

CLIMATE CHANGE MITIGATION EXPENDITURE IN EAST AFRICA

Cross-Country Comparison of Uganda, Kenya, Tanzania, and Rwanda

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Introduction

East Africa is experiencing frequent and severe climate-related shocks, including prolonged droughts, destructive floods, landslides, heat stress, biodiversity loss, and declining agricultural productivity. These impacts threaten economic growth, food security, public health, infrastructure, and livelihoods across Uganda, Kenya, Tanzania, and Rwanda. Although East Africa contributes less than one percent of global greenhouse gas emissions, it remains highly vulnerable to the adverse effects of climate change. East Africa governments have been compelled to integrate climate change considerations into national development planning and public expenditure frameworks.

Between 2015 and 2025, climate action moved from the periphery of policy discussions to the centre of national development agendas. International commitments under the Paris Agreement, the Sustainable Development Goals (SDGs), Agenda 2063 of the African Union, and various national climate strategies have placed growing pressure on governments to allocate resources toward climate change mitigation and adaptation.

Climate mitigation, which focuses on reducing greenhouse gas emissions and promoting low-carbon development pathways, has become particularly important as countries seek to balance economic growth with environmental sustainability. Investments in renewable energy, sustainable transportation, forest conservation, climate-smart agriculture, and energy efficiency are viewed as critical components of long-term economic transformation.

However, political commitment alone does not guarantee meaningful climate action. The true measure of government commitment is reflected in budgetary allocations and actual expenditure. Public budgets reveal the extent to which climate objectives are prioritized relative to competing demands such as education, health, security,

infrastructure, and debt servicing. Examining climate expenditure therefore provides insights into national priorities, institutional capacity, and the seriousness with which governments are responding to climate risks. Moreover, understanding the proportion of national budgets dedicated to climate action helps to illuminate the scale of the financing gap that continues to hinder the implementation of climate policies across East Africa.

This review, therefore, examines climate change mitigation expenditure in Uganda, Kenya, Tanzania, and Rwanda from 2015-2025. It evaluates climate-related spending within the context of overall national budgets, assesses expenditure trends and financing gaps, and compares the relative commitment of each of the four countries to climate action. The analysis further explores the extent to which climate expenditure aligns with national climate ambitions and international commitments. It provides a broader understanding of the opportunities and challenges facing East African countries as they pursue climate-resilient and low-carbon development paths.

Climate Change Mitigation Expenditure in Uganda

Climate change financing has historically been characterized by fragmentation across multiple sectors rather than explicit budget lines in Uganda. Climate-related expenditures were embedded within agriculture, forestry, energy, transport, water, and environmental protection programmes, prior to the introduction of Climate Budget Tagging reforms. This made it difficult to determine the exact level of government commitment to climate mitigation. Nevertheless, available Climate Public Expenditure Reviews indicate that climate-related spending generally fluctuated between 1.5 and 3 percent of total government expenditure during the period 2014–2024^{1, 2}.

¹ Government of Uganda. (2021). Climate Public Expenditure Review. Kampala: Ministry of Finance, Planning and Economic Development.

² International Monetary Fund. (2024). Uganda: Public Financial Management Climate Assessment. Washington, DC: IMF.

This low allocation becomes more apparent when compared to Uganda's rapidly growing national budget. Between FY2014/15 and FY2024/25, Uganda national budget expanded from approximately UGX 15.2 trillion to more than UGX 72 trillion. This represented an increase of nearly 374 percent. However, climate-related expenditure did not increase proportionately.

For example, while public investment in roads, energy generation, and administrative infrastructure increased dramatically during the decade, climate mitigation expenditures remained concentrated in forestry restoration, renewable energy promotion, wetland protection, sustainable land management, and climate-smart agriculture.

The result is that climate financing has lagged behind both economic growth and environmental degradation. Uganda updated Nationally Determined Contribution estimates that approximately US\$28.1 billion will be required between 2021 and 2030 to implement climate interventions. This is equivalent to roughly US\$2.8 billion annually³. Actual public expenditure remains below this requirement. This has created a substantial financing gap.

A closer examination reveals that Uganda climate expenditure profile is heavily skewed toward adaptation rather than mitigation. This pattern reflects vulnerability to floods, droughts, landslides, and agricultural losses. Investments in renewable energy, energy efficiency, and low-carbon transportation systems are limited. Yet, Uganda commitment to reducing greenhouse gas emissions by 24.7 percent by 2030 under its Nationally Determined Contribution⁴.

