SOMALIA IS THE INNOCENT VICTIM OF CLIMATE CHANGE: FUTURE RISK AND VULNERABILITIES AND WAY FORWARD

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Climate change is not a recent phenomenon. Warmer temperatures are changing weather patterns and disrupting nature's normal balance. This poses numerous dangers to humans and all other forms of life on Earth. The effects of climate change have become more acute in Somalia. It has experienced some of the strongest natural disasters ever recorded, such as, droughts and floods, and property losses over the last decade. Unfortunately, the country is already experiencing the worst effects of climate change, and these extreme weather events will only worsen without action in Somalia. Now the effects of climate change in Somalia are being felt heavily. This may have serious consequences for the rest of the world, ranging from problems with economic growth to severe social unrest. On the International Day for Disaster Reduction (IDDR), every person and government is asked to take part in building more disaster-resistant communities and nations. The United Nations General Assembly designated October 13 as the International Day for Natural Disaster Reduction as part of its declaration of the International Decade for Natural Disaster Reduction (IDNDR) The Sendai Framework for Disaster Risk Reduction (2015 - 2030), adopted in 2015, through its guiding principles sheds light on the importance of strengthening local communities' resilience to climate change.

Several hydro-geological and socioeconomic factors contribute to this, including Somali's location in East Africa and consist mainly of plateaus, plains, and highlands. The weather is hot throughout the year, except at the higher elevations in the north. Rainfall is sparse, and most of Somalia has a semiarid-to- arid environment suitable only for the nomadic pastoralism practiced by well over half the population, and the fact that the majority of its population is dependent on crop agriculture and pastoralists, which is highly vulnerable to climate change. All of these factors contribute to the country's high vulnerability to climate change.

Over the years, Somali's relationship with powerful droughts and floods from the southern part of the country has left a path of devastation and death.

An extended unprecedented drought is threatening the lives and livelihoods of nearly 7.8 million people in Somalia, almost half of Somalia estimated population, have been affected by the worst drought experienced by the country in over 40 years. Currently, over 1.1 million people are displaced and, by the end of this year, approximately 6.7 million people across Somalia are expected to face high levels of acute food insecurity. Since November 2021, when Somalia declared a drought emergency, the number of people affected has more than tripled to 7.8 million; more than a million are displaced.

At least 41 per cent of the population is expected to face acute food insecurity through December, with parts of southern and central Somalia projected to be in famine between October and December 2022 if assistance is not scaled up and sustained. Some 6.4 million people lack access to safe water and sanitation, elevating the risk of cholera and measles, especially in camps for internally displaced people (IDPs).

Although Somalia will be at the forefront of these global challenges, the nation does not contribute to the world's carbon emissions. According to Our World in Data's Somali country profile, Somalia generates 0.04 tons of CO2 per person, compared to 14.86 tons in the US, 12.10 tons in Russia and 8.05 tons in China. This is viewed by many as a climate injustice. Cases like these are among the key justifications given by developing nations for their demand that rich nations support their attempts to shift to clean energy. The threat posed by climate change and its effects is already evident, notwithstanding the energy shift that is now taking place.

Future risk and vulnerabilities

As climate change intensifies, these effects will become more prominent. According to the Sixth Assessment Report (AR6) of Working Group II (WGII) of the Intergovernmental Panel on Climate Change (IPCC), climate-related disasters caused the loss of almost 850,000 families and 250,000 hectares of agricultural land; this led to crop failure, which raised the price of rice by 30 per cent between 2014 and 2021.

Depending on the scenario, temperature in Somalia is projected to very likely rise between 1.4–1.9 °C by 2030, 1.5–2.3 °C by 2050 and 1.4 –3.4 °C by 2080 compared to pre-industrial levels, with coastal regions being less affected than the rest of the country.

The annual number of very hot days (with daily maximum temperature above 35 °C) is projected to increase with high certainty all over Somalia with central Somalia being particularly affected. Heat-waves will also impact the Somali economy, and projected sea-level rise threatens the livelihoods of coastal communities, including those in the capital Mogadishu. Climate Risk Profile: Somalia also includes lower-certainty projections for precipitation, water availability, crop yields, ecosystems and floods.

Such information is necessary to assist in decision-making in the direction of a more climate-resilient and peaceful future. Understanding how climate change interacts with conflict and instability to affect Somalians' lives will be necessary for long-term planning that fosters resilience in Somalia. For instance, researchers have previously discovered that frequent droughts in Somalia cause herders to sell more of their livestock than they would under normal conditions, causing livestock prices to decline and rural incomes to deteriorate.

