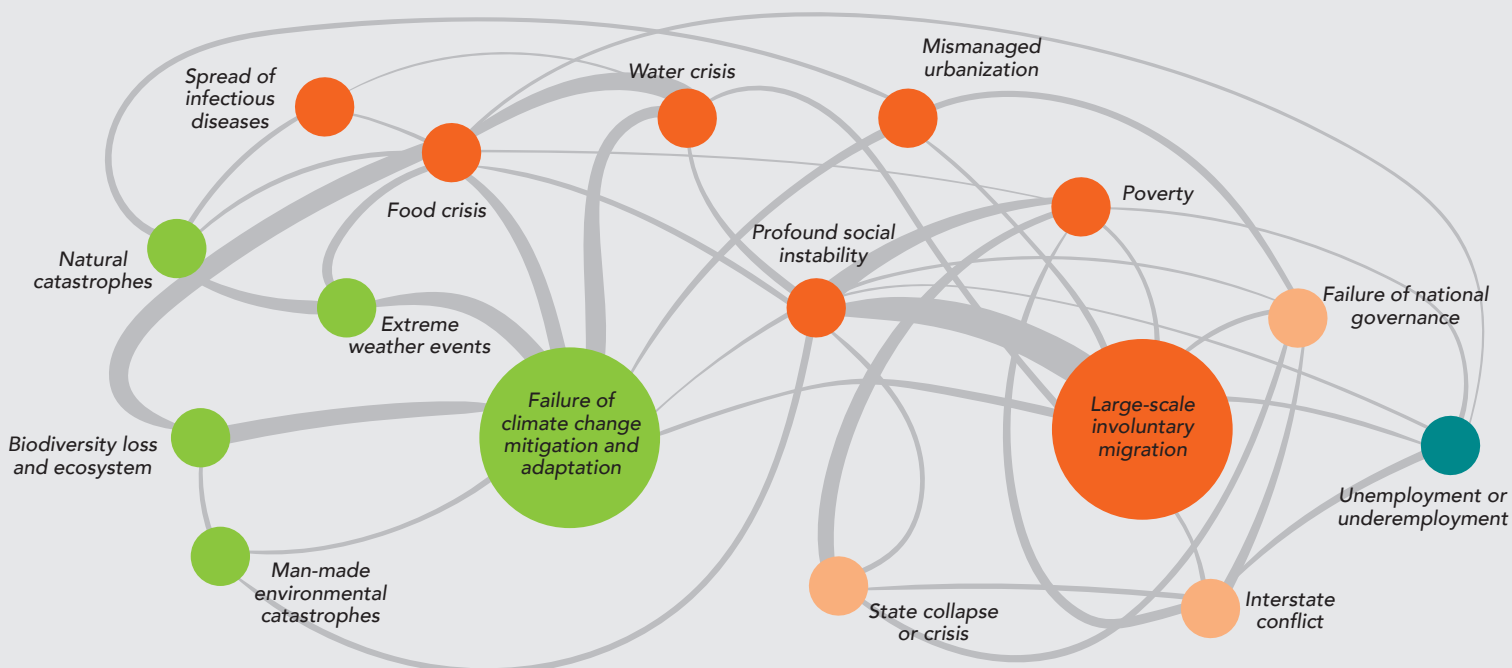


Nexus Brief

Climate Change & Environment

Migration



Key Messages

The impact of climate change on migration will increase in the future. There is, however, low confidence in quantitative projections of changes in mobility, due to its multi-causal nature.

Sudden-onset disasters such as flooding, storms and earthquakes have displaced 26.4 million people each year during the last couple of years. The effects of gradual changes are likely to have an even greater impact on the movement of people in the future than extreme events.

Climate change and global environmental changes affect migration but are not the sole drivers.

Global environmental change exacerbates existing challenges in urban areas such as unbalanced population structures, lack of social cohesion and social inequality. The extent to which policies create an enabling framework beneficial to migrants and inhabitants will determine to a large extent how functional a city will be.

Migration is increasingly considered in the discussion of climate change, while environmental and climate issues are included in policy processes on migration. Nevertheless, there is still a lack of comprehensive policy responses on migration and the environment.

Populations with limited resources may not have the means to benefit from migration as an adaptation strategy and therefore find themselves trapped in vulnerable situations.

