



# Sustainable Soya

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# SOPA



# About TRST01

Global sustainability tech company working at grassroots aimed to build trust in all environmental projects

## Sustainability at Grassroots

**835K Ha.**

Project Area for Sustainability  
Compliance Environment

**425K**

Grassroot beneficiary with 2x  
with additional income

**50 MN MT**

Certified Quantity of Sustainable,  
Traceable product across globe

**2.42 BN**

Value of Traceability Compiled  
Inter-country material movement

## Our Presence

India (HQ) | Singapore | USA  
UAE | Australia

## Countries Impacted

India | Vietnam | Laos | Cambodia | Indonesia  
Malaysia | China | Cote d'Ivoire



## Global Capabilities

**10+ Countries**

Providing sustainability  
certifications

**Commodities covered**

Rubber, Soya, Coffee, Cashew,  
Cocoa, Vegetables

**Tech Innovations**

Inhouse products. Highly  
qualifies & Experienced team

**1 Bn Datapoints**

Processing everyday, strong  
data security

## Awards & Recognitions



UBS FORUMS





~ 13.5 million Ha

Area under soybean  
(2024/25, USDA)

~ 12.5 million tonnes

India's soybean production  
(2024/25 estimate)

~ 5.5 million

Farmers livelihood  
dependent on Soya bean

Indian soybean is a smallholder, rain-fed crop concentrated in central India. India is the world's top-5 producer with expanding acreage but yield ~1.0 t/ha vs global ~2.6 t/ha.

- **Production Leadership in Central India:** India, the world's 5th largest soybean producer with 12.5–13 MMT output, sees over 90% of its crop from Madhya Pradesh, Maharashtra, and Rajasthan.
- **Non-GMO Competitive Advantage:** With no GM food crops approved for cultivation, Indian soy supplies non-GMO meal/food streams sought by premium buyers.
- **Export momentum:** India shipped ~2.1 MMT of soymeal in 2023–24 (+16% YoY); top buyers were Iran, Bangladesh, and Nepal, with niche EU demand for non-GM meal.

# Sustainability is Inclusive

Producing soy that regenerates resources, raises farmer incomes, and is provably compliant. India's focus is less on frontier deforestation and more on soil health, rain-fed water efficiency, safe inputs, and auditable supply chains.



## Environmental

- **Regenerative agronomy:** reduced/zero till + >30% residue cover, soy-wheat/chickpea rotations, short-window cover crops.
- **Input & water stewardship:** soil-test nutrients + organics (FYM/compost), IPM, in-situ water conservation for rain-fed belts.
- **What to track:** SOC change, water-use productivity (kg grain/m<sup>3</sup>), Active-ingredient use intensity & harvest loss %.



## Social

- **Livelihoods & fairness:** higher net margin/ha, timely payments (≤7–14 days), transparent price discovery via FPO aggregation.
- **Safety & skills:** PPE + safe pesticide handling, training/farmer/season, grievance logging etc.
- **Inclusion & safeguards:** women participation in field teams/FPO boards, onboarding small & marginal farmers, no child/forced labour.



## Economy

- **Traceability:** plot geolocation (polygons), lot-level segregation & identity preservation (non-GMO/certified volumes). **Premium Pricing**
- **Certification & audits:** ISSS for scale; RTRS/ProTerra for export chains; surveillance audits
- **Digital and Data-driven Inclusion** – Integrating farmers into digital sustainability ecosystems like dMRV and traceability platforms builds transparency, enabling financial inclusion, carbon credit access, and new income streams



India's home-grown soy sustainability benchmark for smallholder, rain-fed belts. It translates ESG into six principles with clear criteria & indicators, enabling credible audits and buyer-ready evidence on agronomy, legality, and responsible practices.

## Principles of ISSS

### 1. Sustainable Crop Production

Soil & water stewardship; soil-test nutrients, IPM; residue/RT/NT; safe input use.

