

IETA DISCUSSION PAPER

BRAZIL & CARBON MARKETS

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INTRODUCTION

Brazil faces one of the most ambitious climate agendas in the world: reducing greenhouse gas (GHG) emissions by between 59% and 67% by 2035 relative to 2005, restoring 12 million hectares of native vegetation, and eradicating illegal deforestation by 2030. These are commitments that require private capital mobilization at an unprecedented scale, precisely in a context of growing fiscal constraints, structurally high cost of capital, and pressures on industrial competitiveness.

Given this context, the central and strategic question is how to promote decarbonization in a way that is economically efficient, socially just, and internationally credible. It is worth noting that Brazil's transition starts from a distinctive position. Unlike other jurisdictions with mature Emissions Trading Systems (ETs), and with an electricity matrix already among the most renewable among major economies, the country faces a far more complex challenge of decarbonizing its productive structure, restoring ecosystems at scale, and financing all of this without compromising the competitiveness of many sectors and activities that still need to modernize.

As the country advances in the operationalization of the Brazilian Emissions Trading System (SBCE), the question that the carbon market regulatory framework needs to answer is direct: how to finance this process efficiently? The SBCE, a fundamental long-term instrument, is under construction, and even once fully operational, will cover only a smaller share of the country's total emissions. The Voluntary Carbon Market, already operating in the country, offers opportunities, but has limited demand. Engagement with Article 6 of the Paris Agreement, in turn, if well regulated, may represent the greatest financing opportunity to support the country in meeting its climate commitments, particularly during the critical period between 2026 and 2035.

This paper aims to shed light on considerations relevant to Brazil's engagement with Article 6, from the perspective of the private sector, such as (1) the criticality of the 2026–2030 period for enabling the necessary policies; (2) the need for clarity on which activities may generate CRVEs and ITMOs; (3) the importance of CORSIA as a source of short-term demand; (4) the development of a positive list based on objective, predictable, and internationally recognized criteria and (5) the regulatory predictability and systemic scalability needed to attract and sustain private-sector participation, all to be further detailed ahead.

AN ALTERNATIVE PATHWAY

While the consolidation of SBCE rules and infrastructure is a prerequisite for scaling up international engagement, recent quantitative modelling carried out by IETA shows that Brazil's structurally high cost of capital makes engagement with international cooperative approaches under Article 6 of the Paris Agreement, in the short term, a strategic opportunity¹. Each year of delay in effective engagement with Article 6 carries a real cost, in unrealized investment, potentially on the order of BRL 70 billion per year according to IETA's socioeconomic modelling, in unfinanced projects, and in uncaptured revenue that could help finance precisely the restoration and conservation commitments due as early as 2030.

Brazil has unique comparative advantages in international carbon markets: forest potential, a diversified bioeconomy, technological capacity in renewable energy and biofuels, and growing climate credibility. However, for this comparative advantage to translate into a practical advantage, it needs to be accompanied by a regulatory framework that the market can understand, price, and trust in order to be converted into real investment flows. To provide predictability and unlock private-sector investment, objective and transparent criteria are needed.

Within this context, Article 6 can reinforce the SBCE, and vice versa. While complementary, the two instruments serve distinct functions and require distinct rules, and may advance in parallel, not necessarily on the same timeline, including through specific transitional rules and simplified procedures to authorize ITMOs, avoid double counting, and ensure compatibility with Brazil's NDC, without prejudice to environmental integrity safeguards.

While the regulated system consolidates governance, processes, and infrastructure to ensure a robust long-term foundation for the operation of carbon markets in the country, engagement under Article 6 can provide the price signal and capital at scale to help address national climate commitments that the gradual implementation of the SBCE will not be able to generate in the short term. On the other hand, progress in this engagement and in structuring the regulatory framework, aligned both internationally and adapted to address national challenges, can itself serve as a global reference, particularly with regard to nature-based solutions and their permanence and additionality attributes, so as to help advance the implementation of Article 6 at scale in order to cooperatively achieve the objectives of the Paris Agreement globally.

