

# **MINING AND THE CARBON MARKET**

**Positioning of the mining  
sector on the Brazilian Emissions  
Trading System (SBCE)**





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sector on the Brazilian Emissions  
Trading System (SBCE)



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# Summary

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# 1. Context

Extreme events resulting from climate change represent one of the greatest global challenges today. Its socio-economic impacts and long-term implications require coordinated and ambitious action at a global level.

The Paris Agreement is the main international treaty on climate change, adopted by around 200 countries and in force since 2016. Its main objective is to limit the increase in global average temperature to well below 2 °C above pre-industrial levels, with additional efforts to restrict this warming to 1.5 °C, in order to avoid the most severe impacts of climate change.

Globally, governments have been formalizing their climate commitments under the Paris Agreement through NDCs (Nationally Determined Contributions). In the case of Brazil, the targets set in its NDC come into force in 2025 and cover all sectors of the economy, with a **commitment to an absolute reduction in greenhouse gas (GHG) emissions.**

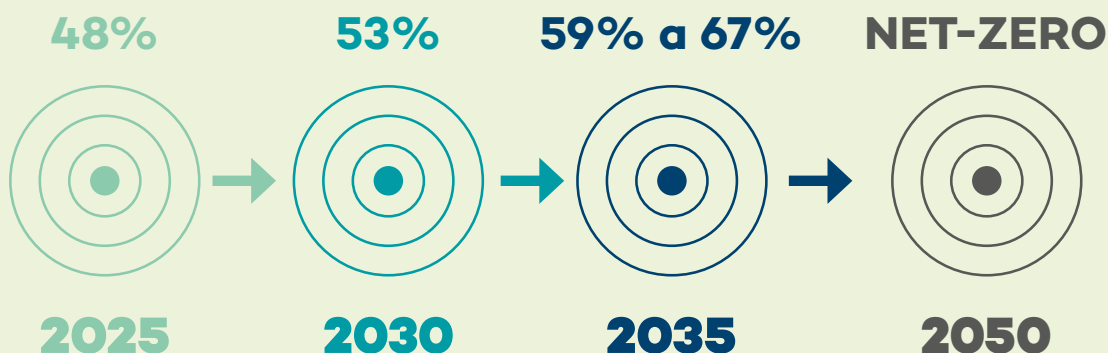
These targets are aligned with the goal of achieving climate neutrality by 2050 and follow the following reduction trajectory, with 2005 as the base year: 48% by 2025, 53% by 2030 and a range of 59% to 67% by 2035.

The Climate Plan is Brazil’s main planning instrument for meeting this challenge, guiding the implementation of public policies aimed at mitigating emissions and adapting to climate impacts. It establishes guidelines for the country to fulfill its international commitments, promoting a just and sustainable transition.

