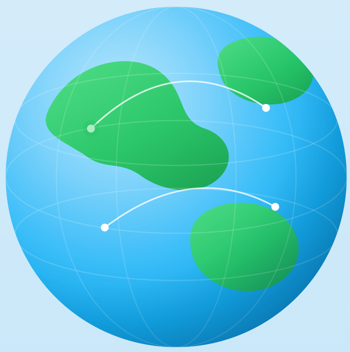
EB-PB-010 · ENTERPRISE PRODUCT BRIEF

EarthESG
Product Brief

Enterprise ESG data management and disclosure tooling with carbon-credit infrastructure integrated as a native capability: measurement, verification, issuance, trading, and retirement of carbon assets on the same rails as the reporting that cites them — eliminating the reconciliation gap between claims and evidence.

ESG REPORTING · CARBON CREDITS · MRV PIPELINE · EBS-1155 · 3525

Version 1.0 · **Status** Public Release · **Date** July 2026
Canonical source Earth Blockchain Whitepaper v2.0
Audience sustainability officers · carbon project developers · assurance firms · banks



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EarthESG — Sustainability, Reporting & Carbon Credits

CLAIM AND EVIDENCE ON ONE LEDGER

ESG reporting and carbon markets suffer the same disease from opposite ends: disclosures cite evidence nobody can trace, and credits trade with provenance nobody can prove. EarthESG unifies them — every disclosed number links to anchored evidence, every credit carries its measurement-to-retirement history, and a retirement certificate is a first-class object a report can cite. Because the ledger underneath is verifiably low-power, the infrastructure never undermines the product.

At a Glance	
Category	Sustainability intelligence and integrated carbon-credit infrastructure (Whitepaper §12.2).
Core EBS standards	EBS-1155 (credit classes by project × vintage), EBS-20 (pooled units), EBS-4671 (verifier attestations), EBS-3525 (splittable credit lots).
Primary buyers	Listed and multinational enterprises under disclosure mandates; carbon project developers and registries; sustainability consultancies and assurance firms; banks assessing financed emissions; public agencies running carbon programs.
Commercial model	Platform subscription tiered by entities and data volume; marketplace take-rate on credit issuance and transfers; per-retirement certification fees — settled in EARTH.
Canonical reference	Whitepaper v2.0 §12.2; platform interfaces in EB-API-003; contract patterns in EB-SCC-005.

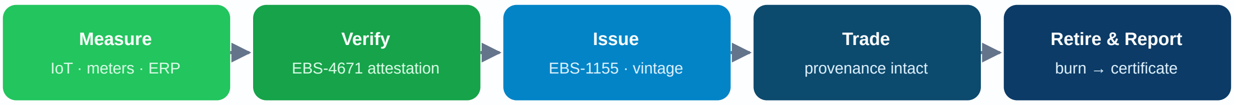
1. The Problem

Sustainability disclosure regimes (CSRD/ESRS in the EU, BRSR in India, ISSB-aligned frameworks globally) demand evidence-linked, assurance-ready data — while most ESG reporting still aggregates spreadsheets whose provenance evaporates on inspection. Voluntary carbon markets face the mirror crisis: double-counting, phantom credits, and untraceable retirement claims have damaged price and trust alike. Running reporting and carbon assets on separate systems guarantees a reconciliation gap between what a company claims and what its certificates show (Whitepaper §3, §12.2).

2. Solution Architecture

An ingestion layer collects emissions and sustainability data from meters, IoT gateways, utility feeds, ERPs, and supplier declarations — the latter arriving pre-verified as EarthDoc attestations. A computation layer applies emission factors and methodology templates structured for GHG Protocol accounting and CSRD/ESRS- and BRSR-style disclosure, anchoring evidence commitments as data arrives. The integrated carbon module issues credits as EBS-1155 classes keyed by project and vintage after an accredited verifier signs an EBS-4671 attestation; EBS-3525 lots split and merge cleanly; retirement burns the asset and mints an immutable certificate cited directly in disclosures (Whitepaper §12.2). Alignment describes tooling structure, not regulatory certification.

Fig. 1 — EarthESG: Integrated Carbon Lifecycle



Measurement to retirement on one ledger — double-counting is structurally impossible, and every disclosure cites its evidence.

Fig. 1. Measurement to retirement on one ledger — double-counting is structurally impossible, and every disclosure cites its evidence.

