



How does climate change affect human mobility?

Potential impacts and how to address them

Impacts of climate change – residual risk and L&D

More people than ever before had to leave their homes in recent years. The large majority has been displaced by war, conflict or persecution. While war and conflict remain the predominant causes for people to leave their home, climate change can be an accelerating factor: In the complex causality of the Syrian crises, for example, the most severe drought in the region since 100 years is considered a threat multiplier increasing political, economic, religious, demographic, and ethnic forces.¹

The latest assessment report by the Intergovernmental Panel on Climate Change (IPCC) confirms that climate change will have significant impacts on human mobility. Although there is no universally agreed definition of human mobility in the context of climate change, it describes the movement of people induced by changes in weather or climate. In the current debate, migration is often used interchangeably with human mobility. However, many consider human mobility as an umbrella term for displacement, migration and planned relocation.

Different types of climate-induced human mobility

Conceptually, there are three different types of climate-induced human mobility: displacement, migration and planned relocation.² It is important to note that even though displacement and migration are treated as two distinct types, in most cases affected people and communities can be found along the continuum.

- **Displacement** – Usually a situation where people are forced to leave their home. Displacement is predominantly associated with extreme weather events, such as droughts, cyclones or floods. Hence, typically communities as a whole are affected rather than individual households. In most cases, displacement is internal but can also be across borders³. It can be temporary or become permanent.

- **Migration** – People migrate when they have the necessary resources and capabilities, such as financial resources and health, to choose between different options.⁴ Climate change is expected to predominantly cause internal migration. Migration across international borders will particularly affect inhabitants of low-lying small island states and other countries facing substantial loss of territory.⁵ Even if climate-related slow-onset changes and extreme events cause cross-border migration, it is expected that people mainly migrate regionally.
- **Planned Relocation** – Planned relocation is a planned process organized by a state or government upon request with strong participation of the affected communities and the hosting communities. Planned relocation processes are usually initiated if the communities are threatened to lose their home or habitual place of residence due to the negative impacts of climate change or if the (projected) living conditions do not allow residence. Planned relocation should be considered as a last resort.

Climate change as an additional driver

The IPCC confirms that human mobility does not have a single cause but rather emerges from multiple factors. These include poverty and demographic pressure, bad governance, depletion of natural resources or armed conflicts and violence. Economic reasons, especially regional income disparities between rural and urban areas, remain the most significant drivers of movement. However, climate change is an additional driver. Climate and weather-related extremes, such as floods and storm surges, directly trigger – often temporary – migration or displacement. For example, between 2008 and 2015 an annual average of 21.5 million people was displaced by weather-related disasters.⁶ Population growth in regions highly exposed to weather-related extremes, especially in developing countries' urban areas, is a key driver of increasing vulnerability and is causing a threat to sustainable development. Together with increasing frequencies and intensities of weather-related extreme events as a consequence of climate change, the number of displaced persons will increase further.

Slow-onset changes, such as increasing temperatures, desertification, deteriorating soil fertility, and sea-level rise, are projected to be major drivers for future movements. In the Pacific,

the Indian Ocean, and the Caribbean it is estimated that 2.2 million people will have to leave their homes due to sea level rise. However, populations may move rather gradually in response to these changes. As a last resort, planned relocation will be an option to adjust to the changing situation.⁷

Due to the complexity and multi-causality of human mobility and the uncertainty of the extent of future climate change impacts, no reliable quantitative estimates exist.⁸ In the case of migration, predictions for the year 2050 vary between 150 million and 250 million people, but cannot be regarded as scientifically robust.

Though the actual extent of climate change-related human mobility is unclear, current climate science allows to identify regions and populations at risk.⁹ These in particular are people living in low-lying coastal regions, as well as those living in arid or mountain areas.¹⁰ The timely identification of populations threatened can improve adaptation strategies and climate-resilient planning and thus reduce the number of people at risk significantly.

