Policy Paper

Climate Change and Human Mobility in Africa

Stephen Adaawen













Contribution to discussions at the GFMD summit 2024

SUPPORTED BY



Policy Paper

Climate Change and Human Mobility in Africa













Table of Contents

Climate Change and Human Mobility in Africa	ć
Climate Change and Human Mobility: Policy Options to Safeguard Human Security in	
Africa	6
References	12

Climate Change and Human Mobility in Africa

In Africa, climate change is contributing to observed changes in temperature, rainfall activity, as well as the increase in frequency and intensity of both sudden- and slow-onset hazards such as droughts, floods, tropical storms, sea level rise and heat waves across countries.^{1,2,3}

As highlighted in the 2022 State of the Climate in Africa report, the continent has witnessed changes in climate patterns with an average increase in temperature of +0.3°C per decade between 1991 – 2022, in contrast to the +0.2°C recorded within the period 1961 – 1990 (Table 1).3 There has also been observed changes in precipitation across regions, with rainfall anomalies (between 1991 – 2020) reflecting in reduced rainfall (deficits exceeding 150 mm in north and north-western Africa), delayed onset of rainfall (West Africa), and heavy rainfall patterns (observed above average precipitation over the Gulf of Sidra and Northern Egypt; Central Africa – more than 200 mm above average and high rainfall in parts of East Africa – Sudan and parts of Southern Tanzania).³

The corresponding increase in climate and weather-related disasters have been identified as contributing to loss and damage, as well as population displacement in the continent.^{2,4} Climate and weather-related disasters have often interacted with existing socio-economic vulnerabilities (high levels of poverty, poor urban planning, limited institutional and policy frameworks, and State fragility) to trigger displacement and (forced) migration of people in the continent.^{5,6}

In 2022, for instance, there were a total of 16.5 million internal displacements recorded in sub-Saharan Africa (SSA) – this constituted 27 percent of the global internal displacement (60.9 million) recorded within the period.2 Of the total number of internal displacements in SSA, it is estimated that 7.4 million (44.8%) were due to the impact of weather-related disasters such as drought, floods and storms in many parts of the continent.⁵

Climate Change and Human Mobility: Policy Options to Safeguard Human Security in Africa

Global climate change is expected to continue into the foreseeable future. This means that the impacts will change and drive the increase in frequency and severity of extreme events, as well as interact with existing vulnerabilities to drive the increase in population mobility - migration and internal/cross-border displacement - in Africa. 8,42 Human mobility in the context of climate change, disasters and environmental can be categorised into three types or movement (migration, displacement and planned relocation) (see Box 1).

Table 1 Near-surface Air Temperature Anomalies in °C for 2022 relative to the 1991-2020 and 1961-1990 reference periods

North Africa	0.50°C (0.40°C- 0.65°C)	1.40°C (1.24°C-1.64 °C)
West Africa	0.03°C (-0.18°C- 0.14°C)	0.50°C (0.39°C- 0.87°C)
Central Africa	0.13°C (-0.04°C- 0.37°C)	0.80°C (-0.18°C- 0.14°C)
East Africa	0.14°C (-0.02°C- 0.28°C)	0.90°C (-0.69°C- 1.12°C)
Southern Africa	0.01°C (-0.17°C- 0.12°C)	0.61°C (-0.42°C- 0.75°C)
Indian Ocean Island Countries	0.03°C (-0.04°C- 0.10°C)	0.60°C (0.49°C- 0.70°C)
Africa	0.16°C (0.06°C- 0.28°C)	0.88°C (0.74°C- 1.07°C)

Box 1 Human Mobility in the Context of Climate Change, Environmental Degradation and Disasters 'Migration': relates to movements that are voluntary with the decision often influenced by complex and multiple drivers. "Displacement': instances where people are forced to leave their usual place of habitation due to the impact of the hazard or environmental risk. Displacement and migration can take place within a country or across borders.

