



# Disaster displacement under the Sendai Framework for Disaster Risk Reduction 2015–2030: implications for inclusive growth in Africa

## Key highlights

- The number of internally displaced persons has continued to rise in Africa over the past two decades. In sub-Saharan Africa, the number of new disaster displacements jumped from 3.4 million in 2019 to 4.3 million to date.
- The main factors shaping displacement in Africa are inequality, conflict, environmental degradation, climate change and the disproportionate impacts of disasters.
- The Sendai Framework for Disaster Risk Reduction 2015–2030 is an important instrument created to tackle disaster displacement by averting displacement, supporting internal or cross-border migration, if it occurs, and providing durable solutions for migrants.
- The scarcity of data continues to hamper evidence-based policymaking and well-informed public discourse on migration and displacement in Africa.

- Actions for displacement and disaster risk reduction should be designed and implemented as integral priorities of interventions for climate change adaptation and the achievement of the Goals of the 2030 Agenda for Sustainable Development.

## Sendai Framework for Disaster Risk Reduction

The Sendai Framework for Disaster Risk Reduction 2015–2030 was adopted by the General Assembly (187 States Members of the United Nations) in resolution 69/283 on 3 June 2015. The Framework commits governments to the development and implementation of their strategies, policies and plans to reduce disaster risks. With 38 indicators to monitor its progress, the implementation of the Sendai Framework is expected to mutually reinforce the achievement of the Sustainable Development Goals and the implementation of the Paris Agreement on climate change and the Global Compact for Safe, Orderly and Regular Migration.

The goal of the Sendai Framework is to achieve the “substantial reduction in disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries”. The expected outcome is to “prevent new and reduce existing disaster risks through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard, exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience.”.

## Sendai Framework – priorities for action

Priority 1: Understanding disaster risk;

Priority 2: Strengthening disaster risk governance to manage disaster risk;

Priority 3: Investing in disaster risk reduction for resilience;

Priority 4: Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction.

In addition, the Sendai Framework outlines four priorities of action and seven targets to reduce and prevent disaster risks (see boxes 1 and 2), including through governance, investment in resilience, and disaster preparedness, response, recovery and rehabilitation. The framework has 38 indicators that are aligned with the Sustainable Development Goals for measuring and reporting the progress made by countries. Thus, the Framework presents opportunities to safeguard hard won development gains, if it is integrated into sectors and development works.

The worst impacts of disasters are felt when people are displaced and forced to flee their homes or places of habitual residence as a result of, or in order to, avoid the effects of a disaster. In this context, displacement is an undesired outcome of a disaster event. A number of agencies have come up with statistical methods to determine the risk of displacement from disasters and to predict the number of people likely to be displaced per event and over a specific return period. It is usually regarded as a function of hazard, exposure and vulnerability and is expressed as:

Risk = Exposure X Hazard X Vulnerability

## Sendai Framework and disaster displacement

Displacement and migration as a consequence of disasters have continued to increase in visibility over time as part of the disaster risk reduction agenda. For example, the Hyogo Framework for Action, which expired in 2015, referred to displacement only once, whereas the Sendai Framework makes reference to “displacement” or “displaced” four times. In particular, paragraph 7 of the Sendai Framework states that “Governments should engage with relevant stakeholders, including ... migrants ... in the design and implementation of policies, plans and standards”. Paragraph 27 (h) further encourages governments to “empower local authorities, as appropriate, through regulatory and financial means to work and coordinate with ... migrants in disaster risk management at the local level”. Paragraph 36 (a) (vi)

also stresses that “migrants contribute to the resilience of communities and societies, and their knowledge, skills and capacities can be useful in the design and implementation of disaster risk reduction.”

