

Mining Positioning on the Climate Change Agenda in Brazil

Contextualization

The mining industry is essential for providing resources aimed at boosting production and contributing to economic development and social welfare. And, in the light of the new demands of a changing society, the mining industry has faced the challenge of rethinking how it creates and shares value with its stakeholders.

The **Brazilian Mining Association (IBRAM)**, an entity that represents 85% of the mining sector players in Brazil, directs its actions towards building a favorable environment for business on a sustainable basis. It also coordinates mitigation and adaptation actions related to Climate Change with its associates, both nationally and internationally. In the international landscape, this topic has been coordinated with the International Council on Mining and Metals (ICMM).

Although Brazil is characterized by a predominantly renewable energy matrix and a low global contribution of emissions, the Climate Change issue should be analyzed and understood considering the agreements signed in December 2015, during the COP 21 (21st Conference of the Parties) of the United Nations Framework Convention on Climate Change (UNFCCC). On that occasion, governments from about 190 countries met in Paris to seek an agreement on the global climate change.

Each of the countries represented was asked to submit their targets for reducing domestic Greenhouse Gas (GHG) emissions, called Nationally Determined Contributions (NDCs). The goal is to limit the temperature increase on the globe to a maximum of 2°C by 2100. Brazil, in 2015, committed to reduce GHG emissions, by 2025, by 37% compared to 2005 levels and, as a subsequent indicative contribution, to reduce GHG emissions, by 2030, by 43% on the same basis of comparison.

It is worth noting that Brazil's NDC encompasses the whole economy and is based on flexible pathways to achieve those goals. In other words, the goals can be achieved in a variety of ways, with different contributions from economy and government sectors.

A relevant aspect to be mentioned is the impact of Climate Change on **mining**. The mining industry, as well as other productive sectors, can be affected both by financial impacts – derived from the imposition of GHG emission reduction targets, without due consideration of the contribution of sources – and by extreme climate events, such as changes in rainfall patterns, which can result in floods, droughts, or cold and heat waves. In the case of Brazil, there is an additional risk associated with the dependence of the electric matrix on hydroelectricity, subject to the effects of droughts.

The main risks for the mining industry are:

- Increased competition for climate sensitive resources, such as water and energy;
- Interruption of port, rail and road activities, resulting in higher raw material prices and delayed deliveries;
- Increased cost of energy and biofuel production;
- Various physical damages to industry assets, due to extreme events;
- Reduced equipment efficiency, requiring operational changes, even influencing demand for specific services; and

- Impacts on critical infrastructure related to energy, transportation, telecommunications and water supply, which would result in negative consequences to the Brazilian industry.

Since this is a strategic agenda for Brazil, which goes far beyond environmental aspects, it is urgent to implement concerted actions among the various players in society, in order to ensure the commitments made by Brazil in International Agreements, and especially, to ensure the sustainability of the global climate system.

Therefore, and focusing on the mining industry, it is important that the government establishes:

- Internal legal framework with regulations that fill legal gaps about topics related to Climate Change, such as governance, normative and administrative powers, voluntary and compulsory targets, and economic instruments;
- Integration of initiatives on the Climate Change agenda in the federal government, making sectoral policies compatible and seeking harmonious coexistence between the different regulatory frameworks in the three governmental levels;
- Development of existing financial mechanisms for a low carbon economy, in order to ensure that the flow of resources permeates the Brazilian industrial sector and mining, inducing effective actions to reduce GHG emissions;
- Investment in infrastructure and logistics seeking to integrate the links of production chains and mitigate climate risks;
- Simplification of access and expansion of the industry's participation in financial resources to promote low carbon investment;
- Destination of financial resources from future carbon pricing mechanisms for investment in Research and Development (R&D);
- Effective expansion, support and maintenance of monitoring networks of hydrological, meteorological and climatic variables to enable the deepening of prospective studies, considering such variables in a systematized way, including vulnerability studies;
- Implementation of infrastructure with greater resilience to Climate Change, especially in the urban, transportation, port, telecommunications, energy generation and distribution, and land use change sectors;
- Creation of incentives to increase the capacity to manage and prevent climate risks in areas of greater vulnerability to extreme events resulting from Climate Change in Brazil;
- Expansion of energy conservation and efficient use programs;
- Encouragement of scientific research and education by public and private agencies;
- Investment in R&D&I for studies related to the capture and removal of CO₂, energy efficiency, and the effects of adaptation to Climate Change; and
- Monitoring mechanisms and actions against deforestation as exclusive attributions of public agencies.