'Planned Relocation': involves the conscious or planned relocation or resettlement of vulnerable populations or communities to reduce or mitigate any potential environmental risks. It can be voluntary or forced, and it is most often initiated, planned and supervised by the public authorities although the processes may be initiated by the communities under threat 13

The combined impact of climate change, environmental degradation and disasters would be profound in the agricultural sector (crop farming, forestry, livestock and fisheries). This is because the agricultural sector, which serves as a source of livelihood and food security to the majority of the population, as well as national economies is largely rain-fed. 10

Aside from the impact in disrupting agricultural livelihoods, the impact of environmental degradation and climate change-induced decline in rainfall, intra-seasonal and inter-annual rainfall variability, increasing near-surface temperatures, recurring drought and increasing water scarcity will pose threats to crop and livestock production.^{2,43} The expected increase in frequency of weather-related hazards such as droughts, floods and storms in the continent, could undermine yields for especially climate sensitive crops such as maize and wheat.⁹

As shown with the analysis of wheat yield variability between 2000 – 2019 in Morocco, for example, it is estimated that the impact of increasing temperatures, drought and high precipitation had contributed to a 2 percent decline (less than 0.1 t/ha) of the average yield of wheat for the period.9 In West Africa, it is also projected that a 1.5°C global warming could result in yield decline for sorghum, while 2°C global warming will result in between 20 – 40 percent in yields for maize.^{2,44}

In the face of global food price volatility, disruption of global food supply and fertiliser due to the Russia-Ukraine war, coupled with the lack of irrigation infrastructure and agricultural services in most parts of Africa, it is envisaged that climate change, environmental degradation and disasters could threaten food and nutrition security for especially poor farm households in rural areas. ^{14,15}

Considering that the agricultural sector accounts for almost half (48%) of employment in Africa and more than 70 percent across some of the regions and countries, 10, 16,9 the impact of climate change, environmental degradation and disasters could disrupt livelihoods, affect household income and national economies.

While acute food insecurity has been the cause of human

suffering, malnutrition, social unrest and population displacement in many parts of Africa, 45,46 the recognition is that the direct and indirect impact of climate change, environmental degradation and disasters on populations will also contribute to increased displacement and forced migration of people in almost every region. 17 The World Bank and the African Climate Mobility Initiative, for example, project that in a scenario of no concrete climate and development action, the African continent could record over 100 million internal migrants by 2050.8

In especially marginal and dryland areas, it is observed that the compounding effect of reduced rainfall, recurring drought, and land degradation have, in the face of population growth and increasing water demand, exacerbated water scarcity.⁴⁷ Increasing water and resource scarcity have translated into competition and simmering tensions between farmers and pastoralists. Aside from the impact on crop production, it is observed in many regions that water scarcity and lack of pasture is affecting the livelihood activities of pastoralists.¹⁸ In West and East Africa, for example, it is observed that climate change has altered and undermined nomadism and transhumance as livelihood strategies to seasonality of rainfall for pastoralists.^{19, 48}

As a consequence, herders now have to move (also cross-border) their livestock further to wetter areas in the southern parts of the region for pasture and water (ibid.). In East and North Africa, the compounding effects of climate change-induced water scarcity, environmental degradation, elite exploitation of local grievances, state fragility and competition over scarce natural resources have served to fuel clashes and violent conflicts between herders and farmers across countries.^{20,21}

As a threat multiplier, it is recognised that the combined effect of climate-induced conflicts, environmental degradation and disasters could overwhelm existing coping systems or social safety nets. This could further lead to increased displacement, while many people may be forced to migrate as a response or adaptation strategy. Many others could be trapped and unable to move despite the risks due to the direct impacts of climate change disasters or lack of necessary capital to facilitate movement. As shown in Malawi, for example, the direct impact of climate change on populations can erode human, social, and financial capital and thereby, affect the capacity to move.²²

In the wake of climate-induced conflicts or disaster displacement, it is noted that migration or planned relocation can enhance adaptation and resilience.²³ Yet, migration, displacement or planned relocation could also compromise human security through the loss of livelihoods and incomes, lack of social capital, as well as health challenges.^{24,25}

Considering the high levels vulnerability of the African continent to climate change and disasters, the concern is that the potential change and increase in human mobility across countries could undermine the capacity of governments to effectively manage the associated impacts, as well as leverage the potential of migration as a viable climate adaptation and resilience strategy.¹³

The Human Security Approach: Towards an Integrated Approach to addressing Human Mobility in the Context of Climate Change, Environmental Degradation and Disasters in Africa

Based on a desk-based review of literature, official reports and policy documents, this policy brief thus explores the options, as well as advocates the integration of the human security approach in policy frameworks and measures to foster a more holistic, people-centred and integrated approach to addressing human mobility that also takes into consideration the multifaceted and complex nature of challenges, to the wellbeing of populations in the face of climate change and related disaters in Africa.

