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# **Environmental migration and displacement: A new theoretical framework for the study of migration aspirations in response to environmental changes**

Migration has existed in all times and places and people have migrated for a variety of (combined) reasons: environmental, economic, political, humanitarian, social and cultural. While social and political conflicts that have arisen out of environmental changes are not new, environmental changes have placed some living conditions and other reasons for migration under even more pressure. In this paper, we combine insights from two approaches to the study of environmental migration and displacement – namely ‘the sustainable livelihoods approach’ and ‘the new economics of labour migration’ – and build further on existing models and theories of migration aspirations and dynamics. Based on these insights, we develop a theoretical framework on the study of migration aspirations and how they take shape within the existing structural constraints or capabilities for people living in areas heavily affected by environmental change using a multilevel perspective. The novelty of this model is that it focuses on migration aspirations when confronted with environmental changes. The multilevel approach, which includes the local social environment, incorporating the culture of migration of the living environment, one’s personal local and transnational networks, perceptions on environmental changes and local discourses thereof, is therefore of particular relevance.

Keywords: environmental change; migration; migration aspirations; culture of migration; environmental change discourses

## **Introduction**

Environmental change and migration are both emerging and polarizing themes that characterize the 21st century (IPCC 2014). Migration has existed in all times and places, and people have migrated, both voluntarily and involuntarily, for environmental, economic, political, humanitarian, social and cultural reasons (Carling 2002a; 2002b; 2014; De Haas, 2010a; 2010b; McLeman and Gemenne 2018b). Over the last decade, more attention has been placed on how environmental changes have given rise to migration, and have also put other reasons for migration under pressure (TGOFS 2011;

IPCC 2014; Piguet 2010). Despite the rapidly growing interest in environmental migration, the field of study of environmental migration has only recently been developed, and it is largely driven by policymaking needs to enable the adequate (legal) protection of environmental migrants and displaced people (e.g. El-Hinnawi 1985; Myers 1995; Bates 2002; Ojeda, 2010; Bose and Lunstrum 2014; Zetter 2017). Moreover, these existing studies have hardly applied a sociological framework (McLeman and Gemenne 2018a). While sociologists have been reluctant to include environmental issues in their research since the start of the discipline, the idea that environmental problems are social problems has become accepted in sociology. The study of environmental migration fits perfectly within the discipline of environmental sociology as it further contributes to insights on how changes in the natural environment have put the living environment of people, related to work, housing and so forth, under pressure (Dunlap and Marshall 2007; Heinrichs and Gross 2010).

The lack of scientific and sociological evidence on the topic of environmental migration is clearly reflected in the difficulties involved in defining, conceptualizing, categorizing and theorizing about environmental migrants or displaced people (TGOFS 2011; Gemenne and Blocher 2016; Bose and Lunstrum 2014; Piguet 2010). Many attempts to set up a comprehensive typology or provide a sufficient tool for policy makers or conceptual model for future research have failed. This failure was mainly due to the multilayered nature of environmental migration and displacement, the overlapping nature of migration motivations, as well as the varying nature of environmental changes (McLeman and Gemenne 2018b; TGOFS 2011), which remains an issue when studying this topic. One frequently used definition of ‘environmental migrants’, formulated by the International Organization for Migration (IOM), goes as follows:

*“Environmental migrants are persons or groups of persons who, predominantly for reasons of sudden or progressive change in the environment that adversely affects their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad”* (IOM, 2011:33).

This definition often serves as a starting point to identify the issue in its broadest sense, and will therefore also be used in this paper. Nevertheless, many definitions like this one have been criticized for being so wide that the concept of environmental migrants becomes meaningless (Bose and Lunstrum 2014). Furthermore, many debates have been

held on the use of concepts such as ‘climate change’ or ‘environmental’, referring to the so-called causes of migration, as well as concepts such as ‘refugees’, ‘migrants’ or ‘displaced persons’, which have distinct legal and political consequences or were contested due to the lack of human agency in the migration project of the people involved (Zetter 2017).