In this regard, the mining industry, under the coordination of the Secretariat of Geology, Mining and Mineral Transformation of the Ministry of Mines and Energy of Brazil (SGM/MME), supervised by members appointed by the Brazilian Forum on Climate Change (FBMC), with representatives from the Brazilian Mining Association (IBRAM), and by the Brazilian National Confederation of Industry (CNI), developed, in 2012, the **Low Carbon Mining Sector Plan (MBC Plan)**.

The MBC Plan presented in its scope the Base-Scenario, initiatives for GHG emission abatement and their respective abatement potentials, in addition to other items previously defined in Decree 7.390/2010, with structuring based on IBRAM's Greenhouse Gas (GHG) Inventories for the Mining Industry.

The abatement initiatives focus on three main emission reduction programs:

1. Change of the energy source used in processes – program consisting of initiatives to replace high carbon fuels with renewable fuels;
2. Optimization of mining assets – program consisting of initiatives to change equipment or install parts that optimize fuel or electricity consumption; and
3. Use of new technologies in mining – program consisting of initiatives to change mine design and use of advanced mining equipment.

Minerals and metals play a key role in the transition to a low carbon economy future and are crucial to how energy is generated, transported, stored and used. The shift underway has enormous potential to change the scale and composition of global demand for minerals and metals.

The decarbonization trend of the economy and the world energy matrix points out to new opportunities for the mining industry, particularly with the supply of new materials, also adding the possibility of nuclear energy generation, which marks the indispensability of the mining industry, considered strategic for this evolution, with the contribution of minerals, especially Thorium (Th), for the 4th generation of nuclear plants.

As for Climate Change Adaptation, Article 7 of the Paris Agreement establishes it as a global challenge faced by all in the local, subnational, national, regional and international levels. This article recognizes the importance of international cooperation in adaptation efforts, taking into consideration the needs of developing countries, especially those that are particularly vulnerable to the negative effects of Climate Change.

At COP 26 UN Climate Change Conference, to be held in Glasgow, Scotland, November 1-12, 2021, the main topic to be addressed during another important round of discussions will be the regulation of article 6 of the Paris Agreement, about a carbon market mechanism at global level, considered one of the main instruments to achieve the goal of containing the increase in global average temperatures to below 2°C. The regulation of this article has been discussed since 2016.

Currently, even adding up all the commitments made by different nations under the Paris Agreement (NDCs), the reduction of emissions has not been enough to curb global warming.

Carbon pricing, especially in the form of markets, is universally seen as an efficient mechanism to enable the achievement of the announced emission reduction targets, to foster others and to enable and ensure solutions that contribute to contain global warming below 2 °C.

Positioning

- 1) The Mining industry defends **carbon pricing** as an economic mechanism to enable the transition to a low carbon economy. This requires a robust, creditworthy and regulated carbon market, in order to promote the effective compensation of emissions, that is, through the purchase of carbon credits in (cap and trade) robust markets.
- 2) We support the **regulation of Article 6 of the Paris Agreement**, in order that the environmental integrity of the pricing mechanism is ensured and that emission reduction commitments are strengthened, establishing price levels appropriate to the required transformations.
- 3) We support the **regulation of Article 6.4 on the Sustainable Development Mechanism (SDM)** and the Global Carbon Market, which will contribute to the increase of competitiveness and the consolidation of the low carbon economy in Mining.
- 4) We encourage the adoption of regulatory frameworks, aimed at driving a Carbon Neutral agenda for the sector, regarding the **Payment for Environmental Services*** and promotion of a **Voluntary Carbon Market** resulting from these services and integrated to the regulated Carbon market (*Forest+, Forest+ Carbon and Brazilian National Policy for Payment for Environmental Services - PNPSA).
- 5) We support the mobilization and increase of **climate finance**, from developed countries, for the effective application in R&D&I and implementation of new low carbon emission technologies in processes and activities in all phases of the mineral enterprise.
- 6) We support and encourage **Training and Technology Transfer** in the global transition to a low carbon emission economy, through real incentives for technological development in the **use of strategic minerals and energy efficiency equipment and renewable energy**, in order to contribute to a **fair energy** and mobility transition.
- 7) We support the **Brazilian National Adaptation Plan (NAP)** and the **global funding for Climate Adaptation** as a way to reduce risks and adverse impacts to the mining industry, as well as encourage effective practices and adaptation needs of the sector.

This positioning of IBRAM, together with its associated companies, aims to contribute to the Brazilian government in the COP 26 negotiations, as well as to inform stakeholders of the mining industry's efforts in the pursuit of a low carbon economy in Brazil.