



Disaster induced displacement and durable solutions in Africa

Freeman Munisi Mateko¹ · Noncedo Vutula²

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Abstract

Climate change represents a significant challenge to the sustainability of the global economy. Many African countries have suffered the repercussions of environmental and climate deterioration, most notably internal displacement. This article sought to examine the impact of climate change within the context of internal displacement in Africa and to preview and describe the trends of internally displaced people in Africa. The study used a mixed methods approach. Qualitative data was obtained from online repositories, and it was analyzed using content analysis. Quantitative data was obtained from World Bank portal and it was analysed using descriptive statistics. Research findings have shown that Africa is plagued by a high number of internally displaced people. It was also established that climate change leads to income inequality, the exposure of people to poverty, and the destruction of infrastructure. These adverse effects affect the capacity of African economies to attain selected Sustainable Development Goals. In terms of policy recommendations, it was suggested that there is a need to strengthen the regional and continental bodies, invest in climate change adaptation measures, broaden the definition of refugees to include climate refugees, and promote robust research and capacity building.

Keywords Climate change · Displacement · Poverty · Migration · Refugees · Sustainable development goals

1 Introduction

The increasing occurrence of climatic events such as floods, heat waves, and droughts has heightened the threat to the continent's food security, affecting people's livelihoods and contributing to the displacement of people (Heshmati 2020; Smart et al. 2023). In addi-

✉ Freeman Munisi Mateko
matekofreeman90@gmail.com

¹ DST/ NRF South African Research Chair in Industrial Development, University of Johannesburg, Johannesburg, South Africa

² The Nelson Mandela School of Public Governance, University of Cape Town, Cape Town, South Africa

tion, research reveals that there will be a rise in human migration due to the inability of people to adapt to the impacts of climate change (Klaiber 2014). Different scholars have also cautioned that climate change will continuously cause human migration and, in turn, undermine national development, create inequalities, violate human rights, and promote insecurity (Faist 2023; Piguet 2011; Watson et al. 2022; Wright et al., 2021; Ravengai 2023).

By 2050, the World Bank predicts that migration inside Africa might account for around 86 million people due to climate change (World Bank 2022). Over 10.1 million people are relocated in Southern Africa or internally displaced as a result of natural disasters connected to climate change, drought, instability, and economic pressures (Mbiyoza 2023; United Nations 2022). These statistics show that the consequences of climate change may lead to increased internal displacement in Africa unless solutions are put in place to minimize that. Africa's urban communities are under tremendous pressure to take in inter-country and resource-constrained rural refugees as well as climate refugees (Mpandeli et al. 2020). This implies that the adverse effects of climate change lead to overpopulation in urban areas. Most metropolitan areas are exceeding their ecological thresholds to support the built environment, causing some socio-ecological challenges. This research paper seeks to examine the impact of climate change within the context of internal displacement in Africa. Other objectives of the study are:

1. To preview and describe the trends of internally displaced people in Africa.
2. To suggest possible solutions for solving disaster induced displacement.

The research is worth pursuing because the impact of climate change affects other developmental imperatives in Africa, such as structural economic transformation, poverty reduction, and the achievement of the Sustainable Development Goals (SDGs) (Laumann et al. 2022). As a result of the impact of climate change, there are more frequent occurrences of climate events, in particular floods, droughts, cyclones and heat waves. These catastrophic weather events result in increased threats of food insecurity, water shortages, degeneration of natural resources, reduced biodiversity, a decline in human health viability, increased land degradation, desertification, and coastal erosion. Notwithstanding the heavy impact of climate change, Africa contributes only 3–4% of greenhouse gas emissions (Bedair et al. 2023). However, the preparedness of African countries in terms of disasters or climate change effects is still a cause for concern. To add more, from a financial perspective, between 2019 and 2020, \$29.5 billion in climate finance was committed to Africa's climate adaptation programs (Ijjasz-Vasquez and Saghir 2023). This also shows that the adverse effects of climate change are costly from a monetary perspective. This research paper is structured as follows: Sect. 2 provides a conceptual framework, followed by an empirical literature review and the research methodology is presented under Sect. 3. Section 4 presents the research findings and the policy recommendations and conclusion will be presented at the end under Sects. 5 and 6 respectively .