### 2. Legal Compliance

Land/title & licenses verified; input/labour laws met; documented compliance.

### 3. Community & Workers

No child/forced labour; fair wages & hours; PPE/OSH, sanitation, grievance redressal.

### 4. Conservation & Restoration

Protect natural resources; cut emissions; avoid residue burning; carbon +ve practices.

### 5. Good Business Practices

Viable farm/processing economics; fair pricing & quality; clean storage/transport risk controls

### 6. Improvement & Transparency

Annual plans & training; audit CAP closure; traceable, shareable ESGI data.

# Methodology Framework ISSS–(Proposed)

Stage	Focus Area	Key Activities / Methodology	Purpose / Outcome	Potential Digital Tools / Systems
A. Baseline & Data Capture	Farm <b>Geo-referencing, Farmer Profiling, Soil &amp; Water</b> Baseline	Map farms using <b>GPS/GeoJSON</b> for deforestation-free verification. Collect farmer socio-economic and production data ( <b>landholding, inputs, yield, income</b> ). Conduct soil and water quality analysis to establish sustainability baselines.	Establish credible baseline for <b>sustainability measurement and EUDR compliance</b> .	<b>TRST01Chain, GIS-based mapping, GeoJSON datasets, Soil IoT sensors, Farmer Registry Database</b>
B. Sustainable Production Practices	Climate-smart Agriculture, Input Optimization, Resource Efficiency	Promote crop rotation, reduced tillage, and cover cropping. Adopt biological inputs and minimize agrochemicals. Optimize irrigation (drip/sprinkler) and nutrient use for efficiency.	Enhance productivity, soil health, and reduce environmental footprint.	Footprint ( <b>ESG Platform</b> ), <b>Farm Management Apps, IoT-based irrigation sensors, Agro-advisory dashboards, LCA</b>
C. Traceability & Verification	End-to-End Traceability, Blockchain Integration, Data Validation	Record each transaction from farm to buyer via blockchain. Digitally tag produce batches and maintain audit trails. Enable QR-based certification and supplier verification.	Ensure transparency, traceability, and trust in sustainable soy value chain.	TRST01Chain, QR/Blockchain Ledger, Supply Chain ERP, Certification APIs
D. Monitoring, Reporting & Verification (MRV)	Digital MRV Systems, Satellite & IoT Monitoring, Third-party Audits	Use <b>digital MRV</b> to measure GHG, soil, and water metrics. <b>Apply remote sensing and IoT data for real-time sustainability</b> tracking. Validate results via third-party audits.	Enable accurate sustainability reporting and continuous improvement.	dMRV System (TRST01), Satellite Remote Sensing, IoT Soil & Climate Sensors, ESG Reporting Dashboards



# Key Indicators Framework for ISSS

Dimension	Focus Area	Indicator / Metric	Measurement Methodology	Potential Digital Tools / Systems
Environmental	Deforestation & Land Use	% area verified as non-deforested	Satellite / GIS analysis using GeoJSON farm data	TRST01Chain, <b>GIS Tools, Remote Sensing</b>
	GHG Emissions Reduction	CO <sub>2</sub> equivalent per ton of soy produced	Digital MRV + Life Cycle Assessment (LCA)	dMRV System, <b>Carbon Calculators, IoT Sensors</b>
	Water Use Efficiency	Liters of water per kg of soy produced	IoT-based field data, water meters	IoT Irrigation Monitors, <b>Footprint Platform</b>
	Soil Health Improvement	% increase in soil organic carbon, nutrient balance	Annual soil testing and remote sensing	Soil IoT Sensors, <b>Lab-linked Data Portal</b>
	Biodiversity Conservation	% of buffer zones and native vegetation maintained	GIS mapping and farm audits	GIS Layers, <b>Biodiversity Index Tools</b>
Social	Farmer Livelihood	Average income increase per year	Annual income and yield tracking	Farmer Registry, <b>Digital Payment Records</b>
	Gender Inclusion	% of women farmers engaged in sustainable soy	Field data and farmer profiling	Footprint Social Metrics, <b>Farmer Registry Database</b>
	Training & Capacity Building	Number of farmers trained in sustainable practices	Attendance logs, mobile training data	Learning Management Systems, <b>Digital Training Apps</b>
	Fair Labor & Safety	Compliance with labor norms and fair wage verification	Field audits and digital reporting	Audit App, <b>Footprint Compliance Tracker</b>
Economic	Yield Improvement	% increase in productivity (MT/ha)	Field-level crop data monitoring	Farm Apps, <b>IoT Yield Sensors</b>
	Market Access	Volume sold through certified or premium channels	Trade and export records	TRST01Chain, <b>Trade Traceability Dashboards</b>
	Carbon Revenue Generation	Income earned from carbon credits	Verified registry and dMRV	dMRV System, <b>Carbon Credit</b>

