Book 09: Colombian Regulatory Frameworks

Crosswalks with: Colombia GF Taxonomy (TVC 2022), NDC 2030, SISCLIMA, CONPES 4075, Ley 2169 (Acción Climática), Ley de Transición Energética, and COP16 Cali biodiversity commitments.

- Colombia Green Finance Taxonomy (TVC 2022)
- NDC 2030 Sectoral Targets
- SISCLIMA
- CONPES 4075
- Ley 2169 — Acción Climática
- Ley Transición Energética
- COP16 Cali Biodiversity
- Colombia NDC 2030 — Sectoral Targets
- SISCLIMA — Sistema Nacional de Cambio Climático
- CONPES 4075 — Política de Transición Energética
- Ley 2169 de 2021 — Ley de Acción Climática
- Ley 2099 de 2021 — Ley de Transición Energética
- COP16 Cali — Biodiversity Commitments (October 2024)
- Colombian Regulatory Crosswalk Summary

Colombia Green Finance Taxonomy (TVC 2022)

Taxonomía Verde de Colombia — 10 sectors

NDC 2030 Sectoral Targets

Colombia's Nationally Determined Contribution targets by sector

SISCLIMA

Sistema Nacional de Información sobre Cambio Climático

CONPES 4075

Política de Transición Energética Justa

Ley 2169 — Acción Climática

Colombia's Climate Action Law 2021

Ley Transición Energética

Colombia Energy Transition Law

COP16 Cali Biodiversity

COP16 commitments from Cali, Colombia 2024

Colombia NDC 2030 — Sectoral Targets

Framework Overview

Field	Value
Framework	Nationally Determined Contribution (NDC) 2030
Country	Colombia
Headline Target	51% GHG reduction by 2030 from reference scenario (max 169.4 MtCO2eq)
Carbon Neutrality	2050
Last Updated	NDC 3.0 submitted September 2025
Legal Basis	Paris Agreement ratification + Ley 2169/2021
Taxonomy Column	col_ndc2030_aligned

Sectoral Mitigation Targets

Colombia's NDC distributes mitigation across all major economic sectors, with AFOLU dominating due to deforestation reduction potential:

- **AFOLU (59% of mitigation):** Reduce deforestation to 37,500-50,000 ha/yr by 2035; transition 150,000 ha cocoa and 936,500 ha coffee to agroforestry by 2030; restore 69,000 ha via livestock intensification. Total: ~67 MtCO2e.
- **Waste (14%):** 20.7 MtCO2e by 2030 — methane capture, circular economy (ENEC 2019), wastewater methane valorization.
- **Industry (8.9 MtCO2e):** Cement emissions intensity -7.5% by 2030; PAI PROURE 2022-2030 energy efficiency; carbon tax reaches 100% from 2028.
- **Transport (6.7 MtCO2e):** 600,000 EVs by 2030; 100% ZEV bus sales by 2035; 100% zero-emission new cars/vans by 2040.
- **Energy:** Peak emissions by 2029; 70% renewable electricity (achieved 2024); coal phase-out for power by 2036; halt new oil/gas exploration.
- **Buildings:** Net-zero new buildings by 2030; all buildings by 2050 (CONPES 3919).
- **Black Carbon:** -40% by 2030 vs 2014.

Adaptation Pillars

- Water security and watershed management
- Agricultural climate resilience (crop varieties, early warning)
- Urban infrastructure resilience
- Coastal and marine ecosystem protection
- Health sector climate preparedness

Cleantech Taxonomy Mapping

Of the 71 Cleantech Taxonomy nodes, **52 are aligned (Y)**, **9 are partially aligned**, and **10 are not aligned** with NDC 2030 targets. The strongest alignment is in energy systems (13/15 nodes) and AFOLU (8/10 nodes).

SISCLIMA — Sistema Nacional de Cambio Climático

Framework Overview

Field	Value
Framework	SISCLIMA — Sistema Nacional de Cambio Climático
Country	Colombia
Legal Basis	Decreto 298 de 2016; Ley 1931 de 2018
Governing Body	Comisión Intersectorial de Cambio Climático (CICC)
Regional Structure	9 Nodos Regionales de Cambio Climático
Taxonomy Column	col_sisclima_relevant

System Structure

SISCLIMA is Colombia's institutional coordination framework for climate change. It is NOT a set of targets but an governance architecture that coordinates actions across sectors and regions.

National Level

- **CICC:** Inter-sectoral commission chaired by MADS, with MinEnergía, MinTransporte, MinAgricultura, MinVivienda, MinComercio, DNP
- **Technical Committee:** Advises CICC on climate science and MRV
- **Financial Committee:** Coordinates climate finance (Finanzas del Clima platform at DNP)
- **Information Committee:** Manages IDEAM climate data systems

Sectoral PIGCCs

Each ministry develops a Plan Integral de Gestión del Cambio Climático Sectorial (PIGCCS):

- Mining & Energy (MinEnergía)
- Transport (MinTransporte)
- Agriculture (MinAgricultura)
- Commerce & Industry (MinComercio)
- Housing & Territory (MinVivienda)
- Health (MinSalud)
- Environment (MADS — cross-cutting)

Regional Nodes (9)

Each node coordinates departmental and municipal climate actions, promotes PIGCCTs (territorial plans), and supports REDD+ and adaptation projects.