In this paper, we aim to address the lack of theory and empirical research on environmental migration from a sociological perspective by developing a new theoretical framework that provides the conceptual tools for future (sociological) research on environmental migration and displacement. This framework will be based on the gaps in, and the critiques or limitations of, existing research and discourses. More specifically, we aim to construct a new theoretical framework to guide research that aims to answer the question: “*how are migration aspirations developed when living in an area affected by environmental change*”, based on an extensive literature review.

### **Towards a new theoretical framework to study environmental migration**

We aim to develop a theoretical framework to focus on the ways people adapt to their changing natural living environment and how this could possibly lead to the development of migration aspirations and actual migration trajectories. The focus on the development of *migration aspirations* and how this could lead to potential migration trajectories is of particular interest for the body of research on environmental migration for four reasons. First, the focus on migration aspirations helps to grasp the gradual development of migration decision-making processes. Second, examining migration aspirations helps to provide a better understanding of how self-categorization processes of environmental migrants could work. Third, migration aspirations reflect the social fabric that shapes environmental discourses, perceptions about environmental changes and migration dynamics. Finally, when studying migration aspirations first, instead of solely focusing on migration outcomes, one can also involve immobile groups who desire to migrate but are unable to do so, as well as environmentally (internally) displaced persons. We argue that if scholars have a better understanding of the development of migration aspirations within a particular context, they will also be more able to understand related migration patterns and dynamics. Moreover, this focus contributes to the field of environmental sociology as it allows us to better understand how people respond to their changing living environment, perceive their immediate living environment, opportunities

therein and adapt their aspirations to the perceived ability to deal with their environment (Dunlap and Marshall 2007; Heinrichs and Gross 2010). In doing so, this study aims to enable future researchers to better map out the vulnerabilities of people that are confronted with environmental changes and contextualize their actions (Zickgraf 2018; Bose, 2016; Büscher & Davidov, 2016; Terminski, 2012).

In the following sections, we will first provide an overview of two main conceptual approaches that are used to study environmental migration (cfr. Kniveton 2008): the ‘sustainable livelihoods approach’ (Brocklesby and Fisher 2003) and the ‘new economics of labour migration’ (Stark and Bloom 1985) - and argue for a combined approach. Second, we will set out previously developed theories on migration aspirations and argue that the focus on migration aspirations could add to a better understanding of environmental migration and displacement. Third, by following a more environmental sociologist approach, we see macro, meso, and micro level factors as intrinsically related to each other, and interacting with each other. This inclusion of the wider context, both at the macro and meso level and how it impacts micro-level factors, is crucial to understanding the final outcomes of the decision-making processes on whether a person is forced or wants to migrate. In this way, we wish to understand how this further influences the migratory trajectories or the development of alternative strategies to deal with environmental changes. Therefore, we will apply a multilevel approach and give an overview of the different macro-, meso- and micro-level factors that constitute our theoretical framework on environmental migration and displacement.

### **A combined approach to environmental migration and displacement**

In the past, environmental migration has been examined by using two distinct approaches, namely the ‘sustainable livelihoods approach’ (Brocklesby and Fisher 2003) and the ‘new economics of labour migration’ (Stark and Bloom 1985). The ‘sustainable livelihoods approach’ aims to understand how people act to maintain a socially and environmentally sustainable livelihood. By doing so, scholars intend to understand how communities in general respond to environmental changes, which could result in migration, intensification, diversification or other strategies (Brocklesby and Fisher 2003; Kniveton et al 2008). Following this approach, scholars look at migration as one of the possible ways of dealing with environmental changes (Kniveton et al. 2008; Gemenne 2010; Gemenne and Blocher 2016). For instance, the ‘migration as adaptation’ model

(Gemenne 2010;Gemenne and Blocher 2016) focuses primarily on migration outcomes, assuming that migration aspirations are the result of the careful consideration of all the consequences of the possible options or adaptation strategies available when facing environmental changes. These models focus on the variety of strategies people apply when being confronted with environmental changes, in which migration is often seen as the last resort. As a consequence, in this field of study, migration aspirations as such are often considered in a rather straightforward way. Consequently, this approach leaves less space to consider the contextual and multidimensional nature of environmental migration and displacement (Ransan-Cooper, 2016; Kniveton 2008).

