DISASTER DISPLACEMENT IN THE SENDAI FRAMEWORK FOR DISASTER RISK REDUCTIONS: IMPLICATIONS FOR INCLUSIVE GROWTH IN AFRICA

Key highlights

- ❖ The number of internally displaced population has continued to rise in Africa in the past two decades. In Sub Saharan Africa, the number of new disaster displacements jumped to 4.3 million, from 3.4 million in 2019.
- ❖ Inequality, conflict, environmental degradation, climate change and disproportionate impacts of disasters are the main factors shaping displacement in Africa.
- ❖ The Sendai Framework for Disaster Risk Reduction is an important instrument to address displacement in the context of disasters. The Framework can play a role in averting displacement, support internal or cross border migration if it occurs and provide durable solutions for migrants.
- ❖ Limited migrant and displaced persons data continues to hamper evidence-based policymaking and well-informed public discourse on migration and displacement in Africa.

The Sendai Framework for Disaster Risk Reduction

The Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030 that was adopted by 187 UN member states at the third World Conference for Disaster Risk Reduction in Japan in 2015. It commits governments to develop and implement 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 implementation of the Sustainable Development Goals (SDGs), the Paris Agreement and Global Compact for Migration (GCM).

The aim of the Sendai Framework stated as a goal is '*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 stated outcome is ' *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[1]'*.

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

Box 1: Sendai Framework Priorities for Action
1) Understanding disaster risk
2) Strengthening disaster risk governance to manage disaster risk
3) Investing in disaster risk reduction for resilience
4) Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction.

> **Box 2: The SFDRR seven targets**
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> **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)
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> **Increase**
>   E. The number of countries with national and local DRR strategies
>   F. International cooperation to developing countries
>   G. The availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people.

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

Risk = Exposure X hazard X Vulnerability

Sendai Framework and disaster displacement

Displacement and migration as a consequence of disasters has continued to increase in visibility over time as a DRR agenda. For instance, the Hyogo Framework for Action that expired in 2015 had mentioned displacement only once but the current Sendai Framework makes reference to 'displacement' or 'displaced' four times and the term 'evacuated' or 'evacuate' twice. 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 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 term 'displacement' or 'displaced', the Sendai Framework also makes reference to 'human mobility' to describe 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 on Open Ended Intergovernmental Working Group on Indicators (OEIWG) for DRR defines disaster affected people 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 SFDRR, the African Union Commission (AUC) has developed the Programme of Action (PoA) for the Implementation of Sendai Framework for Disaster Risk Reduction and further contribute to achievement of Agenda 2063 in the continent. Africa Heads of States and responsible ministers have continued to demonstrate strong commitment to the implementation of the PoA through declarations and commitments. This include the Yaounde Declaration (2015), the Tunis Declaration (2018) and more recently the Nairobi Declaration (2021). A revised matrix of PoA to guide implementation of the SFDRR and an institutional framework for implementation for multi hazard EWS in Africa were also adopted during the recent Africa Regional Platform for DRR[2]. 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 IMPACTS ON SDGs

The number of newly displaced persons as a result of disasters continues to rise in Africa in the past decade (Figure 1). According to the Internal Displacement Monitoring Centre (IDMC, 2021), the number of new disaster displacements in Sub Saharan Africa rose to 4.3 million from 3.4 million in 2019 while displacement from violence rose to 6.8 million people. Five countries with most displacements in Africa are Democratic Republic of Congo, Ethiopia, Somalia, South Sudan and Mozambique with majority of the displaced being young persons aged 5 -14 years.

The major disasters that force people to move are flooding, land degradation, locust invasion, and drought that interacted with other forces to compel people to move. The current global COVID - 19 pandemic has compounded the 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 the risks.