2 Literature review

2.1 Theoretical framework

The United Nations has consistently raised the need to protect people displaced by climate change and disasters because the number of people displaced by climate and natural disasters is increasing. In addition, several international initiatives have raised the issue of climate change and disaster displacement (Ahmed et al. 2021). These initiatives include the Sustainable Development Goals, the Sendai Framework for Disaster Risk Reduction, the World Humanitarian Summit, the New York Declaration for Refugees and Migrants, the Nansen Initiative on Disaster-Induced Cross-Border Displacement, and the Platform on Disaster Displacement (Emeerton, et al., 2020; Yamamoto et al. 2017).

The Platform on Disaster Displacement notably stipulates the capacity to anticipate displacement and to determine what kind of ‘protection’ is called for, by whom, and where (Platform on Disaster Displacement, 2019). Unfortunately, the existing global policy interventions, such as the Global Compact on Refugees and the Global Compact on Safe, Orderly, and Regular Migration, have fallen short of providing the required solutions. However, these existing frameworks remain relevant as they provide considerable scope for institutional, rights-based developments. Moreover, the links between climate change, disasters, and other causes of displacement are now undisputed.

In addition to serious human rights abuses and poor governance, people are ‘on the move’ because of acute poverty, the collapse of traditional livelihoods in a context of globalization and rapid urbanization, the effects of climate change, natural disasters, and environmental degradation, which often exacerbate competition over scarce resources (Aly 2014; Durojaye 2020). Often, these various factors overlap or reinforce each other. According to the Nansen Initiative on Disaster-Induced Cross-Border Displacement, people increasingly leave their homes because of the interaction between environmental degradation, natural hazards, and climate change and the effects of rapid urbanization, water insufficiency, food insecurity, and energy insecurity, exacerbated by desertification, drought, flooding, and the growing severity of disasters (Adeola 2015; Kalin 2015).

People who move in such circumstances are often doubly vulnerable due to the locations and conditions in which they live and the risk they face of repeated displacement (Kalin 2015). The drivers of displacement today are profound and complex, and this will continue. Climate change can contribute to conflicts that cause displacement and exacerbate existing displacement situations. Protective needs must always be front and center in addressing displacement in these contexts.

The UNHCR’s five-year strategic plan notes that conflict is not the only driver of displacement (Goodwin-Gin and Mac Adam 2017). The UNHCR is hinged in 5 plans which are: strategic partnerships, leveraging for inclusion, global advocacy, improving resilience and implementing development projects (UNHCR 2023).

Some key stakeholders have concerns regarding UNHCR’s engagement, which primarily reflect those expressed earlier regarding the internally displaced. These include:

- i. The ‘sovereignty issue’ and the apprehension that the UN and its partner organisations will interfere in the domestic affairs of the state concerned.

- ii. The ‘core mandate issue’ and the responsibility to provide international protection and to seek solutions for refugees forcibly displaced across borders.
- iii. The related ‘resources issue’: fears that funding will either not be forthcoming or that it will be diverted from core activities.
- iv. The general suspicion of anything that looks like ‘mission creep (United Nations High Commissioner for Refugees 2022).

New ideas and proposed solutions need to be cognizant of the UNHCR’s involvement with disaster displacement and its role in providing humanitarian assistance. Additionally, the role of UNHCR within the UN system needs to be acknowledged, particularly in relation to climate refugees and disaster displacement. The UNHCR’s primary responsibility is to provide international protection and to provide solutions to displaced people across borders (UNHCR, 2024). However, it should not be the task of UNHCR alone to address internal displacement, other stakeholders such as governments, non-governmental organisations and civic organisation have a role to play as well. This research paper highlights the need for one of the UN agencies to focus on the special needs of climate refugees. This role can either be located under the United Nations Framework Convention on Climate Change (UNFCCC) or the UNHCR. One of the cross-cutting issues that is re-linked to climate change is climate finance.

