

Impact of Climate Change in Tanzania



Introduction

Climate change is a global phenomenon that has far reached impacts on Human societies and the environment. Tanzania, like many other countries in the SADC region, is particularly vulnerable to the effect of climate change. This case study aims to provide an overview of the effects of climate change in Tanzania of the targeted countries under the SADC Project. The case study also proposes measures to be taken to mitigate these effects and best practices. In order to achieve the aim of this case study, a desk review of previous empirical work on climate change as well as national development plans was conducted to assess the degree of climate change impacts and response strategies in Tanzania.

Background

Tanzania is a country located in East Africa and is home to over 60 million people and of these, more than 90 % is dependent on agriculture or agricultural-related activities. Agriculture accounts for approximately 30% of Tanzania's GDP and it largely depends on rainfall which is increasingly becoming unpredictable and unreliable with worsening climate change impacts. Tanzania's National Climate Change Strategy 2021-2026 outlines findings from the Tanzania Meteorological Agency that some of the previously highly productive areas of Tanzania such as the southern and northern highlands will continue to be affected by declining rainfall, frequent droughts. Further, Tanzania is known for its natural beauty, wildlife, and diverse cultures. However, the country is also vulnerable to the effect of climate change, which threatens the country's ecosystems, agricultural productivity, and economic development.

Effect of climate change in Tanzania: Climate change is already having a significant impact on Tanzania, and these effects are likely to become more severe in the future. Here are the findings regarding the impacts of climate change in Tanzania include:

- **Increase in temperatures:** Tanzania has experienced an increase in temperature in recent years, which has led to decreased crop yields, reduced water availability, and increased health risks due to heat stress. Rising temperatures and changes in patterns are leading to the loss of habitat for many plant and animal species particularly those that are adapted to cooler and water conditions.
- **Changing of precipitation patterns:** Tanzania has also experienced changes in precipitation patterns, including more frequent and severe droughts and floods. This has led to crop failures, an increase in food insecurity, and displacement of people from their homes. In 2020, heavy rains caused flooding in several regions of the country, leading to the displacement of over 200,000 people and significant damage to infrastructure and crops. Drought also has become more common in Tanzania the notable recent being in 2016 which left over 1.5 Million people in need of food assistance. Drought has also led to a decline in hydroelectricity power generation, which is the major source of energy in the country
- **Rising of sea level:** Tanzania has a coastline along the Indian Ocean, and rising sea levels are a significant concern of the country. This has led to coastal erosion, loss of infrastructure, and displacement of the people. Also, rising sea levels and increased storm surges are leading to the erosion of beaches

and the destruction of infrastructures such as Hotels and roads. This can have a very significant impact on the communities that depends on these industries for their livelihood.

- **Loss of Biodiversity:** Tanzania is home to a wide range of plant and animal species, many of which are threatened by climate change. This includes species such as elephants, lions, and rhinos which are important for the country's tourism industry. This loss of biodiversity can have far-reaching effects on ecosystem services that support human well-being, such as pollination and water purification.
- **Increased risks of disease:** Climate change is also increasing the risk of disease in Tanzania. This includes water born such as cholera which is more likely to occur during floods, as well as vector-borne diseases such as malaria, which are more likely to spread in warmer temperatures.

Mitigation Measures:

To mitigate the effect of climate change in Tanzania, a range of measures can be taken including:

- **Development of climate-resilient infrastructure** that can withstand extreme weather conditions, such as floods and droughts.
- **Disaster response and preparedness:** There has to be created a ready and reliable response to crises and disasters mechanism that will support local partners and governments to address the disproportionate burden of climate change impact on the community. This will protect people's safety and well-being.
- **Promoting sustainable agriculture practices:** Promoting sustainable agriculture practices, such as conservation agriculture and agroforestry, can help increase crop yields and soil health.
- **Protecting biodiversity:** protecting Tanzania's unique ecosystem and wildlife through conservation efforts and sustainable tourism.
- **Flexible program financing:** To support responses to climate change, including, as most donor-funded programming is contingent on achieving results and may not allow for contingency budgets to be redirected in the event of crises, programs may face a low return on investment and risk not delivering benefits and impact to the target population. This could be driven by increased economic hardships encountered by individuals and wider communities. Therefore advocates the need for climate-resilient programming to proactively address the barriers caused by, and coping mechanisms adopted in response to, climate change.
- **Improving healthcare:** Improving access to healthcare and sanitation to reduce risks of waterborne and vector-borne diseases.
- **Education and climate mitigation:** Education is widely recognized as a powerful tool to create change and has been a central element in numerous behavior change initiatives. It has been argued that education is an essential component to fostering a shared understanding of the nature and impact of

climate change, which is critical in supporting national and international climate action. This has been highlighted in recent years with the role of youth activism in promoting climate action and mitigation, led by young female role models including Greta Thunberg, Malala Yousafzai, and others.