Besides the terms “displacement” or “displaced”, the Sendai Framework also employs such terms as “human mobility”, “evacuation” and “human mobility” to describe the different types of movements that may occur as a result of slow-onset or rapid-onset disasters. This is perhaps due to the thin line between the concepts of displacement and migration occasioned by what triggers the movement. Generally, rapid-onset disasters such as floods force people to speedily flee (displacement), while slow-onset disasters such as drought, environment degradation and climate allow people to move out of harm’s way voluntarily (migration). Furthermore, the report of the open-ended intergovernmental working group on indicators relating to disaster risk reduction (A/71/644) defines people affected by disaster as: “People who are affected, either directly or indirectly, by a hazardous event. Directly affected are those who have suffered injury, illness or other health effects; who were evacuated, displaced, relocated or have suffered direct damage to their livelihoods, economic, physical, social, cultural and environmental assets”.

In line with the Sendai Framework, the African Union Commission has developed the Programme of Action for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030 in Africa, which also contributes to the implementation of Agenda 2063: The Africa We Want, of the African Union. African Heads of State and responsible ministers have continued to demonstrate strong commitment to the implementation of the Programme of Action through declarations and commitments. These include: the Yaoundé Declaration on the Implementation of the Sendai Framework in Africa (2015); the Tunis Declaration on accelerating the implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030 and the Africa Regional Strategy for Disaster Risk Reduction (2018); and, more recently, the

## Sendai Framework – seven targets

### Reduction in:

- (a) Disaster mortality;
- (b) The number of people affected by disasters;
- (c) Direct economic loss;
- (d) Damage to critical infrastructure and disruption to basic services (comparing average losses between the period 2005–2015 and 2020–2030, relative to the size of a country’s population or economy).

### Increase in:

- (a) The number of countries with national and local disaster risk reduction strategies;
- (b) International cooperation to developing countries;
- (c) The availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people.

Nairobi Declaration on accelerating the path to achieving the goals and targets of the Programme of Action for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030 in Africa (2021).

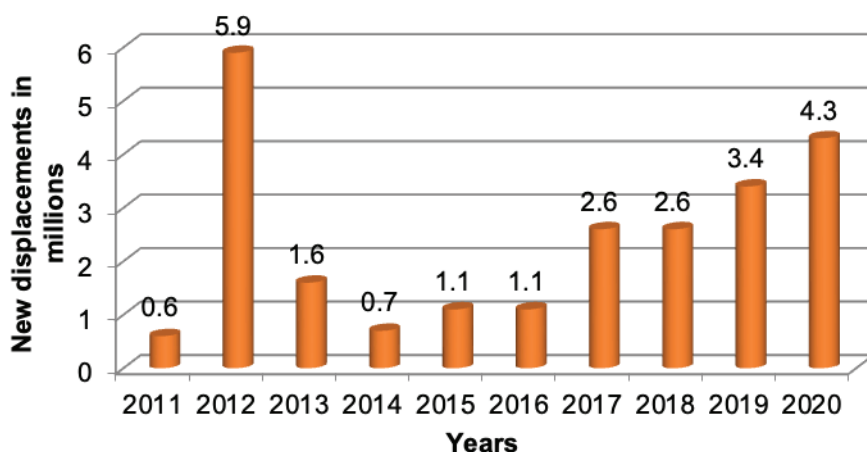
A revised Programme of Action matrix to guide the implementation of the Sendai Framework and an institutional framework for the implementation of the multi-hazard early warning system in Africa were also adopted during the recent session of the Africa Regional Platform for Disaster Risk Reduction, which was held in Nairobi in 2021. The African Union Commission has also set up the Africa Working Group on Disaster Risk Reduction to provide coordination and support African countries in their efforts to implement the Programme of

Action. All these measures are aimed at reducing exposure and strengthening the resilience and adaptive capacities of the vulnerable populations at risk of displacement.

## Disaster displacement and its impact on the Sustainable Development Goals

The number of disaster displacements has continued to rise in Africa in the past decade (see the figure below). According to figures from the Internal Displacement Monitoring Centre on Internal Displacement (see the 2021 Global Report on Internal Displacement), the number of new disaster displacements in sub-Saharan Africa rose from 3.4 million in 2019 to 4.3 million people to date, while displacements from violence rose to 6.8 million. The

**New disaster displacements in sub-Saharan Africa, 2011–2020**



five countries with the highest number of displacements in Africa are the Democratic Republic of the Congo, Ethiopia, Mozambique, Somalia and South Sudan with majority of the displaced being young people between 5 and 14 years of age.