## Expected Outcomes

- Economic: **15–25%** higher income for sustainable soy farmers through yield, premium pricing, and carbon credits.
- Environmental: Verified non-deforestation production, 20% water efficiency improvement, measurable GHG reduction.
- Social: Increased participation of women and smallholders, enhanced financial inclusion.
- Governance: Digital transparency, EUDR-ready traceability, and real-time sustainability reporting.

## Implementation Alignment

- SDG Alignment: **SDG 1** (No Poverty), **SDG 2** (Zero Hunger), **SDG 5** (Gender Equality), **SDG 12** (Responsible Consumption), **SDG 13** (Climate Action), **SDG 15** (Life on Land).
- Policy Integration: Aligned with India's National Mission on Sustainable Agriculture (NMSA) and FAO's Sustainable Food Systems Framework.
- Technology Backbone: Powered by TRST01's suite **TRST01Chain** (traceability), **Footprint** (ESG management), and **dMRV** (data-driven verification).

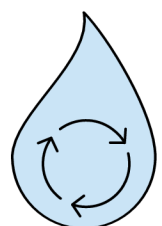


A systems approach that rebuilds natural capital and farmer prosperity—aiming to leave the land and community better each season, not just “less harmed.”



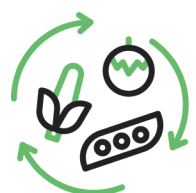
**Improve soil health** — build organic matter, strengthen structure, reduce erosion.

Adding organic matter (compost/FYM), retaining residues/mulching, reducing tillage



**Enhance water resilience** — better infiltration, moisture retention, and drought tolerance.

Conserving ground cover, shaping bunds/contours, harvesting rainwater (ponds/pits)



**Support biodiversity** — healthier field and landscape ecology, natural pest balance.

Diversifying rotations/intercrops, planting hedgerows/trees, adopting IPM/biocontrols



**Strengthen livelihoods & equity** — more stable incomes, safer work, inclusive participation.

Aggregating via FPOs, improving drying/storage & grading, training and using PPE

# Why it Matters ?



**Rising global demand** — Retailers, feed & food brands are shifting to traceable, deforestation-free, non-GMO soy with ESG disclosure.



**Premium & market access** — Better entry to EU/US food-grade (e.g., lecithin) and buyers that pay for certified & verified supply.



**Regulatory compliance** — Meets regimes (EU deforestation rules, Germany's LkSG, UK Environment Act) and aligns with buyer responsible-soy policies.



**Supply & brand risk reduction** — Fewer shipment disputes, audit findings, and reputational risks; stronger buyer confidence.



**Finance & incentives** — Improves eligibility for sustainability-linked finance, green procurement scorecards, and long-term contracts.