As an example, without adaptation a sea-level rise of only 0.5 meters could cause the displacement of 72 million people. A sea level rise of two meters could cause 187 million, or 2.4% of the world's population, to leave their homes. It is expected, however, that if appropriate adaptation measures are taken less than half a million people would have to leave their homes.¹¹

Human mobility under the United Nations Framework Convention on Climate Change (UNFCCC)

- Climate-induced human mobility, especially migration and displacement, is addressed in the debate on adaptation and Loss and Damage (L&D) in particular. L&D refers to negative impacts of climate change that have not been or cannot be avoided by mitigation, adaptation and risk reduction measures.
- Human mobility as a potential adaptation strategy was first recognized by the **Cancun Adaptation Framework**. More concrete action on climate-induced human mobility is taken in the work of the **Warsaw International Mechanism for Loss and Damage (WIM)**, which seeks to enhance the understanding of the subject.
- The **Paris Agreement** that emerged from COP21 mandates the establishment of a **Task Force on Displacement** under the WIM to develop recommendations for integrated approaches to avert, minimize, and address displacement related to the negative climate change impacts.

The role of development cooperation

Addressing human mobility has been and will be an important part of development – with or without climate change. Migration, for example, can be an important adaptation strategy and should be recognized as such. It is already widely used in regions experiencing climate variability. Migration and as a last resort planned relocation can reduce the risk of loss and damage. Hence, enabling people and households at risk to make a decision to migrate or communities to relocate is an important development objective. Planned relocation should preferably take place within countries whenever possible and be implemented in a participative manner in close coordination with the hosting communities. Facilitating migration and planned relocation is especially important for so-called trapped populations. These are often the most vulnerable as they lack financial resources and capacities to migrate from an area at risk on their own.¹²



Development cooperation should thus not only design and implement adaptation measures that increase resilience and reduce the pressure to move. Development cooperation can also facilitate migration e.g. by diversifying and improving income sources and livelihood strategies as well as assisting populations and governments of partner countries in planned relocation processes. Migration should be designed in a way that benefits receiving countries or regions, countries or regions of origin as well as migrants and their families (“Triple-Win”). This is key to avoid conflicts between moving and host populations. In the case of people threatened by displacement, communities should be assisted in increasing their resiliency to reduce the number of people displaced in case of an extreme weather event.

Bangladesh: managing climate-induced migration in urban areas

Bangladesh is one of the countries most vulnerable to climate change impacts. Climate change threatens the economic development of the country and particularly livelihood opportunities for the poor and most vulnerable people. Riverbank erosion and floods are the major causes for climate-induced migration in Bangladesh. For the affected people both permanent and temporary migration are important diversification and adaptation strategies.

The programme *Urban Management of internal Migration due to Climate Change* is the first GIZ project explicitly addressing climate-induced migration. The project is financed by the special initiative *Tackling the Root Causes of Displacement – Reintegrating Refugees* on behalf of the Federal Ministry for Economic Cooperation and Development (BMZ). The initiative aims at overcoming structural causes of displacement, supporting host regions and facilitating the (re-)integration of migrants. In Bangladesh, it focuses on supporting the economic and social integration of climate-induced migrants in the divisional capitals Khulna and Rajshahi, which show an exceptionally high proportion of migrants.¹³

The project goal is to improve the living conditions of migrants through demand-oriented measures. These include:

- Building and climate-proofing basic urban infrastructure in informal settlements and slums while at the same time generating short-term income opportunities through labour-intensive works, such as waste management, or building and cleaning of drainage systems. Income opportunities will benefit migrants as well as other underemployed resident slum-dwellers. With their focus on the provision of basic services such as drinking water and flood protection, the works also aim at reducing climate change impacts.
- Identifying successful strategies to utilise the economic potential of migrants for the local economy of the host cities through the development of demand-oriented trainings in close cooperation with small and medium enterprises.
- Capacity building of city corporations and the integration of successful measures into city development plans.

To support the steps taken and to enable cities for climate change resilient planning and development, the KfW Development Bank finances streets, paths, drainage channels and other items which are designed to withstand floods and storms in selected cities in Bangladesh.