The major factors driving displacement are flooding, land degradation, locust invasion and drought, which, along with other forces, compel people to move. In addition, the global coronavirus disease (COVID-19) pandemic has compounded the situation of disaster-displaced populations and those at risk of displacement. These factors interact to deepen vulnerability, highlighting the increasingly complex and interconnected drivers of mobility that requires an inclusive, holistic and anticipatory approach to managing risks.

Disaster displacement has profound impacts on populations, especially on children, women, older persons and persons with disabilities. These include social and psychological impacts, the heightened need for protection, disruption to family life and exclusion from recovery and development initiatives. Migrant populations get left behind in development when they lack choices, opportunities and capabilities to earn an adequate and consistent income and to derive an equitable benefit from development. According to the development analyst Robert Chambers, “social inferiority, physical weaknesses, seasonal deprivation, vulnerability, powerlessness and humiliation”<sup>1</sup> interact to form a complex web that keeps such disadvantaged populations trapped in poverty.

Resolving these issues will require African governments, in collaboration with relevant stakeholders, to reduce the risk of displacement and to support those already displaced to participate in social and economic activities, build their resilience and enjoy their human rights. This requires a whole-of-society approach under the leadership of the government with a strong coordination and institutional mechanism in and across sectors. The planned relocation and orderly migration of vulnerable communities in disaster-prone areas can be organized by developing anticipatory measures through disaster preparedness and early warning systems that focus on the local at-risk populations.

<sup>1</sup> Robert Chambers, “Poverty and livelihoods: whose reality counts?”, Discussion Paper 347 (Brighton, United Kingdom of Great Britain and Northern Ireland, Institute of Development Studies, University of Sussex, 1994).

## Reducing the risk of disaster displacement

The Sendai Framework is intended to “prevent new and reduce existing disaster risk through the implementation of integrated and inclusive, economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience”. Reducing risk is critical to enhancing the resilience and adaptation of migrants and can contribute to the achievement of the Sustainable Development Goals by ensuring that no one is left behind.

Target 7 of Goal 10 of the 2030 Agenda – facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies – lays a firm foundation for the measures to be taken to reduce the risk of migrants and strengthen their resilience. It also reinforces the commitment to leave no one behind and can complement the Sendai Framework. The Agenda’s strong focus on the disadvantaged and marginalized populations, who are often ignored, can be regarded as a paradigm and revolutionary shift in the development approach.

It is important for African countries to tackle the drivers of disaster in a holistic manner in order to reduce risk of the risk of displacement. In this context, implementing priority 1 of the Sendai Framework plays an important role, as an improved understanding of disaster risk underpins the other three priorities: strengthening disaster risk governance to manage disaster risk; investing in disaster risk reduction for resilience; and enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction. The United Nations, in recognizing the increased pace in frequency and disasters globally, has developed guidelines for reducing disaster risk and addressing the factors that cause displacement.

The Sendai Framework is intended to ensure the orderly and safe movement of at-risk populations by emphasizing the need for African countries to strengthen preparedness measures and enhance multi-hazard early warning systems. Decision-makers need to leverage these important measures to facilitate regular and orderly migration that avoids disruptive mass displacements from the sudden onset of such disasters as flooding.

It is also important, as expected in Sustainable Development Goal 11 (to make cities and human settlements inclusive, safe, resilient and sustainable), for countries and local governments to adopt and implement national and local disaster risk reduction strategies in line with the Sendai Framework.