As an integrated and people-centred approach that addresses the multi-dimensional risks to population wellbeing, the human security approach basically focuses on instituting measures to safeguard human lives, human rights and dignity. It seeks to enhance the fundamental freedoms and capabilities of people to enable informed decisions and to allow for participation in initiatives that safeguard and improve their wellbeing. 26,27

The human security approach transcends the concerns relating to national security to a focus on addressing the multiplicity of socio-cultural, economic, political and environmental factors that interact in complex ways to threaten the wellbeing of people and ongoing efforts at inclusive growth and sustainable development.

What is human security in the context of climate change?

...a condition that exists when the vital core of human lives is protected, and when people have the freedom and capacity to live with dignity" (Adger et al., 2014: 759).²⁴

The potential of the human security approach is reflected in the fact that it is people-centred, comprehensive, context-specific, prevention-oriented, and enhances protection and empowerment of people and communities.28 Its people-centred and holistic approach to addressing the root causes of multiplicity of insecurities (economic, political, food, health, environmental, personal and community insecurities) provide a comprehensive framework that can contribute to building resilience to climate change, environmental degradation, and disasters.²⁴

Mainstreaming the human security approach into existing migration, climate change and disaster risk reduction policy frameworks thus provides the opportunity to effectively address the insecurities of populations that have been displaced, on the move or unable to do so due to climate change, environmental degradation and disasters in the African continent.

At the international level, there has been considerable progress in developing policy frameworks and measures at addressing human mobility and to enhance the potential of migration as an adaptation strategy or to improve resilience to climate change, environmental degradation and disasters.

Specifically, the Global Compact for Migration (GCM) has outlined several objectives and targets to guide States on addressing the impacts of ongoing changes in environmental, demographic, and socio-economic conditions on migration.²⁹

Under objective 2, for example, the GCM has called for actions to minimise the negative drivers and structural factors that tend to push people to leave their places or countries of origin. It further specifies under objective 2(k), for the harmonisation and development of "approaches and mechanisms at all levels in addressing the vulnerabilities of persons affected by natural disasters, by ensuring that they have access to humanitarian assistance that meets their essential needs

with full respect for their rights wherever they are, and by promoting sustainable outcomes that increase resilience and self-reliance, taking into account the capacities of all countries involved" (UN GA, 2019: 10).²⁹

The call to address vulnerabilities of persons affected by disasters and for considerations to help them meet their essential needs and respect for their rights, aligns with the call for a human security approach to disaster response and to address the human mobility dimensions of climate change, environmental degradation and disasters. Provisions to address the mobility dimensions of climate change, environmental degradation, disasters and in the context of other crises have also been respectively outlined as part of objectives 5 and 7.

Besides these provisions, several other global frameworks such as the Sendai Framework for Disaster Risk Reduction (2015-2030), the Agenda 2030 for Sustainable Development (SDGs), the Nansen Protection Agenda and the Guiding Principles on Internal Displacement have all made provisions on climate-related disaster, displacement and migration governance.

As outlined under Priority 4, for instance, the Sendai Framework details the commitment to enhance "disaster preparedness for effective response and to "build back better" in recovery, rehabilitation and reconstruction" (UNISDR, 2015:21).30 It is noted that empowering women and persons with disabilities, and promoting gender equality, by allowing for inclusion and participation in disaster risk reduction (DRR) and response are key to building back better and resilient communities for future disasters and other risks such as global pandemics and economic shocks.³⁰

At the continental, regional and national levels in Africa, there has been relative progress in outlining measures to enhance cooperation, African unity and integration in the areas such as trade, diaspora engagement, migration, free movement, disaster risk reduction, human rights, protection of refugees and internally displaced persons, as well as planned relocation. 31,32,33 As part of Agenda 2063, the African Union has indicated its commitment to address climate change and to facilitate effective policy by prioritising adaptation in all policy actions in the continent. 34

Within the context of the continental Revised Migration Policy Framework and Plan of Action (MPFA) (2018 -2030), the AU recognises the impact of environmental

degradation and poverty as root causes of migration and forced displacement in the African continent. In this light, the AU MPFA advocates the integration of environmental considerations as part of national and regional migration management policies. It is noted that this would help to better address the root causes of environmental migration and the corresponding impact on the environment.³⁵