Classic strategies of development cooperation in rural areas, such as livelihood diversification and sustainable management of natural resources, seem to be valid approaches for climate change adaptation and for reducing the pressure to migrate to urban areas.

SDC has identified the need to further enhance the knowledge base, and to foster interaction and intersectoral cooperation on the nexus between climate change and migration.

Context

Why this nexus brief

SDC has started a dialogue to address the linkages between climate change, environment and disaster risks on the one hand and migration and economic development on the other. The dialogue includes thematic inputs, e-discussions and a workshop organized in Morocco in March 2016, with a particular focus on North Africa.

This nexus brief focuses on the climate change/environment and migration nexus and synthesizes the main findings from this process to date, including

the relevant literature. While addressing this nexus in general, this brief has a specific focus on North Africa and explores different types of migration.

Interconnections of climate change and migration

Environmental factors have, together with other factors, always acted as a driver of human mobility.¹ as a result of extreme weather events, sea level rise and

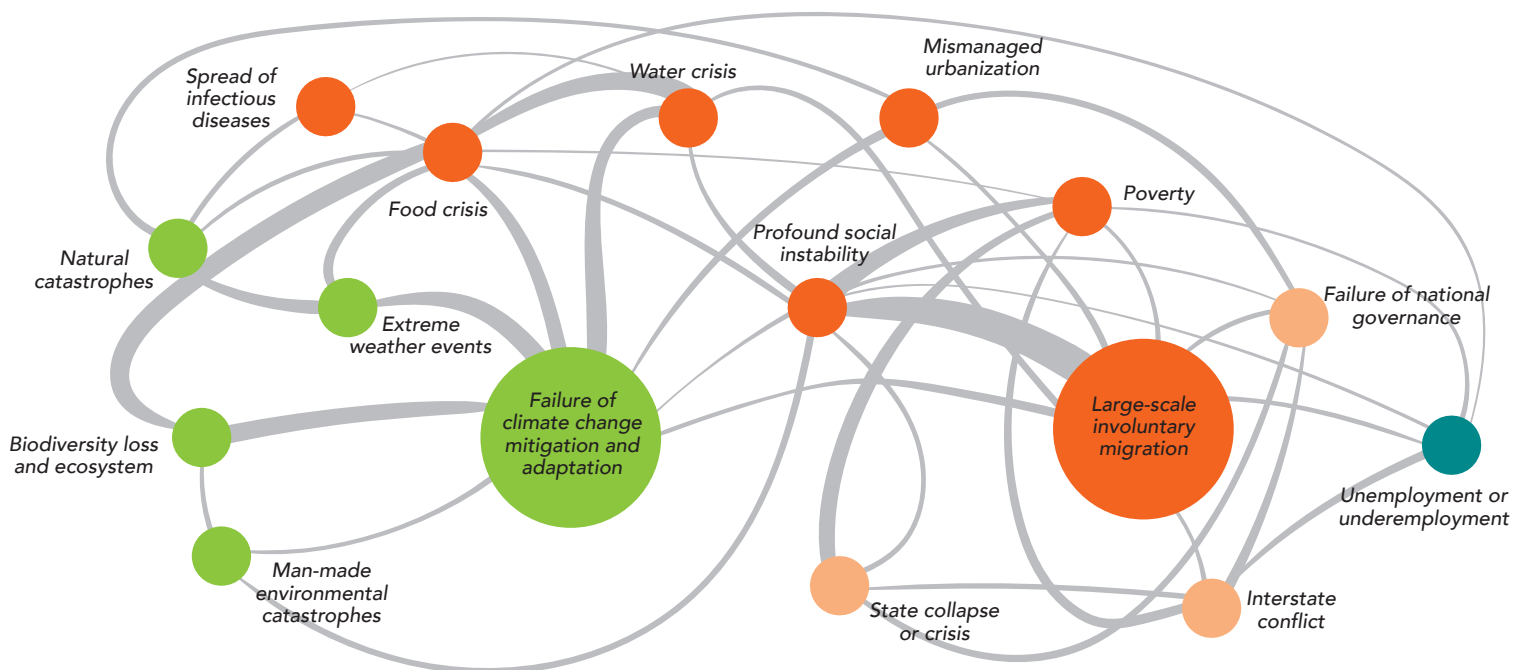
1 According to the UNFCCC Cancun Adaptation Framework, human mobility refers to three forms of population movement: 1. Displacement (forced movements of people), 2. Migration (predominantly voluntary movements), 3. Planned relocation (organized, planned process of settling persons/group of persons to a new location) (UNFCCC 2011).