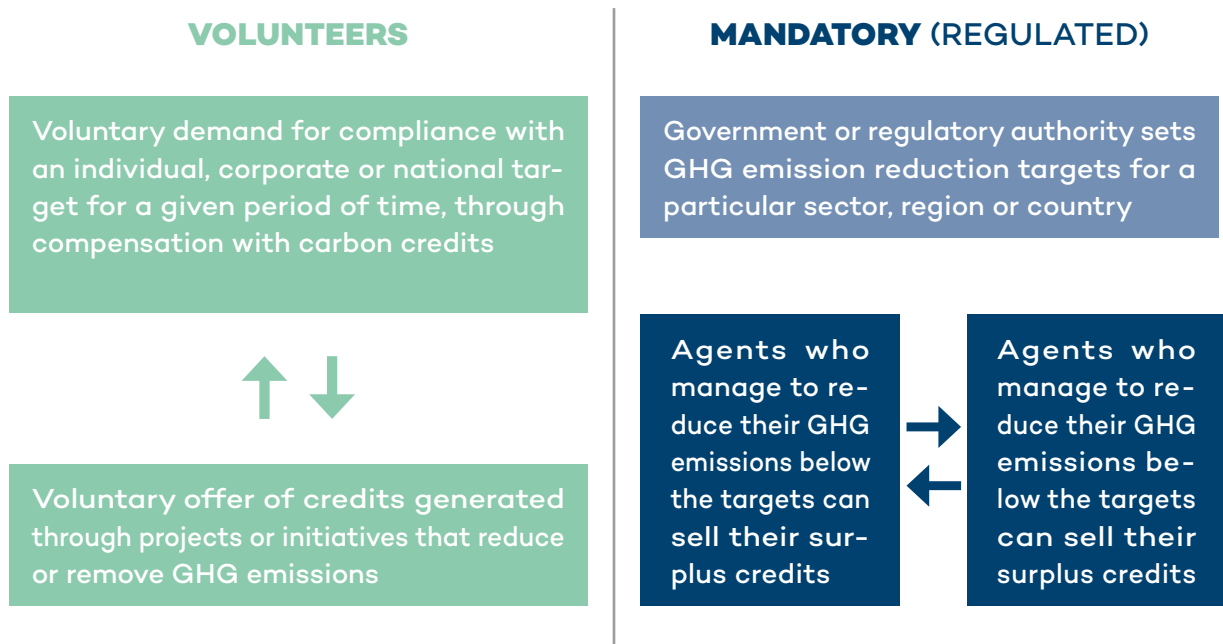
In line with the Climate Plan, the **Brazilian Emissions Trading System (SBCE)**, whose legal framework was established by Law No. 15.042, sanctioned in December 2024. The SBCE is one of the government’s main bets to **support the productive sector** on its decarbonization path, and is considered a key instrument to enable the transition towards a low-carbon economy.

## EMISSION REDUCTION TARGETS IN BRAZIL\*

These targets are aligned with the goal of achieving climate neutrality by 2050 and follow the reduction path below, with 2005 as the base year.



## WHAT ARE CARBON MARKETS?



In this way, Brazil joins the group of countries that have adopted carbon pricing systems as an instrument to support decarbonization.

### CARBON PRICING SYSTEMS AROUND THE WORLD - AN OVERVIEW

- **There are** currently **80 carbon pricing instruments** in operation around the world, including **Emissions Trading Systems (ETS) and carbon taxes**.
- The **total revenue** from ETSs and carbon taxes was **US\$102 billion in 2024**.
- The global coverage of direct carbon **pricing has risen from 24% to around 28%**, largely as a result of the expansion of China's ETS to industrial sectors.
- **Of the total global GHG emissions** covered by an ETS or carbon tax, **45% originate from the electricity sector**, followed by **industry (38%) and the mining and extractive industries** sector (**11%**).
- The economies that have already implemented a carbon tax or ETS account for almost **two thirds of the global Gross Domestic Product (GDP)**.
- All the **major middle-income economies have already implemented** or are considering the adoption of direct carbon pricing.
- **Most of the new instruments**, or those being planned, are **ETSs**.