The ‘new economics of labour migration’ approach focuses on how migration decisions are made in a joint way by both migrants and non-migrants. By adopting this approach, all possible migration reasons are studied together, such as environmental changes, networks, economic reasons and so forth. In this way, scholars attempt to understand the relative importance or interaction of all reasons for migration. This approach helps to pay more attention to the different types of migration and how these relate to the reasons for migration or distinct types of environmental changes. Piguet (2010) already noted that distinct migration patterns emerge when looking at different types of environmental changes. People living in regions affected by hurricanes, torrential rains and floods – especially in poorer countries – are found to have little mobility and return in most cases as soon as possible to their homes to reconstruct them. People that are confronted with droughts and desertification in their natural environment often only see migration as their last resort, which often generates progressive departures. By contrast, people living in areas that are threatened by rising sea levels are easier to locate and, due to its irreversible character, are also more likely to prepare for permanent migration. There appears to be a direct relationship between the type of environmental change or stressor and migration patterns. The Foresight report also included different reasons for migration and human mobility outcomes when developing a comprehensive theoretical model for their study (TGOFS 2011). In their report, the authors focus on environmental migration processes and bring together how environmental factors mutually influence cultural, demographic, economic, political, and social processes at various scales. Four human mobility outcomes are included: (1) those who choose to leave (migration); (2) those who are forced to migrate (displacement); (3) those who stay because they are unable to leave (‘trapped populations’); and finally, (4) those who

choose to stay (immobile group). In this report, a distinction is made between sudden and gradual, as well as between actual and perceived environmental changes, between the spatial and/or temporal variability, and differences in source and destination area.

Building further on the insights derived from both approaches and previous models, empirical research on this matter has suggested that scholars need to consider how social and ethnic differences reflect and reinforce the already existing inequalities in society when studying environmental migration. This is important as these ethnic and social differences are also reflected in the choices people make when opting for alternative adaptation strategies (McLeman, Schade and Faist 2016; McLeman and Gemenne 2018b; Bose and Lunstrum 2014). As the impact on environmental changes affects the most vulnerable people in a society the hardest, affected groups will be more likely to travel shorter distances, travel to the nearest urban centres for better work facilities or existing (family) networks. When environmental migrants do travel greater distances, they are more inclined to do so in different stages (McLeman, Schade and Faist 2016). During such "fragmented journeys" (Collyer, 2010), people adapt to their new living conditions, and gradually develop new migration aspirations, frames of reference and motives. This makes it more difficult to ascertain for migrants and policy-makers what role environmental impacts play in the initial migration from the region of origin. Due to the particular ways in which environmental changes affect people living in these areas, a large proportion of environmental migrants are often internally displaced migrants who have limited resources to return to their region of origin (e.g. Bose, 2016; Bose and Lunstrum 2014; Büscher and Davidov 2016; Terminski 2012). Apart from these migrated/displaced groups, the differential impact of environmental changes on populations means that there are large, vulnerable groups affected by environmental changes that are not able to migrate ("immobile climate migrants" or "trapped populations", Zickgraf 2018). This group should be distinguished from those who (voluntarily) opt for alternative adaptation strategies to deal with environmental change and do not aspire to migrate.