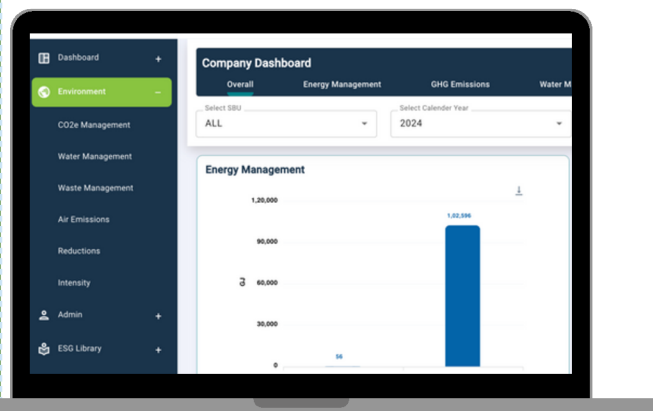


# Our Solutions

## Enterprise **FOOTPRINT**

### Footprint Smart Tool

Automated ESG Reporting Tool – **FOOTPRINT**, With risk adjusted scoring module, Dynamic dashboards, multi-user access



Compatible with global frameworks like BRSR, GRI, TCFD, CSRD, SASB, CDP, and SDGs, and features automated calculators for Scope 1, 2, and 3 emissions across categories.

## **TRST01Chain**

### Powerful Traceability tool

Enabled with End to End seed to plate traceability in agri-supply chains



Compatible with Globally acceptable Traceability principles of WTO, FAO, Codex Alimentarius, ISO 22005:2007, EUDR

## **dMRV**

### d Measurement Reporting Verification


Tool for audit-ready measurement & reporting across carbon sequestration, methane abatement, and sustainability programs —turning sensor/field/satellite data into verifiable evidence.




IoT + remote sensing, geotagged mobile capture, methods engine (reductions/removals), live dashboards, API export, audit-ready reports, SDG metrics.

# Solutions CONVERGENCE







**Plot Mapping**  
KYC, Risk & Governance



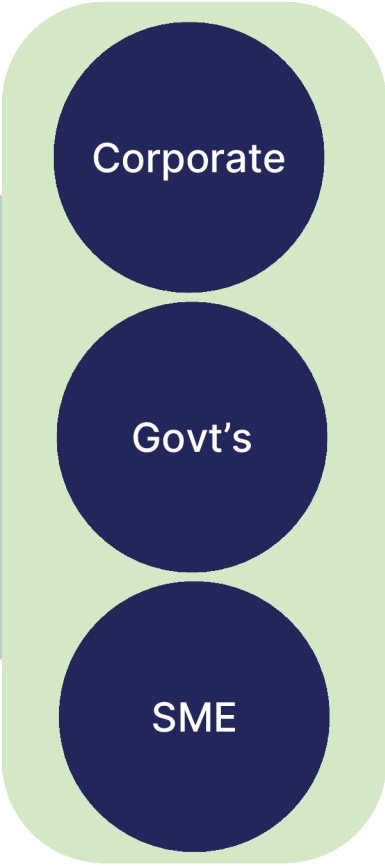
**Change of State Reporting**  
Carbon Footprint



**Sustainable Sourcing / production**  
Sustainable practices in sourcing & manufacturing



**End to End Traceability**  
Blockchain enabled traceability platform



ESG Reporting  
Standard / Framework based reporting

**Company's carbon emission dashboard**

Calculated Carbon Emission

Total carbon emission	2.4 Gt	+2.7% (1Y)	+0.05% (1Y)
Scope 1 carbon emission	0.8 Gt	-0.02 Gt (1Y)	-3.23% (1Y)
Scope 2 carbon emission	0.6 Gt	+0.05 Gt (1Y)	+8.65% (1Y)
Scope 3 carbon emission	1.0 Gt	+0.5 Gt (1Y)	+5.26% (1Y)