Source: State and Trends of Carbon Pricing (2025), World Bank

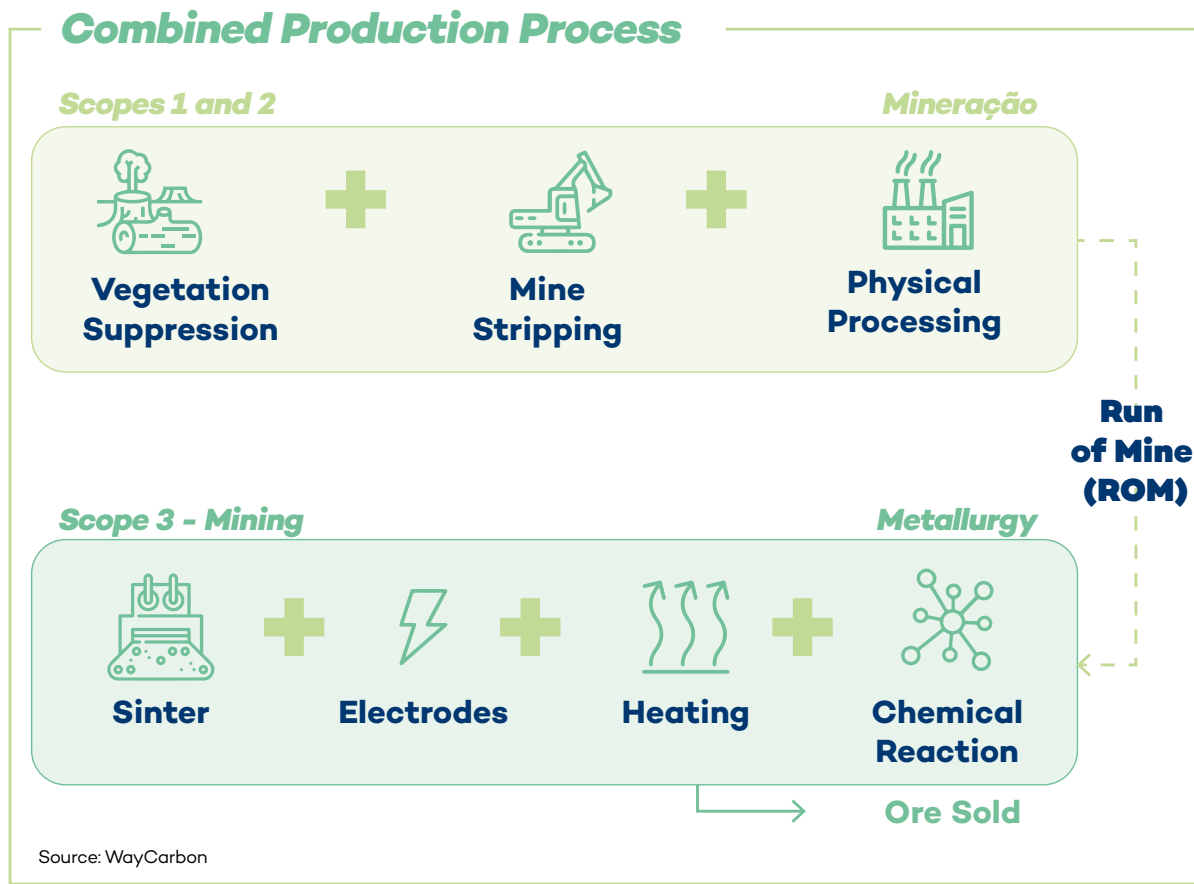


Figure 1 - Mining production process and GHG emission scopes

Following the approval of Law 15.042/2024, which is still in the process of being regulated, the Brazilian Mining Institute (IBRAM), through its Climate and Carbon Working Group, began to analyze in depth the possible implications and impacts of future regulations for the mining sector.

For the purposes of inventory and defining the scope of action, IBRAM considers mineral extraction to be all the stages from the suppression of vegetation to the heating of the ore

for commercialization purposes, as illustrated in Figure 1.

IBRAM has made an effort to find out about its GHG emissions<sup>1</sup> and thus have solid data to contribute to the discussions on the regulation of SBCE. IBRAM reaffirms its willingness to actively collaborate in the discussions on the regulation of the Law, in order to present the perspectives of the mineral sector and contribute to its implementation in a fair, balanced and comprehensive manner.

<sup>1</sup> Inventory of Greenhouse Gas Emissions from the Mineral Sector 2024 - Available at: [https://ibram.org.br/wp-content/uploads/2024/05/IBRAM\\_Inventario-Emissoes-GEE\\_2024-1.pdf](https://ibram.org.br/wp-content/uploads/2024/05/IBRAM_Inventario-Emissoes-GEE_2024-1.pdf)

## 2. Governance and Engagement with the Productive Sector

The mining sector supported the creation of the **Brazilian Emissions Trading System (SBCE)**, recognizing that the adoption of the cap and trade model<sup>2</sup>, offers greater flexibility and efficiency in the process of reducing emissions. As well as **reducing emissions** in specific economic sectors, the new market will promote investment in clean, low-emission technologies, stimulating innovation and **enabling the transition towards a low-carbon economy**.