Other notable continental frameworks such as the Kampala Convention, as well as the associated formulation of the 2017 Harare Plan of Action and the 2018 AU Model Law on Internal Displacement have all sought to promote the adequate and comprehensive protection of displaced populations (incl. disaster-related displacements) across the continent.^{36,37}

At the level of the regional economic communities (RECs), it is also noted that several regional frameworks have been developed to facilitate free movement of people and to address the effects of climate change, environmental degradation and disasters on human mobility. In the context of the Intergovernmental Authority on Development (IGAD) (East Africa) and Economic Community of West African States (ECOWAS) (West Africa), for example, both RECs have developed several measures that have promoted free movement, and measures that are specifically targeted at addressing human mobility and building resilience, and to safeguard human security in the face climate change, environmental degradation and disasters. 38,33

The potential of free movement protocols at both the continental and regional levels, and the inherent binding rights of Community Citizens, provide the opportunity for free entry and to enhance protection of cross-border displaced populations, and to exercise rights to livelihood opportunities and humanitarian assistance. However, recent analysis has identified several gaps and limitations in how these existing free movement agreements could be leveraged to enhance protection of human security for environmental migrants or cross-border displaced persons.³⁹

While acknowledging the relative progress in mainstreaming and outlining provisions on human mobility in policy frameworks at the continental, regional and national levels,³¹ the integration of measures to address the human insecurities that may exacerbate the vulnerabilities of displaced persons or environmental migrants in the continent is limited.

The relative considerations that have so far been made to enhance resilience and to safeguard human security in climate change, migration and DRR policy frameworks have mostly been generic, and without concrete actions or measures as to how to address the vulnerability circumstances of environmental migrants and displaced persons. This further undermines the prospect of offering durable solutions and meeting both global and continental commitments to promote long-term resilience, climate adaptation and inclusive growth.

To leverage the potential of the human security approach in promoting durable solutions and enhanced protection for displaced persons and environmental migrants in the African continent, the following recommendations are outlined for consideration:

i. Integrate the human security approach and human mobility in existing and upcoming migration, climate change adaptation and DRR policy frameworks and processes at the continental, regional and national levels: insights from recent analysis of regional and national migration policy frameworks have indicated limited integration of human mobility issues and measures to enhance protection of persons displaced by disasters in the African continent.31,33,38,39

Even for the provisions that have been outlined to address the different human insecurities, the measures often specified are often generic and with no specific considerations to address the vulnerable circumstances of environmental migrants and populations displaced due to disasters. There are also limited considerations or provisions to enhance protection for persons who are unable to move and thereby, trapped despite the risks to their wellbeing.

Atthe regional and continental level, the Kampala Ministerial Declaration on Migration, Environment and Climate Change (KDMECC) and its subsequent expansion into a Continental Addendum (KDMECC – Africa) has outlined a more comprehensive and people-centred commitment to address human mobility issues and to protect human security, through the provisions outlined to address the root causes of vulnerability in the face of climate change, environmental degradation and disasters in the continent, as well as harness the potential of well-planned migration to enhance climate adaptation and resilience in Africa.

Considering its promise in providing a comprehensive approach to addressing human mobility and protection for displaced persons, the recommendation is to integrate the human security approach into existing and upcoming policies and legal frameworks targeted at addressing human mobility in the continent. In addition to other policies that may be under review at continental, regional and national levels, consideration could be made to outline specific measures as part of the continental expansion of the KDMECC.

It is envisaged that this would guide the development and implementation of specific measures to address the different insecurities that tend to exacerbate the vulnerability circumstances of environmental migrants, displaced persons and sustainable (re)integration of persons being relocated or returning in the face of climate change, environmental degradation and disasters.

ii. Develop or enhance existing shock-responsive social protection (SRSP) as a proactive approach to responding to climate change and disaster impact on migration and population displacement: it is increasingly acknowledged that adequate and effective implementation of SRPS can accelerate recovery and long-term resilience to climate change, disaster and other shocks in vulnerable areas.