To conclude, we can learn from the 'sustainable livelihoods approach' (Brocklesby and Fisher 2003) that there are various alternative strategies to migration when dealing with environmental changes, and these strategies need to be studied all together. The starting point of this approach is that no environmental hazard inevitably results in migration. However, in this approach, too little attention has been given to how

migration dynamics, (im)mobility patterns and aspirations take shape and respond to environmental changes. Additionally, these studies often assume that all inhabitants are very conscious about these environmental changes and their reasons for migration. By contrast, the ‘new economics of labour market migration’ approach (Stark and Bloom 1985) shows us that the category ‘environmental migrants’ consists of a heterogeneous group of migrants that differ in the migration trajectories they (are forced to) undertake, the timeframe of the environmental changes and the migration trajectory, the period (temporary or permanent) that they reside in places other than their region of origin, and the combined set of reasons for migration. Nevertheless, this approach gives relatively little attention to alternative strategies that are used to deal with the same reasons one would opt to migrate for. Although both approaches have value individually, especially when conducting quantitative research (cfr. Kniveton 2008), the combination of both is needed when one aims to understand better decision-making processes on strategies to deal with environmental changes and how this possibly gives rise to an aspiration to migrate. This combined approach should provide information about the contextual factors that matter 1) when deciding which adaptation strategy to employ, and 2) if migration is the preferred/chosen adaptation strategy, how this decision coincides with other factors influencing migration decisions. Finally, this combined approach should pay attention to how this results in particular migration trajectories or dynamics. In the next section, we delve deeper into the existing theories on migration aspirations and theorize how they can be applied to environmental migration and displacement.

### **The development of migration aspirations**

Concluding from the previous paragraphs, we argue that environmental migration and displacement should be considered together with other reasons for migration, but also include the available alternative adaptation strategies people use to deal with environmental changes. To fully understand the decision-making concerning such migration trajectories, more attention needs to be given to migration aspirations for the following two main reasons.

First, the inclusion of migration aspirations allows scholars to examine the nexus between abilities, forced movements and aspirations. Using the *aspirations/ability model of Carling* (2002a; 2002b; 2004; 2014; Carling and Schewel 2017) as a starting point, a distinction between migration aspirations and the abilities to migrate need to be



considered. In this way, both mobility and immobility can be placed in a model (cfr. McLeman, Schade and Faist, 2016). With regard to environmental migration and displacement, this aspirations/ability model could be especially useful as the distinction between aspirations and abilities facilitates the inclusion of immobile groups – at least conceptually – in research on environmental migration and displacement (cfr. Carling and Schewel 2017). In this way, people (internally) displaced due to effects of environmental changes could also be included, which is important to understand return migration, migration trajectories and group-based actions and decisions (cfr. McLeman and Gemenne 2018b; Bose and Lunstrum 2014). Interestingly, Carling (2014; Carling and Schewel 2017) later also suggested adding the importance of the household level and the collective and social networks, and the contextualization of migration aspirations, which leads us to the second point.

When it comes to environmental factors, many scholars are eager to recognize that environmental changes put other reasons for migration under pressure (TGOFS 2011; IPCC 2014). However, less is known on which combined set of factors actually causes people to migrate and how this shapes the development of migration aspirations. Particularly in the case of environmental migration and displacement, the underlying or interfering reasons for migration are sometimes hard to see during one's lifetime and may be entangled with other migration reasons. To be aware of environmental factors and to perceive them as a reason to migrate often requires some sensitization or knowledge about the environmental or, more specifically, climate change discourses (Ransan-Cooper, 2016; Wodon and Liverani 2014). It is in this light that the inclusion of *meso-level factors* are important. For instance, the EUMAGINE project previously already demonstrated the importance of including local and transnational networks and cultures (Timmerman et al. 2010; 2014a; 2014b, 2018; Van Mol et al. 2017). Moreover, special attention was given in this model to the development of migratory and geographical imaginations and perceptions on human rights and democracy that shape migration aspirations (Timmerman et al. 2018). These factors are theorized to be influenced by both macro-level factors, including media and policy discourses, and meso-level factors, such as popular discourses (Timmerman et al. 2010; 2014a; 2014b, 2018; Van Mol et al. 2017).

