



KLIMAPOLITIK IM FOKUS



Emil Nolde, Hallig, o.J. ©Nolde Stiftung Seebüll

Diskussionspapier

The Good, the Bad and the Ugly:

Observations from the new Brazilian Emissions Trading System

Elena Aydos, Ederson Porto, Sven Rudolph

The Good, the Bad and the Ugly:

Observations from the new Brazilian Emissions Trading System¹

Elena Aydos, Ederson Porto, Sven Rudolph²

1 Introduction

Brazil is one of the fastest developing economies in the world and a Member – currently holding the presidency – of the BRICS intergovernmental group, which increasingly influences international climate negotiations. Brazil is also both one of the world's largest emitters of greenhouse gases (GHG)³ and among the countries most vulnerable to the impacts of climate change. In 2023 and 2024, the country experienced a series of unprecedented extreme weather events, which had severe socio-economic consequences especially to those already marginalised segments of the population.⁴

In response, the three branches of the Brazilian government established a “Pact for Ecological Transformation” in August 2024.⁵ Among its ten key commitments is the prioritisation of legislative proposals aligned with the themes of the Pact,⁶ including the creation of a national emissions trading system (ETS).⁷

Following nearly a decade of legislative debate, the *Sistema Brasileiro de Comércio de Emissões de Gases de Efeito Estufa* (SBCE) was formally established in December 2024.⁸ The SBCE is a federal cap-and-trade scheme intended to be implemented over five phases in the next four to five years.⁹ Phase I consists of a period of 12 to 24 months for the regulation of the SBCE legislation, starting from 12 December 2024. Given the lack of certainty around regulation at the time of writing,¹⁰ it is likely that phase I will last at least the full 24 months allowed by legislation. Once the SBCE is regulated, operators will have one year to operationalize their GHG inventories and reporting mechanism (phase II). From 1 January 2028 until 31 December 2029 (phase III), operators of activities emitting over 10,000 tCO₂e per year will face monitoring and reporting obligations. The first National Allocation Plan will be in place for the calendar year starting on 1 January 2030 (phase IV). From 2031 onwards, the SBCE is scheduled to be fully implemented (phase V).

It is worth mentioning from the outset that the SBCE legislation is unusual in its scope. On the one hand, it is very broad. It sets a very basic framework of the SBCE; creates a new carbon offset scheme to be managed by the SBCE Management Body; determines the taxation regime applicable to the

¹ This paper was submitted to the 26th Global Conference on Environmental Taxation – Policies for Green and Sustainable Financing”, Porto Alegre, Brazil, Sep. 24-26, 2025.

² Dr Elena Aydos is a Senior Lecturer at the School of Law and Social Justice, University of Newcastle. For correspondence: elena.aydos@newcastle.edu.au. Dr Sven Rudolph is a scientific advisor on climate policy, Institute for Church and Society, and Spokesperson for Climate Alliance Germany. For correspondence: sven.rudolph@kircheundgesellschaft.de. Prof. Dr. Ederson Porto is professor of Tax Law at Universidad Federal do Rio Grande do Sul, Porto Alegre, Brazil. For correspondence: ederson.porto@ufrgs.br.

³ Sistema de Estimativas de Emissões e Remoções de Gases de Efeito Estufa (SEEG) accessed 20 August 2025.

⁴ Brazilian Government, *Brazil's NDC: National Determination to Contribute and Transform* (2024) 2.

⁵ Brasil, *Pacto pela Transformação Ecológica entre os Três Poderes do Estado Brasileiro*, *Diário Oficial da União*, Edição 162, Seção 1, 6, Brasília, DF, 22 August 2024.

⁶ *Ibid* art. 2(I).

⁷ *Ibid* Anexo, Eixo II, 9.

⁸ Lei Nº 15.042, de 11 de dezembro de 2024, *Institui o Sistema Brasileiro de Comércio de Emissões de Gases de Efeito Estufa* (SBCE) (Brazilian Emissions Trading System Act).

⁹ *Ibid* art. 50.

