

# MIGRATION AND MOBILITY IN A CHANGING CLIMATE: a policy perspective

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This paper draws on recent evidence on the links between the impacts of climate change and growing mobility to explore how policies can best support and accommodate migration as an increasingly important adaptation strategy. Since poverty, both income and non-income, is a key factor of vulnerability, it argues that policies need to address its underlying causes in order to be effective.

**Keywords:** Adaptation; Mobility; Income diversification

## Introduction

Migration has become increasingly important in the context of climate change debates. Earlier catastrophic predictions of environmental degradation resulting in mass migration and displacement have given way to greater attention to migration as one of the main adaptive responses by vulnerable populations. There is still much that remains to be understood, however, about how environmental degradation as a factor of mobility interacts with other factors – socio-economic, cultural, demographic and political. A better understanding of these admittedly complex dynamics is necessary to achieve a better sense of what can be done to support and accommodate migration in a changing climate.

This paper draws on the findings of recent case studies to explore appropriate policy responses. These include initiatives that specifically

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address environmental deterioration. At the same time, research clearly shows that poverty and lack of alternative livelihoods are critical elements of vulnerability to the impacts of climate change. Hence, the key argument of this paper is that supporting migration as adaptation to climate change can only be successful if the underlying causes of vulnerability are also addressed. These include income poverty but also lack of representation.

### **The difficulties of understanding the links between environmental change, non-environmental factors and migration**

Although the term ‘environmental refugees’ was first used in the late 1970s, it is only recently that it has become a relatively common concept, in the wake of the growing understanding of the impacts of climate change on natural ecosystems. This does not mean that the concept is not controversial. Indeed, whether and how environmental degradation would give rise to mass displacement and migration has been the subject of heated debate in the past decade.<sup>1</sup> Perhaps unsurprisingly, such divergent views reflect different perceptions of the role of migration and mobility in socio-economic development. But they also reflect the limited evidence available on the links between migration and environmental degradation, and the related methodological difficulties.

Predicting with any precision the impacts of climate change at the local level is still relatively difficult, despite huge scientific improvements. There are still high levels of uncertainty on the speed of environmental transformations linked to climate change, especially in the regions likely to be most affected, such as West Africa.<sup>2</sup> Moreover, there is a lack of comprehensive data on internal migration, especially in its temporary and seasonal forms. Again, this is particularly the case in low-income nations that are likely to bear the brunt of environmental degradation linked to climate change.<sup>3</sup>

Extreme weather events such as hurricanes, floods and landslides, often force people to move away from their home areas. However, it is the poorest groups, those who are often forced to live in dangerous locations such as steep slopes or ‘informal’ settlements with little if any provision for storm drainage, limited access for emergency services such as ambulances

<sup>1</sup> BLACK, Richard. “Environmental refugees: myth or reality?”; CASTLES, Stephen. “Environmental change and forced migration: making sense of the debate”.

<sup>2</sup> ECOWAS/SWAC. “Climate and Climate Change”.

<sup>3</sup> KNIVETON, Dominik; SCHMIDT-VERKERK, Kerstin *et alii*. “Climate Change and Migration: Improving Methodologies to Estimate Flows”.

and fire-fighters trucks, distant from health centres and with overcrowded and inadequate housing, who suffer the most. It is when extreme events affect people with high levels of vulnerability that they become disasters. With regards to mobility, in most cases people return as soon as possible to reconstruct their homes and livelihoods. Whether and how rapidly they are able to do so depends largely on the level of support they receive from governments and civil society.<sup>4</sup>

Slow-onset impacts of climate change such as drought, desertification and land degradation are related mainly to changes in rainfall patterns. Research in the Sahel following the droughts of the early 1970s and 1980s suggests that people in affected rural areas are likely to move temporarily to local destinations, while rural-urban migrants, usually the wealthiest groups, are relatively unaffected by environmental conditions.<sup>5</sup> Research in Nepal suggests similar patterns.<sup>6</sup>