ESG Score

Environment	40
Social	32
Governance	20
Total	92

**Scope 1 detailed summary**

0.8 Giga tons

Carbon emission trend - Renewable energy

Woody Biomass	100
Vegetable oils	150
Animal fats	250
Greases	350
Algae	450

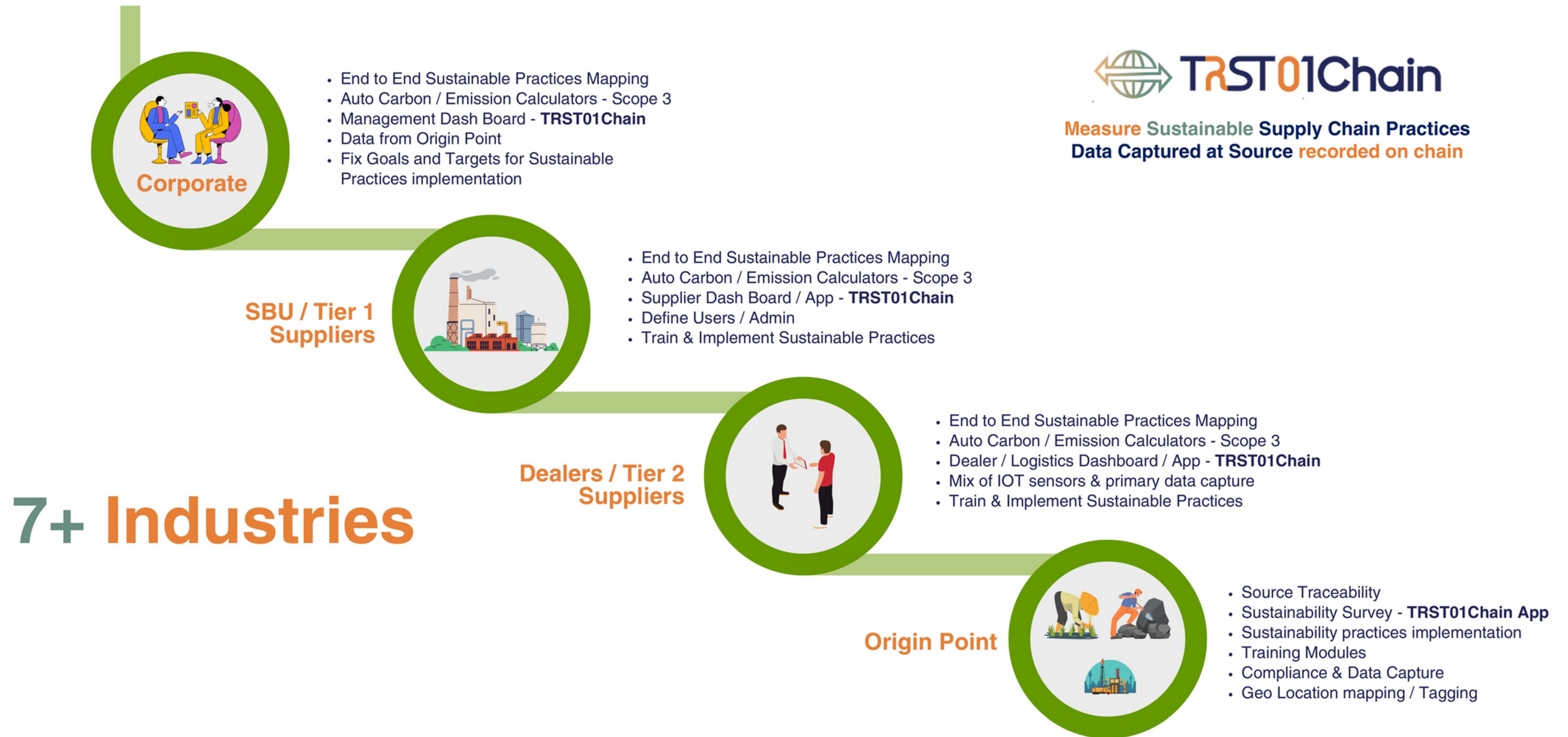
Renewable energy details

S.No	DATE	SITE ID	FUEL TYPE	UNIT	VALUE	CARBON EMISSION
1	11/9/23	ABC123	Woody Biomass	Ton	1000000	2 Ton
2	11/9/23	ABC123	Vegetable oils	Ton	1000000	2 Ton
3	11/9/23	ABC123	Animal fats	Ton	1000000	2 Ton