2.2 Empirical literature review

In the African continent, the impact of climate change is severe in many sectors. The rise in temperature and changes in rainfall patterns have increased the frequency and intensity of extreme weather events across the continent. Previous research has been done on the links between climate change and human migration and displacement (European Migration Network Inform 2023; Omukuti et al. 2023; Stapleton et al. 2017; Weerasinghe 2021). However, considerably less attention has been given to structured and sustainable solutions to emerging and unplanned climatic disasters, particularly in Africa.

Seweneti and Belay (2019) researched on the causes and impacts of internal displacement in Ethiopia. The study revealed that the country’s policy of resettlement and relocation (development-driven causes), conflict such as intercommunal violence, regional political instability, ethnic tensions, and localized conflicts, and the poor governing capacity of the country were all related to climate-induced factors (Seweneti and Belay 2019).

These findings show that the causes of internal displacement are linked to climatic issues, and as such, there is a need for durable solutions to alleviate such dire situations. However, the study covered Ethiopia only, and the rest of the African economies were excluded. Thus, there is a gap that needs to be closed. Finally, the study is also silent on the practical, durable solutions that can be implemented to solve the challenges faced by Ethiopia. This current study seeks to provide long-lasting solutions to the challenges of climate change and internal displacement.

Williams (2019) established that internal displacement in Africa is primary due to poor governance, unresolved conflicts, environmental factors such as drought and flooding, and economic factors such as unemployment and poverty. Williams (2019) and Seweneti and Belay (2019) share similar research findings on the causes of internal displacement, and cli-

mate change is a major factor mentioned by both scholars. This implies that there is a need for a holistic approach to solving climate change challenges in Africa.

Regional boards in Africa, such as the Southern African Development Community (SADC) and the African Union (AU), should be pro-active in dealing with climate change and internal displacement issues. They should be able to offer solid disaster reduction and management solutions and avail financial resources to assist the victims of climate change. Lekan (2021) supports the above sentiments and goes on to mention that in Africa, SADC and AU, as well as other regional boards, have a mandate to address internal displacement and the adverse effects of climate change. However, the effectiveness of these boards is a cause for concern because Africa remains a continent with the largest number of IDPs (Lekan 2021). Therefore, more need to be done to solve internal displacement and adverse climate change effects.

Amadi and Vundamina (2023) established that when regional boards in Africa work collaboratively, they can help mitigate the adverse effects of climate change. In their research, they established that a Protocol on the Free Movement of Persons and the Right of Residence and Establishment was approved in 1979 by the 15-member state organization known as the Economic Community of West African States (ECOWAS), which is located in the West African subregion (Amadi and Vundamina 2023).

The East African Community (EAC) also established visa-free travel for citizens of its member states, which helps when people need to migrate due to natural disasters such as floods or droughts (Amadi and Vundamina 2023). Lekan (2021) and Amadi and Vundamina (2023) share similar views on the importance of African regional boards in providing practical solutions to solve climate change and IDP.

Falola (2023) established that internal displacement in Africa is primarily due to climate change, natural disasters (for example, floods and droughts), as well as other factors such as armed conflicts, political instability, and ethnic tensions. The study also revealed that certain mechanisms have been put in place to deal with internally displaced people (IDPs). For instance, the African Union established the Kampala Convention, also known as the African Union Convention for the Protection and Assistance of IDPs in Africa (Falola 2023). This shows that the regional board in Africa is working towards addressing IDPs; however, more need to be done by such boards in Africa to effectively address IDPs. This is crucial because, as discussed prior, the number of IDPs continues to increase in Lekan (2021), Amadi and Vundamina (2023), and Falola (2023) both share similar opinions on the importance of addressing the adverse effects of climate change and internal displacement.

Finally, the research cites that many African economies have diverse disaster plans and legal frameworks for addressing IDPs, but they seem to be ineffective or underfunded because recent natural disasters, for example, Cyclone Idai, left scores displaced and exposed to dire poverty levels. It is also crucial to note that there are deaths that cannot be accounted for due to the Cyclone Idai. Therefore, African economies need to inject financial resources, revise their disaster management policies, and invest in research and development so as to effectively reduce the adverse effects of climate change.

Table 1 Database and keywords

Database	Keywords
Science Direct Scopus Web of Science Google Scholar	Climate change, Africa, internal displacement, floods, cyclone, drought, natural disasters.