Recent research in environmentally fragile rural areas in Bolivia, Senegal and Tanzania goes further in exploring the impacts of environmental degradation on migration and mobility patterns.<sup>7</sup> The case studies show that desertification, soil degradation and disrupted rainfall patterns do indeed deeply affect the livelihoods of rural people who rely primarily on natural resources. At the same time, however, they also suggest that in many cases it is possible to identify 'precipitating events', such as unusually harsh drought and epidemics of livestock disease, that have a long-lasting impact on local economies and livelihoods. What is crucial in making these events so catastrophic is the socio-economic context which restricts the ability to rely on well-tested strategies of local diversification of activities within the agricultural and non-farm sectors. Hence, in Bolivia the extremely severe drought of 1982-83 coincided with the closure of mines in the Andes region, a traditional alternative income-generating activity for farmers. In Tanzania, allocation of 'empty' land to commercial investors severely restricts Maasai pastoralist practices to move further away looking for water and pasture, thus undermining their traditional way of life. As a

<sup>4</sup> PAUL, Bimal Kanti. "Evidence against disaster-induced migration: the 2004 tornado in north-central Bangladesh"; PERCH-NIELSEN, Sabine; BÄTTIG, Michele. "Exploring the Link between Climate Change and Migration".

<sup>5</sup> FINDLEY, Sally. "Does Drought Increase Migration? A Study of Migration from Rural Mali during the 1983-1985 Drought"; HENRY, Sabine; SCHOU MAKER, Bruno *et alii*. "The Impact of Rainfall on the First Out-Migration: A Multi-level Event-History Analysis in Burkina Faso".

<sup>6</sup> MASSEY, Douglas; AXINN, William *et alii*. "Environmental Change and Out-Migration: Evidence from Nepal".

<sup>7</sup> TACOLI, Cecilia. "Not only climate change: mobility, vulnerability and socio-economic transformations in environmentally fragile areas of Bolivia, Senegal and Tanzania".

result, while mobility has long been a traditional coping strategy for people living in fragile environments, it has now become much more widespread and diverse. Perhaps more importantly, it has become a crucial part of local livelihoods: in all the case study locations, the most vulnerable households were unanimously identified as those who do not receive remittances from migrant relatives.

For the formulation of appropriate supportive policies, information on the duration, destinations and composition of migrant flows is essential. These are determined largely by non-environmental factors. In remote rural areas where livelihoods rely primarily on rain fed agriculture, seasonal migration of adult men can be crucial for food security and simply to make ends meet, and involves mainly poor individuals and communities. It is a response to the lack of local alternative employment opportunities outside family farms, but also to the growing demand for seasonal labourers from family farms in areas with different agricultural cycles. Such demand, in turn, is the result of labour shortages due to widespread out-migration, especially of younger generations, to urban and international destinations, which is compensated by their remittances which enable households to hire labourers. Such a profound transformation in family farming is not confined to areas undergoing environmental degradation, and has been documented in several other locations, including those with a prosperous agricultural sector.<sup>8</sup>

Temporary migration – not linked to agricultural calendars – is more likely to be directed towards urban centres, and increasingly towards small towns. Women are more likely to engage in this type of movement to work in non-farm sectors, especially domestic service and small-scale trade, provided the nature of their responsibilities in farming households allows them to move. Young people also tend to move to towns, with boys going to work in construction and services such as watchmen and girls in domestic service. In this type of movement, social networks have an important role in ensuring access to jobs and accommodation but also social protection and control, which partly explains the large proportion of young people and women moving without male relatives.

There is no evidence supporting the view that environmental degradation linked to climate change will result in large flows of international migrants. However, investments by international migrants have an impact

<sup>8</sup> DIYAMETT, Bitrina; DIYAMETT, Mathew *et alii*. "The Case of Himo and its Region, Northern Tanzania". HOANG, Xuan Thanh; DINH, Thi Thu Phuong *et alii*. "Urbanization and rural development in Viet Nam's Mekong Delta: Livelihood transformations in three fruit-growing settlements".

on internal movement. The main reason is that such investments tend to be made in areas with potential for economic growth and, in many cases, in non-agricultural activities. The concentration of investment in construction and businesses in urban centres, especially in small and intermediate ones where land is cheaper, is a powerful magnet for internal, often temporary, migrants. Hence, while there are locally-specific differences in migration patterns, it is important to take into account the close interrelations between them. Even in the most dynamic settlements, in-migration typically goes hand in hand with out-migration.<sup>9</sup>

