

## EFFICIENT CARBON MARKETS: PATHWAYS FOR THE PUBLIC SECTOR

CONSEMA Auditorium – CETESB | São Paulo – SP

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### Executive Summary

#### About the event

The workshop “Efficient Carbon Markets: Pathways for the Public Sector” was organized by IETA, in partnership with the São Paulo State Secretariat for Environment, Infrastructure and Logistics (SEMIL), and hosted at the Environmental Company of the State of São Paulo (CETESB) in São Paulo. The event aimed to support the State of São Paulo in preparing for the implementation of the Brazilian Emissions Trading System (SBCE).

The meeting brought together representatives from different secretariats, agencies, and foundations of the São Paulo state government, as well as national institutions such as the National Agency of Petroleum, Natural Gas and Biofuels (ANP) and the Energy Research Office (EPE). The workshop also included participation from private sector organizations, academia, and international institutions. The event sought to promote knowledge exchange on carbon markets, decarbonization instruments, and international experiences relevant to the Brazilian context.

#### Institutional opening

The opening session featured Pedro Venzon (IETA), Liv Nakashima (CETESB) and Marisa Barros (SEMIL).

The opening remarks highlighted the importance of the current phase of SBCE regulation and the need for institutional readiness among states and productive sectors to engage with market-based instruments and climate policies. The role of CETESB in building capacities related to greenhouse gas inventories and monitoring, reporting, and verification (MRV) systems was also emphasized, given its potential contribution to the implementation of the national system.

#### Foundations and public strategy for carbon markets

**Panelists:** Mariana Tavares (IETA) and Natascha Trennepohl (Trennepohl Advogados).

This session presented the fundamentals of carbon markets and the global landscape of carbon pricing, highlighting that more than 80 jurisdictions currently operate carbon pricing mechanisms, including emissions trading systems and carbon taxes, generating over US\$100 billion annually in public revenues.

Key elements of environmental integrity in carbon markets were also discussed, including additionality, prevention of double counting, transparency, and the management of leakage and reversal risks.

In the Brazilian context, initial estimates were presented regarding the potential impact of the SBCE. The system is expected to cover between 10% and 15% of national emissions, potentially generating annual demand for carbon credits between 17 and 48 MtCO<sub>2</sub>e, depending on the flexibility rules adopted.

The discussion also addressed the role of states in preparing for the system, including the development of MRV infrastructure, institutional capacity-building, and integration between climate policies and regulatory instruments.

Transparency and clarity in the presentation of emissions monitoring data were highlighted as essential elements for ensuring market confidence, alongside the importance of clear governance structures to strengthen the credibility of market institutions. Finally, the discussion highlighted factors that place the State of São Paulo in a position of leadership—and urgency—within Brazil's carbon market agenda, including its institutional capacity and the global exposure of its export-oriented economy.

### **SBCE, regulatory instruments and policy intersections**

**Panelists:** Adriane Berti (BlockC), Elisa Guida (IETA) and Isabela Morbach (Corso Advogados).

The discussion addressed regulatory challenges associated with the implementation of the SBCE, including issues related to regulatory predictability, economic competitiveness, and environmental integrity, as well as the importance of early preparation by companies for emissions monitoring and reporting requirements.

The session also presented an analysis of the architecture of decarbonization instruments in Brazil and their interaction with the SBCE. Several regulatory certificates currently operating in the country were discussed, including CBIO, CGOB, CS-SAF, and CRVE, each linked to specific objectives within Brazil's climate and energy policy framework.

These instruments were highlighted as operating across different layers of decarbonization policy. Sectoral instruments create targeted demand within specific value chains, while the SBCE establishes a cross-economy carbon price signal affecting the broader economy.

The discussion also addressed the strategic role of states in coordinating public policies capable of enabling investments in decarbonization. In this context, it was noted that SBCE implementation is taking place alongside other federal initiatives, such as the Sustainable Taxonomy, the Plano Clima, and the National Climate Fund, reinforcing the need for coordination across policies and levels of government.

Points of attention related to regulatory coordination among instruments were also discussed, along with opportunities for states to create enabling environments for the development of low-carbon projects and value chains.

### Strategic sectors and opportunities in São Paulo

**Panelists:** Nuno Barbosa (Unicarbo), Nathalia Weber (CCS Brasil), Anicia Pio (FIESP) and Desiree Bertoli and Luciano Silva (GIZ).

This session discussed opportunities and challenges for the development of decarbonization projects in the State of São Paulo, considering both mitigation potential and the institutional and economic conditions of the state.

From a project development perspective, an overview of the state's emissions was presented—representing approximately 6% of Brazil's national emissions—alongside São Paulo's climate targets, which include net-zero emissions by 2050 and a 42% reduction in emissions by 2030. The discussion highlighted the state's potential to structure mitigation projects across multiple sectors and value chains.

A case study was also presented on the production of Sustainable Aviation Fuel (SAF) from biomass residues. The initiative, developed through international cooperation, aims to establish a pilot plant between 2026 and 2027, with the prospect of reaching industrial scale between 2027 and 2028. São Paulo's potential to become a hub for SAF production was highlighted, considering its logistics infrastructure, concentration of aviation demand, and availability of feedstocks derived from waste streams.

Another key topic discussed was the role of Carbon Capture and Storage (CCS) technologies in industrial decarbonization. These technologies are particularly relevant for emissions-intensive sectors such as cement, steel, chemicals, and hydrogen production—all of which are significantly present in São Paulo's industrial base. In this context, the state presents important opportunities for the development of CCS value chains, although challenges remain related to regulation, environmental licensing, and public perception.

The session also addressed broader challenges associated with transitioning complex industrial value chains, highlighting the importance of integrating public policy, financing, infrastructure, and technical capacity-building to enable decarbonization strategies across value chains.

### Institutional progress in the state

**Panelists:** Marina dos Santos (SEMIL), Rodrigo Levkovicz (Fundação Florestal) and Maria Fernanda Garcia (CETESB).

The session presented initiatives currently underway in the State of São Paulo that may contribute to the implementation of the SBCE and strengthen the state's broader climate agenda.

The São Paulo Climate Action Plan was presented as a key component of the state's climate strategy. The plan is structured across different strategic pillars and mitigation sectors, including energy, transport, AFOLU, waste, and industrial processes, and

establishes guidelines for emissions reductions, energy transition, and climate governance.

The discussion also addressed initiatives related to the development of carbon projects in conservation areas, including the structuring of payment for ecosystem services models linked to ecological restoration, with potential generation of carbon credits and additional ecosystem benefits such as watershed restoration and erosion control.

The session also highlighted CETESB's role in developing the state's MRV infrastructure. Since 2012, the agency has required greenhouse gas inventories from high-emitting facilities within environmental licensing processes, enabling the development of a relevant emissions database and institutional capacity that may support the implementation of the SBCE.

Recent updates to state inventory guidelines aim to improve the standardization of reported information by aligning emissions categories with national systems and incorporating data on mitigation actions, removals, and offsets. This process was highlighted as an important step toward strengthening transparency and data quality in the state's climate information systems.

### Climate Finance

The final session featured **Stephanie Rogers (World Bank)** and provided a brief overview of climate finance initiatives currently under development in Brazil.

Examples were presented of projects related to forest restoration, bioeconomy, and financial instruments designed to enable climate investments. The presentation also highlighted recent experiences in structuring financing mechanisms linked to restoration initiatives and carbon credit generation.

The topic was introduced as a **teaser for future discussions**, indicating the potential for further exploration of climate finance and capital mobilization for mitigation and adaptation projects in Brazil and in the State of São Paulo.