In sum, we can state that the inclusion of migration aspirations in the body of research focusing on environmental migration and displacement require the inclusion of the social fabric that gives rise to migratory, geographical and even environmental

imaginaries. Such imaginaries need to be considered to fully understand the development and realization of migration aspirations, the migration trajectories which include internal and international (fragmented) trajectories and return migration. Therefore, in this field of research, it is important to pay more attention to how (the lack of) migration aspirations are shaped, reshaped and developed in the light of the abilities people have, while considering the foreseen and unforeseen, abrupt and gradual environmental changes, social and migrant networks, and prevailing climate change and migration discourses/cultures.

### **The use of a multilevel model**

The proposed multilevel model consists of micro-, meso- and macro-level factors and assumes that (the nature of) the environmental changes within a particular socio-economic and political context impacts the decision-making of potential migrants (cfr. Piguet 2010; TGOFS 2011). The changing natural environment becomes visible for local inhabitants through the interplay between macro-level factors and micro-level factors, and is mediated by meso-level factors. Macro-level factors relate to the social, political and economic context. Meso-level factors refer to the environmental change discourses, the existing local and transnational migrant networks, and the community's capacity to handle the effects of environmental changes on the local population. Micro-level factors include individual and household characteristics. Building further on Carling's aspirations/ability model (2002a; Carling and Schewel 2017), this interplay of factors will be decisive for the perceived need and wish to change environment or location of residence (and thus aspirations), as well as having the resources, networks and legal framework to do so (which refers to the ability to migrate or to apply alternative adaptation strategies). This interplay could also give more insight into the nature of the migration journeys that people are willing or have to undertake (temporary, fragmented, local and/or transnational journeys) and help to understand immobile groups (Piguet 2010; TGOFS, 2011; Zickgraf 2018). We discuss each level separately below.

#### ***Macro level: The social and natural environment***

Macro-level factors can be distinguished into a 'natural' and a 'social' part. First, with regard to the *natural environment*, the type of environmental changes (abrupt vs gradual; type of effects) gives a first indication as to the consequences one has to deal with within

one's living environment and the ability to stay (Piguet 2010; TGOFS 2011). Second, the social, political and economic context constitute the *social environment*. This social environment determines to a large extent the community's capacity to handle the effects of environmental changes on the people living in a particular region. Both the natural and social environment impact migration decisions or alternative adaptation strategies. However, these strategies and decisions also largely depend on individual and household characteristics (micro level) and prevailing discourses and networks (meso level). The inclusion of both the social and natural environment is important as most attention on environmental migrants focuses mainly on extreme, urgent and pressing short-term matters (e.g. Bose and Lunstrum 2014). As a result, important seeds for social and political conflicts and instability may be neglected, insufficiently recognized or studied. Less extreme environmental reasons for migrating (e.g. temperature rise), and the ways they affect people's living conditions and income resources, such as livestock and agricultural activities, are therefore more likely to be expressed through violence and conflicts (Carr, 2005; Wodon and Liverani 2014; Bose and Lunstrum 2014). Subsequently, the interplay between environmental change effects, and related political, economic and social issues could give an incentive for people to migrate according to individual and household characteristics (TGOFS 2011).

Thus, both the natural and social environment interact and need to be considered together. For people living in areas vulnerable to environmental change and in a weak socio-political context, environmental migration may be mainly felt through other dynamics, such as socio-political instability and conflicts (TGOFS 2011; IPCC 2014). Consequently, environmentally-induced migration will be less likely to be seen as one of the drivers of undertaking a migratory trajectory (TGOFS 2011), unless there are very well-developed discourses concerning environmental migration that make this connection for people living in this particular region (cfr. meso level). The combined set of macro-level factors further shapes the contexts that affect meso- and micro-level factors.

***Meso level: Local social environment, discourses and migration networks***

As environmental changes affect everyone and environmental change is destructive for all human beings, there remains a grey zone in which people decide for themselves whether or not the environmental changes are sufficient to leave the area they live in.

