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SHORT PAPER

Contextualising typologies of environmentally induced population movement

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Abstract

Purpose – The purpose of this paper is to show how typologies for environmentally induced population movement need to be understood in a contextualised manner in order to be useful.

Design/methodology/approach – This study interrogates some academic discourses concerning environmentally induced population movement. By analysing key environmental factors said to contribute to population movement, in addition to considering time factors, this study uses the case of Tuvalu to demonstrate overlapping categories and the importance of contextualisation.

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Findings – Current typologies provide a basis for considering a wide variety of motives for environmentally induced population movement, in relation to different drivers, motivations, time scales, and space scales. Yet contextualisation is required for policy and practice relevance.

Research limitations/implications – All typologies have limitations. Any typology should be taken as a possible tool to apply in a particular context, or to support decision making, rather than presenting a typology as universal or as an absolute without dispute.

Practical implications – Rather than disputes over typologies and definitions, bringing together different views without reconciling them, but recognising the merits and limitations of each, can provide a basis for assisting people making migration decisions.

Originality/value – None of the typologies currently available applies to all contexts of environmentally induced population movement – nor should any single typology necessarily achieve that. Instead, it is important to thrive on the differences and to contextualise a typology for use.

Keywords Climate change, Forced migration, Environmental change, Displacement, Environmentally induced migration, Population movement

Paper type Conceptual paper

1. Introduction

Population movement has always been part of human endeavours. Yet scientific discussions on the complex relationship between human movement and environmental degradation did not receive considerable attention until the mid-1970s. Then, a group of geographers and population movement researchers (e.g. El-Hinnawi, 1985; Hugo, 1996; Lonergan, 1998; Myers, 1993; Saunders, 2000) presented their studies concerning people who leave their homes due to environmental change. That environmental change could be natural, anthropogenic, or a combination. The scholarly debate continues today, especially in light of anthropogenic climate change and resource depletion.

Despite the topic being popularised in the media, political campaigns, academic symposiums, and books (e.g. Diamond, 2005), often with direct environment-population movement causal links being claimed, Stojanov and Duží (2013) remind us that population movements due to natural resource depletion or due to changes in the climate are common, historical phenomenon. As a truism that is often lost, the discourse of population movements and the environment – for voluntary, involuntary, and combined movements – is inseparably linked with a host of other socio-economic issues which are context specific.

This study interrogates some academic discourses concerning environmentally induced population movement, primarily by focusing on the impact of environmental degradation, natural hazards including climate change, resource depletion, and other forms of environmental change as influencing decisions regarding human population movement and non-movement. By analysing environmental factors contributing to movement and non-movement decisions, in addition to considering time factors, this study describes how a universal typological might not be an achievable goal, despite many efforts. Instead, many typologies of environmentally induced population movement have merit with each one needing to be contextualised to a particular situation in order to have policy and operational relevance.

The next section provides an overview of the scholarly debate on environmentally induced population movements, especially in the context of labelling them "refugees". Section 3 explores some typologies in more depth, providing critiques. Section 4 indicates the importance of contextualising typologies by using a case study of Tuvalu which has become of one of the world's poster children of environmental migrants

expected due to climate change. The conclusion summarises the results and contribution to the literature.

2. The concept of environmental migrants, displacees, and refugees

In human history, environmental degradation, resource depletion, and natural hazards and natural hazard drivers including climate change play a contributing role as important "push" factors affecting population movement. In terms of political ecology, such environmentally related movement always has connections with social (political and economic) forces including poverty, food deficiency, conflicts, power relations, and social inequity. Oliver-Smith (2012) describes climate change impacts, such as on weather and natural hazards, influencing people's displacement, but the displacement origins have roots in social causes. Political ecology perspectives support that view, with the overall indication that population movement is not rooted primarily in climate change, but rather in social conditions. Yet, Myers (2001), Brown (2004), and others detail what they label as the rapidly increasing number of incidents in connection with environmental change that displace people. The environment can also play a role as a pull factor such as in the case of "amenity migration" that is defined as (relatively) voluntary migration motivated by the opportunity to live in a better natural (or social) environment (Gosnell and Abrams, 2011).

The truism is that people do not often move for a single reason. Meanwhile, not all environmental degradation or environmental change leads to permanent population movement – or even the desire to move. The motivation to move involves a complex web of multiple factors that denote individual belief, pursuit, and dreams, or collective decisions for family or cultural groups, within specific local/regional/national/international economic, social, and political contexts.