Disaster displacement has profound impacts on populations, particularly on children, women, older people and those with disabilities. These include social and psychological impacts, heightened requirement for protection, disruption of 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 adequate and consistent income as well as inequitable benefit from development. According to Chambers, (1994), 'social inferiority, physical weaknesses, seasonal deprivation, vulnerability, powerlessness and humiliation' interact, to form a complex web that keeps such disadvantaged populations trapped in poverty
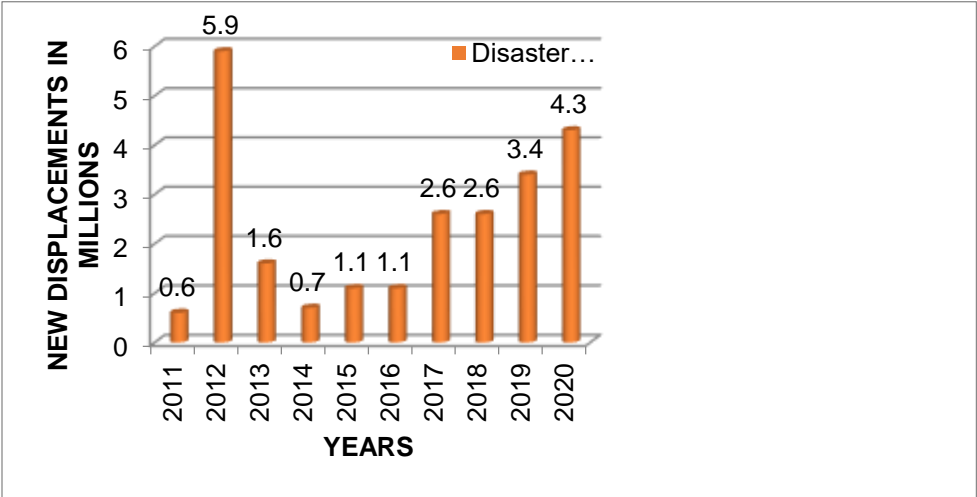
[2] UNDRR, 2021: Africa Regional Platform for Disaster Risk Reduction: The Nairobi Declaration. Prevention Web.

Figure 1: New disaster displacements for SSA, (2011-2020)

This calls for governments in collaboration with relevant stakeholders to reduce risk of displacement and support those displaced to participate in social and economic activities, build their resilience and to further enjoy their human rights. This requires all-of-society engagement under the leadership of the government with a strong coordination and institutional mechanism within and across sectors. 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.

Box 1: Terminologies
    a. Affected

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. Indirectly affected 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.

    b. Disaster displacement

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

    c. Migration

'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

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The SDG 10.7 further reinforces the commitment to leave-no-one behind and can complement the Sendai Framework to lay a strong foundation on the measures to be taken to reduce the risk of migrants and strengthen their resilience. Thus, addressing the drivers of displacement and migration in a systematic and comprehensive manner is critical to the achievement of Goal 10 of the SDGs as we make progress to achieve to 2030[3]. The Agenda's strong focus on the disadvantaged and marginalized populations, who often are ignored, can be regarded as a paradigm and revolutionary shift in the development approach.

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[3] UN, 2015: Sustainable Development Goals 2015 -2030. Goal 10.7 "Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies.

HOW TO REDUCE THE RISK OF DISASTER DISPLACEMENT

Reducing risk is critical in enhancing the resilience and adaptation of migrants and can contribute to achieving the SDGs by ensuring 'no one is left behind'. The goal of SFDRR stresses 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'. Furthermore, Target 10.7 of the SDGs lays a firm foundation on the measures to be made to reduce the risk of migrants and also strengthen their resilience. It is important to tackle the drivers of disaster in a holistic manner in order to reduce risk of the risk of displacement. On the other hand, implementing the SFDRR Priority for Action 1 play an important role since an improved understanding of disaster risk underpins the other three priorities: strengthening DRR governance, investing in DRR to build resilience and enhancing disaster preparedness and response efforts. Besides, upon recognition the increased pace in frequency and disasters globally, the UN developed guidelines for reducing risk as well as addressing displacement.

By the SFDRR emphasizing the need for strengthening preparedness measures for effective response and building-back-better in recovery and reconstruction as well enhancing multi hazard early warning systems, orderly and safe movement of at-risk populations is safeguarded. Decision makers need to leverage on these measures to facilitate regular and orderly migration. Preparedness measures including effective people-centered early warning systems are important in supporting orderly migration that avoids disruptive mass displacements from sudden onset disasters such as flooding.