The sea level is projected to rise with high certainty under both future emission scenarios. The median climate models project a sea level rise of 12 cm until 2030, 20 cm until 2050 and 36 cm until 2080 under RCP2.6, as compared to the year 2000. Under RCP6.0, the sea level is projected to rise by 11 cm until 2030, 21 cm until 2050 and 42 cm until 2080, according to the multi-model median.

Due to Somalia's reliance on natural resources for its economy and the degradation of those resources caused by human activity, such as charcoal production and overgrazing, the nation may become more vulnerable to poverty and food insecurity as a result of climate change. Greater exposure to drought tends to significantly reduce consumption in rural Somalia, which raises the poverty rate. There will be a serious negative impact of climate change on the underprivileged. One of the worst droughts in recent memory occurred in Somalia. Grim accounts of human suffering began to surface after news broke of numerous livestock deaths due to a water shortage. A large portion of Somalia is already vulnerable to economic shocks, given that 69% live below the international poverty line.

Somalia is vulnerable to climate change, especially in agriculture, land, and marine areas. An average 6 million Somalis were affected by drought or floods, or both, in 2019–21, slowing GDP growth and exacerbating poverty and income inequality.

Somalia is ranked the second most vulnerable country and the least equipped to adapt to climate change on the 2019 Country Index of the Notre Dame Global Adaptation Initiative. Somalia prepared its NDC in 2021 as an update to its intended NDC and National Adaptation Programme of Action of 2015. The NDC proposes investing in RE resources, reversing deforestation and range-land degradation, and beefing up disaster management, among other measures, and targets a 30% reduction in GHG emissions by 2030; the proposed mitigation measures are estimated to cost $6.96 billion. However, implementation of NDC actions is hampered by lack of human as well as financial resources. Access to global climate funds has been constrained by the limited investments in potential beneficiary sectors such as energy, which will make it hard for Somalia to achieve SDG 13 on climate action.

Institutional challenges and capacity gaps

Somalia is facing a variety of challenges and capacity gaps that prevent it from responding appropriately to the threats posed by climate change. The biggest capacity gaps are related to the political and security situation, limited environmental governance and the lack of financial and human resources.

Although Somalia has ratified several multilateral agreements related to climate change and adopted climate change policies at the Federal level, the legislative and regulatory frameworks for Somalia are still weak and don't sufficiently define authority, roles and responsibilities and accountability for issues related to climate change. Several climate change-related laws have not been passed by parliament despite the cabinet's approval of policies in this area. This is partly due to poor funding for climate initiatives, inadequate human capital, and fragmentation within government.

> *"A comprehensive analysis of the state of the country's climate change institutions during the [Nationally Determined Contributions] updating process revealed structural and systemic weaknesses in the institutional bedrock. This includes the lack of the necessary capacity to address climate*

change and its associated challenges, financial weaknesses, the dearth of appropriate policies and inability to enforce laws. Moreover, most of the institutions suffer from a considerable deficiency in human, financial, organizational, and institutional capacity to manage the environment and natural resources and respond to the specific challenges that climate change brought to Somalia" Federal Government of Somalia, 2021

Ways forward

"The Ministry is facing tremendous challenges when it comes to finding Somalis who are experts in the fields of environment, meteorology, climate, biodiversity and wildlife" Ministry Staff

Going forward, the government is advised to take concrete measures to close the capacity gaps and prioritize climate action though strengthened institutional capacity. The government should adopt an institutional development framework that strengthens existing capacities and builds new capabilities in the areas of climate financing, regulations, monitoring, forecasting, and coordination.

In addition, the government should absorb capabilities in non-government entities and promote country systems while upgrading existing infrastructure for climate change. The infrastructure upgrade should be accompanied by staff capacity-building and recruiting talented technical staff. It is crucial that the government and international partners prioritize funding for climate change initiatives with the government incorporating climate financing into the budget and financial processes. They should also strengthen the country's climate change research capacity and facilitate academic exchanges and collaborations among universities, thinktanks and government institutions. Furthermore, a deliberate policy on climate conflict will be effective in mitigating and responding to the climate change related violence and conflict. Finally, the government should enact relevant legislations, operationalize new institutions such as the as the national meteorological agency and install a multi-governance coordination mechanism to facilitate information sharing, consultations and decision making.