Nevertheless, the terms "environmental migrants" and "environmental refugees" are gaining popularity. Piguet (2008) quotes numerous terminological variants used by researchers – including ecological refugees, ecological migrants, and ecomigrants – to refer to persons moving due to environmental changes. McNamara (2007) critiques some terminology, arguing that it does little to work towards an understanding of the complex processes involved in population movements. Black (2001a) agrees that environmental degradation and natural hazards may be important factors in movement decisions, but argues that conceptualising environmental change as a primary cause of displacement[1] is unhelpful, intellectually unsound, and unnecessary. Homer-Dixon (1993) implies that isolating individual causal agents of population movement as entirely environmental inappropriately emphasises one cause amongst an array of overlapping and interconnected processes at work. Environmental degradation and change certainly can play a contributing, even major, role in stimulating population movement, but it is not usually the root cause.

Castles (2002) identifies a clear disciplinary divide within the literature between those with a background in ecology, geography, or environmental studies and those who are specialists in migration, mobility, demography, or political science. The first group (e.g. Myers and Kent, 1995; Brown, 2004) tends to advocate for environmental "refugees" as a new category. The second group (e.g. Black, 1998, 2001a; Homer-Dixon, 1993; Kibreab, 1997) sees wider contexts and are concerned about diluting the term "refugee" despite calls to re-examine the international legal term (e.g. Docherty and Giannini, 2009; Williams, 2008).

Suhrke (1993) differentiates between minimalists and maximalists. Minimalists, primarily found in migration studies (compare with Castles, 2002), suggest that

environmental change is a contextual variable that can contribute to population movement, but warns that sufficient knowledge lacks about the process to draw firm conclusions. Maximalists argue that environmental degradation has already uprooted people at large scales, plus more displacement is coming and should be prepared for. Suhrke (1993) questions maximalists for their uncritical approach to using a general and all-inclusive definition of "environmental refugees".

Myers (2001) acknowledges the difficulties in making clear distinctions between people driven to move by environmental factors and those driven by economic conditions. Meanwhile, empirical evidence, such as from Henry *et al.* (2004), shows that sometimes people from areas with unfavourable land degradation and difficult environmental conditions tend to migrate less out of their first residence than individuals from areas with favourable conditions. The reason is that those experiencing difficult circumstances cannot afford to migrate. Massey *et al.* (2010) assert that the scarcity of good data on the subject explains the lack of consensus about environmental effects on population movement, yet they nonetheless suggest that some case studies appear to link population growth, environmental deterioration, and political violence to migration and displacement.

In reading this literature, amongst other works, we do not come to a single, specific, universal conclusion. Instead, much seems to be contextual, often based on the case study or viewpoint adopted. In reality, environmental change at all time and space scales is a factor in population movement, with the continuum ranging from it being the only factor (e.g. Bronen and Chapin III, 2013 for communities in Alaska) to it hardly being relevant (e.g. Sand, 2009 for the Chagossians moving away from Diego Garcia).

Drawing on the literature and critiques above, for this paper we define "environmentally induced population movement" as people who leave their home – temporarily, circularly, over the long-term, or permanently – due to a lack of natural resources and/or due to changes to the environment, which may be caused by natural and/or anthropogenic processes. We do not use the term "environmental refugee" due to the meaning of "refugee" in international law from UNHCR (1951/1967).

3. The present typologies of environmental migrants

Literature dealing with environmentally induced population movement offers various typologies, often varying with the scientific discipline of the authors. A selection is discussed and critiqued here. One of the first typologies of "environmental refugees" was created by El-Hinnawi (1985) based on time scale and impacts of push and pull factors. El-Hinnawi (1985) divided this group of forced migrants into three categories which we interpret as being:

(1) temporarily displaced people (with the opportunity to return home and continue their livelihoods after, for example, a natural hazard);

(2) permanently displaced people (without the chance to return because of permanent changes to their community such as, for instance, dam construction); and

(3) those who could return home but who permanently migrate desiring an improved quality of life because their community cannot provide for their basic needs over a long time period.

The main challenge with this typology is that the categories are, at times, not clear-cut; for instance, Category (3) involves several subjective judgements while

Category (1) speaks to only the "opportunity to return" and so might overlap with Category (3).

