

# Migration, Environment and Climate Change: Policy Brief Series

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Men crossing swollen river due to widespread flooding in Morocco in 2014 © Sean Fitzgerald, 2014

## Environmental migration in Morocco: Stocktaking, challenges and opportunities

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### Introduction

In many senses, the Kingdom of Morocco is a country at the crossroads. With Europe only 13 km away, emigration has been part of the country's experience from the mid-twentieth century onwards. Historically, Morocco is also a major country of transit on the West-African migratory corridor. It is increasingly now becoming a destination

country for migrants from sub-Saharan Africa. In parallel, internal migration of rural population to the country's major cities takes place at unprecedented rates. As a result, these shifts in migration patterns have brought about profound changes in Morocco's societal composition and its migration policies.



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At the same time, climate change impacts are increasingly being felt; storms are becoming more severe, leading to recurrent devastating floods. Simultaneously, large parts of the country are struggling with water scarcity and droughts. Among the countries of North Africa, it is likely that Morocco will face the strongest effects of climate change (Schilling et al., 2012), making Moroccans more vulnerable to extreme weather events, as well as slow-onset degradation processes. It is in this context that Morocco is assuming a leading political role in global climate policy by hosting the Twenty-second Conference of the Parties (COP22) of the United Nations Framework Convention on Climate Change (UNFCCC) in Marrakesh in November 2016.

Developments on the migration front on the one hand, and climate side on the other hand, are increasingly intersecting. The linkages between the movement of people and environmental and climate change are becoming more evident, and a cause for policy action. This brief provides an analysis of current climate change impacts and the state of climate adaptation policies in the country, as well as an examination of key migration questions.

#### Key points of the brief

- Morocco is vulnerable to both slow-onset and sudden-onset climate impacts, and these trends are expected to worsen in the future, affecting more people in all parts of the country. Displacement due to extreme weather events is already a reality and slow-onset climate impacts are likely to already impact the movement of people – notably rural-to-urban migration and the settlement of nomadic pastoralist communities. Internal and international immigration movements also have an impact on vulnerable degraded areas.
- Major migration policy and climate policy developments are under way, but both policy areas need to be better linked to effectively tackle the many dimensions of environmental and climate migration.
- More empirical research is needed on the linkages between migration, environment and climate change, in order to understand the realities of human mobility in a changing climate and support the policymaking process through evidence.
- Morocco's involvement in global climate negotiations – with the organization of COP22 in Marrakesh in 2016 – offers a political momentum to better link migration and climate policies.

## Migration and climate change in Morocco

### A wide array of climate and environmental stressors

Current impacts of climate change in Morocco are widely diverse and encompass both sudden-onset events, as well as slow-onset processes – this is likely to remain the case in the future. The rise in mean annual temperature and reduced precipitation, leading to drought and desertification, are among the most disruptive climate impacts. Extreme weather events, such as storms and flash floods, are also increasingly becoming more common. The occurrence of earthquakes adds to the wide range of environmental and climate stressors experienced in the country.

Table 1. Major hazards in Morocco from 1990 to 2014

Type of event	Year	Deaths	Total population affected
Storm	2014		117,000
Flood	2014	47	
Flood	2010		75,000
Earthquake	2004	628	
Flood	2002	80	
Drought	1999		275,000
Flood	1996		60,000
Flood	1995		35,000
Flood	1995	730	

Sources: EM-DAT, 2015; World Bank, 2015; Davies, 2014.

Different segments of the population are vulnerable to climate impacts due to their socioeconomic status, as well as their geographical position. For instance, over 80 per cent of the country's urban population lives in coastal urban agglomerations, especially vulnerable to sea-level rise and changes in precipitation patterns leading to flash floods, as well as more frequent and intense storms (Grant, 2011:10). Impoverished individuals and households are the most vulnerable, often residing in informal settlements and makeshift housing (Wodon et al., 2014). Morocco's coastal cities, such as Rabat and Casablanca, continue to expand with all the risks associated to population growth in areas experiencing sea-level rise, coastal erosion and flash flooding. Coastal erosion is also aggravated by coastal sand mining near major coastal cities, worsening these urban centers' vulnerabilities (Pilkey et al., 2007).