Uganda climate budgeting can be described as reactive rather than transformational. It

prioritizes resilience to climate impacts rather than structural decarbonization of the economy.

Climate Change Mitigation Expenditure in Kenya

In Kenya, since the enactment of the Climate Change Act of 2016, climate governance has become institutionalized within national planning and budgeting systems. Kenya has been widely recognized as a regional leader in climate finance mainstreaming. This has been particularly through its Climate Public Expenditure Reviews and Climate Budget Tagging initiatives⁵. The Kenya Climate Public Expenditure and Budget Review found that climate-relevant spending had become mainstreamed across multiple sectors including energy, forestry, transport, water, and agriculture.

Between 2015 and 2025, Kenya national budget expanded from approximately KES 1.8 trillion in FY2014/15 to over KES 4 trillion in FY2024/25. Climate-related expenditures are estimated to have averaged between 3 percent and 5 percent of total public expenditure annually. Investments in geothermal energy, renewable electricity generation, drought resilience, and climate-smart agriculture were made. The emphasis on green growth and climate-resilient infrastructure has also attracted external financing, including from the World Bank. This support is aimed at strengthening climate change mitigation and environmentally sustainable policies⁶.

Kenya possesses an advanced geothermal energy sector. It has substantial investments in the Olkaria geothermal complex and other renewable energy projects. These investments have enabled Kenya to generate over 90 percent of its electricity from renewable sources, considerably reducing dependence on fossil fuels⁷. Thus,

³ Government of Uganda. (2022). Updated Nationally Determined Contribution (NDC) 2022. Kampala: Ministry of Water and Environment.

⁴ Government of Uganda. (2022). Updated Nationally Determined Contribution (NDC) 2022. Kampala: Ministry of Water and Environment.

⁵ United Nations Development Programme (UNDP). (2016). Kenya Climate Public Expenditure and Budget Review. Nairobi: UNDP.

⁶ United Nations Development Programme (UNDP). (2016). Kenya Climate Public Expenditure and Budget Review. Nairobi: UNDP.

⁷ International Energy Agency (IEA). (2024). Kenya Energy Profile 2024. Paris: IEA.

climate mitigation expenditures in Kenya have produced measurable economic and environmental outcomes.

However, despite relatively strong performance, Kenya continues to face substantial financing constraints. The National Climate Change Action Plan estimates that annual climate financing requirements exceed available domestic resources by billions of dollars. Climate-related allocations remain overshadowed by recurrent expenditure obligations, public debt servicing, and infrastructure commitments. Kenya allocates a larger share of its budget to climate action than its regional counterparts⁸.

Climate Change Mitigation Expenditure in Tanzania

Tanzania climate expenditure tracking has historically been weaker than in Kenya and Rwanda, making precise annual estimates difficult. Nevertheless, various Climate Public Expenditure Reviews suggest that climate-related spending averaged between 2 and 4 percent of total government expenditure during the past decade⁹. This translates to approximately TZS 987 billion to TZS 1.97 trillion, based on the FY2024/25 budget. Similar to Uganda, climate-related investments have primarily focused on agriculture, forestry, water resources, and disaster risk management.

Between FY2014/15 and FY2024/25, Tanzania national budget increased from approximately TZS 19.8 trillion to TZS 49.35 trillion. This represented an increase of nearly 150 percent between 2015 and 2025. The FY2024/25 budget explicitly identified *Sustainable Economic Transformation through Fiscal Consolidation and Investment in Climate Change Mitigation and Adaptation for Improved Livelihoods* as one of its guiding themes. This was a demonstration that climate change has become an important

national planning priority. The approved FY2024/25 budget amounted to TZS 49.35 trillion, an increase of 11.2 percent over the previous fiscal year^{10, 11}.

A key indicator of growing climate commitment is Tanzania success in mobilizing external climate finance. In 2024, the International Monetary Fund approved approximately US\$786 million under its Resilience and Sustainability Facility specifically to support climate-related reforms and resilience-building measures. The approval of approximately US\$786 million under the IMF Resilience and Sustainability Facility represents one of the largest climate-related financing packages in East Africa¹². Nevertheless, Tanzania climate financing architecture remains heavily dependent on development partners. This dependency creates concerns regarding long-term sustainability.