Along similar lines to El-Hinnawi (1985), Castles (2006) identifies development displacees as people who are forced to move because of large-scale construction or development projects, such as dams, airports, or urban development changing their environment. People displaced by any environmental change (e.g. desertification, deforestation, land degradation, water pollution, or floods) are named environmental displacees. These two categories are not necessarily clear-cut, because development projects can lead to environmental change far away in space and time, such as a dam causing land degradation, water pollution, or increased flooding far downstream in the years after construction. People forced to move by natural hazards (e.g. floods, hurricanes, volcanoes, earthquakes, and landslides) or disasters such as industrial explosions, chemical pollution, or transportation crashes are labelled by Castles (2006) as disaster displacees.

Expanding the latter category, Hunter (2005) differentiates between migration as a response to natural hazards and migration as a response to technological hazards, the most prominent difficulty of which is separating natural and technological hazards unambiguously. If a faulty valve causes problems at a nuclear power plant, that is clearly technological. Where an earthquake leads to a tsunami which exposes management and design flaws in a nuclear power plant, as occurred in March 2011 at the Fukushima facility in Japan (National Diet of Japan, 2012), identifying the hazard cause as natural or technological is not so straightforward (see also Perrow, 1999).

Some typologies, such as from Suhrke (1993) and Renaud *et al.* (2007), use the word "refugee". Bates' (2002) typology differentiates environmental refugees due to disasters (short-term displacees from a geographically limited area); environmental refugees due to the expropriation of the environment (people permanently displaced mainly by situations of anthropogenic origin, such as economic development and warfare); and environmental refugees due to the deterioration of the environment (movement affected by gradual deterioration). While providing a useful discussion basis, aside from that usage moving away from the internationally defined legal term of "refugee", differentiating between refugees (assumed to be people moving involuntary) and non-refugees (assumed to be people moving voluntarily) is often not clear. As discussed in the previous section, the environment frequently influences decisions to move, but is rarely the only driver, thereby blurring the voluntariness of movement decisions based on environmental factors.

Table I summarises the above discussion in order to set the stage for Section 4 contextualising the typologies.

4. Contextualising typologies

Section 3 and further literature (e.g. Demuth, 2000; Bertrand, 1998; Black, 2001b), including definitions of environmentally induced population movement (e.g. Myers, 1993; Hugo, 1996; Döös, 1997), provide a basis for considering a wide variety of drivers and motives for movement, covering different time and space scales. Yet environmental drivers for population movement are rarely fully incorporated in classical migration theories (see Stojanov *et al.*, 2011; Stojanov and Kavanová, 2009) leading to a continuum of motivation for environmentally induced population movement. This continuum is now presented as three non-distinct categories, recognising the large degree of overlap in them and the subjectivity usually required to assign a specific category. The limitations and ambiguities in these categories, reflecting the literature to a large

Citation	El-Hinnawi (1985)	Castles (2002)	Suhrke (1993)	Bates (2002)	Hunter (2005)	Renaud *et al.* (2007)	Consolidation in Section 4 of this paper
Typology	Temporarily displaced people	Development displacees	Environmental refugees	Environmental refugees due to the disasters	Migration as a response to natural hazards	Environmentally motivated migrants	Environmental migrants
	Permanently displaced people	Environmental displacees	Environmental migrants	Environmental refugees due to the expropriation of environment	Migration as a response to technological hazards	Environmentally forced migrants	Environmental displaces slow-onset rapid-onset
	Permanently migrating people	Disaster displacees		Environmental refugees due to the deterioration of environment		Environmental refugees	Development displacees

Table I.
Some typologies of environmentally induced population movement

degree, form the basis for further discussion on the importance of contexualising when applying a typology to environmentally induced population movement.

4.1 Environmental migrants

This category covers people who exercise their freedom of choice to move from their usual place of residence, if they have one, primarily due to environmental concerns or drivers. These people move because they perceive or experience environmental stimuli – such as environmental pollution, natural hazards, land degradation, or land use changes – as push factors which eventually lead them to choose to move. This movement is often proactive and can be viewed as a coping or adaptation strategy – or as a failure to cope or adapt leading them to move. "Amenity migrants" (Gosnell and Abrams, 2011), who also move voluntarily, are excluded from this category because amenity migrants have the environment as a pull factor, whereas this category concentrates on the environment as a push factor.

