,879.42	Migrant	1,884.89	1,992.18
Country	2,515.29	1,653.89	Migration	6,334.53	17,440.99
Diaspora	259.95	826.94	Mobility	1,151.35	3,834.01
Disaster	3,377.22	3,157.42	Movement	696.7	1,014.88
Displace	1,481.81	1,127.65	Natural	1,361.83	1,202.83
Displacement	2,327.96	2,668.77	People	3,010.98	1,917
Environment	1,247.12	5,375.13	Population	2,682.62	1,465.94
Environmental	3,904.49	7,743.2	Refugee	779.84	187.94
Hazard	749.32	413.47	Society	286.26	563.82

Table 5.7.: key data occurrences of the IOCS and their frequency of occurrence in the IOC and IOCS.

Key occurrence	IOM x million	UN x million	Household	574.74	669.79
Climate	11,442.6	8,305.43	Land	2,403.47	267.92
Community	1,671.98	2,411.25	Migrant	2,455.72	803.75
Country	1,776.48	1,339.58	Migration	17,869.27	17,146.68
Diaspora	1,097.24	133.96	Mobility	3,918.7	3,884.8
Disaster	4,023.2	937.71	Movement	1,097.24	803.75
Displace	1,044.99	1,339.58	Natural	1,515.23	401.88
Displacement	2,142.22	4,152.71	People	1,567.48	2,813.13
Environment	5,956.42	3,884.8	Population	1,619.73	1,071.67
Environmental	7,889.65	7,367.72	Refugee	104.5	401.88
Hazard	365.75	535.83	Society	626.99	401.88

Table 5.8.: key data occurrences of the IOCS and their frequency of occurrence in the sub-corpora of the IOCS.

The frequency of occurrence of each term in the IOC and IOCS normalised per million is reported in Table 5.7.; the normalised frequency of occurrence of each term in the sub-corpora of the IOCS is reported in Table 5.8. Frequencies were extracted using the Concordance tool in Sketch Engine (Sketch Engine 9): the CQL string (Sketch Engine 14) used to retrieve the frequencies is [lemma="term|Term"] in order to include in the results both lowercase and capital

letter variants of the terms, even though lemma is a basic form to cover capital letters as well as lowercase variant (words at the beginning of sentences also are lemmatised with lowercase).

From an analysis of dispersion of the key data occurrences reported in Tables 5.7. and 5.8., there are evident discrepancies in the frequency of occurrence of the terms in the IOC and its sub-corpus IOCS, which might depend on an uneven distribution of the terms within the IOC. Most probably, the discourse on environmental migration of the three main organisations included in the IOC is characterised by different lexical choices; since the IOCS mainly includes publications from the IOM (8/10 texts), frequencies extracted from the IOCS are likely to be influenced by the terminology used by the IOM. Indeed, looking at dispersion measures within the IOM and UN sub-corpora of the IOCS, these terms are more frequently found in the IOM sub-corpus than in the UN sub-corpus.

5.3.2. Key data occurrences of the NC

The texts selected for corpus-assisted qualitative analysis were collected in a sub-corpus called "NCselected" (NCS); the sub-corpus consists of 9.296 tokens, 7.948 words and corresponds to the 12.576% of the NC.

After close reading the texts of the NCS, key data occurrences retrieved from the texts were selected to be analysed via corpus-assisted methods; more specifically, their patterns of occurrence were analysed in both the NC and NCS. The terms selected emerged from the close reading of the texts of the NCS as relevant words of the NC for the representations of environmental migration: they either refer to the manifold forms of the phenomenon of migration; to the people involved in the phenomenon as either members of countries of origin, destination countries, or people on the move; or to the environment and the forms it allegedly takes when contributing to migration.

Key data occurrences are reported in Table 5.9. All terms retrieved with the Word Sketch tool in Sketch Engine underwent a process of cleaning, so that only relevant occurrences of the terms were retained for corpus-assisted analysis.

The frequency of occurrence of each term in the NC and the NCS normalised per million is reported in Table 5.9.; the normalised frequency of occurrence of each term in the sub-corpora of the IOCS is reported in Table 5.10. Frequencies were extracted using the Concordance tool in Sketch Engine (Sketch Engine 9): the CQL string (Sketch Engine 14) used to retrieve the frequencies is [lemma="term|Term"] in order to include in the results both lowercase and capital letter variants of the terms.

Key occurrence	NC x million	NCS x million
Area	1,204.04	645.44
Catastrophe	148.81	322.72
Climate	11,133.96	7,207.4
Community	919.94	753.01
Country	4,477.94	3,980.21
Disaster	1,258.15	860.59
Displace	1,258.15	968.16
Displacement	1,122.87	430.29
Ecological	135.29	430.29
Ecology	27.06	107.57
Environment	838.77	860.59
Environmental	1,731.65	1,398.45
Event	392.33	322.72
Human	1,474.61	1,183.3
Immigrant	270.57	860.59
Immigration	622.31	1,075.73
Leave	865.82	1,936.32
Local	459.97	215.15
Migrant	2,178.09	2,043.89
Migrate	473.5	537.87
Migration	4,180.31	3,657.49
Move	1,068.75	645.44
Movement	568.2	430.29
Nation	1.014.64	537.87
Natural	919.94	537.87
People	5,316.7	5,486.23
Person	392.33	430.29
Population	1,515.19	2,259.04
Refugee	4,626.75	2,474.18
Resource	703.48	322.72

Table 5.9.: key data occurrences of the NCS and their frequency of occurrence in the in the NC and NCS.

Key occurrence	G	NYT	SMH	TS	US ON
Area	2,454.99	362.12	0	0	1,915.71
Catastrophe	818.33	362.12	0	0	0
Climate	8,183.31	5,250.77	3,000	23,323.62	1,915.71
Community	2,454.99	543.18	0	971.82	0
Country	2,454.99	4,164.4	3,000	971.82	13,409.96
Disaster	2,454.99	905.31	0	0	0
Displace	3,273.32	543.18	0	971.82	1,915.71
Displacement	818.33	543.18	0	0	0
Ecological	0	543.18	0	971.82	0
Ecology	0	181.06	0	0	0
Environment	818.33	362.12	4,000	971.82	0
Environmental	818.33	1,448.49	1,000	1,943.63	1,915.71
Event	818.33	181.06	0	971.82	0
Human	0	905.31	1,000	4,859.09	0
Immigrant	0	1,267.43	1,000	0	0
Immigration	0	1,448.49	2,000	0	0
Leave	818.33	2,896.98	0	0	1,915.71
Local	0	362.12	0	0	0
Migrant	1,636.66	1,991.67	4,000	0	3,831.42
Migrate	2,454.99	181.06	0	0	1,915.71
Migration	0	3,983.34	3,000	1,943.63	13,409.96
Move	1,636.66	543.18	0	971.82	0
Movement	0	543.18	0	0	1,915.71
Nation	0	181.06	1,000	2,915.45	0
Natural	2,454.99	181.06	1.000	0	0
People	9,001.64	5,975.01	1,000	0	11,494.25
Person	0	362.12	0	971.82	1,915.71
Population	1,636.66	1,086.37	13,000	0	0
Refugee	818.33	1,991.67	3,000	5,830.9	3,831.42
Resource	0	543.18	0	0	0

Table 5.10.: key data occurrences of the NCS with their frequency of occurrence in the sub-corpora of the NCS.

From an analysis of dispersion of the key data occurrences reported in Tables 5.9. and 5.10., discrepancies in the frequency of occurrence of the terms in the NC and its sub-corpus NCS characterise most terms; discrepancies might be biased towards the lexical choices of the *New York Times* (NYT) sub-corpora, which constitutes half of the NCS in terms of number of articles included in the corpus. Nevertheless, looking at dispersion within the different newspaper outlets that constitute the NCS, the terms are fairly evenly distributed within the sub-corpora. The distribution of key data occurrences in the sub-corpora of the NCS is summarised in Table 5.11.: the left handside column reports how many of the 30 key data occurrences are used in each sub-corpora of the NCS; while the right handside column reports how many of the 30 key data occurrences are most frequent in each sub-corpora of the NCS in comparison with every

other sub-corpora in terms of number of occurrences. The distribution of key data occurrences may be revealing of particular discourse practices that are specific to each newspaper outlet included in the NCS. If they are not evenly distributed in the NCS, key data occurrences represent terminological choices about environmental migration that are more typical of one newspaper outlet than another; if their distribution in the NCS is relatively even, then data occurrences can be considered representative of the discourse on environmental migration of the whole NCS (see Section 3.1.1. on distribution).

	Number of key data occurrences	Most frequent key data occurrences
G	19	9
NYT	30	6
SMH	14	1
TS	14	8
US ON	13	6

Table 5.11.: dispersion of the key data occurrences of the NCS: terms that occur in each sub-corpora and terms that are more frequent in each sub-corpora.

Out of the 30 key data occurrences analysed, almost two thirds occur in the *Guardian* sub-corpus, all terms can be found in the *New York Times* sub-corpus, and half of them occur in the other three sub-corpora. All terms are fairly evenly distributed also in terms of frequency of occurrence normalised per million within the NCS sub-corpora, with the only exception of the *Sydney Morning Herald*, where there only is one term that is more frequently used than in the other sub-corpora. Since key data occurrences are fairly evenly distributed in the sub-corpora of the NCS, they can be used as a basis to support data interpretation that can be considered characteristic of the whole NCS (see Section 5.5.).

5.4. Analysis of shared collocations

In this section, the shared collocations are analysed in groups that refer respectively to the phenomenon of migration; the people involved in the phenomenon as either members of countries of origin, destination countries, or migrant communities; and the environment as an entity involved in migration. Terms are identified as belonging to one of these three categories on the basis of who/what they refer to in their context of use in the corpora.

These shared collocations are analysed using the Word Sketch tool in Sketch Engine (Sketch Engine 5); more specifically, their co-text of occurrence is analysed. The co-text can include: modifiers of the term; nouns that co-occur with the term; verbs that co-occur with the term (both with the term as subject and with the term as object of the sentence); association to other phrases of clauses via additive or disjunctive conjunction ("and/or" or a comma); and the definitions of the term given by the expression "x (where x is the term) is a".

5.4.1. Shared collocations that refer to representations of environmental migration

Table 5.12. reports the shared collocations that refer to the phenomenon of environmental migration in alphabetical order.

Shared collocation	Frequency in the IOC	Frequency in the NC	Average frequency per million
Climate change displacement	16.84	27.06	21.95
Climate change-induced migration	20	27.06	23.53
Climate change-related displacement	8.42	40.59	24.5
Climate displacement	12.63	40.59	26.61
Climate induced migration	28.42	13.53	26.08
Climate migration	82.09	216.46	149.27
Environmental displacement	31.57	27.06	29.31
Environmental migration	592.51	94.7	344.95

Table 5.12.: shared collocations about environmental migration, their frequency of occurrence per million in the IOC and NC, and average frequency per million in both corpora.

According to the shared collocations reported in Tables 5.12. and 5.13., expressions related to the phenomenon of environmental migration are less frequent than terms used to refer to environmental migrants (see average frequency per million). This tendency is confirmed in the NC, where expressions about environmental migrants appear to be far more frequent than those about environmental migration, with "climate refugee" being the most frequent of all terms; while in the IOC, expressions about environmental migration are more frequent than those about environmental migrants, with "environmental migration" being the most common expression. Possibly, the fact that news discourse is more centred around the people involved in migration

responds to the function of newsworthiness: representing the people and their experiences and feelings, rather than the abstract process can be a way to establish a close relationship with the readers by engaging them on an emotional level through individualisation (see Section 3.2.) (Bednarek & Caple, 2012, pp.39-44). Also, if people are represented in terms of quantity, namely emphasising the dimension of the phenomenon of migration and the amount of people that will be moving and resettle at a global level (especially in wealthier receiving countries where the majority of the news outlets included in the NC are published – see Section 4.2.2.3.), this would encourage an emotional response on the part of the readership and contribute to the sensationalism of the piece of news and its newsworthiness. These representations increase newsworthiness of the news items; they respond to the concepts of "impact" and "superlativeness" described by Bednarek & Caple (2012). "Impact" and "superlativeness" refer respectively to "the effects or consequences of an event" and "the maximised or intensified aspects of an event"; these elements of a story contribute to its newsworthiness as they affect the reception and interpretation of the text (in Bednarek & Caple, 2012, see pp.43-44, 72-74, 76-77).

The shared collocations used to refer to environmental migration make reference to either the climate (and climate change) or the environment as an interrelated factor to migration: there seems to be more lexical variation with "climate" and "climate change" as modifiers rather than with "environmental" (6 terms out of 8), but frequencies of occurrence show that the terms that are most frequently used are those that are modified by "environmental". In the following examples, I report in bold characters significant concordances of the co-text of shared collocations identified with the Word Sketch tool in Sketch Engine; significant concordances are those that contribute to building networks of meaning around key data occurrences (see Section 5.3.).

Among the terms modified by "climate" and "climate change", the expression "climate migration" is more frequent: it is worth noticing that these terms leave any reference to the role of the climate in environmental mobility unspecified as they do not hint to either a relationship of causality or of interrelatedness. Instead, the other shared collocations modified by "climate" and "climate change" refer to the role of the climate as a cause of mobility with different degrees of explicitness, using either the modifiers "induced" and "related", or the term "displacement" that intrinsically denotes a forced movement (UN 11, 2014). "Environmental migration" and "climate migration" show high frequency in comparison with all other collocations: both terms refer to "migration" and not "displacement", thus they converge towards the representation of mobility in relatively neutral terms and avoid the connoted term

"displacement" (UN 11, 2014). More specifically, in the IOC the modifier "environmental" prevails, while in the NC the modifier "climate" is more frequent: if the discourse of international organisations is to be considered the official and authoritative discourse on environmental migration, then news discourse seems to dis-align from it and switch towards a representation of migration as related to changes in the climate, and not the environment. Possibly, in the discourse of international organisations, changes in the environment and in the climate are understood as trigger factors of mobility, while in news discourse the climate is conceived as a trigger factor both of environmental change and of human mobility.

The decision to opt either for terms modified by "environmental", or for the relatively "unspecified" expression "climate migration", as well as the preference of "migration" over "displacement", might suggest a representation of environmental mobility as related to environmental change, but not necessarily caused by it. In this way, the discussion of the complex and articulated web of factors -and most of all "agents" (see Section 3.2.)- that combine and cause mobility is left open to debate and it is not summed up in a defining expression. The terms used to refer to environmental migration seem to simply try to point to a kind of mobility which is strongly influenced by changing ecosystems that support life without attributing them the responsibility for migration and representing them negatively as the force that determines migration, but rather as the circumstance in which migration happens, therefore relieving nature from the responsibility for human movements and hardships.

More specifically, in the IOC shared collocations modified by "climate" and "climate change" seem to refer to issues of occurrence of natural phenomena and migratory movements (i.e., number of people-on-the-move and frequency and intensity of natural events) as displayed by their co-text ("international climate change-induced migration **flows** (UN 4, 2012)); of interrelatedness with changes in the ecosystems ("climate **change-related** displacement" (UN 15, 2017), "climate **change-induced** displacement" (IOM 12, 2014)); with causality ("it is plausible that climate change-induced migration **causes** vicious cycles" (UN 4, 2012)); and with issues of definition of the phenomenon and its participants ("if the debate about climate change and displacement is **reframed** solely in terms of natural disasters and displacement" (UN 3, 2011), "it can be difficult to **distinguish** climate change-induced migration from economic migration" (IOM 13, 2014), "the gender implications of climate change-related migration are very much **underresearched** and thus not well understood" (UN 14, 2017)). Instead, shared collocations modified by "environmental" refer to issues of management and understanding of the phenomenon ("The Conference has developed advocacy work to **frame** environmental displacements" (IOM 18, 2015), "Vulnerability and resilience are two key concepts in

understanding environmental migration" (IOM 29, 2017), "develop more comprehensive strategies to better **manage** environmental migration" (IOM 2, 2008)); and issues of causality and consequentiality with trigger factors ("the number of environmental disasters is increasing in incidence and that the extent of **resultant** environmental displacement is also increasing", "climate change and global warming which would be likely to **induce** environmental migration" (IOM 4, 2008)).

In the NC, shared collocations modified by "climate" and "climate change" seem to refer to the need for definition and management ("There is also no international institution solely responsible for **addressing** climate change-related migration" (TS 6, 2014)); issues of causality and consequentiality ("climate change and the **resultant** displacement of millions of people" (BBC 10, 2016)); reference to other forms of mobility ("climate change-induced migration, **displacement** and **relocation**" (NYT 3, 2015)); and the frequency and intensity of the phenomenon ("responding to **mass** climate migration" (G 6, 2015)). Instead, shared collocations modified by "environment" refer to the need for management and understanding of environmental migration ("countries expect to **manage** environmental migration internally" (RVN 2, 2009), "immediate need for better data on climate and environmental displacement, a **gap** the IOM has sought to fill" (NN 9, 2016)); and the causality/consequentiality of the phenomenon ("the direct results of environmental migration **driven** by natural disasters" (TS 9, 2016)).

These representations seem to converge around the idea that environmental migration is a phenomenon that needs to be understood and clearly defined in order to be dealt with, especially because the dimensions of the phenomenon are alarming and are likely to increase in the future, putting at risk the safety of the people involved in it. More specifically, the causes and consequences of environmental migration, especially those related to changing environments, are not clear and need be identified in order to address environmental migration in an effective way.

5.4.2. Shared collocations that refer to representations of participants in environmental migration

Table 5.13. reports the shared collocations that refer to the participants in the phenomenon of migration in alphabetical order.

194

Term	Frequency in the IOC	Frequency in the NC	Average frequency per million
Climate change migrant	3.16	40.59	21.87
Climate change refugee	17.89	121.76	69.82
Climate migrant	47.36	270.57	158.96
Climate refugee	86.3	1,122.87	604.58
Environmental migrant	203.12	121.76	162.44
Environmental refugee	79.98	284.1	182.04

Table 5.13.: shared collocations about participants in environmental migration, their frequency of occurrence per million in the IOC and NC, and average frequency per million in both corpora.

Tables 5.12. and 5.13. show that expressions used to refer to environmental migrants are more frequent than those used to refer to the phenomenon of environmental migration (see Average frequency per million). It is interesting to notice that "climate refugee" is the most frequent of all expressions, even though environmental reasons at the basis of mobility are not contemplated in the current legislation on the *Status of Refugees* (UNHCR, 2010).

The shared collocations used to refer to environmental migrants refer to either the climate (and climate change) or the environment as an interrelated factor in migration: there seems to be more lexical variation formed with "climate" and "climate change" as modifiers of these collocations, rather than with "environmental" (4 terms out of 6). Frequencies of occurrence confirm that the terms that are most frequently used are those that are modified by "environmental". The modifiers "climate" and "environmental" were selected as significant words for retrieving shared collocations on the basis of the relevant literature about environmental migration (see Section 5.2.).

This tendency is confirmed in the NC, where shared collocations modified by "climate" and "climate change" appear to be far more frequent than those modified by "environmental"; while in the IOC, shared collocations modified by "environmental" are more frequent than those modified by "climate" and "climate change". A possible interpretation about the reasons why news discourse does not align to the discourse of international organisations could be either that news discourse promotes a specific representation of environmental migration as influenced by the climate (possibly to interpret the representations of environmental migration conveyed by organisational discourse and make them reader-friendly); or that the idea of human mobility related to climate factors is easier to understand that the idea of mobility related to a multiplicity of environmental factors. Possibly, terminology related to the climate was also used first in

official discourses on migration (see Section 1.1.), so it might be more familiar to the readership. Either way, the choice to privilege the modifiers "climate" and "climate change" in news discourse might be a functional one, which aims at fostering understanding and comprehension of the issue discussed.

It is worth noticing that the term "refugee" modified both by "climate", "climate change" and "environmental" is widely used despite ongoing criticism on the fact that the current legislation on the status of refugees does not include environmental reasons as triggers of mobility, and therefore these expression are misleading and might induce the readers to think that environmental migrants are protected internationally under the *Convention on the Status of Refugees* (UNHCR, 2010), while instead specific and tailored-made forms of protection that guarantee their safety are missing.

It is interesting to notice that expressions that explicitly establish a relation of interrelatedness or causality between migration and the ecosystem are missing (i.e. expressions modified by, for instance, "related", "induced"). Sometimes changes in the climate are addressed as the specific factor that relates to mobility ("climate change"), thus stressing that alteration of an original state of the climate is the real issue that pushes people to move.

More specifically, in the IOC shared collocations modified by "climate" and "climate change" seem to refer to assistance and risks (significant concordances of the co-text of occurrence are reported in bold characters) ("policy responses at EU level to protect and **accompany** climate migrants" (IOM 12, 2014), "establishment of an international coalition to **accept** climate change refugees when a country becomes uninhabitable" (UN 3, 2011)); international recognition and common definitions of environmental migration and migrants ("While the EU has so far not **recognised** climate refugees formally" (EU 5, 2018)); the range of the phenomenon ("may face **more** climate refugees in coming years" (UN 3, 2011)); various forms of migration ("migrant", "migration", "displace", "leave", "move", "migrate"); and causality behind environmental migration (""**forced** climate migrant" […] conveys a reasonably accurate impression of the increasing phenomenon of non-voluntary population displacement likely as the impacts of climate change grow and accumulate" (IOM 3, 2008)). Instead, shared collocations modified by "environmental" refer to shared definitions of environmental migration and migrants ("a precondition for using the **category** environmental migrants is that environmental change can indeed be identified as a root cause for migration" (EU 1, 2011), "there is no internationally accepted legal definition of the **term** environmental migrant" (IOM 13, 2014)); the range of the phenomenon ("the number of asylum requests, refugee status and temporary visas from environmental migrants has **multiplied** and continues to steadily increase" (IOM 12, 2014));

forms of migration ("Will all environmental **migrants** come to the industrialized world?" (IOM 13, 2014)); causality behind environmental migration ("a land where poor soils and variable rainfall pose a harsh climate for agriculture, has **spawned** the most environmental refugees", "There are estimates of environmental refugees **caused** by climate change" (IOM 4, 2008)); and the need for origin and migrant communities to be assisted ("existing legal instruments at EU level to **accommodate** environmental migrants should be explored" (EU 1, 2011), "we **treat** environmental refugees arriving in Europe as unwanted migrants" (IOM 2, 2008), "the absence of **accepting** environmental refugees under international humanitarian law" (UN 4, 2012)). Therefore, shared collocations with "climate" and "climate change" and shared collocations with "environmental" seems to refer to similar questions and aspects of environmental migration; only, the former seem to foreground the question of international intervention, recognition, and assistance and risks as a priority for dealing with environmental migration; while the latter seem to deal with a more specific discussion of the characteristics of the phenomenon of environmental migration (i.e., for instance, its causality, frequency, intensity, etc.).

In the NC, shared collocations modified by "climate" and "climate change" refer to migration and migrants ("immigrant", "settle", "move", "refugee", "migrant"); the range of the phenomenon and forecasts about it ("The number of **global** climate migrants will cross 1.0 billion by 2050 from 250 million now" (NN 4, 2013), "Globally, 200 million climate migrants are **expected** by 2050" (SMH 3, 2009)); the need for origin and migrant communities to be assisted ("dialogue to look at how we can **support** future climate migrants" (TS 5, 2013), "**compensation** for Bangladesh by rich countries for adverse impacts of climate change" (RVN 3, 2009), "another priority is ensuring that climate refugees are **equipped** with the skills to survive and prosper" (SMH 5, 2013)); research on environmental migration ("While there's no single definition for climate migrants , the **study** said there's no shortage of examples of people driven away by climate-related disasters" (TS 7, 2014)); and critical aspects related to it ("species **extinction**" (US ON 7, 2018), "livelihood **problems** arising out of climate change factors" (NN 2, 2011)). Instead shared collocations modified by "environmental" refer to the range of the phenomenon ("[IOM] also **forecasts** 200 million environmental migrants by 2050" (NN 10, 2017), "today's 25**million-plus** environmental refugees now outnumber political refugees worldwide" (TS 2, 2010)); and its causality ("environmental refugees **due** to climate change" (CT 2, 2009), "environmental migrants **driven** out of home by cyclones or river erosion" (NN 4, 2013)). Therefore, as in the IOC, the contexts in which shared collocations with "climate" and "climate change" occur seem to favour an interpretation which foregrounds the

critical aspects of environmental migration and the urgent need for providing assistance to those who are involved in it; while the contexts of occurrence of shared collocations with "environmental" seem to focus on specific features of this phenomenon, especially its causality and the frequency of the natural events that influence it.

These representations seem to converge around the idea that migrant and origin communities need assistance to avoid the risks they are exposed to, and so there is the need to define a clear terminology to refer to them and have clear estimates on the number of people that is involved and will be involved in this phenomenon -which is alarming as can be evinced by the use of some negatively connoted terms. Specifically, the issues that cause environmental migration are represented as undefined and needing research to be understood to address the phenomenon in an effective way. This study adopts the label "origin communities" or "communities of origin" used by the IOM in the sense of "a national or local community of a person or group of persons who have migrated internally or internationally" (IOM, 2019); the collocation might be controversial since it blurs the complexity of the multifaceted socio-cultural dimensions migrants belong to.

On average, frequencies of all terms are higher in the NC than in the IOC, possibly because of the type text conventions that characterise news discourse: news discourse must be clear and concise since it has specific space constraints, so it is likely to condense information. Long and dense descriptive or explanatory sections are likely to be missing in news items while specific terminology related to the topic discussed is likely to be used, with specific lexical items that are repeated in the text. Instead, publications of international organisations included in the IOC are generally longer and open to a more detailed and multifaceted discussion of specific topics, therefore they are likely to display a wider range of terminology. Possibly, these differences are also determined by the fact that organisational and news discourse address different publics (see Section 2.2.2.).

5.4.3. Shared collocations and representations of the environment in environmental migration

Even though the combination of words in the shared collocations did not include any compound that specifically refers to the environment, the collocates of the shared collocations reveal interesting aspects about the role the environment is attributed to in environmental migration. More specifically, collocates might help reveal what part or particular condition of the environment is specifically addressed as either a cause to human mobility, or an interrelated factor.

Environmental migration seems to be generally conceived as a type of mobility which is mainly due to climate factors, rather than other natural factors: mostly, collocates occurring in the shared collocations refer to "climate" and "climate change" and do so in a variety of ways; "environment" as a collocate is mentioned more frequently than "climate" and "climate change", but it only occurs in a couple of linguistic constructions that are relevant in terms of their frequency of use (i.e. "environmental migrant" and "environmental refugee"; see Table 5.13.). As shown in Table 5.13., collocates do not express either causality or interrelatedness of environmental and/or climate factors and migration: more specifically, even though both the climate alone and the environment as a whole (possibly including climate) are addressed as factors that interrelate with human mobility, the climate as a trigger to mobility is also mentioned in terms of its changing conditions, that is to say that it is not the climate in its original or naturally evolving state that contributes to migration, but rather it is its altered state that causes it ("climate change"). Also, the role of both "climate" and "climate change" is further specified via the combination with the terms "induced" and "related", which seem to refer to causality and interrelatedness respectively. It seems that the role of climate and climate changes in environmental migration is rather clearly stated, despite the uncertainty on how it actually impacts on mobility patterns. Possibly, sometimes relatedness rather than causality is asserted also as a way to introduce more specific explanations why particular types of mobility are defined as "environmental", offering a more detailed explanation of causality which takes into consideration the role and responsibility of human beings and their lifestyles into altered - and sometimes adverse to the wellbeing of people- ecological conditions.

5.5. Analysis of key data occurrences retrieved from the IOC

5.5.1. Key data occurrences that refer to representations of environmental migration

Key data occurrences that refer to the phenomenon of environmental migration emerged from close-reading of the IOCS and are reported in Tables 5.14. and 5.15. Key data occurrences are reported in Table 5.14. from most to least frequent in the IOC, together with the themes they refer to which are reported in alphabetical order in the right handside column (see Section 3.2.). Henceforth, themes (or thematic areas) are intended as word-sense categories established for this study on the basis of an analysis of key data occurrences in their context of use; they are not fixed categories of meaning, but rather contextually relevant ones (see Sections 4.2. and 4.2.1. for a definition of themes).

Key occurrence	Themes of the co-text
Migration	Causality and interrelatedness; frequency, intensity and range; nature; management; obligation.
Displacement	Frequency, intensity and range; management; mobility; nature; obligation; socio-economic, political and justice issues.
Displace	Frequency, intensity and range; nature; obligation; socio-economic, political and justice issues.
Mobility	Causality and interrelatedness; frequency, intensity and range; management; mobility; nature; obligation; socio-economic, political and justice issues.
Movement	Causality and interrelatedness, frequency, intensity and range; management; mobility; obligation; socio-economic, political and justice issues.
Diaspora	Frequency, intensity and range; management; mobility; origin and migrant communities; socio-economic, political and justice issues.

Table 5.14.: key data occurrences on environmental migration in the IOC and themes emerging from the co-text.

Key occurrence	IOC x million	IOCS x million
Diaspora	259.95	826.94
Displace	1,481.81	1,127.65
Displacement	2,327.96	2,668.77
Migration	6,334.53	17,440.99
Mobility	1,151.35	3,834.01
Movement	696.7	1,014.88

Table 5.15.: key data occurrences on environmental migration in the IOC and IOCS and their frequency of occurrence normalised per million.

According to the normalised frequencies of occurrence of the terms reported in Table 5.15., the terms that are more frequent to refer to environmental migration in the discourse of the IOC are, from most to least frequent: "migration", "displacement", "displace", "mobility", "movement" and "diaspora", as shown in Table 5.14. These terminological preferences are partly reflected in the lexical choices of the sub-corpora IOCS, where the most to least frequent terms used to refer to the environment in environmental migration are: "migration", "mobility", "displacement", "displace", "movement" and "diaspora" as shown in Table 5.15. The most distinctive difference

in usage seems to be related to the term "mobility": since, "mobility" is mainly distributed within the discourse of the IOM and UN (in terms of frequency per million, it occurs 468.3 times in the EU sub-corpus, 1,186.19 in the IOM sub-corpus and 1,386.41 in the UN sub-corpus), this discrepancy might derive from IOM publications, which constitute the 71.94% of the IOCS; also, it might suggest and confirm that the organisations of the IOM and UN work in partnership and mould and share a common discourse on environmental migration.

Table 5.16. reports the themes of representations of environmental migration that emerge from the analysis of key data occurrences of the IOCS and their co-text of occurrence. The order assigned to the thematic areas in Table 5.16. (as well as in Tables 5.19., 5.22., 5.25., 5.28. and 5.31.) is guided by the perceived representativeness of the importance attributed to each thematic area in the corpus, so themes that are ranked top-level in the tables are considered representative of the most important thematic areas of the corpus. The rationale behind the identification of thematic areas is based on the analysis of the co-text of key data occurrences: significant concordances of the co-text were explored to identify the theme(s) they refer to in their contexts of use in the corpus. Significant concordances of the co-text were retrieved using the Word Sketch tool in Sketch Engine and are reported in bold in the examples below. Key data occurrences were then categorised according to the themes they belong to in the corpus. Since themes merge and combine in discourse, some significant concordances from the co-text of key data occurrences fall within more than one thematic area as they are related to more than one theme. Significant concordances of the co-text are reported in alphabetical order for each theme. The themes reported below and in Sections 5.5.2. and 5.5.3. were identified by grouping together significant concordances of the co-text according to the thematic area they refer to in the corpus.

From the analysis of the key data occurrences of the IOCS, the main themes of environmental migration that emerge are the following:

- *Nature* mainly refers to the interrelatedness between environmental migration and the ecosystem, but it also includes references to nature as a stock of resources for people to use and as specific physical areas (i.e., for instance, "coastal areas");
- *Obligation* refers to the degree of coercion according to which people move, namely the extent to which they can choose either moving or remaining in their place;
- *Frequency, intensity and range* refers to the dimension of the phenomenon of environmental migration: the number of people involved in it, the frequency with which

it occurs and will occur in the future, and the intensity of its impacts on origin and destination communities alike as well as on the environment;

- *Management* refers to the need for policies, planning and assistance to address environmental migration and it includes references to studies, estimates and research;

- *Causality and interrelatedness* includes references to natural, anthropogenic or other types of factors and events that may trigger environmental migration;

- *Socio-economic, political and justice issues* refers to the relatedness of environmental migration to the socio-economic, political and justice situation in both countries of origin and destination countries, with specific references to critical issues;

- *Mobility* includes references to different typologies of environmental migration as well as to the idea of mobility as an ongoing process; and

- *Origin and migrant communities* includes ways to refer to and describe origin and migrant communities in text.

Theme	Significant concordances of the co-text
Nature	change-induced, change-related, climate, climate change, climate change-induced, climate change-related factor, climate change relationship, climate-induced, climate-related, degradation, desertification, disaster, disaster-induced, disaster-related, effect of climate change, environment, environment nexus, environmental, environmental degradation, environmental event, environmental factor, environmentally, environmentally-induced, flood, flooding, flood related, impact of climate change, natural disaster, natural hazard, water stress.
Obligation	choice, decision, forced, forcibly, involuntary, opportunity, response, strategy, solution, voluntary.
Frequency, intensity and range	flow, future, grow, increase, large, large-scale, mass, massive, million, more, newly, number, rapid, repeated, sudden, thousand, widespread.
Management	adaptation, adaptation planning, adaptation process, concern, consideration, datum, dimension, environmental policy, expert, framework, governance, governance agenda, government, instrument, issue, knowledge, law, legal, management, management approach, management challenge, matter, model, option, partnership, phenomenon, planned, policy, programme, project, regular, research, response, responsible, solution, specialist, strategy, study, tracking, unmanaged.
Causality and	affect, associate, cause, drive, driver, engender, factor, force, impact, increase,

interrelatedness	induce, influence, initiate, link, nexus, relate, trigger.
Socio-economic, political and justice issues	camp, conflict, contribution, damage, development, development-forced, development-induced, development project, health, investment, livelihood, loss, need, remittance, right, security, transfer, urbanization, violence, vulnerability.
Mobility	circular, cross-border, displacement, economic, evacuation, human, internal, internally, international, irregular, labour, long-term, longer-term, migration, migratory, mobility, mobilization, movement, outward, pastoralist, permanent, permanently, permanently, protracted, relocation, resettlement, return, rural-to-urban, rural-urban, seasonal, short-term, temporarily, temporary.
Origin and migrant communities	child, community, family, group, household, individual, migrant, people, person, population, refugee, resident.

Table 5.16.: themes related to representations of environmental migration emerging from key data occurrences of the IOCS and their co-text.

In order to identify the themes reported in Table 5.16., the co-text of each key data occurrence reported in Table 5.14. was analysed in order to see which themes are associated with each key occurrence. More specifically, according to its co-text of occurrence the term "migration" is mainly described in terms of its correlation to the ecosystem (for instance, "**environmentally-induced** migration" (IOM 1, 2008)) and its interconnectedness with other events and factors ("climate change and migration **nexus**" (IOM 1, 2008)); its typology (for instance, "**labour** migration" (IOM 26, 2017), "**temporary** migration" (IOM 30, 2018)); the degree of obligation or of free will according to which people move ("**voluntary** migration" (IOM 16, 2015), "**forced** migration" (IOM 11, 2014)); its range in terms of numbers of people involved in movements ("**mass** migration" (IOM 1, 2008), "There is also **large-scale** […] migration" (IOM 26, 2017)); and the need to plan and manage mobility to make it orderly and controllable ("**unmanaged** migration" (IOM 11, 2014)) as well as the need to foster research on the topic to improve understanding of the phenomenon ("developing the knowledge base through **research**, data collection and international migration law research and analysis" (IOM 11, 2014), "innovative approaches exist to **study** environmental migration" (IOM 19, 2016)). The idea of mobility as an ongoing process sometimes emerges in text ("migration **processes**", "migration **cycle**" (IOM 11, 2014)). Also, sometimes migration is represented in negatively connoted terms ("**crises** in both natural disaster and conflict settings" (IOM 19, 2016)).

Significant nouns of the co-text confirm that "migration" tends to be associated to forms of displacement; therefore it tends to be used as a general term to refer to mobility and not necessarily to voluntary forms of mobility only (UN 11, 2014). It is interesting to notice that environmental migration is often contextualised as a phenomenon that is rooted in specific socio-economic and political scenarios ("environment, migration, **development** and humanitarian assistance" (IOM 1, 2008), "temporary migration and **remittances** can open up alternative sources of income" (IOM 30, 2018), "those who had to flee their homes due to armed **conflict**" (IOM 19, 2016)), thus suggesting that the causes of mobility are all but merely nature-related.

A fundamental issue is that migration is a wide-ranging and multi-faceted phenomenon: it needs to be understood in its complexity, be ordered and organised, to prevent negative situations for the people involved in it. Also, it seems to be represented as having causes that are both natural and related to economic wellbeing, and therefore both a decision and a way to improve one's life tenor.

According to its co-text, the term "displacement" relates to mobility ("movement") as well as to specific typologies of it ("**cross-border** displacement" (IOM 11, 2014), "**protracted** displacement" (IOM 26, 2017)); it makes reference to its interrelatedness to natural factors and events ("**disaster-induced** displacement" (IOM 6, 2012), "**flood related** displacement" (IOM 12, 2014)); it includes reference to the degree of obligation at the basis of people's movement (and displacement generally is a "forced" movement; UN 11, 2014); it includes references to the range of the phenomenon in terms of its frequency of occurrence and the number of people involved in it ("**repeated** displacement", "**widespread** displacement" (IOM 12, 2014)); and to the correlation between studies on environmental displacement and its management ("displacement **tracking**" (IOM 7, 2013), "displacement **solutions**" (UN 6, 2013)). Displacement is contextualised as relating to particular socio-economic and political factors ("**development-induced** displacement" (UN 12, 2015)).

The term "mobility" mainly represents environmental migration in terms of its typology ("**labour** mobility" (EU 2, 2012), "**seasonal** mobility" (IOM 16, 2015)); its relatedness to natural events ("**disaster-induced** human mobility" (UN 16, 2018), "**climate-related** mobility" (UN 15, 2017)); its management and dealings ("the mobility **partnerships** would be, in principle, a relevant instrument to bilaterally cooperate on all sorts of measures regarding environmentally displaced" (EU 1, 2011), "better integration of mobility **management** in urban contexts" (IOM 7, 2013)) with specific reference to adaptation measures ("Mobility **strategies** of migrants are not inherently 'positive' or 'negative'" (IOM 13, 2014)); and the degree of

obligation according to which people move ("understanding of how climatic factors affect mobility **choices** will help shape adaptation policies" (UN 9, 2014), "different exposure, vulnerability and resilience result into different mobility **decisions**" (IOM 9, 2014)). Also, its controversial causes and triggers are discussed ("mobility **associated** with hazards, disasters and climate change" (UN 16, 2018), "mobility **related** to climatic hazards and stressors" (UN 6, 2013)). "Mobility" is associated to specific socio-economic and political factors that might determine it ("vulnerability depends significantly on key population dynamics, including **urbanization** and mobility" (UN 7, 2013), "multifaceted linkages between people's mobility and their **vulnerability**" (IOM 7, 2013)).

The co-text of the verb "displace" refers to specific typologies of displacement ("**internally** displaced persons (IDPs)", "people **temporarily** displaced for slow onset environmental reasons" (EU 1, 2011)); the interrelatedness between displacement and natural factors; the degree of obligation of displacement ("populations, individuals or families **forcibly** displaced by the impacts of environmental or climate change" (EU 1, 2011)); and the frequency and intensity of the phenomenon ("22 million people were **newly** displaced as a result of natural disasters" (IOM 12, 2014)).

The co-text of "movement" mainly refers to the typology of movement ("**sudden**, large-scale movements are often temporary and localized" (IOM 5, 2009), "Climate change is expected to lead to a shift towards more **permanent** movements, both in relation to disasters and slow process degradation" (IOM 13, 2014)) as well as to different forms of mobility ("migration", "displacement"). It also refers to the degree of obligation of the movement ("Environmental migration involves cases of either **forced** or **voluntary** movements that are not easily distinguishable" (IOM 8, 2014)); its range ("**large-scale** population movements", "**massive** movement caused by extreme events" (IOM 13, 2014)); and the socio-economic and political factors that may relate to it ("the complexity of the links between environment, climate change and **conflict** and related population movements" (EU 1, 2011)).

Finally, "diaspora" seems to revolve around the discussion of particular economic issues which are often related to the possibility of managing environmental migration ("promote diaspora **investments** for land rehabilitation" (IOM 16, 2015), "facilitate migrant and diaspora **contributions** to adaptation projects" (IOM 11, 2014)); it also refers to people-on-the-move ("diaspora **communities**" (IOM 16, 2015)).

Focusing on the prevailing usage of verbs related to these key data occurrences, the co-text of the terms "migration" and "displacement" converges in representing environmental migration as

generally deprived of "agentivity": participants can be represented as "agents" with respect to an action, that is, they perform an action (van Leeuwen, 2008, pp.7-9, 33-34). As specified in Section 3.2., the way actions are represented may either contribute to attributing (activation) or erasing (passivation) agency of participants; so, activation happens when the participant is represented as playing an active role with respect to an action (Fairclough, 2003, p.135; Bartlett, 2014, pp.44-45). Agentivity, i.e. the ability to perform an action, it is generally attributed to sentient beings, and nominalisations like "migration" and "displacement" tend to obfuscate agentivity or deprive people of their agentivity in the process of migration. Nevertheless, in the present study, the focus of the analysis is the representations of three main aspects (environmental migration, its participants, and the environment), which are all treated as potential "participants", namely subjects that can be attributed the ability to "perform" an action, irrespective of their different status as either sentient or non-sentient beings (see Section 3.2.). The aim of the analysis is to shed light on how environmental migration is dealt with in discourse: it is therefore important to let the features of the discourse guide the analysis rather than setting standards the discourse should conform to. This is the reason why the three aspects examined are equally treated as subjects that can all be considered participants and attributed ability (and responsibility) for action: in this way it is also easier to identify patterns according to which responsibility of the phenomenon is either attributed to people, or to non-sentient beings such as natural phenomena in order to divert it from people. In the case of the terms "migration" and "displacement", it can be said that environmental migration is generally deprived of "agentivity": it is represented as the object of verbs that describe it as either a phenomenon that is the result of particular events or actions ("migration is **driven** by multiple factors and it is difficult to isolate environmental and climatic factors" (IOM 12, 2014), "migration **triggered** by environmental changes" (IOM 24, 2016)); or as a phenomenon that is or needs to be dealt with ("readjust policies to better support and **manage** environmental migration" (IOM 12, 2014)). Also the terms "mobility" and "movement" contribute to representing environmental migration as a phenomenon that is dealt with or needs to be dealt with ("global strategies that **address** human mobility in the context of environmental change" (IOM 17, 2015), "Active efforts are required to adequately **manage** rapid, large-scale population movements" (IOM 13, 2014)).

Environmental migration is sometimes represented as activated, as an "agent", but in these cases (see Section 3.2.), it is mostly represented as the subject of verbs that are neither negatively nor positively connoted in the contexts of use. The actions (verbs) environmental migration "performs" do not contribute to representing it as either a negative phenomenon (i.e. for

206

instance, causing danger, harming people), or a positive one (i.e., for instance, providing people with an opportunity for safety): environmental migration is simply depicted as happening, taking place ("Most climate migration **occurs** within the borders of a given country" (EU 3, 2013)).

As far as the co-text of the verb "displace" is concerned, the object of the verb "displace" mainly consists of generic references to people ("**persons** displaced by environmental and climate change", "environmentally displaced **people**", "displaced **population**" (EU 1, 2011)), or more specific references to families and family members ("**families** forcibly displaced" (EU 1, 2011), "displaced **children**" (IOM 12, 2014)), or even to numbers ("Climate change and environmental degradation are predicted to displace **millions** of people" (IOM 10, 2014), "Natural disasters and man-made situations displace **thousands** of people" (IOM 7, 2013)). Instead, the subject of the verb "displace" is identified in nature ("persons displaced by **environmental events**" (EU 1, 2011), "people displaced by the **impacts of climate change**" (UN 11, 2014), "persons displaced by **natural hazards**" (IOM 12, 2014)) and in socio-economic and political factors ("people displaced by **war**" (UN 3, 2011), "People who are displaced by **development projects**" (UN 5, 2012)): people-on-the-move are therefore depicted as having no choice but to move. The co-text of "movement" contributes to the idea that environmental migration depends on external factors ("crises often **trigger** large migration movements" (IOM 28, 2017), "migrants whose movement is **induced** by environmental degradation or climate change" (IOM 10, 2014)).

Overall, looking at the use of verbs in the corpus, environmental migration is generally depicted as a passive phenomenon which results from events and actions (so, it is "caused"), and that needs to be dealt with. As an "active" phenomenon (see Section 3.2.) it is represented in a fairly neutral way and with only a slightly negative connotation which possibly concerns the consequences and the impacts it has on living beings and the environment. Migration is activated when it is represented as a phenomenon that is increasing in "range" (frequency, intensity, number of people involved in it); however, this is a rather loose kind of agentivity with a low degree of intentionality in it; thus environmental migration tends not to be represented as involving agentivity (see Section 3.2. for a definition of "activation").

Generally, the question of "keeping order" and managing environmental migration emerges in texts: environmental migration is represented as a phenomenon that can be controlled and made a voluntary measure to guarantee safety to at-risk people (it is referred to as a "strategy", "phenomenon", "option", or "response"). Representations of environmental migration are

positive when they are referred to in terms of an adaptation strategy: migration would be beneficial for both the people involved in it and the environment that sustains them; the latter would be relieved from much anthropogenic pressure and left to recover its ecological balance.

5.5.2. Key data occurrences that refer to representations of participants in environmental migration

The key data occurrences that refer to participants in the phenomenon of environmental migration which emerged from close-reading of the IOCS are reported in Tables 5.17. and 5.18. Key data occurrences are reported in Table 5.17. from most to least frequent in the IOC, together with the themes they refer to reported in alphabetical order.

Key occurrence	Themes of the co-text
Community	Host communities; management; origin and migrant communities; other participants; socio-economic, political and justice issues; vulnerability and safety.
People	Management; mobility; origin and migrant communities; socio-economic, political and justice issues; vulnerability and safety.
Population	Frequency, intensity and range; host communities; origin and migrant communities; socio-economic, political and justice issues; vulnerability and safety.
Country	Host communities; origin and migrant communities; socio-economic, political and justice issues; vulnerability and safety.
Migrant	Causality and interrelatedness; frequency, intensity and range; mobility; nature; obligation; other participants; socio-economic, political and justice issues.
Household	Origin and migrant communities; socio-economic, political and justice issues; vulnerability and safety.
Refugee	Frequency, intensity and range; mobility; nature; socio-economic, political and justice issues.
Society	Host communities; management; nature; origin communities; other participants.

Table 5.17.: key data occurrences on participants in environmental migration in the IOC and themes emerging from the co-text.

Key occurrence	IOC x million	IOCS x million
Community	3,096.23	1,879.42
Country	2,515.29	1,653.89
Household	1,011.38	601.41
Migrant	1,884.89	1,992.18
People	3,010.98	1,917
Population	2,682.62	1,465.94
Refugee	779.84	187.94
Society	286.26	563.82

Table 5.18.: key data occurrences on participants in environmental migration in the IOC and IOCS and their frequency of occurrence normalised per million.

According to the normalised frequencies of occurrence of the terms reported in Table 5.18., the terms that are used to refer to participants in environmental migration in the discourse of the IOC are, from most to least frequent: "community", "people", "population", "country", "migrant", "household", "refugee" and "society". These terminological preferences are partly reflected in the lexical choices of the IOCS, where the most to least frequent terms to refer to participants in environmental migration are: "migrant", "people", "community", "country", "population", "household", "society" and "refugee". The most distinctive difference in usage seems to be related to the term "migrant", which acquires specific importance in the discourse of the IOCS, that mainly reflects the discourse of the IOM (see Section 5.5.1.).

Generally speaking, there seems to be a preference for terms which are rather generic and do not contribute to the individualisation of the people belonging to origin and migrant communities who tend, instead, to be dealt with in terms of a collective entity. At the same time, these terms are not negatively connoted; rather, sometimes they are relatively neutral and technical and only aim at denoting a particular group ("people", "population"), while in other contexts they seem to point to a sense of belonging of origin communities to social groups with shared socio-cultural traits ("community", "country").

It is worth noticing that the term "refugee" is seldom mentioned in comparison with other terms in the IOC: this might suggest that international organisations acknowledge the boundaries set by *Convention on the Status of Refugees* (UNHCR, 2010) which does not include in the status of refugee people who move because of environmental reasons; this Convention avoids referring to environmental migrants as "refugees".

Table 5.19. reports the themes of representations of participants in environmental migration that emerge from the analysis of the key data occurrences of the IOCS and their co-text of

occurrence; significant concordances of the co-text are reported in alphabetical order for each theme. Significant concordances from the co-text may belong to more than one category according to their contexts of use in the corpus.

From the analysis of the key data occurrences of the IOCS, the main themes of representations of participants in environmental migration that emerge are the following: *Origin and migrant communities*, *Host communities*, *Other participants*, *Socio-economic, political and justice issues*, *Vulnerability and safety*, *Management*, *Mobility*, *Nature*, *Obligation*, *Causality and interrelatedness*, and *Frequency, intensity and range*.

- *Host communities* includes representations of receiving societies;
- *Other participants* includes representations of members of specific social groups such as the scientific and humanitarian communities;
- *Vulnerability and safety* includes terms that refer to origin and migrant communities as exposed to or affected by risks and dangers and needing protection and assistance; specifically, it refers to exposure to the impacts of ecological changes.

The other listed themes have already been mentioned and presented earlier in the chapter (see Section 5.5.1.).

Theme	Significant concordances of the co-text
Origin and migrant communities	affected, affected person, agricultural, area, atoll, child, coastal, community, country, descendant, disability, disaster-affected, displacement-affected, domestic workers, elderly, ethnic, family, female, fishing, foreign workers, group, high-risk, home, household, incoming, indigenous, individual, island, land, livelihood, local, male-dominated, member, migrant, minority, mobile, non-migrant, old, origin, original, pastoralist, people, person, poor, population, refugee, region, resilient, rural, society, state, sustainable, territory, unaccompanied children, urban, village, vulnerable, woman, worker, young.
Host communities	authority, commit, country, destination, global, government, group, host, host community, host country, host population, international, leader, member, members of host, partner, receive, recipient, representative, state, target, targeted.
Other participants	academia, authority, community, environmental group, forum, government, group, humanitarian, institution, member, NGOs, organisation, organization, partner, private actor, private sector, representative, scientific.
Socio-economic, political and justice	capital, composition, demographic information, develop, developed, developing, development, economic asset, economic situation, female-headed,

issues	health, human capital, income, industrialise, integration, justice bodies, labour market integration, least, less, low-income, middle-income, poor, remittance, right, rural, welfare, women-headed.
Vulnerability and safety	affect, affected, at-risk, capacity, dead, decision, depend, dependent, die, disaster-affected, disaster-prone, displace, evacuate, experience, expose, exposed, exposure, face, health, hit, home, homeless, kill, lack, life, live, livelihood, lose, marginalize, need, poor, pressure, prone, rely, remain, resilience, right, safe, slum, suffer, threaten, trapped, unable, vulnerability, vulnerable.
Management	accept, action, adapt, aid, assist, camp, capacity building, category, cohesion, consult, consultation, convention, datum, define, definition, depend, distribution, dynamics, empower, engage, engagement, estimate, evacuate, fund, government, help, host, identify, international policy, involve, involvement, law, level, meeting, need, organization, participation, policy, prepare, prevent, project, protect, protection, protection framework, provide, receive, recognize, regime, relocate, relocation, resilience, resilient, resettle, stabilization, stabilize, status, support, target, term, terminology, train.
Mobility	arrive, asylum seeker, come, cross, diaspora, decide, decision, displace, displaced person, displacement, flee, IDP, internal, irregular, labour, leave, look for, migrant, migrate, migration, migration decision, mobility, move, movement, refugee, relocate, relocation, remain, resettle, resettlement, return, returnee, rural, seasonal, seek, seek for, stay.
Nature	climate change, disaster, ecosystem, environment, environmental, environmentally motivated, flood.
Obligation	Force, involuntary, voluntary.
Causality and interrelatedness	cause, drive, face, force, impact, induce, lead, push.
Frequency, intensity and range	crisis, density, entire, flow, grow, growth, growth rate, increase, inflow, influx, issue, large, many, more, problem, size.

Table 5.19.: themes of representations of participants to environmental migration emerging from key data occurrences of the IOCS and their co-text.

According to its co-text, the term "community" mainly refers to origin and migrant communities, describing them as inhabiting specific physical regions that are particularly exposed to natural events and that tend to overlap with socio-economic areas characterised by

rurality and poverty (for instance, "**vulnerable** communities", "**coastal** communities" (EU 2, 2012), "**agricultural** communities" (EU 1, 2011)). More specifically, it is used to represent participants in environmental migration both as generic people ("local communities and indigenous **people**" (EU 2, 2012), "**society** and communities" (EU 4, 2015), "communities and **countries**" (EU 5, 2018)) and as families ("**households** and communities" (IOM 16, 2015), "migrants, their **families** and communities" (IOM 28, 2017)). Also, origin societies tend to be represented as rather passivated (see Section 3.2. for a definition of passivation), as the object of management on the part of the international community ("IOM has been implementing community **stabilization** projects" (IOM 1, 2008), "its government has taken a number of decisions and measures on community **relocation** due to flooding" (IOM 18, 2015)). Mainly, the term "community" is associated with the idea of vulnerability, referring most often to origin communities. Sometimes "community" also refers to receiving societies ("**host** community" (EU 1, 2011), "**destination** communities" (IOM 18, 2015)); and some other times to other specific communities ("**humanitarian** community" (IOM 1, 2008), "**scientific** community" (IOM 29, 2017)). This term is also associated with specific small groups or individuals occupying official authoritative positions in society ("community **leaders**" (IOM 12, 2014), "community **representatives**" (IOM 5, 2009), "**governments** and communities" (EU 1, 2011)). Mostly, the term "people" seems to be used to represent origin communities; origin communities are mainly represented in terms of their vulnerability to natural events, and of their socio-economic characteristics ("**young** people" (IOM 29, 2017), "**affected** people" (EU 1, 2011), "**rural** people" (UN 7, 2013)). "People" seems to be associated with specific terms that categorise people in terms of sex, age, or group membership (categorisation and classification, see Section 3.2.) ("protect the human rights, and the particular needs and rights of specific groups (**women**, **children**, the elderly, people with **disabilities**) (IOM 29, 2017)", "island **populations**" (EU 2, 2012)). More specifically, origin communities are represented with terms that depict them as underprivileged and fragile (people are described as "**homeless**" (IOM 2, 2008), "**unable** to maintain themselves in their areas of origin" (IOM 25, 2017), "**dead**" from environmental events (IOM 29, 2017), and "**vulnerable**" to new risks (IOM 13, 2014)), possibly as a way to represent the daily reality they experience, rather than the people themselves. What seems to be at stake is their socio-economic certainties as well as their safety ("the impacts on people's **livelihoods** cannot be ignored", "the impacts of climate and disasters on people's **lives**" (IOM 12, 2014), "the potential for internally displaced people's **rights** to be violated" (IOM 18, 2015)).