2 The term "migration" used in this brief includes different aspects of migration and no distinction is made between so-called voluntary and forced migration given existing grey zones between these different concepts. Where we explicitly mean a forced movement of people, the term "displacement" is used.

Figure 1: Interconnections of climate change and migration,

adapted from Global Risks Interconnections Map 2016 of the WEF Global Risk Report 2016.

Green: Environmental Risks; red: Societal Risks, orange: Geopolitical Risks, blue: Economic Risks.



accelerated environmental degradation, including coastal erosion, desertification and biodiversity loss.

Climate change, the environment and migration are interconnected, either directly or indirectly (Figure 1). A failure of climate change mitigation and adaptation might lead to deterioration of environmental conditions, food crises and enhanced water shortages, which – together with other factors – have an impact on livelihoods strategies, among which is migration.

However, the connection between climate and environmental change and migration is by no means deterministic, and the direct effect of environmental change on migration should not be overestimated. Migration is a multi-causal phenomenon, where climate change acts as an amplifying factor thus adding new complexity to the environment-migration nexus.

Environmental change and migration patterns

Migration decisions are a result of a complex interaction among macro factors and individual factors. Accordingly, environmental factors also trigger diverse

types of population flows: internal or cross-border, temporary or permanent, voluntary or forced. The migration patterns also tend to differ according to the type of environmental change.

Extreme weather events tend to lead to sudden, large-scale and mostly short-term movements where return is sometimes feasible in the short, medium or long run after careful consideration of whether such a return makes sense and once the damages have been repaired. Gradual change and deterioration of environmental conditions such as desertification, reduction of soil fertility, coastal erosion and sea level rise likely have a major impact on livelihoods and production systems. As slow onset events they might force an even larger number of people to gradually migrate. Data and evidence in this field is, however, greatly lacking.

Migration associated with environmental change is typically directed from rural to urban areas, as the livelihoods of migrants from rural areas are usually closely linked to climate-sensitive resources. However, environmentally induced migration out of urban areas might also grow in the future as sea level rise increasingly affects the densely populated coastal areas.

Facts & Figures

Future climate risks across all sectors

- Climate change over the 21st century is projected to reduce renewable surface water and groundwater resources significantly in most dry subtropical regions, intensifying competition for water among sectors.
- Due to sea level rise, coastal systems and low-lying areas will increasingly experience adverse impacts such as coastal flooding and coastal erosion.
- Climate change is projected to negatively impact production of major crops such as wheat, rice, and maize in tropical and temperate regions. Major future rural impacts are expected in the near term through impacts on water availability and supply, food security, and agricultural incomes, including shifts in production areas of food and non-food crops across the world.
- Throughout the 21st century, climate change impacts are projected to slow down economic growth, make poverty reduction more difficult, further erode food security, and prolong existing and create new poverty traps (IPCC 2014).

Migration at a global scale

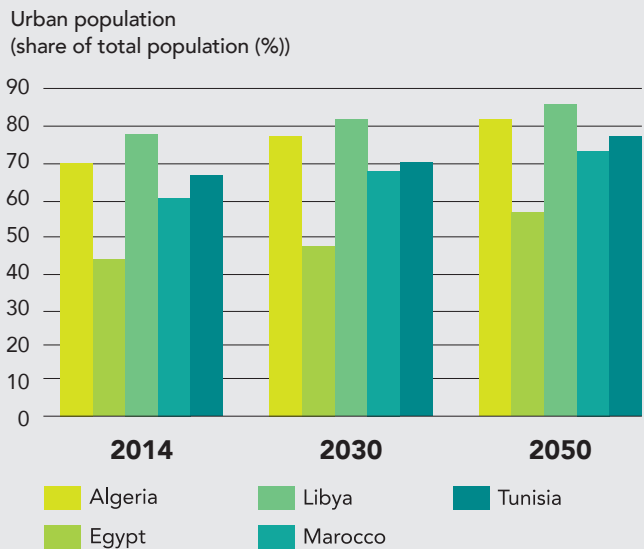
There are an estimated 1 billion people on the move worldwide, of whom 244 million are international (United Nations 2015) and 740 million internal migrants (UNDP, 2009). These figures include 65 million forcibly displaced, 21 million refugees and 41 million “internally displaced people” (UNHCR 2016). Internal migration is to a large extent associated with rural-urban migration.