Examples within this category are urban to rural movement (suburbanisation due to being pushed out of the city core) and migration because of increased air or noise pollution, particularly in industrial areas. A specific example is the migration flow from the "Black Triangle" – the border area of the former communist states of East Germany, Czechoslovakia, and Poland – which suffers from pollution due to coal mining and emissions from coal-fired power plants. Other examples are migration flows from areas threatened by floods, droughts, or other natural hazards. For example, in some places in Central Europe, insurers will not cover properties due to the flood risk (Duží *et al.*, 2014), so some people choose to move which can entail changing jobs and/or commuting far away (Vikhrov *et al.*, 2014).

Another example is the second wave of migration in Belarus and the Ukraine following the 1986 Chernobyl nuclear power plant disaster. Field research in the affected areas in 2007 (Kavanova and Stojanov, 2008) discovered two general migration waves. The first wave forced people out soon after the disaster, so they fled rather than choosing to move voluntarily (see the next category). The second wave was from people living outside the 30-km security zone during the time of crisis who chose to move because of the disaster – including those just across the border in Belarus. The majority of the migrants from Belarus now live in the big cities in Belarus, with only a minority having moved back.

4.2 Environmental displacees

This category covers people who are forced to leave their usual place of residence, because their lives and livelihoods are at serious risk as a result of adverse environmental processes such as natural hazards, chemical releases, or severe land degradation. In contrast to environmental migrants, environmental displacees have little choice apart from moving. This category is close to the literature's original meaning and definition of "environmental refugees" (see El-Hinnawi, 1985). Based on the time scale of their departure, environmental displacees can be divided into two sub-categories.

4.2.1 Slow-onset environmental displacees. This category refers to environmental displacees who have a relatively longer time to prepare for moving, but they are still being forced to move. That might be because they have a longer experience with environmental degradation or with periodic natural hazards, with the eventual consequence that they feel forced to move. An example is migration due to repeated crop failures, perhaps due to creeping land degradation (e.g. see Glantz, 1999 for the

Aral Sea) or slow changes in precipitation variability. For example, during the Dust Bowl period in American and Canadian prairie lands during 1930s, millions of people had to leave their homes due to long-term drought (Gregory, 1991).

In southwest Bangladesh, many Bangladeshis living in the Brahmaputra (Jamuna) River delta are potentially slow-onset environmental displacees. Many left their families in search of employment in Dhaka or abroad as a part of their household survival strategy because the land can no longer support the entire family (Haque and Zaman, 1989). The environmental changes which make the land no longer viable for supporting the entire family are partly linked to climate change impacts such as sea-level rise increasing both land salinisation and water deficits, also seen in the Pacific Islands (Campbell, 2014).

4.2.2 Rapid-onset environmental displacees. At times, a sudden natural hazard forces people to evacuate from their homes at short notice, usually because the hazard is life-threatening. In 1973, residents of the island of Vestmannaeyjar, Iceland abandoned their homes suddenly in the middle of the night because a fissure opened up, spewing lava and eventually building itself into a mountain; it was several months before they could return permanently (Williams and Moore, 1983). As noted above, many people fled the Chernobyl nuclear disaster immediately after the explosion, mainly those living within the 30-km security zone. They are still not permitted to return to their original homes.

Other environmental displacees might be away for shorter time periods. When a hurricane threatens US coasts, millions can evacuate for a few days. In the case of Hurricane Katrina in 2005, residents of New Orleans thought that their displacement would be similarly short term, but the flooding of the city meant that many thousands will not be returning – either because they chose to settle elsewhere (and so they transition into Category 1) or because they cannot come back to their ruined property (this category).

4.3 Development displacees

Development displacees are intentionally relocated or resettled, not by their own choice, due to a planned land-use change, such as for economic or military development which changes the environment (for a recent discussion, see Cahlíková and Stojanov, 2013). This type of displacement includes people who are displaced due to dam or irrigation canal construction, transport infrastructure development, sporting events (e.g. the 2016 Olympic Games or the 2014 World Cup in Brazil), and designation of natural or cultural protected areas (see also Cernea and McDowell, 2000). The UK and the USA struck a secret deal in 1965 to remove Chagossians from their homes on the Indian Ocean island of Diego Garcia so that a military base, which remains today, could be established (Sand, 2009). The UK and USA also have laws permitting the government to sequester land for projects ranging from rail lines to department stores, forcing the inhabitants to sell their properties and move.

Migration drivers and causes in these cases are clearly anthropogenic, somewhat differing from the previous categories where the migration is generally not intended by anyone, even if it is preventable. In the case of development displacees, there tends to be clear evidence of institutional responsibility (e.g. governments, non-governmental organisations, or the private sector) for the intentional environmental change.