The term "migrant" mainly refers to the interrelatedness between environmental migration and natural factors that push people to move ("**Environmentally motivated** migrants" (EU 1, 2011)); the possibility for people to decide whether to move or not and therefore the degree of obligation of mobility ("**voluntary** migrants" and "**involuntary** migrants" (IOM 4, 2008)); and the diverse typologies of movement migrants engage into ("**internal** migrants" (EU 1, 2011), "**irregular** migrants" (EU 2, 2012), "**seasonal** migrants" (IOM 2, 2008)). "Migrant" is also associated to terms that define specific categories of migrants such as "**refugees**" (UN 16, 2018) and "asylum **seekers**" (EU 2, 2012) and that define migrants in terms of their kinship relationship ("migrants and their **families**" (IOM 13, 2014), "migrants and their **descendants**" (IOM 12, 2014)). They are often functionalised (see Section 3.2.) ("migrant **domestic workers**" (IOM 28, 2017), "**foreign** migrant **workers**" (IOM 18, 2015)), classified in terms of sex and age (van Leeuwen, 2007b, pp.52-59) ("Rural-to-urban migrants, especially young **women**" (IOM 7, 2013), "**unaccompanied child** migrants" (IOM 28, 2017)), socio-economic issues ("10 per cent of the country's workforce is working abroad as temporary migrants, and **remittances** from abroad account for 10.2 per cent of GDP" (UN 15, 2017)), or more generic terms ("migrants and their **communities** of origin and destination" (IOM 2, 2008), "migrants and **populations** displaced by natural disasters" (IOM 13, 2014)). Mostly, "migrant" is related to social and justice issues in which origin and migrant communities are involved ("the violations of the migrants' fundamental **rights**" (IOM 12, 2014), "the promotion of migrants' **health**" (IOM 28, 2017)). The co-text of "migrant" stresses the relationship between migrant and destination communities ("Supporting migrants and **host communities**" (IOM 13, 2014), "protect the human rights of refugees and migrants, and support **countries** that rescue, receive and host large numbers of them" (UN 16, 2018)).

As for the term "country", there is a distinction between countries of origin ("**vulnerable** countries", "**middle-income** countries" (EU 2, 2012), "**poor** countries" (EU 3, 2013), "**least developed** countries" (IOM 12, 2014)) and destination countries ("industrialized and **developed** countries" (IOM 12, 2014), "**host** countries" (EU 2, 2012)) which seems to be mainly based on economic criteria. "Country" is also associated to more or less administrative areas ("Most persons fleeing natural disasters remain within their country or **region** of origin" (EU 1, 2011), "EU Member **States** and other European countries" (EU 4, 2015), "small island **states** and other climate-vulnerable countries" (IOM 10, 2014), "countries and **territories**" (IOM 12, 2014)), and their inhabitants, which are described as risking or facing hardships.

The term "household" refers to people or individuals ("relocate and resettle households and **communities**" (IOM 21, 2016), "relocated households and other affected **persons**" (IOM 29,

2017)) and to the socio-economic features that characterise them ("**low-income** households" (EU 2, 2012), "**female-headed** households", "household **size** and **composition**" (UN 7, 2013), "household **economic situation**" (IOM 5, 2009)).

"Population" is used to describe both origin, migrant, and destination communities ("**mobile** populations" (IOM 1, 2008), "**host** populations" (EU 1, 2011), "**indigenous** populations" (EU 2, 2012)). More specifically, origin and migrant communities are described in terms of the unpleasant and risky situations they experience ("**trapped** populations", "**disaster-affected** populations" (IOM 13, 2014), "**exposed** populations" (IOM 29, 2017), "**slum** population" (IOM 10, 2014)), the type of area they inhabit ("**urban** population" and "**rural** population" (IOM 12, 2014), "**island** populations" (EU 2, 2012)), and their "quantity" ("coastal areas with high population **densities**" (EU 2, 2012), "sudden and massive population **influx**", "managing large population **flows**" (IOM 7, 2013)); what is at stake are issues of safety ("address the displaced population's urgent **needs**" (IOM 7, 2013), "reduce the population's **vulnerability**", "increase the population's **resilience**" (IOM 18, 2015)). Economic issues and concerns for both origin and destination societies are stressed ("hazards […] threaten large populations and substantial economic **assets**", "reducing the exposure of vulnerable population and **capital** to disasters" (IOM 13, 2014), "links between population and **development** for adaptive capacity" (UN 7, 2013)). It is interesting to notice that both single individuals and individuals as members of a group of people are mentioned, thus giving salience to both individuals and groups, and disregarding none of them as less important than the other ("vulnerable and at-risk populations and **communities**" (IOM 28, 2017), "affected **individuals** or populations" (EU 1, 2011)).

The term "refugee" is mainly related to the discussion and need for a definition of the status of environmental migrants ("the **term** environmental refugee has been challenged both in the academic and political debate", "any expansion or amendment of the refugee definition would lead to a devaluation of the current protection for '**convention** refugees'", "an expanded refugee **protection framework** would be able to accommodate such forms of migration" (EU 1, 2011), "vulnerable populations fall 'through the cracks of international refugee and **immigration policy**'" (IOM 10, 2014)), but it also refers to environmental migration as a controversial issue both in terms of the number of people-on-the-move involved in it and their management and reception ("vulnerable countries […] may face **more** climate refugees" (UN 3, 2011), "the refugee **crisis**" (IOM 18, 2015), "measure environmental refugee **flows**" (IOM 3, 2008), "specific aspects of refugee **problems**" (UN 2, 2009)). Despite the problematic issue of using the term "refugee" to refer to people who move because of environmental-related reasons, this usage is confirmed by the analysis of the co-text of the term ("the contrasting terms used to

denote the phenomenon, such as **environmental** refugees vs. environmental migrants or climate refugees vs. environmental refugees" (EU 1, 2011), "The terms environmental refugee and **climate change** refugee are therefore misleading and inappropriate" (IOM 13, 2014)). "Refugee" is also related in several contexts to other types of migrants ("the vulnerability of migrants, **displaced persons** and refugees" (IOM 28, 2017), "refugees, **returnees**, and **IDPs**" (IOM 18, 2015)).

The term "society" is used to describe origin communities both in terms of their typology ("**civil society**" (EU 2, 2012), "**pastoralist** societies" (IOM 7, 2013), "**rural** societies" (EU 1, 2011)) and as mainly passive recipient of management and capacity building activities on the part of the international community ("In **prepared** societies, ordered evacuations are an effective strategy" and "For IOM and its partners ensuring proper understanding of the disaster and mobility nexus will help taking the next step towards safer and more **resilient** societies" (IOM 7, 2013)). The term is also used to refer to destination societies and the international community, with specific reference to official and/or authoritative social groups ("civil society **representatives**", "private organisations, **NGOs** and civil society" (EU 2, 2012), "it is crucial to involve different types of actors in the cooperation and bring together **government**, international **organizations**, civil society, private **sector** and **academia**" (IOM 5, 2009)).

Focusing on the prevailing usage of verbs related to these key data occurrences, participants in environmental migration tend to be represented as passivated either because their situation is impacted by natural and anthropogenic events or because people are vulnerable to them (as inferable from the collocates of the terms "community", "country", "household", "population", "refugee" and "society": "populations **affected** by climate and environmental change", "**displaced** populations" (EU 1, 2011), "communities **threatened** by climate-induced ecological changes" (IOM 12, 2014); or because they are dependent from the assistance of the international and host societies and need international recognition (as can be inferred from the co-text of the terms "community", "people", "migrant", "country", "population", "refugee" and "society": "build resilience and **help** people to adapt to the changing environment" (IOM 28, 2017), "**prepare** local communities to future disasters" (IOM 7, 2013), "implementing adaptation strategies that **support** affected populations" (UN 12, 2015)).

Affected communities are the subject of verbs that tend to represent them as exposed to risks and instability (for instance, they are described as **facing** risks, **suffering** from poor health conditions, poor integration, natural disasters, etc., and **depending** on scares resources) and these verbs highlight the relationship of "dependence" from target communities and

international assistance. The verb "recognize" confirms the role of the global community into environmental migration: the international community only acknowledges the critical aspects of the phenomenon, but it does not seem to be committed to targeting and addressing them ("The international community has **recognized** the gravity of the situation" (IOM 10, 2014)).

From the analysis of the co-text of the terms "people", "migrant", "country", "household", "population" and "refugee", origin and migrant communities are represented as active when engaged in mobility (for instance, they are represented as **moving**, **leaving**, **resettling**) and sometimes when dealing with the events and negative issues they are confronted with ("migrants often **face** difficulties in accessing housing" (IOM 28, 2017), "people **remained** in their homes because they were frightened of possible lootings" (IOM 12, 2014)). From these examples, it is clear that despite their expressed will to be represented as active agents that are committed to changing and improving the situations they face, origin and migrant communities are actually represented as active only when they are represented as moving; the other verbs used in the active mode represent them as passively undergoing action, with very few exceptions ("people **decide** to leave their countries of origin" (IOM 2, 2008), "migrants **choose** to relocate for a variety of reasons" (UN 4, 2012)). Indeed, they are sometimes depicted as "passively" moving because of external forces, as in the collocates of the terms "migrant" ("floods and hurricanes **force** people to leave their homes" (EU 1, 2011)).

Finally, migrant communities are often represented in terms of "quantity" (range), namely in terms of the number of people-on-the-move or migrant-to-be; this is especially evident in the co-text of the terms "population" (for instance, "population **growth**", "population **pressure**", "population **density**").

Receiving societies and origin societies tend to differ in economic terms; also, receiving societies are represented as making intentions and hosting migrants, as can be inferred from the co-text of the terms "country" ("**developed** countries" and "**industrialised** countries" (EU 1, 2011), and "**receiving** countries" (EU 2, 2012)).

Overall, both origin and destination societies tend to be represented either as a collective, or in terms of a few small authoritative and powerful groups (or members of groups), and both are sometimes represented in terms of inhabitants of an administrative area or type of area; also, they seem to be mainly identified in terms of economic criteria.

Both persons as individuals and persons as members of a group of people are mentioned, thus giving salience to both individuals and groups.

Origin societies are mainly represented as passivated as the object of other groups' activities; also they are in need of assistance, and are affected by natural and anthropogenic events. Even when agents/subjects of active verbs are represented, the verbs tend to be negatively connoted and migrants and origin communities tend to be represented with terms related to the sphere of vulnerability (i.e. socio-economic and safety issues), possibly as a way to represent the daily reality they experience, rather than the people themselves. Vulnerability does not only depend on environmental conditions, but also on the possibility for origin communities to choose between mobility and remaining at their place; from social and justice issues; economic issues; and issues of protection and reception. Verbs highlight the relationship of "dependence" of origin and migrant communities from host and international communities due to their vulnerability and need for assistance.

As shown by the examples reported in this section, origin and migrants societies are represented both as generic people via kinship relationships and socio-economic features, and as families, family members and individuals with specific socio-economic characteristics. They tend to be functionalised and described in terms of categories that refer to their classification in terms of sex and age; they are also referred to in terms of "quantity".

Destination countries are generally represented as active agents in text, even though they seem to only make claims about the need for taking actions, rather than really acting for a change.

5.5.3. Key data occurrences that refer to representations of the environment in environmental migration

The key data occurrences that refer to the environment in the phenomenon of environmental migration emerged from close-reading of the IOCS and are reported in Tables 5.20. and 5.21. Key data occurrences are reported in Tables 5.20. from most to least frequent in the IOC together with the themes they refer to reported in alphabetical order.

According to the normalised frequencies of occurrence of the terms reported in Table 5.21., the terms that tend to occur to refer to the environment in environmental migration in the IOC are, from the most to least frequent: "climate", "environmental", "disaster", "natural", "land", "environment" and "hazard". These terminological preferences are partly reflected in the lexical choices of the IOCS, where the most to least frequent terms that refer to the environment in environmental migration are: "climate", "environmental", "environment", "disaster", "land", "natural" and "hazard". Generally speaking, there seems to be preference for terms that are not negatively connoted ("climate", "environmental", "environment", "natural") and that only

establish a correlation between human mobility and the ecosystem. It seems that changes in the environment are not condemned, but only acknowledged, possibly conceiving them as caused or induced by human behaviour.

Key occurrence	Themes of the co-text
Climate	Conditions and preservation; management; mobility; nature; vulnerability and safety.
Environmental	Causality and interrelatedness; mobility; nature; management; socio-economic, political and justice issues; vulnerability and safety.
Disaster	Causality and interrelatedness; frequency, intensity and range; management; mobility; nature; vulnerability and safety.
Natural	Causality and interrelatedness; conditions and preservation; frequency, intensity and range; management; mobility; nature.
Land	Mobility; nature.
Environment	Conditions and preservation; mobility; nature; socio-economic, political and justice issues.
Hazard	Causality and interrelatedness; management; vulnerability and safety.

Table 5.20.: key data occurrences on the environment in environmental migration in the IOC and themes emerging from the co-text.

Key occurrence	IOC x million	IOCS x million
Climate	5,415.76	10,186.44
Disaster	3,377.22	3,157.42
Environment	1,247.12	5,375.13
Environmental	3,904.49	7,743.2
Hazard	749.32	413.47
Land	1,257.64	1,804.24
Natural	1,361.83	1,202.83

Table 5.21.: key data occurrences on the environment in environmental migration in the IOC and IOCS and their frequency of occurrence normalised per million.

Table 5.22. reports the themes of representations of the environment in environmental migration that emerge from the analysis of the key data occurrences of the IOCS and their co-text of occurrence; significant concordances of the co-text are reported in alphabetical order for each

theme. Significant concordances from the co-text may belong to more than one category according to their contexts of use in the corpus.

From the analysis of the key data occurrences of the IOCS, the main themes of representations of the environment in environmental migration that emerge from the analysis of these terms are: *Management*, *Vulnerability and safety*, *Mobility*, *Nature*, *Causality and interrelatedness*, *Socio-economic, political and justice issues*, *Conditions and preservation*, and *Frequency, intensity and range*.

More specifically, the theme *Conditions and preservation* refers to the state of natural ecology and the need to preserve it; specific emphasis is given to the alteration of the ecological situation, its state of change. The other listed themes have already been mentioned and presented earlier in the chapter (see Sections 5.5.1. and 5.5.2.).

Theme	Significant concordances of the co-text
Management	action, address, agreement, assistance, change adaptation, change adaptation measure, change adaptation strategy, change agenda, change consideration, change debate, change mitigation, change response, consideration, development, disaster prevention, expect, expected, future, identification, identify, law, manage, management, management agency, management authority, management committee, mapping, mitigate, mitigation, mitigation intervention, mitigation measure, negotiation, policy, preparedness, prevent, prevention, protection, resource management, response, response capacity, risk, risk assessment, risk management, risk management activity, risk reduction, risk reduction effort, risk reduction framework, risk reduction initiative, risk reduction measure, risk reduction plan, risk reduction planning, risk reduction programme, risk reduction strategy, socio-economic, socio-economic, sustainability.
Vulnerability and safety	adverse, challenge, change effect, change impact, concern, consequences, crisis, different stressor, effect, experience, exposure, face, footprint, impact, issue, pressure, problem, recovery, relief, right, risk, security, stress, stressor, victim, vulnerability.
Mobility	change displacement, climate-induced migration, community displacement, disaster, disaster displacement, displacement, flee, future migration, human displacement, human mobility, migrant, migration, migration nexus, mobility, refugee.
Nature	access to resource, acquire, acquisition, agricultural, allocate, arable, available, available resource, buy, calamity, catastrophe, change, climate, climate change,

	climate-related, climatic, coastal, condition, crop, damage, degradation, desertification, destruction, deterioration, disaster, disaster scenario, disaster situation, degradation, degrade, disruption, distribution, effect of climate change, environment, environment and climate change nexus, environmental, environmental catastrophe, environmental change, environmental degradation, environmental factor, erosion, event, extreme climatic event, extreme event, fertile, flooding, geological, global change, gradual change, grazing, hazard, home, house, housing, hydro-meteorological, impact of climate change, irrigate, issue, livelihood, local resource, lose, loss, management, management process, marginal, natural, natural disaster situation, nexus, own, phenomenon, process, productive, property, property issue, purchase, reclaim, rehabilitation, residential, resource, resource-based livelihood, resource management, risk, scarce resources, sell, serious disaster, severe degradation, shock, sudden disaster, suitable, sustainable resource management, tenure, threat, uninhabitable, use, use planning, use regulations, water, water resources, weather-related, weather-related disaster.
Causality and interrelatedness	affect, associate, cause, climate, climatic factor, cultural, demographic, displace, driver, economic, factor, hit, human, human-made, human-made crisis, human-made disaster, impact, increase, induce, industrial, industrial disaster, made, man-made, man-made hazard, natural, nuclear, occur, political, reason, relate, result, social, strike, trigger.
Socio-economic, political and justice issues	conflict, consumption pattern, development, economy, human right, issue, land, livelihood, population, poverty, resource, right, society.
Conditions and preservation	change, change context, change issue, change scenario, clean, condition, degrade, deteriorating, enable, factor, fragile, healthy, landscape, live, process, protect, system, variability.
Frequency, intensity and range	acute, bad, extreme, future, intense, major disaster, rapid-onset, recurrent, recurrent hazard, slow-onset, sudden, sudden-onset, violent.

Table 5.22.: themes of representations of the environment in environmental migration emerging from key data occurrences of the IOCS and their co-text.

According to its co-text, the term "climate" is associated with the representations of changing ecologies and related natural events ("climate **events**" (EU 1, 2011), "climate **hazards**" (IOM 18, 2015), "climate **variability**", "climate change **scenarios**" (IOM 13, 2014)); to issues of management of natural changes via "capacity building" activities ("climate change

adaptation", "climate change **mitigation**" (EU 2, 2012)); to questions of safety of origin communities from the impacts and consequences of natural changes ("climate change **impacts**" (EU 1, 2011), "exposure to climate **risks**" (UN 7, 2013)); and to the people who move because of these alteration in the environment ("climate **migrants**" (EU 2, 2012), "environmental or climate change **displacement**" (EU 1, 2011)). Also, the "climate" is often modified as "climate change", thus suggesting that the cause or contributing factor to human mobility is not the climate in its natural or naturally evolving state, but rather the alterations of the climate.

The co-text of the term "environmental" mainly refers to both gradual and rapid natural events ("environmental **degradation**", "environmental **disasters**" (EU 1, 2011), "environmental **hazards**" (IOM 10, 2014), "environmental **deterioration**" (EU 3, 2013)), possibly as contributing factors to human mobility ("environmental **drivers**", "environmental **triggers**" (IOM 13, 2014), "environmental **factors**" (EU 1, 2011)). It also refers to the people involved in environmental migration ("environmental **migrants**", "environmental **refugees**" (EU 1, 2011)); to the problematic effects and critical aspects of environmental changes that put the wellbeing of origin populations and the environment at risk ("environmental **impacts** are serious" (EU 1, 2011), "environmental **problems** that are translating into environmental migration", "displacement linked to the impact of climate change and environmental **pressures**" (IOM 18, 2015)); and the need for policies and action (especially economic intervention) to address them ("the country can improve its framework in regards to environmental **policies** and migration in terms of stricter environmental policies" (IOM 12, 2014), "A high level of environmental **protection** and the improvement of the quality of the environment must be integrated into the policies", "foster the sustainable economic, social and environmental **development** of developing countries", "taking into account social, **economic** and environmental needs of third countries" (EU 2, 2012)). The fact that "environmental" is associated with the terms "political", "social", "economic", "demographic", "cultural", and "natural" conveys the multifaceted and complex interrelatedness of diverse factors with environmental change and migration.

The co-text of the term "environment" refers to the conditions of the natural ecosystems both in its positive and in its negative aspects ("**healthy** environment", "**fragile** environment", "**deteriorating** environment" (EU 1, 2011), "**clean** environment" (EU 2, 2012)) and to its state of change ("a **changing** environment" (IOM 12, 2014), "a **degraded** environment" (IOM 5, 2009)) as well as to need for preservation of its original or naturally evolving state ("internationally agreed multilateral conventions aiming to **protect** the natural environment" (IOM 28, 2017)). Also, the nexus between mobility, environmental change and climate change is asserted ("the relationship between 'environment and **climate change**'" (EU 2, 2012), "The

221

migration, environment and climate change **nexus**", "the issue of human **mobility**, environment and climate change" (IOM 11, 2014)). "Environment" seems to associate with socio-economic and justice issues, likely affecting origin and migrant societies ("acknowledging that respect for the environment and human **right** is essential" (EU 2, 2012), "migration and its many interlinkages with **development**, environment", "households migrated to other places as a result of the fragile ecological environment and **poverty**" (IOM 18, 2015)).

The term "disaster" refers to the cause and/or interrelatedness of dangerous events with natural and anthropogenic factors ("**weather-related** disasters", "chemical or **nuclear** disasters" (IOM 13, 2014), "**man-made** disasters" (EU 2, 2012), "**industrial** disasters" (IOM 2, 2008)); to the frequency and intensity of such events ("**sudden-onset** disaster" (EU 3, 2013), "**slow-onset** disasters" (IOM 10, 2014), "more frequent and **intense** disasters" (UN 16, 2018)); to the risks and safety of affected people ("granting temporary protection to disaster **victims**" (IOM 7, 2013), "allow communities threatened by climate-induced ecological changes to shift from disaster **recovery** to community relocation" (IOM 12, 2014)); to management activities and interventions needed to address these events ("ensure adequate disaster **preparedness**" (IOM 13, 2014), "the formulation of common laws on natural disaster **prevention**" (IOM 12, 2014), "support communities to implement disaster risk **management**" (EU 1, 2011)); and to human mobility related to the occurrence of these events ("In the immediate aftermath of a disaster, **displacement** is likely to occur" (IOM 26, 2017), "The relationship between environment, climate, disasters and **migration**" (IOM 12, 2014)).

The term "natural" refers to natural events ("**weather-related** natural disasters" (IOM 13, 2014), "natural or **environmental** catastrophes" (EU 1, 2011)), their frequency of occurrence and intensity ("**extreme** natural events" (IOM 12, 2014), "**recurrent** natural hazard" (IOM 13, 2014)) and the state of the environment ("this area is prone to natural disasters as a result of its natural **conditions**" (IOM 18, 2015)). It also refers to the need for management and intervention activities ("the formulation of common laws on natural **disaster prevention**" (IOM 12, 2014)); to anthropogenic causes of mobility ("**man-made** disasters" (EU 2, 2012), "**human-made** disasters" (EU 1, 2011), "**industrial** disasters" (IOM 2, 2008)); and to the idea of nature as a resource for people to use ("natural **resource-based** livelihoods are made increasingly insecure by environmental change" (UN 7, 2013), "increased competition for **scarce** natural resources" (IOM 13, 2014), "finance initiatives for **sustainable** natural resource management" (IOM 2, 2008)).

The co-text of "land" categorises land according to the use people can make of it ("**arable** land" (EU 1, 2011), "**grazing** land" (IOM 12, 2014), "**residential** land" (IOM 29, 2017)) and

represents access to and availability of land as a factor that is linked to environmental change and migration ("human mobility in a changing climate, such as land and **desertification**" (IOM 14, 2015), "the land and migration **nexus**" (IOM 15, 2015)).

The co-text of the term "hazard" refers to the natural and anthropogenic causes of human mobility ("**climate-related** hazards" (IOM 13, 2014), "**man-made** hazards" (IOM 28, 2017), "**hydro-meteorological** hazards" (IOM 7, 2013), "**environmental** hazards" (IOM 10, 2014)); to the typology of hazards ("**rapid-onset** hazards" (EU 1, 2011)); their management ("implementing hazard **prevention** and **mitigation** measures" (IOM 7, 2013)), and the vulnerability of origin communities to natural events and their consequences ("unmanaged migration can increase hazard **exposure**" (IOM 11, 2014), "hazard **impacts**" (IOM 2, 2008)).

Focusing on the prevailing usage of verbs related to these key data occurrences, the representations of the environment linked to environmental migration depict natural ecosystems as playing both an active and a passive role in this phenomenon. As an agent, the environment is attributed the responsibility for impacting on the lives and mobility patterns of people, often with negatively connoted verbs (it is represented as **displacing**, **affecting**, **hitting** people); more specifically, the co-text of the terms "climate" and "hazard" represents it as one of the causes of human mobility ("natural hazards **inducing** mass displacements" (IOM 12, 2014), "affected populations **displaced** by climate and environmental factors" (EU 1, 2011)). Sometimes, though, the active role of the environment is softened and re-dimensioned to mere interrelatedness to mobility ("hazards **related** to the direct or indirect impacts of climate change" (UN 7, 2013), "hazards **associated** with climate change" (IOM 6, 2012)) (see "disaster" and "hazard").

When passivated, the environment is described as the object of action and study on the part of people who try to deal with it, as in the case of the co-text of "climate", "disaster" and "hazard" ("**Addressing** Climate Change Implications on Migration" (IOM 5, 2009), "developing national action plans on disaster **management**" (IOM 18, 2015)); as something that needs to be escaped from by origin communities, as in the case of "disaster" and "hazard" ("people **fleeing** disasters", "hazards **faced** by the local population" (IOM 7, 2013)); or as a stock of resources and an object of people management and use, thus representing it as reified ("**buy** and **sell** land" (IOM 18, 2015), "**owned** land" (IOM 10, 2014), "households are tired of trying to **use** the land with no results" (IOM 29, 2017)) (see "land").

Overall, the representations of the environment in environmental migration revolve around the idea that the environment is a contributing factor to human mobility. More specifically, some of the causes of mobility seems to lie in the state of change of ecological systems and in the consequent or parallel natural events. Also, natural triggers to mobility combine with other sources of causality, especially human-made ones. In this respect, the terms "political", "social", "economic", "demographic", "cultural", and "natural" are often mentioned together and convey the multifaceted and complex interrelatedness of diverse factors into environmental change and migration.

The changing natural environment is represented as something that needs to be managed with policies and interventions that aim at mitigating the impact of future events and preserving the wellbeing and safety of those who might be affected by them via "capacity building" activities.

The twofold representation of the role of the environment in migration as both activated and passivated (see Section 3.2.) is reflected also in verbal usage: the environment is represented both in its state of change and in terms of actions aimed at preserving its original state; it is both escaped from by origin communities, and tentatively managed and dealt with by both origin and destination societies.

Sometimes the environment is represented in a fairly technical way, specifying the typology of land and/or natural environment, especially in the case of places inhabited by origin communities. More often, it is represented in terms of a resource or stock of resources for people, for instance specifying the potential use people could make of it.

It is interesting to notice that natural factors to environmental migration are often distinguished into climate change on the one hand, and the environment on the other hand, as if the two were separate entities.

5.6. Analysis of the key data occurrences retrieved from the NC

5.6.1. Key data occurrences that refer to representations of environmental migration

The key data occurrences that refer to the phenomenon of environmental migration emerged from close-reading of the NCS and are reported in Tables 5.23. and 5.24. Key data occurrences are reported in Table 5.23. from most to least frequent in the NC together with the themes they refer to reported in alphabetical order.

Key occurrence	Themes of the co-text
Migration	Frequency, intensity and range; management; mobility; nature; obligation; socio-economic, political and justice issues.
Displace	Causality and interrelatedness; frequency, intensity and range; nature; obligation; origin and migrant communities.
Displacement	Frequency, intensity and range; mobility; nature; socio-economic, political and justice issues.
Move	Nature; origin and migrant communities.
Movement	Causality and interrelatedness; frequency, intensity and range; management; mobility; origin and migrant communities.
Leave	Origin and migrant communities.
Immigration	Frequency, intensity and range; management.
Movement	Causality and interrelatedness; frequency, intensity and range; management; mobility; origin and migrant communities.
Migrate	Mobility; origin and migrant communities.

Table 5.23.: key data occurrences on environmental migration in the NC and themes emerging from the co-text.

Key occurrence	NC x million	NCS x million
Displace	1,258.15	968.16
Displacement	1,122.87	430.29
Immigration	622.31	1,075.73
Leave	865.82	1,936.32
Migrate	473.5	537.87
Migration	4,180.31	3,657.49
Move	1,068.75	645.44
Movement	568.2	430.29

Table 5.24.: key data occurrences on environmental migration in the NC and NCS and their frequency of occurrence normalised per million.

According to the normalised frequencies of occurrence of the terms reported in Table 5.24., the terms that tend to occur to refer to environmental migration in the discourse of the NC are, from the most to the least frequent: "migration", "displace", "displacement", "move", "leave", "immigration", "movement" and "migrate". These terminological preferences are partly reflected in the lexical choices of the NCS, where the most to the least frequent terms to refer to environmental migration are: "migration", "leave", "immigration", "displace", "move",

"migrate", and "movement" and "displacement". The most distinctive difference in usage seems to be related to the term "displacement", which is ranked top-level in the NC but not in the NCS.

Generally speaking, there seems to be a preference for terms that are slightly negatively connoted and refer to forms of forced mobility. It is worth noticing that "immigration" seems to be a distinctive term of news discourse: its frequency of occurrence per million in the NC (622.31) is thrice the frequency of occurrence retrieved in the IOC (106.29). "Immigration" is likely used from the perspective of receiving societies, and since environmental migration is often represented in terms of the number of people involved in it, it might sometimes be represented as an unpleasant and inconvenient issue for host societies (see below in this section).

Theme	Significant concordances of the co-text
Frequency, intensity and range	alert, boom, considerable, extensive, flow, high, large, large-scale, mass, massive, million, nightmare, number, rate, record.
Obligation	Forced, forcibly.
Nature	change, change-related, climate, climate-induced, degradation, disaster, environmental, erosion, event, flooding, related, typhoon, weather events.
Management	address, agency, anticipate, expert, law, managed, organize, policy, predict, solution, support, system.
Mobility	abroad, area, away, cross-border, displacement, govern, human, inhibit, internal, internally, international, irregularly, locally, migration, mobility, north, other areas, permanently, population, populist, precarious, relocation, unleash, unofficial, unregulated.
Socio-economic, political and justice issues	affect, conflict, crisis, disease, human right, risk, security.
Origin and migrant communities	brother, citizen, community, country, family, groups, home, homeland, individual, member, men, migrant, people, person, population, residence, victim.
Causality and interrelatedness	associate, cause, change, drive, emissions, force, induced, increase, link, trigger, war.

Table 5.25.: themes of representations of environmental migration emerging from key data occurrences of the NCS and their co-text.

Table 5.25. reports the themes of representations of environmental migration that emerge from the analysis of the key data occurrences of the NCS and their co-text of occurrence; significant concordances of the co-text are reported in alphabetical order for each theme. Significant concordances from the co-text may belong to more than one category according to their contexts of use in the corpus.

From the analysis of the key data occurrences of the NCS, the main themes of representation of environmental migration that emerge from the analysis of these terms are: *Frequency, intensity and range*, *Obligation*, *Nature*, *Management*, *Mobility*, *Socio-economic, political and justice issues*, *Origin and migrant communities*, and *Causality and interrelatedness* (see Sections 5.5.1., 5.5.2. and 5.5.3. for an explanation of each area).

According to its co-text the term "migration" refers to the dimension of the phenomenon in terms of number of people and areas involved in it ("**mass** migration" (RVN 4, 2009), "**extensive** migration" (BBC 8, 2016), "migration **flows**" (IBNS 6, 2017)); the degree of obligation according to which people move ("**forced** migration" (BBC 3, 2008)); diverse forms of mobility ("**international** migration" (IBNS 3, 2016), "**internal** migration" (G 5, 2011), "climate-related migration and **displacement**" (NN 9, 2016)); the interrelation between migration and the ecosystems ("**climate** migration" (RVN 4, 2009), "**environmental** migration" (BBC 3, 2008)); the need to manage environmental migration ("**Managed** migration is always better" (RVN 4, 2009), "building consensus around coordinated migration **policy**" (NN 9, 2016)); and the social and justice issues that contribute to causing environmental migration ("a vicious circle of degradation, migration and **conflicts**" (G 1, 2008), "**human rights**, migration, poverty and the environment" (US ON 9, 2018), "geopolitical, geo-economic, **security**, migration, and climate change challenges" (BBC 7, 2015)).

The co-text of "displacement" refers to the natural factors that cause migration ("**climate-induced** displacement" (CT 1, 2008), "**disaster** displacement" (IBNS 1, 2015)); different forms of mobility ("**internal** displacement" (SMH 4, 2010), "climate change-induced migration, displacement and **relocation**" (NYT 3, 2015)); the frequency, intensity and range of the phenomenon ("**massive** human displacement" (BBC 6, 2009), "**large-scale** displacement of people" (NYT 3, 2015)); and to social issues that push people to move ("Climate change is going to affect a large number of people through flash floods, **diseases** and massive human displacement" (BBC 6, 2009)).

The co-text of "displace" refers to different forms of mobility ("**internally** displaced people (IDPs)" (TS 3, 2012), "people may be **permanently** displaced" (NYT 3, 2015)); the degree of

obligation according to which people move ("**forcibly** displaced people" (NN 10, 2017)); those who are displaced ("**people** displaced across borders by disasters and climate change" (IBNS 1, 2015), "displaced **individuals**" (US ON 10, 2018), "climate-induced displaced **victims**" (RVN 1, 2009)); the frequency, intensity and range of the phenomenon especially in terms of the number of people involved in it ("cyclones and floods of increased frequency and intensity that could displace **millions**" (CT 1, 2008), "Forcibly displaced persons **number** roughly 65 million" (US ON 5, 2016)); the relatedness between natural events and migration ("people have been displaced by **typhoons**" (NYT 6, 2017), "people displaced by shoreline **erosion**" (G 5, 2011), "150,000 people across Myanmar were displaced by **flooding**" (G 10, 2018)); and other causes of environmental migration which relate to the socio-economic and political background of origin and destination societies ("Around 60 million people have been displaced by **war**, violence or persecution" (G 7, 2015), "greenhouse gas **emissions** are displacing local communities" (RVN 1, 2009)).

"Move" is associated with the directionality of people's movements ("the people most heavily impacted by climate change - will move **irregularly** across an international border" (SMH 4, 2010), "many more moved **locally**" (NYT 1, 2013), "significant numbers of people may move **north**" (G 6, 2015)); it refers to those who engage in movement ("moving **population** that are affected by natural calamities" (NN 1, 2011), "climate **migrants** move to or within developing countries" (NN 9, 2016), "**communities** have moved *en masse*" (BBC 5, 2012)); and it mentions the correlation between mobility and natural events ("People affected by environmental **degradation** rarely moved across borders" (G 5, 2011)).

The co-text of "movement" refers to the typology of movement ("**cross-border** movement" (SMH 4, 2010)); its causality ("droughts, food scarcity and flooding would **trigger** the movement" (TS 1, 2008), "population movements **associated** with climate change" (CT 1, 2008)); the range of the phenomenon ("**mass** movements" (CT 3, 2015), "**Large-scale** cross-border movements" (US ON 5, 2016)); and the people engaged in mobility ("**population** movements" (CT 1, 2008)). It also refers to the idea of disorder, illegality and problematicity related to migration ("**unofficial** movement", "**unregulated** population movements" (CT 1, 2008), "**precarious** movements" (US ON 4, 2016)), which is confirmed by verbs used to refer to unregulated mobility ("extreme weather will **unleash** many more mass movements of people" (CT 3, 2015), "commitments to **govern** large movements of refugees and migrants" (US ON 4, 2016)), and the need to manage it ("governments should attempt to **anticipate** movement" (G 4, 2011)).

The co-text of "immigration" refers to the range of the phenomenon of mobility ("The immigration **alert**" (G 1, 2008), "the immigration **nightmare**", "immigration **boom**" (SMH 6, 2015)) and the need to manage it ("a very generous legal immigration **policy**" (NYT 8, 2018), "recommended changes to the immigration **system**" (TS 7, 2014), "it requires changes to immigration **laws**" (RVN 4, 2009)).

The co-text of "leave" refers to the people engaged in movement ("It's clear why **people** are leaving", "The family's teenage twin **brothers** left" (NYT 7, 2018)) and to the place they leave, often with a connotation of familiarity ("millions could be forced to leave their **homes**" (RVN 4, 2009), "those forced to leave their **country**" (IBNS 5, 2017), "push factors compelling migrants and refugees to leave their **homelands**" (G 7, 2015)).

The verb "migrate" refers to the directionality of movement ("Climate refugees have already started to migrate **internally**" (RVN 8, 2010)) and to the people involved in it ("More than half of all rural households in many African countries report having at least one **member** who has migrated away" (US ON 5, 2016), "the number of **people** migrating to the EU each year will triple" (G 9, 2017)).

Focusing on the prevailing usage of verbs related to these key data occurrences, the representations of environmental migration in the NCS describe it mainly as a "passivated" phenomenon, as are origin and migrant communities involved in it: indeed, even when engaged in migration they are represented as passive participants to it, and thus they are possibly unable to choose whether to move or not ("the slow onset effect of climate change makes people **move** and migrate, sometimes in a forced way" (IBNS 5, 2017)) (see the co-text of "displace" and "move"). More specifically, environmental migration is represented as a phenomenon that is caused by external factors, as inferable from the co-text of the terms "migration" and "displacement" ("displacement is **caused** by climatically induced environmental terrorism" (NN 1, 2011), "climate change spurred **forced** migration" (BBC 3, 2008)); and as the object of research and management on the part of both origin societies and the international community ("[UNHCR] **predicts** even greater displacement due to climate change in the years to come" (US ON 3, 2015), "develop recommendations for integrated approaches to avert, minimize and **address** displacement related to the adverse impacts of climate change" (NN 9, 2016)) (see "displacement").

When activated, environmental migration is mainly represented as impacting on people's lives and mobility patterns ("Forced displacement has **affected** as many as four million people" (TS 3, 2012)) (see "displacement").

Overall, the representations of environmental migration in the NCS revolve around the description of this phenomenon according to the intensity of the phenomenon and the number of people involved in it; the degree of obligation behind mobility; the interrelatedness between environmental migration, natural events and other factors that can be intended as causes of movement; the idea of orderly and managed mobility as a positive strategy to adapt to environmental changes and safeguard the wellbeing and security of origin and migrant communities; and the socio-political, economic and justice issues that characterise the contextual background within which environmental migration occurs.

Environmental migration is mainly represented as passivated, and it is only activated when represented as impacting on people's lives and possibility to opt either for mobility or remaining in place.

5.6.2. Key data occurrences that refer to representations of participants in environmental migration

The key data occurrences that refer to environmental migrants emerged from close-reading of the NCS and are reported in Tables 5.26. and 5.27. Key data occurrences are reported in Table 5.26. from most to least frequent in the NC together with the themes they refer to reported in alphabetical order.

According to the normalised frequencies of occurrence of the terms reported in Table 5.27., the terms that occur as referred to participants in environmental migration in the discourse of the NC are, from most to least frequent: "people", "refugee", "country", "migrant", "population", "human", "nation", "community", "local", "person" and "immigrant". These terminological preferences are partly reflected in the lexical choices of the NCS, where the most to least frequent terms to refer to participants in environmental migration are: "people", "country", "refugee", "population", "migrant", "human", "immigrant", "community", "nation", "person" and "local".

Generally speaking, there seems to be a preference for terms that represent participants in environmental migration in terms of a collectivity with shared socio-cultural characteristics ("community", "country", "nation"), but sometimes individuals are singled out, often identified as people-on-the-move.

Key occurrence	Themes of the co-text
People	Frequency, intensity and range; origin and migrant communities.
Refugee	Frequency, intensity and range; management; nature; origin and migrant communities; socio-economic, political and justice issues; vulnerability and safety.
Country	Host communities; origin and migrant communities; socio-economic, political and justice issues.
Migrant	Frequency, intensity and range; management; nature; socio-economic, political and justice issues.
Population	Frequency, intensity and range; management; mobility; origin and migrant communities.
Human	Causality and interrelatedness; frequency, intensity and range; mobility; nature; socio-economic, political and justice issues; vulnerability and safety.
Nation	Causality and interrelatedness; host communities; origin and migrant communities.
Community	Management, origin and migrant communities.
Local	Management, origin and migrant communities.
Person	Origin and migrant communities.
Immigrant	Frequency, intensity and range; mobility; nature.

Table 5.26.: key data occurrences on participants in environmental migration in the NC and themes emerging from the co-text.

Key occurrence	NC x million	NCS x million
Community	919.94	753.01
Country	4,477.94	3,980.21
Human	1,474.61	1,183.3
Immigrant	270.57	860.59
Local	459.97	215.15
Migrant	2,178.09	2,043.89
Nation	1.014.64	537.87
People	5,316.7	5,486.23
Person	392.33	430.29
Population	1,515.19	2,259.04
Refugee	4,626.75	2,474.18

Table 5.27.: key data occurrences on participants in environmental migration in the NC and NCS and their frequency of occurrence normalised per million.

Theme	Significant concordances of the co-text
Frequency, intensity and range	boom, burden, burgeon, crisis, density, entire, estimate, ever-increase, expect, explode, explosion, flow, forecast, grow, growth, increase, large, limit, many, mass, massive, more, new, planning, pour, serious, slow(ing), total, unprecedented, world.
Origin and migrant communities	asylum seeker, child, coastal, coastline, community, developing-world, downstream, family, farmers, government, IDP, immigrant, indigenous, island, labour work force, local, low-qualified, migrant, people, population, rural, urban, worker, young.
Host communities	developed, host, industrialized, responsible, rich, wealthy.
Socio-economic, political and justice issues	block, camp, cast, crisis, destabilise, expel, human right, illegal, keep out, lock up, low-income, problem, right, suspect, unauthorized.
Nature	change, change-related, climate, climate change, ecological, environmental.
Management	accommodate, agency, agree, assist, awareness, breach, educate, future, global, help, integration, international, law, map, need, organisation, protect, protection, right, support, status, urge, woman.
Vulnerability and safety	affect, affected, cope, dead, desperate, face, fragile, fundamental, harm, home, homeless, impact, lose, need, poor, right, suffer, suffering, threaten, trafficking, tragedy, vulnerable.
Mobility	arrive, displace, displacement, economic, flee, head, illegal, international, leave, migrate, migration, mobility, move, movement, pour, refugee, relocate, seek, turmoil, unauthorized, undocumented.
Causality and interrelatedness	activity, be responsible for, bear, blame, cause, drive, force, induce.

Table 5.28.: themes of representations of participants in environmental migration emerging from key data occurrences of the NCS and their co-text.

Table 5.28. reports the themes of representations of participants in environmental migration that emerge from the analysis of the key data occurrences of the NCS and their co-text of occurrence; significant concordances of the co-text are reported in alphabetical order for each theme. Significant concordances from the co-text may belong to more than one category according to their contexts of use in the corpus.

From the analysis of the key data occurrences of the NCS, the main themes of representations of participants in environmental migration that emerge from the analysis of these terms are:

Frequency, intensity and range, *Origin and migrant communities*, *Host communities*, *Socio-economic, political and justice issues*, *Nature*, *Management*, *Vulnerability and safety*, *Mobility*, and *Causality and interrelatedness* (see Sections 5.5.1., 5.5.2. and 5.5.3. for an explanation of each area).

According to its co-text the term "people" refers to migrant communities in terms of quantity ("As the impact of climate change is felt, **more** people will stream to the cities" (BBC 3, 2008), "**many** people also are migrating to cities in increasing numbers" (NN 5, 2013)) and to origin communities in socio-economic terms ("**vulnerable poor** people with little choice but to fight or flee" (NN 10, 2017), "We must create the opportunities for **rural** people in developing countries to stay in their home" (US ON 5, 2016)). "People" is often in relation with the term "country", as if migrant and origin communities are represented from a more specific to a more generic point of view and viceversa.

"Country" is used to refer to both origin communities ("**poorer** countries" (IBNS 6, 2017), "**vulnerable** countries" (RVN 1, 2009)) and destination communities ("**rich** countries", "**developed** countries" (RVN 3, 2009), "**wealthy** countries" (SMH 3, 2009), "**host** countries" (IBNS 2, 2016)); the two are mainly distinguished in terms of wealth and other presumably economic criteria such as development. Belonging to one of the two groups is also expressed via possessive adjectives ("desperate people fleeing **their** home countries" (IBNS 6, 2017), "the flow of immigrants into **our** country" (NYT 8, 2018)).

The co-text of the term "refugee" refers to the relationship between the movement of people and natural factors ("**climate** refugees" (BBC 3, 2008), "**environmental** refugees" (BBC 1, 2008), "climate **change** refugees" (RVN 6, 2009)); the quantity of people involved in movements ("Warming Climate Could Bring **Many** Refugees to Finland" (BBC 9, 2008), "There are now **more** climate refugees […] than at any point since World War II" (NYT 8, 2018)) and the very people who move ("integrate into our society **immigrants** and refugees" (BBC 7, 2015), "addressing large movements of refugees and **migrants**" (BBC 10, 2016)). It also concerns critical aspects that characterise the socio-political scenario in which environmental migration occurs, including justice and wellbeing issues ("The current refugee **crisis**" (CT 3, 2015), "the refugee **problem** will become serious" (BBC 6, 2009), "People forced to leave their homes because of climate change are not easily classified under existing **human rights**" (NYT 3, 2015)); and the need for people-on-the-move to be recognised officially and internationally and be granted protection via policy-making practice ("create a climate refugee **status**" (IBNS 5,

2017), "applying international refugee **law** […] to those forced from their homes because of climate change" (NYT 4, 2016)).

The co-text of "migrant" refers to nature, possibly as a trigger that pushes people to move ("**environmental** migrants" (G 1, 2008), "**climate** migrants" (SMH 3, 2009)); to different types of people-on-the-move ("**economic** migrants" (BBC 2, 2016), "**international** migrants" (G 5, 2011), sometimes even with negatively connoted words "**undocumented** migrants" (US ON 4, 2016)); and to the need to protect migrants and their rights ("integrate a 'disparate' assortment of migrants' rights **protections**", "coordinated plan to protect climate migrants' **rights**" (NN 9, 2016)). There is also reference to statistics and estimates of the number of people involved and to-be-involved in movements ("an **estimated** 20 million migrants" (IBNS 4, 2016), "migrants <sic> **numbers** should be reduced" (SMH 1, 2009)). Environmental migrants are also categorised according to their role and age as workers ("**skilled** migrants" (SMH 2, 2009), "**young** migrants" (BBC 8, 2016)), thus they are sometimes reified as workforce for destination countries.

The co-text of "population" refers to the number of people involved in environmental migration and the need to limit and control it ("immigration levels in recent years have driven a population **explosion**", "the Government needs to look at population **limits**" (CT 2, 2009), "Population **planning** should be based on our physical limits" (SMH 2, 2009)) which is also confirmed by verbs ("developing-world populations **exploded**" (NYT 8, 2018), "A system already **burdened** by a large Iraqi refugee population may not be able to absorb another influx of displaced persons" (NYT 2, 2014), "the proportion of South to North migrants in total population has **grown**" (US ON 2, 2015)). It also refers to origin and migrant communities ("**vulnerable** populations" (CT 5, 2017), "**developing-world** populations" (NYT 8, 2018)) and mobility ("population **movements** associated with climate change" (CT 1, 2008), "The most pervasive result of climate change and environment degradation is population **displacement**" (RVN 7, 2010), "**relocate** large populations" (RVN 4, 2009)). Possessive adjectives distinguish origin communities from host societies ("an ethical slowdown in **our** population" (SMH 2, 2009), "the highest proportion of **their** population affected by displacements" (IBNS 5, 2017)).

The co-text of the term "human" refers to issues of responsibility in pushing people to move, possibly mostly on the part of wealthier societies ("human **behavior** influences climate change" (US ON 9, 2018), "climate change as either entirely or mainly caused by human **activity**" (SMH 6, 2015)); to the risks origin and migrant communities are exposed to and the need to guarantee their protection and wellbeing ("global warming has been threatening all human **rights**" (NN 8, 2016), "we would hope that the world's big economies make a big commitment

in response to the level of human **suffering** we are witnessing" (SMH 8, 2017), "combat human **trafficking** and migrant smuggling" (IBNS 2, 2016), "the EU has yet to come up with a common policy towards the current human **tragedy** at its borders" (US ON 2, 2015)); to mobility ("the 'gravest effects of climate change may be those on human **migration**'" (RVN 6, 2009), "the human **turmoil** sparked by climate change" (TS 2, 2010)), its interrelatedness with nature ("**climate change**-related human movement" (SMH 4, 2010)) and the number of people involved in it ("**unprecedented** human mobility" (NYT 3, 2015), "**massive** human displacement" (BBC 6, 2009)).

"Community", "nation" and "local" associate to both origin communities ("**vulnerable** nations" (NN 2, 2011), "greenhouse gas emissions are displacing **local** communities in the South" (RVN 1, 2009), "**low-income** communities" (TS 9, 2016)) and the international and host communities that should assist them ("**developed** nations" (SMH 3, 2009), "**rich** nations" (BBC 1, 2008), "**industrialized** nations are **responsible** for global climate refugees" (NN 4, 2013)), further distinguished by the use of possessive adjectives ("**our** nation" (BBC 6, 2009), "**their** communities" (RVN 4, 2009)). "Local" also refers to "capacity building" activities directed at affected societies and to reception of migrant communities ("create more local **awareness** so people understand" (TS 9, 2016), "solutions to forced migration such as repatriation and local **integration**, may be obsolete" (CT 1, 2008)).

"Person" and "immigrant" are mainly used to refer to origin and migrant communities ("**low-qualified** persons" (US ON 2, 2015), "**young** persons" (IBNS 3, 2016)), sometimes with negatively connoted terms that represent them as outlaw ("one of the largest migrations of **unauthorized** immigrants", "the battle against **illegal** immigrants" (NYT 7, 2018)). The negative "aura" of the term "immigrant" is confirmed by verbs that represent migrants are unwanted and unwelcomed ("build a wall to **block** Mexican immigrants" (IBNS 6, 2017), "**casting** all new unauthorized immigrants as potential, if not probable, violent criminals", "**lock up** more immigrants […] as a deterrent" (NYT 7, 2018)).

It is worth noticing that the only members of societies that tend to be relatively individualised, especially via functionalisation (see Section 3.2.) are authorities: they are very often named and categorised according to their title or function; also, their words are reported in either direct or indirect speech ("FAO Director-General José Graziano da Silva" (US ON 5, 2016); "India's first prime minister, Jawaharlal Nehru" (NYT 1, 2013)).

Focusing on the prevailing usage of verbs related to these key data occurrences, the representations of participants in environmental migration in the NCS describe them as mainly

"passivated" individuals and groups. More specifically, origin and migrant communities are seldom represented as moving as a result of an active choice, and more often their movement is represented as almost forced ("migrants **fleeing** major natural disasters" (TS 6, 2014), "persons forcibly **displaced**" (IBNS 3, 2016)) (see the co-text of "people", "migrant", "community", and "person"). Sometimes verbs evoke a problematic idea of countries of origin as a place that must be escaped as it is subject to dangerous events and situations ("refugees **fleeing** conflict or persecution" (NN 9, 2016), "climate change is primarily **affecting** those countries which many are leaving now" (BBC 9, 2008)) (see "country" and "refugee"). They also are represented as affected by external factors ("people **affected** by climate change" (SMH 5, 2013), "Dam construction in China and India **threatens** downstream communities in India" (NYT 1, 2013)) (see "people", "community", "nation" and "person"), and as needing assistance despite the fact that they are sometimes hampered in their endeavour to resettle in a destination country ("**protect** people fleeing disasters and climate change" (IBNS 1, 2015), "policy responses to **help** communities" (US ON 8, 2018), "international migration can **support** poor people who are at risk from climate change" (G 5, 2011)) (see "people", "country", "refugee", "migrant", "community" and "person").

As active agents, origin and migrant societies are represented as moving ("climate migrants **move** to or within developing countries" (NN 9, 2016), "flows of migrants who are **heading** towards Europe" (BBC 8, 2016)) and as causing disorder by doing so ("Syria was **destabilised** by 1.5 million migrants" (CT 3, 2015)) (see "migrant").

Wealthier countries are generally represented as responsible for environmental change and migration and need to take responsibility for it ("They **blamed** the industrialized nations for the rise in temperature" (NN 4, 2013), "**urging** the rich nations" (BBC 1, 2008), "rich nations **are responsible** for climate change" (RVN 3, 2009)) (see "nation").

Overall, the representations of participants in environmental migration in the NCS revolve around references to the "quantity" of people involved in mobility, including studies and statistics about the expected number of people to be involved in it in the near future. These themes link to issues of management, control and limitation of people-on-the-move, in order to reach an organised movement of people. Reference to policy making, management and the need for the international community and wealthier less-affected societies to provide assistance to affected populations and control mobility also reflects in a varied use of terminology that relates to justice, rights, protection and wellbeing issues. Representations of environmental migrants are also concerned with the problematic dealings with migrants and the hardships they are

exposed to, which is manifest in the use of terminology that refers to unpleasant and potentially dangerous situations and events.

Origin and migrant communities are mainly passivated, even though they are represented as moving: there is an underlying idea of being affected, moving, and being assisted by the international community most of the time. They are represented as passive participants to environmental migration and its circumstances both in terms of being "affected populations", and of being the object of activities predisposed by the international community. It is interesting to notice that there seems to be a pattern by which participants in the phenomenon of environmental migration are depicted from a range of perspectives that shifts from the specific to the generic; when specified, they are often categorised as members of families and as workers.

Participants seem to be mainly distinguished in terms of economic criteria such as development. Wealthier countries are mainly represented as responsible for the events that displace people and needing to take responsibility to address the consequences of these events and compensate the damage done.

5.6.3. Key data occurrences that refer to representations of the environment in environmental migration

The key data occurrences that refer to the environment in the phenomenon of environmental migration emerged from close-reading of the NCS and are reported in Tables 5.29. and 5.30. Key data occurrences are reported in Table 5.29. from most to least frequent in the NC together with the themes they refer to reported in alphabetical order.

According to the normalised frequencies of occurrence of the terms reported in Table 5.30., the terms that tend to occur to refer to the environment in environmental migration in the discourse of the NC are, from most to least frequent: "climate", "environmental", "disaster", "area", "natural", "environment", "resource", "event" and "catastrophe". These terminological preferences are partly reflected in the lexical choices of the NCS, where the most to least frequent terms to refer to the environment in environmental migration are: "climate", "environmental", "disaster" and "environment", "area", "natural" and "resource", "event" and "catastrophe".

Generally speaking, the representation of the role of the environment in environmental migration seems to rely on general terms like "climate" and "environmental", even though there

also is the tendency to refer to specific natural events and/or factors as triggers to environmental migration.