¹⁰ 20 August 2025.

transaction of these units; and creates two new classes of intangible assets, providing rules pertinent to their transaction in the voluntary market:¹¹

- *Cotas Brasileiras de Emissões* (CBEs) are emissions allowances, each corresponding to the right to emit 1t/CO₂-e. CBEs are initially allocated to regulated operators, and can be used for compliance and trading within the SBCE and secondary market.¹²
- *Certificados de Redução ou Remoção Verificada de Emissões* (CRVEs) are offset credits, each representing 1t/CO₂-e reduced or removed through verified abatement or removal activities. Accredited and registered under the SBCE, CRVEs function as intangible assets that can be used for compliance purposes and traded in the SBCE and secondary markets.¹³

On the other hand, the legislation is very limited in the actual definition of key design elements of the SBCE, leaving crucial details to be regulated within the short period of phase I. This transitional phase presents a strategic window for policy dialogue and stakeholder engagement.

This paper adopts the Sustainable Model Rule (SMR) developed by Rudolph and Aydos¹⁴ as its theoretical framework (section 2) to evaluate the initial design of the SBCE as established in legislation.¹⁵ In this evaluation, we borrow from the timeless triad made famous by Sergio Leone’s movie “The Good, the Bad and the Ugly”: the noble or virtuous element represents the strengths of the SBCE (The Good - Section 3), the villain or corrupt element represents its weaknesses (The Bad – Section 4), and the morally complex or flawed represents the uncertainties and unsettling features of the SBCE legislation (The Ugly – Section 5). For the “Bad” and “Ugly” elements in Sections 4 and 5, we draw on experiences from existing ETS worldwide, using them as benchmarks to show what has already been achieved elsewhere. Much like the film’s interplay of archetypes, this framework allows us to explore virtue, vice, and ambiguity. We conclude by offering targeted recommendations aimed at strengthening the SBCE’s environmental integrity, economic efficiency, and social and climate justice (section 6). While closely related to the broader climate policy landscape, the regulation of the CRVE scheme and the taxation regime fall outside the scope of this paper.

2 The Sustainable Model Rule: A Theoretical Framework

The SMR is an innovative, rigorous and at the same time immediately applicable framework for *ex-ante* evaluation of the design of ETS, based on three normative core criteria: environmental effectiveness, economic efficiency, and social and climate justice.¹⁶ Table 1 provides an overview of the major design elements of an ETS in practice (column 1) and the SMR for sustainable ETS design (column 2).

Table 1 Sustainable Model Rule (SMR) for ETS Design

SMR	
Coverage	• mandatory participation

¹¹ Lei Nº 15.042, de 11 de dezembro de 2024 art. 10.

¹² Ibid art. 2, II, VI.

¹³ Ibid art. 2, III.

¹⁴ Sven Rudolph and Elena Aydos, *Carbon Markets Around the Globe: Sustainability and Political Feasibility* (Edward Elgar 2021).

¹⁵ Lei Nº 15.042, de 11 de dezembro de 2024.

¹⁶ Rudolph and Aydos (n xiii) chapter 3.

	<ul style="list-style-type: none"> • all GHG (based on CO₂e) • all polluters
Cap	<ul style="list-style-type: none"> • ≥ -25-40% by 2020, -50-65% by 2030, -70-85% by 2040 (base 1990); net zero by 2050 (Paris Agreement, CBDR) • absolute volume cap (“Budget Approach”) • gradual cap reduction (“Contraction & Convergence”)
Allocation	<ul style="list-style-type: none"> • initial allocation by 100% auctioning • primary and secondary market equally accessible to all interested parties • frequent auctions and well-established secondary market platform
Revenue Use	<ul style="list-style-type: none"> • 100% revenue recycling • earmarked to an equal per capita redistribution of the major part of the revenues, and, if necessary, a targeted regressivity compensation of the poorest
Flexibility Mechanisms	<ul style="list-style-type: none"> • banking permitted (unlimited) • borrowing prohibited • offsets limited to sustainable projects (“Gold Standard”)
Price Management	<ul style="list-style-type: none"> • price floor (auction reserve price) (≥ Social Cost of Carbon, i.e. 60 US\$/t in 2030) • price ceiling (Paris Agreement Compliance Price, i.e. 100 US\$/t in 2030)
Compliance	<ul style="list-style-type: none"> • control periods of no more than three years or long periods with interim GHG allowance holding requirements • continuous emission monitoring, tracking, and registration or annual third-party verified reporting • discouraging fines for non-compliance (≥ 2 x allowance price of the preceding compliance period) • full compensation of excess emissions
Linking	<ul style="list-style-type: none"> • multilateral direct linking