Source Researcher's Construct (2024)

Table 2 below shows the inclusion and exclusion criteria used in this research

Criteria	Inclusion	Exclusion
Type of literature	Journals, conference papers and books	Blogs, editorials, book chapters, and commentaries
Language	English	If not reported in English
Publication dates of research articles	Articles published between 2008–2023	Articles published before 2008
Region	Countries in Africa	Countries outside Africa
Title and abstract	Articles which focused on climate change and internal displacement in Africa.	Articles that did not focus on climate change and internal displacement in Africa
Full screening of research articles	Includes information on climate change and internal displacement in Africa	If the research articles excluded information on climate change and internal displacement in Africa.

Source Researcher's Construct (2024)

3 Methodology

This research paper is based on mixed research techniques. Quantitative data was obtained from the World Bank portal. Qualitative data on climate change and displacement is used in the study. Primary keyword searches in electronic databases, such as Science Direct, Scopus, and Google Scholar, as well as reference checking of the retrieved studies, were used to find the pertinent publications for this study. Table 1 below shows the database and keywords used.

In short, Table 2 shows that the articles used in this study were written in English and published between 2011 and 2023. All these articles focused on climate change and internal displacement in Africa. In terms of data extraction, the researchers searched for literature that focused on climate change and internal displacement in Africa. The literature was appraised, and the main themes were drawn from the literature. To meet the demands of Preferred Reporting Items for Systematic Reviews and Meta-Analyses, a total of 50 articles were searched from the different databases. 5 duplicates were removed. 45 articles were screened to ensure that they matched the required inclusion criteria. 5 articles were removed after screening, and a total of 40 articles were used for analysis in this study. Document analysis was used for analyzing the key issues that centered on the topic under study.

4 Findings

This section seeks to present the research findings. The first number of displaced people in Mozambique, Malawi, Zimbabwe and Madagascar due to cyclone Idai.

Table 3 shows that a total of 616,550 people from Mozambique, Malawi, Zimbabwe, and Madagascar were internally displaced due to Cyclone Idai. To add more, as shown by Table 1, in December 2019, the estimated number of internally displaced persons was 197 658 for the 3 African countries, but there has been an increase of 418 892 IDPs because of the disastrous cyclone Idai (Internal Displacement Monitoring Centre, 2019). This shows a more than double increase in IDPs, and no meaningful solutions have been presented so far to alleviate the problem.

For the bulk of African countries, especially Zimbabwe, disaster preparedness is still poor. Since Cyclone Idai was wreaking havoc, the Zimbabwean government claimed it had prepared alternative accommodation as part of its rescue plans. Surprisingly, some reports show that the identified schools, which were to be used as shelters, and the heads of such schools had not received any communication or resources to use for disaster preparedness. Thus, African governments need to refrain from pulling public stunts when it comes to climate change and disaster management.

Figure 1 above shows ten (10) African countries that were affected by natural disasters. It shows that between 2008 and 2021, Burundi and Botswana had the highest number of IDPs. Overall, it can be concluded that all countries in Panel A recorded fluctuating numbers in terms of IDPs. This is attributed to the fact that the nations experienced varying disasters, and their effects were different. However, for all these countries, whenever a disaster happens, there are people displaced internally, and there is a need for tailor-made solutions to ensure that the number of IDPs is minimized. This, in the long run, will help to improve livelihoods as well as the attainment of the Sustainable Development Goal 13 of climate action.

Figure 2 shows Ethiopia and the DRC had high values of IDPs. These 2 countries are prone to natural disasters such as drought and floods, just to mention a few. As such, if there are no lessons drawn from the previous adverse effects of these natural disasters, more and more people will continue to be displaced internally in these countries. This, to some

Table 3 Disasters and displaced people in Africa

Country	Mozambique	Malawi	Zimbabwe	Madagascar	TOTAL
New displacements ¹	478,169	86,976	50,905	500	616,550
Estimated IDPs as of 31 December 2019 ²	93,516	53,237	50,905	N/A	197,658
Houses destroyed ³	111,202	N/A	10,097	N/A	112,125
People pre-emptively evacuated before the event ⁴	N/A	N/A	N/A	N/A	
People officially sheltered after the event ⁵	77,019	86,976	1273	N/A	165,268