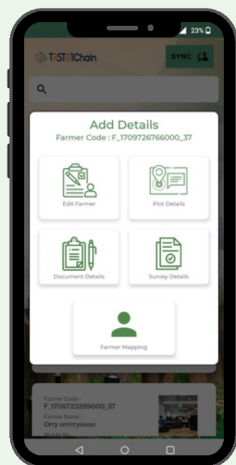
# Sustainable Supply Chain



# Our Approach – EUDR

Supply Chain Data

## 1. Agent/ Mandi/ Processor to Create Farmer Profile



- Farmer Name
- Khasra number
- Adhaar Copy

## 2. Data Extraction from Government Database (MP - Bhulekh, MAHA Bhulekh)

Khasra number



- Plot Polygon file
- Land Legality Document (Khasra Doc)
- Farm details (area etc.)

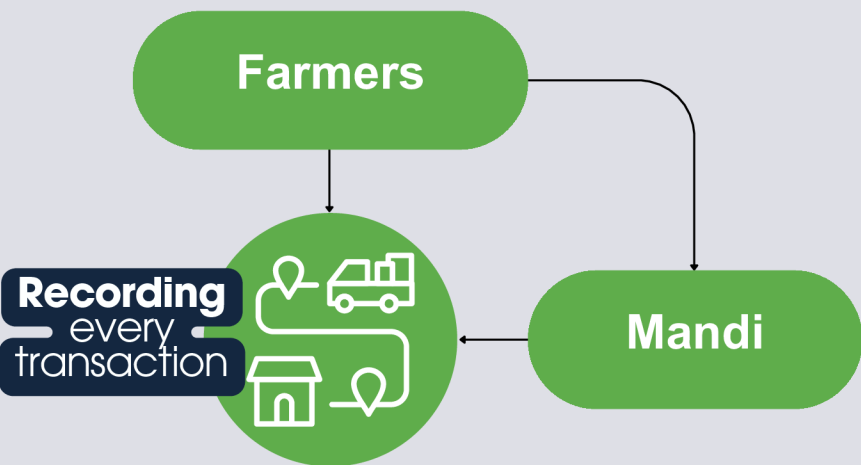
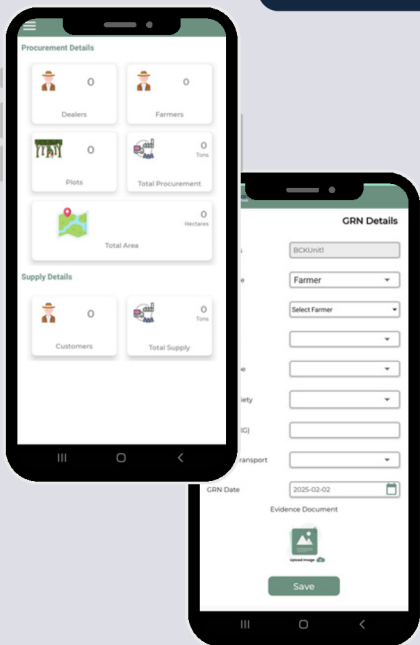
## 3. EUDR Compliant Profiles

- Deforestation Analysis of Plots
- Verified Land Ownership
- Mapped Polygon (GeoJSON)
- Farmer Identity & Aadhaar Linked for Legality