If displacement occurs when disasters cannot be avoided, forcing people to move or migrate, protection measures for the migrants should be expedited. Furthermore, cross-border migrants and even persons internally displaced as a result of disasters should be supported in their efforts to acquire decent work and maximize their contribution to the socioeconomic growth of the country in which they have settled, and should be protected from all forms of exploitation and discrimination. This requires a whole-of-society approach under strong government leadership and robust coordination and institutional mechanisms in and across sectors. Countries have an important role to play in

facilitating the movement of persons and hosting displaced communities as a result of disasters by implementing gender-responsive disaster risk reduction measures. In this regard, the guidance provided by the Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change and the Platform on Disaster Displacement can help African countries to design targeted human rights-based and gender-responsive policy measures that can be implemented to facilitate people who may need to move from unavoidable stressors.

To better understand and design gender-responsive risk reduction measures that address displacement, there is need to invest in data and information management systems to collect, analyse, archive and predict risk of displacement. One of the biggest gaps in effective displacement planning, however, is the limited availability of data disaggregated by gender, sex, socioeconomic

## Selected tools and approaches for modelling disaster risk

**Probabilistic risk profiles:** The most commonly used assessment tool of the displacement risk community is the probabilistic forecast, as used by the Internal Displacement Monitoring Centre (IDMC), the United Nations Office for Disaster Risk Reduction and the Norwegian Refugee Council. It is exemplified in the models of the 2015 Global Assessment Report on Disaster Risk Reduction<sup>2,a</sup> and has been updated through the CLIMADA Framework, which provides an open source and probabilistic risk modelling platform<sup>1</sup>.

**Big data approaches:** Big data approaches use artificial intelligence or machine learning approaches to best predict displacement outcomes. An aggregated database that incorporates indicators of vulnerability and drivers of displacement is developed using sensors, digital devices, log files, the Internet and social media that locate and track online real-time data sources to process, analyse and predict disaster displacement. The software uses the training data to iteratively teach itself about what best predicts displacement over space and time.

**System dynamic models:** System dynamic models are used to explore the drivers of displacement in a deeply contextual way. Disaster settings – the circumstance that make disasters happen and that exacerbate crises – are inherently dynamic and chaotic, and these models are designed to explore the reality of non-linear relationships in complex systems. Analysts use system dynamics models to investigate the ever-changing interconnectivity of indicators that explain displacement, as they differ across contexts and time, and to analyse how the causes of displacement are influenced by other preliminary mediating factors.

**Agent-based models:** Complementing the system dynamics approach, agent-based models are less widely applied in policy decision-making, but are often included in the development of indicators that substantiate causal pathways in displacement risk assessments. Agent-based models offer a unique micro-level insight into the decisions that people make on the ground when experiencing natural and human-induced hazards, often based on people's desires and characteristics.<sup>2</sup> Such models can imitate or simulate the decision-making of individuals, families and government officials, their perceptions and circumstances when experiencing natural- and human-induced stress.

<sup>a</sup> Global Assessment Report on Disaster Risk Reduction 2015 (Geneva, United Nations Office for Disaster Risk Reduction, 2015).

<sup>1</sup> IDMC (2019) Assessing the impacts of climate change on flood displacement risk. Methodological paper. <https://tinyurl.com/m5vhmd2e>

<sup>2</sup> See Guillaume Arnoux Hébert, Liliana Perez and Saeed Harati, "An agent-based model to identify migration pathways of refugees: the case of Syria", in Liliana Perez, Eun-Kyeong Kim and Raja Sengupta, *Agent-Based Models and Complexity Science in the Age of Geospatial Big Data*, Springer International Publishing, 2018.

status and other characteristics that would help countries to accurately map, understand and predict the risk of displacement in Africa. Various organizations have developed models to predict the risk of displacement, albeit with limitations.

### Modelling disaster displacement and migration

At present, there are a number of tools, approaches and methodologies used to support research to model and predict disaster displacement. A review of these methodologies has been developed by the United Nations Office for Disaster Risk Reduction and the International Institute for Environment and Development.<sup>2</sup> Box 3 shows a summary of these models. The robust participatory approaches and tools that are based on the previously cited study by Robert Chambers on participatory rural appraisal can also be used to collect data on vulnerability to displacement.