Source Internal Displacement Monitoring Centre (2019)

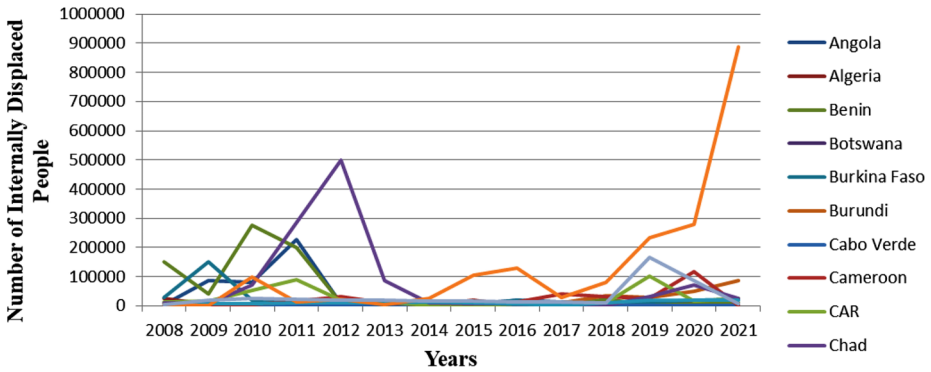


Fig. 1 Internally Displaced People: 2008–2022. *Source* World Bank (2022)

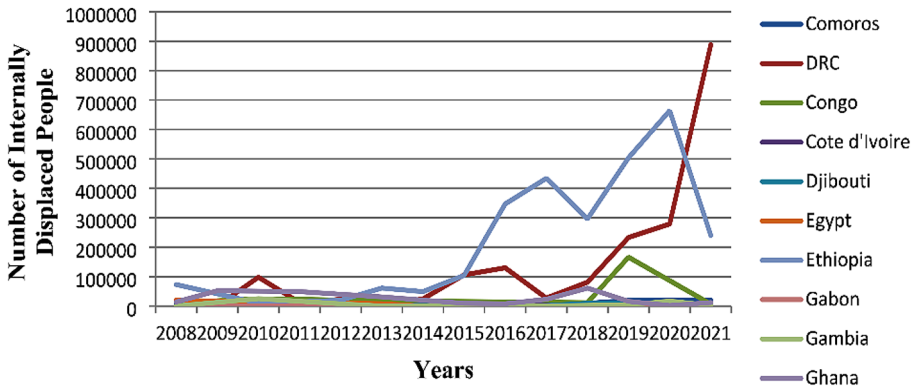


Fig. 2 Internally Displaced People: 2008–2022. *Source* World Bank (2022)

extent, may depict ineffective disaster management plans. Thus, tailor-made solutions such as investing in technology for the detection of floods and droughts are key to solving internal displacement. For other countries, as shown in the above figure, though the figures for IDPs vary, it does not imply that the effect is small. As such, it is the duty of every economy in Africa to minimize internal displacements and ensure that climate change and disaster control are prioritized.

Figure 3 above shows that Malawi, Kenya, and Madagascar were the top 3 countries that were affected by natural disasters between 2008 and 2021. This is mainly attributed to Cyclone Idai, which displaced thousands of people in these countries. Thus, resource mobilization is very important, as in the case of Cyclone Idai, it was early detected, and the respective governments should have relocated people on time and put other measures in place, such as rescue efforts, food provision as well as information dissemination. However, little was done, and the number of people who die and are internally displaced remains high. Therefore, there is a need for African governments to also continually check on people who dwell in disaster-prone areas and relocate them before a disaster happens. This can be a very good long-term solution to reduce the number of IDPs. Although other countries shown