At the continental level, for instance, there have been commitments to improve quality of life and wellbeing for all through affordable social security and protection, as well as decent jobs and increased incomes as part of the Continental Agenda 2063.34 At the national level, the Agenda 2063 First Ten Year Implementation Plan (2013 -2023) details objectives to improve access to social protection and security for vulnerable groups.40

Despite the ongoing efforts and relative progress that has been made, there are still issues of social protection coverage deficits and lack of adequate consideration to respond to climate shocks – due to challenges of underfunding, weak governance and administration, absence of policy and institutional coordination, as well as lack of social protection in rural areas and fragile zones.41

In drawing on good examples from Ethiopia (Productive Safety Net Programme (PSNP)), Kenya (Hunger Safety Net Programme (HSNP)) and Malawi (Social Cash Transfer Programme) on addressing disaster impact

and improving resilience of vulnerable populations, the recommendation is for national governments to consider integrating or developing SRSPs as part of social protection, DRR and CCA programmes.

This could be supported with a dedicated national emergency fund that can provide ready financial support in enhancing recovery and resilience during disaster shocks. As part of the SRSPs, the coverage could be extended to vulnerable groups and communities, and provisions made to include the specific circumstances of displaced or environmental migrants. This could enhance their protection, as well as promote resilience to climate and other shocks.

iii. Develop and pursue green and blue growth economic strategies for inclusive and sustainable growth and long-term resilience to shocks: it is widely noted in both policy and scientific circles that nature-based solutions and a transition to low-carbon emission economic growth can promote CCA and DRR, as well as offer opportunities to build better and resilient communities in Africa.

Besides the potential to unleash thousands of green and decent jobs, the transition to blue and greener economies can enhance livelihood sustainability, inclusive growth and wellbeing for all. Hence, a concerted effort to integrate green growth strategies into existing and upcoming national development planning, CCA and DRR policies could accelerate the creation of thousands of green, blue and sustainable jobs that are not only decent, but would also promote inclusive growth, improved wellbeing and resilience to climate and disaster impacts in the continent.

iv. Promote skills training as part of migration, climate change adaptation (CCA) and DRR policies to facilitate livelihood diversification and employability of vulnerable populations, migrants and displaced persons: in most parts of Africa, the majority of people are engaged in the agricultural sector, which is highly dependent on rainfall, and thus vulnerable to climate change and disaster impacts. Besides the limited options for alternative livelihoods, there is also the challenge of lack of (employable) skills to allow for people to venture into alternative and more resilient livelihoods.

As a strategy to promote resilient and sustainable livelihoods, the recommendation is for national governments to institute measures to facilitate skills training as part of migration, CCA and DRR policy frameworks. Through a public-private partnership, skills training by way of Technical and Vocational Education and Training (TVET) could be extended to vulnerable migrants or displaced persons to enhance livelihood alternatives and resilience. Green skills training could also be offered to vulnerable groups, migrant workers and displaced persons. This could help to empower them with the necessary skills and to venture into alternative livelihoods, as well as facilitate their employability in the green and blue economy, as well as promote climate resilience in the medium- to long-term.

References

- Intergovernmental Panel on Climate Change (IPCC) (2022). Summary for Policymakers [H.-O.Pörtner, D.C.Roberts, E.S.Poloczanska, K.Mintenbeck, M.Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem (eds.)]. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O.Pörtner, D.C.Roberts, M.Tignor, E.S.Poloczanska, K.Mintenbeck, A.Alegría, M.Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3–33.
- Trisos, C.H., Adelekan, I.O., Totin, E., Ayanlade, A., Efitre, J., Gemeda, A., Kalaba, A., Lennard, C., Masao, C., Mgaya, Y., Ngaruiya, G., Olago, D., Simpson, N.P. and Zakieldeen, S. (2022). Africa. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 1285–1455
- World Meteorological Organization (WMO) (2023). State of the Climate in Africa 2022. WMO-No.1330. World Meteorological Organization: Geneva, Switzerland. Available at: https://library.wmo.int/records/item/67761-state-of-the-climate-in-africa-2022, accessed 08.09.2023.
- 4. African Union (2020). Biennial report on the programme of action for the implementation of the sendai framework for disaster risk reduction 2015–2030 in Africa. Available at: https://au.int/sites/default/files/documents/38982-doc-1st_africas_biennial_report_on_disaster_risk_reduction_full_report_english.pdf, accessed 25.11.2023.
- Internal Displacement Monitoring Centre (IDMC) (2023). Global Report on Internal Displacement (GRID), 2023: Internal Displacement and Food Security. Internal Displacement Monitoring Centre (IDMC)/Norwegian Refugee Council.
- International Organization for Migration (IOM) (2019).
 A Region on the Move: 2018 Mobility Overview in the Horn of Africa and the Arab Peninsula. IOM Regional Office for the East and Horn of Africa, Nairobi, Kenya.