Key occurrence	Themes of the co-text
Climate	Conditions and preservation; mobility; management; social, political and justice issues.
Environmental	Frequency, intensity and range; management; mobility; nature; socio-economic, political and justice issues.
Disaster	Causality and interrelatedness; frequency, intensity and range; management; nature; socio-economic, political and justice issues.
Area	Nature; vulnerability and safety.
Natural	Causality and interrelatedness; conditions and preservation; frequency, intensity and range; nature; socio-economic, political and justice issues.
Environment	Conditions and preservation; management; mobility; nature; socio-economic, political and justice issues.
Resource	Frequency, intensity and range; management; nature; socio-economic, political and justice issues.
Event	Causality and interrelatedness; frequency, intensity and range; mobility; nature.
Catastrophe	Nature; socio-economic, political and justice issues.

Table 5.29.: key data occurrences on the environment in environmental migration in the NC and themes emerging from the co-text.

Key occurrence	NC x million	NCS x million
Area	1,204.04	645.44
Catastrophe	148.81	322.72
Climate	11,133.96	7,207.4
Disaster	1,258.15	860.59
Environment	838.77	860.59
Environmental	1,731.65	1,398.45
Event	392.33	322.72
Natural	919.94	537.87
Resource	703.48	322.72

Table 5.30.: key data occurrences on the environment in environmental migration in the NC and NCS and their frequency of occurrence normalised per million.

Theme	Significant concordances of the co-text
Mobility	displace, displacement, emigration, flee, leave, migrant, migration, move, refugee, refugee crisis.
Management	asset, conference, expert, limit, management, organisation, planning, prevent, reduction, specialist, summit, sustainability, talk.
Socio-economic, political and justice issues	conflict, control, demography, disease, economic factor, economy, family-separation, humanitarian crises, justice, poverty, resource, right, terrorism, unconscionable, vulnerability, war.
Conditions and preservation	change, damaged, degradation, inhospitable, pollution, protect, unhealthy, uninhabitable.
Nature	affected, afflicted, asset, available, bounty, calamity, capacity, catastrophe, change, change-related, climate, climate change, climate-induced, climate-related, climate-sensitive, decline, degradation, deplete, depletion, devastation, disaster, divert, dynamics, ecological, environmental, factor, flooded, flood-prone, free, freshwater, hazard, hit, holocaust, lack, land, lend, marine, meagre, mismanage, mobilise, natural, obtain, phenomenon, pillar, problem, resource, scarce, storm-damaged, stress, tidal, use, variability, water, weather, weather-related.
Frequency, intensity and range	dramatic, escalate, extreme, impending, intense, major, mass, million-plus, severe, slow-onset, sudden, sudden-onset, widespread.
Causality and interrelatedness	affect, cause, contribute, displace, drive, fuel, human, induce, link, propel, relate, strip, threaten.
Origin and migrant communities	coastal, low-lying, rural, urban.
Vulnerability and safety	avoid, experience, face, flee.

Table 5.31.: themes of representations of the environment in environmental migration emerging from key data occurrences of the IOCS and their co-text.

Table 5.31. reports the themes of representations of the environment in environmental migration that emerge from the analysis of the key data occurrences of the NCS and their co-text of occurrence; significant concordances of the co-text are reported in alphabetical order for each theme. Significant concordances from the co-text may belong to more than one category according to their contexts of use in the corpus.

From the analysis of the key data occurrences of the NCS, the main themes of representations of the environment in environmental migration that emerge from the analysis of these terms are: *Mobility*, *Management*, *Socio-economic, political and justice issues*, *Conditions and preservation*, *Nature*, *Frequency, intensity and range*, *Causality and interrelatedness*, *Origin and migrant communities* and *Vulnerability and safety* (see Sections 5.5.1., 5.5.2. and 5.5.3. for an explanation of each area).

According to its co-text, the term "climate" refers to migration and migrants ("climate **refugees**" (BBC 3, 2008), "climate **migration**" (RVN 4, 2009)); to policy-making and management ("international climate **talks**" (RVN 2, 2009), "climate **summit**" (RVN 1, 2009), "climate **conference**" (SMH 3, 2009)); and to social and justice issues that are involved in the dealings of environmental migration ("ensure 'climate **justice**' against environment pollution" (NN 8, 2016)). It must be noticed that there is a specific emphasis on the idea of the evolving state of the climate, its state of change: environmental migration depends on the changes that affect the climate. Possibly, expressions like "climate *change* migration" should therefore be preferred to "climate migration" ("climate **change** and the resultant displacement of millions of people" (BBC 10, 2016)).

"Environmental" refers to both gradual and rapid natural events ("environmental **degradation**" (IBNS 2, 2016), "sudden-onset environmental **disasters**", "environmental **stress** and degradation associated with climatic shifts" (RVN 2, 2009)) and to their frequency and intensity ("**dramatic** environmental impacts" (CT 1, 2008), "**severe** environmental problems" (NYT 6, 2017)); to migration related to natural factors ("environmental refugee **crisis**" (NN 7, 2015), "environmental **displacement**" (RVN 7, 2010), "environmental **migration**" (BBC 3, 2008)) and to triggers grounded in socio-economic and political issues in both countries of origin and destination countries ("environmental **terrorism** and climate change are some potent factors responsible for migration" (NN 1, 2011)).

"Disaster" refers to the interconnectedness between human mobility and natural factors and events ("**weather-related** disasters" (G 2, 2009), "**climate-induced** disaster" (RVN 5, 2009)), as well as other socio-political issues that trigger environmental migration ("immigration of humanitarian origin (**conflicts** and natural disasters)" (US ON 2, 2015), "political **crises** and natural disasters are the other major drivers of migration" (NN 10, 2017), "climate change, natural disasters, **disease** and economic shocks" (CT 5, 2017)). It also concerns the rapidity and intensity of natural events ("**sudden-onset** environmental disasters" (RVN 2, 2009), "the people most vulnerable to climate change are also most likely to experience **extreme** weather disasters"

(TS 10, 2018)); and the need to introduce management activities in countries of origin ("we need to enhance disaster risk **reduction**" (SMH 7, 2015), "disaster **planning**" (BBC 3, 2008)).

The co-text of "area" describes natural ecologies in terms of their typology ("**coastal** areas" (CT 1, 2008), "**low-lying** areas" (RVN 4, 2009), "**rural** areas" (CT 6, 2017)), and how they are impacted by natural events ("flooded and **storm-damaged** coastal areas" (RVN 4, 2009), "potent monsoons are making **flood-prone** areas worse" (RVN 5, 2009)). These representations possibly refer to vulnerable geographical zones inhabited by origin communities since they are depicted as places from which people move away through verbal usage ("people will lose their homes and means of livelihood, and **flee** coastal areas" (TS 3, 2012), "**leaving** some coastal areas without potable water" (NN 6, 2014)).

The co-text of "natural" refers to natural events and their correlation to the state of the ecosystems ("natural **devastation** stemming from climate change", "massive rehabilitation programmes after the natural **holocaust**" (NN 1, 2011)), as well as the frequency and intensity of events ("**severe** natural disasters" (RVN 7, 2010), "**extreme** natural disasters" (SMH 6, 2015), "**intense** natural disasters" (CT 5, 2017), "**major** natural disasters" (TS 6, 2014)). It also relates to the idea of the environment as a resource and source of resources for people ("conflicts over natural **resources**" (NYT 3, 2015), "forcing natural resource **assets** out of the hands of legitimate government" (NN 10, 2017)). With reference to the causes of events that trigger migration, it is worth noticing that "natural" combines with the term "human". Possibly, nature is relieved from the responsibility for displacement; instead, the lifestyle of wealthier societies is blamed as one of the causes behind the alteration of the environment.

"Resource" combines with terms that refer to natural elements that can be used as resources for people ("**water** resources" (CT 3, 2015), "**marine** resources" (IBNS 4, 2016), "nations suffering from the climate change fall out are not having enough resources and available **land**" (NN 2, 2011)), to their availability (often described as scarce) ("**scarce** productive land resources" (NN 10, 2017), "resource **depletion**" (SMH 5, 2013)) and the consequent need for fair management and redistribution of them ("resource **sustainability**" (US ON 6, 2016), "resource **management**" (BBC 3, 2008)) to avoid controversial social issues ("resource **conflict** will drive more migrants" (NYT 6, 2017), "violence might become the dominant means of resource **control**" (NN 10, 2017)). The importance of resources for environmental migration is reflected in the terminology used to define them ("land, water and energy as resources are all **pillars** of our survival" (NN 10, 2017), "Competition for energy resources is already a **cause** of conflict" (G 1, 2008)) as well as by possessive adjectives that stress the strive for control and distribution

of them ("Most of **our** resources are now diverted to climate-change-related development" (NYT 4, 2016)).

The "environment" is mainly referred to in terms of its conditions, which are often represented as compromised by either human activity or natural events ("Hundreds of millions of people may be trapped in **inhospitable** environments" (G 4, 2011), "local environments are simply **uninhabitable**" (CT 1, 2008), "extractive practices which […] **damage** local environments" (G 7, 2015), "the impact of global climate change and environment **pollution** on immigration" (TS 9, 2016)) and may aggravate problematic socio-economic issues ("conflict can actually lead to impact on the environment and water **resources**" (US ON 6, 2016), "human rights, migration, **poverty** and the environment" (US ON 9, 2018), "migration, human **rights** and the environment" (TS 5, 2013)) and migration ("given how much damage has already been done to the environment, mass **displacement** could be a very real possibility" (TS 5, 2013)). Reference is also made to interventions on the part of the international community, possibly concerning way to sustainably manage the ecosystems that support life ("human rights and environment **organisations**" (G 3, 2010), "environment **expert**" (NN 1, 2011), "environment and climate change **specialist**" (IBNS 5, 2017)). The environment is also represented as a resource for people to use, as can be inferred from the verbs used in the co-text ("the Darfur conflict has seen the environment **used** against rivals" (BBC 4, 2013)).

The term "event" refers to natural events ("**weather** events" (CT 1, 2008), "**tidal** event" (NYT 4, 2016)) and their intensity ("**extreme** weather events" (SMH 6, 2015)), as well as to their relatedness to mobility ("connect the dots between weather events and **migration**" (US ON 8, 2018)), which is further confirmed by verbs ("people are displaced by climate-**related** events" (NN 9, 2016)).

"Catastrophe" is used to refer both to natural events and to events that affect the ecosystems ("**weather-related** catastrophe" (NN 10, 2017), "**ecological** catastrophe" (NYT 6, 2017), "**environmental** catastrophes" (NN 7, 2015)); it is also used to refer to social issues in host societies that involve the fair reception and treatment of incoming people ("**unconscionable family-separation** catastrophe" (NYT 7, 2018)).

Focusing on the prevailing usage of verbs related to these key data occurrences, the representations of the environment and its role in the phenomenon of environmental migration are described both as active and passive. As active, the environment is represented as changing ("the growing menace of the **changing** climate" (NYT 7, 2018)) (see the co-text of "climate"), and affecting the livelihoods and lives of people, causing mobility ("every second, one person is

displaced by disaster" (NN 10, 2017), "climate **induced** migrants" (NN 5, 2013)) (see "climate", "disaster").

When the environment is passivated, it is represented as an entity that needs to be protected and preserved, especially by proper management and "capacity building" activities ("global efforts to **protect** the climate" (NYT 7, 2018)) (see "climate", "disaster"); it is also represented as of a stock of disappearing resources and their availability and distribution ("conflicts over **depleting** resources" (G 1, 2008), "**declining** water resources" (CT 3, 2015), "**mismanaged** natural resources" (TS 4, 2013)) (see "resource").

Overall, the environment in the NCS tends to be represented in terms of natural events, thus possibly implying that causality of environmental migration lies not in the environment itself, but rather in the changes and alterations that are caused by external forces and do not depend solely on natural patterns. Indeed, its conditions tend to be represented as either at-risk or as already compromised by human and/or natural events, and its patterns of change are described as something that both origin and destination communities want to avoid.

The use of verbs related to representations of the environment and its role in environmental migration conveys an image of the ecosystem mainly as a passive participant to this phenomenon, even when active verbs are employed: it is mainly depicted as a fragile entity that needs protection and management. However, the environment is sometimes described as a threatening entity for origin communities that are endangered by it and move away from it, so it is represented as active when it changes and affects the lives of people and their decision to resettle somewhere safer.

References to the term "ecology" are seldom present in the corpus and expressions related instead to the climate or environment seem to be chosen. It is worth noticing that the climate seems to be represented as a separate entity from the rest of the environment, as if the two are different entities.

5.7. Concluding remarks

Chapter 5 presented the analysis of the shared collocations and key data occurrences about representations of environmental migration, the participants in the phenomenon and the role and representation of the environment. More specifically, the analysis looked at the collocational and distributional patterns of shared collocations related to environmental migration that emerged from specific CQL-based concordance searches and key data occurrences retrieved from close-reading of the texts of the IOCS and NCS.

The analysis revealed that the phenomenon of environmental migration is mainly represented as a phenomenon of "migration" rather than "displacement": according to the definition of "migration" and "displacement" proposed by the UN (UN 11, 2014), this lexical choice might suggest that mobility and natural factors are typically represented in terms of interrelatedness rather than causality. In this case, the natural factors that play a role in the phenomenon of environmental migration would be conceived as circumstances that affect the ecosystems and livelihoods of people, rather than as a force that determines people's mobility.

Environmental migration is also represented as a phenomenon that needs to be managed, especially because it involves -and will involve in the future- a high number of people; therefore, understanding its causes and dynamics is of paramount importance.

The analysis of the representations of the participants in the phenomenon of environmental migration revolves around two major salient issues: on the one hand, origin and migrant communities are represented as people who are in need of assistance because of the risks they are exposed to; while on the other hand they are represented in terms of the alarming number of people who are involved (and will be involved) in environmental migration in the future.

The risks origin and migrant communities face are not only related to the state of the ecosystems that support them, but also to anthropogenic activities, and to related social, economic and political factors that intensify their exposure to hardships and might make them opt for mobility. This seems to be confirmed by the fact that people who are most likely to be affected are sometimes represented in terms of "groups" or "minorities", thus referring to socio-economic or political categorisations, rather than to nature-related characteristics of the area they inhabit.

Origin and destination societies are often differentiated in terms of affected and non- or least-affected countries and according to their economic status.

In the IOCS and NCS, authorities tend to be the only members of societies that are relatively individualised according to their title, function, and their reported words.

The analysis of the representations of the environment and its role in the phenomenon of environmental migration revealed that environmental migration seems to be generally conceived as a type of mobility which is mainly due to climate factors (mainly conceived in terms of weather events and changes in temperature), rather than other natural factors. More specifically, environmental migration is more frequently associated with the term "environment", but there seems to be more terminological variety related to the term "climate"; that is to say, there are more lexical constructions that include "climate" rather than "environment". This tendency seems to

confirm the idea that the climate is the responsible "aspect" of the ecosystem that affects both human and non-human lives and the rest of the environment.

What seems to be the contributing trigger to mobility is the alteration of the state of the climate and environment people depend on: this type of change is not the "natural evolution" of the climate; rather, it is the effect of activities and events that intensify the impact and rapidity of the change. The co-text of the terms "environment", "environmental" and "ecological" tends to include negatively connoted terms like "problems", "degradation", "threats", "destruction", and only seldom is "protection" mentioned (environmental protection is mentioned twice in the NCS -and one of the occurrences is a reference to the Environmental Protection Agency-, and there is no mention at all in the IOCS).

It must be noticed that the term "environment" is the most frequent in the official discourse of international organisations, while "climate" is preferred in news discourse: this dis-alignment of news discourse from the international discourse on environmental migration might suggest that there is a different conception of the role of the environment in human mobility, and that international organisations tend to be cautious in affirming what is the relationship that ties them together.

Sometimes, the environment is reified according to an anthropocentric perspective as "plants", "crops", "fields", "land" and other resources people can make use of. Some other times, instead, it is referred to in inclusive and wide-ranging terms as the "planet", "world" or "earth", especially when discussing the risk of ecological damaging and the need for common and shared responsibility and action to halter its course.

Chapter 5 has presented the aspects of the qualitative analysis of texts related to corpus-analysis methods. More specifically, it has described the processes of selection of texts to build sub-corpora in the IOC and NC that are analysed with qualitative-oriented methods, and the selection of specific multi- and single-word expressions about environmental migration that are particularly relevant for representing this phenomenon and the human and non-human participants involved in it. It has then provided a concordance and distributional analysis of these terms in order to uncover the main aspects of representations about environmental migration in both organisational and news discourse. Chapters 6 and 7 will integrate these findings with the analysis of representations on environmental migration based on the close reading of selected texts from the IOC and NC.

6. THE ANALYSIS OF REPRESENTATIONS IN THE IOC

Chapter 6 presents the qualitative corpus analytical approach to the corpus data. More specifically, it combines the analysis of collocation patterns of terms that are relevant to representations of environmental migration, to the analysis of their distribution in the node corpus IOC and sub-corpora, and to a close reading-based analysis of the texts collected in the IOCS. Section 6.1. provides an outline of the tools that are used for the corpus-assisted analysis of the texts of the IOCS. Sections 6.2., 6.3., 6.4. and 6.5. analyse and discuss the representations of the environment, environmental migration, environmental migrants and other participants in the phenomenon of environmental migration. The analysis focuses on the terminological choices and discourse practices adopted in the texts of the IOC and IOCS to discuss the phenomenon of environmental migration, its participants, trigger factors and the processes that combine with it; special attention is paid to patterns of erasure and evaluation, and the identification of specific ingroups and outgroups in text.

6.1. Corpus-assisted qualitative analysis of selected texts: the IOCS

The corpus-assisted qualitative analysis of selected texts from the IOC (see Appendix, Section 1) is based on a close reading of selected sections of texts; it includes a corpus-assisted investigation of the terminology used in the texts that is relevant to the representations of environmental migration, the people involved in it and the environment. Significant lexical patterns (e.g., key words/clusters, collocates) led to the examination of their expanded co-text, or, when needed, of the whole texts. This approach is supported by Stubbs (1994), who underlines "the need to combine the analysis of large-scale patterns across long texts with the detailed study of concordance lines" (Stubbs in Baker *et al*., 2008, p.284).

The Word Sketch tool in Sketch Engine was used to process both key data occurrences retrieved from close reading (see Section 5.3.1. and 5.3.2.) and shared collocations on environmental migration (see Section 5.2.). Word Sketch enables the analyst to avoid the unrealistic task of checking all instances of a search word in a corpus and it displays combinations with the search word organised in a list from the most typical to the least typical collocation. A collocation is "the above-chance frequent co-occurrence of two words within a pre-determined span, usually five words on either side of the word under investigation" (the node word) (Baker *et al*., 2008, p.278). The Word Sketch tool also displays the frequency of occurrence of the search word in a corpus or sub-corpus, its collocates sorted into grammatical relations, the frequency of each collocate, and the typicality score (how typical a word is) (Sketch Engine 5). By default, the word sketch is sorted

with the most typical collocate at the top of the list, instead of the most frequent. The typicality of a collocate indicates how strong the collocate is: a high score means that "the collocate is often found together with the node and at the same time there are not very many other nodes that the collocate combines with or it does not combine with them too frequently", so the bond between the node and the collocate is very strong; while a low score means that the collocate combines with very many other words, so the bond between the node and the collocate is weak (Sketch Engine 5). In the present study, I refer to collocates retrieved with the Word Sketch tool in Sketch Engine as "concordances" or "co-text of occurrence": the terms retrieved with the Word Sketch tool seem to be part of a network of words that contribute to the meaning of a node word, but do not form collocations with the node word (see Section 5.3.). An analysis of the co-text of these salient words is informative because it provides insights into the various words and their semantic prosodies (Baker *et al.*, 2013b, p.260; Poole personal conversation; Gries & Newman, 2013, pp.12-13).

Moreover, the Word Sketch tool enables the analyst to see not only significant co-occurrences of words (collocation), but also constructions containing specific words in syntactical structure, grammatical categories, and textual position of each word (colligation).

Some specific key data occurrences retrieved from close reading and shared collocations on environmental migration were also analysed in terms of their frequency of occurrence and dispersion. These key data occurrences where chosen because they refer to complex and controversial themes of environmental migration that emerge in the texts and that are worth discussing to investigate the complexity of this phenomenon of mobility, i.e. for example, women's migratory experiences. Their frequency of occurrence was examined to see how frequent each word is in the IOC, the IOCS and the three sub-corpora that make up the IOC (EU, IOM, UN).

Dispersion measures the range of occurrence of a word, i.e. the parts of the corpus where a word occurs. In this way, it is not sufficient for a term to occur many times to be representative, but it should also occur in many places (Poole personal conversation; Marko personal conversation; Baker, 2006, p.49). Dispersion analysis has the function to identify how representative of the IOC and its sub-corpora specific words are, and how evenly distributed across the IOC, the IOCS and the three sub-corpora they are (Gries, 2010, p.5). A dispersion analysis is useful because "two words may have (about) the same frequency of occurrence but one of them may be even spread out through the corpus (reflecting its status as a common word) while the other may be much more unevenly distributed" (reflecting its status as a more specialised word that is just very frequent in particular contexts) (Gries & Newman, 2013, p.12; Baker, 2006, p.49). Also, dispersion may reveal so-called "seasonal collocates", namely collocates that are very frequent in a small number of years only (Baker *et al.*, 2008, p.286).

Corpus-assisted qualitative comments were complemented by and integrated with findings retrieved from the quantitative analysis of the corpora (see Chapter 4).

6.2. Representing the environment

6.2.1. The natural sphere: the "environment", the "climate" and other terminology

One of the most noticeable aspects of the representations of the environment is that there seems to be a rather unclear idea of what constitutes the environment in the first place. The terminological choices adopted to refer to it are manifold and multifaceted: not only do they vary across the discourses of the organisations analysed, but also within single publications. The main controversy seems to regard the environment and climate; more specifically, there seems to be confusion on whether the environment and climate are two distinct entities, or instead they form part of one univocal entity. This uncertainty results in alternating mentioning either the environment, the climate, or both of them as factors that influence migration. Moreover, there seems to be uncertainty around the specific features of the climate and environment that can be issued as trigger factors of migration: if sometimes the environment and/or climate are mentioned as factors contributing to migration in their entirety, some other times only specific changes in the environment and climate are mentioned as factors that contribute to migration (see, for instance, "the likely impact of *changes in the* environment on migration", UN 1, 2008). The decision to opt for one terminological choice or the other seems to remain unjustified as the reasons that motivate the choice are not explained.

There are many examples in the corpus where the environment and climate are mentioned separately as if they were not part of the same entity. For instance, the expression "Environment and climate change" (IOM 8, 2014) depicts the climate and environment separately; also only the climate is represented as changing ("climate change"), while the environment is not, and this is noteworthy since environmental migration is said to be triggered first and foremost by natural changes. In "IOM addresses the links between climate change, the environment and migration" (IOM 11, 2014), "climate" and "environment" are differentiated as two separate entities but they are also paired, possibly as a way to highlight their interrelatedness but diversity at the same time. Again, it is not clear why the climate is sometimes not considered to be part of the environment, and what the difference between the two is.

The indeterminacy behind these expressions suggests a particular interpretation of the natural phenomena involved in environmental migration: changes in the climate affect the environment and mobility alike, or better, climate change influences environmental change which, in turn, drives migration. The trigger potential of the climate on both the ecosystem and its inhabitants

might be the reason why the climate is often told apart from the rest of the natural sphere. Indeed, sometimes climate change is described as a factor that contributes to the deterioration of the environment, which in turn triggers the movement of people: in IOM 8 (2014), for instance, it is said that climate change intensifies both "sudden-" and "slow-onset disasters" and gradual environmental deterioration.

This distinction can also be found in metaphorical representations of environmental migration: in "*Environmental factors* have long had an impact on global migration flows. The scale of such flows […] is expected to rise significantly over the next decades *as a result of climate change*" (IOM 1, 2008) the movement of people is represented as a flow of water; the power of this image is increased by the use of markers of quantity ("scale") as well as by legitimation via reference to scientific projections about the number of people that will engage in migration. It is noteworthy that there is discrepancy within the very same publication: despite the fact that previous mentions in this document refer to the environment, here the climate is mentioned instead, and it is represented as if it was a separate or a specific part of the environment.

Some expressions only mention the environment, while some others limit causality and/or responsibility for environmental migration to the climate and do not mention the environment. The latter seem to include those expressions that are used to discuss policy approaches to environmental change and migration, like "climate change agenda" (IOM 11, 2014) and "climate change adaptation" (IOM 16, 2015). In "impacts, vulnerability and adaptation to climate change" (IOM 11, 2014), for example, causality is attributed to climate change only and the environment is not mentioned.

Among the expressions that only mention the climate or climate change as drivers to migration there is "Climate change is a driver of human mobility and is expected to increase the displacement of populations" (UN 11, 2014) where the climate is presented as causing human mobility with high facticity expressed by an unmodalised verb (see Section 3.2.). Possibly, the attribute "human" is mentioned as a way to mitigate the risk of objectifying migration as a mere process, concealing the people behind it. At the same time, though, human agency as a dimension of environmental change is left unmentioned: the responsibility of people as contributors to environmental change that causes migration is erased or backgrounded while people as affected from environmental change are emphasised, thus giving a distorted or partial representation of the phenomenon of environmental migration and the role people play in it.

Even changes in the natural sphere are sometimes discussed as if solely concerned with the climate and not the environment, as in "the migration, environment, and climate change nexus" (IOM 15, 2015): here "change" refers to the climate only and not the environment.

Environmental changes tend to be backgrounded and natural changes are discussed as related to the state of the climate only. This choice is unclear and not even justified in the text; it seems to imply that environmental migration is only concerned with climate change and not environmental change.

Occurrences that mention both the environment and the climate (or climate change) are, for instance: "*Climate change* increases the risk of *natural disasters* and places a strain on livelihoods; it exacerbates poverty and can potentially cause situations of conflict and instability" (IOM 26, 2017). Here the climate and environment are differentiated as two different entities and one (the environment in terms of "natural disasters") is said to stem from the other (the climate when altered); the climate is therefore represented as the main responsible factor of damage for humankind. More specifically, there seems to be a polarisation between people and the environment on the one hand, and climate change on the other, representing the latter as a separate factor from the environment that has a negative impact on the wellbeing of both people and the environment. The processes described are stated with high facticity through the use of unmodalised verbs ("increases", "places", "exacerbates"), with just one exception ("*can potentially* cause"). The climate is also said to increase the risk of natural disasters and poverty: in fact, these problematic issues already exist, and the climate is not their root cause; it rather contributes to their increase. It is also interesting to notice that the text mentions a series of other human-made or human-related actions which are connoted as unsuitable and unfair ("These conditions, when combined with a *mismatch* between demand for labour and supply and the proliferation of *unscrupulous* recruitment agencies, increase high-risk behaviours", IOM 26, 2017); combined with climate change, they increase other human-related actions that put at risk the wellbeing of "affected populations" ("high-risk behaviours", "negative coping strategies", "resorting to migrant smugglers…makes them vulnerable to trafficking in persons (TiP) and…exploitation and abuse"). Overall, there is no point laying the blame only on the climate as it seems that conditions of risk for human beings are mainly due to inequality in global human relationships and specific geographical and ecological unfavourable patterns in the places people inhabit. Therefore, human agency fosters and increases ecological and climate change, which in turns impacts the least affluent populations.

Uncertainty in the use of terminology to discuss environmental migration, and consequent shifts in the terminology used to refer to it and to the ecological elements that contribute to it, can be confusing and convey an unclear representation of how the phenomena of migration and environmental change interact with each other. For instance, when referring to the causative role of the natural sphere in environmental mobility, there seems to be a general tendency to use

high-facticity statements as in "Populations experience higher exposure to weather events" (UN 11, 2014). In this case, facticity is expressed by the unmodalised verb "experience": it is worth noticing though, that in this example people are said to be certainly "exposed" to potential natural events and not certainly "affected" by them, so the role of the environment as a trigger factor of mobility is a potential one, and not necessarily a determining one. Moreover, only "weather events" are mentioned, as if less attention is paid to potential drivers outside the sphere of the climate (which supposedly includes the weather). This further complicates an already articulated statement, as it is not clear what the actual role of the environment in migration is, whether the weather is a cause of migration or whether it is the only natural element that contributes to migration.

The alternating reference to either the climate or the environment makes it difficult to clearly understand and focus on what the root cause of people's movements really is; what seems to be certain is that climate change does have effects on migration patterns and that these contribute to an increase in the displacement of people. For instance, in "erratic weather, rising sea level and other *climate change* impacts exacerbate migration and *environmental degradation*" (UN 1, 2008), climate change and environmental degradation are considered as two separate issues which relate to movements of people. Below in the text the climate and environment are not represented as two separate entities any longer and they are said to have the potential to cause displacement: "environmental change (*including* climate change) hold the potential to displace millions of people" (UN 1, 2008). It is very difficult to keep track of what the causes of migration are as they may change within the same text, or even within the same paragraph of a text.

The dispute over what should be considered a cause of migration –whether the climate or the environment or even a combination of the two- is complex and controversial, but it becomes even more problematic when the non-natural drivers of change are dismissed, and the climate and environment are represented as changing merely because of natural processes. Mentions on why the climate and/or the environment change or who/what makes it/them change are very often missing and only rarely can they be inferred by adjectives attributed to environmental and climate change. This is the case, for instance, of "human-induced" (for instance in "the current impact of human-induced greenhouse gas emissions is of unprecedented proportions", EU 5, 2018); "triggered by people" (for instance in "a marked environmental disruption (natural and/or triggered by people)", EU 1, 2011); or "triggered by human-made factors" (for instance in "disasters triggered by human-made factors such as large-scale industrial accidents", UN 16,

2018). Most probably, a combination of natural and human activities is the main driving factor to the movement of people (IPCC, 2018).

It may be that the decision to mention either the environment or the climate in terms of their correlation to migration depends on the type of publication and the target public, even though the use of a consistent and univocal terminology seems to be missing even within the discourse of the single organisations; possibly, terminology in use is also developed and updated through the years. Overall, there seems to be no point in polarising the environment and climate since they both need to be preserved in order for people and all living beings to survive.

The natural sphere is not always represented as inherently threatening and potentially harmful or dangerous for people. For instance, while often in the corpus "disasters" are clearly attributed to the natural sphere, in "policy and practice must reflect the significance of *environmental*, *disaster* and *climate change* factors on human mobility" (IOM 30, 2018) they are mentioned separately from both the environment and climate, as if they refer to different entities. This decision may contribute to a representation of the climate and environment as something more than just threatening entities: it may be a way to highlight that the climate and environment are not intrinsically negative and dangerous, but rather specific conditions must be met in order for them to react in ways that can be harmful for humans and living beings in particularly dangerous events. In "address human mobility challenges associated with environmental *factors* and climate change" (IOM 30, 2018), for instance, the environment is not blamed for causing migration, but rather specific factors of the environment are said to be critical for migration patterns. Below in the text, "environmental and climatic *factors*" are said to be a cause of migration, so again only specific "factors" of the environment and climate contribute to migration and they are not blamed as drivers to migration *in toto*. Another example is "we know very little about the likely impact of *changes in the environment* on migration" (UN 1, 2008): here the trigger factor of human migration is not the environment itself, but rather specific changes in the environment, even though the cause of these changes remains unmentioned.

The idea that natural factors are only a contributing factor (rather than a determining factor) to human mobility lessens the negative aura that tends to characterise representations of the ecosystem. For instance, in some occurrences climate change is said to be "increasingly acknowledged as a potentially *contributing factor* to the decision to migrate" (IOM 19, 2016). This statement has important consequences: in the first place it seems to imply that climate change is mainly concerned with voluntary forms of mobility ("decision"), possibly as a gradual natural phenomenon; secondly, the role of climate change in causing mobility is hedged by the

adverb "potentially" and the attribute "contributing", leaving room for other factors as well to play a role in the decision to move. At the same time, though, the contribution of climate change to mobility seems to be relevant since the statement is legitimised as reliable via authorisation ("is increasingly acknowledged as") (see Section 3.2.).

Apart from the differentiation between the climate and environment as drivers to migration, another distinction that is often made in the texts is concerned with the intensity and rapidity with which natural factors manifest in places affected by environmental change.

Natural factors that contribute to migration are often named "events". Natural events "resulting from extreme environmental events" are told apart from those resulting from "gradual processes" (IOM 1, 2008): this expression should be probably interpreted as a way to tell apart "sudden-onset events" from "slow-onset" ones respectively (this is the terminology used by the IOM to refer to natural events). Other examples include: "*extreme weather events* and *longer-term climate variability and change*" (UN 11, 2014) (which seem to imply that the former refers to "sudden-onset events" and the latter to "slow-onset" ones); and "gradual and sudden environmental changes" (UN 1, 2008). This distinction is made even more articulated in "Communities affected by disasters, environmental degradation and climate change" (IOM 30, 2018): here, for instance, "disasters" can be interpreted as "sudden-onset events" and "degradation" as "slow-onset events", while "climate change" is mentioned separately as if "natural events" were merely environmental and not climate-related.

It is interesting to notice that when the activities of international organisations and/or the international community are discussed, the terminology used to describe natural events changes and less connoted expressions like "rapid-onset events" are preferred to more negatively connoted expressions like "environmental disasters" (IOM 11, 2014). In other words, it seems that negatively connoted words are avoided when the activities of international organisations are discussed; possibly, negatively-connoted emotion-charged words might affect the perception readers have of international organisations, and diminish the value of the policies and activities discussed. Also, the role of these events on migration is mitigated and expressions like "have links to human mobility" are preferred to, for example, "have impacts" (IOM 11, 2014) (see Section 6.5.1.).

Especially in complex expressions, attributes may have different nuances of meaning, so it might be difficult for the reading public to identify the meaning intended by the author. For example, some terminological choices related to the discussion of policies are ambiguous. It must be noticed that such use of the attribute "environment" (grammatical embedding, see

Section 3.2.) erases the agent that acts on the environment and invalidates it, that is, it erases the causes of degradation and blurs responsibility by making agency unclear. An interesting example is the expression "environmental sustainability" (IOM 16, 2015): this is a term that could defy a clear understanding of the phenomena interrelated with environmental migration and therefore hinder understanding and effective action to deal with it. The use of the adjective "environmental" may be deceiving as it is not the environment which is unsustainable, but rather many human choices; in other words, it is the use people make of the resources the ecosystems can offer that is not sustainable. Possibly, the term refers to processes by which people use "natural resources" without affecting the possibility for the ecosystem (both animal- and non-animal species) to thrive; still, this lexical choice can be misinterpreted.

6.2.2. The role of the environment: between causality, inter-causality and interrelatedness

The impact of nature on human mobility in the IOC is often represented in blurred and generic ways: mainly, its role varies between causality, inter-causality and interrelatedness, and while sometimes the influence of the environment on human mobility is presented as uncertain and unclear, some other times it is asserted as certain.

The main controversy is that it is not easy to define how the process of environmental migration works: the core issue is the two-way impact that the phenomenon of migration and the ecosystem have on each other. These mutual influences are mentioned, for instance, in "The impact of migration on environmental degradation and climate change" (IOM 15, 2015), where it is clearly asserted that migration impacts the conditions of the ecosystem within which people live and move, as well as the conditions of the climate. Assuming as for previous knowledge provided in the IOC that environmental migration is a kind of mobility determined by natural changes, the process of environmental change and migration seems to be represented as a cycle: migration influences the ecosystems, which in turn influence migration patterns. Nevertheless, parts of this process and its participants seem to be omitted: there is no reference to human agency. Indeed, the contribution of human beings to pollution of the ecosystems and rise in temperatures are not mentioned, nor is their excessive reliance on the environment for their sustenance, which causes the degradation of the environment and forces people to move. In turn, as can be inferred from the texts, people moving to already "fragile" zones (IOM 15, 2015) appear to increase the fragility of the environment.

The link between human mobility and the natural sphere is well exemplified in the headlines of the publications collected in the corpus, such as "*Migration, Development and the Environment*"

(IOM 4, 2008); and "IOM's Engagement in *Migration, Environment and Climate Change*" (IOM 30, 2018). It is worth noticing that the label "migration, (the) environment and climate change" is frequently used: it represents the environment as somehow "fix" and unchanging, as if only the climate is concerned with natural changes. In these examples, the environmental and climate conditions as well as the level of development of a community or country seem to be two complementary factors influencing patterns of mobility; however, it is not clear what "development" consists of. Also, the relationship between migration and the natural sphere is often expressed with terminological choices which are open to interpretation and can be difficult to unravel.

When discussing the role of the environment in migration, verbs are of particular interest as they reveal which degree of causality is attributed to the environment in contexts of environmental migration, and how influential the environment is deemed to be in contributing to migration. Verbs might bear connotations of causality and/or be hedged by modal markers which decrease the facticity of a statement. For instance, in "the increasing frequency and intensity of weather-related natural disasters entail a higher risk of humanitarian emergencies and related population movements" (IOM 8, 2014), the verb "entail" implies that the environment-migration relation is a cause-effect one. Another example where the relationship that ties migration to the environment is represented in terms of clear causality is "Environmental factors have had an impact on global migration flows", where the absence of any modal marker for hedging purposes (high facticity) asserts the causal role of the environment in migration, here objectified metaphorically in terms of water movement (IOM 1, 2008).

Representations of the migration-environment relationship in terms of causality tend to express the role of the climate and environment as causes of environmental migration with high facticity due to the absence of modal markers, so according to these representations there is no doubt that climate and environmental change cause migratory movements. This idea is often reinforced by the use of words like "driver" or "trigger" which bear a clear connotation of causality. Also, sometimes markers of legitimation by authorisation (see Section 3.2.) are used to declare that this is a commonly recognised, reliable and legitimated piece of information- namely that natural triggers cause movements of people; among these, for instance, "Climate change is a driver of human mobility and *is expected to* increase the displacement of populations" (UN 11, 2014). Sometimes legitimation strategies are less incisive, but have a similar aim as in "Climate change *is projected to* increase the displacement of people" (UN 11, 2014): in this case the certainty with which facts are presented is mitigated by "is projected to" which expresses future

perspectives; still the degree of legitimation remains high due to the fact that projections are supposedly based on reliable and authoritative statistics.

Some of the verbs used in the IOCS with reference to environmental triggers of migration include: "play a […] role in shaping", "have always been a cause", "is expected to intensify sudden- and slow-onset disasters", "involves cases of", "affect", "entail", "can exacerbate […] and provoke", and "may make" (IOM 8, 2014). These verbs express a range of interrelatedness between the natural sphere and human mobility that spans from clear causality ("have always been a cause") to unspecified interlinkages between the two ("involves cases of"). For instance, in statements like "Environmental and climate change drivers play a significant and increasingly determinative role in shaping human mobility" (IOM 8, 2014) the expression "play a […] role" functions as a hedging element to lessen the facticity of the sentence: the environment and climate do not directly cause migration, but rather they contribute to it in an unspecified way ("shaping").

With reference to patterns of causality, there are statements where responsible agents are not mentioned as in, for instance, "Countries affected by desertification, land degradation and drought" (IOM 16, 2015): here the root causes of desertification, land degradation and drought remain unmentioned, as if they were merely natural processes. In statements like "Environmental change and forced migration scenarios" (UN 1, 2008) where "forced" is explicitly mentioned, agency is erased -but at the same time presupposed-, so the environment seems to be attributed the responsibility implied by "forced", especially since the two terms are linked by an additive conjunction which implies connection. Another example is "People affected *by* land degradation" and "*the effects of* drought" (IOM 16, 2015), where "by" and "the effect of" imply causality, but the causes of drought and land degradation are not mentioned– also the processes they stand for are nominalised, thus erasing the need to include agency.

Causality is diminished in statements like "As migration is multicausal, it is difficult to distinguish the environment as its sole driver except for some movements *linked to* natural disasters" (IOM 19, 2016), where "linked" does not express causality, but rather co-causality. It is interesting to notice that it seems that people have to adapt *because of* the environment, while they should adapt *to* the environment: changes in the environment are produced by and/or because of somebody or something, but the agent of these changes is erased. Instead, here (and elsewhere in the corpus) it seems that people have to adapt because of changes in the climate and environment, which therefore are to be considered the cause of problems.

In other examples, causality is mitigated through interrelatedness: for instance, when it is affirmed that the impact of climate change as a potential contributor to human trafficking "*can*

256

cause" and "*can* drive outmigration" (IOM 26, 2017), the modal marker "can" diminishes the role of nature. Also in IOM 16 (2015) the expression "Migrants displaced *in connection to* climate change" could have simply been rendered as "climate change displaced": maybe this terminological choice is justifiable as part of a discursive strategy that aims at stating interrelatedness ("in connection to") rather than causality between migration and the environment (IOM 16, 2015). Other lexical strategies to limit the idea of causality include the use of inverted commas which seem to signal distance of the author (see, for instance, "'Environmentally induced migration'", UN 1, 2008). Sometimes the role of the environment is further mitigated by bringing to the fore the agentivity of people and their decision to move: in "Environmental challenges are a factor that impact <sic> the decision to move or to stay" (IOM 30, 2018), specific environmental factors are not represented as influencing im/mobility directly; rather migration depends on the decisions people take.

Metaphors (see Section 3.2.) may sometimes be used to represent the relationship between migration and the environment in terms of causality: it is the case of "roots causes" in "the root causes of migration" (IOM 16, 2015). Some other times causality is reinforced by both legitimation and references to the expected or real quantity and intensity of the phenomenon of environmental migration, as in the case of "is expected to" (legitimation) and "major impacts" (intensity) in "Climate change is expected to have major impacts on human mobility" (IOM 30, 2018). Presupposition and facticity patterns may also contribute to giving strength to these types of statement: for instance, "How *do* environmental factors and climate change *affect* human mobility?" (IOM 8, 2014) presupposes that environmental factors and climate change do affect mobility in the first place; also, the verb "affect" has a negative connotation.

Other examples of expressions of causality are: "Migration *induced* by environmental factors", "the challenges facing mobile populations, including those *resulting from* extreme environmental events as well as those *resulting from* gradual processes") (IOM 1, 2008); "DLDD is a key *driver* of human mobility" (IOM 16, 2015); "*for reasons of* sudden or progressive changes in the environment" (IOM 8, 2014); "Sudden- and slow-onset events both *impact* human trafficking" and "savings (sometimes lost *due to* natural hazards)" (IOM 26, 2017) where the responsibility of the environment in causing migration is further extended to the loss of material goods people face as a consequence of natural events.

Representations of the migration-environment relationship in terms of interrelatedness include expressions like "*interlinkages* between human mobility and the environment" and "migration-environment *nexus*" (IOM 19, 2016): here it is stated that there is reciprocity between human

mobility and the environment, but with no mention of the types of link it depends on. Interrelatedness can be conceived in a range of different "nuances": for instance, in "human mobility *in relation to* climate change" (IOM 15, 2015) the link "in relation to" does not imply causality or consequentiality but rather interrelatedness to changes in the climate; while in "*implications of the intersection of* climate change, environmental degradation and migration" (IOM 1, 2008) both consequentiality ("implications") and interrelatedness ("intersection") between nature and migration are expressed.

In the IOC, other examples of statements that presuppose interrelatedness between human mobility and the environment are, for instance: "The complex *linkages* between migration and climate change", "migration [,] environment *and* climate activities" (IOM 15, 2015); "The *links* between climate change, environmental degradation and migration" (IOM 1, 2008); "seasonal mobility *in the event of* poor harvests", "Migration *linked to* land degradation", "Migrants displaced *in connection to* climate change", "*In the context of* land degradation" (IOM 16, 2015); and "The understanding of *the link and implications of* climate change and environmental degradation" (UN 1, 2008). It is worth noticing that the very expression "environmental migration" expresses correlation between human mobility and the natural sphere.

Sometimes the idea of an inter- or multi-causality at the basis of environmental migration seems to be a more realistic and plausible representation of the phenomenon. Interrelatedness and causality are sometimes mentioned together, as in "Environmental issues and *their* migration *implications* (and *vice versa*)" (IOM 1, 2008): here the pattern underneath environmental migration is one of interrelatedness and reciprocity ("vice versa") as well as of causality and consequentiality ("their implications"), even though "issues" and "implications" would need further explanation. In "Environmentally *induced* migration, and its *relationship* to climate change" (UN 1, 2008), the relationship between human mobility and the natural sphere is represented in an even more articulated way. The interpretation of this statement is not clear-cut: either it means that there is a relation of causality between mobility and the environment ("Environmentally induced"), but only in interrelation with the climate ("relationship"); or it means that the climate is identified as a specific part of the environment that contributes to causing migration more than other aspects.

The inconsistency behind these manifold representations of the role of the natural sphere in human mobility manifests itself in a multiplicity of lexical choices. Sometimes the environment is definitely declared to be a driver, while some other times environmental migration is

described as multi-causal: statements like "Migration is a multi-causal reality" (IOM 30, 2018) seem to convey a multifaceted and articulated representation of environmental migration as linked to an unspecified number of factors other than the environment and climate alone. These descriptions of the drivers to environmental migration seem to shift: the causality of natural factors is sometimes clearly expressed, while some other times the link between migration and the ecosystem is not overtly established. In IOM 19 (2016), for instance, the environment is first defined as a "driver" ("it is difficult to distinguish the environment as its sole driver") and then it is simply said to be "linked" to movements of people ("movements linked to natural disasters") without any further specification on the nature of such link (which therefore it is not necessarily a causal one).

As mentioned above in Section 6.1., the role of the environment in migration patterns can sometimes be blurred by nominalisations (see Section 3.2.). Natural events that contribute to migration are mentioned in some occurrences with long nominalisations or noun-phrases and compounds which obscure the nature of such events, as in "weather-*related* natural disasters" (IOM 8, 2014) and "climate change *related* human mobility" (UN 11, 2014). Here the term "related" indicates the presence of some sort of relationship with the natural sphere without specifying whether it is a cause-effect relationship or a link of any other type. Some other times these events are named explicitly, but still using nominalisations like "sea-level rise". The problematic nature of these expressions is that they erase the possibility to further investigate the nature of such events, which might be rooted in human agency. The erasure of the role of human beings in environmental migration seems to prevent a clear and consistent representation of the phenomenon and the way it works: for instance, in "irreversible damage *due to* slow-onset events" (IOM 26, 2017) it is not clear whether damage is due to so-called natural events or to human agency fostering their occurrence.

There are other such examples of controversial representations of the phenomenon of environmental migration, like, for instance, "The implications of the intersection of climate change, environmental degradation and migration are difficult to assess due to their links with other social, economic and political issues, such as poverty and demographic trends, which affect human vulnerability to environmental change and resulting migratory and other consequences" (IOM 1, 2008). This is a rather problematic sentence as *environmental degradation* is said to be one of the factors affecting the vulnerability of people to *environmental change*. It is a paradoxical statement; its complexity might be revealing of an underlying erasure – possibly and likely, human agency. The paradox of laying the blame of human mobility on ecosystem changes (that are at least partly caused by people's lifestyles) can

be found elsewhere in IOCS, as in "Climate change-human trafficking nexus" (IOM 26, 2017), for instance, where the abuse perpetrated by criminal people onto migrants is represented as depending on climate change, rather than merely on the very criminals who commit the deed. Environmental changes do not cause trafficking, but are connected to its increase: the phenomenon is already present, but the situation of vulnerability becomes increasingly critical because environmental changes superimpose to other factors of vulnerability.

There also are numerous instances of "climate" and "environment" as attributes of a noun; this usage often contributes to obscuring the relation that ties the climate and environment to the noun their refer to. Some examples are: "environmental and climate trigger", "environmental and climate driver", "environmental factor", "natural disaster", "(deteriorating) environmental conditions", "sudden-onset disaster", "slow-onset disaster", "environmental degradation", "weather-related natural disaster", "environmental risk factor", "climate and environmental change", "environmental hazard", and the very "environmental migration". These expressions are problematic because they do not clearly shed light on the nature of the relationship between the ecosystems and the entity mentioned in each expression and the role the former play.

The problematic representation of the environment also depends on the fact that sometimes its role in mobility patterns is represented in texts with a modifier, as in the case of "*natural* disasters", while some other times it is presupposed and implied, so no attribute modifies the words "disasters" and "hazards" and it is presupposed that "hazards" or "disasters" are "natural". An example is "the effects of hazards on displacement" (IOM 19, 2016), where it is presupposed that hazards are natural and they have a causal role in the displacement of people. However, in "The movement of people is and will continue to be affected by natural disasters and environmental degradation" (IOM 30, 2018) the expression "natural disasters" erases any possibility to attribute (at least part of) the responsibility of environmental migration to human agency -even merely at the decisional level to move. Also, the term "environmental degradation" does not deny, but rather erases the possibility that human beings are responsible for this process.

In some instances, there is an over-explication of the nature of these events which still does not contribute to understanding, as in the case of "*Weather-related natural* disasters" (IOM 8, 2014): if events are "weather-related", then there should be no need to use the adjective "natural" to stress that they are concerned with the natural sphere as it should already be assumed. Maybe this is a way to point to a specific category of natural events, i.e. those that are related to the weather. It is worth noticing that the use of the hyphen to express the relationship

between the environment and "disasters" does not contribute to a clear understanding of what the role of the weather in these disasters is; instead, a longer explanation could have been used, further specifying its role.

The representation of nature as bringer of harmful and dangerous events is very much questionable: terms like "disaster" and "hazard" bear and intrinsically negative connotation of harm and damage and therefore convey a negative evaluation of the environment (see Section 3.2.). Representations of the environment as a threat to human safety might background the benefits offered by the ecosystem to prevent potential environmental disasters. The problematic nature of expressions where the environment -or parts of it- is a modifier is that they might contribute to patterns of presupposition: for instance, "natural disaster" not only presupposes the negativity of the event ("disaster"), but most of all it seems to promote the idea that these events are the consequence of natural factors only, thus disregarding the possibility to investigate further the root causes of these events. Despite the fact that complex noun-phrases may be space-saving in case of space constraints, and may also be more effective linguistic means to convey complex information to the audience, a more articulated explanation of the link(s) between events that affect people and the ecosystem and their alleged natural triggers should be provided to the reader for the sake of clarity.

It is interesting to notice that representations of the environment seem to change towards negatively connoted descriptions whenever people are described as migrating for their own safety: "environmental factors" become "natural disasters" and "harsh and deteriorating environmental conditions" (IOM 8, 2014), even though the causes of deterioration are not mentioned (potentially, natural causes combined with human agency). In the same text, "environmental factors" are negatively connoted because they are described as something people have to "cope with" (IOM 8, 2014) as if dealing with a problem.

It is worth noticing that the environment holds a twofold connotation as both cause of disasters and means of subsistence; these contrasting positive and negative aspects of the environment are sometimes referred to in the very same sentence. It is the case of IOM 8 (2014), where the environment as a factor of migration and the environment as something that populations rely on for their subsistence are juxtaposed. The negative representation of the environment in "People flee to survive *natural disasters* or when faced with *harsh and deteriorating environmental conditions*" is turned upside-down later on in the text, stressing the paramount importance of the environment for the wellbeing and livelihoods of the people that are -almost paradoxically- said to be fleeing from it ("Groups *dependent on* agriculture").

261

In "Climate change is projected to increase the displacement of people" (IOM 15, 2015), climate change is the driver of an increase in the phenomenon of migration which is involuntary and/or negatively connoted ("displacement") and people are clearly mentioned as the affected (indeed, the presence of people could have been backgrounded or left unmentioned). It is interesting to notice that when the role of the environment is made explicit and the environment is thematised –therefore it is salient- the environment tends to be represented in fairly negative terms as a cause of damage.

Finally, the specific lexical choices used to represent the dealings of human beings with environmental migration are revealing of how this phenomenon is understood. It is the case of the term "challenges" in "address the many challenges [of] human mobility in the context of climate change", and the term "effort" in "contributions to the global effort against climate change" (IOM 15, 2015). Here the opposition expressed by "against" creates an antithetical positioning between climate change on the one hand and the global community on the other, as gamers playing, or even as enemies fighting against each another, thus polarising people and nature. A fairer and more useful representation of the relationship between the two should instead highlight the pattern of interdependency and mutual care that should bind them together.

6.2.3. Erasure and evaluation patterns: an anthropocentric perspective

The terminology adopted to discuss the role of the environment in human mobility is fundamental for the purpose of representation: specific lexical choices can evoke particular representations and emotions in the mind of the readership. For instance, the expression "(natural) hazards" (IOM 26, 2017) refers to something that may be dangerous or cause accidents and therefore provides a connoted representation of the environment as threatening to human safety. Other terms such as "disasters" are clearly evaluative and they too evoke a negative representation of the natural sphere as dangerous and threatening for the wellbeing of human beings. Environmental "disasters" are also negatively connoted in terms of their consequences as in, for instance, "the immediate *aftermath* of a disaster" (IOM 26, 2017).

Another way to represent the environment is by means of references to the (expected) frequency, intensity and quantity of natural events. In IOM 8 (2014), for instance, "increasing frequency and intensity of weather-related natural disasters" is lamented as it entails the risk of "population movements": environmental events are feared not only because of the potential threat to human safety they represent, but also because they may imply the displacement of a great number of people. An increase in environmental events seems to correspond to a proportional increase in migration, and since migration of people seems to be undesirable, so are

the natural events that may influence or force it. Another example is the expression "extreme" natural events (IOM 1, 2008) which entails that the degree of the impact of these events is far from what people would consider reasonable or "normal". Representations of natural events as more impactful than expected might contribute to a conceptualisation of the environment as an unforeseeable and potentially threatening entity, and might encourage people to approach it in ways that entail defensiveness rather than care for the natural world.

Some other expressions refer to specific natural elements and events, like "rising sea levels" (IOM 8, 2014), "sea level rise", "deforestation" (UN 1, 2008), "coastal erosion" and "glacial retreat" (IOM 26, 2017). These expressions might be controversial because they enable the writer to obscure the reasons at the basis of such phenomena, i.e., for instance, why the level of the sea is on the rise. Indeed, the trigger cause of these events is unmentioned, possibly implying that they occur on a natural basis. Some of these expressions are also preceded by the present participle ("rising", for instance), further contributing to the concealment or abstraction of participants and causal links. These expressions seem to erase the contribution that human lifestyles give to the alteration of the ecosystems. It is interesting to notice that on the one hand the environment tends to be objectified, described in rather indefinite and abstract terms or reduced to a stock of resources for human beings, as in "logging" (IOM 26, 2017) and "areas" (IOM 16, 2015); while on the other hand it is given salience and specificity, for instance by referring to "rainforests" rather than generally to the "environment". These examples represent instances of processes that are nominalised whereby agency, responsibility and causality of these processes and phenomena are erased or obfuscated, thus providing an unclear representation of the role of the environment in environmental migration.

Moreover, the environment is often either backgrounded through passivation (see Section 3.2.) or it is not even mentioned as in "26.4 million people *have been newly displaced* annually between 2008 and 2014" (IOM 19, 2016). Since displacement is involuntary and therefore unwanted, "newly" is an evaluative attribute that contributes to the representation of the environment as a cause for reiterated perils and dangers and therefore undesirable.