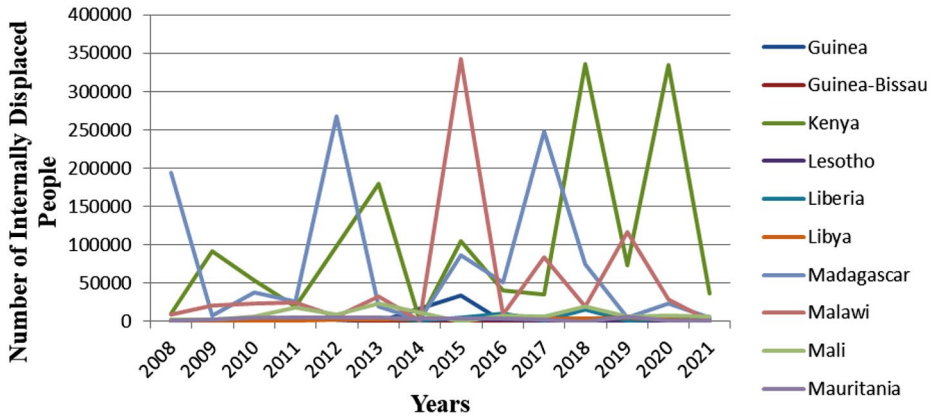


Fig. 3 Internally Displaced People: 2008–2022. Source World Bank (2022)

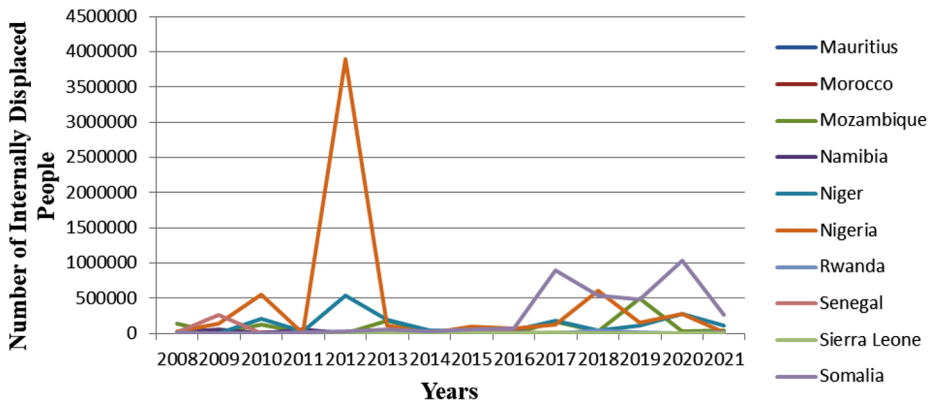


Fig. 4 Internally Displaced People: 2008–2022. Source World Bank (2022)

under Panel C seem to have low numbers of IDPs, there is a need for effective measures to be implemented by the respective governments to minimize the number of IDPs.

Figure 4 above shows that Nigeria had the highest number of IDPs. These are some of the natural disasters that affect Nigeria: floods, droughts, oil spills, bushfires, and landslides (Ogunrinde, Oguntunde et al. 2020). Somalia is also one of the countries that recorded a high number of IDPs. To some extent, the weaker political systems continue to impact the number of IDPs. For example, this is so because Somalia has been facing political turmoil for a long time. As such, the government or responsible authorities will have limited time to focus on the social protection of livelihoods as they will be battling for power in the political arena (Bakonyi et al. 2019). Thus, solving internal displacements does not only require robust policies, but other factors such as political and economic stability should complement them too. This is crucial since even politically stable countries with weak economic status still cannot offer more resources towards climate change and disaster management.

Figure 5 shows that Nigeria had a higher number of people displaced between 2008 and 2021. This is mainly attributed to natural disasters and other factors such as Boko Haram

attacks, communal and political conflict (Godfrey and Tafida 2022). To add more, the economy is prone to floods, and in terms of economic development, the economy is still growing and has other macro- and micro-economic challenges. UNICEF (2022) supports the above assertion and pointed that 4.4 million people were affected by floods in Nigeria in 2022 and 2.4 million were also displaced. This, to some extent, limits its capacity to address key issues related to climate change and disasters. It is crucial for Nigeria to prioritize climate change adaptation techniques as well as minimize internal displacements. This can be achieved by increasing human capital development, acquiring financial and non-financial assets, and building partnerships with other civic organizations. Other countries have low numbers of IDPs, and although some of these countries are not prone to natural disasters, climate change is still a real threat that requires holistic and collaborative effects to be solved.