Consequently, ambiguity with regard to the actual impact of environmental change on people's living environment is detrimental in the understanding and development of people's migration aspirations and whether they link this with the problems they encounter. The use of a sociological approach is especially relevant here as there is a lack of research that examines how prevailing cultures and/or perceptions are created that provide the intermediating variable and setting in which decision-making takes place. Being inspired by previous migration research (e.g. the EUMAGINE model) and people's perceptions of their futures and the change of the environment (Dunlap and Marshall 2007; Heinrichs and Gross 2010), we argue that two main groups of meso-level factors are crucial to consider with regard to the development of environmental migration aspirations: 1) the perceived and prevailing environmental change discourses; and 2) the resources and local and transnational (migrant) networks available to undertake migration.

We will first discuss the importance of the **perceived and prevailing environmental change discourses**. People's perceptions about the relationship between environmental changes, the consequences, and their individual resources are crucial in the potential impact of environmental changes on migration and other adaptation strategies. It is important to note here that discourses and perceptions on the nature and the causes of these environmental changes are not automatically linked to environmental change (Bates 2002, TGOFS 2011). These weather events or phenomena could also be interpreted through religious reasons, be seen as part of the functioning of nature (Hope and Jones 2014; Sachdeva 2016), or be fuelled by (local or transnational) discourses on climate/environmental change and during awareness campaigns (Zietlow, Michalscheck and Weltin 2016). Furthermore, environmental/climate changes are not always clearly visible and refer to patterns of weather outcomes over time and changes in intensity, sudden weather shocks and other consequences (Wodon, Liverani, Joseph and Bougnoux 2014; Kniveton et al. 2008). Not only do the the nature of these weather events and perceived environmental changes have to be considered, but so does the time frame in which these events occur or change (e.g. during the last five years vs longer trends, see Wodon and Liverani 2014). Because of this, the interplay between social, political, economic, demographic and cultural factors at the macro level, and their interaction with both individual/household characteristics and the natural environment and changes

therein often blurs the recognition of the effects of environmental change on migration aspirations (Wodon et al.2014).

Second, the available **resources and local and transnational (migrant) networks** further shape migration aspirations, decisions and final trajectories. The ability to put aspirations into practices relies on individual and household resources, the existence of local and/or transnational (migrant) networks, and the existing immigration policies across the globe. Meso-level factors, such as the availability of transnational networks, traffickers, cultures of migration, the community's capacity to deal with effects of environmental change and remittances are important factors that affect (positively and negatively) the development of migration aspirations and increase the ability to migrate (see Carling 2002a; TGOFS 2011; Warner et al. 2012; Timmerman et al 2014). The local and transnational networks people have access to, give rise to social imaginaries and expectancies of remittances. These resources may be used to invest in the existing issues one is confronted with due to environmental change (e.g. a shared well, agricultural innovation on large scale, and so forth) and turn individual aspirations into collective ones (Carling and Hoelscher 2013). Thus, migration is not only a strategy to diversify the sources of family income (Jäger et al. 2009; TGOFS 2011; Gemenne and Blocher 2016; Carling 2014), or to offer support when facing environmental hazards (Gemenne and Blocher 2016) but also a way to tackle the consequences of environmental change collectively, with more financial means and political power (Barnett and Webber 2010). Nevertheless, since not all inhabitants of a specific region are equally affected by environmental change or receive the same amount or types of remittances, financial remittances of migrants that aim to invest in the possible ways to reduce the consequences of environmental changes may also not be equally spread (TGOFS 2011; Warner et al. 2012). Therefore, during decision-making, the importance and mediation of existing or changing **cultures of migration** cannot be neglected (Timmerman et al 2014a; 2014b; Simon 2018). Environmental migration – especially transnational migration – could be easier in regions with a prevailing culture of migration (e.g. Carr 2005). At the same time, migration could result in more structural investments in one particular area of origin, reducing the need or the wish to migrate. The existence of a particular culture of migration could hamper migration aspirations as they contribute to the idea that migration is not necessarily the only solution or the best adaptation strategy possible to cope with environmental changes. This is certainly the case as feedback mechanisms have already

shown that migration has led to low social positions in the immigration country, jeopardizing the opportunities to send remittances (Gemenne and Blocher 2016; Timmerman et al. 2018; De Haas 2010a; 2010b; 2014; Van Caudenberg, Dupont and Michielsen 2016).

