IETA Brazil Initiative

eos ESTRATÉGIA & SUSTENTABILIDADE IETA

CARBON MARKET FRAMEWORKS FOR BRAZIL · PHASE II

A quantitative assessment using IMACLIM-BR model on how carbon markets and Article 6 engagement can accelerate Brazil's NDC considering four different pathways.

HEADLINE RESULTS OF THE REVISED MODELLING WORK

Pathway 4 combines hard-to-abate sector decarbonization and nature-based solutions under a conservative Article 6 guideline design as initial reference for engagement and delivers the strongest environmental, economic and social outcomes.

929 MtCO2e	**121** MtCO2e	**105** MtCO2e	**BRL 71.6** bi
Net emissions in 2035 — within NDC target	ITMOs available for international transfer in 2035	In cost-effective mitigation units available for use towards NDC in 2030	Foreign investment inflows by 2035

KEY MESSAGE 1 — NDC compliance risk can be structurally mitigated

Can Brazil authorize ITMOs and still meet its NDC?

The proposal discussed in Pathway 4 addresses this directly. Three structural safeguards work together to ensure Article 6 engagement **reinforces Brazil's domestic mitigation trajectory.**

1. **Security buffer:** only measures with marginal cost above the domestic NDC threshold are eligible for ITMO authorization — Brazil's lowest-cost options remain fully available for domestic use.
2. **50% retention rule:** half of all verified mitigation outcomes are retained domestically, directly contributing to NDC compliance and reducing its marginal cost.
3. **Additionality logic:** foreign investment targets high-cost measures not otherwise prioritized and implemented domestically, expanding total mitigation volume for both the Brazilian NDC and authorized units under Article 6.

Even under uncertainty in international carbon prices, the proposed design incorporates sufficient economic and regulatory safeguards to ensure Brazil's Article 6 participation strengthens its climate ambition.

Pathway 4 – reference proposal for initial engagement with A6

Private investment in Project Development
according to SBCE integrity criteria
→
50 / 50 split

50% of credits authorized via A6 · revenue captured

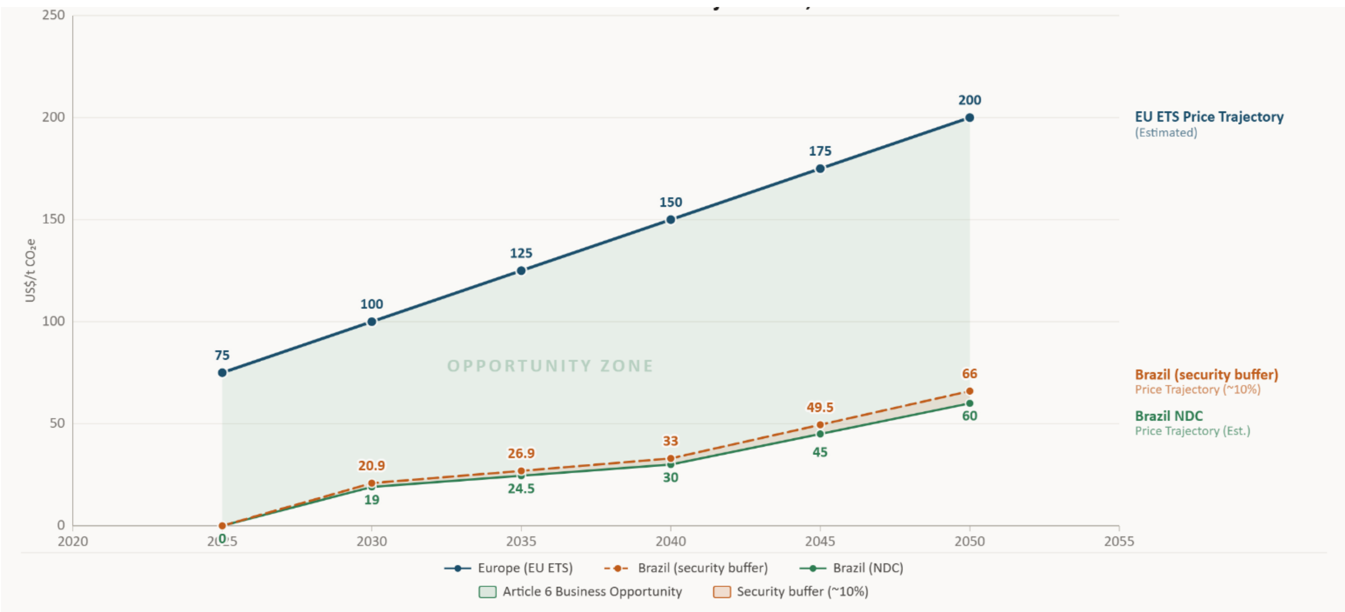
50% credits retained for NDC · risk mitigated

