Innovators Bootcamp
Carbon Footprint Analysis Report
(2025)

Tukuze Afrika Foundation

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AFRIKA

"Every footprint we reduce today is a step towards a livable tomorrow."

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Executive Summary

This report presents the baseline Organisational Greenhouse Gas (GHG) Emissions Inventory for the Tukuze Afrika Foundation, a non-profit organisation dedicated to youth STEM and climate education. The analysis covers the reporting year 2025 and adheres to the GHG Protocol Corporate Standard. It encompasses Scope 1 (direct emissions), Scope 2 (indirect emissions from purchased energy), and Scope 3 (other indirect emissions).

The purpose of this assessment was to establish a robust baseline, identify emission hotspots, and develop a strategic roadmap for emission reductions, in alignment with the Foundation's mission and broader climate commitments. This initiative responds to the organisation's commitment to "lead by example" by aligning internal operations with external advocacy for environmental sustainability by 2027. The strategic roadmap focuses on sustainable event management, low-carbon travel strategies, sustainable procurement, and renewable energy exploration.

This baseline report serves as a decision-making tool for the Foundation's management, a transparency mechanism for donors and partners, and a benchmark against which annual progress will be measured.

Methodology and Scope

This inventory was prepared by the GHG Protocol Corporate Accounting and Reporting Standard (Revised Edition), referencing GRI Standard 305: Emissions and the U.S. EPA Scope 1 and Scope 2 Inventory Guidance.

Reporting Period: 1 January – 31 August 2025

Organizational Boundary: Operational control approach, covering all operations directly managed by Tukuze Afrika Foundation.

Scope	Definition	Included Sources
Scope 1	Direct emissions from owned/controlled sources	Fuel combustion from organizational vehicles
Scope 2	Indirect emissions from purchased energy	Purchased electricity for office operations
Scope 3	Other indirect emissions in the value chain	Travel, event logistics, procurement, waste generation

Reporting Scope:

Data Collection and Quality: Data was sourced from operational records, invoices, travel logs, and event documentation. Conservative estimates were applied where data gaps existed.

Emission Factors: Derived from the GHG Protocol database, UK Government GHG Conversion Factors (2024), and U.S. EPA guidance.

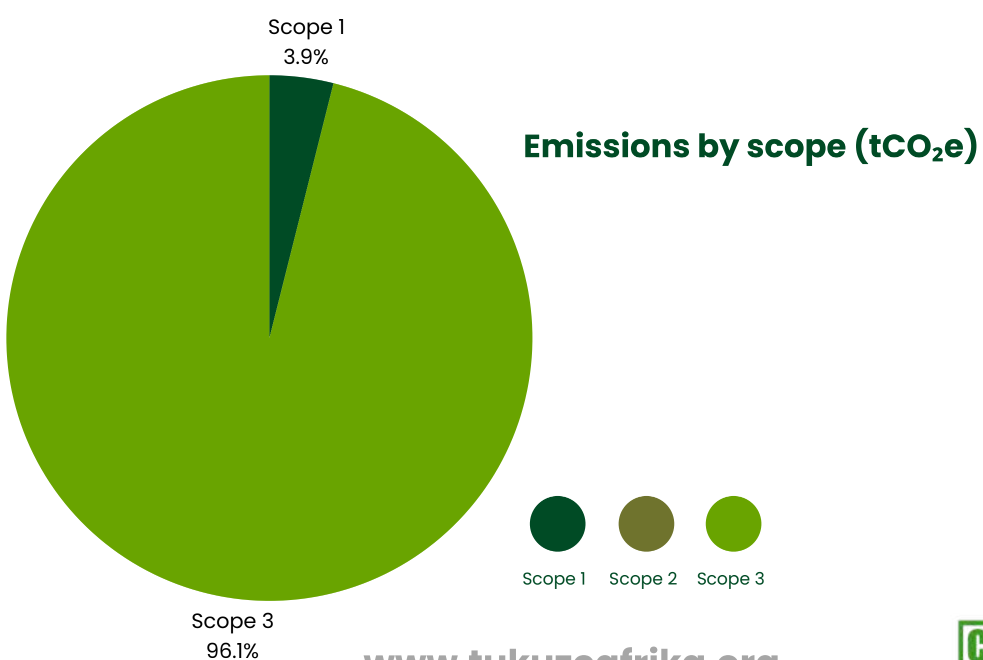
Results are expressed in tCO_2e, applying GWP values from IPCC AR6.