### **Migration, mobility and income diversification**

Although migration plays an essential role in reducing vulnerability and increasing resilience, in many cases it is not mobility per se which is important, but the income diversification it supports. This is especially the case for seasonal and temporary migration. The key characteristic of income diversification strategies is that farming continues to be an important element of livelihoods, even if not the main one. Hence, supporting initiatives to adapt small-scale agriculture to the impacts of climate change remains fundamental. In the context of environmental change, access to land becomes ever more critical, especially for the most vulnerable groups such as pastoralists; addressing non-environmental factors that increase inequality in access is a priority, to avoid the creation of vicious circles whereby restrictions in access to land due to socio-economic factors limit the ability to resort to traditional as well as new strategies of adaptation to the impacts of climate change.

Initiatives that encourage non-farm activities in rural settlements are in many cases intended as a way to slow down out-migration. This is frequently not the case, as improved livelihoods often lead to higher expectations and migration.<sup>10</sup> This should not mean, however, that such initiatives should not be an essential element of rural development initiatives. Several factors contribute to the success – or lack of it – of rural non-farm activities. Access to markets, transport systems and sufficiently large demand are some of the key ones, and clearly require policies that go beyond the local level. However, local non-farm activities can be an important part of adaptation to climate change for the poorer groups, and the nature of the activities

<sup>9</sup> HASAN, Arif; RAZA, Mansoor. "Migration and small towns in Pakistan"; HOANG, Xuan Thanh; DINH, Thi Thu Phuong *et alii*, *op. cit.*; TACOLI, Cecilia, *op. cit.*

<sup>10</sup> DESHINGKAR, Priya. "Improved Livelihoods in Improved Watersheds: Can Migration Be Mitigated?".

can contribute to a relative reduction of local environmental change. On the other hand, they can also contribute to further environmental degradation: for example, expansion of mining in the Bolivian Andes could increase water pollution, itself already a major problem for agriculture and domestic use – and by extension, a contributing factor to out-migration. In Vietnam’s Red River delta, home-based production of lacquered goods, while an important income source for poor households, also increases local environmental problems, especially in rural settlements where there is no provision for reducing the impact of these relatively ‘new’ activities.<sup>11</sup>

Migrants in many cases move between rural and urban areas. This is not only in terms of origins and destinations, but also in terms of investment. Migrants from areas with a declining agricultural sector tend to invest in towns and cities, while migrants from areas where farming offers employment and incomes are more likely to invest there. In many cases such investments are very small because of migrants’ low earnings, but the important point is that they can have a significant impact on local economies. Paradoxically, however, this can result in further environmental degradation. Construction in urban centres, especially smaller ones where migrants’ investment tends to concentrate both because they may be within their area of origin and because costs are lower than in large cities, often contributes to environmental problems.<sup>12</sup> Smaller urban centres are often neglected in debates on climate change, but they are home to a substantial and growing proportion of the population in many countries and critical for both mitigation and adaptation initiatives and policies. But local governments in small towns often lack the technical capacity and administrative authority to ensure that their growth does not contribute to the problem more than to the solution.<sup>13</sup>

### **The importance of local governance systems**

Voluntary migration in its many forms is and will become increasingly important as an element of strategies of adaptation to the impacts of climate change and other transformations. Local level organisations and the establishment of systems of governance that allow voice and influence

<sup>11</sup> DANG, Nguyen Anh; TACOLI, Cecilia *et alii*. *Stay on the farm, weave in the village, leave the home: livelihood diversification and rural-urban linkages in the Red River Delta and their policy implications*.

<sup>12</sup> KLAUFUS, Christien. “Watching the city grow: remittances and sprawl in intermediate Central American cities”.

<sup>13</sup> SATTERTHWAITTE, David; TACOLI, Cecilia. “The urban part of rural development: the role of small and intermediate urban centres in rural and regional development and poverty reduction”. SALL, Mohamadou; TALL, Serigne Mansour *et alii*. “International migration, social change and local governance in Ourosogou and Louga, two small urban centres in Senegal”.

to the poorer groups is without doubt the most important element of any successful policy that aims to support adaptation to climate change. Remarkably, the role of local governments and local governance systems is systematically overlooked in current discussions of migration and climate change. However, there are several reasons why this should be a priority.

