



Tanzania Burundi Railway

The Global Center on Adaptation (GCA), in partnership with the African Development Bank (AfDB) through the Africa Adaptation Acceleration Program (AAAP), supported the Tanzania-Burundi Standard Gauge Railway (SGR) Project (approved in December 2023) to integrate climate resilience into planning and design. This transformative regional infrastructure aims to enhance trade, integration, and economic development in East Africa. The project involves the construction of a 282 km electrified railway linking Uvinza in Tanzania to Gitega in Burundi via Musongati, a key mining hub. Once operational, the railway will improve regional connectivity, open access to the Port of Dar es Salaam, and enable large-scale mineral exports from Burundi.

Adaptation Need

The railway corridor crosses areas highly exposed to extreme heat, flooding, and landslides. Without adaptation, these hazards are likely to disrupt operations, damage assets, and trigger major socio-economic losses. GCA's analysis found that current designs could face up to 167 temperature-induced faults annually, resulting in 37 disruption days, \$165 million in economic losses, and \$21 million in lost revenue for the Tanzania Railways Corporation. Additionally, 23 km of track are vulnerable to flooding during a 1-in-50-year rainfall event, and 21 km—mostly in Gitega and Rutana—are at high risk of landslides. Under a high-emissions scenario (SSP5-8.5), average maximum temperatures could rise by up to 6°C by 2100. In Gitega, a 100-year rainfall event could occur every 43 years by 2080, significantly increasing climate-related disruption.

GCA's Added Value

Between Q1 2024 and Q1 2025, GCA supported AfDB and national counterparts in assessing climate risks and identifying adaptation priorities. This included climate hazard modeling, asset vulnerability stress tests, and cost-benefit analysis of resilience measures. The work focused on both grey and nature-based solutions (NbS), with technical guidance provided to integrate these into detailed design and O&M plans. GCA also developed a climate finance rationale to help AfDB access concessional adaptation funding and strengthen the project's long-term sustainability.

Total Investment Value Influenced

\$720.19M

Beneficiaries

N/A

IFI Implementation period

2024 - 2030

Program

Infrastructure and NbS

Partners

African Development Bank

Status

In progress



PROJECT GOALS

Mainstreaming Adaptation and Resilience

GCA proposed targeted adaptation solutions to address vulnerabilities along the corridor. These included “green track” infrastructure using drought-tolerant vegetation to reduce heat-related faults by up to 35%, culvert upgrades and embankment raising to mitigate 89% of flood risk over 23 km, and slope stabilization in landslide-prone areas, particularly in Burundi. The recommended measures showed strong economic returns, demonstrating that low-cost investments can significantly reduce damage, downtime, and operational losses. By embedding these solutions in project design and financing, GCA has helped mainstream resilience into a flagship regional transport project, supporting climate-smart infrastructure and safeguarding communities across the Tanzania-Burundi corridor.

Expected Outcomes

GCA will ensure that the Project will achieve:

- Safer, resilient central railway corridor.
- Greater sustainability of the railway network with upgraded maintenance program.

GCA will facilitate effective, efficient, and sustainable outcomes on:

Reduced freight costs between Burundi and Dar port from US\$160 to \$70
Reduced travel time from 5 days to a day
Total 651km of electrified SGR system built
500 long term jobs created (30% women)
12,000 direct temporary jobs created (40% women)
2,400 indirect jobs created (80% women)

TIMELINE

GCA Support Status

Technical Assistance Preparation

GCA Support Implementation

December, 2023

GCA Support Completion

Monitoring

Project Investment Value

Total Investment Value
\$720.19M

IFI INVESTMENT VALUE

\$98.62M

OTHER INVESTMENT
VALUE

\$621.57M

IFI partners



African
Development Bank

CONTACTS

GENERAL MEDIA INQUIRIES

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REQUEST FOR INFORMATION

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