Rural-urban migration

Internal migration drives the urbanization of a country’s population. Movement from rural to urban areas together with rapid population growth is leading to fast urbanization in North African countries. The share of urban population is expected to grow on average from 55% in 2014 to 68% in 2050 in North Africa.

Figure 2: Share of urban population in selected North African countries.

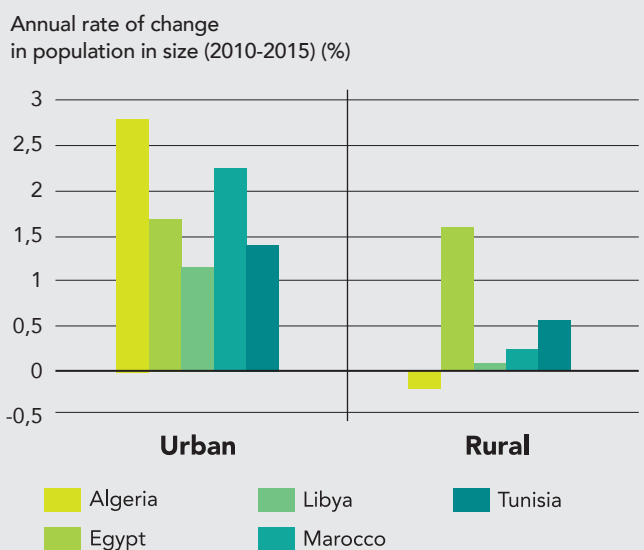
Data from United Nations 2014.



Approximately half of the urban population growth worldwide can be ascribed to migration (Tacoli/McGranahan/Satterthwaite 2015). In North Africa, the population growth rate in urban areas between 2010 and 2015 is approximately 2% per year on average, whereas the rural population is growing at a slower pace or even decreasing.

Figure 3: Population growth rate between 2010 and 2015 in selected North African Countries.

Data from United Nations 2014.



Environmental migrants

Several estimates of the numbers and projections of so-called environmental or climate migrants exist. The estimates reach from around 80 million environmental migrants in 2030 to 150 or even 300 million in 2050 (IOM/SciencesPo 2016). The methodologies for those estimates have been much criticized, as they require the implicit assumption that environmental migration can be distinguished from other forms of migration. The term implies a deterministic relation between environmental or climate changes and migration, and fails to do justice to the complexity of migration decisions.

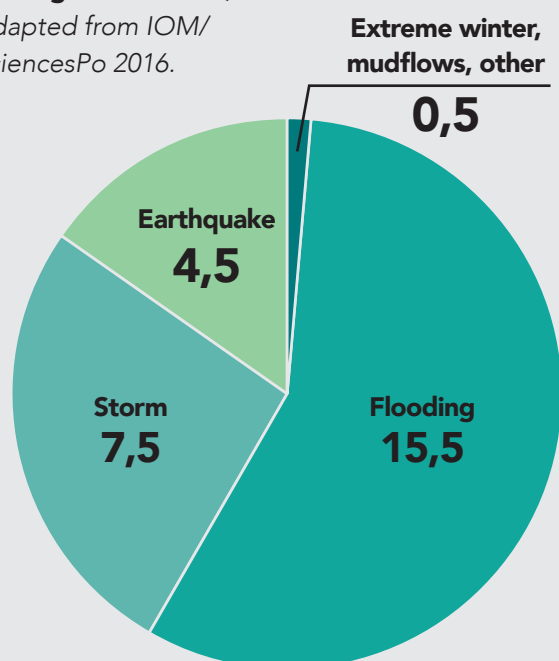
Migration associated with disasters

Sudden-onset disasters have displaced 26.4 million people each year during the last couple of years. (IOM/SciencesPo 2016/Nansen Initiative).

The effects of gradual changes are likely to have a much greater impact on the movement of people in the future than extreme events. Over the last 30 years, twice as many people have been affected by droughts as compared to storms (1.6 billion compared to 718 million) (IOM 2009).

Displaced people, by type of disasters in millions (average 2008-2013).