The anthropocentric perspective at the basis of these representations of the environment is one that values the environment in terms of its utility and use for humankind. These representations often rely on nominalisations that depict aspects related to the environment in terms of resources for human beings. It is the case of "food security" (IOM 11, 2014; IOM 8, 2014), "water availability" and "shrinking natural resources" (IOM 8, 2014): here nature is conceived as a mere set of resources for people to use and it is reduced to elements that humans can transform into means for their own sustenance. These types of representation do not do justice to the

263

manifold functions that the environment performs and which are of paramount importance for the wellbeing and survival of human and living beings.

The reification of the environment is also likely to lie at basis of the use of "managerial terminology" to refer to the environment: it is the case of "sustainable land management" (IOM 11, 2014; IOM 16, 2015), where the term "management" conveys an idea of the ecosystems and their complexity as something human beings can control and organise. The natural sphere is reduced to a resource ("land") that people can treat according to their own purposes and will.

The anthropocentric perspective underlying these representations of the environment characterises specific nominalisations that are negatively connoted, like "*poor* harvest", "crop *destruction*", "*strong* climatic events", and "*extreme* droughts" (IOM 16, 2015). The problematic nature of some anthropocentric representations of the environment, besides being partial and promoting the objectification of the natural world, is concerned with the erasure of human agency through the use, for instance, of the past participle (which carries a passive meaning). Some examples are: "degraded", "abandoned", and "used" (see, for instance, "degraded and abandoned land"; "Land used for agriculture is moderately or severely degraded"; and "Land based opportunities", IOM 16, 2015); this way responsibility for careless dealings with the natural world cannot be directly and precisely blamed on anybody.

Alongside representations of the environment as a trigger factor of migration and as a resource for human beings, in the IOCS there are also several representations of the environment as an entity to be preserved. Some examples include expressions like "Biological Diversity" (IOM 16, 2015) and "holy land" (IOM 18, 2015), where nature is described as a complex entity than needs to be cared for. These types of representation are likely to bestow a higher degree of respect for the natural sphere and encourage the readership to embrace a more compassionate and complex idea of the natural world, its members and the processes and relations that tie them together; as a result, people might be encouraged to pay attention to and care for nature.

Interestingly enough, there are instances in the texts where the importance of the ecosystems for human beings is juxtaposed to processes of reification of the natural world: in "people *depend on* scarce productive land resources" (IOM 16, 2015), for instance, it is clear that the environment is of paramount importance for human beings to survive as expressed by the verb "depend on". At the same time though, the environment is no longer able to thrive and it is highly objectified and metonymically reduced to land that produces resources, a sort of machine ("productive"). The image of the "environment-as-machine" is also negatively connoted by the term "scarce", implying that it is not working properly or as expected, thus evoking the image of a broken mechanism.

Also, sometimes the objectification of the environment is juxtaposed to processes of quasi-personification: in "land-based adaptation and land rehabilitation initiatives" (IOM 16, 2015), for instance, the environment is reduced to "land" on the one hand, but on the other hand it is somehow "humanised" by attributing to it a process of "rehabilitation" which commonly refers to people or animate beings. This twofold and controversial representation is of particular interest: it could be either simply interpreted as a mere representation of the environment from an anthropocentric perspective, or rather it may be representative of a more complex "story" (see Section 2.2.3.) about the relationship between nature and human beings. As Goatly argues (Goatly, 2018, p.231), the anthropomorphisation of natural elements may imply that human beings feel they have a moral responsibility in their dealings with nature. More specifically, the anthromorphisation of the "land" may imply that the land and its products and resources for the sustenance of human beings are what people value the most about it. Therefore, this representation, despite being biased by an anthropocentric point of view, may convey the sense of responsibility and protection people feel towards what they care the most about nature.

Representations of the environment as "land" may not always be grounded on a *conscious* anthropocentric perspective: in "Sudden-onset disasters can cause unexpected loss of land and lives" (IOM 26, 2017), "lives" is a metonymy that supposedly refers to both people and other living beings; "land" would then assume the meaning of any feature of the environment which is not a living being, but that is a constitutive and fundamental element of the ecosystems that support life. However, if "lives" only refers to human beings, then the statement acquires a completely different meaning: "land" would then simply refer to those features of the environment that human beings use as a resource for their livelihoods, thus reinforcing the anthropocentric perspective. If there was a doubt that lives could be not only human, then the context clarifies that this is not the case: in the expression "destruction of means of livelihood" the environment is reified to a set of "means" for people to survive.

In some occurrences, metaphors that represent how people approach environmental migration often refer to a fight, battle, or war against changing ecosystems. Metaphors of fighting tend to be quite controversial and problematic for several reasons. In "Combat Desertification" (IOM 15, 2015), for instance, desertification is represented as an enemy; this description creates a polarisation between people and changing ecosystems via a nominalised process which conceals the fact that behind desertification there are the behaviours and unsustainable lifestyles of human beings. In "combat climate change" (IOM 15, 2015) the reasons for climate change is left unmentioned, but if we assume that it partly does so because of human agency, than the metaphor would be quite confusing. It would actually refer to a war of the humankind against

themselves and their lifestyles, particularly those of wealthier industrialised countries (possibly, the ones some authors of the texts and many members of international organisations belong to). Finally, natural events can be represented as something that should be avoided via association to metaphors that are commonly perceived as "negatively" connoted: it is the case of "Sudden-onset disasters can cause unexpected loss of land and lives […] *plunging* those without safety nets into poverty." (IOM 26, 2017), where the term "plunging" evokes a movement downwards, which is generally perceived as "negative", as opposed to a movement upwards, something that is uplifting ("orientational metaphors" that have to do with spatial orientation, Lakoff & Johnson, 2003, p.14).

6.3. Representing environmental migration

6.3.1. Environmental migration: patterns and causes

The expression "environmental migration" clearly associates the natural sphere with human movements; nevertheless, it does not shed light on what kind of association this is (i.e. a causal relationship, etc.). Very often, indeed, the relationship between nature and mobility is implied by the juxtaposition of terms such as "migration, the environment and climate change" (IOM 11, 2014): despite the fact that they are listed together, there is uncertainty on the type of relationship that ties them together because no explanation of the way they interact is inferrable from the co-text.

It is interesting to notice that migration is sometimes represented as a circular pattern by expressions like "migration cycle" (IOM 11, 2014), which imply that migration is not a linear process. This type of representation has important implications: for instance, it challenges the idea that receiving societies will be overburdened by a limitless and continuous movement of incoming people. Instead it encourages a conception of mobility as a regular pattern that has no clear beginning and ending, rather than an exceptional situation of emergency. The representation of environmental migration as a circular pattern may help to understand why the environment is sometimes mentioned as affected by migration, rather than as its driver. This representation entails that the environment affects mobility, and mobility affects the environment in return. What needs to be highlighted, though, is that this specific representation of environmental migration obfuscates the role human beings may have as contributors to environmental change and mobility. When human agency is erased, the representation of environmental migration is partial and incomplete even though it seems coherent. In "Interaction between these phenomena are complex and include not only the impacts of environmental factors on migration, but also the effects of migration on the environment" (IOM

1, 2008), for instance, migration and the ecosystems reciprocally influence each other, but the role of human beings in mobility is not mentioned; also "environmental factors" remain unspecified, thus obscuring what the natural triggers of mobility are.

It is interesting to notice that whenever the dealings of the international community with environmental migration are discussed, human agency in environmental migration is backgrounded or erased. In "the humanitarian response to displacement induced by natural disasters" (IOM 11, 2014), for instance, human beings are somehow relieved from their responsibilities and depicted as participants that are only concerned with positive and purposeful dealings with environmental migration, rather than being also represented as actors that cause this phenomenon. This argumentative strategy consists in erasing the agency of human beings and affirming the agency of natural triggers instead.

One of the recurrent "stories" around environmental migration that can be found in the IOC is that "human mobility is a cause of vulnerability", namely it is the cause of dangerous situations for human beings. However, at the same time migration is described as a positive strategy of adaptation for affected populations, namely as a process people engage into to make their lives and livelihoods suitable for changed environmental conditions. There seems to be a twofold story about environmental migration as an adaptation measure: mobility is presented both as a last resort for survival and a desirable strategy to adapt. This is evident, for instance, in the juxtaposition of the terms "challenges" and "opportunities" in "challenges and opportunities related to the interlinkages between human mobility and land degradation" (IOM 16, 2015). When migration is represented as an adaptation measure, it is presented as beneficial for those who engage in it and it is juxtaposed to environmental events which instead bear a negative connotation as cause of danger. Nevertheless, adaptive migration is sometimes presented as somewhat undesirable, the ultimate approach to environmental change if everything else fails. For instance, in "resort to mobility strategies to cope with DLDD" (IOM 16, 2015) the verb "resort" indicates an activity that is done almost unwillingly, alluding to the quasi-forced nature of adaptive movements, thus slightly associating adaptive migration to displacement; the verb "cope with" further contributes to a representation that it is connoted as problematic.

Overall, despite the fact that sometimes adaptive migration is described as a somewhat forced movement, there seems to be a general tendency to describe human mobility in binary terms: "positive" adaptive migration on the one hand and "negative" forced migration on the other hand. Examples of both of these can be found in IOM 30 (2018), where it is said that forced mobility should be prevented (by whom and how it is not mentioned) ("prevent forced migration that results from environmental factors"); while mobility as an adaptation strategy

should be facilitated ("facilitate migration as a climate change adaptation strategy"). This twofold perspective on migration can also be found in "migration does not have to be a 'last resort' solution, but can also be a positive driver for change" (IOM 30, 2018): here migration is mentioned as both a "'last resort' solution" (so environmental change is the problem), and as a "positive driver" for change.

Specifically, migration as an adaptation measure is represented as positive for "Populations that are engaged in natural resource-based livelihoods that are affected by events, such as coastal erosion, sea-level rise and glacial retreat" because it may be part of "proactive measures to diversify their income" (IOM 26, 2017), thus increasing their capacity for sustenance. Migration seems to be represented as positive especially in cases of "slow-onset events", possibly because in the case of gradual deterioration of the environment, people can opt for migration instead of being forced to choose it, they have more decisional power on whether to migrate or not (or they simply have more time to prepare for it).

The representation of environmental migration as a positive adaptive strategy for people who lack of economic resources for their sustenance is fundamental for understanding the root causes that motivate migration. In "slow-onset events including sea level rise and deforestation affect labour and seasonal migration" (UN 1, 2008), for instance, the information structure seems to imply that migration from gradual degradation of the environment is due to the loss of livelihood, labour, and the general possibility for sustenance. This is of paramount importance for the definition of environmental migration and the comprehension of the factors that contribute to it: environmental migration is almost explicitly described as a form of economic migration that has a strong dependence on altered environmental conditions and the exploitation of the resources that the ecosystem can offer.

6.3.2. A terminology for environmental migration: definitions and lexical choices

There are many ways to refer to environmental migration, even within the very same text; for instance in IOM 19 (2016) it is named with no clear differentiation as follows: "environmental migration", "migration", "movements linked to natural disasters", "displacement", "mobility in the context of environmental degradation and hazards", "human mobility", "internal movements", "movements", "seasonal patterns" and "environmentally induced migration". These shifts in terminology appear both within single texts of the IOCS and in other texts commissioned by the international organisations.

The reasons at the basis of such a variety of definitions is unclear: in a technical text "elegant variation" might create terminological confusion and specific technical terms are often preferred

for the sake of clarity and consistency. It is especially difficult to find a reason why the terms "environmental migration" and "environmentally induced migration" are used without apparent difference. The degree of causality expressed by the two expressions is radically different: the former relates these movements of people to the natural sphere without providing any further specification, while the latter clearly affirms that these movements are caused ("induced") by the environment. The decodification of the root causes of this phenomenon becomes even more complicated when later on in the text environmental migration is described as "multicausal", therefore not solely induced by the ecosystem. Also, expressions such as "movements *linked* to natural disasters" and "mobility *in the context of* environmental degradation and hazards" (IOM 19, 2016) convey a particular degree of causality or rather a specific role of the natural sphere in mobility. The terms "linked" and "in the context of" express, respectively, connection with environmental change, and a changing ecosystem as the condition for migration to occur. Therefore, the latter does not represent environmental change as a trigger or contributing factor to human mobility, but rather as a scenario that is determined by causes that are not mentioned (among them there might be human agency). Also, "natural disasters" and "environmental degradation and hazards" (IOM 19, 2016) are two slightly distinct ways of representing the environment and its responsibility in human movements, despite the fact that all expressions include negatively connoted terms that evoke the possibility of harm ("disasters", "degradation" and "hazards"). More specifically, both "disasters" and "hazards" refer to something that may be dangerous or cause accidents, while "degradation" implies the participation of someone/something damaging the environment: therefore, the expression "environmental degradation and hazards" seems to include the impact of human beings upon the ecosystems as a cause for environmental change and migration.

Shifts in terminological use to refer to environmental migration can be found in other documents of the IOCS as well: indeed "environmental migration", "climate migration", and other expressions to refer to it alternate in the texts. For instance, in IOM 11 (2014) there are shifts from "mobility", to "migration" and "diaspora". Sometimes there is a shift between the terms "migration" and "human mobility" (UN 11, 2014, among others), while in other occurrences "migration and mobility" are mentioned together in a pair, but separately, as if they referred to two different processes (but the difference between the two is not mentioned). Sometimes the expression "human mobility" is preferred to "migration": even though both terms are nominalisations and abstractions that contribute to obscuring the people who move, the former stresses the fact that there are people involved in this process. The need to make the "human nature" of migration stand out is interesting: indeed it is presupposed that the type of

mobility the international organisations deal with is "human" also when it is not explicitly mentioned; non-human migration is not the concern of these organisations, so it is not taken into account in their discourses. The decision to stress the fact that people are involved in migration must therefore be part of a discursive and argumentative strategy by which people are bestowed salience: expressions that explicitly mention people, like "human" and "population", are probably used with the aim to catalyse attention and emotions on the phenomenon described. Another example of alternating lexical choices relates to the difference between "displacement" and "migration": apparently "displacement" refers to forced involuntary movement, while "migration" refers to movements that are predominantly voluntary. It is not clear whether this definition is shared across the global community - or at least among authoritative organisations and institutions that deal with migration and environmental change – or whether it was coined *ad hoc* by the UN.

In the light of these definitions, "(human) mobility" should be a comprehensive term that encompasses both migration, displacement and planned forms of relocation. The idea that the term "migration" refers to relatively voluntary patterns of mobility can be found, for instance, in UN 11 (2014) where it is presented as "an informed choice", in antithesis with the idea of forced mobility. The term "diaspora" is not mentioned among these three main forms of mobility (migration, displacement and relocation), so it is not clear what it refers to specifically. This term seems to be more frequent in particular contexts in the IOCS: when representations of environmental migrants rely on the term "diaspora", there seems to be a process of reification and erasure of the migrants (for instance, by nominalisation). The term "diaspora" seems to be more frequent whenever approaches to the phenomena of environmental change and migration are discussed, thus focusing on processes rather than people. This term has a biblical connotation and refers to a mass movement of people who leave their homeland unwillingly and in unfortunate circumstances. In this case, the movement of human beings is represented as salient and emotionally charged. Some examples are: "Develop a package of measures and incentives to offer land-based opportunities to migrants and *diasporas*", "Provide sustainable land management opportunities to *members of the* […] *diaspora*", "Facilitation of the dialogue between government and *diaspora*", "channel and promote *diaspora investments*", and "Encourage the involvement of *diaspora communities*" (IOM 16, 2015).

The categorisation of environmental migration adopted by the UN seems to be ambiguous and does not always fit into the terminological use adopted in the texts of the IOCS. For instance, in IOM 15 (2015) the expressions "human mobility *in relation to* climate change" and "climate *induced* migration" are both used alternatively, even though the former only expresses

interrelatedness between the two aspects, while the latter implies causality ("induced"). Some differences in the use of terminology about environmental migration seem to be easier to explain: for instance, the distinction between "displacement" and "planned relocation" can also be found in texts that are not written by the UN (see, for example, IOM 15, 2015), so possibly this is a generally accepted distinction.

If migration is commonly recognised as a voluntary movement of people, interrelatedness rather than causality of the environment should be assumed. Expressions like "climate change migration" are problematic since migration is represented as a movement forced by a trigger factor (in this case climate change): whenever causality is implied, the term displacement should be used. The decision to explicitly assert the causal role of the environment might be interpreted as a discursive choice to stress that it is the primary and most impacting factor that guides the decision of people to resettle somewhere else. Other examples of lexical choices that are not clearly justifiable in terms of the tripartite distinction proposed by the UN can be found in UN 1 (2008): in "Environmental Change, Forced Migration, and Social Vulnerability" it is evident that the terminological usage is not stable because forced forms of migration should be simply named "displacement"; this specific lexical choice can be found elsewhere in the IOCS (see, for instance, "voluntary as well as forced migration", IOM 1, 2008).

Overall, if a variety of lexical choices are used within the same text, it might be difficult for the readership to keep track of what each expression stands for and so have a clear understanding of the topic of discussion. The use of a variety of different (and sometimes incompatible) collocations to identify environmental migration is a linguistic phenomenon called "overlexicalisation" (Halliday, 1978, in Fairclough, 1992, p.193) or "overwording" (Fairclough, 2001, p.92). Overlexicalisation in the context of environmental migration is indicative of uncertainty and lack of coherence about this topic on the part of the organisations and institutions that study it and identify policies to render it a less problematic phenomenon.

The terminology chosen to represent human beings in relation to environmental migration is indicative of the ideas underlying representations of this phenomenon. Each term implies a specific "story" or "way of thinking" about this phenomenon; some of the terms used in the IOC are: "challenge", "strategy", "approach", "response" and "solution" (IOM 8, 2014). The term "challenges" (IOM 15, 2015) refers to a difficult endeavour that needs skills and effort to face and has a connotation of competition; it seems to imply that people dealing with environmental migration will engage in something difficult that will test their abilities and it contributes to representing environmental migration as a game or riddle. Also the environment is represented

271

as challenging human beings in the first place, putting people in a risky or difficult situation. Instead, a fairer and more truthful representation would portray the ecosystem as an indispensable entity for human survival and wellbeing.

The idea that migration, climate and environmental change constitute a challenge for people seems to be reaffirmed by the term "strategies" (IOM 30, 2018), which implies that a set of plans are used to achieve something successfully and it is metaphorically related to fighting wars effectively. This terminological choice allegedly contributes to representing the relationship between people and the environment as conflictual; it encourages a threatening conceptualisation of the environment and consequently a practical response to environmental migration that is careless towards the preservation of the ecosystems, the "enemies" that need to be fought. Not taking care of the environment would only aggravate the conditions of those who are most affected by changes in their natural habitats and would not constitute an effective approach to environmental changes and migration in the long term. Indeed, the unsustainable lifestyle of specific groups of people is a contributing factor to environmental changes that cannot be disregarded and that should be approached and overcome. Another example can be found in "environmentally induced migration requires a comprehensive and strategic approach" (IOM 11, 2014), where the expression "strategic approach" seems to represent the dealings of environmental migration as a plan for a war or competition: people should deal with environmental migration the way they would deal with a problem, one which requires a plan to be followed; also, "strategy" is metaphorically connected to fighting, thus evoking a war-like scenario. "Strategy" can be also used to represent environmental migration as a game of ability that can be controlled by the players (see, for instance, "strategies to better manage migration induced by environmental factors", IOM 1, 2008).

The term "response" refers to a reaction or reply to something or someone and therefore this implies that it is the environment to act first through natural events and causing migration. This representation can sometimes be partial and misguiding as it erases the responsibility of people in processes of alteration of the ecosystems they depend on by means of polluting them and exhausting their capabilities to support specific lifestyles. Expressions like "response to displacement", "responses to environmental migration" and "respond to and address environmental migration and disaster displacement" (IOM 30, 2018) seem to imply that any approach to forced forms of migration is done as a reaction. It is worth noticing that the idea of responding to migration is in contrast with the idea of migration as manageable, which is proposed elsewhere in the corpus as well as in the same publication; so there seems to be confusion on how to approach this phenomenon. In "migration patterns can be responses to

extreme weather events and longer-term climate variability and change" (UN 11, 2014), "migration patterns" are defined as "responses" to natural events: the participants in such "responses", though, are blurred by the nominalisation "migration patterns".

The term "solutions" is rather problematic: according to statistics and research (see, for instance, the *Summary for Policymakers*, IPCC, 2018), climate and environmental change cannot be stopped or "solved" because environmental change is an ongoing condition and not a temporary impasse. "Solutions" frames environmental migration and change as a problem that can be solved; this is a deceiving representation because environmental change can only be limited and made less impactful by managing and re-dimensioning its proportions and consequences (see, for instance, "understand the root causes of environmentally induced migration, and find solutions to the related risks posed by climate change" in UN 1, 2008).

The term "approach" (IOM 30, 2018) simply denotes a way of dealing with something and therefore it does not attribute any specific connotation to representations of environmental change and migration (i.e., for instance, as a problem, menace, etc.). Since this term is not connoted, it might be an appropriate lexical choice to refer to environmental migration because it is open to diverse interpretations of this phenomenon of migration which is still under investigation.

The term "adaptation" refers to a change suitable for a new situation, need or purpose. Interestingly, it implies that people will have to change their behaviour and possibly their ideas about their own role in the natural world in order to fit into a new situation. Consequently, the current lifestyles and "stories" about the environment are evaluated as unfit and unsuitable.

There are also other terminological choices related to the discussion of environmental change and migration in the IOC which are worth analysing. The term "issues" in its contexts of use in the corpus often refers to a topic of discussion with the connotation of something problematic, as in "migration, environment and climate change issues" (IOM 8, 2014). It possibly implies either that the interrelatedness of mobility and ecosystems is still unknown and needs exploring, or that the implications of such interrelatedness may be hard to deal with. In both cases environmental migration is represented as critical and controversial.

The term "activities" simply refers to actions that are carried out to achieve something; it seems to refer to ways and modalities that people adopt to approach mobility (see, for instance, "migration management activities" in IOM 11, 2014).

The term "policy" implies that people adopt a way of doing or dealing with environmental change and migration which has been officially decided by a political group or an official organisation. This term seems to imply that people need a structural and cohesive approach to

deal with environmental migration which is therefore represented as a complex, serious phenomenon of considerable impact and extent (see, for instance "Activities include efforts to promote policy coherence", IOM 11, 2014).

Finally, the term "factors" in its contexts of use usually refers to one of several features that influence or cause a situation or contribute to its solution, thus it seems to indicate that environmental migration is at least partly caused by changes in the ecosystems people depend on for their livelihoods (see, for instance, "Environmental and climatic factors are both drivers and pull factors of migration, and are influenced by economic, social, political and demographic aspects" in IOM 15, 2015).

In "The migration, environment and climate change nexus" (IOM 11, 2014), the term "nexus" indicates that there is a link between nature and mobility, but the type of link is not specified in the co-text.

Expressions like "at stake" and "the stakes are high" (IOM 15, 2015) convey a particular "story" on environmental migration: the endeavour of the international community to deal with climate change commonly and effectively is represented as a game ("at stake") for the winner and it may mean that there is something of great importance that people have to deal with, possibly the wellbeing of people and the ecosystems.

The term "efforts" in "efforts to address human mobility challenges associated with environmental factors and climate change" (IOM 30, 2018) implies that physical and mental energy is required in the attempt to deal with environmental migration; the resulting representations are in line with the ones evoked by the terms "challenge" and "strategy", among others.

Among the verbs used to describe the ways in which people approach environmental migration, "address" is frequent (see, for instance, "Address the challenges facing mobile populations", IOM 1, 2008). "Address" implies paying attention to a problem and trying to deal with it, therefore it is an approach to deal with a negative situation or problem and in this case the problem are the challenges that people experience.

The verb "face" is negatively connoted as it refers to dealing with a difficult or unpleasant situation or problem, therefore evaluating environmental migration as as much negative (see, for instance, "the region faces extreme vulnerability to climate change", IOM 26, 2017).

The verbs "prepare for" and "prevent" in "Policy makers lack the information necessary to prepare for, prevent, or respond to environmental migration in an effective manner" (UN 1, 2008) refer respectively to making plans or arrangements to deal with environmental migration, and to behaving in specific ways after it has happened. The expression "*target* the issue of

environmentally induced migration" (UN 1, 2008) means that people aim at dealing successfully with environmental migration and achieve their aims about it. These lexical choices contribute to representing environmental changes and migration as a problematic phenomenon that needs be handled carefully and/or limited, possibly in order to either manage or substantially decrease the movement of people.

An interesting discoursal feature found in the data to discuss the phenomenon of environmental migration involves the use of "managerial terminology", namely particular lexical choices that convey the idea that the ecosystem can be managed and controlled by human beings. "Managerial terminology" seems to be relatively frequent in the IOC and it is used to discuss environmental migration in terms of a phenomenon that can be controlled, structured and organised to make it more easily approachable. For instance, the term "managing" implies that environmental migration is something that can be organised and controlled by people, as if it was a company and people were in charge of it. This representation might be misguiding: people can only control their own lifestyles, which would influence environmental change and migration, for instance by reducing and controlling their patterns of consumption and pollution, but they cannot step aside from the environment and control it from above as if they were not part of it. However, there can be policies that try to control these problematic and complex situations. Another example is "managed migration" (IOM 11, 2014): this expression does not specify by whom and how the movement of people should be managed. Also, migrants are concealed in their role of people who move; possibly, the erasure of human beings makes it easier to discuss migration in managerial and technical terms. In "migration management activities" (IOM 11, 2014) the "managerial" perspective is expressed through a nominalisation which does not contribute to clarifying the situation and lacks of further explanation about the nature of such activities.

Other instances of managerial terminology include expressions like "management of climate induced migration", "operationalization of migration and climate activities" (IOM 15, 2015), "migration management tools" (IOM 1, 2008), "migration management" (IOM 16, 2015), "migration governance, policy and practice", and "safe, orderly and regular migration" (IOM 30, 2018). In these examples, words like "management" and "operationalization" contribute to a portrayal of migration as "manageable". They seem to imply a degree of possible control and convey a "story" of environmental migration as something that can and should be controlled, organised and dealt with as if it were a company (who should do this is not mentioned). In this way, the complexity of the phenomenon as well as its articulated and therefore problematic nature is dismissed and understated. Even though migration might be represented as

controllable, in many occurrences agency is erased through the use of non-finite verbs such as infinitives. For instance, in "research on ways in which *to manage* environmental migration" (UN 1, 2008) responsibility for managing migration is erased as no one is mentioned.

It is worth noticing that positive representations of migration often refer to an idea of managed and controlled migration, probably both from receiving countries and local authorities in origin countries (see, for instance, "IOM is committed to the principle that *humane and orderly migration* benefits migrants and society", IOM 8, 2014).

6.3.3. Erasing the link between migration and the natural world

There are numerous nominalisations related to the phenomenon of migration: "migration issue", "migration scenario", "human mobility", "environmental migration", "forced movement", "voluntary movement", "temporary migration", "population movement", "migratory movement" and "forced migration" to mention a few. Some of these expressions may contribute to obscuring the relation that ties migration to the term it collocates with; it is the case of the terms "forced movement" and "forced migration" which do not overtly mention who or what forces people to move.

Patterns of erasure of the relationship between mobility and the natural sphere are so pervasive that they become the norm. The erasure or backgrounding of this relationship can be achieved through the use of nominalisations, specific verb forms and ellipsis. An example is the occurrence "The 2014 Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) highlights *the important and complex nature of human mobility in the climate change context*" (IOM 11, 2014): the type of interaction between mobility and climate change is not explained, either in terms of causality, reciprocity, or other forms of interrelation.

Transitivity patterns that involve passivation can sometimes leave the link between migration and environmental change understated (see Section 3.2.). Passivation is indeed frequently used to discuss the relationship between environmental change and migration; the structure frequently used is: Object - Verb - Subject (OVS) (see, for instance "migration *induced by* environmental factors" in IOM 1, 2018). The erasure or obfuscation of the relation between natural changes and mobility is detrimental: a clear representation and description of the relationship that ties them together is of paramount importance for understanding these interrelated phenomena and the identification and consequent protection of environmental migrants and origin communities.

6.3.4. Evaluating environmental migration

Representations of environmental migration often bear a negative connotation which seems to be justified by the impact that natural events might have on human beings and their livelihoods. Nevertheless, these representations are often grounded on an anthropocentric perspective by which the impact of human beings on the environment is disregarded and not mentioned.

In the IOCS there are recurrent examples of connoted representations of environmental migration. For instance, environmental migration is depicted in terms of the "negative effects of the movement of people on the environment" (IOM 1, 2008), where migration is evaluated negatively. In "border management" (IOM 30, 2018) the theme of control and management of environmental migration blends with the theme of "securisation" and control of national borders from the arrival of migrants, thus implying that migration is a threat to host societies and as such groups of migrants should be prevented to reach other countries; thus, the representation of migrants is likely to acquire a connotation of illegality and threat. The expression "irregular migration" (IOM 26, 2017) seems to refer to a quasi-illegal practice. In fact, environmental migration is not legally recognised, so its representation as irregular or illegal may be misunderstood and convey an unnecessary negative image of it, since this phenomenon cannot but be irregular until it is officially regularised. However, its representation as the only "viable option to pursue better opportunities" suggests that this type of migration is supposed to lead to a better situation for those who engage in it, so the evaluative term "irregular" is softened. Finally, environmental migration can be evaluated as a threat to human beings when it is represented in terms of quantity, frequency and intensity: for instance, in "Environmentally induced migration and human displacement affects <sic> at least 24 million people" (UN 1, 2008): in this occurrence, as in many others, the impact is described in terms of the huge numbers of people that will be affected by it.

Metaphors greatly contribute to patterns of erasure, backgrounding and evaluation. For instance, in IOM 11 (2014) migration is represented as a "mechanism for building resilience", which is an objectification ("mechanism") of a way for "building resilience". This metaphor of migration is dehumanising: if migration is a mechanism, then the people involved in it, be it migrants and/or origin communities, must be intended as cogs in a machine.

Sometimes migration is represented in terms of a journey or safe harbour; in "migration is anchored in negotiated texts on climate change" (IOM 11, 2014) migration is represented in terms of a ship and officially agreed-upon texts on climate change are a safe harbour for those who migrate. Its implicit message seems to be that official agreements on the topic of environmental migration would be desirable and should be the aim for the international

community in order to approach the phenomenon effectively. Another example is the term "diaspora", which represents the journey in biblical terms (see Section 6.3.2.).

Metaphors of water are rather frequent in the IOCS: instances like "The scale of such *flows* […] is expected to rise […] as a result of climate change", "Internal and cross-border *flows*" and "migration *flows*" (IOM 1, 2008) represent people-on-the-move in terms of water flowing. The representation of migrants in terms of moving water tends to attribute "a negative attitude about immigrants, maybe biased on a racist ideology and used to stimulate fear, reproduce racism and persuade people to act in specific ways" (van Dijk, 2014b, p.135).

6.4. Representing environmental migrants
6.4.1. Environmental migrants: general considerations

There are three main types of mobility acknowledged by international organisations: migration, displacement and relocation. The difference between these forms of mobility lies in the degree of willingness according to which people move: migration mainly refers to relatively voluntary movements of people; displacement refers to involuntary and forced movements; and relocation concerns those movements which are planned and organised and are supposed to involve the agreement -if not the request- of people to move. Consequently, people who move should fall into one of these three main categories and may be roughly named migrants, displacees and relocated people (UN 11, 2014).

More specifically, environmental displacees are represented as the ones who move as a result of adverse environmental processes and events both natural- and/or human-driven: "environmental displacees are people who are forced to leave their usual place of residence, because their lives, livelihoods and welfare have been placed at serious risk as a result of adverse environmental processes and events (natural and/or triggered by people)" (EU 1, 2011). Displacees include the category of Internally Displaced Persons (IDPs) who are "persons or groups of persons who have been forced or obliged to flee or leave their homes or habitual places of residence, in particular as a result of or in order to avoid the effects of [...] natural or human-made disasters" (EU 1, 2011).

There is a multiplicity of labels for environmental migrants, which include, for instance, "environmental emergency migrants", "environmentally motivated migrants" and "environmental refugees" or "climate refugees"; each label is motivated, but none is recognised officially, nor appears to be constantly used. Sometimes environmental migrants are further categorised into different sub-groups, as in the case of "eco-migrants" and "labor-oriented migrants". This differentiation highlights the concurrence of a multiplicity of causes into

278

patterns of environmental migration, that also result into different resettlement schemes ("The eco-migrants will be entitled with farmlands, while the labor-oriented migrants will lose their lands, relying mainly on waged and contracted work"; IOM 12, 2014). There is also a multiplicity of labels for environmental migration, which include, for instance, the term "climigration", clearly attributing these patterns of mobility to the climate and not the environment (IOM 12, 2014). Despite differences in the degree of willingness to move, there seem to be some generalised and comprehensive features that characterise the identity of environmental migrants; for instance, they are likely to be members of marginalised or vulnerable groups (EU 5, 2018; IOM 18, 2015; UN 15, 2017; UN 16, 2018).

As there are three main types of environmental mobility, there also are three main scenarios and forms of mobility. Mainly, movements can be either "voluntary; acute and crisis-driven; or long-term, structural and disparity-driven". While voluntary migrants might experience a "higher standard of living and health status in their destination countries, and are able to improve the lives of their families at home through remittances", the other two groups of migrants are likely to be disadvantaged (IOM 28, 2017).

Overall, "environmental migration" occurs when a person faces loss of natural resources (i.e. for instance, fertile land and water) and/or gradual environmental change and deterioration; the gradual deterioration of the environment causes people to reflect upon the decision to move (UN 4, 2012). "Environmental displacement" is considered a form of forced migration because the environmental event which has an impact on the livelihoods of affected populations can be clearly identified as the trigger of the movement, so people flee from the affected area to avoid physical harm and because of the loss or disruption of livelihoods. So the term "environmental migration" (and/or variants of the terms such as "environmentally induced migration") seems to be used to denote the broad phenomenon of mobility related to environmental factors, while "environmental displacement" (and/or variants of the term such as "environmentally induced displacement") is used to denote forced forms of environmental mobility primarily engendered by environmental change (IOM 29, 2017). As for the terms "relocation" and "resettlement", they are often used to denote forms of mobility as a response measure to environmental related effects; sometimes they are also used to refer to the last stage of environmental migration (EU 1, 2011; UN 10, 2014).

Environmental migration is a complex and multifaceted phenomenon that cuts across different policy areas, including but not limited to migration, development, climate change and the environment, humanitarian assistance, and security (IOM 13, 2014). Among the root causes of

environmental migration, there seems to be a particular factor related to livelihood patterns and wellbeing, whereby people tend to leave unproductive areas for areas that are more habitable and resourceful (IOM 12, 2014).

As causes of environmental migration there also are questions of social justice and equity, which manifest in issues of competition for and inequitable distribution of resources, or conflicts induced by such patterns of inequality; indeed, migration and environmental factors do not work in isolation from other factors like income inequality or poverty. The problematic aspect of these issues of equity and justice is that they might be misinterpreted as economic or war triggers of migration, while instead dire economic conditions and conflict seem to be the outcome of underlying patterns of inequality. For instance, it is said that "[a] proportion of displacement resulting from environmental factors will be primarily economic in motivation because affected populations escape from deteriorating living conditions as a result of environmental degradation" (EU 1, 2011): the deterioration of the living conditions of people affected by environmental change falls within economic drivers of mobility. Possibly, since the deterioration of the living conditions of people implies a loss of their wellbeing (not only loss of economic means, but also of health, service accessibility, rights, etc.), the drivers to migration should be interpreted as wellbeing-related rather than economic-related.

Generally speaking, it is difficult to tell apart economic drivers from other types of driver: even when drivers to migration seem to be economic in nature, they might be motivated by wellbeing-related issues. It is the case, for instance, of people moving because of income/wage differentials between the area of origin and the area of destination: despite being presented as "[e]conomic factors" to migration, they respond to a "desire to improve one's socio-economic status" to escape pattern of "[p]overty and social exclusion", which remain the main reasons for moving (IOM 12, 2014).

Among the factors contributing to environmental migration there are also specific socio-economic factors, most importantly "development": members of the international community are encouraged to cooperate and contribute to the implementation of "development" in less-affluent affected countries. "Development cooperation" is deemed necessary to deal with so-called "ecological developments", that is changes in the ecosystem, and to increase the wellbeing of affected populations : the IOC reports that the ability to deal with "climate change requires both environmental issues and development cooperation to be addressed as one" since "climate change is not only an environmental problem. It is also clearly a development problem" (EU 2, 2012). The issue of development is represented as if so-called least developed countries are responsible due to their vulnerability to environmental changes and their limited

capacity to prevent and respond to them, while the responsibility of developed countries in contributing to environmental changes is erased. Most importantly, the issue of development cooperation seems to try and justify some kind of post-colonial attitude of wealthier countries towards poorer ones: the intervention of wealthier industrialised countries in the lifestyle and socio-economic systems of countries affected by environmental changes is presented as necessary and desirable. Poorer countries are represented as needing wealthier countries to introduce them to the concept and practices of development in order to reinforce their ability to deal with the effects of environmental changes.

Overall, the representation of environmental migration emerging from the data seems to be one of migration related to environmental changes as well as instances of poverty-reduction and the increase of wellbeing. It remains open to question whether and to what extent "natural disasters play an incisive role in the impoverishment of people" living in affected areas (IOM 12, 2014).

What emerges from the texts is that there is a controversy on the role the environment plays in these forms of mobility. More specifically, there seem to be an issue on the very concept of the environment, i.e. on what the environment really is and includes, which makes the identification of environmental factors to mobility hard to identify. The most evident linguistic manifestation of this uncertainty is the fact that the environment and climate are both mentioned as driving factors of environmental migration, but in a problematic way: expressions about environmental migration alternatively mention either the former or the latter, or even both of them together. Sometimes the label "environment" seems to implicitly include the "climate" as well; sometimes the climate is clearly mentioned as an environmental factor; and some other times they are mentioned as two distinct entities, at times even as affecting one another (see Section 6.2.1.).

Possibly, the formulation of clear definitions for environmental and climate change would in turn help shape a more consistent definition of environmental migration and migrants. The publications of international organisations either provide ambiguous definitions of environmental and climate change, or they leave them undefined. For instance, climate change is sometimes intended as a "change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere […] in addition to other natural climate variability that has been observed over comparable time periods" (IOM 13, 2014): here the responsibility of humans to climate change is clearly stated, but elsewhere in the data statements are less clear and complete; also, only climate factors to mobility are usually mentioned, leaving aside environmental factors.

It is unclear whether the climate and environment are to be considered two separate entities affecting each other (environmental factors contribute to climate change, and climate change in turn contributes to the degradation of the environment), or whether the climate is a constitutive element of the environment which acts as a major driver to migration. Also, the two are not mutually exclusive: climate change is sometimes said to drive environmental change, which in turn causes migratory movements (see Section 6.2.1.).

In some instances, climate change is addressed as the cause that reduces resources for livelihood, leading to conflict and migration flows. When conflicts are mentioned as triggers of mobility, the issue of environmental migration merges with the controversial question of providing environmental migrants with adequate protection measures by, for instance, extending the refugee status in such a way as to include them.

There are manifold metaphors related to environmental change and the way people deal with it. Within the "voices" (see Section 3.1.1.) of international organisations, different types of representation of environmental migration, environmental migrants and the environment can be found, each bearing a distinct connotation. Many representations refer to fighting, such as: "a comprehensive policy to *combat* climate change", "obtaining a broader commitment to the *fight against* climate change at the global level" (EU 2, 2012); "*counter* climate change and its effects" (EU 1, 2011); "measures to *battle* the constant threat of environmental issues" (IOM 12, 2014); "*combating* environmental degradation" (IOM 2, 2008); "the *fight against* climate change" (IOM 16, 2015), and many more. The story that seems to underlie these representations of environmental migration, and more specifically of the environment, is: "climate and environmental changes are an enemy and dealing with climate and environmental change is a war". It is worth noticing that images of war and fight are commonly used for both environmental change and environmental migration; the decision to employ these images is problematic, as they may stimulate fear and other negative attitudes towards the subjects represented and encourage ineffective and controversial response measures (KhosraviNik, 2014, p.507).

Other images are more positively connoted, less straightforward to unravel and they do not closely relate to representations of environmental migration, but rather to the way it is dealt with. For instance, in "talking of migration in the context of climate change means *giving a human face to* the climate change debate" (IOM 13, 2014), migration does not seem to be negatively connoted; actually, this example seems to lessen the potential negativity attributed to climate change by introducing ethical considerations in the way this phenomenon is dealt with.

In IOM 18 (2015) there is an unconventional and unique representation of the environment: the land of arrival is represented as sacred ("the residents consider the new site to be a *holy* land"), contrasting with representations of the environment and its usefulness as a mere stock of resources.

Sometimes the environment is represented as quasi-personified, a textual representation which might imply "a moral responsibility in our dealings with nature" or suggest "a blurring of the human-nature divide" (Goatly, 2018, p.231): it is the case of, among other occurrences, "degraded ecosystems generally need a long time to *recover*", where the verb "recover" is used to refer to a non-living being (EU 1, 2011). In other instances, though, the anthropomorphisation of the environment bestows on nature the power to affect the wellbeing and safety of humankind: nature has the possibility to exercise its own agency on humans and their livelihoods; this representation has the consequence of erasing the responsibility of humans in natural events and changes, and attributing the whole responsibility to the natural sphere; see, for instance, "small island states *threatened by sea-level rise*" (EU 1, 2011).

6.4.2. Terminological choices to refer to migrants and origin communities

The representations of people affected by environmental changes include both people who migrate (those who choose mobility) and people who cannot move or decide not to move (those who choose to remain in place). In UN 1 (2008) the expression "people […] affected by environmental migration" probably refers to both environmental migrants and people who either do not move or decide not to move; the latter might experience migration of members of their family and/or community.

The main terms and expressions used in the IOCS to refer to people affected by environmental change, irrespective of their decision to stay or move from the place where they reside, are: "affected populations", "affected communities", "populations exposed to (environmental risk factors)", "populations on the move (as a result of disasters and climate and environmental change)", "populations affected by (disasters and other environmental hazards)", "Displaced persons", "those displaced by natural disasters", "affected families or individuals" and "migrants". The expressions "affected", "affected by", "exposed to" and "as a result of" contribute to representing migrants and origin communities as a passive beneficiary and the environment as an active agent that impacts on them (see Section 3.2. for a definition of "beneficiary"). More specifically, "affected" and "affected by" imply that environmental events cause or influence the situation of change experienced by affected people; "exposed to" is connoted as it refers to someone being in a situation that might be harmful or dangerous; and

"as a result of" clearly expresses a pattern of causality and consequentiality between environmental change and migration. Moreover, naming affected people either "communities" or "populations" contributes to creating a sense of ingroup and commonality between them (see Section 3.2.). More specifically, the term "populations" generally indicates a group of people living in an area or country, while "communities" denotes a group of people with shared cultural and/or social common grounds (i.e., for instance, shared nationality, religion, interests, etc.). The terms "family" and "individuals" contribute to individualisation, presenting migrants in their role as family members and as very specific persons, and further reinforces the idea of inclusivity; they also facilitate sympathy and identification on the part of the readership.

Other terms that are used to refer to migrants include "households", a metonymy that evokes the idea of migrants and origin communities as family members, but in a far more abstract way than "family" does (see, for instance, "households may face increased debt and poverty", IOM 26, 2017). As for "lives and livelihoods", "lives" can be read as encompassing and giving salience to both human and non-human lives, while "livelihoods" seems to imply an economic-centered perspective which gives salience to economic factors for origin communities to remain in place.

In some instances "migrants and societies" are mentioned separately (IOM 13, 2014): this choice either implies that the former are not an integral part of the latter and represents migrants as an outgroup "outside" the national and regional societies, or it might be a discursive choice to give salience to a specific portion of the society, namely migrants; the latter would find confirmation in the thematisation of the word "migrants". Another example can be found in IOM 15 (2015), where "societies and communities" are mentioned separately as if implying that there is a difference between the two and they refer to different referents; maybe they include both industrialised and non-industrialised countries. The terms "society and communities" in their contexts of use usually bear a connotation of inclusiveness as an ingroup of individuals kept together by particular bonds.

The use of negatively connoted terms to discuss the circumstances of environmental degradation and the risks for people is frequent, but there also are some occurrences where migration and migrants are described and discussed by means of positively connoted words. In IOM 8 (2014), for instance, the expression "the human dignity and well-being of migrants" highlights the fact that in environmental mobility there are people who need and deserve care, protection and respect. This type of representation is likely to evoke in the readership interest, concern and sympathy towards those who are most affected by environmental migration and it can promote discussions around environmental migration that do not disregard its "human dimension".

Environmental migration is often represented as a process, a means for people to approach environmental changes that affect their lives (see, for instance, "migration as an adaptation strategy", UN 11, 2014), but the people involved in these movements are often erased. The expression "planned relocation" (UN 11, 2014), for instance, does not refer explicitly either to those who participate in the planning process, or to those who are supposed to be relocated: the fact that the object of relocation are people is only implied.

Terms used to refer to environmental migrants are manifold and may change even within the same document; for instance, in IOM 19 (2016) we find: "environmental migrants"; "people displaced by disasters"; "internally displaced persons (IDPs)"; "displaced"; "displaced persons"; and "IDPs displaced by disasters". In line with the categorisation of mobility described in Section 6.3.2., environmental migrants are "displaced" when reference is made to "disasters", as "displaced people" are those who are affected by "sudden-onset events" and therefore cannot choose whether to migrate or not. It is worth noticing how definitions like "people displaced by disasters", "Internally displaced persons (IDPs) who are displaced by disasters", etc., presuppose and assert with high facticity that people are forced to move because of natural drivers. Also, in these expressions people are the subject of a passive structure and therefore depicted as passive beneficiaries of changes in the natural systems instead of active agents who adapt to a situation of change with conscious intentionality. Another instance of representations of migrants and origin communities as passive recipients of environmental events is "Some also *have to flee* their homes several times" (IOM 19, 2016): the high facticity of the statement expressed through deontic modality (see Section 3.2.) seems to imply that people affected by environmental change can rarely make a choice on im/mobility; possibly, only in cases of "slow-onset events" they can decide whether to move or not.

In some occurrences the biased expressions "Least Developed Countries" and "LDC" (IOM 15, 2015) are used as official terms to refer to environmental migrants and origin societies. They bear a rather negative connotation of inferiority to so called "developed countries" and of general underdevelopment, despite the fact that the parameters that define development are not mentioned, nor is the definition of development. The decision to use this type of expression may possibly imply and impose the authoritativeness of the so called "developed countries": it may be a legitimation strategy to evaluate the perspective of "developed countries" on environmental migration as consistent and reliable and, in turn, the approaches they propose to deal with it.

6.4.3. Backgrounding people, emphasising processes

The erasure of migrants as active participants in movements and approaches to environmental change tends to be rendered via nominalised processes. Nominalisation, noun phrases and gerunds *-ing* forms used as substantives are recurrent and tend to obscure agency; some examples include: "human mobility issues", "planning", "community stabilization", "facilitating migration", "labour migration programs", and "diaspora contribution" (UN 11, 2014). In "Migration is often assumed to result from the failure to adapt to a changing environment" (UN 11, 2014), the noun "failure" erases the agency both of those who are supposed to put adaptation strategies into action, and of those who are supposed to adapt. These publications state the role wealthier countries play in causing environmental change and migration; as a consequence they do imply responsibility, but they also refer to the failure of affected countries to adapt to environmental changes. So the term "failure" probably refers to the global community, including most and least affected countries. Finally, the present participle (*-ing* form) of "change" erases the causes and reasons of change, including human agency.

Another example of noun phrases used to describe complex processes where participants are blurred is "migration can be a positive coping and survival strategy" (UN 11, 2014): here the author(s) of the text do(es) not mention explicitly who is supposed to rely on migration as an approach to environmental change, nor whom for it is supposed to have "positive" or "survival"-related effects, even though it can be inferred from the context. In "Migration […] leads to positive development impacts" (UN 11, 2014) too, it is unclear who for migration will have positive effects; also it is not clear, according to whom these effects will be "positive" and related to "development". Other examples include the expression "the displacement of people" (IOM 15, 2015), a nominalisation that emphasises the process rather than the participants. In "migration in turn affects the environment" (IOM 11, 2014), no participant in the process of migration is mentioned and the presence of migrants is implied through a noun ("migration"). Erasing or backgrounding the presence of human migrants through nominalisation may be influenced by the desire not to represent migrants negatively.

Erasure by nominalisation can be found elsewhere in the IOCS, as in the statement "the potential of migration is a tool for resilience-building and adaptation", which is rich in nominalisations and nouns: here migration-as-adaptation seems to be presented from the perspective of wealthier industrialised countries. On the contrary, people affected by environmental migration might conceive migration in other ways, for instance as survival or escape, rather than a positive strategy for adaptation. If unravelled, the statement might mean that people who migrate have the potential to act and build resilience and foster adaptation in

their own countries; still there is the need for wealthier countries to intervene and "manage" this potential for adaptation (it is one of the three "broad objectives" of the IOM with regard to managing environmental migration) (IOM 11, 2014). This is an example of a "post-colonial" narrative that emerges in the IOCS; it characterises the perspective that represents both the environment as a possession, and affected people as needing someone to intervene and provide them with tools and organisational skills to approach environmental changes, as well as lead them towards "development".

Other examples of erasure include "migration pressure" (IOM 1, 2008), where the role of migrants in the deterioration of the environment is erased by the noun "migration" (pressure on the ecosystems depends also on the demands that the people who are moving impose on them). Agency can also be erased through the use of agentless passive verbs, like "degraded", "abandoned" and "used" in "*degraded* and *abandoned* land" and "land *used* for agriculture is moderately or severely *degraded*" (IOM 16, 2015).

The erasure of migrants as active participants in movements is rendered with metonymies in some occurrences: in UN 11 (2014) "displacement" is defined as a "vulnerable" movement, thereby representing people on the move metonymically in terms of the process of moving. This linguistic representation of displaced people is dehumanising (people are obfuscated by the term "displacement") and humanising at the same time: the term "vulnerable" is generally used to refer to living beings and it is an emotion-charged word which is likely to induce the audience to sympathise with migrants and the harsh situations they cope with. The same process of backgrounding of people can be found elsewhere in the text whenever dense lexical compounds are used, as in the case of "rural household income sources" and "vulnerable households" (UN 11, 2014). Another example of a metonymical representation of environmental migrants is "diaspora contributions" (UN 11, 2014) where people on the move are described in terms of the amount of money they contribute to their own country and family members. In "an increase of this figure" (IOM 19, 2016), the term "figure" metonymically stands for the people who are displaced by disasters and who therefore are objectified and erased, while salience is given to the proportions of the phenomenon of migration by focusing on the idea of quantity ("increase").

Representations of migrants that contribute to evaluating them as a dangerous and powerful force that will impact on receiving societies are often concerned with references to quantity, frequency and intensity of environmental migration. For instance, "substantial" (UN 1, 2008) is a reference to quantity and it refers to the large amount of people that will be affected by environmental changes. References to quantity are re-proposed immediately after in "the scale

of such flows" (UN 1, 2008): the use of a metaphor of water to express that many people are/will be involved in mobility is very common in discourses on migration (KhosraviNik, 2014, p.507; van Dijk, 2014b, p.135). References to quantity are sometimes backed up by references to studies and projections as in "The scale of such flows, both internal and cross-border, *is expected to rise*" (UN 1, 2008); as a result these statements are legitimised and evaluated as authoritative and therefore are presented as reliable to the reading public.

Metaphors of water are sometimes used to represent migration patterns in terms of their intensity, frequency and quantity. For instance, in "The scale of such flows, both internal and cross-border" (UN 1, 2008) migrants are represented as flowing water, described in threatening and worrying terms as having "unprecedented impacts on lives and livelihoods" (UN 1, 2008); the term "unprecedented" reinforces the idea of extraordinary intensity -and its consequent result, worry. Negative representations of migrants include their representation as engaging in criminal activities as a last resort for survival: an example is "Sometimes affected families or individuals may also resort to trafficking or collude with traffickers in order to earn money" (IOM 26, 2017).

Other examples that include reference to numbers and estimates are, among others, "200 million to 1 billion people moving *due to* environmental factors"; "A striking 26.4 million people, one person per second"; and "IDPs displaced by disasters *were almost double of* those who had to flee their homes due to armed conflict" (IOM 19, 2016). It is worth noticing that the verb "due to" implies causality of environmental factors for migration (it could be rendered with "because of", for instance), and the adjective "striking" is evaluative and it reinforces the emphasis on numbers by appealing to the expected reaction of the readership to the numbers reported. In "numbers of people" and "millions of people displaced by natural hazards" (UN 1, 2008), references to numbers are thematised through passivation, thus giving salience to the idea of quantity; this device may evoke in the readership a sense of being overwhelmed or threatened by the arrival of migrants.

There are other metaphorical representations in the IOCS that are mainly used for evaluative and legitimation purposes. For instance, "harness the potential of migrants in areas of destination" (IOM 16, 2015) is a metaphor that relates to the animal sphere: migrants are represented as powerful and indomitable animals whose potential for danger can be reduced or controlled and turned into a positive force. This metaphor evokes an emotional response to migration as having a lot of power that needs to be catalysed to avoid its potential danger for receiving societies. It creates affinity with the reading public of affluent societies because it declares that IOM's activities aim at securing the safety of receiving societies, and that the

potentially harmful impact of migrants will be controlled and limited; in this way members of affluent societies are likely to feel reassured. This is a legitimation strategy and it is also evaluative as it creates a double image of migrants as having animal-like force on the one hand - which is negative if they are arriving in host societies in mass-, but also as a force that can be tamed -which is "positive" for host societies because migrants can bring power and energy for the host societies to be controlled and employed, mainly as workforce.

In "migrants have minimal bargaining power to assert their rights and can become easy targets for exploitation" (IOM 26, 2017), migrants are represented in metaphorical terms as a "target". This representation is rather controversial because it seems to imply that migrants need to call for their rights in order to have them recognised and respected by others, and also need to do that by economic means; the negativity of this representation is further reinforced by a reference to exploitation. The overall representation of migrants as people who can be and who are exploited unless they have enough economic power to assert their rights is quite questionable and reminiscent of distinctions in socio-cultural classes which are problematic.

Another representation of affected populations that is worth exploring is "trapped populations" in "the most vulnerable may be those who are unable to or do not move (trapped populations)" (IOM 30, 2018). Firstly, in the context it is not clear whether vulnerability refers to vulnerability to natural events, poverty, lack of services and resources, or other. It is interesting to notice that vulnerability seems to depend also on people's own choice and will to relocate somewhere safe ("do not move"); so remaining in place is also the result of unwillingness and not only of inability. Therefore, the definition "trapped population" becomes controversial and contradictory as "trapped" would imply a situation of no escape caused by an external agent. This is quite a sensitive issue because of course affected populations cannot be forced to move, so lexical choices need be pondered. Below in the same text, though, migration is described as a factor of vulnerability itself: "migration can amplify [...] vulnerabilities" (IOM 30, 2018). Migration is therefore described both as a strategy that "allow[s] people" to become more resilient to vulnerabilities ("temporary migration" can, for instance, "reduce reliance on the environment for subsistence"; IOM 30, 2018), and as a trigger of vulnerability at the same time, further complicating the representation of who vulnerable people really are.