¹ IETA & EOS Consulting (2026). Carbon Market Frameworks for Brazil 2.0. Available at: <https://www.ieta.org/carbon-market-frameworks-for-brazil-2-0>

CRITICAL POINTS FOR BRAZIL'S ENGAGEMENT WITH ARTICLE 6

BASED ON THIS CONTEXT, IETA SEEKS, THROUGH THIS PAPER, TO PROMOTE DISCUSSION IN SUPPORT OF THE FEDERAL GOVERNMENT'S RECENT EFFORTS TO ADVANCE BRAZIL'S ENGAGEMENT WITH ARTICLE 6, RECOGNIZING NATIONAL SOVEREIGNTY IN DEFINING THE ARRANGEMENTS FOR PARTICIPATION. DRAWING ON ACCUMULATED EXPERIENCE WITH PRIVATE-SECTOR ACTORS ENGAGED IN CARBON MARKETS AND ON THE RESULTS OF QUANTITATIVE MODELLING WORK ON THIS TOPIC FOR BRAZIL, WE IDENTIFY BELOW FIVE FUNDAMENTAL ELEMENTS TO BE CONSIDERED SO THAT ITMO REGULATION IN BRAZIL, CURRENTLY UNDER PUBLIC CONSULTATION, IS, AT THE SAME TIME, AMBITIOUS, CREDIBLE, AND OPERATIONALLY EFFICIENT.

1. THE 2026-2030 WINDOW OF OPPORTUNITY CANNOT BE IGNORED

Several of Brazil's most urgent climate commitments — zero deforestation, restoration of 12 million hectares — are due in 2030, not 2035. Regulation that restricts ITMO authorizations to later periods would deprive the country of international carbon revenue precisely at a critical moment for mobilizing capital to meet national commitments. Carbon projects take years to become operational; without regulatory clarity and the promotion of near-term engagement, the projects that should help finance the fulfilment of 2030 commitments will very likely not be developed in time.

With global demand for ITMOs on the order of at least 700 MtCO₂e by 2030², several countries are already establishing national regulations to engage with Article 6 and closing bilateral agreements to take advantage of the imbalance between supply and demand for ITMOs in the international market. This context represents a window of opportunity that Brazil, as a potential global supplier of high-quality climate services, should consider in order to help achieve its climate commitments efficiently.

Accordingly, it would be important for ITMO regulation in the country to recognize this opportunity, providing for mechanisms and infrastructure for early engagement and giving predictability to procedures for converting eligible CRVEs into ITMOs, even if on a transitional basis in specific volumes or through pilot projects or programs, until the carbon market regulatory framework is fully implemented in the country. This would allow the consolidation of a pipeline aligned with Federal Government rules to occur in parallel — rather than in sequence — with the SBCE operationalization process, eventually providing integrity and greater efficiency in meeting Brazil's climate commitments.

2. CLARITY ON WHICH SECTORS MAY GENERATE CRVEs AND ITMOs

Linking ITMOs to CRVEs registered under the SBCE raises a critical regulatory question. Since Law 15,042/2024 indicates that only sources not covered by the compliance system will be able to generate CRVEs, and consequently ITMOs, based on accredited methodologies, industrial sectors covered by the SBCE could be excluded, by definition, from ITMO eligibility. If consolidated, this reading would undermine Article 6's potential as an instrument for industrial decarbonization and technology transfer, precisely the activities in which several buyer countries have strong interest and which tend to generate the highest price premiums in the international market.