On the other hand, inhabitants of the oases region in the south of Morocco are exposed to increasing desertification of the arable land, higher population

pressure and a related, expected drop in agricultural productivity in this region. Oases have been losing considerable parts of their crop area (Adaptation Fund, 2014), and the agricultural overuse of water exacerbates these detrimental impacts. Agricultural productivity in the oases region is predicted to be 17 to 30 per cent less than the average of the period from 1972 to 2000, while groundwater consumption is expected to double (Schilling et al., 2012:30).

Mobile pastoralists – mostly found in the south of the country – are also directly concerned by climate impacts felt in the oases. However, mobile pastoralists are by far less vulnerable to changing precipitation patterns and more frequent droughts than sedentary pastoralists – as their mobile way of life allows them to find better living conditions to support their livelihoods. In that respect, encouraging the settlement of nomadic populations might increase their vulnerability; while establishing new forms of mobile pastoralism (Freier, Finckh and Schneider, 2014) could be one way of using migration as an adaptation strategy (IOM, 2014).

Morocco's economy is heavily based on agricultural production. Changes in rainfall and weather patterns, as well as the increase occurrence of droughts and the salinization of soil, have enormous impact on the economy as a whole. Today, 75 per cent of Morocco's arable land is already affected by soil erosion (Schilling et al., 2012:23). Climate change also impacts fisheries through changes in sea temperature that lead to the disappearance of certain fish species in the fishing grounds off the Moroccan coast.

Alongside slow-onset processes, Morocco is prone to sudden natural hazards that often turn into disasters. From 2002 to 2011, nine out of ten top natural disasters in the country were floods (World Bank, 2015). Floods temporarily displace a large number of people; for example, during the intense flooding episode of 2010, 6,000 families had to seek temporary shelter (IFRC, 2010). Urban flooding is the "highest economic risk to the two cities [Rabat and Casablanca] from weather related events" (Grant, 2011:10). Storm surges are also expected to rise. The cost of these adverse events associated to the changing climate is projected at USD 150 million per year in 2030.



Palm groves are impacted by emigration and land abandonment in Figui, Oriental Region, which lead to desertification or the loss of biodiversity. © IOM, 2015 (Photo: Hind Aissaoui Bennani)

## **(Environmental) migration from, to and within Morocco: A complex tapestry and knowledge gaps**

Moroccan society is highly mobile. Until recently, Morocco was perceived as a country of emigration and today, emigration figures remain high and are likely to stay this way (de Haas, 2014a, 2014b). The country is also traditionally a transit location for sub-Saharan nationals aiming to reach Europe. However, within the last decade, Morocco has become a country of destination, as well as a location where many transit migrants settle. Policymakers and researchers are increasingly acknowledging the new realities linked to this “migration transition” (de Haas, 2005).

Migrants come to Morocco for a broad variety of reasons. Some evidence points to a direct causal link between immigration and environmental factors. A recent study points out that many West African fishermen migrated to Morocco “because of resource depletion in their origin countries due to climate variability and overfishing” (Sow, Marmer and Scheffran, 2015:1). Whether or not this environmental migration has reduced migrants’ vulnerability is yet to be demonstrated, especially in light of the negative perceptions of African migrants and their relative lack of economic opportunities. Only very few studies exist, and there is a clear need to better understand the potential linkages between immigration, environmental stressors and vulnerability through further case studies and systematic mapping.

Likewise, there is little research on the effects of environmental factors on emigration from Morocco. A first comparative study on climate change and migration in the Middle East and North Africa region indicates that environmental factors likely contributed to more mobility in Morocco, in particular temporary migration, both internally and cross-border (Wodon et al., 2014). Emigration rates are expected to remain high in the near future, especially originating from rural areas affected by drought episodes that impact agricultural production. In this respect, it is highly likely that climate change is already playing a role in the decision to migrate abroad. In such contexts, migration can function as an adaptation strategy to cope with adverse climate impacts. Some researchers suggest that there is indeed a correlation between emigration and a drop of agricultural productivity due to climate change (Schilling et al., 2012:30; Sow, Marmer and Scheffran, 2015:6; Wodon et al., 2014). This link has to be further corroborated by robust empirical evidence.

