Building resilience: Eritrea's climate actions

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From 10–21 November 2025, the United Nations Climate Change Conference – or COP30 – is underway in Belém, Brazil. As the world's only universal climate decision-making forum, the COP is where countries negotiate concrete actions to limit global warming to 1.5°C, accelerate adaptation for vulnerable communities, and advance the global path to net-zero emissions by 2050. This year's conference brings together governments, business leaders, youth, scientists, Indigenous Peoples, and civil society to push for more ambitious, inclusive, and equitable climate action.

A decade after the Paris Agreement, Africa stands at the centre of the global climate conversation. The continent is already experiencing the sharp edge of the climate crisis: rising temperatures, prolonged droughts, destructive floods, and intensifying cyclones that collectively shave up to 5% off Africa's GDP. By 2030, as many as 118 million Africans could be exposed to extreme weather.

But Africa's story is not only one of vulnerability. Rather, it is also one of strategic opportunity. The continent holds nearly 30% of the world's critical minerals essential for the green transition, possesses vast renewable energy potential, and is home to the world's youngest and fastest-growing workforce. Africa is no longer a passive stakeholder in global climate diplomacy; it is a pivotal actor shaping solutions.

As COP30 unfolds, African countries are entering negotiations with a clearer, more unified voice – one that demands greater ambition, fairness, and partnership. Their agenda bridges vulnerability and potential, aiming to secure the resources, technologies, and governance needed to build resilience, drive low-carbon growth, and ensure shared prosperity.

It is against this backdrop that Eritrea's own climate challenges and responses come into sharp focus.

For Eritrea, a young, developing nation situated in one of the world's most climate-exposed regions, the issues raised at the summit are especially urgent. The country faces a wide range of climate-related hazards, including locust infestations, and even volcanic activity. Since the 1960s, national temperatures have risen by roughly 1.7°C, an average rate of 0.37°C per decade, significantly above the global mean. At the same time, Eastern Africa, including Eritrea, has seen more frequent extremes in precipitation, from prolonged droughts to intense, damaging rainfall.

Today, Eritrea ranks high on the United Nations' Economic and Environmental Vulnerability Index (EVI). Although Eritrea contributes less than 0.01% of global cumulative greenhouse gas emissions, it disproportionately suffers the impacts of climate change, particularly through severe and prolonged droughts. In 2018, national emissions were approximately 6.4 megatons of CO_2 equivalent, a 20% increase from 2000 but a slight 0.4% decrease compared with 2015.

Despite these challenges, Eritrea has been making significant investments in climate change mitigation, adaptation, risk reduction, and disaster rehabilitation. The country has ratified several international climate agreements, including the Kigali Amendment to the Montreal Protocol in 2023, committing to gradually reduce the use of global-warming hydrofluorocarbons (HFCs). Eritrea has also drafted its third Nationally Determined Contribution (NDC), demonstrating its ongoing commitment to climate action. The NDC includes a robust conditional target, representing the country's highest ambition: using its own resources, Eritrea has committed to an 8.6% reduction below business-as-usual, and with adequate international support, it estimates it could achieve a 24.4% reduction by 2030, bending its emissions curve downward to below 2018 levels.

On the ground, Eritrea has established protected areas and enclosures, expanded sustainable irrigation schemes (including drip and sprinkler systems), and constructed hundreds of terraces, dams, and ponds. Since independence, the number of dams of all sizes has grown from 138 to over 800, impounding hundreds of millions of cubic meters of water, with many more projects in planning or development. Plans for desalination of seawater for domestic and economic use are also underway. Across the country, households and communities, especially in at-risk areas, receive targeted support with adaptation strategies and technologies, reducing vulnerability, strengthening resilience, and securing livelihoods.

Renewable energy is a national priority, helping to reduce dependence on imported fossil fuels and cut emissions from power generation. Eritrea is improving energy efficiency and promoting clean alternatives across transport, manufacturing, and household consumption. A notable intervention has been the introduction of improved traditional stoves, locally known as "Adhanet", which decrease energy consumption by 50%, minimize deforestation, and reduce health and safety hazards. Designed by the Ministry of Energy and Mines and distributed by the Ministry of Agriculture, more than 170,000 units have been installed nationwide since 1998.

The country is also actively conserving, restoring, and enhancing natural areas. Nationwide afforestation campaigns engage communities, students, and youth

groups, alongside water and soil conservation programs that protect ecosystems and sustain agricultural productivity.

Finally, Eritrea is investing in environmental education and public awareness, particularly for young people, to foster a deeper understanding of the climate crisis and the need to live in harmony with nature. Sustainability, climate, and environment-related issues are integrated into school curricula, ensuring that students gain knowledge and practical skills from an early age. Notably, a few weeks ago, an innovation competition held in Asmara showcased numerous cutting-edge, locally developed solutions created by young Eritreans of various backgrounds demonstrating the country's growing capacity for homegrown climate and sustainability innovations.

Eritrea's experience illustrates both the severity of climate impacts and the potential of proactive solutions. Despite contributing minimally to global emissions, the country is advancing adaptation, renewable energy, ecosystem restoration, and youth-led innovation, demonstrating resilience and leadership. Its efforts highlight the urgent need for continued support to help vulnerable communities withstand climate change and build a sustainable future.

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