We highlight the importance of **Article 4** of Law 15.042/2024, which proposes **a cooperative process** involving government, academia, civil society and industry, to guarantee **legal certainty and reliability** for the market. Furthermore, IBRAM congratulates the federal government's efforts to make the SBCE compatible with other internationally established instruments.

The mineral industry emphasizes the importance of the participation of productive sectors in governance bodies, in order to ensure a technical, balanced and representative structure. The presence of experts from each sector with in-depth knowledge of the technological, operational and economic specificities of reducing emissions is fundamental to qualifying the decision-making process and guaranteeing the effectiveness of decarbonization policies.

**The active inclusion of the productive sector is essential so that decisions are based on technical data**, avoiding distortions that jeopardize the viability of the regulated carbon market. Building effective and innovative solutions depends on the expertise of companies that know the real challenges and costs of decarbonization.

## 3. Measurement, Reporting and Verification System - MRV

It is necessary to advance the debate on the creation of a National Reporting Program, supported by an MRV (Measurement, Reporting and Verification) system for GHG emissions and removals that is robust, transparent and technically consistent. This system must be clear and objective in order to facilitate compliance with legislation, guarantee the credibility of the data reported and ensure transparency for investors, regulators and market operators.

**In this sense, the mining sector sees the need for greater clarity on how the definition**

**of the activities, sources and facilities** of regulated agents (**Chapter I, Art. 2, I, XII, XV**) will be carried out. **2, items I, XII, XV**), to avoid legal uncertainty and distortions in the application of the SBCE.

The definition of activities, sources and facilities should align international best practices with the specificities of Brazil, following internationally recognized standards and methodologies. It is important that the reality of companies with multiple operating plants and different Brazilian Business Registry Number (CNPJs, in the

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<sup>2</sup> The cap and trade system defines the maximum amount of aggregate GHG emissions that regulated agents can emit (cap), and emission rights (permits) are generated in an equivalent amount. Regulated agents evaluate trade opportunities according to the market price (trade).

Brazilian acronym) be taken into account for the installations, allowing the accounting to respect the challenges and investments

already faced by companies in the sector regarding the duplication and linking of information. In addition, the distinction

**STAGES OF THE MRV SYSTEM**

- 1. Definition of the scope and rules**, such as: sources, sectors, coverage, methodologies, emission factors, measurement standards and protocols (e.g. ISO 14064, GHG protocol, IPCC)
- 2. Measurement:** calculation of emissions and removals, based on the collection of activity data, application of emission factors and established methodologies and consolidation of data by regulated unit (company, installation, plant).
- 3. Reporting:** submission of emissions reports to regulatory bodies within the established deadlines; adoption of standardized spreadsheets, creation of online reporting systems;
- 4. Independent Verification:** evaluation of reports by accredited verification bodies. This verifier will check the consistency of the data, methodologies, calculations and records.
- 5. Approval and validation:** after final analysis by the competent bodies (in the case of Brazil - the SBCE Managing Body); in some cases adjustments or corrections will be necessary - updating information in the event of material errors or relevant operational changes.
- 6. Publication and Transparency** (where required), with the disclosure of aggregated market data and sector inventories and overall performance.

Source: Own elaboration adapted from National Confederation of Industry - CNI (2023)

between plant operators, economic operators and business groups must be clear, in order to correctly define responsibilities in the regulated market.

It is therefore recommended that the complementary technical standards provide greater detail on these terms, ensuring predictability and consistency with international best practices.