Source: Sven Rudolph and Elena Aydos. *Carbon Markets Around the Globe: Sustainability and Political Feasibility*. Edward Elgar, 2021.

In 2021, Rudolph and Aydos evaluated nine real-world Emissions Trading Schemes (ETSs) against the SMR framework, finding that the closer an ETS aligned with the recommended design elements (Table 1), the greater its capacity to limit greenhouse gas emissions both effectively and efficiently as well as equitably and thus help covered entities to transition to low-carbon production pathways in a truly sustainably fashion.¹⁷ This finding provides a strong rationale for Brazilian policymakers to adopt

¹⁷ Ibid chapters 3 – 7.

the SMR as a guiding framework in the next stages of regulatory development, in order to enhance the sustainability of the SBCE.

3 The Good

Of those design elements already defined by legislation, the following can be said to be the strengths of the SBCE, directly aligning with the SMR recommendations: pollutant coverage and mandatory participation, declining absolute caps, annual compliance and openness to linking.

3.1 Coverage

The SMR recommends comprehensive polluter and pollutant coverage in an ETS that is mandatory for all targeted polluters.¹⁸ At the current stage, the SBCE has the potential to fulfil these criteria. The SBCE is mandatory for operators of activities emitting over 25,000 tCO₂e per year (compliance period).¹⁹ Pollutant coverage is comprehensive, with the exception of nitrogen trifluoride (NF₃), and includes carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulphur hexafluoride (SF₆), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs).²⁰

Also, in principle, the SBCE legislation allows for comprehensive polluter coverage, with the exception of the agricultural sector and selected waste treatment facilities.²¹ But there's a caveat: the SBCE Managing Body (*órgão gestor do SBCE*) will specify which activities will be covered by the SBCE.²² The Managing Body also has the power to increase the liability thresholds.²³ Therefore, the matter of polluter coverage is far from being settled, as further discussed below.

3.2 Cap

When assessing the emissions cap of a carbon market, determining factors include the size and character of the cap, as well as the dynamics of changing the cap over time.²⁴ The SMR recommends a scarcity-inducing cap to be set in absolute volume terms and to be contracted from status quo to target levels.²⁵ Intensity targets such as emissions per product output or per unit of Gross Domestic Product (GDP), in contrast, create particular difficulties with respect to environmental effectiveness and intergenerational justice by not guaranteeing accurate compliance with an overall absolute volume target.²⁶

¹⁸ Ibid 27 – 29.

¹⁹ Operators emitting between 10,000 tCO₂e and 25,000 tCO₂e per year face monitoring and reporting obligations. Lei N^o 15.042, de 11 de dezembro de 2024 art. 1^o, § 1^o; 3^o; 29; 30 and 34.

²⁰ Lei N^o 15.042, de 11 de dezembro de 2024 art. 2^o, XIII.

²¹ Ibid art. 1^o, § 2^o.

²² Ibid art. 30, § 2^o.

²³ Ibid art. 30, § 1^o.

²⁴ Rudolph and Aydos (n xiii) 30 – 33.

²⁵ Ibid 30 – 33.