In summary, the inclusion of meso-level factors such as networks, prevailing local cultures and (shared) perceptions on strategies to deal with environmental changes, as well as the perceptions of such changes, could be innovative for a body of research that has been largely unexplored by sociologists.

### ***Micro level: Different vulnerabilities, adaptation strategies and human mobility trajectories***

People's vulnerabilities, adaptation strategies and decision-making to deal with environmental changes depend on the wider range of opportunities they can have access to in their living environment, often situated at the macro level (cfr. supra). This is, for instance, higher for people living in richer countries compared to more developing countries (Vincent 2004). Some groups are harder affected by environmental changes than others (Bose and Lunstrum 2014). For instance, people living in rural areas may express a higher desire to migrate than people living in urban areas, while they are actually less able to put these desires into practice (Creighton 2013). Further, within regions environmental changes can make living conditions more fragile, which increases the risk of living in poverty and leads to the immobility of the groups most vulnerable to the effects of environmental change (Bates 2002; TGOFS 2011; Zickgraf 2018). Individual decisions are often weighed up against other possible adaptation strategies, such as taking money from savings, selling livestock, withdrawing children from school (Adoho and Wodon 2014). It could include changes in the farm production technologies, crops, relying more on grains, other products, trying to store water or using fertilizers and pesticides, and could result in people investing more in other work than farm work (Nguyen and Wodon 2014). Such adaptation strategies do not automatically result in migration (Piguet 2010).

The abovementioned issues at the meso level also impact micro-level factors as they determine migration aspirations, the 'ability to stay', the 'ability to migrate' and impact partly the type of human mobility trajectories people will follow. Put differently, the type and the perception of the effects of environmental changes on people's lives

causes considerable tensions with regards to the ability and the aspirations to migrate (Carling 2002a; 2002b; 2004; 2014; Carling and Schewel 2017; Zickgraf 2018; TGOFS 2011). The most privileged groups in society may have sufficient resources to cope with problems related to environmental change and be able to migrate. This contrasts with the situation of the most vulnerable groups, in terms of economic, political and social resources, who are most likely to aspire to migrate. The unequal aspirations and abilities to migrate across social groups living in the same area may therefore be important to understand the trajectories of migrants and the destination areas. This could – especially for the most disadvantaged ones – result in ‘fragmented journeys’ (Collyer 2010). This concept is used to describe the multi-stage and prolonged migration pathways migrants are facing. This could especially be the case as many migrants living in areas that are affected by environmental changes, and have migrated to neighbouring areas, are afterwards even more prone to migrate to more distant areas as they have already lost their income provision and area of residence (Wodon and Liverani 2014). This type of transit migration gradually blurs the initial migration motivations (i.e. environmental migration) and transforms them into different ones on the way (Collyer, Düvell and De Haas 2012; Düvell 2012; De Clerck 2015). Finally, we should note that not all groups are able to migrate. In the Foresight report (TGOFS 2011), these groups are referred to as ‘trapped populations’ since it is precisely these groups that have less capital/wealth at their disposal to move away from situations in which they are at a higher risk of being subject to environmental threat, and at the same time will be even more prone to suffer from these environmental changes (see also Adger, De Campos and Mortreux 2018). Finally, being forced to migrate due to abrupt environmental changes could result in a temporary migration, or does not necessarily lead to the development of aspirations to actually migrate abroad (Wodon and Liverani 2014; Adger, De Campos and Mortreux 2018).