Finally, Fig. 6 above shows that South Sudan and Sudan had high numbers of IDPs. Droughts and floods are the main disasters that affect these two countries. The countries have been subjected to political upheaval, which has further increased the number of IDPs (Omer 2019). Zimbabwe is also an economy that was affected by cyclone Idai, and even prior to 2008, cyclone Eline also caused a large number of IDPs. The country's weak economic and social structure is to blame for the high number of IDPs. This is so since the country is facing competing needs such as addressing political instability, tackling macro-economic objectives such as unemployment and economic growth and it still has to deal with IDPs too. Furthermore, since the economy has other macro-economic challenges, there seems to be limited interest by the country in attending to climate change and natural disasters.

To add to that, South Africa, especially Durban, was also affected by floods in April 2022, and a number of people were displaced (Bouchard et al. 2023). One common feature that applies to the bulk of African countries is the lack of disaster preparedness, lack of financial resources, and limited human capital. These are key issues of concern that must be tackled to ensure that IDPs are reduced. The first research objective of the study aimed to preview and describe the trends of internally displaced people in Africa. The above explanations and figures show that African economies have been affected differently due to climate change, and overall, the number of IDPs is high. Therefore, the first research objective of

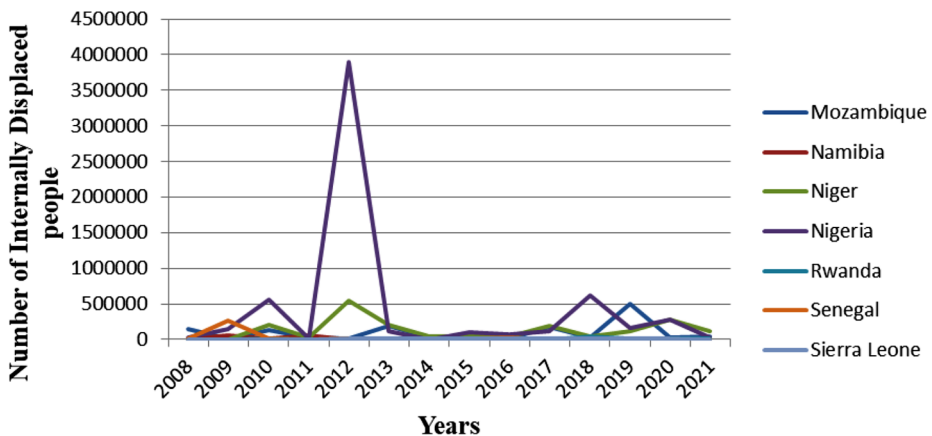


Fig. 5 Internally Displaced People: 2008–2022. Source World Bank (2022)

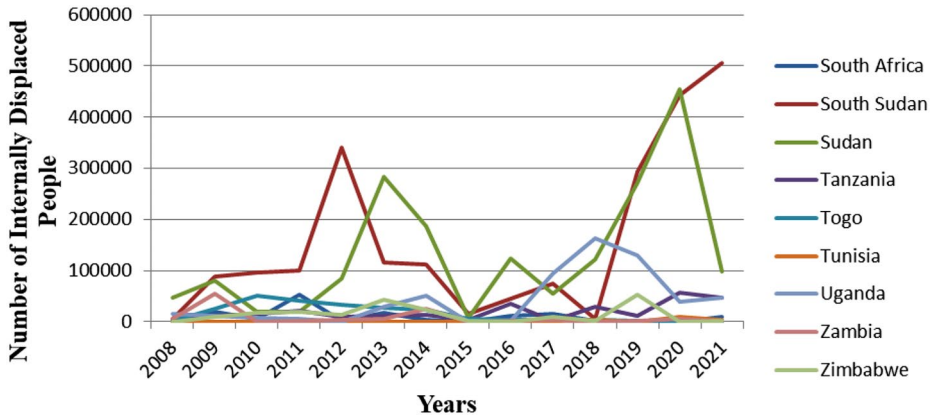


Fig. 6 Internally Displaced People: 2008–2022. Source World Bank (2022)

the study was successfully answered, as a sufficient description of each African country and the associated number of internally displaced people was presented.