### Data sources

The above approaches depend on data from various sources to analyse the risk of migration and displacement. Many countries and organizations, such as agencies of the United Nations system, the private sector, research foundations and universities, are collecting, analysing and achieving data on trends and damages on losses from disasters in Africa. They do, however, encounter such challenges as missing data, lack of disaggregated data and underreporting, due to limited infrastructural and technical capacities at the country level.<sup>3</sup>

The major sources of data are:

- a. Internal Displacement Monitoring Centre – Global Internal Displacement data: This database provides comprehensive information on disaster displacement worldwide associated with conflict since 2003 and that for disasters since 2008;
- b. DesInventar: This is an open database hosted by the United Nations Office for Disaster Risk Reduction that contains disaster-loss data from more than 100 countries, for the purposes of disaster risk

management and for the monitoring of the Sustainable Development Goals and the Sendai Framework for Disaster Risk Reductions;

- c. EM-DAT International Disaster Database: This is an open database maintained since 1988 by the Centre for Research on the Epidemiology of Disasters. It contains more than 22,000 disaster records worldwide from 1900 and approximately 300 events are recorded annually;
- d. NatCatSERVICE (Munich Re): This is another global database on disasters founded in 1974 in Germany that provides comprehensive and reliable information on economic and human impacts of natural hazards. Regional and country-level information is consolidated to allow for regional analysis;
- e. SIGMA (Swiss Re): This is a database on damage and losses from disasters established by the Swiss Reinsurance Company in 1968. It provides risk data, place of the disaster, date and place of disaster and information on the victims, with approximately 300–350 events added to the database annually.

### Conclusions and recommendations

The number of disaster-displaced people has continued to rise in Africa as a consequence of extreme weather events that are being aggravated by a changing climate. This has often caught many communities and governments off guard, forcing vulnerable populations to move in a disorderly and irregular manner. Implementing the Programme of Action for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030 in Africa is key to preventing and reducing hazard exposure and vulnerabilities to hazards.

The Programme of Action encourages African countries to reduce risk and vulnerabilities for migrants and is linked to Sustainable Development Goal 10, which addresses the drivers of migration in a systematic and comprehensive manner. As examining the drivers of disaster risk is an essential element in reducing the risk of displacement, African Governments need to consider integrating displacement planning into their disaster risk reduction frameworks in line with the Sendai Framework, the Programme of Action and the Agenda for the Protection of Cross-Border Displaced Person in the Context of Disasters

<sup>2</sup> For more information, see, [www.undrr.org/media/76315/download](http://www.undrr.org/media/76315/download).

<sup>3</sup> African Union Commission, Biennial Report on the Programme of Action for the implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030 in Africa (Addis Ababa, 2020).



and Climate Change. While more research is needed in order to harmonize the various tools, approaches and methodologies to better model and predict disaster displacement, African countries continue to be hampered by limited databases, owing to weak technical and institutional capacities.

The Sendai Framework can be complemented with other frameworks to better address the risk of displacement in a holistic and comprehensive manner, including their human rights. For example, the Global Compact for Safe, Orderly and Regular Migration provides more comprehensive measures that can be utilized to avert displacement and provide protection measures if it occurs. Regional economic communities such as the Intergovernmental Authority on Development and the Economic Community of West African States have also made good progress towards developing risk-sensitive measures that will facilitate migration and displacement in the context of disasters.

To better strengthen continental capacities on risk databases and anticipatory risk management, a number of recommendations are presented below.

**1. Increase investment in efforts to collect, analyse and archive data on disaster risk and damage and losses to better understand the nature of risk as a basis for building the resilience of migrants and displaced populations**

Understanding the nature of exposure and vulnerability to displacement and the impact that disaster and climate change have on people is the basis for strengthening the resilience of vulnerable populations. This requires countries to collect, analyse and archive accurate data in a usable format disaggregated by sex, gender, age, disability, migration status and other characteristics, such as how many people are exposed to or are at risk of displacement, how many are displaced, where to and for how long, all of which are useful data to guide policy and decision-making. At present, very few countries are recording these data because of technical and infrastructural challenges. The limited spatial and temporal coverage of data pose challenges in using the information to precisely predict the risk of displacement. This requires African Governments, with support from stakeholders, to take urgent action to tackle these issues.