- 7. The UN Advisory Group on Climate Change and Human Mobility (2014). Human Mobility in the context Of Climate Change: Recommendations from the Advisory Group on Climate Change and Human Mobility. Cop20 Lima, Peru. Available at: https://www.iom.int/files/live/sites/iom/files/pbn/docs/Human-Mobility-in-the-context-of-Climate-Change.pdf,accessed 28.11.2023.
- 8. Clement, V., Rigaud, K.K., de Sherbinin, A., Jones, B., Adamo, S., Schewe, J., Sadiq, N. and Shabahat, E. (2021). Groundswell Part 2: Acting on Internal Climate Migration. World Bank, Washington, DC.
- Food and Agriculture Organization (FAO) (2023) The Impact of Disasters on Agriculture and Food Security 2023 – Avoiding and Reducing Losses through Investment in Resilience. FAO: Rome, Italy. Available at: https://www.fao.org/3/cc7900en/cc7900en.pdf, accessed 28.11.2023.
- 10. Allen, T., Heinrigs, P. and Heo, I. (2018). Agriculture, Food and Jobs in West Africa. West African Papers, N°14. OECD Publishing: Paris, France.
- 11. Black, R., Arnell, N. W., Adger, N.W., Thomas, D. and Geddes, A. (2013). Migration, Immobility and Displacement Outcomes following Extreme Events. Environmental Science & Policy, 27s, S32-s43.
- 12. Ionesco, D., Mokhnacheva, D. and Gemenne, F. (2017). The Atlas of Environmental Migration (First Edition). Routledge: London and New York, pp.172.
- Melde, S. Laczko, F. and Gemenne, F. (eds.) (2017). Making Mobility Work for Adaptation to Environmental Changes: Results from the MECLEP Global Research. International Organization for Migration, Geneva, Switzerland.
- Coulibaly, T., Islam, M. and Managi, S. (2020). The Impacts of Climate Change and Natural Disasters on Agriculture in African Countries. Economics of Disasters and Climate Change, 4, 347–364.
- 15. Pickson, R.B. and Boateng, E. (2022). Climate Change: A Friend or Foe to Food Security in Africa?. Environ Dev Sustain, 24, 4387–4412.
- Kwakwa, V. (2022). Seizing the Agri-Food Opportunity in Eastern and Southern Africa. World Bank Blogs. Available at: https://blogs.worldbank.org/africacan/ seizing-agri-food-opportunity-eastern-and-southernafrica, accessed 10.11.2023.

- 17. Ibrahim, B. and Mensah, H. (2022). Rethinking Climate Migration in sub-Saharan Africa from the Perspective of Tripartite Drivers of Climate Change. SN Soc Sci, 2(87): 1-24.
- Zingg S. (2021). Exploring the Climate Change– Conflict–Mobility Nexus. Migration Research Series, N° 70. International Organization for Migration (IOM), Geneva.
- 19. Vigil, S. (2017). Climate Change and Migration: Insights from the Sahel. In: Out of Africa: Why People Migrate [Carbone, G. (eds.)]. Ledizioni Ledi Publishing: Milan, Italy, pp.51-71.
- Bessadi, N. (2019). Morocco: Rising Tensions between Nomadic Pastoralists and Sedentary Communities over Land and Water. In: Minority and Indigenous Trends 2019: Focus on Climate Justice [Grant, P. (ed.)], Minority Rights Group International, pp.163-168. Available at: https://minorityrights. org/wp-content/uploads/2020/08/2019_MR_ Report_170x240_V7_WEB.pdf, accessed 28.11.2023.
- 21. Intergovernmental Authority on Development (IGAD) (2022). Report on State of Climate, Peace and Security in the Horn of Africa. Available at: https://www.icpac.net/documents/648/State_of_Climate_Peace_and_Security_in_the_Horn_of_Africa_2022_gttu3PO.pdf, 23.11.2023.
- 22. Suckall, N., Fraser, E. and Forster, P. (2017). Reduced Migration under Climate Change: Evidence from Malawi using an Aspirations and Capabilities Framework. Climate and Development, 9(4), 298-312.
- 23. International Organization for Migration (IOM) (2022). Leaving Place, Restoring Home II: A Review of French, Spanish and Portuguese Literature on Planned Relocation in the Context of Hazards, Disasters, and Climate Change. IOM: Geneva, Switzerland.
- 24. Adger, W.N., J.M. Pulhin, J. Barnett, G.D. Dabelko, G.K. Hovelsrud, M. Levy, Ú. Oswald Spring, and Vogel, C.H. (2014). Human Security. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp.755-791.

