Digital Climate Solutions

Source Metadata

Field	Value
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sector	ICT & Digitalization
subsector	Digital Climate Solutions
mitigation	Y
adaptation	Y
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CPI Definition & Scope

Digital Climate Solutions in CPI's GLCF framework tracks climate finance directed at digital technologies that enable or enhance climate action across all sectors. CPI captures investment in measurement, reporting, and verification (MRV) systems, earth observation and satellite monitoring platforms, artificial intelligence for climate applications, digital twins for infrastructure planning, and Internet of Things (IoT) sensor networks for environmental monitoring. These enabling technologies underpin the accuracy and transparency of climate finance tracking itself.

Subsectors & Examples

- **MRV Systems** — digital platforms for measuring and verifying emission reductions
- **Earth Observation** — satellite-based deforestation monitoring, crop health assessment, flood mapping
- **AI for Climate** — machine learning for energy optimization, climate modeling, early warning systems
- **IoT & Sensor Networks** — environmental monitoring stations, air quality sensors, soil moisture monitoring
- **Digital Twins** — simulation models for cities, infrastructure, and ecosystems

Mitigation & Adaptation Classification

Digital climate solutions are classified as **dual-benefit** in CPI's framework. These are enabling technologies: MRV and earth observation support both mitigation verification (carbon credit integrity) and adaptation monitoring (climate impact tracking). AI and IoT applications serve both energy optimization (mitigation) and early warning systems (adaptation). The classification depends on the specific application, but the category as a whole is dual-purpose.

LATAM Relevance

Digital solutions are critical for Latin America's vast, often remote territories. Colombia's IDEAM national environmental system uses satellite monitoring for Amazon deforestation tracking. Peru's GeoBosques platform provides real-time forest cover data. Costa Rica's national GHG inventory system is among the most advanced in the region. The region's growing tech ecosystem creates opportunities for homegrown climate tech startups focused on MRV, precision agriculture, and climate data services.

Cleantech Taxonomy Crosswalk

Maps to Cleantech Taxonomy sector **IC** (ICT) for digital climate solutions. Cross-references with virtually all other sectors as an enabling technology layer — particularly **AF** (AFOLU) for forest monitoring, **ES** (Energy Systems) for grid optimization, and **XS** (Cross-Sectoral) for MRV infrastructure underpinning carbon markets.

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