



SDG BLOCKCHAIN ACCELERATOR

Impact Measurement Framework – Template

1. Project Information

- **Project Name:** Sun4Schools
- **Challenge & UNDP Office:** UNDP Mauritius
- **Document Version:** Impact Measurement Framework V1

2. SDG Alignment

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

Example:

- **SDG 13: Climate Action**
 - Target: Reduce carbon emissions through verified tokenized offsets
 - Indicator: Tons of CO₂ offset per transaction
- **SDG 7:**
 - Target: Focuses on increasing renewable energy share
 - Indicator: Megawatt-hours (MWh) of clean solar energy generated (measured post-installation, e.g., total MWh produced and integrated into the grid, aligning with Mauritius' 60% renewables goal by 2030).
- **SDG 5: Gender Equality**
 - Target: Ensures women participation in leadership:
 - Indicator: Percentage of women-led projects funded or women investors participating (e.g., % of total investments from women or % of schools with female administrators receiving solar funding).
- **SDG 4: Quality education**
 - Target: Promotes Education for sustainable development
 - Indicator: Number of schools equipped with solar energy (e.g., total schools funded and operational, measured by reduced energy costs and increased access to education tools).

3. Key Performance Indicators (KPIs)

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

KPI	Measurement Method	Target / Threshold	Notes
Funds raised for solar projects	Platform backend dashboard and transaction logs	MUR 500,000 in first year	Tracks total investments/donations via simulated payments; aligns with Mauritius' 60% renewables target by 2030, monitored quarterly for pilot schools.
Number of schools funded with solar installations	UNDP/CEB project reports and on-site verification	10 schools in first year	Measures successful crowdfunding leading to installations; contributes to SDG 4 (quality education) by powering schools, with progress tracked via CEB connection agreements.
Megawatt-hours (MWh) of clean solar energy generated	CEB grid integration data and solar panel monitoring	100 MWh in first year	Post-installation metric for SDG 7; uses CEB's renewable energy tracking to ensure affordable clean

			energy, with annual audits.
Tons of CO ₂ offset	Verified via CEB/UNDP carbon calculators (e.g., based on solar output)	50 tons in first year	SDG 13 indicator; calculated as ~0.5 tons CO ₂ /MWh avoided, tokenized for transparency; external audits for verification.
Percentage of women investors or female-led school projects	User profiles and investment logs (anonymized)	40% participation	SDG 5 metric; tracks women donors/investors or schools with female administrators, promoted via UNDP training programs for women in renewables.
Number of users onboarded and active	Platform dashboard (login/investment activity)	500 active users	Includes local/diaspora investors; tracked via wallet connections or logins, supporting SDG 4 by enabling education on sustainable development through platform resources.

4. Tracking Methods

(Describe how you will monitor and collect data for KPIs.)

On-chain Metrics:

As we do not yet have on-chain solutions implemented, on-chain tracking will be deferred until the rollout of crowdfunding smart contracts in future phases.

Off-chain Metrics:

For the MVP phase, all tracking relies on off-chain methods to ensure transparency and data collection without blockchain dependencies. These include:

- Dashboard monitoring user activity (e.g., investments, logins, and project views via platform backend logs).
- External reporting (e.g., UNDP and CEB audits for solar installations and energy output).
- Surveys and on-site audits (e.g., quarterly school feedback for impact and CO₂ estimates).

Example:

All investments and user activity will be logged via the platform dashboard and cross-checked weekly with UNDP reports. Solar energy generation and CO₂ offsets will be verified by CEB data and external audits quarterly, with manual token distribution tracked in a secure backend ledger until smart contracts are implemented.

5. Baseline vs Projected Outcomes

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

Example:

Metric	Baseline	Projected Outcome
Funds raised for solar projects	MUR 0	MUR 500,000 in first year
Number of schools funded with solar installations	0 schools	10 schools in first year

Megawatt-hours (MWh) of clean solar energy generated	0 MWh	100 MWh in first year
Tons of CO ₂ offset	0 tons	50 tons in first year
Percentage of women investors or female-led school projects	0%	40% participation
Number of users onboarded and active	0 users	500 active users

6. Monitoring & Reporting Plan

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

Frequency: Quarterly reporting (with monthly internal reviews for MVP phase).

Responsible Party: UNDP Mauritius Project Manager (overall coordination), Socious Fund Development Team (platform metrics), and Central Electricity Board (CEB) representatives (solar installation and energy data verification).

Format: Platform dashboard summaries (real-time user activity and funds raised) + off-chain PDF reports (quarterly, including project progress, CO₂ offsets, and SDG alignment) shared with stakeholders via email or UNDP portal.

Tools: Internal platform dashboard (for off-chain metrics like investments and user onboarding), CEB energy monitoring tools (for MWh generated and CO₂ offsets), and manual audits (e.g., school surveys for impact); future integration with Cardano tools (Ogmios, Kupo) once smart contracts are implemented.

7. Risks & Mitigation

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

Risk: Delays in solar installation data from schools or CEB (e.g., off-chain verification lags due to manual audits).

Mitigation: Establish monthly check-ins with UNDP and CEB representatives for preliminary data; use automated dashboard alerts for overdue reports.

Risk: Inaccurate CO₂ offset calculations or energy generation estimates (e.g., due to variable solar output or placeholder data in MVP).

Mitigation: Rely on verified CEB carbon calculators and external audits (quarterly); cross-check with independent solar monitoring tools, with notes in reports for any assumptions.

Risk: Low user participation or data collection (e.g., users not logging in or providing incomplete profiles for gender metrics).

Mitigation: Promote optional login with guest mode; run awareness campaigns via UNDP social media and school outreach to boost onboarding, targeting 500 users through targeted emails.

Risk: Data privacy concerns (e.g., tracking women investors without consent, per Mauritius Data Protection Act).

Mitigation: Use Self-Sovereign Identity (SSI) verification via Hyperledger Identus for decentralized, user-controlled identity management. Users hold their data in digital wallets, sharing only minimal, verifiable attributes (e.g., gender via zero-knowledge proofs) without storing PII on servers. This ensures anonymized aggregation for SDG 5 metrics, with revocation options and tamper-proof logs on Hyperledger's distributed ledger. Conduct annual DPA compliance audits; fallback to consent forms and guest mode for MVP.