4.4 Overlapping of the categories

Each of the population groups has time specification. Environmental migrants tend to be permanent, because they voluntarily move, likely taking some time in deciding,

although return or movement elsewhere is not precluded. Environmental displacees include different times scales: permanent and long-term displacees, as well as temporary or circular displacees. Development displacees are usually permanent, especially when their original environment has been destroyed or they are not permitted to return. The time scale of movement varies according to the jurisdiction and development reason. Many conditionals such as "tend to" and "usually" are necessary in these descriptions, indicating a blurring and overlapping of categories – a continuum across motivations and time scales rather than being absolute, definitive, and universal categories.

To ensure descriptive power and policy relevance, relying on a single, neatly categorised, perfectly delineated typology does not seem to be the most useful approach. Instead, when a typology is needed to describe or to determine needs, one which is contextual to the case study but based on previous work could be developed. That might be as straightforward as picking one which most conforms to observations on the ground and then locally contextualising it. To highlight how this approach could work in practice and to show policy relevance, in particular highlighting the overlaps in and limitations of categories, the Pacific atoll state of Tuvalu is used as an illustrative case study. The case study is based on qualitative research drawn from the literature (Farbotko, 2010; Farbotko and Lazrus, 2012; Shen and Binns, 2012; Shen and Gemenne, 2011; Stratford *et al.*, 2013).

Environmentally induced population movement encompasses climate change as one environmental change. The notion of climate change related population movement has been gaining momentum in recent years especially with regards to low-lying islands, such as Tuvalu (e.g. Farbotko, 2010). The common suggestions are that Tuvalu might be inundated by sea-level rise. Yet water security and food security might be more likely to drive population movement – plus the population has previously experienced environmentally related population displacement. Table II demonstrates a contextual categorisation for Tuvalu, also exemplifying limitations in the categorisation.

Yet Table II does not show everything. Migration from Tuvalu has never been for just environmentally related reasons, but has mainly been for livelihood and family reasons (Bedford and Hugo, 2012). Tuvaluans who are able to afford the complex and

Table II.
A possible categorisation of environmentally induced population movement for Tuvalu

		Environmental displacees		
Category	Environmental migrants	Slow-onset environmental displacees	Rapid-onset environmental displacees	Development displacees
Application to Tuvalu	Proactive Tuvaluan migrants, who think that they will eventually have to move due to climate change and who are able to afford the complex and costly process of migration, so they do so immediately	Tuvaluans who feel forced to move by the potential threat of rising sea levels and other climate change impacts, especially those who have experienced the recent, high King Tides	Tuvaluans in low-lying islets evacuated due to freshwater shortages or cyclones (longer-term displacement) or tsunami warnings (shorter-term displacement)	Due to construction of the airfield in 1943 by American soldiers, a large proportion of Funafuti island, Tuvalu's capital, was covered up for development, displacing many Tuvaluans

costly process of emigration (with New Zealand being a prime destination) generally have more formal education, more resources, and more awareness of their choices. If discussion or experience of climate change precipitates migration of such Tuvaluans, then they could potentially be termed environmental migrants or partially environmental migrants.

Climate change has indeed started affecting Tuvaluans through pressures on their living conditions (e.g. Farbotko, 2010; Shen and Binns, 2012; Shen and Gemenne, 2011) and, more notably, associated psychological effects – such as being iconised internationally regarding climate change impacts. Shen and Binns (2012) and Shen and Gemenne (2011) describe Tuvaluans with embedded emotional effects including anxiety, disappointment, hopelessness, and even resentment over the possible effects of climate change on their homeland and the feeling that they are being forced to move as a result of a destructive phenomenon to which they have not contributed. These Tuvaluans could be considered to be slow-onset environmental displacees.

These two categories clearly overlap. Shen and Binns (2012) certainly note that growing economic disparity within Tuvalu is evident between those Tuvaluans who are able to emigrate easily (due to having resources) and those who have little chance of moving overseas without assistance (due to lacking resources). It is a continuum, rather than a binary division. Some Tuvaluans who decide to migrate but do not have the resources immediately available might have the option to take out loans or to draw on their friends and families for support. Meanwhile, not all comparatively affluent Tuvaluans choose to migrate. The environmental migrant and environmental displacee categories are not clear-cut. They blur together when climate change melds with other migration drivers such as livelihood and family reasons. Categorising Tuvaluan migrants is not as straightforward a depicted in Table II.