However, if displacement can occur when disasters cannot be avoided, forcing people to move, or migrate, protection measures for the migrants should be expedited. Moreover, cross border migrants and even IDPs as a result of disasters should then be supported to acquire decent work and maximize their contribution to the socio-economic growth where they are settled and further ensure they are protected from all forms of exploitation and discrimination. This requires all-of-society engagement under a strong government leadership and a robust coordination and institutional mechanism within and across sectors. Countries have an important role to play to facilitate movement of persons and host displaced communities as a result of disasters implementing gender responsive DRR measures. In this regard, the guidelines on 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 guide countries design human rights-based and gender-response targeted policy measures can be designed and implemented to facilitate people who may need to move from unavoidable stressors.

To better understand and design gender sensitive risk reduction measures that address displacement, there is need to invest in data and information management system to collect, analyze, archive and predict risk of displacement. However, one of the biggest gaps in effective displacement planning is limited availability of data disaggregated by gender, sex, socio-economic status and other characteristics that would accurately help in mapping, understanding and predicting the risk of displacement in Africa. Various organizations have developed models to predict the risk of displacement, albeit with limitations.

Modeling disaster displacement and migration

A number of tools, approaches and methodologies currently exist to support research to model and predict disaster displacement. Probabilistic risk assessment is commonly used to estimate the risk of migration and displacement by CIMA Foundation, NRC, UNDRR and IOM are risk

across Africa. Probabilistic risk assessment, big data approaches, system dynamic models, agent-based models and risk indices are the methods that commonly used by various organizations to predict the risk of displacement in the context of disasters. Box 3 below shows a summary of these models. Besides, robust participatory approaches/tools that are based on Robert Chambers earlier work of 1994 on Participatory Rural Appraisal can be used to collect data on vulnerability to displacement.

Box 3: Tools and approaches for modelling disaster risk

1. **Probabilistic risk profiles:** Using probabilistic risk profiles, CIMA Foundation in collaboration with UNDRR and other stakeholders has carried out risk profiles for a number of Sub Saharan Africa Countries. CIMA used 2 climate scenarios for the 1979-2018 period with disaster risk analyzed under projected climate conditions. The basic feature of probabilistic risk assessment is to give an estimate of future displacement risk and economic losses under different scenarios for rapid onset disasters such as floods.

2. **Retrospective and prospective risk assessment:** This approach uses the number of houses damaged to estimate the number of people displaced. The data is obtained from national disaster data bases and complemented by IDMC's Global Internal Displacement Databases to account for the limited temporal and spatial data from countries. To overcome historical gaps in data bases and make the estimation global, the prospective risk assessment methodology was developed where hazard, exposure and vulnerability are used from countries. This allows to estimate the expected impact of disaster on displacement in each country(for details see the GAR 2015 Methodology).

3. **Big data approaches**: Uses 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, internet and social media that locate and track online real-time data sources to process, analyze and predict disaster displacement. The software uses the 'training data' to iteratively teach itself about what best predicts displacement over space and time.

4. **System dynamic models:** System dynamic models are used to explore the drivers of displacement in a deeply contextual way. Disaster settings − what makes disasters happen and crises exacerbate − 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 how the causes of displacement are influenced by other preliminary mediating factors.

5. **Groundswell methodology:** It used to predict climate migration that is projected to escalate as climate change grows against future changes in population and crop production over large areas. It focuses on water availability, crop productivity, sea level rise and storm surge as driver's migration

Data sources

The approaches presented in Box 3 depend on data from various sources to analyze the risk of migration and displacement. Many countries and organizations such as UN agencies, private sector, research foundations and academia are collecting, analyzing and achieving data on trends and damages on losses from disasters. There are challenges in reporting on damage and losses from disasters in the Africa including missing data, lack of disaggregated data and under reporting due to limited infrastructural and technical capacities at country levels[4].