Given that Brazil already starts from a renewable energy matrix, one of the country's main challenges is to competitively decarbonize industry, such as steel, cement, chemicals, transport, among other hard-to-abate sectors. Excluding these sectors, by definition, from the possibility of generating CRVEs and, consequently, from any eventual positive list for ITMOs, would mean forgoing the most effective instrument available to finance precisely the industrial transformation the country needs. It is worth noting that the possibility of ITMO generation by these sectors would, given the price differential between domestic and international credits, enable industrial decarbonization at a lower total cost. In this sense, it would be essential for regulation to explicitly clarify that activities in sectors regulated by the SBCE could eventually generate CRVEs, and therefore ITMOs, provided that additionality is demonstrated beyond their compliance obligations.

2 Granziera, B., Hamrick Malvar, K., and Verdick, J. (2026). Article 6 Explainer: Questions and Answers about the COP Decisions on Carbon Markets and What They Mean for NDCs, Nature, and the Voluntary and Compliance Carbon Markets (ed. updated with the decisions of COP30). The Nature Conservancy. Available at: https://www.nature.org/content/dam/tnc/nature/en/documents/TNC_Article_6_Explainer.pdf

3. THE IMPORTANCE OF CORSIA AS THE LARGEST SOURCE OF SHORT-TERM DEMAND

CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation), with international airlines covered by Phase I required to meet their obligations as early as 2028 and Phase II entering into force from 2027 onward, represents the largest source of regulated ITMO demand in the short term, with estimates of a cumulative value ranging between 502 and 1,299 MtCO₂e by 2035³. Brazil has clear potential and competitive advantages to meet this demand, both in terms of credit generation and sustainable aviation fuels (SAFs).

Beyond the immediate opportunity, there is also a long-term strategic dimension: a fully operational CORSIA would stimulate international demand for Brazilian SAF, creating a larger market for SAF production initiatives in the country and helping to incentivize the operationalization of the Fuel of the Future law (Lei do Combustível do Futuro) and the National Sustainable Aviation Fuel Program (Programa Nacional de Combustível Sustentável de Aviação). The non-inclusion of CORSIA as an explicit channel for ITMO authorization, and the eventual prioritization of authorizations through bilateral or multilateral agreements between governments, would marginalize the largest available source of short-term demand, with direct consequences for potential revenue and for Brazil's competitiveness as a supplier of global climate solutions.

In this sense, the program's Phase II, which is mandatory and begins in 2027, tends to be a relevant period for the program's trajectory. Recently analyzed market data⁴ indicate that, of the approximately 640 MtCO₂e potentially eligible for CORSIA's Phase I, only 37 million tonnes met all Article 6 authorization requirements, with the accessible volume — even under an optimistic scenario that includes countries assessed as likely to authorize — remaining short of an estimated demand of 163 million tonnes for Phase I alone. With the transition to Phase II, projected demand for eligible units will reach an even higher cumulative level.

4. A POSITIVE LIST WITH OBJECTIVE, PREDICTABLE, AND INTERNATIONALLY ORIENTED CRITERIA FOR ITMO GENERATION

An eventual positive list of eligible activities would represent a genuine advance in market transparency and predictability. To fulfil this function, however, its inclusion criteria would need to be objective and take into account real international demand, not only alignment with national plans. It is worth noting that criteria still under development, largely qualitative and/or subjective, do not provide the market with the legal certainty needed to direct long-term investment at scale.

Accordingly, an eventual positive list for ITMO generation in the country should incorporate explicit reference to qualified sources of demand (such as CORSIA requirements and those of buyer countries), to marginal abatement cost criteria identifying activities to be unlocked through the economic differential for export under Article 6, and to methodologies that follow internationally recognized integrity standards, without necessarily treating alignment with such standards as an automatic and sufficient condition for authorization, but rather as a complementary reference alongside national safeguards.

5. PREDICTABILITY AND SYSTEMATIC SCALABILITY INSTEAD OF CASE-BY-CASE COMPLEXITY

Regulatory architectures that depend on extensive bilateral negotiations, discretionary periodic reviews, and authorization percentages defined on a project-by-project basis tend to generate exactly the opposite of what carbon markets need: predictability. High-quality mitigation projects require long-term revenue visibility in order to be financeable; without it, capital simply does not flow to where it is needed.