**4. Definition of CAPs<sup>3</sup>**

The **CAPs must be defined** in line with the targets of the NDC and the Sectoral Mitigation Plans established by the Federal

Government, seeking a balance between reducing emissions and maintaining.

**3** CAPs - aggregate GHG emissions that regulated agents can emit.

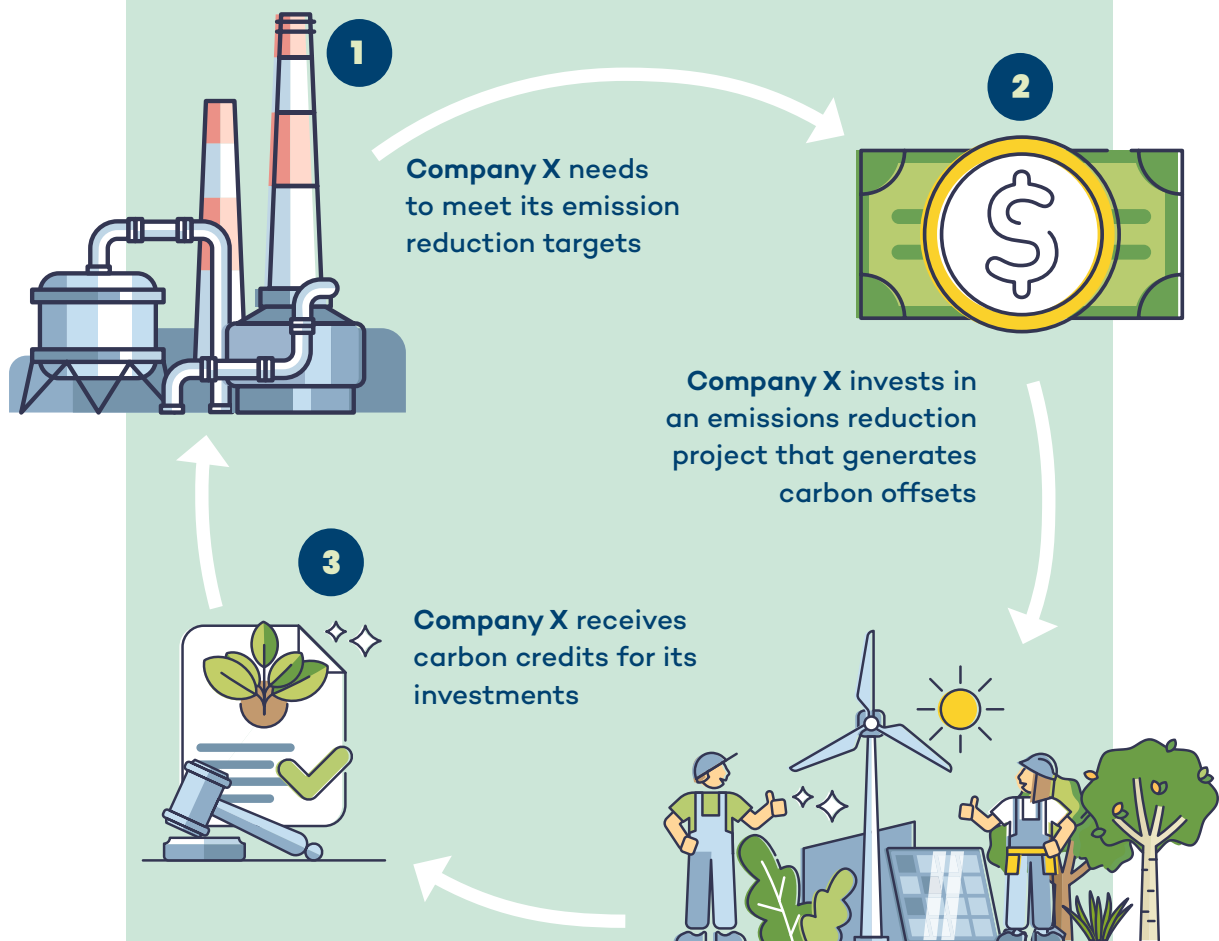
## 5. Carbon Credits (Offsets)

The mining sector stresses the need for methodological clarity in defining the criteria for accepting credits originating in the voluntary market (offsets) within the SBCE.