3. Workflow

1. **Connect data.** Wire meters, utility feeds, ERP extracts, and supplier attestation intake into the MRV pipeline; raw-data commitments anchor as they arrive.
2. **Compute & review.** Apply factor libraries and methodology templates; sustainability teams review evidence-linked datasets entity by entity.
3. **Verify.** Accredited verifiers review the trail and sign on-chain attestations — for disclosures and for credit issuance alike.
4. **Issue & transact.** Mint credits per project × vintage; transfer between eligible registries, brokers, and buyers with full provenance.
5. **Retire & disclose.** Buyers burn credits; retirement certificates flow into CSRD/BRSR-structured disclosure exports, closing claim to evidence.

4. Standards and Platform Integration

Component	Role in EarthESG
EBS-1155	Credit classes (project × vintage) with batch operations for registry-scale issuance.
EBS-3525	Quantity-divisible lots that split and merge without breaking provenance during partial retirement.
EBS-4671	Verifier and methodology attestations; supplier declarations via EarthDoc interop.
EBS-20	Pooled/fungible environmental units where class identity is intentionally abstracted.
BaaS Anchoring & Indexing	Evidence commitments and assurance-ready exports (EB-API-003 §5.1, §5.4).

5. Deployment and Integration Path

- **Pilot (weeks).** One facility or one project: connect its meters/feeds, produce an evidence-linked emissions dataset, and run a single verified credit issuance-and-retirement round trip on testnet, then mainnet.
- **Integration (months).** Roll ingestion across entities; onboard your verifier(s) to attestation signing; connect supplier declarations through EarthDoc; map disclosure exports to your CSRD/ESRS or BRSR reporting workflow.
- **Production (quarters).** Group-wide MRV, marketplace participation or program operation, financed-emissions data feeds to lenders, and Scope 3 supplier coverage targets — with the network's own energy profile (validator green attestations) available for your infrastructure footprint narrative (Whitepaper §13).

6. Business Model and Value

Dimension	EarthESG
Target customers	Listed and multinational enterprises under disclosure mandates; carbon project developers and registries; sustainability consultancies and assurance firms; banks assessing financed emissions; public agencies running carbon programs.
Business model	Platform subscription tiered by entities and data volume; marketplace take-rate on credit issuance and transfers; per-retirement certification fees — settled in EARTH.
Revenue opportunities	Disclosure tooling seats, MRV pipeline services, registry-integration licensing, verified-data API access for lenders and insurers.
Competitive advantage	Reporting and carbon assets on one verifiable ledger (no reconciliation gap); a credibly low-power chain hosting the market; supplier data arrives pre-verified via EarthDoc and EarthSCM.

7. Enterprise Use Cases

CSRD/ESRS- and BRSR-structured disclosure with evidence links; corporate net-zero tracking across subsidiaries; high-integrity voluntary carbon issuance; Scope 3 supplier data collection with verifiable attestations; green-bond impact reporting; public carbon-program registries.

8. Measuring Success

- **Assurance efficiency.** Auditor hours per disclosure cycle; share of reported figures with one-click evidence resolution.
- **Credit integrity.** Zero double-counting by construction; retirement-certificate citation rate in disclosures.
- **Coverage.** Entities and Scope 3 suppliers on verified data feeds; percentage of emissions under anchored evidence.
- **Market performance.** Issuance-to-retirement cycle time; provenance-complete share of traded volume.

9. Security and Compliance Notes

- **Evidence integrity.** Raw-data commitments anchored at ingestion; any later edit is detectable — the property assurance teams actually need.
- **Verifier accountability.** Attestations are signed, on-chain, and revocable; verifier identity and history are public objects.
- **Commercial confidentiality.** Volumes and counterparty terms stay off-chain; classes, attestations, and retirements are the public layer (EB-ENT-006 §5).
- **Framework posture.** Structural alignment with GHG Protocol / CSRD / BRSR reporting shapes — certification and assurance remain the adopting organization's process.

Getting started. Bring one project's data to a testnet MRV pilot (EB-API-003 §5), invite your verifier to the attestation flow, and contact the enterprise team for marketplace and registry-integration onboarding.

EB-PB-010 v1.0 (July 2026). This brief expands Whitepaper v2.0 §12.2 with deployment and operational guidance; the Whitepaper governs in any discrepancy. References to reporting or regulatory frameworks describe structural alignment of tooling, not certification or approval. Nothing herein constitutes financial, investment, tax, or legal advice.