The major sources of data are:

I.   **IDMC'S Global Internal Displacement data:** This database analyzed and provides comprehensive information on disaster displacement worldwide associated with conflict since 2003 and that for disasters since 2008.
II. **DesInventer:** It is in open data base operated by UNDRR that analyzes disaster trends and damage and losses data bases for more than 89 countries for SDG and SFDRR monitoring system.
III. **EM-DATA**: Open-data base operated by EM-DAT launched by the CRED. It contains more than 22,000 disaster records worldwide from 1900 and about 300 events are recorded annually.
IV. **Natural Catastrophe Services:** This is another global data base on disasters founded in 1974 in Germany that provided comprehensive and reliable information on economic and human impacts of natural hazards. Regional and country level information is consolidated to make to allow regional analysis.
V.   **SIGMA (Swiss Re):** This data base on damage and losses from disasters was founded by Swiss Insurer in 1970 where 300-350 events are added into the data base annually. Risk data, place of the disaster, date and place of disaster and information on the victims is included.

CONCLUSIONS AND RECOMMENDATIONS

The number of disaster displaced people has continued to rise in Africa due to extreme weather events that are being aggravated by a changing climate. This has often caught many communities and governments flat footed forced vulnerabilities to move in disorderly and irregular manner. Implementing the SFDRR is key in risk reduction with aim to prevent and reduce hazard exposure and vulnerability to hazards. The SFDRR calls for reducing risk and vulnerabilities for migrants and is also linked to Goal 10 of the SDGs that's calls for addressing the drivers of migration in a systematic and comprehensive manner. Addressing the drivers of disaster risk is an essential element in reducing the risk of displacement. Therefore, governments need to consider integrating displacement in their DRR frameworks in line with the SFDRR, AU PoA and the Agenda for the Protection of Cross-Border Displaced Person. More research is need to harmonized the various tools, approaches and methodologies to better model and predict disaster displacement. However, the limited data bases owing to the weak technical and institutional capacities in Africa continue to hamper their utility.

However, the SFDRR can be complemented with other frameworks to better address displacement in a holistic and comprehensive manner including their human rights. For instance, the GCM has more comprehensive measures that can be utilized to avert displacement and provide protection measures if it occurs. Regional economic communities such as IGAD and

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[4] AUC, 2019: Biennial 2019 Report on Programme of Action (PoA) for the implementation of the SFDRR in Africa

ECOWAS have also made good progress to develop risk-sensitive that enables migration and displacement in the context of disasters.

To better strengthen continental capacities on risk data bases and anticipatory risk management, this paper makes the following recommendations:

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

To better understand exposure and vulnerability of populations and how disasters and climate change impact on people is the basis of strengthening resilience of vulnerable populations. This requires countries to collect, analyze 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 or are at risk of displacement, how many are displaced, to where and for how long. Currently, very few countries are recording these data due to technical and infrastructural challenges and cannot be useful to guide policy and decision making. Limited spatial and temporal coverage of data poses challenges in using the information to precisely predict risk of displacement. This requires governments supported stakeholders to take urgent action.

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

Migration and disaster displacement is expected to continue rising in Africa due to 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 hence fuel more migration and displacement in the continent. Projecting future displacement and migration should therefore take into account the changes in demographic, inclusive growth, climate change and heightened frequency of these extreme events. The current models that are used to predict the risk of displacement should account for these changes at grid level including the extent of future economic growth, a key migration driver. 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 country and regional levels.

3. Gender sensitive preparedness measures and policies can guide orderly and safe migration and boost economic growth.

Preparedness measures including effective people-centered early warning systems are important in supporting orderly migration that avoids disruptive mass displacements from sudden onset disasters. Cross border migrants and even IDPs as a result of disasters should then be supported to acquire decent work and maximize their contribution to the socio-economic growth of where they are settled and communities of origin and further ensure they are protected from all forms of exploitation and discrimination. Migrant women, though they are often paid less than men, remit higher proportion of their earning for use in healthcare and education back in their countries of origin[5]. This may need other frameworks such as the GCM to complement the SFDRR to better address the needs of migrants.

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[5] UN, 2019: The Impact of migration on migrant women and girls: A gendered perspective. Report on Special Rapporteur on the Huma Rights of Migrants. United Nations Security Council, 2019.