Adapted from IOM/SciencesPo 2016.



Policy Developments at a Global Level

Migration is increasingly considered in the agenda of climate change, while, at the same time, environmental and climate issues are included in policy processes on migration.

The Paris Agreement (2015) of the UNFCCC requests the establishment of a task force to develop recommendations for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change (Article 50). This is an important sign of migration-related considerations within the climate agenda. The Paris Agreement offers a new anchor point in order to respond to issues of displacements and environmental migration (IOM/ SciencesPo 2016). However, there has always been a debate whether an international process is the best place to address this issue, as people tend to migrate within their own countries or to neighbouring countries. Bilateral or regional agreements will therefore have to play an important role.

In the area of disaster risk reduction (DRR), the Sendai Framework for Disaster Risk Reduction 2015-2030 encourages the adoption of policies and programmes addressing disaster-induced human mobility in order to strengthen the resilience of affected people and host communities (Article 30).

Within the migration policy debates, environmental migration has mostly been subject of national, bilateral or regional treatments, but less of global frameworks. On an intergovernmental level, the subject has been primarily addressed by non-binding policy processes such as the state-led Nansen Initiative (<https://nanseninitiative.org>). The Nansen Initiative was launched by Switzerland and Norway in 2012 and was designed to identify normative, institutional, operational and knowledge gaps with regard to the protection of those affected, and to find ways to prevent and/or reduce disaster displacement in a first place. It was a bottom-up, state-led consultative process with multi-stakeholder involvement. The overall goal was to build consensus among states on key principles and elements to protect people displaced across borders in the context of disasters caused by natural hazards, including those linked to climate change. The outcome of this process is the "Protection Agenda for People Displaced

Across Borders in the Context of Disasters and the Effects of Climate Change" based on the three pillars of international cooperation, standards for the treatment of affected people, and operational responses. After the endorsement of the Protection Agenda in Geneva in 2015 by 109 States, the Nansen Initiative came to a close and has been replaced by the state-led multi-stakeholder Platform on Disaster Displacement. The platform focuses on the implementation of the Protection Agenda (<http://disasterdisplacement.org>).

Despite this anchorage in the respective international agendas or debates, there is a lack of comprehensive policy responses on migration and the environment. There is no international framework in place to offer people protection and assistance under a recognized official status although some efforts have brought to the attention of governments the need to recognize and address these issues. Migration, climate, DRR and broader development debates need to be better linked to effectively tackle the many dimensions of environmental and climate migration (IOM/SciencesPo 2016).

Key Issues regarding the Climate Change & Migration Nexus

Key issue 1: Climate change and increases in extreme weather events will affect and displace ever more people

Migration associated with disasters is already a reality. The impact of the adverse effects of climate change on migration will increase in the future. Climate change over the 21st century is projected to increase the displacement of people. There is, however, low confidence in quantitative projections of changes in mobility, due to its complex, multi-causal nature (IPCC 2014).

Key Issue 2: There are no pure environmental or climate migrants

Climate change and global environmental changes affect migration and may have a multiplier effect, but are not the sole driver (Foresight 2011).

Environmental drivers can only be understood when considering their interrelationship with other demo-

graphic, economic, political and social drivers of migration (Bilgili/Marchand 2016).

In North Africa, the combined effects of climate change and disasters, demographic pressures, underperforming labour markets, and a rapidly changing political and security situation affect local communities and livelihoods in both rural and urban areas, and have an effect on human mobility patterns. Furthermore, climate change-related drivers of migration need to be understood not only at the level of the North Africa region but also at the level of the regions and countries of origin of the migrants who reach North Africa (Ariza/Rueff 2016).

Key Issue 3: Coping strategies vary significantly due to different exposures to climate change and other predominant factors

Environmental conditions, exposure to climate change and political circumstances vary among countries and areas within the countries. Each rural area has its own characteristics and challenge and its own adaptation capacities and options; the possibilities for influencing migration choices vary greatly. In Morocco, arid and mountain areas (e.g., Atlas) seem to be most affected by degradation of natural resources. Additional climate change related pressure may have further impacts on the already high level of rural-urban migration.

An understanding of local circumstances is therefore important in the determination of appropriate strategies for reducing vulnerability. Differentiated approaches are needed to address the challenges of different areas.