²⁶ A detailed discussion on absolute vs. intensity caps can be found e.g. Frank Jotzo and John Pezzey, 'Optimal Intensity Targets for Greenhouse Gas Emissions Trading under Uncertainty' (2007) 30(2) *Environmental and Resource Economics* 259; Ian Wing, Denny Ellerman and Jingliang Song, 'Absolute versus Intensity Limits for CO₂ Emission Control: Performance under Uncertainty' in Roger Guesnerie and Henry Tulkens (eds), *The Design of Climate Policy* (MIT Press 2009) 221; Tim Herzog, Kevin Baumert and Jonathan Pershing, *Target Intensity: An Analysis of Greenhouse Gas Intensity Targets* (World Resources Institute 2006).

The SBCE legislation provides for an absolute emissions cap, which should gradually decline over time, ensuring predictability to operators.²⁷ National Allocation Plans (NAP) will determine the absolute emissions cap and the cap trajectory for the subsequent two compliance periods.²⁸

According to the phased implementation schedule for the SBCE, the first National Allocation Plan (NAP) is expected to apply to the year starting on 1 January 2030 (first compliance period).²⁹ The NAPs must be finalised at least twelve months prior to each compliance period,³⁰ therefore the size of the initial cap is expected to be available by 1 January 2029.

From an environmental effectiveness point of view, the emissions cap should be calculated based on remaining emission budgets and the percental reductions necessary to reach the Paris Agreement's target to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.³¹

The SBCE legislation does not mandate the parameters for setting the emissions cap, although it implicitly refers to Brazil's commitments under the UNFCCC.³² The adequacy of the cap, therefore, will be tied to the ambition of Brazil's Nationally Determined Contribution (NDC) for the 2025 round, observing the principles of inter-generational justice, intra-generational international justice and common but differentiated contribution.

Brazil's second NDC was submitted in 2024, setting an economy-wide target of GHG emissions reduction of 59 to 67 percent below 2005 levels by 2035, alongside a goal for climate neutrality by 2050.³³ The Climate Action Tracker rates Brazil's NDC 2035 target as "almost sufficient" when compared with its fair share of the global mitigation effort to limit global warming to 1.5°C, although it could become sufficient with moderate improvements.³⁴ This means that there is great potential for the SBCE emissions cap to be consistent with Brazil's fair share of the global mitigation efforts under the Paris Agreement, provided that the SBCE reflects the overall reduction target in its cap setting and Brazil's next NDC reflects a progression beyond previous commitments.

Lastly, the SBCE legislation dictates that proportionality between the emissions cap and Brazil's total emission must be observed.³⁵ This is crucial to promote intra-generational equity between covered and non-covered sectors.

3.3 Compliance

The SBCE provides for annual monitoring cycles starting from phase III³⁶ and annual compliance periods starting from phase IV.³⁷ Annual compliance periods allow for timely control over emission reductions, strengthening the environmental effectiveness and inter-generational justice of the

²⁷ Lei Nº 15.042, de 11 de dezembro de 2024 arts. 2º, XVI and 21, § 1º, I.

²⁸ Ibid art. 21, I and § 1º, III.

²⁹ Ibid art. 50, IV.

³⁰ Ibid art. 21, § 1º, II.

³¹ *Paris Agreement to the United Nations Framework Convention on Climate Change*, opened for signature 26 April 2016, UNTS I-54113 (entered into force 4 November 2016) art. 2(1)(a).

³² Lei Nº 15.042, de 11 de dezembro de 2024 art. 2º, XVI.

³³ Brazilian Government (n ii) 7, 23.

³⁴ Climate Action Tracker, 'Brazil' <<https://climateactiontracker.org/countries/brazil/>> accessed 16 July 2025.

³⁵ Lei Nº 15.042, de 11 de dezembro de 2024 art. 21, § 1º, VI.

³⁶ Ibid arts. 32 and 50, III.

³⁷ Ibid arts. 34 and 50, IV.

system.³⁸ They are also aligned with the design of other ETS, which facilitates future negotiations around linking.

3.4 Linking

The SBCE legislation allows for future direct linking with other ETS,³⁹ international trading of carbon credits and trading of internationally transferred mitigation outcomes (ITMOs) under Article 6 of the Paris Agreement.⁴⁰ Linking independent ETS can increase the economic efficiency and environmental effectiveness of the scheme and promote social and climate justice outcomes.⁴¹ A key requirement for linking independent ETS is design alignment.⁴²

Despite the positive aspects highlighted above, the sections below will address some areas for significant concern in terms of the sustainability the SBCE. These, in turn, may also impact on the feasibility of future linking of the system with international ETS.