The predictability and transparency of these rules are key to guaranteeing legal certainty, stimulating investment and bringing Brazil into line with international best practices.

### WHAT ARE OFFSETS?

Offsets in the carbon markets refer to emission reduction units that are generated by projects that contribute to reducing or removing GHGs from the atmosphere.



One carbon credit = one ton of GHG reduced

#### Compensation programs for carbon emissions can include:

- Reforestation
- Renewable energy
- Carbon capture and storage

In Brazil, the definition of an appropriate percentage for these offsets should be defined for each period, according to market

conditions, in order to ensure the competitiveness of the regulated parties and avoid market distortions.

## 6. Allocation Plan

The **distribution of quotas in the Allocation Plan** must take into account various factors, such as: i. the history of emissions and efforts already made, as a basis for initial allocation, similar to the grandfathering system adopted in the EU-ETS<sup>4</sup>; ii. Sectoral reduction capacity, with periodic assess-

ments of the capacity of each sector to reduce its emissions, in order to encourage sectors with greater potential for technological innovation; iii. Competitiveness, seeking to protect sectors most exposed to international trade, ensuring that they are not harmed by additional carbon costs.

## 7. Obligations of Regulated Agents

Article 30 of Law 15.042/2024 establishes the eligibility levels for operators subject to SBCE regulation.

IBRAM argues that, for the first phase of implementing the carbon market, the provisions of §1 of the aforementioned article should be followed, which states:

“The levels provided for in items I and II of the main body of this article may be increased by a specific act of the SBCE management body,” and also considering its items:

- I. Cost-effectiveness of regulation;
- II. Compliance with the National Policy on Climate Change (PNMC, in the Brazilian acronym) and the commitments made under the United Nations Framework Convention on Climate Change;
- III. Other criteria laid down in a specific act of the SBCE management body.

## 8. Infractions and Penalties

The mining sector is concerned about Section IV, Article 37 of Law 15.042/2024, particularly with regard to the linking of fines to companies' turnover. We consider the progress

of the SBCE to be positive, but we stress the importance of greater clarity and transparency regarding the rules that will be defined for penalties, in order to guarantee predict-

<sup>4</sup> The grandfathering system in the EU-ETS allocated emission allowances based on companies' historical emissions, ensuring a gradual transition to a more competitive carbon market. This model can serve as a reference for Brazil, adapting to the specificities of the national market.

ability and proportionality in the application of sanctions. It is essential to differentiate infractions and establish prior notification for the correction of irregularities, avoiding disproportionate impacts.

These measures strengthen legal certainty and encourage compliance without compromising the sector's competitiveness.

## **9. Protecting Sectors Exposed to Competition**

It is important for the market to provide the necessary conditions to protect exposed sectors, in the form of free distribution of quotas and revenue recycling. The market must provide the necessary conditions to protect exposed sectors, in the form of the

free distribution of quotas and the recycling of revenue, making financial resources available to sectors, especially those facing the greatest challenges in reducing emissions, to promote innovation and the adoption of low-carbon technologies.

## **10. Conclusion**

IBRAM therefore supports the implementation of the SBCE as an essential tool for the transition to a low-carbon economy, however, highlights the need for clarity and transparency in its regulation to ensure legal certainty, predictability and alignment with international best practices.

It also recommends the gradual and flexible implementation of an instrument for man-

agement of the SBCE. In addition, that this implementation takes place in such a way as not to jeopardize the country's economy or the economics of the mining sector.

The Institute is available to contribute technically, reinforcing the importance of continuous dialog between government, industry and other stakeholders to ensure an efficient and transparent SBCE.





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