Limitations: Data gaps in travel and energy use, exclusion of downstream emissions from educational material usage, and reliance on standard factors for catering emissions.

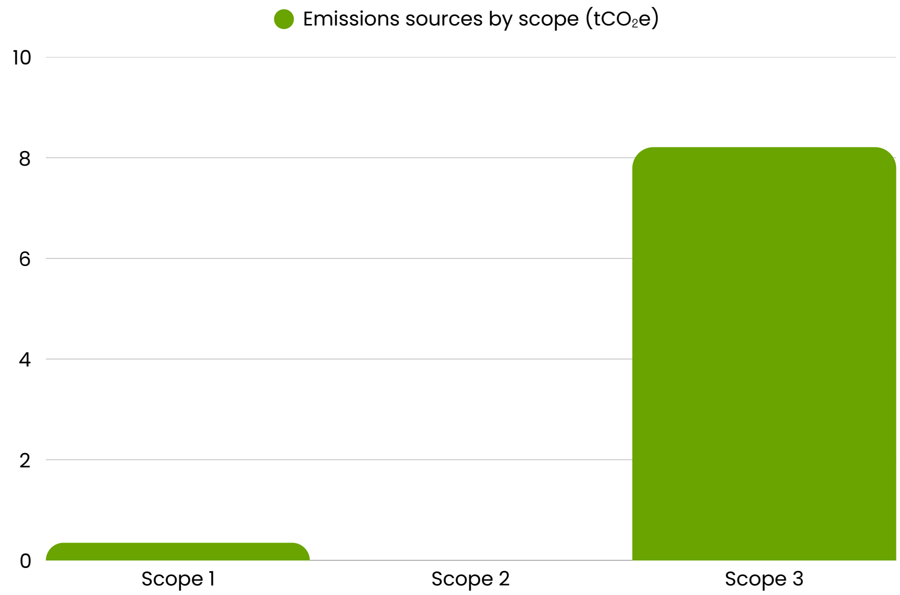
Results and Analysis

Baseline Emissions Profile:

Scope	Emissions (tCO_2e)	Contribution (%)	Key Sources
Scope 1	0.35	4%	Fuel combustion from petrol/diesel
Scope 2	0.00	0%	Purchased electricity
Scope 3	8.21	96%	Travel, event logistics, procurement
Total	8.56	100%	-



Emissions sources by scope (tCO_2e)



Key finding: Scope 3 activities dominate emissions (96%), primarily driven by travel and event logistics.

Travel & Fuel Consumption Details

During the reporting period, the Foundation covered an estimated **1,300 km**, consuming **130 litres of petrol**. Based on the IPCC standard factor (2.31 kg CO_2/litre), this resulted in **300.3 kg CO_2** (0.30 tCO_2e).

Breakdown of Travel-Related Emissions:

- **Exhibition Days**: 5 litres, 10 km → **11.55 kg CO_2**
- **Awarding Day**: 3 litres → **6.93 kg CO_2**
- **School Visits & Logistics**: 122 litres → **282.0 kg CO_2**

School Visits & Logistics accounted for over **90% of transport emissions**, underscoring the need for optimised travel routes and low-carbon options.

Event-Based Emissions Analysis

Bootcamp, Awarding Ceremony, and School Visits contributed a combined **0.821 tCO_2e**. Catering and transport represented over **90% of event-related emissions**, with road travel being the largest single factor.