Thus, the interplay between macro-, meso- and micro-level factors is important to consider when aiming to understand migration responses (TGOFS 2011; Adger, De Campos and Mortreux 2018) or the use of alternative adaptation strategies (Gemenne and Blocher 2016; Brocklesby and Fisher 2003). These factors may influence the locus (international vs internal migration, see Creighton 2013; McLeman and Gemenne 2018b) and temporality of the migration (Wodon and Liverani 2014; Adger, De Campos and Mortreux 2018).

## **Discussion**

This study aims to contribute to environmental sociology by theoretically framing how to study people's migration aspirations when dealing with environmental changes. By using a sociological approach, we are better able to underpin and discuss the complexities introduced by the consequences of environmental change on the livelihoods of people, and see to what extent these environmental changes further contribute to ethnic, gender and social inequalities (Dunlap and Marshall 2007; Heinrichs and Gross 2010; McLeman, Schade and Faist 2016; Gioli and Milan 2018). We combined two existing approaches to the study of environmental migration, namely the 'sustainable livelihoods approach' (Brocklesby and Fisher 2003) and the 'new economics of labour migration' (Stark and Bloom 1985). We argue that you need both approaches to fully understand the wide range of mobile and immobile groups that are confronted with all kinds of environmental changes in their living environment (cfr. Kniveton et al. 2008). As a starting point for the development of our theoretical framework, we combined these approaches and added insights from existing migration theories (Carling 2002a; 2004; 2014; Carling and Schewel 2017; Timmerman et al. 2010; 2014a; 2014b, 2018; Van Mol et al. 2017). The newly proposed theoretical framework explicitly focuses on migration aspirations, which could lay bare how people have distinct opportunities that shape their migration aspirations and distinct abilities to deal with environmental changes and migration. This framework is innovative in three ways. First, it uses a multilevel approach and incorporates the interplay between macro-, meso-, and micro-level factors that matter during decision-making processes (Ransan-Cooper, 2016). Second, it introduces meso-level factors influencing migration aspirations, such as environmental change discourses, the perceived linkage with individual hardships, and the existence of transnational networks, factors that are often missing in previously developed theories on environmental migration. By including these meso-level factors, the newly developed framework incorporates the consequences of the different types of environmental changes. Third, although this framework is not solely focused on predicting migration outcomes, aiming instead to understand them, it introduces the 'sustainable livelihoods approach' (Brocklesby and Fisher 2003) or 'migration as an adaptation strategy' (Gemenne 2010; Gemenne and Blocher 2016) into a wider theoretical framework, linked



with the diverse and multiple reasons for migrating (cfr. Kniveton 2008). Consequently, distinct adaptation strategies and migration trajectories are placed in relation to each other and it is suggested that they be studied jointly.

Future empirical research is needed to test the empirical evidence of this theoretical framework and study its fit for a variety of contexts. It would be especially interesting to empirically test this model across contexts that are affected in different ways by the impact that environmental change has on these regions (i.e. abrupt or gradual changes), or have varying socio-political contexts. Special attention should also be given to the differential impact on the inhabitants living in these areas, according to socio-economic status, gender, migration networks and education (TGOFS 2011; Warner et al. 2012; Timmerman et al. 2014a; 2014b; Piguat 2010; Gioli and Milan 2018). Additionally, a longitudinal perspective could help us to understand the impact of the natural environment and its consequences in the long run. Finally, building further on the idea of fragmented journeys (Collyer 2010), more research is needed that delves deeper into the (distinct) pathways of environmental migration and changes in every stage of the migration trajectory and how this changes migration aspirations and perceived migration motivations. For policy-makers, this theoretical framework helps to gauge the varying types of environmental migration and the vulnerabilities of people affected by environmental change. This is a required step to develop a legal framework aimed at the recognition and categorization of migrants as ‘climate change migrants/refugees’ or their vulnerabilities (Ojeda, 2010; Myers 1995; Bates 2002; Zetter 2017). This is especially useful as the distinct migration trajectories resulting from environmental change may cause additional difficulties in recognizing people as environmental/climate change migrants or refugees.

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