An exception to these representations characterised by erasure or backgrounding of environmental migrants is the expression "migrant entrepreneurs" in IOM 16 (2015): here migrants are categorised according to functionalisation (see Section 3.2.) in terms of the job and/or activities they engage in. This representation describes them as important according to their working skills and competences: the word "entrepreneurs" evaluates migrants as

competent and skilled. This type of representation may lessen the feeling of threat and fear evoked by narratives that depict migrants as "stealing" job opportunities in receiving societies; at the same time though, migrants are only valued as potential workforce for host societies. These representations of migrants include a perspective on their usefulness and role in particular socio-economic settings, possibly based on the fact that "[h]ealthy migrants contribute to the advancement of human capital in both sending and receiving countries, supporting healthy communities and healthy economies" (IOM 28, 2017). It is interesting to notice how economies are humanised by the attribute "healthy" which is also used for migrants and communities and is repeated three times in the sentence –a rhetorical device called "list of three" that stresses the salience of the element which is repeated (see Section 3.2.): the wellbeing of incoming people seems to be important because it entails the wellbeing of host communities and their economic systems.

6.4.4. Patterns of inclusion and exclusion from "groups"

Environmental migrants and origin communities are referred to in a multiplicity of ways which can convey diverse degrees of either inclusivity or exclusion. Inclusive and exclusive linguistic features on environmental migrants can include person deixis expressed through pronoun use, as in "provide […] protection for *those* affected" (IOM 11, 2014): here origin communities are categorised using a nominalised past participle which backgrounds those who are affected. Also, the pronoun "those" used as a form of person deixis is likely to evoke in the audience a sense of distance from the participant mentioned, as if the reading public is unlikely to fall within the category of people who experiences the impacts of environmental change.

Origin and migrant communities seem to be included in one shared group: in "people who already are or will be concerned by human mobility choices" (IOM 16, 2015), people who experience environmental changes are not represented as people who either move of stay in their origin country, but rather they are included in an ingroup regardless of their im/mobility.

The categorisation of participants in ingroups and outgroups (see Section 3.2.) does not necessarily mean that the members of these groups do not sympathise with one another. For instance, in IOM 19 (2016) the use of the third person plural in "Some also have to flee their homes" conveys the idea of an outgroup; nevertheless, the use of the word "home", which bears a connotation of familiarity and refers to a primary basic need to almost everybody in the world, is likely to evoke in the readership emotions of sympathy for the loss experienced by affected people. Also, in "taking into account *their willingness* to diversify their incomes" (IOM 16,

2015) the desires and choices of the outgroup (the will to relocate) are acknowledged as salient and therefore to be respected (see Section 3.2.).

Emotion-charged words can also create in/outgroups that go beyond the binary opposition between affected and non- or least-affected populations. Migrants and affected communities are sometimes represented as exposed to unsafe conditions and manifold risks. They may become the victims of other people's illegal behaviour which increases the hardship of their situations; they may also try to find ways out that only worsen their precarious conditions. For instance, in "increased desperation may push affected populations into the hands of criminal actors" (IOM 26, 2017), affected populations are juxtaposed to specific social groups that are negatively connoted as criminals: by opposing these two participants, the author(s) evaluate(s) affected populations positively as they are told apart from "criminal actors". In "giving space for traffickers to operate and exploit affected people, their desire for safety and search for means of income to help restore their lives" (IOM 26, 2017), the use of terms that encourage an emotive response to the situation described ("exploit", "desire for safety", "help restore their lives") creates bonding (see Section 3.2.) with the reading public: smugglers and traffickers are represented as an outgroup and affected populations and the readership are included in a common ingroup.

In some occurrences, the representation of migrants is based on their -supposed- gender, and creates other types of ingroup and outgroup oppositions. In "men selling their wives or other female relatives or parents selling their children in order to cope with the losses associated with a changing climate" (IOM 26, 2017), men are the main actors, as if women and children need not coping with the losses of environmental change. Another example of "gendered" representation is "women are especially vulnerable as incidents of women originating from climate vulnerable areas being duped by "agents" is frequent" (IOM 26, 2017): here terms like "vulnerable", "incidents" and "being 'duped'" result in a representation of women which is rather superficial and portrays them as quite passive and naïve. These examples contribute to a representation of women as passive participants: even though they are the subject of the sentence, women are not represented as active agents, but rather as participants in processes that they undergo and they are "vulnerable" to particular actions that are performed by others. Also, these processes are named "incidents", thus using a vague nominalisation which blurs both the agent and the gravity of the deed. Moreover, "originating from" seems to imply that there is a cause in the conditions of the climate that relates to these deeds, while they deal with human agency and criminal activities. The verb "duped" almost lays the blame on women for their supposed naivety, and "agents" in inverted commas backgrounds the criminal nature of the

people who commit these crimes. Overall, this representation of women results in a narrative which softens the gravity of their situation. Also, "vulnerable women" is mentioned again immediately later in the text, reinforcing the idea of the fragility of women as an easy "target" for fraud and crime.

Other examples that contribute to this representation of women include "women and women-headed households are perceived as vulnerable to trafficking, alongside children displaced or orphaned during natural disasters" (IOM 26, 2017): here the vulnerability of women to criminal actors is re-affirmed, as well as the vulnerability of children who are left alone or cannot rely on any adult figure to take care of them. In "the risk faced by women" (IOM 26, 2017) women are presented as dealing with a problem or difficult situation, in fact someone is threatening them; also, they are backgrounded and "risk" is thematised via passivation. The gendered representation of migrants and origin communities seems to be revealing of an underlying patriarchal mind-set: it is worth noticing, for instance, the order chosen to list "men, women, boys and girls" in "the differential impact that climate change has on men, women, boys and girls and how this relates to human trafficking" (IOM 26, 2017), subtly implying a hierarchical order of importance and power.

The gendered representations of migrants and affected communities also regard the risks and vulnerabilities migrants are exposed to: men migrants risk forced labour, while "women and children may be coerced into prostitution or exploitative domestic work" (IOM 26, 2017). Overall there is a pervasive negative connotation of the situations migrants are exposed to by those who take advantage of their precarious condition, but the latter are left unmentioned as agency is erased. In some occurrences, the representation of women as passive participants extends to men too: in "incidents of trafficking of men and boys for labour purposes from areas affected by natural disasters" (IOM 26, 2017), for instance, the fact that men are threatened by traffickers could have been made more explicit, instead it is represented via nominalisation ("trafficking").

To sum up, these representations of environmental migrants are quite controversial: they discuss lack of protection for people who find themselves homeless and deprived of a community and a socio-economic network to support them in both origin and destination countries. However, the dangerous situations and loss of rights they experience may be only partly related and attributed to environmental change; mostly, it has to do with persons who find themselves in a situation of lack of protection and become victims of unscrupulous and criminal people.

6.4.5. A gendered experience: women's migratory experiences

According to what emerges from the texts of the IOC, an effective approach to environmental migration should not only be "people-centred" and "human-rights-based", but also "gender-responsive": it is argued that the cultural and economic value that women and girls as migrants contribute to societies is commonly recognised. Despite the important role women play in migratory experiences though, they appear to be a group of under-recognised and under-protected migrants.

It is interesting to notice that throughout the corpus the topic of gender emerges quite frequently, and women are often addressed in a twofold way: either as crucial participants in decision-making processes on prevention and/or response measures (hence the importance to include them in such processes and share information); and as the most severely affected victims of environmental change. Some examples are: "women and the poorest indigenous peoples are rarely consulted on issues, particularly in relation to climate change" (EU 2, 2012); "vulnerable groups and women must be included in decision making and carrying out interventions" (EU 4, 2015); and "the most vulnerable members of society such as women, children, the elderly, disabled persons, minorities and indigenous peoples are the most directly concerned" (EU 3, 2013).

In the keyword lists extracted from the comparison between the IOC and NC (see Tables 4.1. and 4.2.), issues of gender only emerge twice: the term "woman" which is ranked 65 in the top 100 single-word keywords, and the expression "gender-based violence" which is ranked 83 in the top 100 multi-word keywords. Despite resulting in only two key terms, issues of gender are all but seldom dealt with in the IOC. A close reading of the linguistic context of keywords and frequent words reveals that issues of gender are pervasively referred to when discussing various questions related to the phenomenon of environmental migration. More specifically, women, their role in im/mobility and their peculiar experiences related to environmental migration are frequently mentioned, compared and contrasted with those of men ("climate and environmental change will generate different migratory experiences and impacts for women and men", EU 1, 2011). "Woman" (and so "women") has 419 occurrences in the IOC in 950.189 words, so one occurrence every 2267,75 words, with a frequency of 440.96 occurrences per million, but the term is mainly distributed in 3 texts only (totalling 125 occurrences out of 419), namely IOM 28 (2017) (59 occurrences, that is 62.09 occurrences per million), IOM 29 (2017) (35 occurrences, that is 36.83 occurrences per million), and IOM 13 (2014) (31 occurrences, that is 32.63 occurrences per million). Therefore it seems that the phenomenon of women's outmigration and

its consequences in both origin and destination societies is not deemed to be a salient one and it is mainly a concern which emerged around 2017 for the IOM.

The main issues related to the gender-differentiated experience of migration are situations of exclusion: they either have to do with socio-cultural issues (women's supposed social and domestic role as care-takers, EU 1, 2011) and issues of participation in decision-making processes in contexts where women's perspective is disregarded (EU 2, 2012); economic issues (women's exclusion from the working sector); and safety issues (women's exposure to health and security risks, EU 2, 2012).

Undoubtedly, the gendered issue *per excellence* is the very experience of migration; it emerges, for instance, in the linguistic context of use of the keyword "process", where differentiation in migratory experiences is evident: migration is "a social process which is inherently gendered as climate and environmental change will generate different migratory experiences and impacts for women and men" (EU 1, 2011).

More specifically, women are mentioned in their social role as caregivers both in origin societies (a determining factor in the decision of a family to move, EU 1, 2011), and in host societies where they are valued as workers because of their supposed propensity and ability in domestic work. Indeed, in origin societies women are said to be "increasingly carrying the burden of their households", while women are also increasingly migrating in receiving societies "due to shifts in the global labour demands and the cultural expectation that women are particular suitable for domestic employment opportunities" (EU 1, 2011). Therefore, gender inequalities also shape labour migration dynamics, to the point that destination countries might consider adjusting their migration policies "to take into account gender-specific trends, for instance by organizing programmes for admission of foreign workers specialized in particular fields" (IOM 28, 2017).

The migratory experience can also be a means of emancipation for women, who might be able to earn money and manage it autonomously, thus increasing their independence and reinforcing their resilience towards forms of social vulnerability: it is stated that the "migration of women can also have emancipating effects due to increased wage-earning potential and personal autonomy" (EU 1, 2011). Men's migratory experiences, including seasonal migration, can be a means of empowerment for women as well, since "when such migrants return home through the so-called circular migration process, they can take back and disseminate norms of behaviour and practices that improve the position of women in their society of origin" (IOM 28, 2017). Nevertheless, migration can also result in a completely opposite situation, leaving women in a condition of social, economic and cultural disparity with men, as "the out-migration of women

does not necessarily translate into more egalitarian household divisions of labour and can even reinforce patriarchal gender relations" (EU 1, 2011).

Different groups of women are represented as having diverse experiences of migration. It is worth noticing that their social position as caregivers may play a crucial role in the migration propensity of the whole family when exposed to a situation of environmental risk: their social and domestic function may indeed influence the household's decision for earlier evacuation, for instance (EU 1, 2011). According to the data, behind the decision of women to move there are strong cultural influences rooted in cultural norms and/or the norms related to the family: since women are supposed to perform the role of caregivers in the family "[t]he obligations women may have towards parents and children can be a barrier of migration" as they may affect the extended family (EU 1, 2011). Also, since women are "relegated" to the role of caregivers, women's outmigration may also impact on other women in the household, with the risk of aggravating their condition; as mentioned in EU 1 (2011) "women are also affected by environmentally induced migration when they are not migrating themselves" as they "are left on their own in a heightened situation of poverty".

The problematic issue of the gender-differentiated impact of environmental change on migration is concerned with the gender-differentiated responses of affected populations to environmental change and mobility. One of the terms that best exemplifies this topic appears among the top single-word keywords of the IOC and is "household". "Household" seems to occur mainly in co-texts that refer to the drivers of movements, especially for women. As already mentioned, women very often carry the burden of the household; in this respect it is argued that the household should be more egalitarian so that women are not "left behind" and can rely on their own source of income:

> "Male out-migration often results in increased workloads for the women left behind. The increased reliance on male-dominated migrant incomes can also have detrimental effects on female empowerment. In general, the impacts of migration on gendered roles vary by household characteristics, cultural setting and the migrant experience and therefore have to be assessed on a case to case basis" (EU 1, 2011).

The controversial issue of the financial income deeply affects the gender-differentiated experience of migration: migration might lead to increasing reliance of women on men's "incomes", further aggravating the detrimental effects of migration on women's empowerment. When women are affected by unemployment because of their gendered roles, their "exposure" to social vulnerabilities increases:

"because of a deeper economic and social gender divide, women often experience larger negative impacts of climate variability and change than men do as they tend to be poorer and less educated than men, to rely more on natural resources for their livelihood and to face social, economic, and political barriers that limit their coping and adaptive capacities" (IOM 13, 2014).

However, at the root of women's economic exclusion from a male-dominated economic world there are usually cultural patriarchal "norms" motivating it (EU 1, 2011). Most importantly, the gender division of labour might also exclude women from the so-called "right to environmental knowledge" around issues of environmental change and migration and ways to deal with them (EU 2, 2012): the social organisation of life requires women to carry out "domestic tasks" and take care of children and the elderly, so that only men are called to deal with disaster management and response activities to environmental change (IOM 12, 2014). Women therefore tend to be excluded from information around environmental change and preventive and adaptive measures to deal with it. Depriving women of the necessary knowledge for safe and informed response to situations of risk is not only likely to increase their vulnerability to environmental change (as well as the vulnerability of the family members there are expected to take care of), but it also reduces the ability of the whole community for coordinated and well-managed response to environmental changes. In fact, the exclusion of women from processes of information, capacity-building and empowering in the context of environmental changes has negative reflections on men as well, resulting in an impoverishment for the whole community: it is suggested that in particular situations "men can be more exposed to natural hazards, including secondary hazards related to emergency assistance, and that they might be less aware of risks and less ready to mobilize social capital to initiate a migratory movement" (IOM 13, 2014).

Possibly because of their imposed subordinate role in society, women (and children), are also the most at "risk" category of migrants, suffering from psychological, physical or sexual violence or exploitation (EU 1, 2011). Women and other under-protected members of origin societies are exposed to acts of violence and exploitation perpetrated against them both during the process of migration and once arrived in host societies: "[w]omen are, for instance, particularly exposed to gender-based violence during the migration process, and are affected disproportionately by migrant trafficking" (IOM 28, 2017); also "[w]omen and girls are especially vulnerable to sexual and other forms of gender-based violence as arriving refugees" (IOM 18, 2015). Women are also most concerned by health issues both during the process of migration and once arrived at the centres of reception, due to "hygienic and infrastructural

deficiencies in and outside evacuation centers" (IOM 12, 2014). If women are expected to be the caregivers of the family, then it is likely that a decrease in the level of wellbeing of women might in turn impact on the level of wellbeing of any member of the family they are supposed to look after.

When choosing a destination country, women who are able or decide to move may take into consideration their own possibility for empowerment, in order to ameliorate their socio-cultural and economic condition through migration: "levels of discrimination in destination countries play an important role in shaping female migration flows, as migrant women are often attracted to countries where more gender-equitable norms and practices offer them greater freedom and rights" (IOM 28, 2017).

All in all, issues of gender emerge in terms of "unequal gender distribution of roles and responsibilities and unequal access to resources which may make women more vulnerable than men" to the impacts of environmental change in both developed and developing countries (IOM 13, 2014). It is argued in the data that "gendered power relations, cultural norms and values, together with the gendered division of labour, deeply affect and differentiate the adaptive capacity of women and men" (IOM 13, 2014): this problematic scenario is likely to be underpinned by a patriarchal mind-set which results in injustice for some members of the society and risks for all of them. From a human rights perspective and according to a human-rights approach to environmental migration, women should participate in information-sharing and decision-making processes around environmental change and migration, and should be granted equality with men especially because, together with the most vulnerable members of society such as children, the elderly, disabled persons, minorities and indigenous people, they are the most directly concerned (EU 3, 2013).

6.5. Representing other participants

6.5.1. Creating ingroups and outgroups

Non-migrant participants in the phenomenon of environmental migration that appear in the texts of the IOCS include international organisations and the global community. The terms "country" and "countries" (see, for instance, IOM 16, 2015) are often used to metonymically refer to the participants involved in the phenomenon of environmental migration and its dealings, be it host or origin societies, migrants and those who play a role in decision- and policy-making processes. References to nations, countries or communities might be used to tie something "to the national context, thereby establishing a larger community", an ingroup (Bednarek & Caple, 2012, p.52). Indeed, this lexical choice may either function as an inclusive word to establish

different ingroups (countries) that are not in competition among them; rather they differ from one another because of geo-cultural and social motives. Or else, this choice might be justified because it often occurs in specific contexts in the IOCS where international policies and activities are discussed, and the term relates to governments and leaders, therefore it is discursively appropriate.

As far as lexical choices used to discuss initiatives to approach environmental migration are concerned, there seems to be a general tendency to employ a terminology that includes positively connoted words, emotion-charged words and inclusive words. When the activities of the international community and international organisations are discussed, the terminology used to describe environmental issues is carefully selected and expressions like "slow-onset events" and "rapid-onset events" are preferred to others like "environmental disasters", which are used elsewhere in the texts. Also, the role of these events on migration is mitigated and expressions like "have links to human mobility" are used instead of, for example, "have impacts" on it (IOM 11, 2014). Positively connoted verbs tend to be used in relation to the activities of international organisations and the international community. Moreover, there is a tendency in the publications of the IOM to thematise the IOM with the supposed aim of proposing itself as a key player in the dealings of environmental migration, giving salience to its own role (see, for instance, "Over the past few years, IOM has established a comprehensive programme of work"; "IOM has been active in MECC"; "The Organization pursues the following three broad objectives"; "IOM contributes to policy processes", etc., IOM 11, 2014).

Lists of activities promoted by international organisations often include positively connoted words or words which acquire a positive connotation in their context of use in the corpus. For instance in IOM 11 (2014) the verbs "foster", "promote", "respect" as well as other expressions with a positive semantic prosody like "human rights" relate to the activities of the IOM. Some other examples are: "prevent", "provide assistance and protection", and the metaphor "harness the potential" (IOM 11, 2014) (see Section 6.4.3.).

Despite the apparent endeavour to characterise the discourse on international organisations and the international community at large in terms of inclusivity, purposefulness and positivity, it must be noticed that it also relies on pervasive patterns of erasure and backgrounding. For instance, when referring to the work of international organisations, words which imply cooperation like "negotiated" (IOM 11, 2014) are used in a controversial way: the participants included in the process of negotiation are not mentioned, so it is unclear whether negotiations only concern wealthier industrialised countries and policy-makers, or they include affected countries as well. Also, sometimes nominalisations, nouns and impersonalisation or passivation

have a positive aura or are inserted in a context where they acquire one as they refer to activities that should be undertaken to deal with environmental migration effectively: it is the case of "*preparing for* and *responding to* displacement when it occurs is crucial", "Anticipatory *planning* such as national adaptation process is crucial to *preventing* or *mitigating* displacement, *reducing* vulnerability, and *strengthening* the resilience of communities", "the available options for *coordinating* and *linking* human mobility issues with climate change-related policies and planning, in particular, the *development* of national adaptation plans", "The adaptive capacity of vulnerable households and communities *can be improved*, for example through *training to help* people access jobs", etc. (UN 11, 2014). Nevertheless, in these examples agency is never clearly mentioned and it is never said who should take care of these activities.

The blurring of participants in the processes discussed -and the consequent obfuscation of responsibilities- mainly depends on the use of nominalisations and non-finite verb forms. For instance, in "It could be possible, in this context, *to introduce* changes in the Returns Directive, *to invoke* serious slow-onset climate-change events in the country of origin as a factor *to be considered* in suspending the return decision" (EU 3, 2013) the use of infinitives backgrounds who is going to sign the Agreement and whether it will include representatives of affected countries; basically, it hides whose agenda is displayed in the Agreement. The process of blurring participants involved in the dealings of environmental migration is further increased by the fact that the activities listed in the Agreement are presented in terms of nominalisations like "adaptation", "loss and damage", "mitigation", "financing", etc. All nominalisations are introduced by an infinitive like "include", "consider", "mitigate", etc. and continue with a nominalised process or a complex phrase such as "facilitated migration", "displacement issues", "human mobility issues", "financial transfers", "migrants and diaspora knowledge" further erasing or backgrounding agency (see, for instance, "provide the funds for climate financing", IOM 15, 2015). Even though the publication states that it is the IOM that "is committed to bring <sic> human mobility concerns across all the substantive pillars of the expected Paris Agreement", it is not the IOM that will carry out the actions reported. Rather, it will be the international community committed to signing the Agreement; but these countries remain unmentioned, thus blurring responsibility for agency. For instance, the IOM only encourages the international community "*to bring* the notion of human mobility on the climate negotiations agenda and *have it recognized* in the Paris Agreement", but the completion of the task is not the IOM's responsibility.

In some occurrences, though, the backgrounding of specific participants may be influenced by the negative aura of the topic of discussion: in IOM 19 (2016), "those figures" and "this figure"

(that is, estimates) are metonymies to refer to the process of movement and the people involved in it in a sort of euphemistic way, as a way to relieve migrants from the responsibility of the estimated consequences of migration for receiving societies.

When specific terminological choices are displayed, it is not always clear who they refer to; this seems to occur especially with terms which bear a negative connotation of, for instance, danger or harm. In "migration *challenges* in the context of environmental and climatic changes" (IOM 16, 2015) whether the term "challenges" refers to migrants, host societies, origin societies, or even all of them comprehensively is not specified because agency is erased by "migration". The same principle applies to expressions like "increased vulnerability" and "security risks" (IOM 16, 2015), where the danger of "vulnerability" and "risks" does not have a clear target or referent, bar the reference to human mobility in the co-text.

It is worth noticing that when specific technical terms like "vulnerability" and "exposure" are mentioned (for instance, IOM 19, 2016) it is rarely mentioned whom they refer to and what their source is; this could be a euphemistic way to background or erase the risk to human lives -and more specifically to a particularly underprivileged part of humanity- and their safety. In "human security" (see, for instance, UN 11, 2014) there is no further explication whose security the text mentions; possibly, lack of any specification implies that "human" refers to the safety of everybody, but no specific explanation is given. The message conveyed by this expression is likely to be based on good and purposeful intentions, but these types of lexical and discursive pattern risk diminishing positive messages. Other instances of nominalisations and nouns related to the activities and policies of international organisations include: "community stabilization projects"; "coping capacity" (IOM 1, 2008); "human mobility perspective" (IOM 1, 2008); and "environmentally induced migration research" (UN 1, 2008).

In some occurrences, the activities of international organisations are rendered through images that positively evaluate them: in the case of "The MOU signature officially *launched a* structured *collaboration* on the land-migration nexus" (IOM 16, 2015), the metaphor retains a positive connotation since "launch" is an evocative term which seems to imply a good degree of novelty and energy, and "collaboration" evokes an idea of partnership and working together. These expressions contribute to representing the international community as purposefully and commonly engaged in active and innovative action to approach environmental change and migration.

The international community is also concerned with the pollution of the ecosystems that eventually leads to environmental changes that trigger mobility. However, the agency and responsibility of these countries into ecosystem change is erased and can only be inferred. For

instance, in "developing countries vulnerable to climate change" (IOM 15, 2015), the populations living in these countries are said to be vulnerable to climate change, but the consequences of human activities that contribute to such changes are left unmentioned. In "environmental sustainability measures" (IOM 30, 2018), the term "measures" refers to an official action to deal with a problem, and the problem supposedly is environmental unsustainability. Indeed, "sustainability", namely the possibility for the environment to continue to exist and be healthy, is put at risk by somebody or something which is left unspecified, even though it can be inferred that the lifestyles of people from industrialised countries are the real danger.

Other non-migrant participants in the phenomenon of environmental migration that appear in the texts of the IOCS include actors that are often represented as engaging in illegal or even criminal activities. In IOM 26 (2017) people engaging in specific job activities ("industries") are said to be "vulnerable to human trafficking or labour exploitation"; the nominalisations "human trafficking" and "labour exploitation" are used to background both the agent and patient of unethical coercive labour practices. In this passage "industries" mentioned in the text are said to "have a detrimental impact on the environment and contribute to climate change", therefore these "industries" are evaluated negatively and blamed for causing environmental change. This representation is further confirmed by other passages such as "environmentally damaging extractive industries are underpinned by large numbers of migrant workers in forced labour situations": in this passage the detrimental impact of industries on the ecosystems is explicitly declared, but the agency of those who force migrants into these working activities is erased. This statement also describes what migrants are exposed to, namely "less-then-ethical" and "coercive" work and treatment. The agents responsible for illegal or irregular activities perpetrated towards both migrants and the ecosystem tend to be erased through the use of nominalisations: for instance, in "the link between forced labour associated with modern slavery, unregulated logging, and the widespread destruction of rainforests" (IOM 26, 2017), there is no agency expressed for "modern slavery", "unregulated logging", and "widespread destruction of rainforests".

6.5.2. Patterns of responsibility

As briefly mentioned in Section 6.5.1., there is a widespread backgrounding of agency on to-dos activities and practices that are required in the context of environmental migration. More specifically, lack of agency seems to be associated with statements that describe what actions need be done (deontic modality) to approach environmental migration, but the agent supposed

to put them into action is unspecified. It is the case of "Environmental factors *must be integrated* across all areas of migration management" and "IOM *recognizes the necessity to step up* national, regional and international efforts to address human mobility challenges associated with environmental factors and climate change" (IOM 30, 2018): lack of agency and deontic modality seem to be often associated in these texts.

Another instance is "ensure that adaptation measures are taken to prevent and mitigate displacement in the context of climate change" (UN 11, 2014): here agency is not mentioned, so there is no reference to who is supposed to take preventive measures and ensure that these are actually taken. The same happens in "environmentally induced migration requires a strategic approach" (IOM 11, 2014), where the nominalisation obfuscates responsibility for taking action, so the readers are not told who is supposed to act and deal with the phenomenon of migration. More specifically, there is a general erasure of agency in contexts where the role and policies of the global community to address environmental migration are discussed. In "common action towards the climate agreement" and "interagency action on climate and human mobility" (IOM 15, 2015) it is not clear who is supposed to take action and which type of action specifically (changing unsustainable lifestyles in the long-term? Providing assistance to affected countries in the short-term?). In this way, the attribution of responsibility remains unmentioned and therefore there is the risk that the actions that are deemed necessary remain undone because of the unclear attribution and sharing of responsibility and tasks. Anyway, the terms "common", "interagency" and "discussions" stress the need for collaboration and coordination to approach environmental migration in an effective way.

Erasure of people and their responsibility can be achieved via various linguistic means. For instance, in "migration […] reduces pressures on fragile eco-systems" (UN 11, 2014) people are reified by "migration" and their potential responsibility in spoiling the environment is not clearly mentioned. The author(s) do(es) not mention why some ecosystems are fragile, nor what "fragile" means: does it refer to the capacity of ecosystems to function and support themselves autonomously? Or either to their usefulness as efficient habitats for living beings? Or else, more specifically, to their capacity to sustain the livelihood patterns of human beings? As far as it can be inferred from the co-text, it means that if people who pressurise the environment for their own subsistence move away from that very environment, pressures on the ecosystems are released; once unravelled, this sentence is a quasi-tautology. Therefore, the erasure of participants from the discourse of environmental migration can produce representations of this phenomenon that are misleading and unclear and/or do not give a fair contribution to the understanding of environmental migration.

It would not be possible for the author(s) of these texts to always mention that environmental change is mostly induced by the lifestyles and activities of human beings. Nevertheless, for the sake of clarity, expressions which affirm that people should respond to natural changes instead of to human activities that cause natural changes (see, for instance, "adaptation to climate change") would need to be explaned. The role and responsibility of human beings should at least be clearly defined and explained somewhere in the publications -as far as data allow the author(s) to do. Instead human beings are generally represented as beneficiary of environmental changes (they negatively benefit from it) and hardly ever are they mentioned as agents of the change.

Other linguistic means to blur agency include the use of infinitives, nominalisations, passivations and gerunds (*-ing* forms) used as substantives that allow meanings to be "nominalised" and so eliminate the need for any agent to be mentioned. In "further the understanding of the migration, environment, and climate change nexus" (IOM 15, 2015), for instance, the agent and the beneficiary of the action of "furthering understanding" are not specified.

Agency and participants are erased or backgrounded also in: "A consensus is emerging in the international community on *the need to improve* the understanding of environmental issues and their migration implications (and vice versa) and *to plan for, adapt to and mitigate* the processes and effects of environmental change for human mobility" (IOM 1, 2008); "The main goal of the Convention is *to improve* the living conditions of people affected by land degradation and mitigate the effects of drought, in order *to support* poverty reduction and environmental sustainability" (IOM 16, 2015); "The impact of climate change, however, *is rarely considered* as a potential contributor to human trafficking […] and the nexus *remains* relatively *underexplored*" and "*In the absence of* academic studies or policy documents on the topic" (IOM 26, 2017) to mention a few. In all these examples the responsibility -or at least agency- of those who are in charge of processes of research on the topic of environmental change and migration is left unmentioned, or rather, it is presupposed and implied, but not explicitly stated or given salience to. For instance, the Convention (see the example from IOM 16, 2015 above) is the UN Convention, so it is presupposed that member countries of the UN are in charge of taking care of those actions; still, the use of infinitives seems to be a strategy to avoid taking responsibility.

Metonymies too are a means to impersonalise the processes described and avoid mentioning its participants. The use of metonymies that erase the agent(s) seems to occur whenever the decisions and activities of the organisations or of the international community are presented: it

is the case of "Two decisions have recognized 'climate induced migration, displacement and planned relocation'" (IOM 15, 2015) where "decisions" metonymically stands for those who made the decisions. In this way, the precise countries that participated in decision-making processes are not mentioned explicitly, and so are backgrounded and less exposed to direct blame.

Complex noun phrases can also be quite unclear and complicated for the readership to unravel and do not contribute to promoting or facilitating understanding of the issues discussed (see, for instance, "climate change displacement coordination facility", IOM 15, 2015). Collocations like "climate conference(s)", "discussions are ongoing" and "climate change agreements" (IOM 15, 2015) obscure the exact subject they refer to. Some terms like "climate negotiations" (IOM 15, 2015) need an interpretative effort on the part of the reader: no specification on the nature of such negotiations around the topic of the climate is given, so it is up to the reader to infer that these negotiations might be concerned with the commitment of several countries to halt their impact on the state of the climate. It sounds like a quasi-euphemistic expressions that conceals the reality behind it: negotiations aim at regulating the responsibilities and behaviours of industrialised countries since they are the ones that affect the lives of poorer people through their unsustainable lifestyles and relationship with the ecosystems. While "climate negotiations" seems to point to a positive attitude of preservation of the ecosystems which aims at avoiding their further invalidation, the responsibility of particular countries that have invalidated them thus far is blurred. The same pattern of obfuscation of the issues discussed which demands interpretative work for the readership can be found in other expressions, like "migration questions"; "management of climate induced migration"; "operationalization of migration and climate activities" (IOM 15, 2015), where the meaning of "questions", "management", and "operationalization" is not clear.

The most controversial cases of erasure or blurring of agency are concerned with processes that involve responsibility of serious actions or crimes in which migrants are the victims, as in the case of "sexual exploitation", "forced labour", "forced marriage", "organ removal" and "risk of TiP in camps/camp-like settings" (IOM 26, 2017). There are other erasure patterns that are as problematic: some occurrences erase the responsibility of affluent countries to engage into policy-making and studies on how to best deal with environmental migration (since they have the means to do it effectively). It is the case of, for instance, "*insufficient strategic thinking* from policy makers"; "*lack of* data and empirical research"; "'Environmentally induced migration' *has so far received little attention*"; and "patterns of cause and effect relating to environmental migration *remain largely unexamined*" (UN 1, 2008).

The anthropocentric perspective underlying specific representations of the environment also emerges when nominalisations that are particularly negatively connoted are used: not only do they reify the environment and reduce it to a stock of resources for people to use, but also they erase agency of the negatively connoted phenomena mentioned. It is the case of "poor harvests", "crop destruction", "strong climatic events" and "extreme droughts" (IOM 16, 2015): these processes and phenomena are very likely to be the consequence of processes and activities perpetrated by human beings onto the ecosystems they depend on. These expressions give a specific outline of the way people interact with the environment which definitely needs shifting towards more caring, attentive and sustainable behaviours.

6.6. Concluding remarks

Chapter 6 has analysed the representations of environmental migration in the discourse of the IOC. The analysis has provided insights into the ways in which environmental migration is discussed by authoritative international organisations, commenting on the ideologies that seem to underpin representations and the ethical principles the organisations seem to stand for. Special attention has been paid to the patterns of causality and responsibility that might trigger environmental migration, and the relationship(s) between human beings and the ecosystems that emerge from the texts, as well as the way humans interact with each other and other living beings.

7. THE ANALYSIS OF REPRESENTATIONS IN THE NC

Chapter 6 has presented a qualitative corpus analytical approach of the data of the IOC and IOCS; Chapter 7 presents a parallel analysis for the NC and NCS. More specifically, it examines the linguistic contextualisation of terms that are relevant to representations of environmental migration and their distribution in the NC and its sub-corpora; the analysis is based on a close reading of the texts collected in the NCS. Section 7.1. provides an outline of the tools that are used for the corpus-assisted analysis of the texts of the NCS. Sections 7.2., 7.3., 7.4., and 7.5. analyse and discuss the representations of the environment, environmental migration, environmental migrants and other participants in the phenomenon of environmental migration. The analysis focuses on the terminological choices and discourse practices adopted in the texts of the NC and NCS to discuss the phenomenon of environmental migration, its participants, trigger factors and related processes; special attention is paid to patterns of erasure and evaluation, and the identification of specific ingroups and outgroups in text.

7.1. Corpus-assisted qualitative analysis of selected texts: the NCS

The corpus-assisted qualitative analysis of selected texts from the NC (see Appendix, Section 2) is based on a close reading of selected sections of texts (collected in the NCS) and includes a corpus-assisted investigation on relevant expressions used to refer to environmental migration, the people involved in it and the environment (see Section 6.1. for a discussion of the procedures adopted for the corpus-assisted analysis of data).

The Word Sketch tool in Sketch Engine was used to process both key data occurrences retrieved from close reading and the shared collocations on environmental migration (Sketch Engine 5) (see Section 6.1. for an explanation of the functionalities of the tool and the tasks it was used for in the present analysis).

The key data occurrences retrieved from close reading and the shared collocations on environmental migration (see Section 5.1.) were also analysed in terms of frequency and dispersion. Their frequency of occurrence was examined to gain insights in the frequency of specific terms in the NC, in the NCS and in the ten sub-corpora that make up the NC (US ON, G, BBC, NN, NYT, RVN, SMH, IBSN, TS, CT) (see Section 6.1. for a discussion on dispersion).

Corpus-assisted qualitative comments were complemented by and integrated with findings retrieved from the quantitative analysis of the corpora (see Chapter 4).

7.2. Representing the environment

7.2.1. The natural sphere: the "environment" and the "climate"

In the discourse on environmental migration of both newspaper outlets and international organisations, the climate tends to be told apart from the environment when the triggers of migration are discussed. More specifically, the climate and environment are attributed two distinct roles in the phenomenon of environmental mobility: the climate is represented as an active agent that causes environmental change, and the environment as a passive recipient that is subjected to changes in the climate (see Section 3.2. on agentivity). The climate is apparently identified with the weather and temperatures, while the environment seems to coincide with the "physical objects", the tangible and concrete parts of the ecosystem. As a result, the climate, and more specifically changes in the climate, are generally attributed causality for environmental changes. For instance, in "Climate change is not equally felt across the globe, and neither are its longer term consequences" (NYT 6, 2017) only the climate is attributed responsibility for "its" consequences, which are not only socio-economic, but also physical, "environmental".

A similar pattern can be found in "How a warming planet drives human migration" (NYT 6, 2017): here the climate is depicted in terms of temperatures and it is metaphorically represented as the only responsible agent for human mobility ("drives"), while no mention to environmental changes is made (that is, there is no mention of human-made physical changes in the environment like, for instance, deforestation). Also, the nominalisation "migration" and the attribution "warming" conceal the fact that behind the rise in temperatures there are both natural factors and human agency; the responsibility of human beings in causing climate change is thus blurred (see Section 3.2.). Expressions that represent environmental and climate issues as two separate entities belonging to two distinct dimensions might indicate difficulty in categorising natural events as either climate- or environment-related; at least these expressions reveal doubts on how to refer to them.

The dichotomy between the climate as "agent" and the environment as "beneficiary" seems to be reinforced in particular occurrences in the corpus where human beings are represented as planning to manage the natural landscape in order to protect it from the potentially destructive effect of climate events. In "'We have built two storm shelters […] and we are trying to build more mangroves to shelter village coastlines'" (G 10, 2018), the climate is represented as harmful for both people and the environment (in the co-text it is represented as "storms"). People and the environment seem to almost unite in a coalition in order to mitigate the impact of the climate: tropical trees need to be planted as an adaptation strategy to protect the people living along the coastlines and the area they inhabit. Actually, it seems to be difficult to

represent the environment regardless of its relevance for human beings. Representations of the environment rarely encourage people to deal with it fairly and with care because they are often influenced by an underlying anthropocentric perspective; the environment tends to be represented in relation with people.

An example is "Coffee was responsible for the majority of the community's income but had been decimated by a plague known as coffee rust, or la *roya* [plant disease]. Plagues like these aren't necessarily caused by climate change, but it exacerbates them, and *roya* is now infecting plants at higher elevations as those heights become warmer" (NYT 7, 2018): the plants of coffee are described as "decimated by a plague" which is "infecting plants", and the environment is depicted as a living being, which can fall ill and die. Nevertheless, the environment is only conceived in terms of its resourcefulness for human beings (coffee), and its loss is represented as unfortunate because it impacts people's lives and wellbeing. When the environment is represented as an important resource for people, it is not conceived as a cause for potential damage and migration, but rather as an entity affected by the climate. These representations of the environment are not negatively connoted as they do not blame the environment itself for damage and migration. For instance, in "natural bounty" (NYT 1, 2013) the environment is represented in its capacity to nurture humans and all living beings.

There are many occurrences of representations of climate impacts on the environment. For instance, in NYT 6 (2017) climate models are said to predict that "warming oceans will make typhoons and tropical storms more intense, raising their destructive potential": here the representation focuses on the negative "destructive potential" of the climate in terms of temperature rise and consequent sea-level rise and floods; also, it can be inferred that the damages will impact on both people and the rest of the environment. In the same news item, a "deadliest" storm is said to have "killed more than 7,000 people": here the weather is represented as the cause of death of many people, and it is anthropomorphised as a "killer". In these examples, the quantity and intensity of the events is either mentioned explicitly or implied, for instance by referring to climate events as "deadliest" and having increasingly "destructive potential". Other occurrences which discuss the triggers of environmental migration as changes in the climate are the following: "consistent warming trends […] manifested in 'increasing frequencies of warm nights, fewer cool days and cool nights'" (NYT 2, 2014) (where the climate is represented in terms of temperatures); and "Because of the storm surges, my old house was destroyed" (G 10, 2018) (where an aspect of the climate is thematised as cause of the destruction (see Section 3.2.) and the climate is negatively connoted as a destroyer).

Possibly, due to these representations of the climate and environment, climate changes are described in some occurrences as a problem that requires a strategy to be approached. In "Does he really think we can continue to engineer our way out of overpopulation and climate-change problems such as water shortages?" (SMH 2, 2009), the dealings with climate change are described in terms of something problematic that needs to be approached strategically. The "problems" that people should escape from are social as well as related to the climate (indeed, "water shortages" are represented as having both natural and anthropogenic causes). The occurrence "[e]ngineering our *way out*" is a metaphorical representation of escaping via strategical action and human ingenuity: two oppositional groups are created by the pronouns "he" [referring to Lindsay Tanner, former Australian member of the House of Representatives for the Australian Labor Party] and "we", and the rhetorical question is used to delegitimise the former and align the reader with the perspective of the author of the text. Other expressions that refer to dealings with climate change include "work out" and "deal with" ("members of the Pentagon are quietly working out scenarios on how to deal with it [climate change]", TS 2, 2010): they both hint at either finding a solution or answering a problem or issue, or at taking a decision about it, so they implicitly represent climate change as problematic. The negative conception of climate change is confirmed by its representation as a "top national security concern" (TS 2, 2010): the head noun "concern" evokes a feeling of worry about an important entity or event. The intensity of the feeling is increased by the adjective "top" which indicates that climate change is perceived to be one of the most important current issues. Also, the occurrence "climate upheaval" (TS 2, 2010) represents climate change as a huge phenomenon that causes a lot of disruption ("upheaval").

7.2.2. The role of the climate and environment in mobility

In the NC, news representations of environmental migration tend to represent climate changes as damaging the environment people depend on and causing human mobility. For instance, in "22.5 million people have been displaced by climate-related or extreme weather events" (NYT 7, 2018), the cause of displacement is identified in climate events; these are distinguished between slow- and rapid-onset events (as categorised by international organisations), bar the fact that the former are represented as "climate-related events" and the latter as "extreme-weather events". These events seem to include "tragedies" such as "widespread famine", "monsoons and flooding", and a "catastrophic hurricane": the climate is represented as causing very negative phenomena, characterised by great intensity and quantity (NYT 7, 2018). Another example is "Climate change […] is a reality leading to the melting of polar ice caps and

currently stripping them [families] of their homes, their livelihoods and their ancestry" (TS 2, 2010): climate change is an active agent, almost personalised; its "actions" are metaphorically represented as damaging out of choice ("stripping"); it is evaluated as certain ("a reality"), and represented as responsible for the (nominalised) process described ("the melting of polar ice caps") (the verbs "leading" and "stripping" express causality). Climate change is negatively represented as more than a threat to people, a phenomenon which is unfolding and deprives human beings of their basic comfort belongings: "strip" denotes the process of taking something important away from someone, especially possessions or properties, and it is followed by nouns that have an affective connotation ("homes", "ancestry"), thus reinforcing the negativity of the representation of the climate. The tricolon is further used for persuasive and incisive purposes, repeating the possessive adjective "their" to stress the loss (see Section 3.2.).

Because of its detrimental impacts on both people and the ecosystems, in several occurrences climate change is described in fairly negative terms. For instance, in "climate change is not only a human *tragedy*, but also a gestating geopolitical *nightmare*" (TS 2, 2010), the changing climate is metaphorically described both as a "tragedy" for people, an extremely sad situation, and as a "nightmare" because of its political implications, causing unpleasant instability. Some other evaluative terms used to discuss climate change include "horrendous flooding" and the metaphorical term "plight", which stress the negative and serious circumstances of climate change and its consequences (TS 2, 2010).

The fact that climate change is represented as responsible for instability and danger is inferrable from a number of lexical choices in the co-text: "massive human suffering and potential geopolitical violence *spawned by* climate change" (TS 2, 2010) where the negative phenomena generated by climate change are thematised as complex nominalisations in which quantity ("massive") and negativity ("suffering", "violence") are underlined (see Section 3.2. for thematisation); the "baleful *effects of* climate upheaval" (TS 2, 2010), where the consequences of climate change and climate change itself are negatively evaluated ("baleful", "upheaval"); "drastic *impacts* of climate change", where "impacts" implies causality or at least influence of climate change on affected people (TS 2, 2010); "in peril *from* climate change"; "acutely *vulnerable to* rising sea levels"; and the "turbulent climate *has played an outsize role*" (NYT 1, 2013), where "play a role" metaphorically represents the climate as "agent".

However, in some occurrences environmental change is represented as the "agent" that affects the lives of people so much that they are forced or decide to move. For instance, in "severe environmental problems would require them [adults interviewed for a poll] to move" (NYT, 6 2017), natural changes are represented as "severe problems" that cause human mobility.

Anyway, the environment is generally represented as a cause of human mobility only in its most drastic and extreme manifestations; in these occurrences, environmental changes are evaluated through negatively connoted words like "disaster", "problem", etc. Otherwise, the environment is represented as affected by the consequences and implications of climate changes (as much as people are) (see Section 7.2.1.).

Finally, there are instances like "As our world heats up and sea levels rise, the problem of forced migration around the world is projected to become far worse" (NYT 7, 2018) where the representation of climate and environmental change is rendered in a somewhat simplistic way, and ecology is reduced to temperatures and thawing only: this may be part of a strategy for simple representation of environmental change that aims to target the largest section of public possible in order to have persuasive effects maximised.

7.2.3. The role of human agency in mobility: a socio-economic issue

As mentioned in the previous section, the environment is not attributed responsibility in migration patterns generally; rather, the latter are described as phenomena depending on climate change that aggravate existing situation of injustice and consequent political and economic instability in affected countries, thus leading to increased movements of people, which already occur. What seems to be missing from this kind of representation is human agency as a cause of climate change, which after all is described as the main source of the situations of hardship that affected people have to face. Indeed, climate change tends to be represented as a merely natural phenomenon; this may be so in part, but climate change is aggravated by the polluting and unsustainable lifestyles of wealthier countries.

In NYT 1 (2013), there is a representation of a cyclone that metaphorically "*swept in* […] to *strike* the coastal Indian state of Odisha, leading to the evacuation of some 800,000 people": here environmental events are represented as a threat and are attributed causality for displacement. This representation seems to be based on a process of selection of information: natural events surely cause displacement, but mobility depends on a combined web of factors that prevent people from living in their country. The root cause of patterns of migration seems to be of socio-economic nature: a combination of lack of income, wellbeing and resources for self-sustenance further aggravated by environmental changes cause people to move. Environmental changes are therefore represented as having an effect on socio-economic issues, rather than on mobility.

Environmental and climate factors are not always addressed as the trigger cause of migration: in the following example (NYT 7, 2018), coffee plants (coffee is a source of income for the origin

societies of the context) are "decimated by a plague" which is "infecting plants". These plagues are not "necessarily caused by climate change", however "it exacerbates them": the climate is represented as contributing to environmental change, but it is not its main cause. It is assumed that "stress from the drought has made these plants more vulnerable to the plague" (NYT 7, 2018), thus confirming that environmental factors are only aggravating a situation of instability and that plants were already "vulnerable" (because of the plague).

In the occurrence "this increase [in sea-level] will result in permanently flooded areas and a loss of productive agriculture land" (G 10, 2018), the link between climate change and environmental change that affect the socio-economic patterns and livelihoods of affected populations is described in terms of consequentiality: natural changes do not directly influence migratory movements; rather, they impact on the livelihood patterns of affected populations. Therefore, socio-economic issues as well as issues related to the wellbeing of affected populations are at the basis of the phenomenon of environmental migration. In the instance, "The rains had changed -it wasn't just that they had lessened but that they had become more erratic; no rain when the crops needed it to grow, and then, when it was time for harvest, it would rain suddenly and terribly, ruining the crops" (NYT 7, 2018), environmental events are blamed for causing economic and wellbeing issues to origin societies, increasing poverty and malnutrition in already unstable communities.

In "those disasters contribute to failed crops, famine and overcrowded urban centers; those crises inflame political unrest and worsen the impacts of war, which leads to even more displacement" (NYT, 6 2017), the negatively connoted term "disasters" refers to natural disasters, which are represented as contributing to an overall loss of wellbeing of affected populations together with other factors; they are not blamed as the main or the only determining driver to migration. The consequences of these "disasters", as far as it can be inferred from the structure of information and text organisation, are defined "crises", a negatively connoted term that contributes to a general aura of negativity around the consequences of natural changes ("failed crops", "famine", "overcrowded urban centers"). These consequences aggravate ("inflame") already existing socio-political issues -they do not cause them in the first place- eventually increasing the number of people who engage in migration. It is worth stressing that the role of the environment in migratory movements is represented as a contributing factor that combines with pre-existing strained conditions deriving from inequality and limited wellbeing. These conditions alone already push people to move away; affected natural ecosystems only lead to "even more displacement", so displacement already occurs and it does so in quantitatively remarkable terms.

Interrelatedness between environmental change and socio-political instability is further explained and re-stated elsewhere in the corpus, as in the following example: "our researchers came across a WikiLeaks cable that brilliantly foreshadowed how environmental stress would *fuel* the uprising" (NYT 2, 2014). In "economic and social *fallout* from the drought was 'beyond our capacity as a country to deal with'" (NYT 2, 2014), the negative representation of the link between particular natural events and specific patterns of livelihoods includes the description of a situation of potential starvation for affected people in the co-text.

In the example "the root cause of most, if not all, environmental degradation *is* the rapid growth in the population of our own species" (SMH 2, 2009): the socio-demographic cause of environmental change -more specifically "degradation"- is explicitly stated, humans are attributed responsibility for it and are called to take it up with the use of the inclusive adjective "our own" (reader included). The non-modalised verb "is" (see Section 3.2.) guarantees that the link between socio-economic questions and environmental migration is clear and uncontroversial. Overall, nature is depicted as degraded because of social factors, claiming anthropogenic causality. Statements like "We urgently need to determine how many people different parts of our country can sustainably support" (SMH 2, 2009) show that there are socio-economic factors at stake and they are evaluated as urgent to deal with: in the co-text, it is argued that people living in wealthier receiving societies are deemed responsible for taking care of the demographic issues that affect the environment. It is worth noticing that people are not distinguished between migrants and natives, so the problem is outlined and informed from a larger holistic perspective which takes into account the relationship humans-nature: two groups represented by "people" (others) and "our country" (we) respectively are gathered together in order to achieve a positive goal. What emerges from these examples is that support to origin and migrant communities should be sustainable and respectful of the environment. There is also specific reference to authorities (with name and functions) as responsible to take care for action (see, for instance, "Mr Garrett and his department should lead this debate", SMH 2, 2009).

In turn, socio-economic issues are represented as worsened by environmental phenomena. For instance, in NYT 7 (2018) it is asserted that "years of water scarcity helped lead to the country's brutal conflict": environmental change leads to political instability and conflict which then trigger mobility; "helped lead" means that the environment is just one contributing factor to the situation of instability that causes migration. In "With sea level rising and deltaic lands subsiding, saltwater intrusion onto farmlands has accelerated, with serious consequences for food production" (NYT 1, 2013), environmental change is blamed for causing damages to farmlands and therefore impacting on the livelihoods (and wellbeing, more specifically) of

affected populations, who are unable to produce what is necessary for their sustenance. As a result, injustice and inequality might increase because specific natural resources become less available and less well-distributed, as for instance, in the following example: "El Salvador, one of the world's most murderous countries, is just now recovering from *a devastating drought, which only heightens* the stakes and scopes of the violence" (NYT 7, 2018).

Some occurrences, like "the internet has enabled citizens to easily compare their living standards with those in Paris or Phoenix" (NYT 8, 2018), are indicative of the fact that there are situations of economic unbalance and wellbeing behind the decision of people to move. More specifically, they relate to unfair and unjust processes of resource distribution and sharing; these are now acknowledged by underprivileged people who call for a change. Collocations like "climate justice" (TS 2, 2010) imply that the effects of climate change involve issues of justice, not only natural issues. In this respect, the environment is often represented as a resource for human beings also because migration derives from lack of natural resources and means of sustenance that influence the wellbeing of people. It is interesting to notice that representations of the environment as a resource might imply that the "people-on-the-move" actually are economic migrants: they move as their wellbeing decreases.

In NYT 6 (2017), "glacial melting" is represented as reducing freshwater reserves so "tensions" are growing between locals and the businesses; as a result, "this resource conflict will drive more migrants" to places where "many" are "fueling the rise of criminal syndicates". In this example, environmental events are represented through nominalisation, thus erasing the cause that triggers them (which is probably anthropogenic), and are stated to affect the availability of natural resources people depend on, consequently increasing already existing internal instability (aggravating the conflicts for redistribution and appropriation of decreasing natural resources). These specific socio-economic conditions resulting from manifold contributing factors are the real trigger to migration; it is not the sole environment. In this example, as in several others, the role of human beings in causing changes in the environment is under-acknowledged; therefore, identifying the environment as the real and unique cause to mobility seems inappropriate. In turn, migration is represented as further invalidating weak political and social situations, contributing to a vicious cycle whose head is not easily identifiable.

By recognising the incidental role of the ecosystem in the worsening of already existing problematic scenarios, the climate and environment are partly relieved from the responsibility of causing environmental migration. More specifically, they are relieved from the responsibility of causing migration whenever social factors are mentioned as a driver to migration. The main social questions that are raised in the texts include sustainability, which is addressed both in

terms of the types of lifestyles adopted by societies, and in terms of demographic pressures on the ecosystems and their ability to respond to the demand of growing numbers of people. For instance, in the passage "There is a limit to population growth in Australia: water", environmental limits (lack of water) are represented as potentially increased by migration (population growth). The possibility of the ecosystem to adequately support the demand of resources is affected, so "Population planning should be based on our physical limits, not aspirational comparisons" (SMH 2, 2009). The nominalisation "population planning" seems to be a strategy to avoid mentioning the unwillingness of receiving societies to host migrants; everything is asserted with deontic modality as to imply the authoritativeness of the statement. This representation places human beings within the limits of the environment, so there is identification between people and the natural sphere.

The same process of identification can be found in "our climate" where the use of the possessive adjective "our" establishes an ingroup of people and the ecosystem they belong to, and implies both sense of responsibility and belonging (see Section 3.2.). Nevertheless, only the climate is included, not the environment, thus reinforcing the idea that the environment is more an affected participant than a trigger factor. Another example is "As *our* world heats up and sea levels rise, the problem of forced migration around the world is projected to become far worse", where the environment and human beings are included in the metonymy "our world" (NYT 7, 2018).