This analysis highlights opportunities to **reduce emissions through sustainable catering practices, carpooling, and virtual engagement alternatives.**

Total Emissions and Offsetting

- **Baseline Total (Jan–Aug 2025): 8.56 tCO_2e**
- **Main:** Scope 3 (Travel, logistics, and procurement).

Offsetting Pathway

While the Foundation is committed to emission reductions, residual emissions will be offset to achieve carbon alignment with its 2027 strategy.

Offsetting Options:

1. **Tree Planting & Restoration Projects** – Planting ~410 trees to offset 8.56 tCO_2e
2. **Clean Energy Initiatives** – Encourage schools to develop environmentally friendly innovations and materials, and support tree planting and school gardening initiatives within their schools.
3. **Renewable Energy Credits (RECs)** – Purchase offsets where direct reductions are not possible.

Reduction Targets and Strategic Roadmap

The Tukuze Afrika Foundation has committed to a 20% reduction in operational GHG emissions by 2027, using the **2025 baseline of 8.56 tCO_2e**. This target aligns with climate science recommendations and the organisation's mission to demonstrate leadership in sustainability.

The roadmap includes specific actions, responsible parties, and expected annual reductions in emissions. Actions are categorised as short-term (2025), medium-term (2026), and long-term (2027).

Action Area	Initiative	Timeline	Estimated Reduction (tCO_2e)
Sustainable Event Management	Use energy-efficient venues, local catering, minimize waste	2025	0.50
Low-Carbon Travel	Promote virtual meetings, optimize travel routes, encourage public transport	2025–2026	0.80
Sustainable Procurement	Source from suppliers with strong environmental credentials	2026-2027	0.40
Renewable Energy	Assess and adopt solar PV or renewable energy credits	2026–2027	0.50

Recommendations

Based on the findings, the following recommendations are proposed to support the achievement of the 2027 target:

1. **Implement Continuous Monitoring** – Establish quarterly emissions tracking to evaluate progress.
2. **Engage Staff and Volunteers** – Conduct awareness and training programs to promote sustainable practices.
3. **Explore Renewable Energy Options** – Conduct feasibility studies for solar PV installation.
4. **Optimise Waste Management** – Implement recycling, composting, and waste reduction strategies at events and offices.
5. **Green Procurement Policy** – Formalise a procurement policy favouring sustainable suppliers and materials.
6. **Carbon Offsetting** – Invest in credible offset projects for unavoidable emissions. Tree planting initiative in schools, in which we are in partnership.

Risks and Opportunities

Risks:
-Reputational risk if the Foundation's operational footprint conflicts with its environmental advocacy.
- Donor trust erosion if emissions reduction targets are not met.

Opportunities:
- Enhanced donor engagement through transparent reporting.
- Leadership position in the non-profit sector on climate action.
- Potential cost savings through energy efficiency and travel optimisation.

Governance, Accountability & SDG Alignment

The Monitoring & Evaluation (M&E) Committee of Tukuze Afrika Foundation will oversee the implementation of this roadmap. Progress will be tracked quarterly and reported annually in line with **GRI 305 disclosures.**

This reduction target directly supports **SDG 13 (Climate Action),** while contributing to Kenya's NDC commitment to **reduce emissions 32% by 2030**.

Conclusion

This inaugural Organisational Carbon Footprint Analysis provides the Tukuze Afrika Foundation with a clear emissions baseline and a strategic roadmap for achieving a **20% reduction** by 2027. The findings emphasise the importance of focusing on **Scope 3** emissions, particularly event logistics and travel. Implementation of the recommended measures will position the Foundation as a credible leader in sustainable operations and reinforce its mission to promote climate education.

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Contact Us

P.O BOX 2520 -60200
MERU, KENYA
0723175181

stem@tukuzeafrika.org
letspartner@tukuzeafrika.org
munene@tukuzeafrika.org
muendo@tukuzeafrika.org

www.tukuzeafrika.org