- 25. Bower, E. and Weerasinghe, S. (2021). Leaving Place, Restoring Home: Enhancing the Evidence Base on Planned Relocation Cases in the Context of Hazards, Disasters, and Climate Change. Platform on Disaster Displacement (PDD) and Andrew & Renata Kaldor Centre for International Refugee Law.
- 26. Bell, D. (2013). Climate Change and Human Rights. WIREs Clim Change, 4, 159–170.
- 27. United Nations General Assembly (UNGA) (2012). The Future We Want. Resolution Adopted by the General Assembly on 27 July 2012. A/RES/66/288. Available at: https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_66_288.pdf, accessed 28.11.2023.
- 28. United Nations Trust Fund for Human Security (UNTFHS) (2016). Human Security Handbook: An integrated Approach for the realization of the Sustainable Development Goals and the Priority areas of the International Community and the United Nations System. UN Human Security Unit.
- 29. United Nations General Assembly (UNGA) (2019). Global Compact for Safe, Orderly and Regular Migration. Resolution adopted by the General Assembly on 19 December 2018. A/RES/73/195. Available at:https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_73_195.pdf, accessed 28.11.2023.
- 30. United Nations Office for Disaster Risk Reduction (UNISDR). (2015). Sendai Framework for Disaster Risk Reduction 2015-2030. United Nations Office for Disaster Risk Reduction: Geneva, Switzerland.
- 31. Yonetani, M. (2018). Mapping the Baseline to what extent are Displacement and other forms of Human Mobility Integrated in National and Regional Disaster Risk Reduction Strategies? Platform on Disaster Displacement (PDD): Geneva, Switzerland.
- 32. International Organization for Migration (IOM) (2019). Climate Change and Migration in Vulnerable Countries: A Snapshot of Least Developed Countries, Landlocked Developing Countries and Small Island Developing States. International Organization for Migration: Geneva, Switzerland.
- 33. International Organization for Migration (IOM). (2021). Environmental Migration, Disaster Displacement and Planned Relocation in West Africa. IOM. Geneva, Switzerland.
- 34. African Union (AU) (2015). Agenda 2063: The Africa We Want (Popular version). Africa Union Commission:

- Addis Ababa, Ethiopia. Available at: https://au.int/Agenda2063/popular_version, accessed 28.11.2023.
- 35. African Union (AU) (2018). Revised Migration Policy Framework and Plan of Action (MPFA) (2018 -2030). Africa Union Commission: Addis Ababa, Ethiopia. Available at: https://au.int/sites/default/files/documents/35956-doc-au-mpfa-executive-summary-eng.pdf, accessed 27.11.2023.
- 36. African Union (AU) (2017). Plan of Action for the implementation of the Kampala Convention adopted by conference of states parties (Harare Plan of Action). Available: https://au.int/sites/default/files/pressreleases/32341-pr-pr_051_-_kampala_convention.pdf, accessed 23.11.2023.
- 37. African Union (AU) (2018). African Union Model Law for the Implementation of the African Union Convention for the Protection of and Assistance to Internally Displaced Persons in Africa, 12 April 2018. Available at: https://www.refworld.org/docid/5afc3a494.html, 23.11.2023.
- 38. Nyandiko, N. and Freeman, R. (2020). Disaster Risk Reduction, Climate Change Adaptation and Development Policies and their Consideration of Disaster Displacement and Human Mobility in the IGAD Region. IGAD/NRC/PDD. Available at: https://disasterdisplacement.org/portfolio-item/drr-ccadevelopment-policies-and-disaster-displacement-human-mobility-in-igad/, accessed 12.11.2023.
- 39. Wood, T. (2019). The Role of Free Movement of Persons in Addressing Disaster Displacement of Persons: A Study of Africa. Platform for Disaster Displacement: Geneva, Switzerland.
- 40. African Union (AU) (2015). Agenda 2063: The Africa We Want First Ten-year Implementation Plan 2013 2023. African Union. Available at: https://wedocs.unep.org/bitstream/handle/20.500.11822/20823/Agenda%202063%20-%20FIRST%20TEN%20YEAR%20PLAN%20%20%20September%20%202015.pdf?sequence=1&isAllowed=y, accessed 29.11.2023.
- 41. International Labour Organization (ILO) (2021). Africa Regional Social Protection Strategy, 2021-2025: Towards 40% A Social Protection Coverage Acceleration Framework to Achieve the SDGs. Available at: https://www.ilo.org/wcmsp5/groups/public/—africa/—ro-abidjan/documents/publication/wcms_828423.pdf, accessed 28.11.2023.