**2. Displacement risk should be updated to account for changes in demographic, climate change and the development and displacement models revised to factor such changes**

Migration and disaster displacement are expected to continue rising in Africa as a result of population growth, increased exposure from extreme weather and climate events and land degradation. Climate change is projected to escalate the frequency and intensity of these extreme climate events, which could result in more migration and displacement on the continent. Accordingly, African countries should take into account the changes in demography, inclusive growth, climate change and the heightened frequency of these extreme events when projecting future displacement and migration risks. The current models that are used to predict the risk of displacement should account for these changes at the grid level, including the extent of future economic growth, a key driver of migration. The amount of data required to run the models is, however, significant and more effort and resources are needed to address the current data gaps at the country and regional levels.

**3. Gender-responsive preparedness measures and policies can guide orderly and safe migration and boost economic growth**

Preparedness measures and effective people-centred early warning systems are important instruments in facilitating orderly migration that avoids disruptive mass displacements from sudden-onset disasters. African countries should support cross-border migrants and even internally displaced persons in their efforts to acquire decent work and to maximize their contribution to the socioeconomic growth of the country in which they have settled and their communities of origin; and ensure that they are protected from all forms of exploitation and discrimination. Even though migrant women are often paid less than men, they remit a higher proportion of their earnings for use in health care and education in their countries of origin.<sup>4</sup> This may need other frameworks, such as the Global Compact for Safe, Orderly and Regular Migration, to complement the Sendai Framework to better address the needs of migrants.

<sup>4</sup> Human Rights Council, "The impact of migration on migrant women and girls: a gendered perspective". Report of the Special Rapporteur on the human rights of migrants (2019). A/HRC/41/38.

4. Actions for displacement and disaster risk reduction should be designed and implemented as integral priorities of interventions for climate change adaptation and implementation of the Sustainable Development Goals

## Terminology<sup>a</sup>

### Affected population

This term refers to people who are affected, either directly or indirectly, by a hazardous event. Directly affected populations are those who have suffered injury, illness or other health effects; who were evacuated, displaced, relocated or have suffered direct damage to their livelihoods, economic, physical, social, cultural and environmental assets. Indirectly affected populations are people who have suffered consequences, other than or in addition to direct effects, over time, due to disruption or changes in economy, critical infrastructure, basic services, commerce or work, or social, health and psychological consequences.

### Disaster displacement

“Disaster displacement” refers to situations in which people are forced to leave their homes or places of habitual residence because of a disaster or to avoid the impact of an immediate and foreseeable natural hazard. Such displacement results from a situation in which the affected persons being exposed to a natural hazard are too vulnerable and lack the resilience to withstand the impacts of that hazard.

### Migration

The term “migration” is used to describe movement that is predominantly voluntary. Movements that people make in an attempt to build their resilience and ability to adapt to slow-onset hazards and environmental change are referred to as “migration as adaptation”.

<sup>a</sup> Adapted from United Nations Office for Disaster Risk Reduction, Disaster Displacement: How to Reduce Risk, Address Impacts and Address Resilience, Words into Action Guidelines, Geneva, 2019.

## About the African Climate Policy Centre

The African Climate Policy Centre is a hub for demand-led knowledge on climate change in Africa. It addresses the need for improved climate information and the strengthened use of such information for decision-making in Africa by improving analytical capacity, knowledge management and dissemination activities.

## Please contact

African Climate Policy Centre  
Economic Commission for Africa  
Menelik II Road, PO Box 3001,  
Addis Ababa, Ethiopia  
Website: [www.uneca.org/acpc](http://www.uneca.org/acpc).

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