SDG BLOCKCHAIN ACCELERATOR

Impact Measurement Framework

1. Project Information

- **Project Name:** Blockchain-Enabled CRF Fund Disbursement System

- **Challenge & UNDP Office:** UNDP Bangladesh

- **Document Version:** V1

2. SDG Alignment

1. SDG 1 – No Poverty

   - **Indicator 1.4.1:** Proportion of population living in households with access to basic services and financial resources.

     Contribution: By enabling digital wallets and transparent loan disbursement, the solution increases financial access for climate-vulnerable households.

2. SDG 5 – Gender Equality

   - **Indicator 5.a.1:** Proportion of women with ownership or control over assets, land, and financial accounts.
     Contribution: 98% Beneficiaries of the LoGIC project are women. Women beneficiaries gain equal access to CRF funds via mobile wallets, strengthening their financial autonomy.

3. SDG 8 – Decent Work & Economic Growth

   - **Indicator 8.10.2:** Proportion of adults with an account at a bank or other financial institution or with a mobile-money service provider.
   - **Contribution:** The solution promotes financial inclusion by linking beneficiaries with formal digital financial services (MFS like bKash).

3. Key Performance Indicators (KPIs)

KPI	Measurement Method	Target / Threshold	Notes

Number of successful validator transactions	Cardano transaction logs (Ogmios/Kupo)	≥95% success rate	Ensures cooperative transactions (savings, loans, committee votes) execute reliably
Cooperative tokens minted (shares / savings tokens)	On-chain ledger	100,000 tokens within first year	Each token represents cooperative value (e.g., savings unit or shareholding)
Active cooperatives onboarded	Backend dashboard + wallet addresses	20 cooperatives in first year	Multi-cooperative expansion tracked via user/org registry
Secondary committee participation	Meeting/vote logs + on-chain voting contracts	≥70% participation rate	Measures governance effectiveness
Loan disbursement & repayment success	Smart contract logs + off-chain dashboard	≥90% repayment adherence	Tracks financial sustainability of cooperatives

4. Tracking Methods

On-chain Metrics:

- Transaction success rate
- Smart contracts logged
- Loan repayment contract validations

Off-chain Metrics:

- Cooperative dashboard (member activity, savings balances, loan performance)
- Committee participation logs
- Survey data from cooperative leadership
- Quarterly audit reports from cooperative unions

Example:

All cooperative transactions (loan contracts, disbursement, and payment transactions) will be logged and reconciled with the cooperative dashboard in real-time.

5. Baseline vs Projected Outcomes

Metric	Baseline	Projected Outcome
Active cooperatives onboarded	0	200 within Year 1
Loan Disbursement Rate		≥70%
Committee participation rate	N/A	≥70%
Transaction success rate	N/A	≥95%

6. Monitoring & Reporting Plan

Frequency:

- Monthly internal monitoring (on-chain/off-chain sync)
- Quarterly cooperative performance reports
- Annual stakeholder review

Responsible Party:

- **UNDP Bangladesh** – managing climate resilience programs.
- **Government partners** – overseeing national adaptation priorities.
- **Local cooperatives** – implementing projects on the ground.
- **Beneficiaries** – climate-vulnerable households who depend on timely support.
- **Cladfy Inc**

Format:

- On-chain logs + Ogmios queries
- Cooperative dashboard summaries
- PDF/CSV reports shared with cooperative unions & funders

Tools:

- CardonoScan
- Internal cooperative dashboard
- Custom reconciliation scripts

7. Risks & Mitigation

- **Risk:** Data mismatch between on-chain transactions and the cooperative dashboard
  - **Mitigation:** Weekly reconciliation scripts + alert system

- **Risk:** Low committee participation in governance
  - **Mitigation:** Member incentives + training sessions

- **Risk:** Network downtime affecting cooperative operations
  - **Mitigation:** Redundant infrastructure + fallback manual reporting

- **Risk:** Loan defaults affecting cooperative KPIs
  - **Mitigation:** Risk-based credit scoring + staged disbursements