4 The Bad

From an SMR perspective, there are significant shortfalls with the methodology for initial allocation CBEs, the revenue use, and the use of offsets for meeting liability under the SBCE. We discuss these concerns in detail as follows.

4.1 Allocation

The volume of CBEs to be issued for each compliance period, corresponding to the overall emissions cap, and the allocation methodology will be determined in the NAPs.⁴³ Two main allocation methodologies are commonly employed in real-world ETS: periodical auctioning and free-of-charge allocation.⁴⁴ Businesses have historically lobbied for free-of-cost allocation, while economists and most of the environmental NGO community tend to prefer the auctioning of permits.⁴⁵ Not surprisingly, in practice, political pressures often comes at the cost of equity, cost efficiency and effectiveness, with most real-life ETS, at least at their early stages of implementation, adopting some level of free-of-cost allocation.⁴⁶

The SMR recommends auctioning as the sole methodology for initial allocation, with both primary and secondary markets open to all stakeholders, including non-covered and civil society actors.⁴⁷ Auctioning immediately sets a transparent carbon price, enhancing dynamic efficiency and innovation incentives; it most effectively reflects the true scarcity price of emissions; and it best aligns with the polluter-pays principle.⁴⁸ From a social and climate justice perspective, auctioning

³⁸ Rudolph and Aydos (n xiii) 42 – 44.

³⁹ Lei N° 15.042, de 11 de dezembro de 2024 art. 8, XXI.

⁴⁰ Ibid art. 2º, XXXIV.

⁴¹ Rudolph and Aydos (n xiii) 44.

⁴² Joseph Dellatte and Sven Rudolph, 'Understanding Barriers to Linking Heterogeneous Emissions Trading Schemes: Evidence from and Lessons for Northeast Asia' (2022) *Environmental Politics*.

⁴³ Lei N° 15.042, de 11 de dezembro de 2024 art. 21, II and III. The NAPs may also establish a reserve for new entrants: art. 21, § 1º, IV.

⁴⁴ Lawrence H Goulder and Ian WH Parry, 'Instrument Choice in Environmental Policy' (2008) 2(2) *Review of Environmental Economics and Policy* 152.

⁴⁵ See, eg, Cameron Hepburn and others, 'Auctioning of EU ETS Phase II Allowances: How and Why?' (2006).

⁴⁶ Rudolph and Aydos (n xiii).

⁴⁷ Ibid 33 – 36.

⁴⁸ Ibid 33 – 36.

ensures fair compensation for the allocation of a valuable public resource, supporting both intra-generational equity and the polluter-pays principle. Free allocation undermines this fairness by transferring the resource value to polluters without compensation, enabling unjustified windfall profits, as well as unequal treatment of newcomers.⁴⁹

In its second NDC under the Paris Agreement, Brazil signaled its intention to auction allowances, stating that “[t]his allocation of resources reinforces the commitment to a just transition, which promotes economic growth and social inclusion, in sync with environmental goals”.⁵⁰ However, the SBCE legislation instead provides for free-of-charge allocation as the default methodology, with 100 per cent of CBEs being allocated free-of-charge in the calendar year starting on 1 January 2030 (phase IV).⁵¹

The SBCE Managing Body will determine the criteria for calculating the number of CBEs that each operator will receive free-of-charge on a given compliance cycle, based on: technological development; marginal abatement costs; emission reductions, GHG removals, and historical efficiency gains; and other parameters defined in a specific act by the SBCE managing body.⁵² This process, whether the SBCE decided to rely on historical emissions (grandfathering) or output levels multiplied by a cap compliance factor (benchmarking), requires the availability of robust sectoral data and remains highly susceptible to strategic manipulation, given the informational asymmetries between regulated entities and government authorities.⁵³ This will no doubt increase the administrative costs of the SBCE and expose it to sectoral lobbying.