Within Morocco, two internal migration trends are visible: migration from rural areas to cities and mobile pastoralism. The Government of Morocco has pointed out in both of its national communications to the UNFCCC that a link could be made between these internal movements and drought episodes (Government of Morocco, 2001:9; 2010:25). These findings are in line with the above-mentioned study that suggests that Moroccan environmental migration is mostly of an internal nature (Wodon et al., 2014).

A research gap clearly exists on environmental immigration and emigration, as well as environmental impacts on internal migration. The lack of reliable empirical data at all levels has direct implications on the understanding of issues linked to environmental migration in Morocco and the formulation of sound evidence-based policies to tackle these challenges.

## **Existing migration, climate change and adaptation policies**

### **Morocco’s migration policies**

Since the 1990s, Morocco has liberalized its emigration policy in order to embrace the positive contributions of the country’s diasporas. In 1990, the Ministry in Charge of Moroccans Living Abroad and Migration Affairs (Ministère chargé des Marocains Résidant à l’Étranger et des Affaires de la Migration) was founded. This focus on the diaspora communities has led to the creation of the High Council of the Moroccan Community Abroad (Conseil Supérieur de la Communauté Marocaine à l’Étranger (CSCME)) in 2007, comprised of diaspora representatives, which has an advisory role to the government (de Haas, 2009:6–7). Morocco is also in the process of reforming its immigration policy in order to adapt to its new immigration reality. Currently, Morocco’s immigration and emigration policies do not explicitly refer to questions of environment and climate change.

### **An increased focus on climate change policies**

Ever since Morocco ratified the UNFCCC in 1995, the country has demonstrated its political will to play a key role in the global climate diplomacy scene. The country hosted the UNFCCC COP7 in 2001 and will host COP22 in November 2016. Morocco’s domestic climate change policy has developed alongside the country’s increasing involvement in the international climate dialogue.

**Table 2. Milestones in Morocco’s climate policy**

Year	Event/Legislation
1995	Ratification of the Framework Convention on Climate Change
2001	Submission of the first National Communication to the UNFCCC
2002	Ratification of the Kyoto Protocol
2002	Establishment of the Clean Development Mechanism
2009	Issuance of a National Plan against Global Warming (PNRC)
2010	Submission of the Second National Communication to the UNFCCC
2012	National Charter for Environment and Sustainable Development
2015	Intended Nationally Determined Contribution (INDC) to the UNFCCC (Third National Communication)

Sources: ClimaSouth, 2015 and Nachmany et al., 2015.

### Mobility in existing climate policy instruments

The development of national climate change policies started in 2001 with the establishment of the National Committee for Climate Change (Comité national sur les changements climatiques). The Committee, whose main task is to draft the national communications to the UNFCCC, is headed by the Department for the Environment (the UNFCCC institutional national focal point), and includes representatives of other ministries involved. In 2002, Morocco established its Clean Development Mechanism (Mécanisme de développement propre), which currently oversees 40 projects and programmes (Nachmany et al., 2015).

In 2009, Morocco presented a National Plan against Global Warming (Plan national contre le réchauffement climatique, PNRC), which details the country’s strategic approach to mitigation, adaptation and transversal measures and includes the commitments of all ministries concerned, with special focus on issues around agriculture, coastal areas and water scarcity (Nachmany et al., 2015:6). Further, the 2012 National Charter for Sustainable Development (Charte Nationale de l’Environnement et de Développement Durable, CNEDD) “calls for strengthening national capacities to promote adaptation to climate change” (Nachmany et al., 2015:7).



Land abandonment in Figui, Oriental Region, has severe consequences on the maintenance of the collective water system and subsequently, the environment. © IOM, 2015 (Photo: Hind Aissaoui Bennani)

The Plan refers to issues related to relocation of populations under the section on “housing and urbanism” and the Ministry of Housing, Urbanism and Spatial Planning (Ministère de l’Habitat, de l’Urbanisme et de la Politique de la Ville) is tasked with the “[i]mplementation of programs to relocate people whose homes are located in major hazard sites and threatened by floods” (Government of Morocco, 2015:29). No reference is made, however, as to which areas will be targeted and what magnitude these relocations will have. The PNRC is complemented by the Green Morocco Plan (Plan Maroc Vert), which focusses on adaptation in agriculture through the implementation of over 300 projects (Nachmany et al., 2015:4).