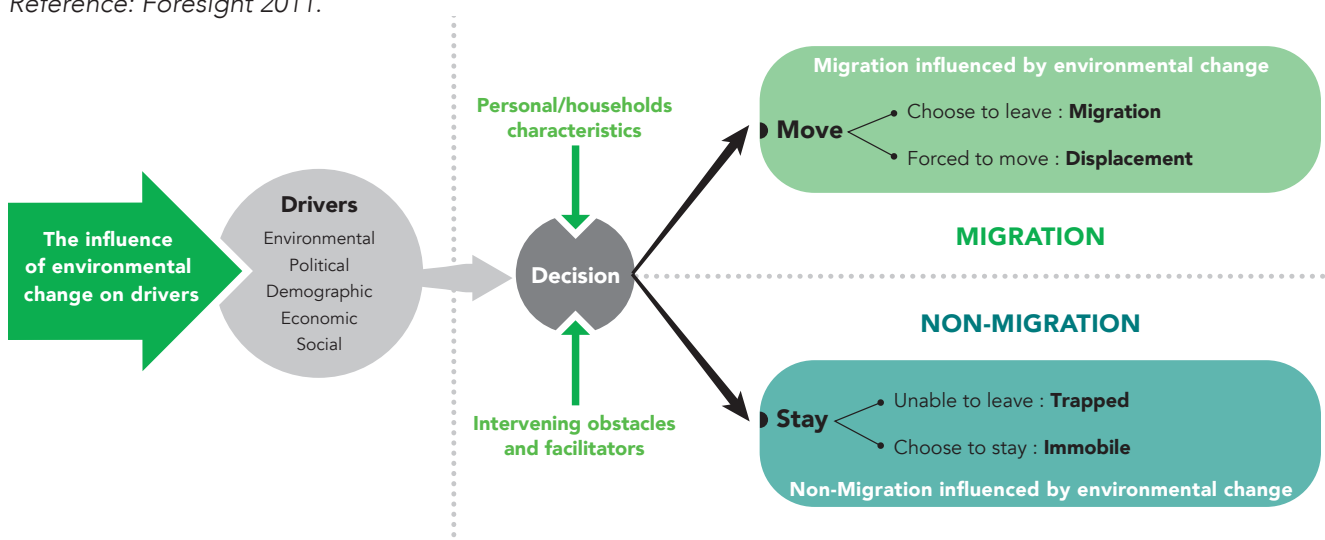
Key Issue 4: Migration is an adaptation option but also an obstacle to adaptation

Migration is often misperceived as a failure to adapt to a changing environment. Instead, migration can also be a deliberate adaptation strategy in the face of climate and environmental change (IOM 2015). Migration has become an important aspect of rural livelihood strategies in response to the gradual deterioration of environmental conditions. Alternative income sources increase the ability for migrants to survive, while also increasing the resilience of their families through remittances (UK Climate Change and Migration Coalition 2014). In the case of Morocco, some argue that the agricultural transformation of the country is substantially supported by migration-related investments (Bilgili/Marchand 2016).

But migration might also increase vulnerability and vice versa. This is especially the case if people move into hazard-prone or sensitive areas such as low-lying coastal cities or water-scarce cities. In Morocco, over 80 percent of the urban population lives in coastal agglomerations prone to sea level rise, flash floods, and heavy storms (Grant 2011). Migrants are often particularly vulnerable. On the one hand, migrants are often vulnerable per se due to their often irregular status. On the other hand, they tend to live in high-density settlements in areas prone to environmental risks, and may not have the human, social or financial capital to protect themselves (Foresight 2011). The exposure of coastal cities and the high level of vulnerability of people might trigger a second wave of migration towards third countries across the Mediterranean Sea (Ariza/Rueff 2016).

Figure 5: Drivers of migration and the influence of environmental change

Reference: Foresight 2011.



Key Issue 5: Special attention should be given to the role of cities

Urbanization is expanding rapidly in North Africa, especially in Morocco and Algeria with urban population growth rates of more than 2 percent per year. These urban areas are often confronted with major socio-economic challenges such as unbalanced population structure, lack of social cohesion, social inequality or high (youth) unemployment. Global environmental change acts as a multiplier of existing challenges and adds to existing fragilities of cities (Foresight 2011). Particular attention should therefore be given to the vulnerability of cities and those citizens that are most vulnerable to climate change, such as migrants. The way city authorities react to new arrivals, the policies in place to create an enabling framework to be beneficial to the migrants and the inhabitants of the cities will determine to a large extent how functional and resilient a city will be in the face of climate change.