The absence of detailed climate budget reporting limits transparency and makes it difficult to evaluate the effectiveness of climate expenditure. Climate allocations continue to be overshadowed by competing budget priorities such as infrastructure development, public administration, debt servicing, education, and health. For example, while the FY2024/25 budget allocated more than TZS 49 trillion in total expenditure, only a small fraction could be directly linked to climate mitigation activities. This suggests that Tanzania remains in the early stages of transitioning from climate policy commitments to large-scale climate investment.

Climate Change Mitigation Expenditure in Rwanda

Rwanda provides perhaps the most compelling example of climate finance mainstreaming in East Africa. Unlike Uganda and Tanzania, where climate expenditures are often dispersed across multiple sectors and difficult to isolate, Rwanda

⁸ World Bank. (2023). Kenya Country Climate and Development Report. Washington, DC: World Bank.

⁹ United Republic of Tanzania. (2022). National Climate Change Response Strategy Review Report. Dodoma: Vice President's Office.

¹⁰ United Republic of Tanzania. (2022). National Climate Change Response Strategy Review Report. Dodoma: Vice President's Office.

¹¹ Tanzania Invest, 2024

¹² International Monetary Fund. (2024). United Republic of Tanzania: Resilience and Sustainability Facility Review. Washington, DC: IMF.

has institutionalized Climate Budget Tagging. This allows climate-related expenditures to be systematically identified, tracked, and reported within the national budget process. This reform has improved transparency, accountability, and the government's ability to align public expenditure with national climate objectives. As a result, Rwanda is widely regarded as a continental leader in integrating climate considerations into public financial management systems¹³.

Rwanda national budget increased from approximately RWF 1.8 trillion in FY2014/15 to RWF 5.69 trillion in FY2024/25, representing an increase of more than 216 percent. During the same period, climate-related expenditures expanded at an even faster rate. Government reports indicate that climate and environmental protection allocations accounted for less than 1 percent of the national budget before 2009, increased to approximately 2.5 percent in 2013, reached 4.9 percent by 2021, and exceeded 8 percent by FY2024/25. This trajectory demonstrates a deliberate policy shift toward climate-responsive budgeting and sustainable development planning¹⁴.

The FY2024/25 budget provides the clearest picture of Rwanda climate financing commitment. Out of a total national budget of RWF 5.69 trillion, climate-related expenditures amounted to approximately RWF 466 billion according to the official Climate Budget Statement. Other government estimates place the broader climate expenditure envelope at approximately RWF 580 billion when all climate-tagged interventions are included. These figures suggest that between 8 and 10 percent of total government expenditure is now directly associated with climate-related objectives. This

proportion exceeds that of most African countries and surpasses the levels observed in Uganda, Kenya, and Tanzania¹⁵.

Approximately 58 percent of climate spending was directed toward adaptation interventions, 18 percent toward mitigation activities, and 24 percent toward projects that simultaneously contribute to both adaptation and mitigation goals. In monetary terms, this translates to roughly RWF 270 billion for adaptation, RWF 84 billion for mitigation, and RWF 112 billion for integrated interventions. While adaptation remains dominant due to Rwanda's vulnerability to floods, landslides, and agricultural shocks, the share allocated to mitigation is considerably higher than that observed in many developing countries¹⁶.

Another indicator of Rwanda commitment is the substantial allocation provided to environmental institutions. In FY2024/25, the Ministry of Environment received approximately RWF 154.4 billion, one of the largest environmental allocations in the country's history. Of this amount, about 43 percent was directed toward adaptation-related interventions, 20 percent toward mitigation initiatives, and the remaining 37 percent toward activities that simultaneously address both objectives. These investments support watershed restoration, climate-resilient agriculture, forest landscape restoration, disaster risk reduction, biodiversity conservation, and renewable energy promotion¹⁷.

According to Rwanda Climate Budget Statement for FY2024/25, climate-related expenditures reached approximately RWF 466 billion, representing around 8 percent of the national budget¹⁸.

¹³ United Nations Framework Convention on Climate Change (UNFCCC). (2022). Nationally Determined Contributions Registry. Bonn: UNFCCC.

¹⁴ Ministry of Finance and Economic Planning (MINECOFIN). (2024). Rwanda Climate Budget Tagging Statement FY2024/25. Kigali: Government of Rwanda.

¹⁵ Ministry of Finance and Economic Planning (MINECOFIN). (2024). Rwanda Climate Budget Tagging Statement FY2024/25. Kigali: Government of Rwanda.

¹⁶ According to the FY2024/25 Climate Budget Statement.

¹⁷ World Bank. (2024). Rwanda Country Climate and Development Report. Washington, DC: World Bank.