Other occurrences specifically relieve the climate from the responsibility of environmental migration. In "Ethiopia has been hit hard by climate change, though it is not even in the top 100 emitters of greenhouse gases. But the problem with climate change, of course, is that it is a problem that crosses borders" (NYT 7, 2018), countries (and therefore the populations they stand for metonymically) are represented as passivated and intensely affected by the "agent" climate. Questions of injustice are raised as these populations are not the main polluters of the ecosystems, thus implying that pollution and climate change are closely related and so that beyond climate change and its impactful consequences there is human agency. The "problem" is not climate change itself, but rather patterns of responsibility, inequality and injustice that expose particular populations to the damaging consequences of the activities of affluent populations. This is asserted with certainty by treating this piece of information as common sense ("of course"), thus implicitly laying the blame on wealthier industrialised countries and delegitimising the rightfulness of their activities. The problem is represented in terms of climate change crossing the abstract geopolitical borders established by people and therefore spreading to countries that do not cause climate change and should not be compelled to deal with it. It is interesting to notice that this representation in based on the idea that wealthier countries cannot

protect their own borders from people coming from poorer countries if they do not protect people from poorer countries from their own harmful and polluting activities in the first place. Pollution that causes climate change "migrates" to countries that are not responsible for it and affects them.

The climate is also partly relieved from responsibility when natural changes are stated to happen on an ordinary basis, but the rapidity with which they occur nowadays is deemed unnatural: for instance, in the example the coast has "been affected by *accelerated* erosion" (G 10, 2018), erosion is described as a natural event, but the adjective "accelerated" implies that the timing is not. It is interesting to notice that the term "affected" (usually referring to people) is used to refer to the environment: this lexical choice reinforces the idea that both specific populations and the environment are impacted. In "consistent rainfall has been *replaced by a more intense monsoon*, causing flash-flooding" (G 10, 2018) the factor that alters the "naturality" of weather and climate changes (notice that they are passivated) remains unmentioned, but it is stated that changes have shifted to intense and they cause extreme natural events.

In some instances, human responsibility is left unmentioned, but implicitly inferrable. When the Polynesian nation of Tuvalu is represented as "being reclaimed by the Pacific owing to rising sea levels" (TS 2, 2010), the Pacific Ocean is personalised by the unusual use of the verb "reclaiming" which would need a human subject; so, it is metaphorically represented as an active agent. "Owing to" expresses causality but not responsibility of the ocean; so causality is not attributed to the environment (the ocean), but rather to the climate-induced phenomenon of sea level rise. The environment is almost paradoxically represented as a beneficiary, thus having no responsibility for what it does, but rather being subjected to someone else's actions. Also, not only the ocean, but also the land is represented as passive, so there must be an unmentioned agent (instigator, see Section 3.2.) that regulates the trends of both the climate and the environment, the latter reacting to the actions imposed on them.

However, there are instances revealing human presence as a "trace" behind these representations: they are partially erased but still present in text (Stibbe, 2015, p.149). For instance, in "nearly a quarter of the earth's habitable surface changed between *just* 1992 and 2015, primarily from forests to agriculture, from grasslands to deserts and from wetlands to urban concrete" (NYT 8, 2018) the only participant which is mentioned is the surface in the process of changing, so it is described as a natural process. However, the term "just" underlines the unusual rapidity of the event for it to be merely natural and in this specific context of use it evokes the idea of a blame or warning. Together with "agriculture" and "urban concrete", "just"

indicates that there is the intervention of human beings behind these transformations of the environment, even though human agency and responsibility are backgrounded or erased.

In this example "The bay […] was shaped by monsoons and migration, as European powers exploited the region. […] Today the bay is being reshaped again by the forces of population growth and climate change" (NYT 1, 2013), it is stated that natural factors and migration existed also in the past and they used to impact on the morphology of the environment. This process is happening nowadays too; the trigger factors, though, are described in similar but different terms as "climate change" and "population growth". The parallel seems to point to the fact that environmental change is a phenomenon that is caused by external forces and therefore is not natural; instead, climate change is active and agentive, the cause of these changes. Lexical choices to describe natural phenomena are relevant: is climate change really a natural phenomenon comparable to naturally occurring monsoons? Or are human beings intensifying its natural trends?

In "Climate change inaugurates an unpredictable new phase" (NYT 1, 2013), climate change is metaphorically represented as personalised ("inaugurates") and responsible for a new phase in history. This representation is biased and partial: the new era that is unfolding in front of us is increasingly referred to as the "Anthropocene" or "Antrhopocene Epoch" and not as the "Holocene" anymore, due to the magnitude, variety and lasting effects of human-induced changes. The Anthropocene is an era of global change and human impacts on the planet and its atmosphere (Larson, 2018, pp.367-368); this label highlights the fact that human beings are responsible for change. As Hillel & Puppim de Oliveira (2014) write "Anthropocene" is an expression "which many ecologists are beginning to use to describe the current geologic age in which Homo sapiens have become the key structuring species that could determine, alone, the fate of Earth's life forms".

In terms of causality, among the aspects that are "exacerbating the effects of the drought" (NYT 7, 2018), there is the mistreatment of the ecosystems. As in the IOC, in the NC human agency seems to be identified as the primary contributing factor to environmental change, together with natural patterns of variability: "Any balanced assessment of the climate science and evidence accepts that global warming is driven primarily by human carbon emissions from fossil fuel combustion, agriculture and land clearing, superimposed on natural climate variability, and that it is happening faster and more extensively than previously anticipated" (CT 4, 2016). The problem is that human agency as a factor of environmental change is not always acknowledged in text; it is difficult to say whether its erasure from discourse should be interpreted as a denial of human responsibility in environmental change (and therefore migration); whether human

agency is implied by default; or whether it is simply not acknowledged as much as it should. Another example discusses "pervasive deforestation and farmers overtaxing their lands" (NYT 7, 2018): climate change is said to be aggravated by the exploitation of the resource "environment" -even though the nominalisation "(pervasive) deforestation" blurs human agency and responsibility from this representation. Nevertheless, this simplistic explanation is in contraposition with authoritative statements on development and climate change, and it is juxtaposed to them with the contrastive conjunction "BUT"; in this way, it is delegitimised. The alternative explanation is fairly more detailed: "But according to Climatelinks […] the average temperature […] has risen 2.34 degrees […] and droughts have become longer and more intense. The sea has risen […] and is projected to rise […] more". Here, data on climate, temperature changes and their effects on the environment (such as slow phenomena like drought or rapid events like hurricanes) are reported, underlying their intensity and quantity ("39 hurricanes hit" the country). The text includes a repetition of getting "worse" predictions (migration is "projected to become far worse") possibly to give more salience to the environmental issue described. Notice that environmental factors are also given salience through thematisation.

In "Dam construction […] threatens downstream communities" (NYT 1, 2013), human agency is implied in the nominalisation of those human actions that put the lives of some populations at risk ("Dam construction"). Another example where human agency is either erased or implied is: "What's most striking is that this year has been par for the course in terms of *abnormal* monsoon periods and natural disasters" (G 10, 2018), where the idea that environmental changes cannot be classified as purely of natural origin is confirmed by the juxtaposition evoked between abnormality (implying that events are not natural) and normality (naturally occurring events); these unnatural events are further negatively evaluated as "disasters". The (implied) contraposition between abnormality and normality emerges elsewhere in the corpus, as in the case of "If this is just a *normal* year, with a large storm surge that has been slowly intensifying each year, what happens when a big cyclone hits again?" (G 10, 2018), and "*a rise in the* frequency and intensity of the [..] cyclones" (NYT 1, 2013). These descriptions evoke feelings of danger and fear in the readership, because of their focus on the frequency and intensity of present and near-future natural events.

The erasure of human agency in environmental changes increases the degree to which the environment itself is attributed responsibility for migration. Examples of the erasure of human agency in environmental events and their consequences include "the catastrophic effect of rising sea levels" (G 10, 2018) where the nominalised process "rising sea-level" conceals the reasons

that motivate it (which is probably human-induced temperature increase). In the "worst natural disaster […] which displaced 2.4 million people" (G 10, 2018) the event is represented as natural, without mentioning any potential underlying human-induced cause. Also, it is represented negatively in terms of a "disaster", thus depicting the environment almost as an enemy force which determines the displacement of a high number of people (reference on quantity and negative evaluation contribute to the negativity of the representation).

7.2.4. The "quantification" of environmental change

In the NC, there are several statements that provide technical and specific representations of the environment like: for instance, in "low-lying *floodplains*" (G 10, 2018) and "nearly a quarter of the earth's habitable surface changed between just 1992 and 2015, primarily from *forests* to agriculture, from *grasslands* to *deserts* and from *wetlands* to urban concrete" (NYT 8, 2018), the environment is described in almost technical terms as a specific type or part of nature. These representations seem not to be grounded on a merely anthropocentric perspective though: "habitable", for instance, could supposedly refer to any living being.

Most often representations of the environment seem to be less specific and environmental events are "quantified" (as well as migrants are): quantification seems to create a parallel between increased degradation of the environment and increased mobility. In some instances, this seems to be a way to include human beings and the rest of the environment in one whole comprehensive ingroup which is interconnected, since it is affected by and suffers from the consequences of climate change. For instance, in "The country's deserts have expanded by 21,000 square miles […] crowding out cropland and producing devastating sandstorms" (NYT 6, 2017), the process of desertification is quantified (even though the causes of desertification are left unmentioned) and it is attributed responsibility for forcing crop plants out and causing severe weather events. In the NCS, desertification and floods, as well as weather events and temperatures, seem to be included within the sphere of the climate (see Section 7.2.1.): climate events are attributed responsibility for causing harm to both the environment (here represented in terms of "cropland") and people, who are damaged by the fact that they suffer from lack of food and physical exposure to extreme weather events.

In "*Everyone* is dealing with something like a Superstorm Sandy", environmental events are described as a problem which is pervasive and affects many people (NYT 2, 2014). In the case of "sea-level rise" is "less alarming" than the "risk of being *totally* erased" (G 10, 2018), the intensity of the event is maximised by the adverb "totally" and the impact of the metaphorical representation of places being "erased" instead of "submerged". Other examples of reference to

the quantity, frequency and intensity of natural events are frequent; the following are only some instances: "a *three-year* drought" (NYT 6, 2017); and "*another intense* cyclone hits -and since the 80s, cyclones in the Bay of Bengal *have increased in number*, often *developing into hurricane-force* storms" (G 10, 2018). Sometimes quantification and evaluation combine to represent environmental events, as phenomena that put the lives of humans and non-human beings at serious risk, as in "the country's *worst* drought in four decades" (NYT 2, 2014), where the superlative "worst" and the reference to a specific span of time convey the exceptional nature and power of the event.

7.2.5. Erasure and evaluation patterns: an anthropocentric perspective?

As discussed in Section 7.2.1., the representation of the environment in terms of resources for humans should not be considered as merely a reification of the environment from an anthropocentric perspective that conceptualises nature as a stock of resources. In fact, the awareness that environmental changes affect the livelihoods and aggravate the economic conditions of already underprivileged populations, leading to their loss of minimal standards of wellbeing, sheds light on the paramount importance of preserving nature and its ability to sustain the livelihoods of affected populations: the preservation of the environment should mitigate the movement of people and grant their survival and preservation of their culture. In other words, the representation of the environment as a resource for human beings is not always based on a "greedy" anthropocentric perspective that disregards the ability of the ecosystem to sustain human beings and be able to regenerate itself. Rather, it conceptualises the ecosystem as a system human beings belong to and on depend on. Nature needs to be nurtured in order for it to nourish humans in a mutual and reciprocal cycle; therefore these are relatively positive representations. This conception of the ecosystem is confirmed by specific occurrences like "a vital resource" (NYT 6, 2017), where the environment is positively evaluated as an extremely important and necessary resource for people, not just a stock of resources that can be accessed to satisfy trivial wants and unnecessarily luxurious lifestyles.

In "fish adaptation project" and "community forest" (G 10, 2018), the environment is represented as a resource. Possibly, its function as resource for humans is highlighted because the causes of migration are closely related to lack of these resources. Processes of reification of the natural ecosystems sometimes occur in text: in "water scarcity, crop failures, livestock deaths drove an estimated 1.5 million people to the cities from rural areas" (NYT 6, 2017) nature is reduced to resources for human beings; more specifically, plants are reduced to "crop" and animals are represented as "livestock". Nevertheless, these reifications seem to point to the

fact that it is not the environment that causes human mobility, but rather the degraded economic dimension and the consequent loss of means to survive for affected populations. The environment is represented in economic terms in order to highlight the fact that the factors that cause migration are mainly economic in nature, not environmental; in this way, the environment seems to be relieved from the responsibility to cause migration as is often represented.

As far as the relationship between human beings and the environment is concerned, it must be noticed that in some occurrences humans are represented as being outside the realm of nature; this is a misleading representation that can disregard the fact that people depend on nature as well as any other species do, and so may diminish the importance of ecosystem preservation. In other occurrences, human beings are acknowledged as part of the ecology like any other species. For instance, in "Every other species has natural factors which constrain its growth. We have removed them all except for our own volition" (SMH 1, 2009), the expression "Every other species" implies that humans are one among many species, but "we have" implies dissociation to the other species: an ingroup (humans) is established within a wider ingroup (natural species) which has some peculiar characteristic (indeed people are described as having removed "natural constraints" while other species have not). This type of representation suggests that human beings have the ability to overcome, control and manipulate natural processes and limits, and it can have a twofold consequence: either humans are encouraged to address and manage environmental changes for the better, or they are induced to thinking that they have control over natural changes and there is no need to worry about them.

It is interesting to notice that when there are processes of individualisation of people, the environment tends to be described in more detailed terms as well (see Section 3.2.); rather than actual emphasis on the environment, though, fine-grained descriptions seem to be part of a narrative strategy that imitates the genre of fiction and which might simply be a way to engage the reader, as in "the dappled shade of his coffee plantation, pointing to the limp, yellow *roya*-pocked leaves all around us" (NYT 7, 2018).

7.2.6. Metaphorical representations of the environment

The relationship between human beings and the environment is often represented via metaphorical images; for instance, metaphors of fighting are used to represent the relationship between origin societies and the environmental changes that affect them. The following example represents a fight between people and an anthropomorphised sea that "swallows" a well: "the well is symbolic of their losing *battle* with the sea" (G 10, 2018). In the "coasts are *under assault* in every dimension: by water *conflicts* […] and by drilling for oil and gas in the

deep sea" (NYT 1, 2013), a metaphor of war and invasion is applied to the way people engage in processes of appropriation of natural resources: the environment is the "assaulted" participant undergoing negative effects, while the presence of human beings behind these processes is backgrounded or erased.

Other metaphors are less conventional and try to provide an image of the target domain (see Section 3.2.) which is vivid and easy to understand. For instance, in "The bay is a *sink* of pollution borne by the great rivers that spill into it" (NYT 1, 2013), the bay is represented as a sink in which pollution is conveyed. This is a very negative representation of mistreatment of the environment: responsibility for pollution seems to be attributed to the rivers that flow into the bay instead of humans pouring pollutants into watercourses.

Some metaphorical images concern the representation of the climate and environment as mad and cruel entities, wild animals that need harnessing, as in the following example: "the tyranny and the vagaries of nature were not so easily subdued" (NYT 1, 2013).

In some occurrences, evaluation and metaphorical representations combine in text. It is the case of "Climate change prosperity or disparity? The idea that we can prosper in a time of climate change distorts a threatening reality" (TS 2, 2010): climate change is represented as a global phenomenon that involves all countries, the terminology used is negatively connoted ("distorts", "threatening"), and it aligns the reader with the text authors. This representation is further reinforced in the co-text by the expression "earth-shattering reality", a metaphorical expression to represent the devastating effects of climate change. In other occurrences, environmental events are represented in terms of a metaphor of mess and/or dirt to "clean up": "'In the future, who will help a country like Syria when it gets devastated by its next drought if we are in a world where everyone is dealing with something like a Superstorm Sandy,' which alone cost the U.S. $60 billion to *clean up*?" (NYT 2, 2014).

There also are metaphors of threat and danger that depict climate change and (consequent?) environmental events as a phenomenon that may cause damage or hurt people, as in the following example: "Storms are a constant *threat*" and "periodic droughts and dangerous storms have posed a recurrent *threat*" (NYT 1, 2013). More specifically, some metaphorical representations of environmental change are related to issues of security and safety of host societies, origin societies and migrants communities. For instance, in the following examples environmental change is defined an "*impasse*" ("a way of getting out of this impasse (global warming)"; BBC 6, 2009), where the controversial and debated expression "global warming" is used (see Section 1.1.); "a *powerful weapon* of *mass destruction* that is getting out of control" (IBNS 3, 2016); and "the greatest *security threat* of the 21st century" (G 8, 2016). The terms

"impasse", "weapon", "mass destruction" and "security threat" evoke a scenario of menace to human and non-human safety and security, and therefore represent environment change as negative and responsible for danger and potential harm to living beings. It is interesting to notice, though, that the term "weapon" refers to climate change in the co-text, and it implies that climate change can be employed as a tool for destruction, but it is not necessarily so: its potential for destruction depends on the way climate change is "handled" and dealt with. The responsibility of human beings in the proper management of climate change is implied: climate change will only become hugely destructive if people do not change their unsustainable lifestyles and start adopting a caring attitude towards the ecosystems they depend on.

Possibly the most valuable representation of the ecosystem in the NCS portrays "ecology" as something that "transcends national frontiers" (NYT 1, 2013): borders cannot be established for people who flee their own countries because there are no borders for the pollution that expands across countries and makes them vulnerable to natural changes, and politically and socio-economically unstable. Environmental migration, is therefore a question of justice: since the ecological systems we depend on do not have borders and there is mutual influence, national borders should not be rigid barriers for those who are deprived of their "ecological" or physical possibility to survive. The need for partnership collaboration among countries from all over the world in order to deal with environmental change and migration effectively emerges in this holistic representation of the environment: "Will it be a world where the projected loss of biodiversity on land and sea severely limits the possibilities of life […] thereby imperilling humanity's place on this planet?" (IBNS 4, 2016).

7.3. Representing environmental migration
7.3.1. The economic and humanitarian dimensions of environmental migration
In the NC, migration is not necessarily represented as a problem; rather there is discrimination between wealthier and poorer countries, and only immigration from the latter is represented as unwanted. This is well exemplified in the representation of the immigration policies of Donald Trump's administration. The undesired movements of people are those proceeding from poorer countries and are influenced by socio-economic and political issues, as represented in this example: "He wants immigration *from poor countries* to stop. He sees the problems in those countries as theirs, not ours -never mind the centuries of catastrophic foreign intervention" there "or the growing menace of the changing climate" (NYT 7, 2018). The host society is represented as unwilling to receive migrants because poorer countries are supposed to deal with

the patterns of inequality and injustice that determine migration on their own ("their problem"). Migrants are represented as a burden for host societies because they are identified with the problematic scenario of their country of origin; the responsibility of wealthier societies in contributing to the exacerbation of this scenario through post-colonial attitudes and practices is expressed in text, but ignored by US governmental choices. The social, economic and political drivers to environmental migration are also acknowledged in the evoking expression "climate disparity" ("this is a question not of climate prosperity, but of climate disparity; TS 2, 2010): the issues at the basis of migration are social and of equity; the discrepancy between wealthier and poorer countries is represented in terms of unbalance in ecological wellbeing and safety.

In some instances, business and the environment are discussed as interrelated realities and as the most important issues in the migration debate (see, for instance, "Business and environment go head-to-head in migration debate", SMH 1, 2009). Social and economic questions are often mentioned in the texts of the corpora, and in some occurrences the interests of the economy and the interests of humanity are represented in contraposition and irreconcilable. In the following example, migration is dealt with in both its economic, moral and humanitarian implications and it is defined as "most importantly a moral and humanitarian concern"; therefore, the co-text states that the debate on migration should revolve around a rights-based approach rather than economic speculations. It is asserted that the discussions on environmental migration should bring "discussion back towards the environment" and the question of "climate refugees" (SMH 1, 2009), implying that the ecological and socio-humanitarian dimensions of the phenomenon have been disregarded thus far.

Environmental migration is represented as fundamentally driven by socio-economic instability and political unrest; environmental issues further superimpose to them, thus impacting on populations that already experience dire living conditions. For instance, in "the migration of 15,000 unskilled labourers *would add* to the social and economic pressures presently at play" (NYT 2, 2014), affected countries are represented as already under pressure, and natural events only exacerbate the whole socio-economic scenario. Also, migrants are only mentioned in terms of quantity ("15,000") and functionalisation ("unskilled labourers") (see Section 3.2.). They are negatively evaluated because they cannot positively contribute to the work-force and economic system of destination societies.

The injustices behind migration, and natural changes, are blamed as the real cause of migration, which in turn is legitimised as a source of resilience for affected people. In the following example, migration is represented as having historical as well as ecological reasons: "recognizing that the bay's history, as much as its ecology, transcends national frontiers" (NYT

1, 2013). Migration is represented as a process which initiated with the movement of people from wealthier countries to other nations in order to exploit their natural resources. Now the process has reversed as a consequence of long-term impoverishment, and people move from poorer countries towards wealthier countries in search for wellbeing and a fairer economic situation. Indeed, in NN 1 (2011) the push factors to migration are identified with processes of "*exploitation*, *deprivation* and *destitution*": "man-made crisis, natural calamities and several antecedents of feminization of poverty coalesce to create compelling circumstances for the poor to leave their native villages. In the countryside polymorphous violence, structural tension, environmental terrorism and climate change are some potent factors responsible for migration".

As for the role of the environment in migration, the environmental dimension of migration is often discussed cautiously, it is uncertain and often implied; human agency is generally erased. For instance, in NYT 7 (2018) "environmental degradation or climate change" are represented as the "more subtle but still profound dimension to the problems they [environmental migrants] are leaving behind": the expression "subtle but profound" implies that the environmental dimension of mobility is either hard to detect or hard to understand. Environmental changes are only one dimension of the problematic circumstances that affected people escape from. The use of the adversative conjunction "or" seems to provide different alternatives to represent this phenomenon ("environmental degradation or climate change"); otherwise, it might imply that the latter is the cause (climate change) and the former is the consequence (environmental degradation) and, no matter which one happens first, their impact on people's livelihoods is great and it causes migration. Another example is "one million Syrian farmers, herders and their families were forced off the land into already overpopulated and underserved cities" (NYT 2, 2014), where the use of agentless passivation ("were forced off") (see Section 3.2.) erases the responsibility of who/what caused the displacement of people. At the same time, the passive verb indicates a high degree of causality (forced migration) and the impossibility for displaced people to act in any other way. Again, problems already exist prior to environmental change and migration, so the overall scenario in which environmental migration takes place is unstable and invalidated.

Migration is explained as the loss of the possibility for sustenance through traditional livelihoods. In "As people lose their land, experience a drop in crop productivity and struggle with declining water availability, many […] are migrating to the cities" (G 10, 2018), the processes that lead to migration are represented via nominalisations ("crop productivity" and "declining water availability") which depict the environment merely as a resource for human beings and conceal the cause behind environmental change. The erasure of the responsible

agents of environmental change is further enhanced by the verbs "lose", "drop" and "struggle": they metaphorically represent affected populations in a fight ("struggle") against the "enemy", the loss of the natural resources they used to rely on. The responsibility for conflict in already unstable situations is often attributed to lack or loss of resources, but not to human agency: in "access to water could spark conflict in the future" (G 10, 2018), the term "access" erases who cannot access water and the reasons for it; unequal distribution of resources and power is erased. The identification of the role of the environment in environmental migration is further complicated by the fact that the climate and environment are sometimes represented as two separate entities with different degrees of influence on mobility patterns (see Section 7.2.1.). For instance, in the following example "floods, drought, heat and cold" are described as purely climate-related events, and not environmental events: "Climate-driven extreme weather -floods, drought, heat and cold- on top of man-made deforestation began to hammer many countries, especially their small-scale farmers. This happened right as developing-world populations exploded" (NYT 8, 2018). This statement has a twofold interpretation: either the climate is conceived as separate from the environment and it impacts on both the environment and people; or the climate is conceived as a specific part of the environment which has a particular influence on mobility patterns. In any case, it is worth noticing that the activities and responsibility of human beings in environmental changes are acknowledged, even though references generally concern physical and concrete actions on the environment such as "deforestation" (NYT 8, 2018), rather than indirect influence on the ecosystem via pollution. Overall, both the climate and human beings seem to be represented as responsible for environmental change. The two phenomena (climate-induced and human-induced environmental change) are metaphorically represented as "hammering" (damaging) countries and their populations, especially people relying on agriculture. These natural and anthropogenic causes superimpose to a demographic factor of population expansion. The combination of such factors (climate and anthropogenic factors) causes environmental degradation (see, for instance "developing-world populations" who, "along with droughts, totally stressed its [Syria] water resources", NYT 8, 2018).

When natural events are mentioned as triggers of migration, they are often represented as the responsible "agent" that impacts on the livelihoods of affected communities, as in the following example: "last summer's *floods* in China *destroyed* 2.2 million hectares of farmland and *forced* 1.5 million to flee their homes" (TS 2, 2010). Also, the lexical choices used to refer to natural triggers and their impact reveal that they are generally negatively connoted ("destroyed") and their proportions are stressed as concerning and worrying. The negativity of the representations is increased by juxtaposing the force and violence of "activated" natural events to the loss and

suffering of "passivated" communities: the use of empathy-inducing language ("their homes", "flee") evokes sympathy in the readership; natural events are agentive and threatening, while affected people are passive, vulnerable and helpless.

Overall, some newspaper outlets included in the NC assert that environmental events lead to social and economic issues of instability that include migration, and all of them can also cause conflict. Other newspaper outlets, instead, represent the process in a reversed way: first people migrate and then conflicts begin to wage. This twofold representation demonstrates that the actual link between environmental events and migration is not clear-cut or agreed upon.

Sometimes the socio-economic issues triggering human mobility are represented metaphorically. Metaphorical representations contribute to depicting migration as a phenomenon that has social, economic and political causes and consequences. In NYT 6 (2017), "Climate displacement" is represented metaphorically as "one of the world's most powerful - and destabilizing- geopolitical forces": forced migration is represented as a phenomenon that has a negative impact on the whole world and the relationships between countries. The root causes of migration are identified with overlapping and coexisting social and environmental (more specifically, climate-related) issues: social instability (and possibly migration) are described as a "human turmoil" (NYT 6, 2017) that results from migration. The term "turmoil" represents a situation of trouble and confusion: "climate turmoil" thus correlates to social instability and together they both cause mobility. The idea of turmoil is repeated in "the human turmoil sparked by climate change" (TS 2, 2010), where social discontent is represented as the starting point to mobility ("sparked by" expresses causality).

In some occurrences, climate change is specifically identified as the natural factor that impacts on already existing socio-economic and critical political situations, as well as on the environment. In the following example, climate change is metaphorically represented as a "threat multiplier", so it is negatively connoted as a factor that increases already existing problems and may amplify the harm and damage they cause. It also contributes to environmental change ("propels"): "Climate change is a threat multiplier: it contributes to economic and political instability and also worsens the effects. It propels sudden-onset disasters like floods and storms and slow-onset disasters like drought and desertification; those disasters contribute to failed crops, famine and overcrowded urban centers; those crises inflame political unrest and worsen the impacts of war, which leads to even more displacement" (NYT 6, 2017). In the "ecological catastrophe is a compounding factor in the Boko Haram insurgency crisis which has led to displacement of 3.5 million people" (NYT 6, 2017), the link between environmental change (here negatively represented as a "catastrophe") and migration is made

even more explicit and straightforward: it is not a direct cause-effect relation; rather, there are socio-economic and political intermediary factors that environmental change contributes to, eventually leading to migration.

In some other occurrences, though, environmental changes are almost completely blamed for the socio-economic difficulties of poorer countries. The metaphor of the "fallout" in the "economic and social fallout from the drought" (NYT 2, 2014) is used to represent the critical socio-economic conditions of origin countries. More specifically, it relates to the source domain of nuclear explosion (see Section 3.2.) and it refers to the radioactive dust that is left in the air after a nuclear explosion. This is a very incisive way to blame environmental and climate events ("drought") for socio-economic instability, and to erase responsibility of who/what causes -and maybe maintains- instability in the first place. Environmental changes are more likely to be the result and consequence of economic patterns of instability rather than their cause; they might anyway contribute to aggravating such instability once they occur.

Nevertheless, in the NC, the relationship between ecological changes and migration is generally represented as one of interrelatedness rather than causality between natural and social factors. In TS 2 (2010), scarcity of resources and migration caused by climate events are metaphorically defined "a fulsome recipe for armed conflict": the effects of climate events will probably result in conflict, and therefore they are negative for people -their negativity being further reinforced by the evaluative adjective "fulsome". The representation of the dangerous scenario migrants escape as a recipe is somehow repeated in the expression "toxic mix" ("a toxic mix of communal violence, political disenfranchisement and environmental threats"; NYT 1, 2013). In "Food prices soared, contributing to economic and social tensions" (NYT 6, 2017), mobility is represented as caused by the unresolved social and economic crises that leave people "vulnerable to subsequent war". Other examples that discuss the intermediate socio-political factors between environmental change and migration include, for instance, "you can't understand the Arab awakenings -or their solutions- without considering climate, environment and population stresses", where the "connection between the Syrian drought and the uprising there" is discussed (NYT 2, 2014).

In the following example, mass migration is described as a phenomenon that "could act as a *multiplier* on social and economic pressures already at play and undermine stability" (NYT 2, 2014). The passage states that economic and social issues already exist, even though the reasons that motivate them are not mentioned. Since migration adds up to these issues and aggravates the general situation of instability, it acquires a negative connotation as something noxious for affected populations. Environmental change is blamed for the aggravated socio-economic

situation people shall deal with, including potential starvation and "economic and social fallout from the drought" (NYT 2, 2014). These representations seem to imply that people can potentially deal with environmental change, but often they cannot deal with the socio-economic consequences of environmental events; mobility seems to be represented as a reaction to this situation.

The general description of a scenario which is compromised under a socio-economic perspective in "this time of rising costs, growing dissatisfaction of the middle class, and a perceived weakening of the social fabric and security structures" (NYT 2, 2014) confirms the idea that the overall circumstances of countries of origin is the real cause of migration. Environmental changes are only the tipping point that leads to migration in an already overburdened scenario (in this respect, notice that little or no mention is made to the environment). In the following example, the pattern of interrelatedness between events is represented as beginning with environmental change and continuing with socio-economic destruction, political instability, and finally (sometimes) migration (see "depart"): "economic and social fallout from the drought" might cause social destruction that "would lead to political instability" and "small-holding farmers would be forced to depart" (NYT 2, 2014). It is interesting to notice, though, that there is no mention of who/what causes environmental change in the first place; the causes are probably related to socio-political inequality and abuse, and therefore human action.

The role of the environment added to socio-economic and political issues is explained in NYT 2 (2014): environmental changes are represented as a factor that becomes uneasy to handle for populations already burdened by problematic socio-political scenarios and their economic consequences. For instance, the ability to respond to "prolonged drought" in contexts of political instability will be increasingly compromised the more the general scenario worsens: "imagine what could happen if Syria is faced by another drought after much of its infrastructure has been ravaged by civil war". The passivation "is faced by" contributes to delineate affected countries as the beneficiary of events they suffer from (see Section 3.2.), rather than as actively engaged in response measures and management.

Violence and lack of jobs are among the reasons of migration, so issues of mobility are primarily socio-economic. This opinion is also underlined in text via legitimating practices: "*It's clear why* people are leaving: […] political conflict, endemic racisms against indigenous people, poverty and, increasingly, gang violence" are the main socio-economic and socio-cultural issue at the basis of mobility (NYT 7, 2018). Another example is: the "lesser-known dimension to this migration" is that drought and rising temperatures "are making it harder for people to make a

329

living or even survive, thus compounding the already tenuous political situation" (NYT 7, 2018). Even though environmental factors are thematised, the clause actually presents the difficulty to make a living, pointing to economic factors which are aggravated by natural changes. Economic problems are worsened once the environment is no longer able to sustain specific livelihoods; so migration cannot be imputed on the environment altogether. The more economic livelihoods are compromised, the more the people find it hard to earn enough for surviving: in "We can't make a living […] anymore" (NYT 7, 2018); the problem affecting populations from countries of outmigration is clearly represented as economic. Overall, changes in the ecosystems and the consequent change in availability of natural resources reinforce issues of redistribution and inequality and cause conflict and/or migration. Climate change is said to be the factor that could potentially contribute to further environmental degradation and to increased levels of poverty and inequality which may lead to conflict (see, for instance, "even a modest rise could be the *tipping point* for a new conflict over water and a new wave of climate refugees", G 10, 2018).

The representation of environmental migration as a phenomenon which derives from socio-economic factors is also confirmed in the following occurrence: "a concrete solution in a rights-based approach that aims to prevent land conflict" (G 10, 2018) would be to provide displaced people with a fair amount of land. This representation implicitly points to the need for re-distributing resources and limit inequality which are at the basis of migration. The term "land conflict" sheds light on the fact that environmental change limits the availability of natural resources for people, who in turn fight for redistribution; if they still lack sufficient resources or the situation degenerates into a conflict, they move. The link between environmental migration and economic factors seems to be further confirmed by the fact that international organisations and the global community engage in initiatives on "Climate Prosperity" about "the Environment and the Economy", thus mentioning them as complementary areas of this phenomenon (TS 2, 2010).

The correlation between human movement and weather events is influenced by economic factors affecting the level of wellbeing of people-on-the-move. For instance, in "This surge in migration coincided with two of the worst cases in a millennium of the failure of the monsoons to bring the needed rains" (NYT 1, 2013), the expression "needed rains" implies that the rains were needed in order for the harvest to be sufficient to feed the people, who eventually decided to move away. This is confirmed in "periodic warming of surface waters […] brought drought" and "millions died in the famines that ensued" (NYT 1, 2013): climate events are represented as slowly degrading the environment and causing loss of wellbeing; they also reduce the ability to

survive for people who are not able to harvest enough food. As a consequence of this loss, "Thousands sought survival overseas; many more moved locally" (NYT 1, 2013); so migration happens as a form of adaptation to degraded living conditions rather than to a degraded environment. This is further restated in the following example: "Poverty was as likely as sudden disaster to propel people's journeys" (NYT 1, 2013). So, environmental migration seems to be a type of economic, or better wellbeing-related mobility; indeed "patterns of migration […] outlasted particular climatic or economic conditions" (NYT 1, 2013).

The way environmental migration is conceived has repercussions on the way environmental migrants are protected and dealt with. In NYT 1 (2013) environmental migrants are represented as "refugees […] escaping a toxic mix of communal violence, political disenfranchisement and environmental threats": though environmental migrants cannot be considered "refugees" because environmental triggers to mobility exceed the *Status of Refugees* (UNHCR, 2010), the example states that the basic reasons behind mobility are political instability combined with changing natural conditions.

7.3.2. Lexical choices for environmental migration

Representations of environmental migration often depend on nominalisations and terms that tend to describe it as a process while people are backgrounded or erased. As in the discourse of the IOC, in the NC there seems to be a twofold representation of environmental migration: one is negatively connoted and often overlaps with forced forms of mobility, and one is positively connoted as a voluntary strategy for adaptation. In "Migration should be an act of choice and not a desperate last resort" (US ON 5, 2016), for instance, migration is negatively represented as a "last resort", something that is done unwillingly and involuntarily, and it is in contrast with voluntary migration. Representations of positive and negative migration can be found in the following example: "migration has […] been a driver for development, the cost becomes too high when people find that leaving their homes is their only alternative" (US ON 5, 2016). Migration is represented as a factor of development, thus supposedly beneficial for poorer affected populations; forced migration instead is metaphorically defined a "cost" for people who engage in it, thus stressing that people are obliged to leave their homes.

However, environmental migration seems to be generally represented as a phenomenon which evokes concern and worry, especially in terms of its management and consequences. In the passage "Large-scale cross-border movements in recent years have sparked tensions in some countries, placing migration high on the diplomatic agenda and front and center at talks" (US

331

ON 5, 2016), migration is blamed for causing tensions and it is represented as a salient theme of discussion for wealthier countries through spatial deixis ("front and center") (see Section 3.2.).

Some of the terms that are used to refer to environmental migration in the NCS are: "crisis", "plan", "tackle", "solution", "problem", "response", "manage"; they confirm the negative aura that characterises discussions on environmental migration and its dealings.

In "any *plan* to *tackle* the contemporary migration crisis" (US ON 5, 2016), migration is presented as a "*crisis*", a time of critical circumstances, and so it is negatively connoted; also "plan" and "tackle" imply that migration need be addressed strategically and in an organised and coordinated way -a plan- as it is a complex phenomenon to deal with. The idea of environmental migration as a crisis is repeated in "The UN […] warned that the continent [America] faces a refugee 'crisis moment'" (NYT 8, 2018): "crisis moment" implies that the crisis is temporary and short-timed, which is unlikely (see, for instance, the *Summary for Policymakers*, IPCC, 2018). Also, the use of emotion-charged lexicon like "warn" and "faces" contributes to the negative representation of "refugeeism" (actually, "migration" according to the *Status of Refugees*, UNHCR, 2010) and conveys negative emotions to the readership; these representations risk promoting an unwelcoming disposition of host communities towards migrants in search for reception and help. This problematic representation is allegedly legitimised by the UN, an authoritative international body.

In the following passage, the term "solution" implies that there is a problem, namely that affected people cannot stay home and so they move. Migration is represented as a problem because it aggravates this crisis, so it is represented as a situation that can be solved and needs be solved ("investing in sustainable agriculture and rural development is an integral part of any solution", US ON 5, 2016).

"Problem" represents migration as a difficult situation to deal with, which might have a solution. In "As our world heats up and sea levels rise, the *problem* of forced migration around the world is projected to become far worse" (NYT 7, 2018), for instance, migration is represented as a problem, possibly for both origin and destination societies, and it is further evaluated by the pejorative "far worse", stressing the intensity or extent of the phenomenon in terms of the number of people it will probably involve. In "This is our biggest geopolitical *problem*. […] And this has to be a global project" (NYT 8, 2018), mobility and its contributing factors are represented as a worrying problem in terms of its proportions; also, "our" seems to imply that the international community has to take responsibility for its dealings.

In "setting up a special team to co-ordinate the regional *response*" (NYT 8, 2018), the term "response" implies that incoming migration is conceived as something that needs a reaction.

332

In "a policy that *rationally manages* the flow of immigrants into our country and offers a *strategy* to help stabilize the world of disorder through climate change mitigation, birth control diffusion, reforestation, governance assistance and support for small-scale farmers" (NYT 8, 2018), the expression "rationally manage" implies that incoming people are problematic to deal with for the receiving society, but their incoming can be controlled and organised in a successful and effective way. Indeed, "strategy" implies that migration can be "managed" by dealing with natural variability, demographic issues, human-made degradation of the environment, and socio-economic and political issues of justice and redistribution that mobility depends on.

In the following example "Otherwise the world of order is going to be increasingly challenged by refugees from the world of disorder, and all rational discussions of immigration will go out the window" (NYT 8, 2018), two opposing groups are established: the "world of order" of wealthier countries and the "world of disorder" of the poorer countries, the "threat" to order. In this way, migrants are blamed for causing trouble in wealthier countries and therefore they are negatively depicted as troublemakers; the risk is to encourage unwelcoming dispositions and attitudes towards migrants on the part of host societies.

When migration is described as a form of adaptation it is positively represented and legitimised as it provides people deprived of protection with the possibility to find shelter from harm and danger: migration is described as a "*source of resilience* […] offering a lifeline to groups that cannot rely on state protection" (NYT 1, 2013).

It is interesting to notice that overall, environmental migration is represented as a problematic phenomenon that can be solved and/or managed.

7.3.3. A huge threatening phenomenon

In the NC, there are frequent references to the intensity of the phenomenon of environmental migration and the number of people that are or will be involved in it. The representations of migration in the NC tend to linger on the proportions of this phenomenon. Even though the IOC and NC state that migration has always been a strategy for people to adapt to changes in the environment, the fact that mass migration will become the "new normal" (see, for instance, SMH 7, 2015; G 6, 2015; UN 13, 2017) represents current and future migration as unconventional and different from what migration has always been because of its proportions, namely the number of people that is and will be involved in movements. Expressions like "mass migration" emphasise the intensity of movements; the arrival of incoming people might intimidate the reading public (half, if not more, of the newspaper outlets included in the NC are

published in countries which are or could potentially be host societies). Furthermore, these representations might also evoke fear in people belonging to origin countries because of the challenges and risks they might be forced to face.

Migration is often represented in terms of quantity and metaphorically evaluated as a process which is the outcome of worry and concern for one's safety ("fleeing") and of the consequent need for survival ("struggling"), as in the following example: "'*Tens of thousands* […] are fleeing their country amid chronic shortages of food and medicines. The country's longstanding economic crisis has seen *more than two million citizens* leave […] causing regional tensions as neighboring countries struggle to accommodate them" (NYT 8, 2018). The cause of migration is economic and evaluated as very serious; it concerns the wellbeing and survival of people from affected countries. Some other examples include "Outmigration is also *high*" (G 10, 2018); "The tragedy and trauma of such *massive* dislocation" (TS 2, 2010), where migration is also evaluated in terms of the emotional and psychological impact it has on affected communities, possibly encouraging sympathy on the part of the reader. In the occurrence "The *scale and pace* of these *challenges*" (both "natural" and demographic), the term "challenges" further increases the represented intensity and problematicity of migration (see, for instance, "climate change is a far bigger *challenge* than international terrorism", BBC 6, 2009).

In "'More weather extremes, more often, in more places' lead to massive food and water shortages, forced human migrations and desperate border crossings" (TS 2, 2010), the quantity, frequency and intensity of environmental and climate events are stressed via repetition (tricolon), and their role as the main cause of human mobility is presented as true and certain via legitimation strategies: the statement is not modalised and an authoritative person (a Pentagon consultant) is quoted as the source of information. The tricolon is reiterated also structurally in the clause with three nominalisations and their evaluative attributes that represent scarcity of natural resources and migration ("massive food and water shortages, forced human migrations and desperate border crossings"). It is interesting to notice that "migration" and "border crossing" are distinguished, so they possibly refer to internal and external movements respectively -a terminological choice that does not align with the official one, nor does it convey clarity of the types of mobility it refers to. It is also interesting to notice that the reason why environmental changes are increasingly frequent and pervasive is not mentioned, possibly erasing human responsibility behind these patterns.

Moreover, the linguistic choices and images used to represent environmental change and migration generally contribute to evoking an atmosphere of concern and worry: "rapid, irreversible and catastrophic change" (CT 4, 2016), "fight the scourge" (IBNS 3, 2016), "the

human horror" (SMH 8, 2017), "immigration nightmare" (SMH 6, 2015) and "the age of the megacrises" (NYT 5, 2016) are a few examples. These occurrences contain negatively connoted terms that represent environmental change and human migration as threatening, harmful, dangerous, destructive and, fundamentally, an enemy; but also as one of "the staggering *humanitarian crises* facing the world today" (NYT 5, 2016). Most of these representations are metaphorical: environmental change is depicted as an enemy to be fought ("fight", "scourge"); migration is conceived as a sort of frightening experience or feeling ("horror", "nightmare"); and the overall situation of hardship as a series of very bad or dangerous events and conditions ("megacrises"). Other examples of metaphors of fighting include "*combat* increased waves of illegal migration that will likely accompany climate change" (BBC 5, 2012), and "the *battle* against illegal immigrants" (NYT 7, 2018).

Other metaphorical representations which are frequently used to depict migration are metaphors of water (KhosraviNik, 2014, p.507). A few examples in the NC include: "cutting emissions could partially stem the *tide* [of immigration]" (IBNS 6, 2017); "people could *flood* across international borders to escape the impacts of climate change" (G 5, 2011); "immigrants '*swamping*' British culture" (G 3, 2010); "the EU has *absorbed wave* upon *wave* of immigrants" (G 1, 2008); "the *flow* of refugees will *ebb away*" (BBC 8, 2016); and "a new *wave* of environmental migration" (BBC 3, 2008). Representations of migrants and migration as water flowing focus on the proportions of these movements and imply that the number of people involved is so high that people-on-the-move can be thought of as a continuous and unstoppable flow. These representations entail that the impact of "waves" of people on receiving societies is potentially damaging: the host country might end up being "flooded" by a number of incoming people which is difficult to deal with and receive. It is interesting to notice how this metaphor extends to host communities and the way their react to immigration with a "*wave* of anti-immigrant sentiment" (IBNS 6, 2017). The "wave" of incoming migrants is responded to with a "*wave*" of inhospitality, representing the meeting between the two as "waves breaking"; this metaphor often implies that the flux is impossible to stop.

7.4. Representing environmental migrants

7.4.1. Environmental migrants: general considerations

Environmental migrants are often represented in terms of the situations of risk they are exposed to and their dire conditions of living, which are affected by economic, social-justice and environmental factors. For instance, they are described as the "75 percent of the world's poor and food insecure […] highly vulnerable to conflict, persecution, poverty, lack of employment,

inequality, environmental degradation and climate change" that "can "quickly chip away at their capacity to provide a decent life for their families" (US ON 5, 2016). In G 10 (2018), people from poorer countries are represented as exposed to frequent events that lead to risks and miserable living conditions: they "have had to migrate from their homes several times. They have moved back as far as they can go on vacant land. 'Now they're literally just waiting for their houses to fall into the sea'". The almost compulsive movement and reiteration of mobility implies the frequency of natural events and the precarious and extremely unsafe living conditions of affected communities.

The representation of migrant and origin communities is further exacerbated by the description of the consequences of their loss of wellbeing and, possibly, of displacement and environmental change too; see, for instance, "stress levels, spousal abuse and child psychological disorders have increased exponentially" (TS 2, 2010). Indeed, migrants are sometimes described as the target of violence and injustice also during the migration process and once arrived in the receiving countries. For instance, in NYT 7 (2018) migrants are described as facing an "unconscionable family-separation catastrophe" in the receiving society (USA): despite the fact that the evaluative terms "unconscionable" and "catastrophe" are used to delegitimise "family-separation", this practice is represented as a process through nominalisation, thus backgrounding the governments of host societies that put it into practice.

In some occurrences, migrants are represented in terms of the benefits their presence brings to the receiving societies, such as beneficial effects on the economy, contributions to cultural development and personal success. For instance, in "migrants have driven the economy further, enriched the culture and fabric of our nation and their children are, by and large, even more successful" (SMH 1, 2009) migrants are positively represented as active agents (see Section 3.2.). In this respect migrants and members of origin communities are sometimes represented via categorisation as workers; it is the case of "high-energy, low-skilled workers and high-I.Q. risk takers" (NYT 8, 2018), where migrants are relatively individualised via functionalisation (see Section 3.2.). When they are represented as workers, the perspective seems to be that of receiving societies which estimate the advantages and disadvantages of receiving migrant populations. In some occurrences, those who engage in high-skill activities are called "risk takers" as if to imply that they will probably experience hardship and difficult living standards in the country of destination -maybe underpaid or exposed to low-levels of safety in the working place. Some other times, migrants are backgrounded via nominalisation and represented as a process, as in "well-managed migration raises the benefits to all involved" (SMH 1, 2009).

Generally speaking, environmental migration tends to be dealt with in terms of a process with advantages and disadvantages. The high number of people engaged in migration is sometimes represented in terms of increased socio-economic problems for the receiving societies. In SMH 2 (2009), for instance, each migrant is negatively represented and reified as a "polluting unit": "Each immigrant from a non-industrialised country will […] become a carbon dioxide polluting unit at a tenfold increased level". Such a representation of people coming from "non-industrialised" -and therefore less-polluting countries- to "industrialised" countries that rely on polluting economic systems, is irreverent and it encourages anti-immigrant and unwelcoming sentiments in the readership. Some negative representations of migrants are attributable to anti-immigrant groups in the receiving societies: they usually delegitimise migrants by making reference to alleged breaches or violations of the legal system. For instance, in "He wants to lock up more immigrants -including toddlers- as a deterrent while casting all new unauthorized immigrants as potential, if not probable, violent criminals" (NYT 7, 2018), migrants are associated to issues of violence and criminality. This particular perspective is in fact delegitimised in the text; see for instance the use of lexical items such as "toddlers" which help to individualise and shed light on the true nature of migrants and align readers with the authors' stance.

Poorer affected countries tend to be told apart from wealthier countries, to which they are juxtaposed in terms of the impact of their lifestyles on the environment and their exposure to harmful environmental events. It is the case of "those countries […] that contribute little to global warming but suffer its most devastating effects" (TS 2, 2010): wealthier countries are those that contribute the most to the pollution and damage of the ecosystem, but are also the ones that suffer the less from the resulting environmental and climate change. Poorer countries, instead, tend to be the most affected by changes in the climate and environment, despite being less responsible for their alteration. In the example, the antithesis ("contributing little" but "suffering […] most") stresses the paradoxical injustice inflicted on affected populations.

In some occurrences, origin and destination countries are also represented as polarised: they are distinguished in groups of belonging (ingroups and outgroups) according to the way they interact or are expected to interact with each other during the process of migration, especially during resettlement in the host country. For instance, in "Together, they're creating vast zones of disorder, and many people want to get out of them into any zone of order […] triggering nationalist-populist backlashes" (NYT 8, 2018), migrants and host societies are metaphorically represented as belonging respectively to the "world of disorder" and the "world of order". Developing countries are represented as wanting to move away from a situation of instability,

337

but in doing so, they are blamed for causing disorder and extremist socio-political reactions in the receiving countries, so they are somehow blamed for anti-immigrant behaviours. Another example where people moving are deemed responsible for issues of border control and political tension is "people affected by rising waters will seek safety farther from home. In doing so, they *provoke* an anxiety about borders" (NYT 1, 2013).

The process that leads to migration is much more articulated and it is described in more detail throughout the news item NYT 1 (2013). The question is political as well as an issue of power, as explained in "Where local people see a fluid frontier, state officials see firm lines on a map" (NYT 1, 2013): by delegitimising anti-immigrant positions, migration seems to be legitimised. Sometimes, representations of migrants stress the number of people involved in the movements (see above in this section) and might imply blame on receiving societies for being insensitive and unwelcoming towards migrants as in "*more than 13,000* people have tried to cross […] *Hundreds* have died in the attempts; those who survive the journey face a harsh reception" (NYT 1, 2013). These representations might be used as a legitimation strategy to delegitimise anti-immigrant attitudes and align the readers with ideological positions which are more welcoming of migrant people.

In terms of agentivity (see Section 3.2.), migrants tend to be represented as passivated participants who are displaced by natural events, as in "nearly 15 million people *have been displaced by* typhoons and storms" (NYT 6, 2017); rarely are they portrayed as actively taking action to react to these events. The representation of migrants as passively subjecting to natural events and mobility patterns might depend on the fact that they do not always move willingly; rather there are a multiplicity of factors that influence and limit their possibility for autonomous choice. For instance, they might be perceived as an "outgroup" within their own community (i.e. for instance, a minority) and therefore be vulnerable in their own country, or they might be forced to move for political reasons; so, issues of power intertwine with physical changes that impact on their safety and wellbeing. In the following example, environmental migrants interestingly overlap with minority groups in the country of origin: "The government has resettled hundreds of thousands of 'ecological migrants' -many of them religious or ethnic minorities- from the 'affected areas'" (NYT 6, 2017). Another example where migrants are represented as passive participants is: "22.5 million people *have been displaced by* climate-related or extreme weather events" (NYT 7, 2018). In "some people *affected by* rising waters will seek safety farther from home" (NYT 1, 2013), people are passivated and described as moving because of loss of wellbeing and safety. The affective representation of migrants with words and images that induce an emotional reaction (seeking safety and being forced to do so

338

by leaving home) encourage the reader to sympathise with them. The representation of migrants as passive and inactive has nevertheless been critiqued by migrants and origin communities alike, stating that they would prefer to be represented as actively reacting to the conditions that put their wellbeing at risk, rather than as "victims" of environmental change (Dreher & Voyer, 2015, pp.69-71).

7.4.2. Loss of wellbeing as the trigger to human mobility

As mentioned in the previous section, affected populations suffer from poor conditions of living whether they migrate or remain in place. In "The number of extremely hot days is projected to increase […] which will also cause serious health problems" (G 10, 2018), the health issues they are exposed to are evaluated as "serious […] problems", and these risks are represented as the consequence of climate change. The use of the modal verb "will" expresses with certainty that climate change causes a loss of wellbeing for affected communities, that might chose to migrate away. Responsibility is therefore attributed to natural factors, dismissing the fact that climate change is mainly due to the unsustainable lifestyles of affluent societies. Responsibility should be also attributed to wealthier industrialised societies; instead, they are almost always backgrounded in text. The news item often refers to temperatures and weather events as negative, and it represents the environment as subjected to degradation because of these events, in turn affecting the wellbeing of people. As can be seen in many occurrences, the erasure of human responsibility in the alteration of the ecosystems that determines migration is often achieved through nominalisation and nominal processes: in "A *warming world* creates desperate people" (NYT 7, 2018), causality is attributed to a changing climate, while the reasons (or better the participants) that determine such change are not mentioned.

The erasure of human responsibility can be rendered with nominalised processes, as in "Guatemala, the main source of the migrants caravan heading our way, has been ravaged by *deforestation* thanks to *illegal logging*, farmers cutting trees for firewood and drug traffickers creating land strips and smuggling trails" (NYT 8, 2018). Even though the agency and responsibility of humans for the processes of deforestation and logging might be implied by the co-text, nominalisations like "ravaged by deforestation" and "thanks to illegal logging" background the responsibility of human beings ("by" and "thanks to" imply causality). These representations of human agency should be negatively evaluated; instead, the active role human beings have in the degradation of the environment and the consequent loss of wellbeing for migrants are elided. Also, receiving societies are represented as the "victims" confronted with the question of migration.

In some instances, poorer host countries are also represented as impacted by the high number of people-on-the-move they receive, as in the following example: "more than two million citizens leave […] causing regional tensions as *neighboring countries struggle* to accommodate them" (NYT 8, 2018).

Responsibility of who should provide assistance to origin and migrant communities is also erased, often via impersonalisation and the use of past participles as attributives which conceal agency behind the phenomena described. For instance, in "In most places in the developing world they [climate migrants] will end up landless, migrating from rural areas and ending up in slums in the cities with severe *increased* poverty, *if there is no assistance*" (G 10, 2018), the expression "there is no assistance" conceals who should take care of it, namely local governments and the international community.

When climate change and natural events are addressed as the primary cause of mobility, their role is sometimes hedged with expressions like "vulnerable communities *likely to be* displaced by climate change" (G 10, 2018); in this way, the writer can hedge controversial statements about the causes of environmental migration.

Representations of migrants in terms of the activities and professions they perform confirm that there is a link between socio-economic factors and the decision of people to move. Specific categories of people engage in migration after their livelihood patterns are (almost) irremediably affected, and they are generally people who belong to rural communities and work in the agricultural sector. This is why in news discourse there are references to the need to "preserve the social and economic fabric of this rural, agricultural community" (NYT 2, 2014). Environmental factors in themselves are not a sufficient reason to determine people's migration: not all people from origin communities who experience changes in the ecosystems do necessarily move; some might still be able to live out of their jobs and activities. However, since environmental migrants also depart for economic reasons, they might partly overlap with economic migrants. In the NCS, environmental migration is generally represented as a socio-economic and environmental phenomenon: the causes of mobility are mainly identified with lack of job opportunities, namely economic reasons (see Section 7.2.3.).