Key issue 6: There are complex interactions between environmental degradation and migration in origin and destination areas

Migration can affect the environment in places of destination and origin. Large-scale movements can lead to overexploitation of natural resources in the host environment, e.g., in the setting of unmanaged urbanization. Internal migration will increasingly put additional pressure on available resources and services in peri-urban areas and intermediate cities. This may provoke further migration resulting in a vicious cycle between migration and the environment (IOM 2009). Migrants can also introduce natural resources management practices that might either enhance or reduce environmental impacts in the host environment.

In places of origin, on the other hand, outmigration may alleviate land use pressure, sometimes allowing a degraded local ecosystem to recuperate (IOM 2009).

Key Issue 7: People who are most vulnerable to the impacts of environmental change are the least able to secure their livelihoods through planned migration

While climate change is recognized as a factor that undermines people's resilience, climate change does not necessarily lead to more migration. Trapped populations with limited resources may not have the means to

benefit from migration as an adaptation strategy (Bilgili/Marchand 2016). Environmental change can even reduce the ability to migrate as it erodes the financial or physical assets and capital required to finance migration. People might increasingly be trapped in vulnerable situations, where neither safe migration nor staying is an option. Policy makers focusing on those who move should not overlook those who remain in irregular and vulnerable situations (Foresight 2011).

Key issue 8: Policy makers can build upon existing coping strategies to address environmentally induced migration

In order to address environmentally induced migration, the main focus should be on building upon existing coping strategies and promoting sustainable utilization of resources in rural areas to mitigate the negative effects of climate change (Bilgili/Marchand 2016). Classic strategies of development cooperation in rural areas, such as livelihood diversification, payment for ecosystem services, revitalizing rural areas through more sustainable management of natural resources or developing agricultural value chains seem to be valid approaches for climate change adaptation, for securing livelihoods in rural areas and for reducing the pressure to migrate to urban areas.

However, climate change and disaster risks need to be integrated into sustainable resource management and along different value chains in order to avoid maladaptation. Some strategies might no longer be effective under changing climatic conditions.

Relevance for SDC

SDC, through its Global Programme Migration and Development as well as its Corporate Domain Regional Cooperation, aims to maximize the positive aspects of migration in support of fair, orderly and regular movement of people. At the same time, SDC, through its Global Programme Climate Change, jointly with its Corporate Domain Regional Cooperation is addressing the impacts of climate change by securing livelihoods under changing conditions.

The linkages between climate and environmental change and migration have, however, not been a priority for interventions yet. This is to a large extent given to the fact that migration is a multi-causal phenomenon, which makes it difficult if not even inappropriate to single out climate change as the main cause of migration without considering other drivers. Furthermore, several aspects of this nexus are addressed implicitly, for example in SDC's cities-related work.

Nevertheless, there is a rising need to better understand the linkages between both global phenomena. With Agenda 2030, new instruments are available to address displacement from a prevention angle.

What is SDC already doing?

Enhancing the knowledge base, interaction and cooperation

SDC's networks on Climate Change and Environment, Disaster Risk Reduction, Migration as well as Employment and Income have jointly organized a process to reflect on interactions. E-discussions and a joint thematic workshop in Agadir in March 2016 have identified the need to further enhance the knowledge base, and to foster interaction and intersectoral cooperation on these issues.

Livelihood diversification projects in rural areas

There are no SDC projects specifically on the climate and migration nexus. But a variety of projects have indirectly addressed some of the root causes of migration. Livelihood diversification and natural resource management projects have always been at the centre of SDC's activities in rural areas. A variety of approaches including climate change adaptation projects aim at securing livelihoods in rural areas under changing conditions.

A number of projects in North Africa tackle issues of economic development through value chains and the promotion or creation of employment. They are being designed in a climate smart way to address climate change and are expected to have positive impacts on migration, too. As a concrete example, the support to commercialize aromatic and medicinal plants in the south-east of Morocco offers a perspective for young entrepreneurs to develop a livelihood in rural areas, thus reducing their desire or need to move to urban centres.

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