



## SDG BLOCKCHAIN ACCELERATOR

### Impact Measurement Framework – zenGate Global Ltd

## 1. Project Information

- **Project Name:** zenGate Global - Traceability via Winter Protocol
- **Challenge & UNDP Office:** UNDP Bangladesh
- **Document Version:** v1.0

## 2. SDG Alignment

### SDG 8 – Decent Work and Economic Growth

- *Target:* Advance decent work and export competitiveness in target value chains (vegetables, leather).
- *Indicator:* Increase in verified export-ready batches and producer revenues.

### SDG 9 – Industry, Innovation, and Infrastructure

- *Target:* Ensure SERA traceability data is anchored on-chain, reducing reliance on siloed cloud databases.
- *Indicator:* 50% of SERA traceability events successfully written to the blockchain via Winter Protocol APIs.

### SDG 16 – Peace, Justice, and Strong Institutions

- *Target:* Strengthen institutional transparency and build trust with global markets for target export value chains.
- *Indicator:* 100% of supply chain records independently verifiable on-chain by regulators and buyers.

### 3. Key Performance Indicators (KPIs)

KPI	Measurement Method	Target / Threshold	Notes
<b>Traceability events logged on-chain</b>	Winter Protocol API logs + blockchain transaction hashes	≥50% of all SERA traceability events	Compared to total events stored in SERA's cloud database
<b>Export batches supported with verified traceability</b>	Dashboard + export documentation cross-check	≥90% of batches backed by traceability QR codes	Evidence via export docs and QR code scans
<b>Adoption – new partnerships</b>	Signed agreements (MoUs)	2 MoUs with other traceability platforms	Demonstrates ecosystem growth beyond SERA

### 4. Tracking Methods

#### On-chain Metrics:

- API-submitted transaction IDs (harvest, QA, payments).
- UTxO state changes recorded on Cardano testnet.
- Immutable audit trail of export batches.

#### Off-chain Metrics:

- SERA dashboards for user activity (farmer onboarding, QA checks, payments).

## 5. Baseline vs Projected Outcomes

Metric	Baseline	Projected Outcome
Traceability events logged on-chain	0% of events on-chain	≥50% of all SERA events written on-chain
Export batches supported with verified traceability	0% backed by blockchain-anchored traceability QR codes	≥90% of SERA export batches backed by QR codes with blockchain anchoring.
Adoption – new partnerships	1 MoU signed with SERA Bangladesh	2 <b>new</b> MoUs signed with other traceability platforms

## 6. Monitoring & Reporting Plan

- **Frequency:** Quarterly reporting.
- **Responsible Party:** SERA Tech Team + UNDP Bangladesh Accelerator Lab + Winter Protocol integration team.
- **Format:** On-chain logs + dashboard reports + quarterly PDF brief for UNDP/government stakeholders.
- **Tools:** Winter Protocol APIs and Explorer Tab (i.e see all on-chain activity)

## 7. Risks & Mitigation

### 1. Risk: Incomplete data anchoring

- Description:* Not all SERA events are submitted on-chain due to integration issues or missed API calls.
- Mitigation:* Conduct comprehensive preview net testing before production rollout to ensure end-to-end reliability.

### 2. Risk: Data mismatch between SERA database and blockchain

- Description:* On-chain data may diverge from SERA's cloud records if updates are made only in the database.

- b. *Mitigation:* Ensure all edit events are also catalogued on-chain; enforce policy that changes in SERA DB must trigger edit events via API.

### 3. Risk: Slow blockchain adoption

- a. *Description:* Broader ecosystem may be slow to recognize or integrate blockchain-anchored traceability records.
- b. *Mitigation:* Expand engagement strategy beyond Bangladesh, targeting other UNDP offices and regions with higher compliance pressure and technology need.