Environmental migrants are represented as suffering from a general scenario of political instability in which the government fails to assist them, thus causing social discontent; when environmental change superimposes to this scenario people are further affected by natural events ("dislocated by the drought") (NYT 2, 2014). The following example confirms the idea that there are questions of wellbeing behind human mobility -more specifically economic factors that in turn depend on social and equity patterns of fair distribution of material and

immaterial resources: "87 percent of people in conflict zones do not flee their homes despite facing severe food insecurity. And almost all of those that do end up in developing regions" (US ON 5, 2016). In this example, the wellbeing of people is represented as menaced by both starvation and war which reinforce one another and push people to move: lack of food might depend on a poor harvest due to unfavourable environmental conditions, as well as on impossibility to access stocks of food because of a waging war in the area where people reside.

In "according to global relief agencies, 68 million people worldwide have been forced to flee their homes, often because of war, poverty and political persecution" (NYT 7, 2018), references to international authorities, estimates and data legitimise the representation of mobility as driven by socio-economic and political reasons; migrants are represented as passive agents, so they have no choice but moving. Another example that conforms to the representation of environmental migrants as overlapping with economic migrants is "The men had left [..] *to find work and send money* back to their families" (NYT 7, 2018), where mobility is associated to seeking job opportunities.

The combined natural and wellbeing-related reasons that push people to move intertwine in such a way that they apparently are difficult to tell apart from one another. However, human agency is never mentioned among the reasons why environmental changes and particular socio-economic scenarios occur and are so impactful. For instance, in "people have already been forced to leave their homes due to lack of water or an increased temperature. 'The total monsoon period has already decreased'" (G 10, 2018), causality of migration is attributed to "lack of water or an increased temperature" ("due to"). The use of these two nominalisations erases the root cause(s) of these phenomena, which probably correlate(s) to human agency and current "glocal" relationships between countries.

7.4.3. "Voice" and perspective in the representations of environmental migrants and origin communities

The voice of origin communities represents a relevant means to compare the representations of migrants informed by wealthier societies with those informed by affected communities themselves. In terms of metaphors, for instance, if the former tend to represent migration in terms of a concerning flow of water, the latter seem to focus on representing their displacement as lack of a safe haven. The voice of an affected person is reported in the following example: "'We feel like hermit crabs, we do not have a place to live,' says Khin Ohn Myint, her voice wavering as she looks at the bones of her house in the sea" (G 10, 2018); the displaced person refers to the world of animals to describe both herself and her community as "hermit crabs", and

her house like a body lying dead in the sea ("the bones of her house"). It is through the "voice" of origin communities than a better understanding of the motives lying behind migration can be achieved. In "My children have had to go across the border […] to look for work, so we are looking after their children" (G 10, 2018), the modal verb "have had to" expresses the compulsory nature of the movement, thus confirming the idea that mobility is not only determined by natural events, but also by "economic" need.

It is interesting to notice that whenever the point of view from which the facts are narrated is aligned with the perspective of migrant and origin communities, migrants are represented as "leaving" rather than "coming" to receiving societies: the preferred perspective is not the one of receiving societies feeling threatened by incoming people, but rather one that tries to engage the readership in processes of understanding and sympathy. For instance, in NYT 7 (2018) migrants are described as "most often *leaving* because of some acute political problem at home": the representation emphasises the fact that the "problem" is the political situation of origin countries, not migrants, thus encouraging the readership of receiving societies to accept mobility as legitimate.

Sometimes migrants and members of origin communities are individualised; often, fine-grained descriptions are used when they are interviewed by the author of the news article who reports an anecdote of her/his experience. Individualisation of participants tends to include a description of what the participants do or feel, also through the description of their moves and actions that enable or support the expression of emotions. These representations often include the "voice" of the interviewee, whose words are reported through direct or indirect speech, as in "they told me they could no longer make a living off their crops or even adequately feed their families" (NYT 7, 2018). An example of individualisation is: "'The well used to be the centre of our village,' Mya Htay says, grasping the side of a cement water well. But it no longer holds fresh water" (G 10, 2018). In this example, individualisation is achieved by combining name and actions performed by the participant represented; Mya Htay's words are reported directly and personal life stories are added. The representation extends to the whole community she belongs to: the disjunctive conjunction "but" indicates that there has been dismantling of the traditional patterns, livelihoods and landmarks of the community. Another example is "She sighs […] she shrugs […] 'where will we go?'" (G 10, 2018). Direct quotes do not only construe individualisation and salience, but they may also have dramatising effects, thus catalysing the attention of the readers and adjusting their commitment to the events reported (Bednarek, 2006, p.126).

Other examples of individualisation include the emotions of the participant or represent the participant while engaged in mental processes: "We witness a *devastated* mother", "We also see the *angst-ridden* visage of a withered father", and "we witness a middle-aged, *world-weary* victim" (TS 2, 2010). These examples engage the readers emotionally and have them experience a sense of closeness with the participants described: the authors of the text seem to position themselves as empathically recognising the problems of affected communities, and encourage the readers to sympathise with them as well.

Most representations describe the socio-economic environment of hardship and violence these communities experience, as well as the deteriorating conditions of the natural environment their livelihoods depend on. In the following example, migrants are presented through classification (teenagers), as well as through their experiences and "voice" in "a group of teenagers from Gambia who had crossed the Mediterranean from Libya told me that farming had become too difficult to sustain" as semiarid regions spread ever wider "drying up people's land" (NYT 7, 2018). Other examples of individualisation (by different degrees) include: "the family's teenage twin brothers" (categorisation by kinship relation); "migrants living in the shadows of a Kenyan slum" (categorisation by provenance); a "group of men" (gender categorisation); "they were farmers" (functionalisation) (NYT 7, 2018); and "people of Khindan"; "elderly people", "young children", "vulnerable communities" (representation as a collectivity) (G 10, 2018) (see Section 3.2.).

In "Tuvalu islanders […] [are] just one heart-rending example of "environmental refugees" - persons displaced, often permanently, from their homes owing to extreme weather events, such as floods, desertification and rising sea levels" (TS 2, 2010), affected communities are introduced through affective and evaluative language as a "heart-rending example" of "environmental refugees", thus encouraging sympathy on the part of the reading public. However, as mentioned in Section 7.3.1., the definition "environmental refugees" is not legally recognisable as it exceeds the boundaries of the *Status of Refugees* (UNHCR, 2010). Also, in this example environmental migrants are described in a partial way with respect to the definition outlined by the IOM and UN (see Section 1.1.). The IOM states that environmental migration is mostly internal, therefore temporary and not permanent ("Migration flows as a result of natural disasters are in most of the cases internal and temporary because a large proportion of displaced populations return home, if possible", EU 1, 2011); also, it does not attribute clear and complete causality of mobility to environmental changes, but rather it states that people move "predominantly for reasons of sudden or progressive change in the environment that adversely affects their lives or living conditions" (EMP, 2018).

It is worth noticing that when participants are individualised, the environment tends to be described in detail. In "The tomatoes took on a pallid, sickly color; other crops failed to grow at all. The family couldn't survive from farming anymore, so more of the children considered going north" (NYT 7, 2018), the environment is almost anthropomorphised as a person who is pallid and sick because ill; at the same time, though, it is reduced to a resource and property of human beings. Origin societies are represented as people and members of a family and community ("family", "children") who decide to migrate as a way of survival; the theme of survival engages the reading public and encourages understanding of the economic issues that determine migration (especially young migration). Sometimes, individualisation passages are like personal life stories, thus engaging the readership in the reading: "On a stiflingly hot morning, Daw Mya Htay rolls up her longyi, a Burmese sarong, ready to wade into the sea" (G 10, 2018) (see Section 7.2.5.).

7.4.4. Terminological choices to refer to migrants and origin communities

Some of the main terms that are used in the NCS to refer to environmental migrants are: "environmental migrants", "climate refugees", "climate dispossessed", and "environmental refugees". It is worth noticing that the use of the term "refugee" to identify environmental migrants is unjustified. All definitions including the word "refugee" do not align with the terminology adopted by international organisations dealing with environmental change and mobility. Also, they are in contrast with the meaning of "refugee": environmental migrants are not included and protected by the Geneva Convention on the *Status of Refugees* (UNHCR, 2010). Expressions such as "climate *refugees*", "forced climate change '*refugees*'", etc., even when hedged by inverted commas, are incorrect and potentially misleading for the reading public and should be avoided. These representations might give the impression to the reader that environmental migrants can be protected under the Convention on refugeeism while this is not possible due to official legislation; also, they imply that "people have no alternatives for survival" (Warner, 2010, p.404) (see Sections 1.3. and 5.5.2.).

As far as expressions which identify the root cause of movements in the climate, they align with the terminology adopted in the discussions on the *Paris Agreement 2015*: they mention "climate" or "climate change" (for instance, "climate migration"), and only partly with international organisations, which instead mention "environment/al" more often (for instance, "environmental migration"). Choices in terminology might be determined by the conceptualisation of how natural changes and human mobility mingle and interact, identifying either the climate or the whole environment as a determining factor for migration. For instance

in "how many have left their homes because climate change has made their lives or livelihood untenable" (NYT 6, 2017) only the climate is blamed for affecting people's lives.

One of the most evident dis-alignments between the terminology used in the discourse on environmental migration of international organisations and the lexical choices of news discourse regards the terms used to refer to environmental migrants. More specifically, the term "refugees" referring to people who move mainly because of environmental reasons is used more consistently in news discourse than in the official organisational discourse (4,626.75 occurrences per million in the NC, 780.9 occurrences per million in the IOC), even though the concept of "environmental refugee" does not exist legally and its use has been discouraged by several international organisations, including the United Nations High Commissioner for Refugees (UNHCR) and the IOM (Warner, 2010, p.404). In "25 million-plus environmental displaced now outnumber political refugees worldwide and, if present trends continue, that number may swell" (TS 2, 2010), the comparison with political refugees is quite problematic because the category of environmental migrants is not legally defined and it might partly overlap with economic migrants and/or war/political refugees. The same happens in "There are now more climate refugees, economic migrants searching for work and political refugees just searching for order than at any point since World War II, nearly 70 million people […] and 135 million more in need of humanitarian aid" (NYT 8, 2018): environmental, economic and political migrants are put together for the sake of statistics, but also possibly because of their interrelatedness and the difficulty to tell them apart since economic, political and natural factors all contribute together to human mobility.

In some occurrences, the terminology shifts in the same text: it is the case of SMH 2 (2009), where "climate refugees" and "climate-change refugees" are used alternatively in the text with no clear differentiation. Another label that occurs in the NCS is "climate-displaced people" (G 10, 2018); it is not clear, though, whether the term "displaced" only refers to those who move because of sudden weather events, or also those who move because of slow events related to temperature increase. The use of terminology which is not clear-cut and specific can be misleading. Lack of a clear terminology to refer to environmental migration and migrants in the discourse of international organisations is then reflected in the discourse on environmental migration of newspapers.

7.4.5. Metaphorical representations of environmental migrants and countries of origin

Migrants moving from the place where they reside are often metaphorically represented as *fleeing* from home ("68 million people worldwide have been forced to flee their homes", NYT

7, 2018); this foregrounds the forced nature of the movement and the fact that they need to escape from danger. Empathy-inducing language is sometimes used to encourage the reader to align and engage with the point of view promoted by the author of the text, often sympathising with migrants. It is interesting to notice that remaining in place is also represented with images of movement. In some occurrences, the hardships that origin communities who do not move have to face are metaphorically represented in terms of movement or directionality: people "remain behind" (see, for instance, "the challenges persisted for those who remained behind", NYT 7, 2018). The idea of staying behind seems to see things from the point of view of those who leave their own country; it is an image which, in these instances, is conventionally negatively connoted (see "orientational metaphors", Lakoff & Johnson, 2003, p.14) and evaluates the situations of origin communities below acceptable standards of living.

Another metaphor occurring in the NC is the representation of poorer countries (nowadays often origin societies), during the colonial period as an "*arena* for imperial competition and economic vitality" (NYT 1, 2013): origin countries are described as a place for wealthier societies to exercise their jurisdiction, depriving the countries of their resources. The news item outlines the colonial history of the bay and explains (and compares) the current state of human mobility, thus legitimising it as the "natural" consequence of a reckless behaviour of wealthier societies (nowadays often receiving societies). The representation of poorer countries as an "arena" evokes the idea of fighting.

In some occurrences, metaphors of fighting are also used to represent the way specific social groups within receiving societies aim to deal with migrants. An example is "the battle against illegal immigrants" (NYT 7, 2018), where migrants are tentatively delegitimised by evaluating them in terms of illegality. It is worth noticing that in the NC, there are representations of migration as "illegal" and of migrants as "unauthorised" to move (NYT 7, 2018, NYT 8, 2018); these representations can also be found in the IOC and so in the discourse of the international organisations analysed in this study. In the IOC the term "irregular migration" (IOM 26, 2017) has a different connotation, less negative and accusatory, pointing to the fact that the status of environmental migration has still to be clearly defined and acknowledged.

The idea of fighting seems to underpin also metaphorical representations of migrants as an animal- or beast-like entity, and can be found both in the IOC and NC: migrants are depicted as a powerful creature that needs to be controlled, possibly by wealthier countries (see, for instance, "extreme weather will *unleash* many more mass movements of people" (CT 3, 2015), where the verb "unleash" refers to migratory movements). These representations are emotion-laden: they depict movements of people triggered by weather events as suddenly happening and

346

having a great effect, and they might reinforce the idea that mass arrivals of migrants are negative because of their potential impact on host societies.

Metaphors of migration often relate to liquids/fluids; metaphor of water are especially frequent in discourses on migration (KhosraviNik, 2014, p.507; van Dijk, 2014b, p.135). In some occurrences, migrants are represented metaphorically as water flowing, as in "a new *wave* of climate refugees" (G 10, 2018), and "people worried about the refugee *flow*" (NYT 8, 2018). The impact of migrants on host societies is represented metaphorically, possibly to convey a more vivid idea of menace and increase the emotional response of the readership (Lakoff & Jonhson, 2003, pp.25-27). For instance, in "A system already burdened by a large Iraqi refugee population may not be able to absorb another influx of displaced persons" (NYT 2, 2014), migrants constitute a "burden" for the receiving society which is represented in terms of a metaphor of fluid/water ("absorb"). Migrants are portrayed in terms of water flowing (here as "influx"); in turn, the receiving society is metaphorically represented as a permeable sponge. These metaphors of migration construct migrants as a "natural disaster" which is difficult to control (Bednarek & Caple, 2012, p.50).

An interesting metaphorical representation that combines the idea of migration as a liquid and the representation of origin countries as bodies can be found in NYT 8 (2018): "The most frail of them are hemorrhaging <sic> people […]. Others […] have just fractured". Countries are metaphorically represented as bodies bleeding and with broken bones, and they are attributed features that would rather fit a living being like "frail" and "haemorrhaging". Migration is represented as a flow of blood from broken and unhealthy societies.

7.4.6. The "quantification" of environmental migrants

Migrants are often represented in terms of quantity, namely of the amount of people involved in mobility; some examples include: "our current *immigration rate* is too high", "*migrants numbers* should be reduced" (SMH 1, 2009), and "*numbers* have tripled" (NYT 6, 2017). These news items should supposedly convey general information about environmental migration, therefore individualisation of single persons tends to be uncommon, possibly because it would linger on details that are not very informative for explaining this phenomenon of mobility. The representation of migrants in terms of numbers diminishes the salience attributed to them as individuals, and relevance is given instead to the potentially great impact they might have on the structure of receiving societies. References to numbers are especially made with regards to the projected increase in temperatures and, consequently, in people-on-the-move and migrants. These representations easily evoke a sense of concern in the reading public and they might

encourage unwelcoming or even anti-immigrant dispositions. Representations of environmental migrants as numbers lead to further erasure of migrants-as-persons, since migrants are reduced to a process that needs managing, as in "*well-managed migration* raises the benefits to all involved" (SMH 1, 2009).

However, the representation of migrants in terms of numbers and quantity do not necessarily contribute to their erasure; rather, it might point to the high number of people that are affected and in need of assistance, thus encouraging sensitivity towards the issues of environmental change and migration. In this case, the representation of environmental migrants may be characterised by a higher degree of individualisation. It is the case, for instance, of "*one million people* impacted by […] the country's worst drought in four decades"; and "15,000 small-holding farmers" (NYT 2, 2014), where migrants are named "people" and categorised according to their profession or, more simply, the kind of activities they engage in. Another example is "100,000 dependents -women, children and the elderly or infirm- would be left behind to live in poverty" and "Children would be likely to be pulled out from school […] in order to seek a source of income for families left behind" (NYT 2, 2014): affected people are categorised by both functionalisation and classification, so they are described with a relatively high degree of individualisation. The example seems to point to the hard situation origin communities would face as a consequence of the economic and social aftermaths affecting agriculture. These aftermaths are negatively evaluated with the repeated ideas of being "left behind" and suffering from poverty and lack of education, which contributes to low standards of wellbeing. It is interesting to notice that no mention is made to the responsibility and reasons why affected people undergo these situations: origin communities are passivated ("would be left behind", "would be likely to be pulled out from school", etc.) and represented as the beneficiary of someone else's actions. These representations confirm the juxtaposition of poorer affected countries to wealthier countries in terms of their impact on the environment and their exposure to consequent environmental events.

Representations of migrants in terms of "quantity" may include evaluative expressions that negatively represent or delegitimise migrants. It is the case of the following instance: "one of the largest migrations of *unauthorized immigrants*" (NYT 7, 2018), where migrants are represented as acting out-of-the-law. Also the choice of the term "immigrants" might point to the point of view of receiving societies, more specifically, those people who are unwilling to receive migrants. Other examples of quantification of migrants are: "The population […] has twice doubled" (NYT 2, 2014); "an estimated 244 million international migrants"; "a 40 percent

increase"; "internal migration flows are even larger"; "an estimated 740 million people", and "at least one member who has migrated away" (US ON 5, 2016).

It is interesting to notice that references to quantity are in contraposition whenever the focus of attention is the lack of natural resources that poorer communities would need for their sustenance: the less resources, the more migrants. Some examples are "People have already been forced to leave their homes due to *lack* of water or an increase in temperature. 'The total monsoon period has already *decreased*'" (G 10, 2018).

Representations of migrants in terms of "quantity", namely in terms of the number of people involved in movements, are sometimes employed to discuss the responsibility of wealthier societies in environmental change and in the dealings with environmental migrants. In "These climate refugees were crowded together with one million Iraqi war refugees" (NYT 2, 2014), the insistence on the "quantity" of migrants ("crowded together with") is coupled to the erasure of responsibility (via passivation) for the low standards of treatment and assistance refugees suffer from. This representation might convey the message that wealthier societies cannot be blamed and made responsible for the lack of assistance to environmental migrants because migrants are too many to take care of. Another example of the representation of migrants in terms of quantity and the implied responsibilisation of receiving societies for receiving them is "It's time to rewrite the economic textbooks and prepare for the likely millions who will be on our doorstep as climate-change refugees" (SMH 2, 2009): immigration is represented metaphorically as "having people at the doorstep" and being responsible for their reception. Representation that combine issues of responsibility with the quantification of people involved in migration induce a sense of worry in the readers who may therefore become unwilling to receive environmental migrants.

7.5. Representing other participants

7.5.1. The international community: patterns of responsibility

In the NC, international organisations and the international community are generally represented as engaged in the dealings of environmental change and migration and committed to managing the situation of instability and unsafety these phenomena associate with. They tend to be represented as active agents and the terminology used to refer to the role they play in environmental migration tends to bear a connotation of "striving" but not always "succeeding". For instance, in "If UNFAO *efforts fail*, Yehia [Syria's U.N. food and agriculture representative] predicts mass migration from the northeast" (NYT 2, 2014), the term "efforts" conveys the sense of the energy invested in the attempts, which are nevertheless represented as

failing. In "What the U.N. *is trying to* combat […] is the potential for 'social destruction' that would accompany erosion of the agricultural industry" (NYT 2, 2014), the endeavour to alter the course of actions is expressed through a metaphor of fighting ("combat"), but the results are still to be achieved ("trying to"). Moreover, receiving societies are represented as lacking organisation and not ready to manage migration: they do not seem to have a clear "standard on immigration" (NYT 8, 2018), so there is no uniform policy to apply.

The idea that wealthier societies need to take action but fail to do so recurs also in other contexts in the NCS. Indeed, whether the perspective represented is of anti-immigration or pro-immigration groups, wealthier societies tend to be depicted as those who are responsible for taking action. They are represented as going to have their "own problems with poverty, pollution and starvation […]", mainly related to demographic issues and their impact on the ecosystem, as well as to job opportunities, if they fail to take action ("if we don't urgently start planning for a slowing of our birthrate and a smaller intake of skilled migrants", SMH 2, 2009).

The role of the international community in dealing with environmental change and migration, though, is one which is often delegitimised as limited and ineffective, if not irresponsible and noxious at times. In NYT 2 (2014), for instance, the international community is blamed for its response to environmental migration, which is compared with the approach the community should supposedly put into practice: "you're fighting for control of a potential human/ecological disaster zone. You need to be working together to rebuild Syria's resiliency […] not destroying it". The unlikelihood that the international community will actually engage in serious, pondered and supportive activities is acknowledged and further legitimised via a metaphorical saying: "I know that in saying this I am shouting into a dust storm" (NYT 2, 2014). Governments of wealthier nations are strongly delegitimised in their actions and they are negatively represented as engaged in "fights" to gain power (both material and immaterial) that bring further "destruction" to areas and populations which are already in a critical situation ("disaster zone"); instead, they should provide support. It is worth noticing that both human beings and the environment are represented as deeply affected by the activities and behaviours of wealthier countries, as in "human/ecological disaster zone": this is a statement and accusation for wealthier societies to cause harm to particular communities and their ecologies, thus relieving the environment of this responsibility. The use of the modal verb "need" expresses the duty for collaboration; nevertheless, the endeavour to ideally find common grounds for collaborative action ("you need to") is juxtaposed to the description of what is actually happening, namely "destruction" and "fighting" ("you're").

Even when the responsibility of wealthier societies to take action is asserted, action is presented as yet to be undertaken, as in "*We must create* the opportunities for rural people in developing countries to stay in their home" (US ON 5, 2016). In the example, the words of an authoritative figure in the field of environmental migration are reported in direct speech: "we must" expresses the moral duty of wealthier societies to "create the opportunities" for others, but they appear to have not committed to yet. Another example that reports on the actions that should be undertaken by the international community (not accomplished yet) is "A necessary first step is to address the factors that lead to distress migration" (US ON 5, 2016): the modal marker "necessary" and the metaphorical expression "first step" indicate that these actions have not yet begun; together with the use of the infinitive "to address" they converge towards a general erasure of responsibility. In "the government *is trying to* work towards the goals set in the Paris agreement" (G 10, 2018), the international community is represented as making an effort to put into practice management and response measures to environmental migration, though not necessarily succeeding.

Sometimes emotion-charged words are used, possibly to stir the emotional response of the readership and increase the intensity with which the need for taking action is felt. In "we have 12 years to limit climate *catastrophe*. Its report urged action to cut carbon emissions to avoid the atmosphere warming by a *disastrous* 3C" (G 10, 2018), the connoted words "catastrophe" and "disastrous" are paired with a call for action (inclusive "we") that focuses on the limited amount of time left to act ("we have 12 years"; "urged").

Whenever assistance to affected countries is discussed, nominalisations and nominalised processes are often used, avoiding clear reference to the participants engaged in the activities mentioned; in this way, the responsibility to take care of migrant and origin communities is either erased or left unspecified. Possibly, international organisations and the global community would be expected to provide assistance as they are the wealthier and less-affected countries, as well as the most responsible for changes in the ecosystem that affect the living conditions of poorer countries in need for help. Some examples of nominalised processes that tend to background the responsibility of wealthier societies for taking action are: "direct assistance", "drought assistance" (NYT 2, 2014); "*investing* in sustainable agriculture and rural development is an integral part of any solution" (US ON 5, 2016); and "but there remains a pressing *need for better adaptation planning*" (G 10, 2018), where the use of impersonalisation erases the responsibility for "planning".

In "FAO promotes measures aimed at building resilience and fostering development in countries where many of today's migrants originate" (US ON 5, 2016), the people who are supposed to

take up these "measures" are left unmentioned. Also, "measures" are represented via nominalised processes, thus backgrounding or erasing the agents: "*ensuring* adequate access to land and water, *empowering* women, and *promoting* financial inclusion to boosting family farming, *paying* special attention to rural youth's needs and prospects, and *strengthening* social protection schemes that can serve as buffers against shocks". It is interesting to notice that these measures concern the promotion of equality and justice, such as fair sharing of environmental and financial resources, and equal gender possibilities. Basically a situation of deep inequality is identified as the main cause of instability; therefore migration is represented as deriving from inequality patterns, especially in terms of processes of sharing or preserving natural, economic and social resources and possibilities.

Another example of processes in which responsibility is backgrounded is "The Bay of Bengal urgently needs more effective cooperation for environmental protection -for instance, by regulating fishing, protecting mangrove forests and curbing persistent pollutants and carbon dioxide emissions" (NYT 1, 2013): there is no mention of who is supposed to take care of it, nor whom or what the environment should be protected from. Lack of responsibilisation is confirmed by the many nominalised processes: "*regulating* fishing", "*protecting* mangrove forests" and "*curbing* persistent pollutants and carbon dioxide emissions"; the latter cannot but refer to wealthier societies and their responsibility of their own lifestyles. Agency is also erased in "More coordinated humane policies on migration must also be developed" (NYT 1, 2013): who is being inhumane and who is suffering from inhumane treatment is left implicit in the discourse (possibly, receiving societies and migrant communities respectively), and no one is said to be taking responsibility for making progress. Processes are also nominalised when they are negatively connoted and their agent is backgrounded or erased, as in "masking", "destructing", "increasing social discrepancies" (see, for instance, "notions of 'economic success' that *mask* ecological destruction and widening chasms between the haves and have nots", TS 2, 2010).

The use of nominalisations not only backgrounds the participants involved in the processes described, but the target of the processes is also erased, thus hindering understanding. For instance, in the following headline "Plan now for a sensible limit to our population. Growing pains" (SMH 2, 2009), both the participants involved in the process and the very process itself are not mentioned (if not metaphorically as "pains"). It would be interesting to know who the affected participants are, especially since "growing pains" is a strongly evaluative expression that is both as negative and as intensifying. Possibly, the statement is grounded on the perspective of host societies that identify environmental migration as a phenomenon that will

352

add up to unresolved questions in the host country with the risk of producing a hardly manageable situation. For instance, demographic issues related also to the reception of migrant communities are represented as clashing with the environmental limits of the country in the following examples: "There is a limit to population growth in Australia: *water*"; and "Population planning should be based on our *physical limits*, not aspirational comparisons" (SMH 2, 2009) (here, there is a sort of process of identification between human beings and their lived environment: "our *physical limits*").

This perspective supports the idea that problems already exist in destination societies and are only aggravated by environmental mobility. For instance, in "The economic benefits are far outweighed by factors such as rapid depletion of water, food and building materials, and urban infrastructure […] that is already at breaking point" (SMH 2, 2009), ideological and political groups that place economic issues before services to human beings are blamed and delegitimised as unable to tackle the problems related to environmental change and migration. The latter are metaphorically represented as already "at a breaking point", so in very critical conditions. Despite the positivity of the message, namely that a shift in priorities is needed, the mere anthropocentric perspective through which the facts are reported reifies the environment and reduces it to a stock of ecosystem services; the need to preserve the integrity of the ecosystems for the sake of all members of the environment is disregarded.

The (represented) low-level of commitment on the part of receiving societies in managing environmental migration might be influenced by particular socio-economic issues at stake. The governments of receiving societies are represented as supporting specific economic interests behind gate-keeping processes about migration, which are used for political purposes. Migration (including environmental migration) is represented as necessary for host societies to continue living according to their living standards, thus further confirming the unwillingness of wealthier societies to commit to changing the systems of injustice and inequality that underpin world relationships. In the following example, immigration becomes instrumental for the host country to be wealthy and prosperous, and covering the whole job demand: "the country won't do as well as it can in the 21st century unless it remains committed to a very generous legal immigration policy -and a realistic pathway to citizenship for illegals already here- to attract both high-energy, low-skilled workers and high-I.Q. risk takers" (NYT 8, 2018). The receiving society is represented as engaged in highly demanding living standards, but the impact these have on both other people and the ecosystem is blurred and implicit. Overall, the immigration policy is not "very generous" (which is a euphemism) but rather opportunistic.

In "They have been the renewable energy source of the American dream -and our secret advantage over China" (NYT 8, 2018), migrants are further reified by receiving societies to achieve their goals: they are metaphorically represented as fuel ("renewable energy") and an advantage for competition between countries. This representation of receiving societies (in this specific context USA) as taking advantage of other less powerful people is delegitimised as negative and worth blaming. The representation of wealthier societies as profiting of less powerful countries (represented as "weak little nation-state[s]" that need powerful countries as "tutors") is blamed as immoral. Also, wealthier societies are blamed for intruding into the socio-political systems of poorer countries and becoming co-responsible for upheavals and political instability that determine human mobility (see, for instance the statement "no one had a cellphone to easily organize movements against your government", NYT 8, 2018).

7.5.2. Creating "ingroups" and "outgroups": "voice", legitimation and evaluation patterns

In the NCS, groups of belonging (ingroups) and groups of exclusion (outgroups) are created not only between origin and destination countries, but even within origin and destination countries. In affected societies, governments are blamed for not providing adequate assistance to affected communities, thus identifying the former and the latter as belonging to two distinct groups possibly based on different criteria of power and status (see, for instance "The government should start the work at union level to see how many people are falling prey to natural calamities and their life and livelihood patters are changed because of them", BBC 1, 2008). In wealthier societies, governments and organisations are blamed for lack of assistance and unwillingness to contribute to a change in unsustainable and harmful lifestyles, thus they are excluded from the ingroup of those who commit themselves to addressing issues of injustice (i.e., for instance, environmentalists).

The same distinction between different groups of belonging within receiving societies is expressed elsewhere in the NCS. For instance, in some occurrences, the governments and authorities of wealthier societies are called to take action. In "We need smarter leaders to start planning now for an ethical slowdown in our population" (SMH 2, 2009), two groups are represented within a society, i.e. citizens, and governmental authorities. One group (i.e. citizens) demands that the other takes action and "start planning", thus attributing responsibility. In other words, the distinction between different groups of belonging may be a strategy to avoid taking responsibility for any dutiful action. In this respect, it is worth noticing that the participants who should supposedly engage in response measures to demographic issues (including

environmental migration) are further backgrounded or erased by representing response measures in terms of nominalised processes ("sensible limit").

Positive self-presentation and negative other-presentation (see Section 3.2.) is one of the strategies used to delegitimise the ideological stance of the outgroup by means of distancing oneself from it. Different groups of belonging within a society appear to be related to different ideological positions and so different political stances. These are sometimes implicitly distinguished by means of evaluating each other's actions and priorities, as in "the stupidity of setting an ever-increasing population as an essential goal" (SMH 2, 2009). Indeed, the representations of receiving societies in the NCS are characterised by failure to take responsibility for the dealings of environmental migration, and by the endeavour to bounce it back and forth between different ideological groups in a "political election".

Another evaluative statement which is used to delegitimise each other's perspective is: "The Federal Government's Population targets will make it impossible to reach any *decent* carbon reduction levels" (SMH 2, 2009), where the federal government is referred to as responsible for missing the targets of pollution reduction that influence environmental problems. The distinction between groups can therefore be also a strategic means to re-bounce responsibility for taking action (or failing to do so) to each other.

Some other examples are: "'adapt and prosper as a result of climate change'", and "notions of '*economic success*' that mask ecological destruction and widening chasms between the haves and have nots" (TS 2, 2010), where quotes are used for distancing purposes in a text in which there are accusations of "destruction" and social injustice. In "notions of 'prospering' in a time of climate change should give us pause", the expression "give us pause" contributes to creating two groups to encourage the readers to engage with the author's perspective ("us") and distance themselves from the perspective of the implied outgroup (TS 2, 2010). The "outgroup" includes "the business community" which is attracted by the idea of prosperity and "might otherwise be reluctant to take part in such debates" (on climate change); also, the outgroup is sponsored by an "oil company" so it "might raise questions -if not hackles- among those concerned with our need to move away from fossil fuels to more sustainable energy sources". Here the outgroup is delegitimated because of the relations with other partners that are represented as unreliable and problematic; connoted terms are used to evaluate the group as one which is dishonest or morally wrong ("raise questions", "hackles").

Positive self-presentation and negative other-presentation strategies may also rely on comparisons with groups, actions, etc. which are commonly perceived as positively or negatively connoted. It is the case of the following instance: "ICE [Immigration and Customs

355

Enforcement] spreads 'fear and intimidation' among immigrants the way the Ku Klux Klan did among blacks" (NYT 8, 2018). In the example, the outgroup is represented as discriminatory to an utmost racist point; this is delegitimation by moral evaluation via reference to illegality (see Section 3.2.). Another example is: "Border Protection officers firing tear gas to keep out desperate migrants […] will get a lot worse" (NYT 8, 2018): officers are represented as engaged in violent actions towards migrants who are represented as "desperate"; this situation is presented as one that should be avoided as it is formulated like a warning and negatively evaluated. Further delegitimation of this outgroup comes from the quotation of reliable authoritative sources which claim that "economic approaches accenting prosperity are appealing because they can allow us to sidestep the 'deep soul-searching' necessary to change from a profligate fossil-fuel-based economy to a sustainable one". In this passage, people who adopt particular economic models that are unsustainable are delegitimised as "profligate".

As far as positive self-presentation is concerned, legitimation can be achieved by representing oneself as accountable, reliable and authoritative; in SMH 2 (2009) self-presentation as a scientist (a biologist) encourages the readers to align with the perspective of the author and join the cause promoted in the text because that would be the right action to take. Also, reference can be made to commonly acknowledged sources of reliable information as in "base decisions on *the best available scientific information*" (SMH 2, 2009).

Positive self-presentation and self-legitimation are also achieved by refusing derogatory accusations, the "delegitimising statements" about oneself made by an opposing outgroup. It is the case of NYT 8 (2018), where the right wing party "had once *shamefully* tweeted that Democrats were 'the NeoKlanist party'", thus delegitimising this utterance as disrespectful and disappointing. The process of responding to reciprocal accusations continues in the text: "Democrats think the ICE officers protecting you from illegal immigrants are like the K.K.K. You gonna vote for that?" (NYT 8, 2018). It is interesting to notice that the readership is called to align with the point of view of the speakers by means of using direct personal address ("you"; "voters"), colloquial language ("You gonna…?"), and evaluation of specific actors ("ICE officers protecting you"; "illegal immigrants").

Another strategy for delegitimation is the euphemistic and derisory representation of outgroups, their practices and beliefs. For instance, in "It will be hard for visionaries […] to convince Australians their wasteful lifestyle and hedonistic 'equality of life' will need to be curtailed. But failure to do so will result in a rapid diminution of both" (SMH 2, 2009), the lifestyle of Australians is condemned. The responsibility of the affluent Australian society for causing environmental degradation and consequent increase in inequality between wealthier and poorer

countries (as well as within poorer countries) is underlined. The derisory tone and the use of markers of person deixis like "their" seems to point to two distinct groups, thus blaming responsibility back onto the "others".

This type of argumentative strategy has the twofold function of delegitimising the opinion of the "outgroup" and legitimising one's own position. In "He should travel to Wilcannia to see what our 'inadequate' 21.5 million, with its demand for irrigated produce, has done to the once-navigable Darling River" (SMH 2, 2009), inverted commas are used to express distancing from the original meaning of the word "inadequate" identifying it as a euphemism in this context. Other examples of statements that use tropes to discredit and delegitimise the other's perspective are: "*laughable* when they talk" (euphemism); "*Does he really think* we can continue to engineer our way out of overpopulation and climate-change problems" (rhetorical question); and "Europe's slowing population and lead role to reduce emissions *don't appear to have had any dire economic impacts*. We need smarter leaders to start planning now for an ethical slowdown in our population" (litotes) (SMH 2, 2009). The use of tropes and evaluation strategies to delegitimise particular perspectives aligns the readership with the opinion promoted.

Sometimes the "voice" of the outgroup is reported using direct speech in order to let the members of the outgroup delegitimise themselves. For instance, the words of President Trump are reported in "We need a high wall with a big gate" (NYT 8, 2018): this statement sounds as an unrealistic simplification of political discourse. This idea is reinforced by figuratively representing the members of the opposing ingroup, who do not support the construction of a gate, as those who "need to be the *adults* and offer a realistic, comprehensive approach" (NYT 8, 2018). As the groups are evaluated, the readership gets to know which side to take.

In some occurrences, the use of these tropes combines with metaphors to strengthen the delegitimising effect. An example is "doing nearly everything it [the President Trump's team] can to walk back decades of regulations intended to protect our air, water and land" (NYT 7, 2018): the action of the President's team is delegitimised with a metaphor of movement that is conventionally connoted as negative ("going backwards") (Lakoff & Johnson, 2003, p.14). Also, it is delegitimised as affecting the goods of an implied ingroup ("our") which possibly includes the readership. The actions of the team are further strongly evaluated as negative by means of a cruel metaphor of "opening up" a body ("doggedly eviscerating"): "the administrator of the Environmental Protection Agency, is doggedly eviscerating the agency he runs"; "The Trump Administration can continue to eviscerate the E.P.A. and thumb its nose at global efforts

to protect the climate, or he <sic> can work responsibly to try to curb international migration by addressing the challenges" (NYT 7, 2018).

A parallel is established between those who are against immigration and fair treatment of migrants and those who appear to be seriously disregarding the preservation of the environment: the two seem to overlap. The perspective of anti-immigrant and non-environmentalist groups of people is delegitimised as inconsistent because human mobility and the protection of the environment have interrelated effects: the more the ecological system is compromised, the more people will engage in migration. Environmental change is represented as deriving from the pollution of the environment, which causes the exacerbation of economic difficulties that trigger mobility: by "refusing to take climate change or responsibility for our planet seriously the Trump administration is encouraging the conditions that will increase unauthorized migrations" (NYT 7, 2018). The Trump administration is delegitimised as neither serious, nor responsible, thus going against the interests of the ingroup ("global efforts", "our"). The environmental impact of irresponsible behaviour which disregards the environment will lead to more movements of people.

Other examples of delegitimation are based on moral evaluation, such as "The anti-immigrant rhetoric of the Trump administration has made for *elaborate and bombastic theater* -but with real, and sometimes *deadly*, human consequences" such as the "children separated from their parents at the border"; "*he'd better get serious* about climate change" (NYT 7, 2018); and "Republicans have completely *caved* to Trump's *craven exploitation* of immigration" (NYT 8, 2018).

7.5.3. Lexical expressions and metaphorical representations to refer to origin and destination societies

A common representation of the way origin and destination countries interact with the situation of migration relates to fighting. More specifically, anti-immigration groups within host societies are sometimes represented metaphorically as engaged in a fight with incoming people, the "outlaw". An example is "President Trump had made the *battle* against *illegal* immigrants the *rallying cry* of his campaign and administration. He wants to *lock up* more immigrants - including toddlers- […] while casting all new *unauthorized* immigrants as potential, if not probable, *violent criminals*" (NYT 7, 2018): the immigration policy of President Trump's administration is described in terms of a battle between Americans and migrants, and the latter are assumed to be prone to illegal activities and therefore are negatively represented.

People living in host communities are rarely mentioned via individualisation -as in the case of migrants- unless they are acknowledged as authoritative political or scientific figures. Interestingly, both origin and host societies are often represented as "countries", therefore as people belonging to a collective entity characterised by the sense of belonging to a group with shared socio-cultural traits. As such, people are often metonymically represented in terms of the country they come from. An example is "if *Canada* 'turned away from its current damaging policies and shifted to a green energy economy'" this "will also uphold Canada's 'moral obligations' to those *countries* […] that contribute little to global warming but suffer its most devastating effects" (TS 2, 2010): an affluent society is represented as one of those countries that have the moral duty to reduce global injustices by changing their own livelihoods patterns.

Metaphors of movement and directionality are sometimes used to represent the actions wealthier polluting societies engage in to allow migrants to remain in their countries of origin when they are willing to do so, as in the example quoted above, "Canada '*turned away* from its current damaging policies and *shifted* to a green energy economy'" (TS 2, 2010). As migrants are represented as needing to move from more affected to less affected areas, so are wealthier societies represented as needing to "move" from more polluting to less polluting economic systems and lifestyles.

The metaphor of movement curiously combines with the metaphor of water in "No one prospers when millions are *set adrift* in an ecologically damaged world" (TS 2, 2010): origin and migrant communities are figuratively represented as "set adrift", but the responsibility of those who abandon them and leave them without assistance is left unmentioned; responsibility for damaging the environment is also erased. What is most interesting, though, is the use of ingroup and outgroup distinctions and the representation of the members of the global community as interlinked and co-dependent from one another for their wellbeing ("No one prospers"). As ecology is represented as univocal and therefore co-dependant on the manifold aspects that constitute it (see Section 7.2.6.), so are human beings co-dependent one from the other; this statement seems also to imply that humans are by all means part of the ecology.

The concept of "thinking beyond the border" (NYT 8, 2018) is introduced in the NCS as a potential approach to environmental migration: there is the need to rethink both the concept of "border" and the "issues that are pushing migrants our way" in holistic terms, as the two are inextricable.

7.6. Concluding remarks

Chapter 7 has presented the analysis of representations of environmental migration in the discourse of the NC and NCS. The analysis has provided insights into the difficulties of informing adequate representations of environmental migration and identifying specific terminology for this phenomenon. More specifically, the patterns of causality and responsibility that trigger environmental migration are represented in both corpora as problematic: the role of the environment in human migration is unclear and remains unspecified. Since causality of the environment is uncertain, the relation between environmental change and migration is often represented in terms of unspecified interrelatedness. Representations of environmental migration tend to be biased by an anthropocentric perspective, and the impact of human agency on this phenomenon of mobility and on ecosystem change is generally backgrounded or erased. However, the texts in the corpora show an awareness of the limited role of the environment in human mobility, claiming anthropogenic causality. The humanitarian and socio-economic triggers to environmental migration are well present in the texts: environmental migration is partly understood as a phenomenon that derives from combined natural changes and unstable socio-economic and political scenarios, which invalidates the wellbeing of affected communities. The phenomenon of migration and migrant communities are often represented as contributing to problematic and threatening circumstances for all people involved also through metaphors of fight and water and by quantifying their impact on origin societies, receiving societies, and the environment.

The participants involved in environmental migration, namely communities of origin and communities of destination, are generally represented in terms of ingroups and outgroups based on: their impact on the ecosystem; their exposure to environmental phenomena and migration; and their "agentivity", their ability to actively deal with environmental change and migration. However, the identities of participants involved are varied, they span across restraining ingroup/outgroup distinctions, and they open up possibility for dialogue and mutual understanding: in the texts of both corpora there are representations of groups of belonging and groups of difference even within communities of origin and destination.

Chapters 8 will bring together all threads of the analysis; it will comment on the representations on environmental migration proposed in the IOC and NC and it will encourage reflection on specific aspects of representations.

8. CONCLUSIONS

Chapter 8 gives an overview of the different strands of the analysis of the discourse of environmental migration as carried out in this study, and presents the interpretation of the findings of the analysis. It reflects on several problematic questions and issues related to the representations of environmental migration informed by the discourses analysed. It also presents the limitations of the study, draws some conclusions and outlines potential developments.

8.1. The study: key aspects

The present study has investigated representations in official organisation and media discourses about environmental migration. The analysis aims to show how the phenomenon of environmental migration is represented by current discourses around this topic by surveying linguistic aspects within specific socio-cultural contexts. The analysis focuses on the representations of three main aspects that inform environmental migration, namely the very phenomenon itself, its participants (migrant communities and individuals, communities of origin and communities of destination), and the environment. The questions at the basis of this investigation are: how is environmental migration represented? How is the environment represented in this phenomenon? How are environmental migrants represented and what are the reasons behind their movement?

Representations either reflect and reinforce or challenge the ideologies that underpin them; they reveal interrelated meanings, "stories" (Section 2.2.3.) and understandings of the phenomenon of environmental migration. Once underlying meanings are brought to the fore they can be questioned, explored, challenged and replaced with new ones if need be (Blommaert, 2012, p.12; 2005, p.25). The focus is therefore not so much on individual texts but on recurrent patterns of language which are present across large numbers of texts, and so are representative of the discourses analysed. More specifically, organisational and mainstream media texts are analysed as sites of contested representations that (re)produce, challenge, and amplify ecocultural perceptions, practices and identifications (Stibbe, 2018, p.176; Milstein & Castro-Sotomayor, 2020c, p.223).

The investigation and interpretation of representations of environmental migration are based on linguistic analysis and are limited to the interpretation of the analyst: the point of view and value system of the analyst are used to interpret representations of environmental migration. In order to complement the comments and interpretations of the findings in a reliable way, the study is based on the following environmental reports at world level: the summary for policymakers of the *Global Environment Outlook 6 (GEO6)* (United Nations Environment Programme-UNEP, 2019); and the summary for policymakers of the *Global Warming of 1.5°C* (Intergovernmental Panel on Climate

Change-IPCC, 2018) (see Appendix, Section 3). Representations found in the data are assessed on the basis of the most recent information available on the state of the environment and its ecological and humanitarian entailments, which is reported in these documents (see Section 2.1.1.1.).

8.2. Environmental migration and value systems: discourses of conservatism and change

Discourses constitute social identities, social relations, and systems of knowledge and beliefs and are informed by them (Fairclough 2003, p.124) (see Sections 2.1. and 2.2.3.). Representations in discourse are evaluative and socially shared; representations in the discourse of environmental migration may promote particular attitudes about (im)migration and negatively present other attitudes. These attitudes are at the basis of individual and social practices: they may result, for instance, in ethnic prejudices and discrimination, or in welcoming dispositions and sympathy. This is why discourses are involved both "in the daily reproduction of social structures of domination and resistance" and in the construction of new alternative social structures (van Dijk, 2014b, p.129). In the discourses of the IOC and NC, representations of participants to environmental migration tend to be compartmentalised in two distinct groups which correspond roughly to people belonging to countries of origin on the one hand, and people belonging to countries of destination on the other hand. More specifically, the former group includes less-affluent and more-affected people and migrant communities; while the latter group includes more-affluent and less-affected people, and it includes (but not exclusively) members of international organisations. These ingroups and outgroups are represented in discourse which promotes specific attitudes towards them; therefore, power relations and social practices are shaped also by discursive representations as "[i]t is also through such socially shared attitudes that group members are able to *cooperate* in the attainment of personal and social goals" (Van Dijk, 2014b, pp.130-131).

Discourses imply encoded points of view of how people, entities and processes are represented. Specific perspectives evaluate and legitimise participants, entities and processes according to specific values (especially at the level of morality and affinity) (Hart, 2014, pp.110-111, 124, 163-164). The evaluations conveyed by representations of environmental migration vary according to political priorities and worldviews (see Section 2.2.1.). The perspective that prevails in the discourses of the IOC and NC belongs to dominant and powerful social groups within wealthier less-affected societies. The "voices" and perspectives in the data which present environmental migration belong to groups of power (official international organisations operating in the field of migration, and mainstream English-language newspapers outlets); their influence on the understanding and modalities of response to environmental migration is likely to be a major one. The phenomenon, participants and features of environmental migration are therefore attributed

362

specific connotations which reflect the interests of powerful groups and align with their systems of values and beliefs; the phenomenon itself is explained and interpreted through their specific interpretative lenses.

What seems to be valued as good, right and ideal according to the encoded point of view is the preservation of the economic system and *status quo* of unbalance and inequality: for instance, the themes of "development" and "adaptation" are particularly relevant in these discourses, while reference to "change", "transformation" and "transition" is sporadic. The possibility to continue living according to socio-economic and political systems which are proving to be unsustainable for both the ecosystem and less-privileged communities seems to be a major concern, even prior to the preservation of the environment and the well-being of less-privileged societies. In this respect, some controversial questions emerge in the texts: for instance, the idea of exporting "development" in more-affected countries is more salient than the idea of promoting the transition towards less-polluting systems of sustenance in the countries which pollute the most. Adaptation is a preferred option to transition, reflecting the scarce commitment of powerful societies to engaging actively in response measures to environmental change and migration: processes of adaptation and resilience are represented as processes that less-polluting countries have to undergo; more-polluting countries are only seldom called to take action to reduce their impact. In general, more-polluting and (often) wealthier countries are not asked to transition to economic systems and lifestyles that do not affect the wellbeing and survival of other living beings and the ecosystem. Rather, they are represented as either assisting other countries to change and adapt, or to literally pay for the damages they have caused, thus reducing environmental questions to economic matters.

What is valued as good, right, ideal is a matter of ecocultural communication: it reveals the perspective, ideologies and interests that underlie representations of the social and environmental dimensions of environmental migration (Freeman, 2020, p.442). What emerges from the representations of the IOC and NC is an insistence on the idea of maintaining the *status quo* (on the part of affluent societies) through adaptation to environmental change (on the part of poorer countries); these representations communicate immobility and unwillingness to commit to changing. Additionally, the discourse on environmental migration seems to be underpinned by an "anthropocentric language of domination that perpetuates the binary framing of human and non-human life" (Bloomfield, 2020, p.201). It reinforces the distinction between wealthier societies (which have the privilege to avoid change) and poorer affected communities, which must and/or are expected to change, either by moving away from their place of residence, or by adapting socially and economically to the new circumstances. Wealthier societies are those who remain in place and do not move despite changes in the eco-system, while affected societies are those who move and

"go ahead" in the search of innovative and more sustainable patterns of living. The former represents immobility, the latter change.

Official discourses should possibly promote the transformation and transition to new and innovative socio-economic systems which re-balance the relationships that tie the ecosystem and human beings together. Anthropocentric and ecocentric approaches to environmental migration depend on different values and worldviews: anthropocentric approaches lead to undistributed power, ecocentric approaches to shared wellbeing.

8.3. The environment

8.3.1. The emerging role of the environment in environmental migration

Interpreting the results of corpus-assisted analysis in the contexts in which IOC and NC have originated and developed, it is possible to acknowledge how representations of "environment" are uncertain and ambiguous, and reflect specific priorities and worldviews. Representations of the natural phenomena on which environmental migration depends generally construct environmental change as affecting the whole interconnected ecological system, and as undeniably rooted in specific unsustainable human actions and behaviours (see Section 1.1.). The impacts of ecological events and human activity on the environment and on human migration are acknowledged also in the documents on fundamental human and environmental rights used to assess the discourses of the IOC and NC (see Section 8.1.), and they are well exemplified in the following passage from the *Global Environment Outlook 6 (GEO6)*: "Climate change alters weather patterns, which in turn has a broad and deep impact on the environment, economics and society, threatening the livelihoods, health, water, food and energy security of populations (*well established*). In turn, that increases poverty (*well establishe*s), migration, forced displacement and conflict (*established but incomplete*), with particular impact on populations in a vulnerable situation (*well established*)" (UNEP, 2019, p.14).

Changes in global temperatures impact on the whole ecosystem and their inhabitants; specifically, they have dire consequences for human wellbeing, safety and survival, increasing mobility and insecurity for the people who are more-exposed to environmental events.

The state of the environment and human wellbeing increasingly emerge in the texts of the dataset as interacting factors that cause people to move: the discourse of environmental migration mainly identifies both climate change and environmental change as conditions for human migration to occur (see Section 1.1.). More specifically, in the two corpora the state of the environment is represented as ranging from a contributing to a determining factor that impacts on the wellbeing of human beings, rather than on their patterns of mobility. Therefore,

environmental conditions are not an exhaustive explanation for human migration in environmentally fragile contexts; the wellbeing of human populations is represented as further impacted by a constellation of factors which include economic issues like poverty, political issues like instability, and a combination of socio-political and economic questions determined by uneven power relations such as unequal distribution of resources and access to basic services.

In the texts of the IOC and NC, the environment is rarely represented as endowed with agentivity; rather, representations often are anthropocentrically biased and portray "humans as actors and the environment as a background before which action occurs" (Parks, 2020, p.105). However, there also are representations of the climate and environment as threatening and potentially impactful entities which are blamed for contributing to environmental migration. Instead, the contribution of human beings to the deterioration of the living conditions of vulnerable social groups is understated and often erased; it is acknowledged only sporadically and often implicitly and/or briefly in the texts of the corpora.

Since it is argued that climate and environmental change are going to continue over time in the next decades (IPCC, 2018; UNEP, 2019), representations of environmental migration which do not evoke feelings of vulnerability, helplessness, and lack of agency become of paramount importance: representations mediate feelings, and feelings mediate beliefs and behaviours. Environmental change and migration can be represented as "as extra-human" and so "unable to be stopped", but "if people consider themselves powerless to mitigate climate disruption, they will be immobilized and unwilling to even try". Instead, representations of environmental change as strongly dependent on the actions and behaviours of human beings would mitigate "the correlation between fatalism and apathy towards environmental activism" (Bloomfield, 2020, pp.203-204).

8.3.2. Relationships among countries and with the ecosystem: the question of development

The discourse on environmental migration can be categorised as a "biopolitical discourse", where issues of environmental preservation merge with issues of sustainable development and resilience, environmental change and migration management (Bettini, 2017, pp.33-34). According to Bettini, discussions about these issues in mainstream and official discourses on environmental change and migration "share the same horizon: the 'production' of governable populations out of the vulnerable" (2017, p.36). More specifically, representations of the environment and of socio-ecological relations, namely the ways in which different social groups

interact with the ecosystem, reveal "which relationships are regarded as meaningful within a particular [cultural] world" (Quick & Spartz, 2020, p.353). In the dataset, for instance, environmental management and the reification of the environment as a stock of resources deprives the environment of agentivity and intrinsic value: nature is reduced to an object that can be managed through specific practices.

In the texts analysed, people and societies are categorised into two broad groups roughly corresponding to industrialised and less-industrialised countries. This distinction is also represented in terms of the groups' interaction with the ecosystem, thus underlining "the role of ecological interaction in the production of identity" (Love-Nichols, 2020, p.179). Industrialised affluent societies are implicitly (and sometimes explicitly) identified with "developed" societies (see for instance, "developed and developing countries", IOM 21, 2016); these representation should entail that the way industrialised societies interact with the ecosystem is a preferred one. On the contrary, less-industrialised and more-affected societies are generally represented as the "less-developed" societies ("Least Developed Countries (LDC)", IOM 15, 2015), thus their modalities of interaction with the ecosystem are less "efficient" and undervalued.

These representation are controversial and problematic: in the two corpora, "developed" societies are also represented as the most polluting societies, responsible for spoiling the environment both by gradual and cumulative pollution and by sudden accidents; instead, "less-developed" societies are represented as less-polluting societies which live accordingly to more sustainable livelihoods (either out of will, or necessity). The problematicity of these representations and the ideas they convey derives from the fact that the concept of "development" is not specified in the texts and so it is open to interpretation. Notice for instance how, especially in the discourse of the UN, economic growth is labelled as "development" even when its negative impacts are well acknowledged: "Human population dynamics or trends, particularly population pressure, and economic *development* have been acknowledged for many decades as the primary drivers of environmental change" (UNEP, 2019).