Regarding migration over shorter time scales, in 1997, Tuvalu's capital island Funafuti was hit by three tropical cyclones which eroded a significant 0.5 km^2 from the 26 km^2 of the entire country distributed amongst several atolls. Memories of Cyclone Bebe, devastating to Funafuti in 1972 with 98 per cent of houses destroyed, remain vivid amongst locals (Shen and Gemenne, 2011). There are few places for Tuvaluans to shelter or to evacuate to during storms – or tsunamis. One of the worst fears is a storm surge or tsunami coinciding with a "King Tide" (Shen and Gemenne, 2011).

Tuvaluans moving after such hazards are in the category of rapid-onset environmental displacees – but not always. A hazard might trigger a migration decision, but that does not mean that all the displacees move the day after the hazard strikes. It can be months or years for a decision to made and for the resources to be available, before the final step of leaving. It might not be entirely clear whether the population moving are migrants (because they make an active choice to leave when they could stay), are displacees (because they have no choice but to leave), or are in between (because they feel that their best choice is to leave or they are uncertain but use the hazard as an excuse to leave).

In Funafuti during the Second World War, the US Navy landed a construction battalion (the Seabees) who built an airstrip and subsidiary facilities on the lagoon side of the island. These facilities took up a large proportion of Funafuti's land, changing the environment and forcing many Tuvaluans to move as development displacees. For Tuvalu, this category is clear and definitive: either they moved due to US Navy

construction or they did not. For this context, "development displacee" forms an unambiguous category which, for instance, could assist in providing compensation, if that were deemed to be appropriate.

Tuvalu illustrates all forms of environmentally induced population movement as well as the blurring of the category boundaries. For policy relevance in Tuvalu, development displacee is much clearer than the other categories. Overall, the local context shows that the categories assist in depicting motivators for environmentally induced population movement, but are not unambiguously fixed (Farbotko, 2010; Farbotko and Lazrus, 2012; Shen and Binns, 2012; Shen and Gemenne, 2011). For policy, this contextualisation of the categories indicates that motivators for environmentally induced population movement are mixed and complex. Rendering aid to just one category, such as environmental displacees, could lead to difficulties in separating those who fit and do not fit that category. Instead, a more nuanced approach for assisting environmentally induced population movements from Tuvalu (and elsewhere) would be needed, factoring in local contexts at different time scales across a range of categories (see also Stratford *et al.*, 2013).

5. Conclusion

The environment-migration nexus is accepted as being an important issue at international, regional, national, and local levels. To address the concerns of environmentally induced population movement, the need for more engagement across disciplines is apparent, especially to balance between the environment as a push factor for migration (e.g. natural hazards including climate change or dams) and the environment as a pull factor for migration (e.g. better agricultural land or the expectation of more lucrative livelihoods). The different time and space scales involved in different push and pull factors adds complexity.

In recent years, the debate regarding environmentally induced population movement has been dominated by anthropogenic climate change as a driver. Despite the extensive publicity of "climate change refugees" and "climate refugees", repeated in the recent IPCC (2014) report, so far little empirical evidence exists to support the claims or projections (Bettini, 2013; Hartmann, 2010; Nicholson, 2014; Piguet, 2013). The predictions might or might not come true in the future, although already some communities in the Arctic and small island states are indeed being displaced due to only climate change (Bronen and Chapin III, 2013). In the meantime, a disconnect continues between those pushing the agenda of environmentally induced population movement on the basis of climate change only (e.g. IPCC, 2014) and those taking wider perspectives to understand root causes of people's movement while placing climate change in wider contexts.

That contextualisation of climate change is important, because it speaks to the need demonstrated in this paper to contextualise the labelling of environmentally induced population movement within wider mobility discourses. Encompassing various motivations, drivers, time characteristics, and space characteristics in a typology – based on the evidence from a case study – will help to ensure that one factor, such as climate change, does not dominate the discussion. That typology should not be taken as exact or as universal, but should instead be used as an indicator of the ambiguities and contextualities. It can also be a motivator to continue seeking empirical evidence to confirm or refute future expectations in order to provide populations influenced by environmental change with the help that they need (and often request) for movement-related decision making.

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Note

1. We follow the Nansen Initiative's (www.nanseninitiative.org) definitions that "displacement" refers to forced population movement while "migration" refers to (relatively) voluntarily population movement. Migration and displacement comprise population movement.

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