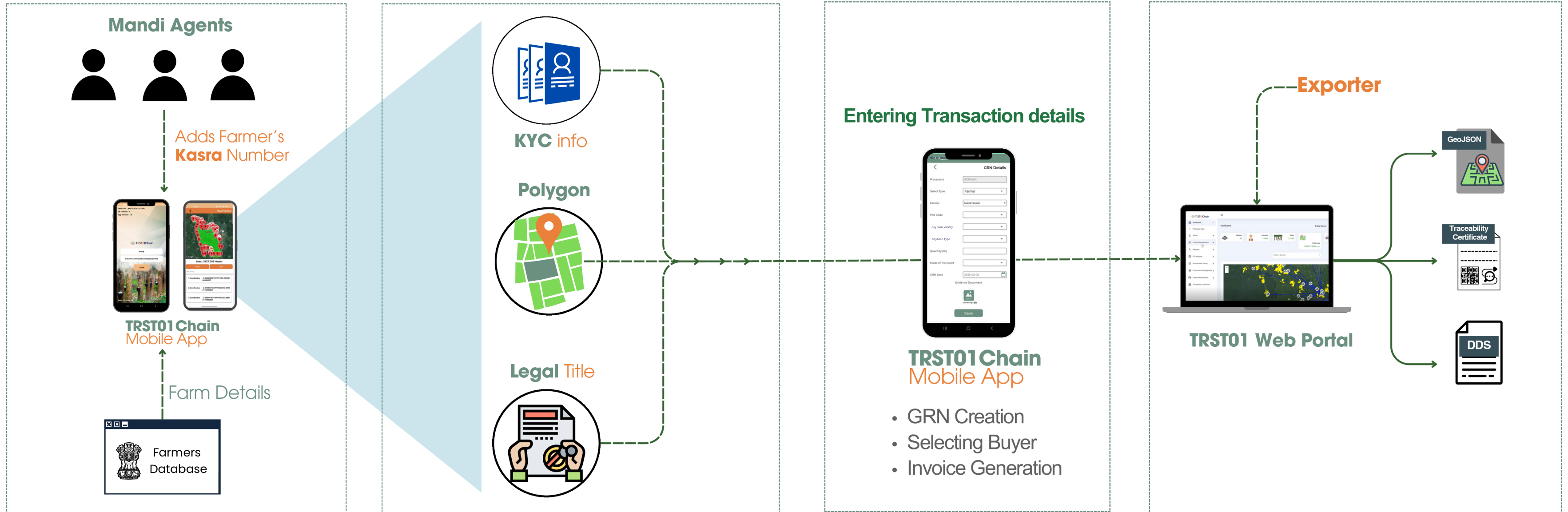
Traceability Data

Farmers → Traders	Goods tagged to mapped farmer and recorded with GRNs
Traders → Mandis	Digital transfer logs created, maintaining batch identity
Mandis → Processors	Batch is segregated and processed separately with traceability maintained
Processors → Exporters	DDS and traceability certificates auto-generated with EUIS compliant polygon data & DDS

## Intelli Track App for Stakeholders



# Process Flow



Supply Chain Mapping  
किसान का विवरण जोड़ना

Plot Polygon and Documentation  
प्लॉट मैपिंग और दस्तावेज़ जमा करना

Establishing Traceability  
ट्रेसबिलिटी स्थापित करना

EUDR Docs for Exporters  
EUDR दस्तावेज़ (निर्यातकों के लिए)



# Our Impact & Expertise

835,000+ Ha

Largest coverage of Sustainable and  
deforestation free Farm Lands

425,000+

Farmers onboarded on TRST01Chain  
platform

50 Mn Tons

of Products flown through the system  
including EUDR shipments

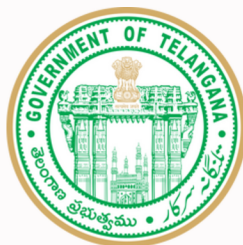
## Government Partnerships



RUBBER BOARD,  
GOVERNMENT OF INDIA



PDS, GOVERNMENT  
OF ODISHA



GCC, GOVERNMENT  
OF TELANGANA



TELANGANA STATE  
AGRI UNIVERSITY

## ESG Monitoring and Reporting



SATO®



## Global Exporters Rubber/Coffee/Cocoa/Tyres





SOPPA

# Thank You !

**Connect with us**

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