

# Constitutional Layer

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# CTH as Framework Operator

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## CTH as Framework Operator

CleantechHUB operates the infrastructure. It does not own the data.

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The most important design choice in this framework: **CTH is the operator, not the owner**. CTH maintains the technical infrastructure, publishes the standards, certifies validators, and enforces the rules. CTH does not own, sell, or unilaterally access the climate data that flows through the system.

**The ICANN Model:** ICANN operates the Domain Name System globally. It maintains the protocol, accredits registrars, and enforces policy. It does not own domain names — registrants do. CTH's relationship to climate data is structurally identical. CTH maintains the protocol and enforces the framework; data submitters and communities own their data.

## What CTH Can Do

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### ? Maintain infrastructure

Operate the governance ledger, API, and credential verification services.

### ? Publish standards

Release new framework versions, SHACL shapes, and methodology registries.

### ? Certify validators

Issue CTH Validator Credentials to organisations meeting EN ISO/IEC 14065 requirements.

### ? Enforce submission rules

Reject submissions that fail SHACL validation or lack required FPIC credentials.

## What CTH Cannot Do

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## ? Override FPIC consent

CTH cannot access community-restricted data even with full administrator credentials. This is enforced at database row-level security — not policy.

## ? Sell or license data

CTH cannot sell, license, or grant access to data it does not own. Data owners control their own ODRL usage policies.

## ? Change framework unilaterally

Major framework changes require a ? board supermajority. Changes touching FPIC rules additionally require Community Sovereignty Panel affirmative vote.

## ? Validate its own data

CTH-submitted data must be validated by a third-party accredited validator. No self-certification.

# Legal Basis

| Jurisdiction  | Relevant instrument                   | Implication for CTH   |
|---------------|---------------------------------------|---|
| Colombia      | Law 21 of 1991 (ILO 169 ratification) | Free Prior and Informed Consent mandatory before collecting data in indigenous territories        |
| Colombia      | 2016 Peace Accords — Ethnic Chapter   | Community data rights recognised as part of territorial rights                                    |
| EU            | GDPR Article 5                        | Data minimisation and purpose limitation — encoded in ODRL policies                               |
| Brazil        | LGPD (Lei 13.709/2018)                | Consent requirements for personal data in emissions records                                       |
| International | CARE Principles (GIDA 2018)           | Collective benefit, authority to control, responsibility, ethics — all encoded in framework rules |

# Governance Board

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## Governance Board

Multi-stakeholder deliberation body. No single constituency can dominate.

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The Governance Board makes decisions about the framework itself — what rules apply, which methodologies are accepted, how disputes are resolved. CTH holds one seat as Operator but cannot outvote the other four seats combined. The board structure is designed to prevent regulatory capture.

## Board Composition

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### ? Scientific Council

**Members:** IDEAM, CGIAR/CIAT, national universities (UNAL, Los Andes), independent climate scientists.

**Authority:** Approves and rejects methodologies. Arbitrates technical disputes. Maintains the methodology registry.

### ? Community Sovereignty Panel

**Members:** COICA (pan-Amazonian), Arhuaco, Wayúu, farmer cooperative representatives (Federacafé regional).

**Authority:** Veto on any rule touching FPIC, indigenous data rights, or benefit-sharing. Arbitrates consent disputes.

### ? Industry Council

**Members:** LATAM exporters, EU commodity importers, certification bodies, commodity traders.

**Authority:** Tests practical workability of rules. Shapes usability and adoption. Cannot set rules against community interests.

### ? Civil Society Seat

**Members:** Environmental NGOs, Global Forest Watch, Rainforest Alliance technical staff, Colombian environmental watchdogs.

**Authority:** Anti-capture guarantee. Can publicly dissent from any board decision and trigger a 30-day review.

## ?? Regulatory Observers

**Members:** EU DG ENV, Colombia MinAmbiente, Brazil IBAMA, Mexico SEMARNAT.

**Authority:** Observer only — no voting rights. Must be notified of material framework changes within 30 days.

# Voting Rules

| Decision type   | Required majority   | Additional conditions   |
|---|---|---|
| Major version change (new principles, breaking schema changes)  | ? of all seats  | 30-day public comment period. Minimum 4/5 seats must vote (quorum).                             |
| Minor version change (new accepted methodology, optional field) | Simple majority   | 14-day comment period. CTH operator decision with board notification.                           |
| Any rule touching FPIC or indigenous data rights                | ? of all seats <i>plus</i> affirmative Community Panel vote | Community Panel veto is structural — not procedural. Board supermajority alone is insufficient. |
| Validator accreditation / de-accreditation                      | Scientific Council recommendation + CTH Steward decision    | No full board vote required unless disputed.  |
| Emergency patch (security / data integrity)                     | CTH Operator alone  | 48h notification to all seats. Board ratification within 30 days or auto-rollback.              |

# Decision Log

All board decisions are published in the framework's decision log within 7 days of vote. Individual seat votes are visible — no anonymous voting. The decision log is stored as an append-only series of governance events in the governance ledger, signed by each voting DID.

# Dispute Resolution & Framework Evolution

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## Dispute Resolution & Framework Evolution

How contested data is handled. How the framework itself grows.

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## Dispute Resolution

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Two types of disputes require different arbitration tracks.

### ? Technical Disputes

**Example:** Is a satellite imagery dataset authoritative for the 2020 deforestation baseline? Is methodology X equivalent to GHG Protocol?

**Arbitrator:** Scientific Council. Typical resolution: 30 days. During review, contested data is suspended from compliance exports.

### ? Consent Disputes

**Example:** A company claims consent was given; the community says it was not. An FPIC credential was issued but the community says the signing process was coerced.

**Arbitrator:** Community Sovereignty Panel. External mediator (COICA-designated) if unresolved in 30 days.

**During any active dispute:** The contested data asset is flagged in the ledger with a `DISPUTE_OPEN` status. It continues to appear in asset history but is excluded from all compliance exports (EUDR, CSRD, CBAM, ISSB S2) until the dispute is resolved. In-progress regulatory submissions using the disputed data are suspended and EU operators notified.

# Framework Evolution — Semantic Versioning

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| Version type         | Example  | Process   | Lead time                                       |
|----------------------|--|---|---|
| <b>Patch</b> (1.0.x) | Typo fix, language clarification                           | CTH Operator. 48h board notification.   | Immediate after notification                    |
| <b>Minor</b> (1.x.0) | New accepted methodology, new optional field               | 14-day public comment. CTH Operator decision. Board notification.                           | 30 days from proposal                           |
| <b>Major</b> (x.0.0) | New principle, breaking schema change, new mandatory field | 30-day public comment. Full board vote (? + quorum). Community Panel veto if FPIC-adjacent. | 90 days minimum from proposal to implementation |

## Backward Compatibility

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All prior major versions remain valid for **24 months** after a new major version is released. Data submitted under version 1.0 continues to be verifiable after version 2.0 is released. Credential schemas are versioned — a version 1.0 DTE credential does not become invalid when the version 2.0 schema is published.

## Framework Versioning in the Ledger

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Each framework version is itself a signed Verifiable Credential issued by the CTH Data Steward DID. The credential contains: version number, release date, changelog URI, schema diff hash, and the board vote record (for major versions). This means framework version history is itself tamper-evident and auditable — not stored in a mutable database or git repository alone.

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