The relationship between social groups and the environment is also represented through the practices the groups engage in, which might lean either towards the preservation of the ecosystem, or towards its undervaluation as a manageable resource (Karikari *et al.*, 2020, p.256). Representations of development as inherently positive and at the same time as a default characteristic of industrialised societies are misleading: the way industrialised societies interact with the ecosystem is implicitly promoted as positive and a goal to be reached for other societies, even though it has widely proven to be deleterious for both the environment and many of its inhabitants. "Progress", instead, should entail the preservation and respect of the web of

relations that tie the whole ecosystem together, and the aspiration to regenerative futures through collaborative environmental action. Most importantly, a limited representation of "development" can hinder the "potential to inform efforts to address socio-ecological crisis <sic>" (Carlin, 2020, p.209); "development" as a long-term solution to unsustainable socio-economic systems should go beyond better resource management and promote innovative relationships between humans and ecology.

Representations of development in the corpora refer to both economic advancement and environmental protection, but they seem to privilege economic arguments over ecological concerns framing the more-than-human world (the biosphere) simply as natural resources. Environmental resource management and, more generally, the management of the ecosystem, emerges in the texts from the use of "managerial" terminology which represents the environment as a controllable resource belonging to humans (see Section 6.2.3.). The idea of "management" of natural resources and natural risks seems to be particularly frequent in the discourse of the UN. Representations of the environment as a stock of resources and as an entity whose processes can be manipulated and controlled are biased by an anthropocentric understanding of nature and imply that "part of non-human life's value is in its utility to human life" (Bloomfield, 2020, p.203). A profound transition towards more sustainable forms of living would require "reconsideration of what it is to be human, what nature is, and the ethical bonds that tie the two together" (Carlin, 2020, p.209).

The controversial representation of development in the dataset seems to "reveal neo-colonial dynamics insofar as they construct the more-than-human world as Other, facilitating the positioning of 'nature' as a singular strategic asset, investment, and/or entity of management", and taking for granted the goals, functions, and effects of development (Karikari *et al.*, 2020, p.244). Affluent countries are represented as dealing with both the environment and most affected communities with the attitude of a "tutor": the ecosystem and affected societies are weakened by the circumstances of environmental change and are unable to respond to it, so affluent societies help them in the response often by means of development-related practices. These representations are biased and problematic: on the one hand, they disempower affected societies and underestimate the potential of the ecosystem for self-regeneration; while on the other hand, they erase the primary responsibility of affluent societies in causing harm in the first place. The intervention of affluent societies is represented as disinterested and not as an act of responsibility towards the damages derived from unsustainable and polluting human lifestyles.

This type of representation is biased by a post-colonial attitude: affluent societies create an artificial "Other" and position themselves as superior to it; superiority is intended mainly in

terms of knowledge and mastery of "development" and of practices of resilience to ecosystem changes. The creation of an artificial "Other" often results in reductive, simplifying and confining representations, and represents a political vision of reality that promotes the difference between the familiar ("us") and the strange ("them")" (Said, 2003, pp.xviii, 3, 43). These representations often aim at structuring the "Other" according to one's own perspective, thus having power authority over it/her/him. The "Other" is thus "*contained* and *represented* by dominating frameworks", and its/her/his identity is not the result of its/her/his own efforts, but rather of identification by others (Said, 2003, pp.3, 32, 40); this seems to be the case in the discourses of environmental migration of the IOC an NC, where the predominant perspective is that of international powerful groups. The "Other" and the "Self" are represented in terms of "imaginative geographies": they possess regular characteristics, and are identified by large general divisions in terms of strength and weakness, roughly identified with "development" in the two corpora (Said, 2003, pp.45, 49) (see below Section 8.8. for further discussion).

The implied hierarchy between affluent countries on the one hand, and affected countries and the environment on the other supposedly justifies the intervention of wealthier countries in the policy-making and decisions-making processes of affected countries. Affected countries identify as imperative that affluent countries take responsibility for their polluting lifestyles, and shift towards livelihoods that are more respectful of everybody's rights. Also, they call for cooperation and active participation in decision-making processes, against passive acceptance of the practices proposed to them, as in the following passage: "Bangladesh has been identified as one of the countries to be worst affected by climate change for global atmospheric pollution caused by the rich and developed countries. […] It is also important to mount pressure on the rich countries for their cooperation to deal with climate change. […] The greatest benefit can come by working to get the rich countries […] to agree to immediate reduction in carbon emissions" (NN 3, 2012).

Anthropocentric, post-colonial and slightly discriminatory attitudes seem to underlie these limited notions of development and sustainability where justice issues are not a priority. Policy-making is mainly the concern of organisations which represent the perspective of less-affected countries; development and sustainability are not conceived in terms of transitioning from the current polluting systems to systems that are environmentally-friendly and respectful of the wellbeing and survival of other human and living beings. Instead, development seems to imply the possibility for less-affected societies to continue living according to their traditional unsustainable and unjust systems. Policy, decision-making processes and development are obfuscated and represented as assistance and sustainability; they grant the continuation of

practices that are not sustainable for the most-affected and least-represented communities, and do not contribute to their empowerment (Freeman, 2020, p.434).

Any approach to sustainability should take into consideration rights, livelihoods, and opinion of any participants involved; in this respect, development should rather be considered a short-term solution rather than a long-term strategy (Tuitjer, 2020, p.380). The improvement of global environmental governance requires a cultural shift: the international community -both state actors and civil societies- must recognise the environment and the wellbeing of all human and living beings of paramount importance, in order to reach global ecological balance and justice.

8.3.3. Relations of instrumental anthropocentrism and holistic ecocentrism

The discourses of the IOC and NC include contrasting notions of nature and ideologies "oscillating from anthropocentric/instrumental to ecocentric/holistic" (Castro-Sotomayor, 2020, p.71). Anthropocentrism is reflected in these discourses in "the invisibility and deniability" assigned to interlinkages, impacts, and interdependencies between humans and the environment; an anthropocentric conception of the environment risks blocking "compassion, empathy, understanding, nuance, interconnectedness, and common recognition" (Milstein & Castro-Sotomayor, 2020b, p.xvii). There is a widespread tendency to separation, exclusion and hierarchicalisation at the heart of "today's related ecological and social crises" (Abram with Milstein & Castro-Sotomayor, 2020, p.6) which is reflected in the dataset of this study; the tendency to conceive the environmental "as separate from or a subsidiary of the economic, political, historical, and cultural" of human beings has led to the large-scale erasure of people's perception of their "nestedness within ecological communities" (Milstein & Castro-Sotomayor, 2020b, p.xviii). As a result, relations seem to be mainly understood as human-to-human relations, thus disregarding the complex and articulated web of interrelatedness that tie human beings to the rest of the ecosystem (Castro-Sotomayor, 2020, p.71).

Transitioning towards more equal and just societies requires moving from a system based on environmental control and manipulation to a system based on environmental reciprocity and connectedness. The ecocultural ideologies and practices that underpin anthropocentric representations of the ecosystem can be changed through processes of reinvention, reconstruction, and renewal which situate the lives and practices of human beings as "inextricable from -and mutually constituted with-" the ecological dimension (Milstein & Castro-Sotomayor, 2020b, p.xviii). New discourses on environmental migration should aim at informing "individuals' and groups' emotional, embodied, ethical, and political sensibilities regarding the more-than-human world" in order to overcome the misguiding idea of "human

exceptionalism and self-sufficiency on a planet that largely exceeds our too human concept of the world" (Castro-Sotomayor, 2020, pp.71, 80).

Innovative ideological paradigms should be protective, creative, restorative of the interrelatedness and interdependency among human beings and between human beings and the ecosystem, thus promoting an idea of existence as intrinsically relational and broadly ethical. A cultural shift should inform sensibilities and ways of being which recognise that humans are "made of, part of, emerging from, and constantly contributing to both ecology and culture - producing, performing, and constantly perceiving and enacting through the both" (Milstein & Castro-Sotomayor, 2020b, p.xix; Milstein, 2020, p.48). Ecocultural sensibilities should promote the acknowledgement of commonalities and shared questions, concerns, and actions regarding our collective course of living, discouraging dominant feelings of disconnection and separation that underlie both "environmental and sociocultural struggles" (Milstein & Castro-Sotomayor, 2020b, pp.xix-xx). An ecocultural transformation would lead to regenerative practices and ecologically and culturally grounded ethics of respect which promote mutual life (Castro-Sotomayor, 2020, p.75; Seraphin, 2020, p.406; Eisler, 1988, pp.xix-xx).

The UNEP and IPCC reports on fundamental human and environmental rights (see Section 2.1.1.1. and Appendix, Section 3) used in this study to assess the discourses of the IOC and NC find that a much larger number of people is expected to migrate as a result of gradual deterioration rather than as a result of natural disasters; this would confirm that the environmentally destructive practices perpetrated by human beings are one of the major drivers of environmental change and loss of wellbeing for other human and non-human beings (UNEP, 2019). In the words of Stibbe, a cultural shift that would enable humanity to reconcile with the natural world and heal the social inequalities that afflict specific groups of people would require a restoration of "the natural world to consciousness", that is a "re-minding" of the importance of the environment (2014, p.596) (see Section 3.2.). For instance, the interconnectedness of socio-economic issues and environmental migration could be better understood by placing economics within the ecological frame, rather than bringing the natural world into economics and removing interaction and interdependence which are, in fact, what ecology should be about (Stibbe, 2014, p.588).

8.4. Environmental migration

In the data of the two corpora, environmental migration is understood as an issue which mainly depends on the environment, as the label for this phenomenon clearly shows. More specifically, due to the nature, impacts and dire consequences of this phenomenon, environmental migration is

represented as an "environment-related problem". In this respect, representations of environmental migration seem to conceal interests of specific social groups which influence, distort or even blur parts of this phenomenon, and which are essential for understanding it. For instance, there are gaps in the representation of the processes by which environmental change and migration occur; these gaps can lead to a partial and distorted understanding of the phenomenon on the part of the reading public, eventually leading to ineffective approaches to deal with it.

Representations of environmental migration refer not only to the present state of affairs, but also to the potential future developments of the socio-economic, political and cultural life of communities of origin and communities of destination. Some aspects of the causes and effects of environmental changes and migration are "hard-tellable" or untellable because they are controversial or problematic. Also, they are difficult to unravel because they are sensitive, complex, poorly-delineated, or related to subjective experiences and feelings. These aspects are discussed metaphorically in the texts or they are elided and backgrounded. Also, some representations erase aspects of environmental migration that are not politically acceptable (Richardson & Colombo, 2014, p.523). For example, in some occurrences environmental migration is metaphorically represented as an unpleasant phenomenon for receiving societies because of the social and political instability it determines in countries of destination; see for instance the following passage: "climate change is not only a human *tragedy*, but also a gestating geopolitical *nightmare*" (TS 2, 2010). This representation is controversial because it tends to side-line the tragic humanitarian implications for affected people, and it focuses instead on the socio-economic and political interests of receiving societies; the consequences of environmental migration on host countries are unlikely to be as grave and devastating as those on directly affected and migrant communities.

In the discourses analysed, environmental migration is mainly represented as a problem whose solution are mitigation and adaptation strategies. Representing environmental migration as a problem to be solved is a form of reductionism which implies that the only possible way of dealing with this phenomenon is the identification of policies, reducing politics to policy. As Bettini remarks, this is "a standard mechanism of de-politicisation conducive to the reproduction of hegemonic relations" and it endorses dominant and mainstream discourses on the environment and migration (2017, p.36).

Moreover, in the IOC and NC there are representations of environmental change and migration in terms of problem-solution that do not coincide with authoritative reports on the state of the environment (IPCC, 2018; UNEP, 2019): environmental and climate change are phenomena that will continue to happen in the future; we can only act upon the factors that can limit it. Environmental change is represented as intertwined with issues like resource depletion, pollution,

and loss of biodiversity, so it is a phenomenon that fundamentally depends on the socio-economic and eco-cultural patterns we live by. For instance, some representations of environmental migration mention pollution (see for instance, NYT 1, 2013; TS 2, 2010) among other issues that affect the environment and the lives of human beings. The triggers that drive migration are rather "unnatural disaster", namely natural events exacerbated by human activity. Several studies clearly identify environmental migration as an anthropogenic environmental problem, one of the consequences of an "unfolding anthropogenic biospheric catastrophe" which risks creating "inhabitable futures" and invalidating the possibility for long-term existence (Bates, 2002, p.471; Milstein & Castro-Sotomayor, 2020b, p.xviii).

In this respect, representations of environmental change and migration in terms of their "mitigation" are ambiguous because they aim at limiting environmental change while maintaining economic systems which have proven to be unsustainable. Mitigation is intended as "efforts to reduce or prevent emission of greenhouse gases"; it "can mean using new technologies and renewable energies, making older equipment more energy efficient, or changing management practices or consumer behavior" (UNEP, 2020). The representation of environmental change and migration in terms of adaptation, instead, seems to be empowered by the scientific knowledge reached thus far on this topic: environmental and climate change are not expected to stop, but rather to continue overtime, and since changes in the ecosystem are not easy to overcome, humans should adapt to them. Adaptation strategies are put into practice when there is a situation of combined risk and vulnerability (Gemenne, 2011, p.184); adaptation should be a constant process since environmental change continues to happen (IPCC, 2018; UNEP, 2019). Moreover, adaptation (and mitigation) projects induce massive population displacement and resettlement, whose benefits are debatable in several cases; also, when migration is "involuntary" it can have harmful impacts on those involved and it can perpetuate socio-economic inequalities (de Sherbinin *et al.*, 2011, p.456; Russo, 2017, pp.195-196).

Among the controversial aspects of representations of environmental migration there is the problematic question of labelling this phenomenon as either voluntary or involuntary. Representations in the discourses of the IOC and NC range between a continuum of agency which includes both voluntary and compulsory migration. Also, identifying "preventive" movements (see Section 1.1.) as "intentional" is debatable and partial: preventive migration is voluntary only insofar there is no other safer choice for those who find themselves in a situation of high risk (Bates, 2002, pp.467, 470). Moreover, the right to move is increasingly at risk in contexts of environmental change, as vulnerability superimposes to poverty, and migration becomes costly. The

voluntary/forced migration distinction of these movements is problematic and does not seem to be an appropriate dichotomy to describe them (Gemenne, 2011, pp.187-189).

Socio-ethical debates on displacement and relocation in the context of environmental change include the popularisation of denominations which include the term "refugee". As discussed in Sections 1.3., 7.3.1., 7.3.2., 7.4.3. and 7.4.4., the use of the term "refugee" in the context of environmental migration has been criticised as it does not have "any legal grounds" and it is "not compatible with the UN convention on the status of refugees" (Russo, 2017, pp.200-201). Also, advocating for the category of "environmental refugees" might contribute to legitimising "future visions of a climate change affected world in which mass population mobility and loss of homelands are considerate unfortunate, but acceptable 'solutions' to the problems of the social impacts of climate change". In this way, major industrial powers could continue to engage in unsustainable practices as they would identify relocation as corrective to their unfair behaviours (McNamara & Gibson, 2009, p.482).

Overall, environmental change is not merely a physical phenomenon but first and foremost a social one, and so are its entailments such as human mobility. The problematicity of the discourses on environmental migration analysed in this study is that often they do not involve the perspective of affected communities, or they under- or mis-represent it. Questions of social justice, responsibility and solidarity are biased by the perspective of less-affected societies; as a consequence, the processes of negotiation of justice and social rights are hindered (Bevitori, 2014, p.603; Tuitjer, 2020, p.379).

8.5. Environmental migrants

People affected by environmental events and migration (environmental migrants and communities of origin) tend to be represented as powerless victims instead of active agents of change, with a right for sovereignty and self-determination. Mostly, denominations of environmental migrants are related to the idea of movement, and they identify environmental migrants "through synecdochization (the action of moving)": a specific trait (the action of moving as a consequence of environmental change) is selected as "a representative depictor and the involved people often have no agency in the nomination process" (Russo, 2017, pp.195-196, 200-201). Also, environmental migrants are often represented as de-individualised, victimised, and deprived of political power in decision-making processes on how they should deal with environmental change and migration. The socio-ecological relations of power that originate vulnerability and the consequent risk of displacement are often elided or backgrounded (Bettini, 2013, p.70).

As mentioned in Section 7.5.2., origin and host societies are generally represented in terms of ingroups and outgroups. On the one hand, there are ordinary people who "fall outside the press picture of news actors and may only collectively be included as the patients of political action or the victims of natural disasters, or individually as the perpetrators of crimes" (they are referred to collectively as an anonymous and generic category, often by quantification); while on the other hand, there are the powerful and political decision-making groups who are in charge of the ways which environmental migration is dealt with (Van Dijk 1988, p.140).

The representation of environmental migrants as "passivated" is sometimes replaced by their representation as an active group of people who engages in migration and response measures to environmental events (KhosraviNik, 2014, p.502). However, representations of migrants and origin communities as active participants tend to be negatively connoted: they either refer to environmental damages and social disquiet that derive from human migration; or they imply that affected communities do not have adequate knowledge and competence to deal with environmental change effectively (in terms, for instance, of "resilience", "adaptation", and "disaster risk management"). This results in the need to "export development" to affected countries.

Most importantly, communities of origin and migrants are conceived as an "Other", regardless of their representation as a passive victim, or as "an impending threat to peace and stability" (Tuitjer, 2020, p.378). The ideological limitations of these representations derive from the emphasis on divisions, resulting in the organisation of societies "along the contemporary white-supremacist speciesist patriarchal hierarchy" (Bridgeman, 2020, p.95). In the discourses of the IOC and NC the relationship among countries is represented in terms of two main "imagined spaces" (Said, 2003, p.49): an (in)group of wealthier, more industrialised countries that are less affected by changes in the ecosystems and that seem to hold decisional power in matters that exceed their own national jurisdiction; and an (out)group of poorer, less-industrialised countries that are more vulnerable to and impacted by ecosystem change, and whose "voice" in decision-making processes is underrepresented.

These "imagined spaces" are well-established in our cultural mind-sets and tend to represent the world in binary terms, a dichotomy which reduces the multifarious characteristics and the complexity of diverse communities to economic parameters. Representations of these "spaces" in terms of economic (under)development and technological advancement/lack of progress shape power relationships: they become ideologically constitutive of unequal relationships between "East and West", and are projected into a sense of division, difference and distance (see Section 8.3.2.); as Said and Farbotko write, representations of identities should go against and beyond binary understandings (Said, 2003; Farbotko, 2010, pp.52-53).

Representations of inferiority and superiority of one side of the world in comparison with the other imply patronising and "tutor-like" attitudes of wealthier countries towards poorer countries, and may influence the modalities with which affected countries deal with environmental change and migration; they are also at the basis of an eco-colonial gaze on affected territories. Some representations of environmental migrants further justify this "post-colonial attitude": representations of migrants as a threatening "force of nature" (a flow of water, an animal, etc.) might be intentionally discriminatory and evoke fear and rejection in the reading public of receiving societies. Instead, representations of environmental migrants dealing with hardships and representations that include their "voice" and perspective engage readers emotionally and cognitively, and they tend to have the opposite effect of strategies of detachment encoding distance (Farbotko, 2010, p.58; Blommaert, 2012, p.201).

The inclusion of migrants in a shared community of people, and their possibility to thrive in a safe and healthy ecological and socio-economic environment, is conditioned by the ideologies and representations in authoritative and widespread discourses. In the dataset, the exclusion of particular groups of people is a practice which is sometimes legitimised as consistent with the moral order of society, or as a question of health or public interest. Social exclusion is presented as morally and politically defensible: it creates and refers to an "imagined community of belonging" and an "imagined community of strangers" (Wodak, 2018, pp.33-35; Martin Rojo & van Dijk, 1997, p.528). Legitimation (see Section 3.2.) happens when "a powerful group or institution […] seeks normative approval for its policies or actions [and] does so through strategies that aim to show that such actions are consistent with the moral order of society". Since legitimation appeals to common-sense knowledge, these discourses are biased by specific commonly-held beliefs and moral systems (Wodak, 2018, pp.35-36): those of dominant and powerful social groups. The tendency to exclusion, separation and hierarchy are forms of "Othering" that construct "inequality via difference" both at a social and at an ecological level: specific social groups are taken as "standard" and other social groups and the non-human world as "Other", subtly justifying the predominance of one over the others (Milstein, 2020, p.28).

The common themes that emerge from the representations of environmental migrants of the IOC and NC are humanitarianism on the one hand, and, on the other, the idea of them being a burden and a weight on receiving societies. This twofold representation of environmental migrants can be considered an instance of so-called "ideological squaring": this is a process by which opposites are created in order to make issues appear simplified and more manageable or controlled (Blommaert, 2012, p.203). In line with other studies on migration, environmental migrants seem to be conceived as "alien to some already apparently cohesive social body", and so as fosterers of social turmoil in

the countries of destination (Baldwin, 2016, p.80). They are conceived as a national/cultural threat to the ethno-national identity of the receiving society, a cause of criminality and social insecurity, unemployment, and abuse of welfare state. Also, immigrant groups are systematically associated with crime and mayhem and there is a disproportionate majority "voice" in contrast to a silenced minority (Richardson & Colombo, 2014, p.523; KhosraviNik, 2014, p.502).

Representations of environmental migrants as causing problems evoke "negative" emotions such as worry, anxiety, uncertainty and fear; they intensify and spread negative emotions, and are not conducive towards welcoming attitudes of receiving societies towards environmental migrants. These representations characterise "dystopian narratives" of humanitarian or national security agendas: they portray populations as victims to be either protected or feared. Also, these representations are detrimental for an emancipatory approach, leave underlying power relations untouched, and (re)produce representational and material marginalisation. Representations of environmental migration and migrants as humanitarian catastrophes that menace international peace and security pave the way for xenophobic reactions; also, they contribute to de-empowering affected populations and do not endorse them actively engaged in bettering their situation (Bettini, 2013, p.63).

As discussed in Sections 2.2.1. and 2.2.2., ways of "knowing and believing" are socially constructed and readers are positioned to value particular perspectives and not others. Organisations and the media play a mediating role between science, governance and society; also, they modulate transnational affect flows and give salience to specific ideas (Bevitori, 2014, p.621; Russo, 2017, pp.206-207). In this respect, the representation of environmental migration in their discourses evoke specific emotional responses in the readership and encourage specific collective actions (Baldwin, 2016, p.82). As Baldwin writes drawing from Grusin (2010), representations of environmental migration "premediate" the future: they tend to anticipate ways in which specific transformations might generate specific realities, but remain almost silent about "the emancipatory possibilities that come with living on the threshold of a dramatically altered world" (2016, p.86).

As emerging from studies on the themes of environmental change and migration (see Baldwin 2016, pp.81, 86), the discourse of environmental migration mainly consists of two distinctive emotions: fear and desire (see Section 3.2.). On the one hand, discourse is conditioned by fear: the consequences of environmental change are represented as demanding attention because they will be socially, politically, culturally and economically devastating. Fear derives from the difficulties of managing migration so that it does not become chaotic and disorderly. Fear is also fear of the "Other" and the supposed disruption of social cohesion in receiving societies; it is the anxiety of loss of "normal social relations" and the desire to maintain the normality of an imagined social

order. The integration of the migrant as "Other" in receiving societies is represented as a form of "adaptation" and condition of survivability to which receiving societies must conform. On the other hand, however, the discourse of environmental migration is characterised by desire: if properly managed and if it improves human well-being and generates economic benefits, "migration is not something to fear, but something to be embraced, something to desire" as an adaptation response to environmental change.

Processes which foreground specific emotions such as fear and anxiety activate negative evaluations and assessment of environmental migration and migrants, creating alarm rather than well-organised approaches to migration and caring and sympathetic attitudes. In this respect, in the IOC and NC there are occurrences of "dramatized representations" of people dealing with environmental events, adaptation and migration; these emotion-charged representations may be a "concrete proof of scientific abstractions", a strategy to respond to scepticism about environmental migration (Russo, 2017, pp.195-196).

Therefore, affect is a site over which power is exercised. Discourses on migration sometimes mobilise "racial sensibilities" for political purposes "without explicit reference to race": there is the presence of racial power in the discourse on environmental change and migration even though the discourse is "shorn of any explicit mention of race" (Baldwin, 2016, pp.79, 85). In the words of Baldwin, the discourse on environmental change and migration frames environmental change "in implicitly racial terms through the cultivation of white affect", which results in a tension between "the desire for homogeneity and the threat of heterogeneity", calling for the preservation of the dominance of "white" value systems (the values of affluent and powerful societies) (2016, p.84). Representations that evoke fear refer to generalised concerns regarding national and cultural identity. The discourse on national identity and insecurity is functional to the ethnicization of social conflict, the sense of menace, fear and legitimation of ethnic hate/dominance, and the reproduction of xenophobia and exclusion (Richardson & Colombo, 2014, pp.521-522). As Richardson & Colombo write drawing from Wodak (2003, 2008), the hierarchical positioning of societies and cultures is not expressed overtly, but anti-immigration positions are often supported and justified by arguments that concern protecting jobs, abuses of welfare, and cultural incompatibilities (2014, p.523).

Previous studies state that migration questions the premises on which affluent industrialised societies are built. More specifically, they identify concern over environmental issues, population size and cultural composition; these concerns can be connected to a broader national anxiety that can be labelled as "whiteness in crisis". Official discourses on environmental migration are an instance of discourses where "whiteness makes 'nonwhiteness' visible […] while rendering itself

invisible as an idealised mainstream norm" (Jensen, 2011, p.85). Indeed, the discourses of the IOC and NC generally encode the point of view and interests of wealthier industrialised and less-affected countries. However, rather than "whiteness in crisis" I would emphasise the fact that host societies perceive their cohesiveness as threatened by external and "alien" (i.e. "different", "Other") socio-cultural realities brought by migrant communities; the risk is that the socio-cultural world of the host society is modified and transformed and it can no longer express its cultural values. Host societies seem to spurn and dislike "confusion". Confusion derives from the inability to manage migratory movements efficiently and negative economic and political backlashes; also, it occurs when diverse and sometimes divergent cultural realities come into contact with the result that they either oppose and contrast each other, or that they "merge" into a multifaceted cultural reality which is no longer recognisable as either the host or migrant culture.

Planetary problems mostly depend on our way of thinking and social organisation models, so they cannot be solved from the point of view of the same logics (Eisler, 1988, p.xxiii): a transformation of the relationships among humans and between humans and the ecosystem from domination and submission towards partnership, interdependence, solidarity and reciprocity requires a common commitment, and it is necessary to address environmental migration as a question of socio-cultural and environmental justice (Bridgeman, 2020, pp.89-90; Eisler, 1988; Oriel & Frohoff, 2020, p.132). Rather than exclusion and presumed "superiority", it is necessary to forge "bonds of solidarity" among communities, in order to "shape more just and liveable ways of being" (Carlin, 2020, p.209; Carr & Milstein, 2020, p.312). Previous studies show that there is an unstated link between environmental change and racism that needs to be brought to the forefront in order to build a state of generalised and shared awareness of the "racist marginalizing of people and their concerns", so that we can start to "roll back the ecological catastrophe facing us" (Wise, 2010). The opposition to practices and behaviours that "bury multiculturalism and resurrect assimilation" of cultures and perspectives seems to already occur in these discourses: the perspective of wealthier industrialised countries is not naturalised and incontestably positive; rather it seems to be open to question and debate (Jensen, 2011, pp.88, 90).

Environmental migration is an ordinary social, economic, and political process; it is neither inherently good nor bad. It is a matter of environmental justice rather than merely a humanitarian or security crisis (Bettini, 2017, pp.36-37). The problematicity of representing migrant communities is that they go beyond linguistic and cultural borders and do not always share the "traditional attributes of speech communities -territorial fixedness, physical proximity, socio-cultural sharedness and common backgrounds"; they are deterritorialized and transidiomatic (Blommaert, 2012, pp.1, 3,

7). Environmental migration surely is a source of "identity tensions, transitions, hybridities, inclusion, and exclusion" that shape politics (Hallgren *et al*., 2020, p.291).

8.6. The international community and its commitments

In the discourse of the IOC and NC, many statements about the dealings of environmental migration are future oriented, intentions rather than descriptions of present activities; a conflict between "what we know we ought to do" and "what we actually do" emerges in many representations (Alexander, 2018, p.205; Bevitori, 2014, p.620). What characterises the representations of the international community and of wealthier societies and the actions and activities they undertake is the fact that their actions are often planned or situated in the future. There is a represented need for "a concerted effort of both people and governments, bottom-up and top-down practices, individual lifestyles and behaviours and institutional and governmental decision making" (Bevitori, 2014, p.620), but practices of cooperation seem to be backgrounded or missing.

As discussed in Section 7.5.2., in the texts of the IOC and NC there are representations of specific "ingroups" within both origin and receiving societies; however, these represented ingroups include members who hold different values with regards to environmental change and migration. More specifically, the distinction between ingroups and some of their members is based on socio-ecological (and inherently political) values, and it indicates the emergence of ecological consciousness in specific groups within affluent and less-affluent countries. The emergence of socio-ecological consciousness and awareness of the questions of justice in the context of ecological change is well exemplified, for instance, in the following passage of the data: "However, there also are contestations around the linguistic choices adopted: perhaps that explains why there has been so little uproar over supposedly civilised societies using terminology like 'marauding' and 'swarms', and making policy decisions that result in hundreds of people drowning in the Mediterranean or languishing in detention centres. These things, we think, don't reflect who we are as people. They are just necessary responses to this current crisis" (G 6, 2015). In this extract from a newspaper article of the NC, the journalist, who is a member of "supposedly civilised societies", is critiquing their approach to environmental migration as anti-democratic. In doing so, she is calling herself out of the ideological group responsible for this type of approaches, and is positioning herself in an ideologically opposed group within her own society. As a result, the distinction between affluent "conservative" countries and less-affluent countries seems to be reduced: there are "varied and nuanced ecological identities" (Hallgren *et al*., 2020, p.272) both nationally and internationally, highlighting the ever-increasing importance that people attribute to socio-ecological issues globally, even within affluent societies.

8.7. Innovation in discourse: justice and partnership understandings

Language plays a fundamental role in the communication and understanding of environmental migration. The complexity of this phenomenon is reflected both in the variety of terminology used to refer to it and aspects of the discourse on environmental migration which lend themselves to misunderstanding and vagueness.

The themes that emerge from the analysis of the texts of the IOC and NC partly reflect the categorisation of the discourses on climate change defined by Hajer (1995) (in Bettini, 2013, pp.64-65) (scientific discourse, capitalistic discourse, humanitarian discourse, and radical discourse). In the discourses on environmental migration of the IOC and NC I identify three main discourses: the scientific discourse, the economic-political discourse, and the humanitarian discourse. Instances of scientific discourse can be found in the explanation of the phenomenon of environmental migration with reference to scientific studies provided by authoritative scientific bodies like the IPCC. Instances of economic-political discourse mainly relate to issues of economic-political security and policy-making, and they emerge from the frequent representation of environmental migration in terms of its impact on the economic structures of industrialised countries, thus reflecting their point of view. The economic-political discourse can also be found in the recurrent mention of the theme of development as part of a strategy for addressing environmental change and mobility. The humanitarian discourse combines the humanitarian and radical discourses outlined by Hajer (1995) and it emerges in the conceptualisation of environmental migration as a humanitarian and justice crisis, and environmental migrants as its victims. These phenomena are represented as interrelated to environmental justice, human rights and security issues and they determine either the preservation or disruption of the wellbeing of affected populations. This discourse is not economy-centred and it endorses sustainability, environmental justice, human and non-human equity and rights as the solid foundation for any effective response to environmental migration.

The discourses on environmental migration of the IOC and NC seem to converge into a set of shared "stories" and representations; for instance, some common representations of environmental change and mobility include apocalyptic versions of events. This does not necessarily imply that these discourses represent environmental change and migration in the same way and share common goals. For instance, "negative" representations in news discourse play a role in the construction of the newsworthiness of the news item, while in the discourse of international organisations they may contribute to communicating the need for urgent action (see Section 5.4.1. on newsworthiness). Shared stories can become hegemonic and influence the common ways to discuss and interpret a topic.

Negatively connoted dramatic images of environmental migration are part of a "crisis narrative" and may become the usual way to discuss this phenomenon, thus contributing to specific emotive reactions to the phenomenon and its participants. More specifically, they may reinforce xenophobic tendencies which may lead to authoritarian policies and restrictive approaches. Fear can also lead to "denial, paralysis, apathy or even perverse reactive behaviour" rather than fostering attention or commitment to action. Eventually, it might lead to a distorted perception of the importance and credibility attached to this phenomenon, and it would create "emotional inflation", by which the sense of urgency for action is supplanted by a generalised scepticism (Bettini, 2013, pp.68-69). According to Bettini, "the fact that an issue is depicted as a catastrophe can even facilitate its reinsertion into the frame of normality, unavoidable". If representations are taken as common-sense and ordinary, there is the risk of "de-politicization" by which established relations and systems of practices are not questioned (2013, p.69). De-politicization is "a process by which the contentious aspects are bypassed and removed, de-politicization is a highly political process and results in a reaffirmation of the dominant relations and practices, a reaffirmation of an existing hegemony" (Bettini, 2013, p.69). This would go against the interests of migrants and affected populations in the first place, and it would hinder the transition towards more partnership-based and egalitarian world relationships.

In the words of Eisler, human beings are at an historical and cultural crossroads: they can choose to follow either the path of scarcity related to xenophobic and "closed" attitudes, or the path of abundance related to "expansive" and sharing dispositions towards the "Other". Social organisation and relationships can be mutual and inclusive or hierarchical and exclusive (1988, pp.xviii-xxiii). Humankind has the power of creating the global conditions of ecological scarcity and crisis or of ecological abundance and thriving in "a time of human-induced climate and planetary disruption in societies where increasingly fewer perceive they are ecologically emplaced and related" (Carr & Milstein, 2020, p.325). In order to redefine our identity as species, as well as the identity of those we share the world with, it is essential to understand that the concepts of scarcity and abundance are no longer directly "driven by ecological conditions and cycles"; rather, they are "the economic products of market logics and an abstracted distanced global system of overproduction and overconsumption strategically framed and obscured by a host of political and media discourses" (Carr & Milstein, 2020, p.326).

The fact that most representations of environmental migration are shared by the discourses of the IOC and NC might depend on the fact that news discourse supposedly draws from the official discourse of authoritative international organisations. However, it may also result from a basic and commonly shared understanding of environmental migration and the relationships that tie human

beings to ecology. What emerges from these representations is that the phenomenon of environmental change and migration cannot be simply reduced to a "degraded ecology"; rather, it is the symptom of a profound "ecocultural crisis" (Hoffmann, 2020, p.158). It can be better understood as a question of social and environmental justice as well as of ethical sensibility, with "ecological, climatic, conceptual, political, and economic connections" (Nielsen, 2020, p.226; Karikari *et al*., 2020, p.241). The approach to environmental migration and the myriad of social, political, economic, ecological, ethical and justice questions that interrelate with it should therefore require a re-conceptualisation of our "ecoculture" and of our ways of living with one another; it should consider our interconnectedness (humans, animals, other living beings), and therefore the concreteness of our impacts (Nielsen, 2020, p.227).

Environmental migration is not only an ecological problem, but also a cultural one because of the loss of ethical relations with place that foster coexistence (Oriel & Frohoff, 2020, p.138). The anthropocentric and egocentric ideologies that often underpin representations of the environment and of the way people interact with it (see in Section 8.3.2. the controversial issue of "development") "result in interrelated forms of marginalization and oppression" and determine social disadvantage rather than social empowerment of affected societies (Parks, 2020, p.104). Hence, the importance of representations of social and environmental interaction: they might either promote and continue "the relation between anthropocentrism and forms of systemic oppression and exploitation" (Parks, 2020, p.106); or they might lay the foundation for "learning [that] respectful interactive behaviours with other species [and communities] is paramount to coexistence" (Oriel & Frohoff, 2020, p.133).

Environmental migration and representations of the ways it is dealt with reflect the social and environmental justice instances that underlie this phenomenon: "[t]he current ecological crisis is essentially an ontological crisis, calling for humans to unveil and reflect on the premises of anthropocentric logics and explore other logics based in diversity, difference, and wellbeing as standards" (Oriel & Frohoff, 2020, p.136). A social change requires a cultural change in the first place, and it should entail rethinking the position and relationships between human beings and between human beings and the environment; "[c]aring for the Earth and non-human life thus becomes an act of righting the scales of climate justice" through a "shared a sense of collective responsibility for environmental problems" (Bloomfield, 2020, p.200). A renovated awareness of the fact that human beings exist among other human beings and the whole ecosystem shall lead to innovative ways of living based on harmony, equilibrium, and balance (Nielsen, 2020, p.228).

In this respect, there is innovation in the discourses of the IOC and NC: environmental migration has started to be reimagined as an ethical, societal, and cultural problem, a phenomenon that has

repercussions for the lives of everyday people, as well as the more-than-human world, and which strongly depends on how humans relate to the environment and to each other. Human relationships are starting to be (re)understood as ecocultural relationships: the idea that humans are positioned outside and/or above the ecosystem and its inhabitants and that they can control and dispose of it is still well present in the discourses analysed in this study; however, in several passages it is possible to notice the growing awareness that humans belong to and depend from the ecosystem and are "geological agents" with a precise ecocultural impact on the Earth (Nielsen, 2020, pp.228, 236; Tuitjer, 2020, p.365).

The discourses of the IOC and NC present contrasting points of view: on the one hand, they promote the idea that the current socio-economic systems of affluent countries can be maintained, exported to other countries, and made more efficient (for instance, through "development"); while on the other hand, they endorse the dismantling of "oppressive structures that affect intra-human relationships" and the wellbeing and integrity of the whole ecosystem (Bridgeman, 2020, p.87). The presence of these two contrasting ideological paradigms possibly indicates that there is an ongoing conflict between socio-cultural systems at the heart of our environmental relations. Given the interdependency of thought and action (see Section 2.1.), statements about the dependence and impact of human actions on the ecosystem are important because they influence and shape "societal actors' decision-making about what to do environmentally" (Tuitjer, 2020, p.383; Hallgren *et al*., 2020, p.260).

Any approach to environmental migration should be considerate of the importance to change the "cultural-economic-ecological processes" that determine current conditions of socio-ecological inequalities. Environmental migration requires "engaging with the politically and environmentally more complex task of tackling the multi-causal roots" of this phenomenon (Tuitjer, 2020, pp.366, 377): our social and ecological relationships must be connected to the social and ecological outcomes we are experiencing in order to understand the ecological and humanitarian dynamics of environmental migration without reducing this phenomenon to a mere issue of development and lack of progress, and/or natural transformation and management. The utmost aim of analysing the socio- and ecocultural dynamics of environmental migration should be the protection of the quality of life for everybody, as well as the promotion of cooperation for creating a caring and sharing society (Raynes & Mix, 2020, p.295; Stibbe, 2020, p.428).

Previous studies on environmental change assert that the focus of discourses on environmental change was on the present (possibly due to the fact that both scientific discussions on environmental change and environmental change as an international scientific and political concern were relatively new -1950s and 1970s respectively) (see Section 1.1.). Instead, the analysis of the discourses on

environmental migration of the IOC and NC seem to identify environmental change (and consequent migration) as the result of historical processes: these discourses seem to be "coming to terms with the historically constructed inequalities of our global reality", and they try to overcome the contradiction of wealthier countries' point of view being simultaneously the "norm for conceptualising history, and the norm that causes the destruction of the environment" (Jensen, 2011, pp.91, 93-94). The discourses of the IOC and NC seem to be overcoming the process by which environmental questions are represented in ways that focus on the interests and concerns of more powerful countries. It seems to hold still true, though, that those who are most severely affected by environmental change and have done the least to cause it are also those whose "voices" are least represented in international debates and negotiations; this goes against the environmental justice approach called for in these discourses.

In comparison with previous studies on environmental change and migration (see, for instance, Dreher & Voyer, 2015), it is possible to say that in the IOC data, international organisations and the international community have started to acknowledge the importance of shifting representations toward environmental justice, even though environmental concerns have not been implemented yet as effective policy action (Carr & Milstein, 2020, p.311). Official representations do not deal with environmental change as predominantly an environmental and political issue any longer; rather, they seem to have increasingly recognised that it is also a social justice and human rights issue, bringing to the fore patterns of inequality in distribution and access to natural resources, as well as other more political and economic concerns.

The approach to the socio-cultural and justice questions underlying the phenomenon of environmental migration is a matter of ethical, socio-cultural, economic, political and ecological human reaction to the current circumstances and events (Gemenne, 2011, p.186). O'Halloran identifies an ethical proactive ecocultural and anti-racist change towards solidarity as follows:

> "showing hospitality to the Other, allowing Self to be interrupted by the Other's viewpoint because of potentially beneficial transformations, is to act ethically" […] to be ethical is to reduce the invisibility of the Other. […] It is to appreciate how the relatively powerful might distort the standpoint of the relatively powerless, which intentionally or not helps to maintain dominance […]. [D]eveloping an ethical responsiveness to a relatively powerless Other […] could lead to a political commitment" (2014, pp.261, 263, 266).

In order to deal with the ecological and humanitarian dimensions of environmental migration effectively, it is necessary to be inclusive towards the "Others", their point of view and experience of this phenomenon, especially if the "Others" belong to less-powerful groups who can hardly have

their voice heard. Representations of participants in environmental migration which promote inclusivity and commonality are of paramount importance for the recognition and protection of those who are involved in this phenomenon and its entailments: since "it seems easier to care about and protect one of 'us', who exactly the 'us' includes becomes a vital issue" (Stibbe, 2020, p.416).

Reformulating the representations of environmental migration by taking into account and appreciating the intrinsic value of cultures and communities, as well as "their human rights and desire for self-determination as active agents", might help replace the exploitative relationships that have produced the current social and ecological crisis, and promote the restoration of shared wellbeing (Dreher & Voyer, 2015, p.69; Bendixsen *et al.*, 2020, p.164). These representations could be in line with, for instance, the "unity-in-diversity" narrative on European identity, highlighting common values, commitments and plurality (Magistro, 2014, p.436).

The discourse of environmental migration of the IOC and NC has proven to be ambiguous and problematic. Nevertheless, the analysis of representations of environmental migration is worthwhile as it brings to the fore the problematic cultural grounds that inform and perpetuate these representations, and it marks a point of departure for innovation. These representations help elaborate on the reasons for particular events, practices and behaviours (Audley *et al.*, 2020, p.451). The role of discourse in awareness and transformation of dominant cultural perceptions and behaviours towards the "Other" and one an-Other is fundamental: it foregrounds connections between "cultural politics and ecological ethics" (Méndez Cota, 2020, p.389). Once these connections are unravelled and understood, it is possible and necessary to "reframe experiences to be more empathetic, relational, and ecocentric", promoting communication practices which are inclusive and regenerative (Audley *et al.*, 2020, p.455). The present era, the Anthropocene, "is experienced as unmooring from both ecological and cultural coordinates, leaving the possibilities and opportunities for experimenting" more open, valuing ethical commitments, and inter- and intra-generational care (Bendixsen *et al.*, 2020, p.176); it is a time for exploring the potential for creative elaboration and deployment of resources in a partnership-oriented way.

8.8. Limitations of the study

The present study has provided an analysis and interpretation of the discourses and representations of environmental migration informed by official authoritative international organisations and mainstream newspaper outlets. I acknowledge that the interpretation of the findings as presented in this study is limited to the perspective of the analyst who has commented and reflected on representations based on her own point of view and value system. In order to avoid the risk of preferential interpretations, I complemented the interpretation of the findings with the latest

available scientific reports and official documents about the state of the environment and human rights (Section 2.1.1.1. and Appendix, Section 3). In this way it was possible to verify the extent to which representations align with the most recent information available on the state of the environment, environmental migration, and their consequences on human rights.

Even though the amount of data considered for the present study is adequate for the purposes of this analysis, this study is very specific: the corpora are small-sized and hand-selected. The number of texts (and number of words) for each corpora is limited because texts were selected manually from the web in order to make sure that they were thematically relevant to environmental change and migration. Manual selection does not guarantee that all relevant texts published during the span of time considered for the analysis have been taken into consideration; however, the corpora collected are well representative of the official authoritative discourse of environmental migration of international intergovernmental organisations and of the mainstream English-language newspaper discourse on this topic (see Section 3.1.2.).

I also realise that the discourses investigated are informed by members of particular discourse communities. The dataset represents official authoritative and mainstream discourses on environmental migration, and it is limited to the perspective of specific powerful global actors on this phenomenon. More specifically, the texts and discourses in the corpora are the "voice" and perspective of international organisations and some mainstream mass media; their perspective on migration and environmental change tends to overlap with the point of view of dominant powerful social groups.

In this study, the "voices" and points of view of those who experience migration (communities of origin, migrant communities, and receiving communities, especially those involved in the reception of migrants) are not directly represented -if not sporadically. More specifically, the representations of environmental migrants of the IOC and NC seem to portray migrants from the point of view of specific social groups within affluent countries (that often are also receiving societies). The literature shows that these representations are not shared by affected people as appropriate to describe themselves; generally, affected communities do not endorse labels that represent them as victims rather than active agents of a community committed to responsive action to environmental events (see Section 3.2.) (Gemenne, 2011, p.190). The reasons why the voice of the protagonists of environmental migration (affected and migrant communities, and members of host societies involved in receiving migrants) are not included as data for the present analysis is that these protagonists and their point of view on environmental migration tend to be excluded from practices of policy-making, especially at institutional level, and therefore from the kind of discourses investigated in this study (see Sections 1.2. and 3.1.1.).

The present study has not investigated the representations of environmental migration emerging from user-generated content and social media discourse, such as sites and blogs where people directly involved in environmental migration (affected communities, migrant communities, and members of receiving societies that do not align with the "voices" of dominant social groups in their society) have the possibility to have their "voice" heard, represent their personal experience of environmental change and migration, and provide their own representations of the identities of everyone involved. The inclusion of the "voice" and perspective of affected communities can contribute to understanding how affected people are active agents and "intentional agents who perform actions in a deliberate manner and therefore are in control of their actions" (Fetzer, 2014, p.378). Also the "voice" of affected receiving communities, namely of affected countries which also are receiving societies, could shed light on their role as agents: not only they engage in response measures to environmental change (migration included); they are also involved in receiving migrants.

Therefore, it would be desirable to include the "voice" of those who are affected by environmental change and migration in the official discourses on these topics. Their "voice" would represent their own forms of adaptation and approaches to environmental migration based on their knowledge of their territory as well as their aspirations, so that wealthier countries are not entitled to "be" the solution. This would challenge representations of hierarchical relationships whereby poorer countries are the "victims" in need to be rescued by more powerful countries, and the capacity of the host country to respond is valued more than the welfare of affected and migrant communities (Dreher & Voyer, 2015, p.70).

Affected and less-affected countries would be both agents and, most of all, partners in negotiating responses to environmental change. Discourses on environmental migration of less-institutionalised and alternative/independent media, as well as discourses of the protagonists of environmental migration, may outline alternative representations of this complex and controversial phenomenon, providing innovative insights into how to deal with environmental migration and all participants involved in it.

8.9. Scope for further development

The discourses on environmental migration investigated in this study are official formal discourses informed by official organisations and mainstream media. They are dominant discourses that generally represent the perspective and ideologies of powerful social groups within affluent and less-affected countries.

Power relationships allow affluent societies to have their "voice" heard more easily and widely, thus letting their interests emerge. Possibly, this is the reason why environmental migration and environmental migrants are often positioned as something/someone to fear and control, however empathetically, which often results in patronising attitudes towards affected and less-powerful social groups.

Discourses are limited in their power to represent and construct the social world and are based on models which are simplifications that leave out "a whole universe of possibilities in their construction of a narrow part of social life"; this may exclude ethical considerations (see Section 2.2.1.) (Stibbe, 2014, p.599). This is why it is necessary to open up space so that alternative discourses "can break a deadlock situation in which we are supposed to choose between alternatives we cannot accept -not doing anything vs. reinforcing various articulations of the same neoliberal mode of migration government" (Bettini, 2017, p.37).

Dominant repertoires of representations which shape the understanding of those who are exposed to them need to be questioned and problematised. In order to promote public engagement, alternative and innovative perspectives could be introduced, including positive messages about environmental migration or concrete examples of what can be done; the effect on how we talk about each other and to each other would be different and potentially innovative. For instance, representations of environmental migration as manageable could be replaced by alternatives which are conducive towards environmental protection (Farbotko, 2010, p.51; Penz, 2018, pp.278, 283).

Since alternative representations are generated from alternative ideological positions (Fairclough, 2003, p.124; 2014, p.11) (see Section 2.2.1.), ecolinguistic research on representations of environmental change and migration should be extended to media accounts beyond the Anglo-American sphere, in particular to those areas which are most affected by environmental change (Penz, 2018, p.288). Most importantly, research on environmental change and migration should account for the "voices" of those who directly experience the effects and consequences of environmental change and migratory movements, and let them emerge. These "voices" are a potential source of alternative representations of the ecosystem and the phenomena that characterise it. Their representations might encode alternative sets of values and understandings of environmental migration, and might provide inspiration for approaches to the wellbeing of humanity and of the ecosystem which can encourage partnership, care, mutual understanding, processes of sharing, respect and equality.

It would be desirable to search for representations of the communities and ecology that "go against binary understandings": representations that are the sum of manifold perspectives and points of view are likely to be more conducive towards deeper understandings of this complex phenomenon

(Farbotko, 2010, p.53). The inclusion of multiple perspectives and diverse (and divergent) "voices" would also provide wider understandings of the phenomena that are unfolding; confronting diverse ethical codes would offer alternative approaches to these phenomena which might be more effective and functional for everybody. The "voice" of affected communities, migrants, and less-powerful social groups within receiving societies could possibly determine a discoursal shift towards values like ecocentrism, reciprocity, and mutualism, among others. Also, they may help constructing representations of the agency and aspirations of those who are most affected and directly involved in this phenomenon (Quick & Spartz, 2020, p.354; Milstein, 2020, p.29; Dreher & Voyer, 2015, p.71).

It would therefore be interesting to explore the "voices" and perspectives of the "protagonists" of migration: communities of origin, migrant communities, and communities of destination. The "voice" of those who experience migration could be investigated, for instance, by analysing the "voices" emerging from social media and user-generated content, such as, for instance blogs and user comments, and from discourses that are not mediated or filtered by mainstream media.

The analysis of official authoritative discourses on environmental change and migration could be furthered by means of analysing diverse dataset which either are representative of more institutions, organisations, and media perspectives; or represent the discourse of different bodies from the ones analysed in the present study, including non- or less-officially recognised organisations working in the field of environmental protection and humanitarian assistance. Moreover, the dataset for the analysis can be the result of diverse modalities of data selection: for instance, the corpus/corpora for analysis can be collected with specific crawling tools which retrieve material on environmental migration from the web, thus avoiding hand-selection.

The perspective of people who experience migration first-hand and those who are involved in processes and practices of reception and assistance of incoming people would be of paramount importance: it would help understand the complex nature of this phenomenon and address the needs of everyone involved in more suitable ways. Most of all, their "voice" and perspectives are worth investigating in order to better deal with the issues of wellbeing that concern themselves (Tuitjer, 2020, p.379).

8.10.   Conclusions

Official and mainstream media discourses on environmental migration represented by the dataset of the IOC and NC tend to encode the "voice" of dominant and powerful social groups, and so they represent global human relationships and human relatedness within ecology according to dominant points of view. The aim of the study is to contribute to reviving "the ecocultural power of language

to evoke earthly immersion and relation" by illustrating and challenging the discoursal boundaries of representations of environmental migration (Milstein & Castro-Sotomayor, 2020b, p.xxi). The analysis of representations can shed light on contemporary ecocultures and ecocultural identities: representations of humans as anthropocentrically removed from the ecosystem must be questioned, opening space for alternative ways of conceiving identities and the eco- and socio-cultural premises on which they are grounded (Milstein, 2020, p.49; Abram with Milstein & Castro-Sotomayor, 2020, pp.5-6).

Finding a solution to our social justice issues requires a recalibration of the sense of community humans are part of, which includes "a more-than-human community of beings" (Abram with Milstein & Castro-Sotomayor, 2020, p.24). Innovative eco- and socio-cultural identities should be "ecocentric" and egalitarian identities which include the "non/anti-anthropocentric identification with the more-than-human world" and promote behaviours and practices based on "eco-oriented" values and beliefs (Milstein, 2020, pp.27, 39; Parks, 2020, p.107). In this respect, discourse can inform and promote ways of perceiving and acting that challenge "normative dualism" and should help redefine inclusive and mutual relationships based on new ecological and humanitarian ethical principles and obligations (Parks, 2020, p.108; Karikari *et al.*, 2020, p.254; Seraphin, 2020, p.403).

The need for a concerted and collective effort to support relationships of mutual respect, justice, care, and social and ecological responsibility, working together to strengthen efforts to protect living beings, is vital considering that "our planet is suffering through a human-induced mass extinction of species, and that global anthropogenic climate disruption, corporate exploitation, and militarization threatens the health and existence of all living beings" (Freeman, 2020, p.431). A cultural shift entails rethinking the values and priorities that underpin our view of and relations with the environment and our fellow human beings; it requires "the interrogation of unquestioned norms and socioecological structures in our society" (Tarin *et al.*, 2020, p.63).

Innovative discourses on environmental migration should acknowledge the human-needs-focused anthropocentricism of current official discourses on environmental migration and lead way to a "physiocentric language which revolves around pathocentrism, biocentrism and holism", thus favouring a philosophy of interaction and harmony (Heuberger, 2018, pp.347-348; Goatly, 2018, p.237; Fill & Penz, 2018b, p.442; Quick & Spartz, 2020, p.362). A new inclusive collectivity could emerge from commitment to common global concerns on matters having to do with the environment, the gap between countries, health and human rights. The protection of and care for human beings and the environment requires cooperation on global solutions, thus framing common but differentiated responsibilities (Said, 2003, p.xxi; Penz, 2018, pp.284-285, 287; Hoffmann, 2020, p.149).

A linguistic intervention has the "potential to rekindling intrinsic interconnections and mutuality between humans and the more-than-human world" and among communities of human beings (Karikari *et al*., 2020, p.242; Bloomfield, 2020, p.204). Communicative practices based on pro-environmental and pro-social beliefs could be the starting point for a process of reconciliation with the "Other" (including the Other in ourselves) and restoration of an inclusive community of living beings, cultivating a constant desire for novelty, flexibility and diversity.

APPENDIX

1. **International Organisations Corpus (IOC)** (Dowloaded on 17 September 2019)

EU (European Union). Available from: https://europa.eu/european-union/index_en

IOM (International Organisation for Migration). Available from: https://www.iom.int/

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1.1. EU (European Union)

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411

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