

Migration, a possible adaptation strategy?*

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Though the environment has always been an important factor in migration, the expected impacts of climate change transform the complex relationship that exists between environmental degradation and migration flows, whether forced or voluntary. Although we don't know much about the way populations react to environmental degradation, "climate migration" is generally presented as one of the most dramatic consequences of global warming. This conception reflects a deterministic vision of the phenomenon, in which migrants are solely presented as resourceless victims. However, empirical research shows that migration may also be a strategy that migrants adopt, if they are given the means to do so, in order to adapt to the degradation of their immediate environment.

What are the impacts of climate change that are likely to induce migration flows?

Three types of climate impacts are thought likely to generate significant migration flows: the increased intensity of natural disasters, sea level rise and water stress. These three types of change will not produce the same kind of migration flows and call for different adaptation strategies.

First, climate change will result in an increase in the frequency and intensity of natural disasters: floods will thus occur more often and hurricanes

will be more violent. It has long been thought that natural disasters do not in fact lead to migration flows, but rather to temporary population displacements. Since Katrina (2005), we know that this assumption is incorrect: roughly a third of the population of New Orleans has not returned to the city. Contrary to a generally accepted idea, displacement caused by natural disasters does not always offer the possibility of returning to the region of origin.

Another impact of climate change will be sea-level rise, which could reach one metre by the end of this

century, although there will be regional variations. Coastal and deltaic regions rank amongst the most densely populated regions on earth; they are home to many major cities and will be directly threatened by flooding, if adaptation measures are not implemented (dykes, coastal restoration, etc.) Small island states are also particularly vulnerable to even the slightest rise in sea levels. Potentially, if substantial adaptation measures are not implemented rapidly, populations in low-lying regions could eventually be forced to move.

Finally, climate change will also lead to the depletion of drinking water resources: this is undoubtedly one of its least directly visible impacts, but one of the most devastating. The effects of water stress on migratory movements are difficult to predict: several studies have shown, for example, that migration tends to diminish during periods of drought, as families prefer to allocate available resources to meeting their immediate subsistence requirements. It can nevertheless be assumed that more structural and permanent water shortages would force the affected populations to leave.

Affected regions and populations

The European research programme EACH-FOR (Environmental Change and Forced Migration Scenarios, www.each-for.eu) has made a comparative analysis of 23 case studies on migration linked to environmental degradation. These studies reveal a positive relationship between environmental change and migration in the different cases studied. But also, and above all, they show that populations react differently to the degradation of their environment: while the wealthier populations are often the first to leave, the more vulnerable often lack the resources that would enable them to migrate. These resources are both economic and social: migration requires the mobilisation of considerable financial resources and social networks, which the most vulnerable populations often lack. They are therefore unable to

leave their environment that has been degraded by the impacts of global warming.

Which migration patterns have been observed? As a rule, most migration flows associated with environmental factors are internal displacements, often over short distances. However, in certain cases, international migration can happen, but this is the exception rather than the rule; the spectre of massive displacements towards the North is therefore just a myth. It is difficult to encapsulate all environmentally-induced migration movements into a single category: the element of coercion has varying degrees, and a certain amount of environmental migration has, for now, a significant voluntary element. Although it is increasingly difficult to make a clear distinction between voluntary and forced migration, we observe that the pressure to migrate is significantly increased in a context of environmental stress.

Migration, a failure of adaptation?

The number of migrants forced to move by the impacts of climate change will largely depend on the adaptation policies that are implemented in order to cope with these impacts. The relationship between migration and adaptation is threefold: it concerns not only the regions of origin and destination, but also the migratory movements themselves.

For some impacts of global warming, the development of adaptation strategies in the regions of origin will be the only way to limit the scale of migration flows. In many cases, migration will be the last resort, which will only be considered if the different adaptation strategies have failed. The real impact of climate change on populations will greatly depend on the success of these adaptation strategies.

However, adaptation should not be exclusively reserved to the region of origin: migration, especially if it is sudden and massive, results in increased demographic pressure on resources in the region of destination. These resources concern not only access to food and drinking water, but also job opportuni-

ties and housing. The regions of destination are generally poor and located a short distance from the region affected by environmental degradation. They are often incapable of dealing with the sudden influx of migrants. It is only by developing adaptation measures that the host regions will be able to cope with increased demographic pressure. Here, a different type of adaptation is needed: it is no longer a question of coping with the impacts of climate change themselves, but with the socio-economic consequences of these impacts.

Finally, migration itself, far from representing a failure of adaptation, may also in certain cases be developed as an adaptation strategy in its own right. The decision to migrate will then be deliberate and will enable migrants to reduce their vulnerability to the impacts of climate change, while easing demographic pressure in their region of origin. Migration, which is sometimes temporary or seasonal, can enable families to diversify their sources of income, and thus constitute an insurance against environmental risk. To understand migration as a risk prevention and a reduction strategy, "climate migration" must not be considered as a specific type of migration, but as part of migration processes that have always existed.

These strategies may be particularly effective in the case of progressive environmental degradation, and especially in situations of desertification. However, for the time being this migration remains compromised by inappropriate public policies and by the migrants' lack of resources: only the more affluent can use migration as a form of adaptation, while the more vulnerable are often being forced to stay. The political challenge will therefore be, in

many cases, to facilitate migration rather than to try and prevent it. This means that migration costs will have to be met, but also that greater integration of migration and environmental policies are needed. For the time being, each of these spheres remains largely deaf to the other. If migration is to become a real adaptation strategy, migration policies will have to integrate the environmental variable, and vice versa.

To conclude

It is difficult to paint a consistent picture of the reality of climate migration, because of the wide range of global warming impacts, affected regions and types of migration. Despite this diversity, the discourse on climate migration remains firmly rooted in a determinist perspective, presenting this migration as the last resort when all other adaptation strategies have failed. The discourse portrays migrants as the helpless victims of climate change. It is clear that the scale and nature of this migration will largely depend on the adaptation policies that are implemented, not only to mitigate the impacts of climate change, but also to facilitate, initiate and/or manage these migration flows. Empirical studies stress that migration does not necessarily represent a failure of adaptation policies, but may also be an actual adaptation strategy used by migrants themselves. At present, however, migration policies are still missing from adaptation policies. ■

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