CT-IC-002 — AI-powered MRV & Carbon Measurement

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Description

AI and machine learning systems for Measurement, Reporting, and Verification (MRV) of greenhouse gas emissions, carbon sequestration, and climate project outcomes. Includes automated emissions estimation models, satellite-derived carbon stock measurement, and digital verification platforms for carbon credits.

Colombia Context

Colombia's SISCLIMA (Sistema Nacional de Cambio Climatico) requires robust MRV infrastructure for NDC tracking. IDEAM manages the national GHG inventory (INGEI) which feeds into biennial transparency reports under the Paris Agreement. Ley 2169 de 2021 established carbon neutrality targets that depend on credible MRV. MinAmbiente is piloting digital MRV tools for REDD+ projects in Choco and Amazonia. The Programa Nacional de Cupos Transables de Emisión (carbon market) requires third-party verification that AI-MRV can streamline.

EUDR Relevance

AI-powered MRV supports EUDR compliance by automating the verification of deforestation-free claims across supply chains. Machine learning models can cross-reference geolocation data with satellite imagery to generate compliance evidence at scale, reducing the cost of due-diligence for smallholder-sourced commodities.

CTH Data Coverage

Strong CTH coverage. Sustenttia diagnostic platform incorporates emissions measurement modules. CLP cohort includes MRV and carbon-tech startups. The Origo platform tracks AI-MRV tools as part of the ICT sector digitalization layer.

Green Finance Alignment

Aligned with Colombia's TVC under ICT for emissions reduction. CPI GLCF recognizes digital MRV as a climate finance enabler. EU Taxonomy considers digital monitoring as a substantial contribution to climate mitigation when applied to eligible activities. Critical infrastructure for carbon credit markets and green bond verification.


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