Additionally, conditioning authorization volumes on the evolution of the National Emissions Inventory overlooks a relevant technical limitation: removals from no-till farming, managed pastures, planted forests, and integrated crop-livestock-forestry systems are not reflected in the inventory due to the lack of a robust official methodology, even though they represent real and relevant contributions.⁵ Any ITMO regulation that restricts authorizations to inventory results would systematically underestimate the potential available for authorization, representing a limitation to the country's potential to engage with Article 6 as an instrument to attract capital for national development.

The determination of the quantity of ITMOs to be authorized by Brazil should be based on forward-looking market analyses, rather than being limited to the historical performance of credit supply. While historical data is relevant for understanding market developments, it does not fully reflect future market dynamics, particularly in a context of rapid transformation. Similarly, the definition of the national authorization budget should take into account not only supply projections, but also the expected evolution of international demand for ITMOs, since this demand determines the market's absorption capacity, price formation, and, consequently, investment in project development.

Alternatively, forward-looking Article 6 engagement strategies could be considered, justified by emissions reductions or removals that would not otherwise be implemented, or that would enable, in parallel, investments contributing to domestic emissions mitigation more than sufficient to offset the impact of corresponding adjustments.

3 MSCI Carbon Markets (2024). CORSIA: Costs and Implications for the Airline Industry. Estimate of cumulative demand for CORSIA-eligible credits in Phase II (2027–2035) of between 502 and 1,299 MtCO₂e

4 Sylvera (2026). Available at: <https://www.sylvera.com/blog/2bn-in-corsia-compliance-spend-hinges-on-host-country-authorisations>

5 Studies estimate that, in 2023 alone, the soil carbon balance resulted in a net removal of 191.1 MtCO₂ in Brazil not captured by the official inventory.

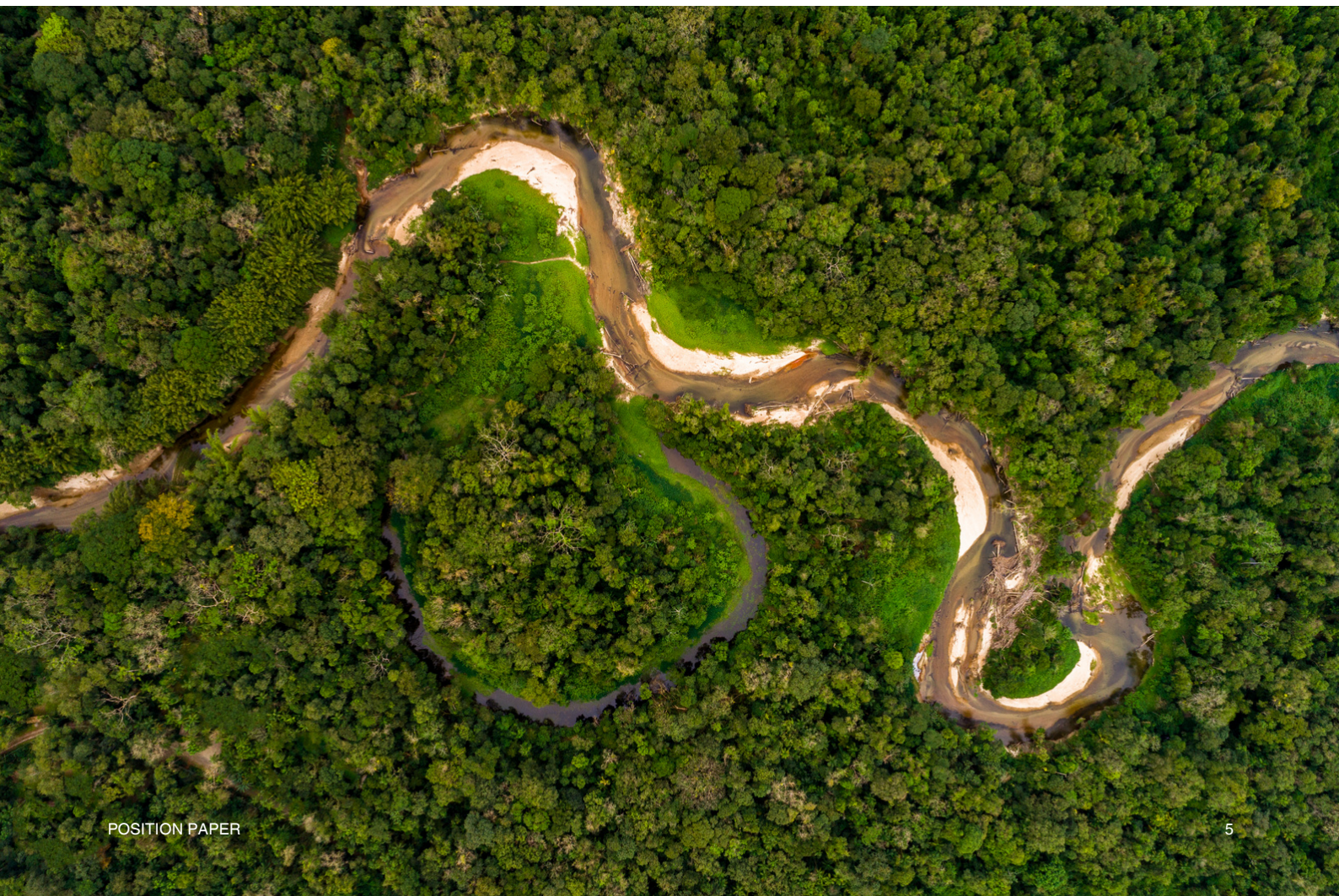
Available at: <https://seeg.eco.br/wp-content/uploads/2024/11/SEEG-RELATORIO-ANALITICO-12.pdf>