Cleantech Taxonomy Mapping

Of the 71 nodes, **47 are relevant (Y)**, **14 are partially relevant**, and **10 are not relevant**. SISCLIMA relevance indicates whether a taxonomy category falls under at least one sectoral PIGCC or regional node mandate.

CONPES 4075 — Política de Transición Energética

Framework Overview

Field	Value
Framework	CONPES 4075 — Política de Transición Energética
Country	Colombia
Approved	29 March 2022
Lead	DNP + MinEnergía + MinComercio + MinTransporte + MinAmbiente + MinCiencias
Focus	Energy sector transition — efficiency, renewables, hydrogen, coverage, digitalization
Taxonomy Column	col_conpes4075

Four Strategic Axes

1. **Energy Security:** Diversify the energy matrix; reduce dependence on hydro (climate-vulnerable); expand FNCE/FNCER capacity
2. **Knowledge & Innovation:** Close human capital gaps; develop qualifications for energy transition; R&D in new energy technologies
3. **Competitiveness & Economic Development:** Position Colombia as a clean energy exporter; green hydrogen hub (La Guajira); attract foreign investment
4. **Low-GHG Energy System:** Reduce emissions from mining-energy sector; phase out inefficient fossil fuel subsidies; carbon pricing integration

Action Lines

- Increase energy efficiency across all sectors
- Expand electricity coverage to underserved rural areas
- Deploy FNCER at scale (solar, wind, geothermal, biomass)
- Develop green and blue hydrogen value chain
- Digitalize the mining-energy sector
- Modal shift in transport to electric/efficient modes
- Structure incentives for clean technology adoption

Cleantech Taxonomy Mapping

Of the 71 nodes, **17 are aligned (Y)**, **17 are partially aligned**, and **37 are not aligned**. CONPES 4075 is narrowly focused on energy transition — it strongly maps to Energy Systems (EN) and Transport (TR) nodes, with partial coverage of Buildings (energy efficiency) and a few extensions (productive energy use, pico-solar).

Ley 2169 de 2021 — Ley de Acción Climática

Framework Overview

Field	Value
Framework	Ley 2169 de 2021 — Ley de Acción Climática
Country	Colombia
Signed	22 December 2021
Headline Target	Carbon neutrality by 2050; 51% GHG reduction by 2030
Sectors	Mining-energy, Housing/territory, Agriculture/fishing/rural, Commerce/industry, Transport, Waste, Environment
ETS Mandate	Design emissions trading system by 2030
Taxonomy Column	col_ley2169

Key Provisions

- **Carbon Budget:** Maximum 169.44 MtCO2eq national emissions by 2030
- **Sectoral Targets:** Each of 7 economic sectors must develop binding mitigation and adaptation plans
- **Carbon Tax:** Progressive implementation reaching 100% by 2028 (amended by Ley 2722/2022)
- **ETS:** Mandates design of a national emissions trading system by 2030
- **MRV:** Requires robust measurement, reporting, and verification systems
- **Adaptation:** Each sector must identify climate vulnerabilities and develop adaptation objectives
- **Just Transition:** Provisions for affected workers and communities in fossil fuel transition

Sectoral Requirements

Ley 2169 requires each sector to develop:

- GHG mitigation trajectories to 2030 and 2050
- Sector-specific adaptation plans
- MRV systems for emission tracking
- Annual progress reports to Congress

Cleantech Taxonomy Mapping

Of the 71 nodes, **49 are aligned (Y)**, **14 are partially aligned**, and **8 are not aligned**. Ley 2169 has the broadest coverage of any single framework because it is economy-wide and covers both mitigation and adaptation.

Ley 2099 de 2021 — Ley de Transición Energética

Framework Overview

Field	Value
Framework	Ley 2099 de 2021 — Ley de Transición Energética
Country	Colombia
Signed	10 July 2021
Amends	Ley 1715 de 2014 (FNCE promotion)
Tax Incentives	30-year validity from July 2021
Hydrogen	Green H2 = FNCER; Blue H2 = FNCE
Taxonomy Column	col_energy_transition

Key Provisions

- **FNCE/FNCER Expansion:** Extends and strengthens incentives from Ley 1715/2014; 50% income tax deduction for renewable investments
- **Hydrogen Economy:** Classifies green hydrogen (from FNCER) and blue hydrogen (fossil + CCUS) as eligible energy sources with full incentive access
- **Energy Communities:** Establishes legal framework for community energy projects (formalized by Ley 2294/2023)
- **Rural Coverage:** Mandates initiatives to close electricity coverage gaps in rural areas using FNCE
- **EV Infrastructure:** Provisions for electric vehicle charging networks and EV incentives
- **Energy Auctions:** Long-term renewable energy auctions (15-20 year PPAs); Reliability Charge mechanism favoring renewables
- **Just Transition:** Provisions for mining-energy sector workers and communities