Best practices from FORUMCC

Since its establishment in 2008, FORUMCC has been working on climate change policy influence, working with local communities on adaptation practices, solid waste management, urban resilience, coastal adaptation, mitigation measures, land use management, right to participate in planning and budget processes, demanding accountability, tracking of climate finance, and promotion of integration of climate adaptation into planning and budgets.

The achievements were attained through lobbying and advocacy, action-based research; information sharing capacity building, awareness creation, campaigns, networking, and alliance building at local, national, regional, and international levels. Areas of focus include Agriculture, livestock, water, energy, infrastructure, climate finance, Coastal and urban resilience, gender, and environment.

Over the years, FORUMCC has made contributions to various national policy processes such as the National Climate Change Strategy 2012 and the recently launched response strategy 2021-2026; Development of Intended Nationally Determined Contributions (NDCs) in 2015; and its recent review where FORUMCC championed the inclusion of Water, Sanitation & Hygiene (WASH); Development of the Health National Adaptation Plan (HNAP-2018-2023), the on-going process of formulating National Adaptation Plans. FORUMCC is also conducting independent monitoring of government-implemented climate change projects such as under the Adaptation Fund (AF), and jointly implementing a project with the Tanzania government on a sub-component of the Least Developed Countries Fund (LDCF) project under the Vice President Office - Division of Environment.

At the local level; FORUMCC has influenced the integration of climate change adaptation into LGAs plans and budgets. LGAs that worked with FORUMCC are more aware of the implications of climate change impacts in their development efforts. FORUMCC has also enhanced communities' capacity to respond to local climate change-related challenges, participate in the planning and budgeting process, empower them to hold office bearers accountable, and demand transparency.

To maintain this pace FORUMCC capacitated and will continue capacitating women and girls in terms of knowledge, social and life skills which strengthened their engagement, advocacy skills, and accountability on social and economic development. They were exposed to processes and actions towards local plans development processes, National and Global negotiations to understand their roles in climate action and their future in relation to climate change projections. The interventions involved climate change women caucus, income generation, vocational training, learning visits, and engagement in Digital activism, and mentorship programs. These interventions built capacities of women and girls who became champions to influence and engage the government at both local and national levels.

This was achieved through FORUMCC's work with different stakeholders. The stakeholders include; communities (farmers, pastoralists, women and youth groups, and coastal communities); Local Government Authorities (LGAs) -Village chairpersons, VEOs, WEOs, Councilors, DEDs, and DCs); National and International Civil Society Organizations (CSOs); National institutions and leaders (Sectorial ministries – Agriculture, Livestock, Fisheries; Water, Energy, Land, Vice President Office on Environment (VPO-DoE), Ministry of Finance and Planning; government agencies such as NEMC-National Environment Management Council, Tanzania Metrological Agency (TMA);

Ministers and Members of Parliament; Media; Regional organizations. The Forum is also engaging in lobbying and advocacy at regional and international levels, particularly under the UNFCCC, Africa Ministerial Conference on the Environment (AMCEN), and East African Community (EAC).

For sustainability, FORUMCC also provided space to embrace the voices, actions, and contributions of young people in building a better world and climate-neutral future. We gave Primary, and secondary school students an opportunity to highlight their engagement in climate action at the local, national, and global levels building momentum for their full participation in the UN Climate Change process. For the last three years (2019-2021), more than 6000 youth including those from Higher Learning Institutions were involved in various scales and approaches such as Youth Digital Activism (YDAs), and Community Resources Persons (CRPs).

Conclusion

Addressing climate change requires bold actions and massive investments across key economic sectors. This is because Climate change is one of the most important issues on the global political and economic agenda, yet it has taken at least 20 years to become an international priority. In many ways, climate change has more often been communicated as a scientific problem. Complex, confusing, and at times contested scientific information resulted in a slow public and political response to the climate crisis. The climate change debate has also taken place in industrialized nations, among a public largely safe from its worst effects. For many, climate change remains an abstract concept.

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