¹⁸ Ministry of Finance and Economic Planning (MINECOFIN). (2024). Rwanda Climate Budget

Despite allocating one of the highest proportions of public expenditure to climate action in Africa, Rwanda still faces a substantial financing gap relative to its long-term climate ambitions. Rwanda climate investment requirements through 2030 exceed available domestic resources, necessitating continued reliance on international climate finance, concessional loans, green bonds, and private-sector investment.

Comparative Analysis of Uganda, Kenya, Tanzania, and Rwanda

Climate expenditure levels generally increase with the maturity of climate governance institutions. Rwanda and Kenya, which possess more advanced climate budgeting systems, consistently allocate larger proportions of their budgets to climate action than Uganda and Tanzania. Climate financing remains heavily concentrated in adaptation rather than mitigation across all four countries. This reflects immediate political pressures to address floods, droughts, food insecurity, and disaster response rather than long-term decarbonization objectives. All four countries face substantial climate financing gaps despite increasing expenditures.

The financing gap is particularly striking when national expenditure is compared with estimated climate investment requirements. Uganda's NDC implementation costs exceed US\$28 billion between 2021 and 2030. Kenya estimates climate financing needs exceeding US\$62 billion by 2030. Tanzania's climate financing requirements are estimated at more than US\$19 billion through 2030, while Rwanda estimates needs exceeding US\$11 billion over a similar period¹⁹.

Current public expenditures cover only a fraction of these requirements. So, climate ambitions across East Africa remain heavily dependent on international climate finance, concessional lending, carbon markets, and private-sector investment. The evidence suggests that Rwanda has demonstrated the strongest commitment to

climate budgeting as a proportion of national expenditure, followed by Kenya, Tanzania, and Uganda.

However, none of the four countries currently allocates sufficient resources to meet its climate mitigation and adaptation commitments. While climate spending has increased substantially over the last decade, the pace of growth remains slower than the rate at which climate-related risks are intensifying. Therefore, future policy reforms must focus not only on increasing climate expenditure but also on improving expenditure effectiveness, strengthening climate budget tracking systems, and leveraging private-sector investment to bridge persistent financing gaps.

Conclusion

The evidence presented in this analysis demonstrates that climate change has become an increasingly important area of public expenditure across East Africa. Yet, the scale of investment remains substantially below what is required to address current and future climate challenges. Between 2015 and 2025, Uganda, Kenya, Tanzania, and Rwanda increased climate-related spending and strengthened climate governance frameworks. However, significant differences exist in the level of commitment, institutional capacity, and effectiveness of climate budgeting systems.

Rwanda has emerged as the regional leader in climate budget integration, consistently allocating the highest proportion of national expenditure to climate-related interventions and establishing one of Africa's most advanced climate budget tagging systems. Kenya follows closely, benefiting from strong climate governance institutions and substantial investments in renewable energy and green growth initiatives. Tanzania has demonstrated steady progress but continues to face challenges associated with expenditure tracking and dependence on external financing. Uganda,

Tagging Statement FY2024/25. Kigali: Government of Rwanda.

¹⁹ United Nations Framework Convention on Climate Change (UNFCCC). (2022). Nationally

Determined Contributions Registry. Bonn: UNFCCC.

despite increasing climate allocations and growing political commitment, continues to allocate a relatively small share of its national budget to climate action and faces one of the largest climate financing gaps relative to its development needs.

A striking finding across all four countries is the persistent imbalance between climate ambitions and available financial resources. While national climate strategies, Nationally Determined Contributions (NDCs), and international commitments have become increasingly ambitious, public expenditure has not expanded at a comparable pace. Climate financing needs are measured in tens of billions of dollars over the coming decade, yet current public spending represents only a fraction of these requirements. This financing gap raises concerns regarding the ability of governments to meet their mitigation targets, protect vulnerable populations, and build climate-resilient economies.

The analysis further reveals that climate expenditure remains overwhelmingly adaptation-oriented. Governments understandably prioritize immediate responses to floods, droughts, food insecurity, and disaster risks. However, unless greater investments are directed toward mitigation measures such as renewable energy, sustainable transport systems, industrial decarbonization, and ecosystem restoration, the region risks becoming increasingly locked into carbon-intensive development pathways.

Future progress will depend on stronger climate budgeting systems, improved expenditure efficiency, enhanced domestic resource mobilization, greater private-sector participation, and sustained access to international climate finance.

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