By 2035, the volume retained domestically (~121 MtCO2e) is of the same order of magnitude as the gap between the upper and lower bounds of Brazil's NDC target range — meaning domestic retention alone could shift the country from the upper bound to the lower bound.

Carbon price trajectory and Article 6 opportunities

Carbon price trajectory in Brazil and EU ETS

The shaded area represents the Article 6 business opportunity: the gap between the EU ETS price trajectory and Brazil's domestic carbon price. The security buffer (~10%) defines the upper boundary of credits eligible for ITMO authorization.



Pathway 4 — Mitigation Potential, Allocation and Revenues

50% of verified mitigation outcomes authorized for ITMO export; remaining 50% retained domestically to contribute to NDC ambition.

Category	2030				2035			
	Total Potential ($MtCO_2e$)	Exported ($MtCO_2e$)	Retained in Brazil ($MtCO_2e$)	Revenue (BRL billion)	Total Potential ($MtCO_2e$)	Exported ($MtCO_2e$)	Retained in Brazil ($MtCO_2e$)	Revenue (BRL billion)
Hard-to-abate	100.06	50.03	50.03	**27.0**	133.42	66.71	66.71	**45.0**
ARR	109.18	54.59	54.59	**15.1**	109.18	54.59	54.59	**26.5**
Total	**209.24**	**104.62**	**104.62**	**42.1**	**242.59**	**121.30**	**121.30**	**71.6**

Table 2: Mitigation Potential, Allocation between Export and Domestic Use, and Associated Revenues — Pathway 4 (2030 and 2035).
Source: EOS Consulting based on IMACLIM-BR results

KEY MESSAGE 2 — Pathway 4 delivers the most ambitious environmental outcomes

Net emissions fall to 929 $MtCO2_e$ by 2035

This reflects the combination of retaining a share of reductions and removals domestically and the strategic use of market mechanisms. Emissions intensity of GDP also improves, reinforcing the decoupling between economic growth and emissions.

1,095 $MtCO2_e$	929 $MtCO2_e$
Net emissions 2030 — within NDC target	Net emissions 2035 — within NDC target

Net emissions compared across pathways in 2035 ($MtCO2_e$):

	Emissions	ITMOs
Brazil 2025	1,824	-
Pathway 1	1,050	0
Pathway 2	944	106
Pathway 3	940	109
Pathway 4	929	121

Towards NDC Lower bound

Pathway 4 positions Brazil between the upper and lower NDC bounds, translating into a concrete operationalization of Brazil's NDC text, which explicitly recognizes market mechanisms as instruments to enhance ambition.

KEY MESSAGE 3 — International engagement generates substantial, concrete flows

ITMO export volumes

2030	2035
104.6 MtCO2e	**121.3** MtCO2e
BRL 42.1 bi revenue	BRL 71.6 bi revenue

Hard-to-abate: USD 100–125/t · ARR: USD 51–90/t. ITMO export revenues in pathway 4 do not account for a 20% authorization fee, applied on Pathway 3.

GDP Increase (Between Pathways 1 and 4)

2030	2035
+0.44%	**+1.23%**

Job Creation (Between Pathways 1 and 4)

2030	2035
+20.000	**+190.000**

The economic logic for buyer countries

These flows enable Brazil to capture significant revenues while contributing to the reduction of global mitigation costs. By exporting lower-cost abatement relative to developed economies, Brazil becomes a net provider of climate efficiency, helping other countries meet their targets at **lower total cost**.

Per capita tCO2e emissions (2035)

Pathway 1	4,8
Pathway 2	4,8
Pathway 3	4,8
Pathway 4	4,3

All pathways assume demographic growth in line with IBGE estimates

Purchasing power — lowest income quintile (2035, 2015=1)

Pathway 1	1.70x
Pathway 2	1.70x
Pathway 3	1.74x
Pathway 4	1.72x

ARR activities are labour-intensive, generating broad rural employment and supporting regional income distribution