The first reason is the high levels of diversity in migration and mobility patterns, both between and within areas. It would be difficult if not impossible for national governments to take into account and accommodate the sometimes wide differences in duration, destinations and composition of flows. Moreover, local governments in both sending and receiving areas need such information in order to better plan the provision of services and basic infrastructure to populations that may shrink or grow at different times. But local governments in many cases lack the capacity and financial means to gather basic information on their existing population, let alone on migrant flows.

It is also important to note that migration in many cases has important implications for social polarization and power relations. In their home areas, financially successful migrants often become important players in local affairs, increasing access to and control over resources such as land for them and their relatives. The emergence of this new powerful interest group can however result in the marginalisation of poorer residents.<sup>14</sup> On the other hand, declining access to land is often a major reason for migration. Local governance systems that include (in the sense of giving voice and influence to) all groups, including non-migrants, in-migrants and out-migrants are a first, essential step towards accommodating migration in climate change adaptation and broader development goals, and in making local governments more accountable.

This does not mean that regional, national and international levels should be overlooked. Indeed, it is difficult for local governments to be effective without national governments' support. Education and better skills for new, often non-farm, activities enhance the possibilities of income diversification, whether or not it is linked to migration, but are often beyond the capacity and revenue of local governments. At the same time, national economic strategies, often linked to regional and international actors, have an important role in determining the locations of investment and thus attracting migrants through the creation of employment, or negatively

<sup>14</sup> SERAGELDIN, Mona; CABANNES, Yves *et alii*. "Migratory flows, poverty and social inclusion in Latin America"; SALL, Mohamadou. "Straightforward critics or would-be candidates? International migrants and the management of local affairs and development: the case of the Senegal River Valley".



affecting environmental conditions for those living in surrounding areas. Moreover, the construction of infrastructure to reduce the use of fossil fuels is certainly likely to increase in the next decades, but its impact on local livelihoods and thus on migration is hardly ever considered. It is very difficult for poor groups to be heard at those levels, let alone influence them.

### **Supporting migration and mobility: priorities for policy**

Migration is typically considered either a problem that needs to be managed, often in the sense of restricting it, or an essentially private concern of the migrant or her/his family. As a result, policies tend to veer between controlling migrants and ignoring them, with little in between. However, by considering migration in isolation it becomes very difficult to understand, and address, the broader socio-economic, political and environmental dimensions that shape, and in turn are transformed by, people's movement. Policies also tend to 'deal' with migration primarily in destination areas, whereas it is important to consider both the causes and the consequences of migration (and the ways in which they in turn affect migration patterns), and address them in migrants' home areas as well as destinations.

In many cases, temporary and seasonal migration is a strategy to enable people to stay in their rural home areas. This should be supported by addressing the impact of both environmental and non-environmental factors on local livelihoods. Access to natural resources is affected by both categories of factors, and land is the most contested asset. Land rights are complex and in many countries changes in legislation – often with the aim to make access more equitable – go hand in hand with the emergence of land markets that tend to marginalize poorer groups and those with little political representation. Land is not often seen as an issue related to migration, but in many cases there is a clear link between the two. Supporting initiatives to preserve and better manage natural resources at the local level is equally important; perhaps most importantly, such initiatives should be de-linked from the aim of reducing migration, and should instead explicitly make a positive link with migration by building on the ways in which different groups and different communities are able to use earnings from migration – for example in consumption or investment.

Most migrants move to locations where they have existing networks of relatives and friends, often from the same home areas. These networks provide crucial support in securing jobs and accommodation. However, especially in the case of migrants from poorer backgrounds, they may not have the resources to ensure that their rights are protected. Education is a



powerful factor in increasing migrants' options at destination, as it is the first step towards accessing information on legislation and regulations related to work and housing.