Renewable Energy Targets

- FNCER share in electricity matrix: from <1% (2018) to 12%+ (2022) to ongoing growth
- Solar: 2 GW installed by end 2024; 13.5 GW approved pipeline (2025-2033)
- Wind: 2.8 GW approved onshore; La Guajira potential of 25 GW onshore + 45 GW solar
- Offshore wind: 1 GW by 2030, 9 GW by 2050 (ambitious scenario)

Cleantech Taxonomy Mapping

Of the 71 nodes, **17 are aligned (Y)**, **11 are partially aligned**, and **43 are not aligned**. Ley 2099 is narrowly focused on energy — it maps strongly to all renewable energy nodes (solar, wind, hydro, geothermal, biomass, batteries, grids, hydrogen, EV charging) plus productive energy use for rural communities.

COP16 Cali — Biodiversity Commitments (October 2024)

Framework Overview

Field	Value
Framework	COP16 Cali — Biodiversity (Kunming-Montreal GBF Implementation)
Host	Colombia (Cali, October 21 - November 1, 2024)
Parent Framework	Kunming-Montreal Global Biodiversity Framework (GBF, adopted COP15 2022)
Key Target	30x30 — 30% land and sea protected by 2030
National Instrument	NBSAP (National Biodiversity Strategy and Action Plan)
Taxonomy Column	col_cop16_biodiversity

Colombia's Biodiversity Context

Colombia is the world's second most biodiverse country, hosting approximately 10% of global biodiversity. As COP16 host, Colombia made elevated commitments to biodiversity protection integrated with its climate agenda.

Key COP16 Outcomes

- **30x30:** Countries committed to protecting 30% of land and 30% of oceans by 2030; Colombia's SINAP (protected areas system) to expand accordingly
- **Indigenous & Local Communities:** Expanded role in biodiversity governance — critical for Colombia's PDET territories and ethnic community conservation
- **Digital Sequence Information (DSI):** Agreement on benefit-sharing mechanism for genetic resource data — affects bioeconomy and bioprospecting
- **NBSAPs:** Countries required to submit national biodiversity strategies showing GBF target implementation
- **Finance:** Calls for USD 200 billion/year in biodiversity finance by 2030; harmful subsidies reform

Colombia-Specific Relevance

- **Deforestation-Biodiversity Nexus:** Amazon and Chocó deforestation directly threatens biodiversity; linked to EUDR commodity supply chains
- **PES & BanCO2:** Payments for ecosystem services programs connect climate and biodiversity finance
- **Marine & Coastal:** Pacific and Caribbean mangrove restoration, blue carbon, coral reef protection
- **Silvopastoral & Agroforestry:** Biodiversity-compatible agriculture central to Colombian NBSAP

Cleantech Taxonomy Mapping

Of the 71 nodes, **12 are aligned (Y)**, **8 are partially aligned**, and **51 are not aligned**. COP16 alignment concentrates in AFOLU nodes (land, forests, oceans, livestock), NbS extensions (reforestation, mangroves, silvopastoral, PES, bioeconomy), and monitoring tech (remote sensing, earth observation).

Colombian Regulatory Crosswalk Summary

Overview

This page summarizes how 6 Colombian regulatory frameworks map to the 71 Cleantech Taxonomy nodes. Each framework column in the taxonomy indicates whether a given cleantech category is aligned (Y), partially aligned (partial), or not aligned (N) with that framework's scope.

Framework Coverage Matrix

Framework	Column	Y	Partial	N	Scope
NDC 2030	col_ndc2030_aligned	52	9	10	Economy-wide climate targets
SISCLIMA	col_sisclima_relevant	47	14	10	Institutional coordination
CONPES 4075	col_conpes4075	17	17	37	Energy transition only
Ley 2169	col_ley2169	49	14	8	Climate action (broadest)
Ley 2099	col_energy_transition	17	11	43	Energy transition only
COP16 Cali	col_cop16_biodiversity	12	8	51	Biodiversity only

Key Observations

- **Broadest coverage:** NDC 2030 and Ley 2169 cover 85-90% of taxonomy nodes — they are economy-wide frameworks.
- **Narrowest coverage:** COP16 Cali (17%) and CONPES 4075/Ley 2099 (24% each) — these are domain-specific.
- **Energy nodes:** All 6 frameworks touch energy (EN sector) — the strongest cross-framework convergence.
- **AFOLU nodes:** Strong alignment with NDC, SISCLIMA, Ley 2169, and COP16 — but weak in energy transition frameworks.
- **Gap areas:** Alternative meat/dairy (CT-AF-009/010), nuclear (CT-EN-003), aircraft (CT-TR-005), textiles (CT-WA-003) align with zero or one framework.

How to Use

Query the Cleantech Taxonomy via BookStack API to find nodes aligned with specific frameworks:

```
GET /api/search?query=[col_ndc2030_aligned=Y] [col_cop16_biodiversity=Y]
```

This returns all nodes that align with BOTH the NDC 2030 AND COP16 biodiversity commitments — useful for identifying climate-biodiversity co-benefit opportunities.