- 42. Amakrane, K., Rosengaertner, S., Simpson, N. P., de Sherbinin, A. Linekar, J., Horwood, C., Jones, B., Cottier, F., Adamo, S. et al. (2023). African Shifts: The Africa Climate Mobility Report, Addressing Climate-Forced Migration and Displacement. Africa Climate Mobility Initiative and Global Centre for Climate Mobility: New York.
- 43. Mckinsey Global Institute (2020). How will African Farmers Adjust to Changing Patterns of Precipitation? McKinsey Global Institute. Climate Risk and Response Case Study: Agriculture in Africa. Available at: https://www.mckinsey.com/~/media/mckinsey/business%20functions/sustainability/our%20insights/how%20will%20african%20farmers%20adjust%20to%20changing%20patterns%20of%20precipitation/mgi-how-will-african-farmers-adjust-to-changing-patterns-of-precipitation.pdf, accessed 11.01.2024.
- 44. Sultan, B., Defrance, D. and lizumi, T. (2019). Evidence of Crop Production Losses in West Africa due to Historical Global Warming in two Crop Models. Scientific Reports, 9(12834): 1-15.
- 45. Food Security Information Network (FSIN) and Global Network Against Food Crises (2022). Global Report on Food Crises 2022 Mid-Year Update. Rome, Italy. Available at: https://www.fsinplatform.org/sites/default/files/resources/files/GRFC%202022%20 MYU%20Final.pdf, accessed 11.01.2024.
- 46. Food and Agriculture Organization (FAO) (2023). Championing Climate Actions to Avert Food Crises and Malnutrition in Eastern Africa. Available at: https://reliefweb.int/report/world/championing-climate-actions-avert-food-crises-and-malnutrition-eastern-africa#:~:text=Climate%20change%20 leads%20to%20a,people%20in%20sub%2DSaharan%20Africa., accessed 11.01.2023.
- 47. Isaacman, A. and Musemwa, M. (2021). Water Security in Africa in the Age of Global Climate Change. Daedalus, 150(4): 7–26.
- 48. Njiru, B.N. (2012) Climate Change, Resource Competition, and Conflict amongst Pastoral Communities in Kenya. In: Climate Change, Human Security and Violent Conflict [Scheffran, J., Brzoska, M., Brauch, H., Link, P. and Schilling, J. (eds)]. Hexagon Series on Human and Environmental Security and Peace, vol 8. Springer, Berlin, Heidelberg.

Author's Biography

Dr. Stephen Adaawen is a researcher and international consultant. He has more than 13 years of experience in being actively involved in international research and consulting for many international organisations including the UNCCD, IOM, ICMPD, World Bank, GIZ, IDOS (DIE) and Misereor in providing critical insights, sustainable solutions and interventions on issues of sustainability, climate/environmental change and development, with a specific focus on sub-Saharan Africa and more recently, the Caribbean. He was also involved in contributing to building migration scenarios from West Africa to the EU under auspices of the Käte Hamburger Kolleg/Center for Global Cooperation Research, Duisburg-Germany and the Friedrich Ebert Foundation (FES, Germany).

His many years of work have bordered on issues of climate/environmental change, migration, the green economy, remittances and development, international migration governance, agriculture and rural development. He is currently involved in developing a Human Security Policy Assessment Tool in the context of climate change and human mobility, which was piloted across 11 Eastern Caribbean countries under the auspices of the United Nations Trust Fund for Human Security (UNTFHS) and IOM Dominica. He also implemented the IOM Integrated Human Mobility Assessment Tool developed by the IOM, CADRI, PDD and UNHCR in Sierra Leone.

Currently, he is an Assistant Professor of Climate Change, Population and Development at the Population Research Centre (Faculty of Spatial Sciences), University of Groningen, The Netherlands.

Policy Paper

Climate Change and Human Mobility in Africa