BRAZIL'S POTENTIAL FOR LEADERSHIP

IN CONCLUSION, THERE IS A RELEVANT INFORMATION ASYMMETRY IN REGULATORY DEBATES ON ARTICLE 6: THE COUNTRIES WITH THE MOST TO GAIN FROM INTERNATIONAL CARBON MARKETS ARE PRECISELY THOSE THAT HAVE NOT YET MEANINGFULLY BEGUN THIS ENGAGEMENT. BRAZIL HAS THE OPPORTUNITY TO CHANGE THIS, NOT ONLY AS AN ACTIVE MARKET PARTICIPANT AND AN INFRASTRUCTURE HUB FOR THE REGION, BUT AS A REFERENCE COUNTRY FOR OTHER EMERGING ECONOMIES, SHOWING HOW A HIGH-INTEGRITY CARBON MARKET, ADAPTED TO SPECIFIC NATIONAL CIRCUMSTANCES, CAN WORK IN PRACTICE, AND CAN HELP NOT ONLY IN ACHIEVING CLIMATE TARGETS, BUT ALSO IN PROMOTING SUSTAINABLE DEVELOPMENT AND A JUST TRANSITION.

Analysis from IETA's recently published modelling study on the socioeconomic impacts Article 6 could have for Brazil indicates that it is possible to combine Article 6 engagement, including authorizations for both hard-to-abate sectors and nature-based solutions, while simultaneously delivering GDP growth, job creation, export revenue, and increased climate ambition. This shows that in countries like Brazil, with diverse mitigation opportunities but a high cost of capital, rather than a dichotomy between development and climate, it is essential to think of climate strategy as a lever for a new form of development.

IETA remains committed to continuing to support this process and to deepening collaboration with the Federal Government, the private sector, and other stakeholders in discussing efficient forward-looking strategies for the country's engagement with Article 6, the eventual definition of priority activities to consider based on real international demand, national characteristics, and Brazil's marginal abatement cost differential; and governance models that enable systemic scalability and promote competitiveness without sacrificing environmental integrity.



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