SDG BLOCKCHAIN ACCELERATOR

Impact Measurement Framework – Template

1. Project Information

- **Project Name:** Thallo

- **Challenge & UNDP Office:** Tanzania

- **Document Version:** V.1

2. SDG Alignment

(Specify which UN Sustainable Development Goals your project addresses. Include the specific targets and indicators.)

SDG 13: Climate Action

- **Target**: Strengthen capacity to track, trade, and retire verified carbon credits in support of Tanzania's national climate goals.

- **Indicator**: Tons of CO_2 issued, sold, and retired through the registry.

SDG 12: Responsible Consumption and Production

- **Target**: Ensure transparent reporting and traceability of carbon credits across their full lifecycle.

- **Indicator**: Percentage of credits with full issuance-to-retirement traceability recorded on blockchain.

SDG 15: Life on Land

- **Target**: Support forest conservation and restoration projects through credible credit issuance.

- **Indicator**: Hectares of land under sustainable management linked to verified credits.

SDG 7: Affordable and Clean Energy

- **Target**: Facilitate financing for clean cooking and e-mobility projects through market access.

- **Indicator**: Number of energy transition projects (e-cooking, e-mobility) issuing credits via the platform.

SDG 17: Partnerships for the Goals

- **Target**: Build digital public infrastructure through partnerships between government, private sector, and international organisations.

- **Indicator**: Number of stakeholders (government bodies, developers, buyers) actively using the system.
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3. Key Performance Indicators (KPIs)

(Define measurable indicators that show your project's impact.)

Examples:

KPI	Measurement Method	Target / Threshold	Notes
Credits issued on registry	Platform issuance logs + blockchain tokenisation records	50,000 credits in first 12 months	Each token = 1 ton CO_2
Credits retired	Blockchain retirement transactions	At least 10,000 credits retired in first 12 months	Demonstrates system integrity
Transaction success rate	Cardano transaction logs	≥ 90%	Reliability benchmark during pilot phase
Active platform users	Backend dashboard (wallet addresses, logins)	50–100 users in first year	Mix of government, developers, and buyers
Project diversity	Platform metadata (project type classification)	Minimum of 2 project types onboarded (e.g. forestry + e-cooking)	Ensures coverage of Tanzania's net-zero priorities
Transparency of credits	% of credits with full audit trail (issuance → retirement)	100%	All credits must be fully traceable

| Government oversight | Administrator access logs | Continuous real-time access | Confirms Tanzanian authorities can supervise activity |

4. Tracking Methods

On-chain Metrics

- **Transaction success rate**: Measured using Cardano transaction logs via `cardano-cli` or Ogmios. Logs will be reviewed weekly to ensure ≥90% success.

- **Tokens minted / burned**: Each issuance (mint) and retirement (burn) is recorded on-chain. These events will be automatically exported and aggregated monthly.

- **UTxO state changes**: Used to confirm balances of issued, listed, sold, and retired credits. Data extracted weekly and reconciled against the platform inventory.

Off-chain Metrics

- **Dashboard monitoring of user activity**: Active users and logins tracked continuously via backend dashboard. Reports generated monthly.

- **Surveys or audits (if applicable)**: Feedback surveys from government administrators and project developers collected semi-annually. Independent audits may be conducted yearly if required.

5. Baseline vs Projected Outcomes

(State your starting point and what you expect to achieve.)

Example:

Metric	Baseline	Projected Outcome (Year 1)
Carbon credits minted	0	50,000

Carbon credits retired	0	10,000
Active users	0	50–100
Project types onboarded	0	2 (e.g. forestry + e-cooking)
Transaction success rate	N/A	≥90%
Transparency of credits (issuance → retirement)	N/A	100%
Reports generated	0	Quarterly reporting available

6. Monitoring & Reporting Plan

(Define who is responsible for reporting, how often, and what format.)

- **Frequency**: Quarterly reporting

- **Responsible Party**: Project Manager (with support from blockchain engineer)

- **Format**: Short PDF/CSV summary covering credits issued, retired, active users, and transaction success rate

- **Tools**: Cardano transaction logs + internal dashboard

7. Risks & Mitigation

(Optional: outline potential risks in measuring impact and how you will address them.)

Risks and Mitigations

- **Risk**: Occasional delays in updating project data
  Mitigation: Cross-check with government/project developer submissions each quarter

- **Risk**: Small discrepancies between blockchain records and dashboard data
  Mitigation: Monthly reconciliation to align both sources

- **Risk**: Limited user adoption in early stages leading to small datasets
   Mitigation: Focus on quality of reporting and transparency rather than volume during the pilot