As migrant flows grow in size, their composition also changes and includes larger numbers of younger people of both sexes. Young migrants are in many cases the most vulnerable to exploitation by employers – for example in domestic service - but receive little protection or indeed interest from local governments at destination. Local organisations that support young migrants will become increasingly important in ensuring that their voice is heard and that they can influence policy decisions on matters that affect them. More generally, strong civil society groups that support the representation of marginalised groups, including migrants and non-migrants, are a key element of inclusive governance systems and need to be an integral part of decentralisation processes.

Initiatives for adaptation and mitigation can in some cases have disastrous consequences on the livelihoods of people that were not initially targeted. Initiatives to improve agriculture elsewhere through the construction of dams for irrigation projects, and to reduce the risk of floods in urban centres through new infrastructure, have in many cases effectively destroyed the local economy in surrounding rural areas, leaving migration as one of the few options. Such infrastructure will become increasingly important in the context of climate change, and it is imperative that projects address their impacts on settlements and populations within a much wider area than is currently the case.

Policy-makers also need to take into account the rapid growth of urban centres, often (albeit not always) fuelled by the remittances of migrants, mainly but not only international ones. Especially in the case of smaller urban centres, local authorities lack the technical and revenue capacity to ensure that such growth does not contribute to greenhouse gas emissions and that it does not marginalise poorer groups – both of which are typical consequences of urban development models that privilege gated communities and suburban expansion.<sup>15</sup> Smaller urban centres have traditionally attracted limited attention from national governments and development cooperation aside from their potential (but often unfulfilled) roles as economic growth centres. Their growing importance in many countries' urban systems and the need to ensure that urbanization contributes to mitigation require renewed attention.

<sup>15</sup> KLAUFUS, Christien, *op. cit.*

## Conclusions

Addressing migration has long been an aim of policy-makers, but, at the same time, one that has had limited success whether it attempted to promote or, more often, limit population movement. This paper argues that a different approach is needed, one that focuses on the causes and especially on the impacts of migration on the resilience of individuals, households and communities to environmental degradation linked to climate change.

To a large extent, this involves attention not only to the impacts of climate change, but also to the ways in which these overlap with non-environmental factors. Clearly, poverty and marginalisation are key elements of vulnerability to natural disasters. Within the context of gradual climate change, it is possible to identify precipitating events, such as unusually harsh droughts, as tipping points from which livelihoods need to change radically in order to ensure survival. Equally important is the fact that it is largely the socio-economic context that makes these events so catastrophic, specifically by restricting people's ability to rely on well-tested strategies of local diversification of activities, both within the agricultural sector and in the non-farm sector.

The links between mobility and socio-economic and environmental change are complex and dynamic, and vary between locations, often with overlapping in and out-migration, and high levels of diversity in the duration, destination and composition of migration flows. This makes it difficult if not impossible to address the impacts of migration, and especially the risk to increase social polarisation and deepen local environmental degradation, in the absence of local governance systems that are inclusive, accountable and equipped with the necessary technical capacity and financial resources. Support to local institutions and civil society is an integral element of adaptation and mitigation policies.

Finally, while migration and mobility are clearly important elements of adaptation strategies, they are also relevant to mitigation, especially in the case of rural-urban movement. The concentration of population in both large and small urban centres has the potential to reduce pressure on natural resources for domestic and productive uses; however, for this potential to be fulfilled there is a need for better planning and regulation, especially in fast-growing small towns. There is also a need to better understand the environmental impacts of different types of non-farm activities, especially the urban informal sector, at the neighbourhood, regional and local levels. Linking adaptation and mitigation initiatives and policies is the next, unavoidable challenge for local, national and global actors.

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## Resumo

### ***Migração e mobilidade num clima em mudança: uma perspectiva política***

*O presente artigo se baseia em evidências recentes sobre a relação entre os impactos das mudanças climáticas e a crescente mobilidade, a fim de explorar as formas pelas quais políticas podem melhor apoiar e lidar com a migração como uma estratégia de adaptação cada vez mais importante. Uma vez que a pobreza, ligada à renda ou não, consiste em importante fator de vulnerabilidade, o artigo argumenta que políticas devem abordar suas causas subjacentes, a fim de serem efetivas.*

**Palavras-Chave:** Adaptação; Mobilidade; Diversificação da renda

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