### Current developments in climate policy

In its Intended Nationally Determined Contribution (INDC) to the UNFCCC in 2015, Morocco outlines its ambition to make “its territory and civilization more resilient to climate change while ensuring a rapid transition to a low-carbon economy” (Government of Morocco, 2015). In that respect, a comprehensive climate change policy is in the process of being developed. The first draft published in 2014 is a step towards further consolidation and coherence at the national policymaking level. The policy is intended as a “flexible and dynamic instrument” that will, together with a tool for evaluation, allow for adjustments of the policy in line with new research findings (Government of Morocco, 2014). The draft explicitly addresses climate change as a push factor for immigrants from sub-Saharan Africa, and migration is acknowledged as a cause of increased vulnerability for Morocco as a receiving country (Government of Morocco, 2014:6, 17). However, the document does not elaborate on the reasons accounting for this increased vulnerability. It is however noteworthy that the draft policy refers to quotes from a speech delivered by the King Mohammed VI in 2013, in which he strongly emphasizes the need for the regularization and integration of migrants (Government of Morocco, 2014:5).

Migration questions, including issues of internal migration, do not yet figure prominently within Morocco’s climate change policies. They are however referenced in a leaflet on climate strategy published by the Ministry of Environment, where a “growing mobility of populations” is mentioned as a direct result of climate change (Government of Morocco, n.d.:25).

## Looking ahead at COP22: Linking migration and climate policy

As outlined earlier, Morocco is vulnerable to both slow-onset climate impacts, as well as sudden-onset effects, which are expected to increase in frequency and severity in the coming years and decades, affecting more people in all parts of the country.

Displacement due to extreme events is already a reality and will continue to be an important issue to tackle; and the country’s seismic activity further increases the risk of environmentally induced displacement. Likewise, slow-onset processes already have enormous impacts on populations’ capacity to sustain their livelihoods, and it is likely that some of the push factors behind rural-to-urban migration and the settlement of nomadic pastoralist communities are linked to climate impacts on the primary sector activities (agriculture, herding and fishery). These trends are expected to continue unabated.



Boys watching cars cross a flooded river in Kasbah Amridil in southern Morocco © Sean Fitzgerald, 2014

Finally, internal and international migrants are often moving to vulnerable and degraded spaces, such as coastal cities, and the impacts of these movements on the vulnerability of these areas need to be better understood and taken into account.

Major developments are under way as regards the national policymaking process on migration on the one hand and climate change on the other hand, and both of these questions are acknowledged to be of vital importance to the country. Yet, it is clear that the climate-migration nexus needs to be better understood in order to support the policymaking process and link up both of these questions. This means that:

1. **More empirical research is needed on the linkages between climate change, environment and the mobility of people.** More and better information is required at many different levels: How are immigration, emigration and internal migration linked to environmental and climatic factors? What are the specificities of each type of movement? What are the impacts of migration movements towards vulnerable areas such as coastal cities? How are climate impacts affecting nomadic populations? An understanding of how climate change and human mobility interact will allow integrating migration into climate change adaptation policies and vice versa, and to take into account climate matters in migration policies. Initial studies (Wodon et al., 2014) and good practice compilations (Milan et al., 2015; Gemenne and Blocher, 2016) provide a good basis for further research.
2. **More visibility needs to be given to questions of migration, environment and climate change on the local, national and regional policy agenda.** Environmental migration is being mentioned in some governmental policies, and the recently drafted national climate change policy makes reference to migration through King's quotes on that matter. This seems to indicate that national policymakers are aware that environmental migration is an issue to be addressed, but that further action is needed.
3. **Morocco's involvement in global climate negotiations offers a political momentum to better link migration and climate policies.** The global Paris Agreement has made groundbreaking advances in the recognition of climate migration (IOM, 2015) and COP22 in Marrakesh is an opportunity to take stock of progress and reaffirm commitment to tackle these questions.

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