4.1 Impacts of climate change

This paper sought to examine the impacts of climate change as well as disasters in Africa. Climate change is a global anathema, and the African continent has been plagued by diverse disasters that result in the displacement of people. From the study it was established that there are several effects of climate change, and they range from food insecurity to increased inequality, loss of life, poverty, and displacement of people and these can be classified as social effects of climate change. These adverse effects of climate change affect the capacity of African economies to attain some of the selected Sustainable Development Goals, such as goal 1: poverty reduction and goal 2: zero hunger, among others. Climate change effects which lead to internal displacement leads to increased expenditure by the government to cater for humanitarian aid. This leads to the loss of revenue from the financial coffers thus it becomes an economic cost. Apart from that, climate change also affects agricultural production which also affects food security (Kitole et al. 2024). Migration is another effect of climate change. It leads to people migrating to other countries and this can be viewed as a political issue since when people migrate, they become refugees (Bhat 2022). These refugees maybe treated differently by the host countries and this can lead to political unrest or strained relations between countries.

These research findings are on par with the views of (Cevic and Jalles 2023; Dagnachew et al. 2021; the Intergovernmental Panel on Climate Change 2023; Torsu and Kronke 2023). All these authors cited that climate change is a stumbling block to the attainment of sustainable development goals. The above explanation answers the main objective of the study, which was to examine the impact of climate change in Africa.

5 Key policy recommendations

This section provides key policy recommendations that can be used to address the challenges of climate change and IDPs. The possible key recommendations suggested are: broadening the definition of refugees to include climate refugees; investing in climate change adaptation measures; strengthening regional and continental bodies; and robust research and capacity building.

5.1 Broadening the definition of refugees to include climate refugees

Dealing with climate change refugees is a relatively new phenomenon. As a result, the UN system needs to include the legal definition for climate change refugees under the UN Refugee Convention so that these refugees also benefit from UN provisions and protection. This will help to ensure that, at the international level, the issue of IDPs gets the attention it deserves.

5.2 Investment in climate change adaptation measures and resources mobilization

African countries need to invest in climate adaptation measures. This includes a shift to renewable energy and the protection of wetlands, just to mention a few. This can work provided there are also sound and robust environmental policies at the grassroots, national, and continental levels. These policies must be enforced to ensure that meaningful benefits accrue as far as climate change is concerned. This paper also proposes that the African continent should adequately mobilize resources to provide climate finance for greening the continent. All in all policies should be complemented by the financial resources availed towards addressing the effects of climate change in Africa.

5.3 Strengthening the regional and continental bodies

There is a need for strengthening and reviewing the policies used sub-regional and African regional organs such as the Southern African Development Community, the Common Market for East and Southern Africa, and the African Union. These boards need to have robust policies that enable them to respond effectively to the challenges brought by climate change and harness modern technology for mitigating climate change and disaster management. This should also be coupled with financial and non-financial resource mobilization because policies alone without funding will not yield significant results as far as addressing climate change and IDP are concerned. All in all, regional and continental bodies should work collaboratively and ensure that their policies along to address the adverse effects of climate change and IDPs.

5.4 Robust research and capacity building

There is a need for African governments to invest in modern research on climate change and disasters. In addition, such research should be supported by the creation of a database on climate change and disasters to enhance further research. This will help scholars develop more research and sustainable solutions to the subject matter. For example, Eritrea and Equatorial Guinea do not have any published statistics on climate change and disasters. This does not imply that these countries are free from the effects of natural disasters or climate change. All the above policy recommendations satisfy the demands of the second research objective of the study.

6 Conclusion

This research sought to examine the impact of climate change in Africa and to preview and describe the trends of internally displaced people in Africa. Research findings indicated that little has been done by African governments to address the negative effects of climate change and the number of IDPs remains very high. Different effects of climate change were discussed as well. Finally, a number of solutions were presented and discussed that can help to address climate change effects and IDPS.

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Declarations

Ethical approval Research used secondary data (journals) from online repositories hence no ethical clearance was needed.

Competing interests The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. No ethics was needed because the study used data publicly available from online repositories.

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