Pacific Island Region: relocation to reduce the risk of future displacement

Pacific island countries are particularly vulnerable to the impacts of climate change. While only contributing marginally to climate change, they suffer disproportionately from the impacts due to their high level of exposure and low adaptive capacity. Many of their habitants already suffer from extreme weather events such as cyclones and droughts. Projected sea-level rise, higher temperatures, altered precipitation patterns and ocean acidification will exacerbate these risks, jeopardising the livelihoods of the people.

Platform on Disaster Displacement

Follow-up to the Nansen Initiative

At the World Humanitarian Summit in May 2016, the Platform on Disaster Displacement was established with the goal to facilitate “enhanced cooperation, coordination and action to improve the protection of disaster displaced persons”.

It evolved from the Nansen Initiative, a state-led, bottom-up consultative process intended to build consensus among states on a protection agenda addressing the needs of people displaced across borders in the context of natural disasters, including climate change.

The Platform on Disaster Displacement builds upon identified gaps and the work started by the Nansen Initiative. The platform aims to implement the recommendations of the Nansen Initiative Protection Agenda, adopted by more than 100 countries in October 2015, that outlines three priorities for enhanced action on the national, regional and international level:

- Collecting data and enhancing knowledge on cross-border disaster displacement;
- Enhancing the use of humanitarian protection measures for cross-border disaster displaced persons;
- Strengthening the management of disaster displacement risk in the country of origin, e.g. by integrating human mobility in disaster reduction and adaptation strategies.
- Conceptualising a comprehensive approach to disaster displacement and identifying a broad set of effective practices, the Protection Agenda provides key principles and approaches to guide future work on human mobility and displacement conducted under the Global Platform on Disaster Displacement. Germany chairs the steering group of the platform until the end of 2017.

Migration has long been a part of life in the Pacific and is considered a “way of life” which sees migration as a “cultural, social and historical heritage of the Pacific”.¹⁴ In the Pacific region, the BMZ-funded programme *Coping with Climate Change in the Pacific Island Region (CCCPIR)* supports participatory and inclusive processes for the planning and implementation of relocation of communities. Planned relocation is part of a comprehensive climate change programme, which further seeks to enhance the skills and capabilities of the local population, civil society partners, national authorities and regional organisations to manage the risk of climate change.



Key messages and recommendations

- Climate change **exacerbates existing drivers of human mobility**, such as resource scarcity, conflicts, and a lack of livelihood opportunities, but is only in rare cases the pivotal factor. The loss of territory as a consequence of sea-level rise is an exception.
- It is projected that climate change will mainly lead to internal or regional movement. Thus, developing and implementing **national and regional approaches** to address climate-induced human mobility should be a key objective for affected countries and regions.
- Robust projections for global movements due to climate change are not yet available. However, **populations at risk can be identified** based on current climate science, which allows for better adaptation planning and for explicitly addressing the risk of displacement as well as the potential need for migration and planned relocation. Accordingly, climate risk and vulnerability assessments should consider potential impacts on human mobility in order to identify appropriate measures
- Appropriate measures do not only include adaptation measures aiming at preventing or reducing human mobility. **Enabling individuals and households to migrate**, especially trapped populations most vulnerable to climate change impacts, or facilitating planned relocation as a last resort can increase human security significantly. Supporting communities threatened by displacement in building resilience can reduce the number of displaced people in the case of extreme weather events. All measures require a high level of participation of affected communities, including those who move but also receiving communities in order to ensure that basic human rights are respected. Development cooperation can assist in addressing the root causes of human mobility as well as in developing and implementing appropriate strategies to manage climate-induced human mobility nationally and regionally.

- On the international level, the **Task Force on Displacement** under the Warsaw International Mechanism for Loss and Damage can contribute to enable the implementation of the **Protection Agenda** and facilitate the integration of climate-induced human mobility into development and adaptation strategies. For this purpose the Task Force works in close cooperation with other organisations and initiatives working on human mobility, such as the Platform on Disaster Displacement



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