From phase V onwards, the NAPs will set limits to the volume of CBEs that might be auctioned or otherwise sold, which may gradually increase over time.⁵⁴ The shift away from free-of-cost allocation in phase V onwards is highly recommended. For international comparison, The European Union Emissions Trading System (EU ETS) and the New Zealand Emissions Trading Scheme (NZ ETS) currently auction over 50 per cent of the general allowances, while the new EU ETS 2 will auction 100% from the outset and the regional schemes. In the US, the California Cap-and-Trade Program and the Regional Greenhouse Gas Initiative, already make polluters fully pay for allowances at the stage of initial allocation.

4.2 Revenue Use

An important feature of an ETS is the potential for generating revenue from the auctioning or fixed-price sale of emissions allowances. A decision must then be made in terms of how exactly the revenues should be earmarked and who exactly should receive which share.⁵⁵ The SMR recommends revenue neutrality, with the redistribution of proceeds back to society, preferably on a per capita equal basis, in order to remedy the immediate detrimental social effects that are caused domestically by the implementation of the ETS and the regressivity of carbon prices.⁵⁶

⁴⁹ Ibid 33 – 36.

⁵⁰ Brazilian Government (n ii) 20.

⁵¹ Lei N° 15.042, de 11 de dezembro de 2024 art. 50, IV.

⁵² Ibid art. 21, § 3º

⁵³ Rudolph and Aydos (n xiii) 33 – 36

⁵⁴ Lei N° 15.042, de 11 de dezembro de 2024 art. 11, § 4º.

⁵⁵ Rudolph and Aydos (n xiii) 36 – 38.

⁵⁶ Ibid 38.

There are good reasons for scepticism around the SBCE's potential to generate significant revenue in the short-term due to the methodology for initial allocation of CBEs. Once the SBCE does begin to generate revenue, the first five years of proceeds are earmarked as follows: at least 15 per cent to cover the administration costs of the SBCE; at least 75 per cent to be used for financing investment in low carbon technologies of the covered sectors; and at least five per cent to compensate indigenous peoples and traditional communities for the conservation of native vegetation and payment for ecosystems services.⁵⁷

In other words, the SBCE is revenue-neutral, and the largest portion of revenue is earmarked for enhancing the environmental effectiveness of the scheme and overcoming technology lock-ins by financing additional climate action, which seems to have received the seal of approval from the private sector.⁵⁸ The European Union Emissions Trading System (EU ETS) adopts a similar approach, focusing on further climate investments.⁵⁹ However, similar to California, the upcoming EU ETS 2 for the transport and building sectors has set aside approximately 25 per cent of the proceeds for compensation purposes via the Social Climate Fund, while the redistribution of the remaining 75 per cent is still heavily debated.⁶⁰

Given the well-known regressive social impacts of ETS, this choice represents a missed opportunity to increase the social justice impacts of the SBCE through revenue use. With approximately 27,4 per cent of the Brazilian population living below the poverty line,⁶¹ intra-generational justice and redistributive welfare-based justice would be best served by using the revenues for a combination of a per capita equal climate dividend and targeted supports for low-income households and disadvantaged communities, in line with the SMR.⁶² The environmental effectiveness of the scheme can be best achieved through setting stringent domestic caps in line with the Paris Agreement, as mentioned above.⁶³

4.3 Flexibility Mechanisms

The SBCE legislation creates a new carbon offset scheme that is linked to the SBCE and regulated by the SBCE Management Body.⁶⁴ As mentioned above, CRVEs are offset credits accredited and registered by the SBCE Management Body. CRVEs are the only offset credits accepted for compliance purposes and traded in the SBCE; other carbon credits can be traded in the secondary markets.⁶⁵ The NAPs will set the maximum percentage of CRVEs that an operator might use for meeting liability, the criteria for trading CRVEs and provisions for the implementation of the CRVE scheme.⁶⁶ While the

⁵⁷ Ibid art. 28, I, II, III and § 2º.

⁵⁸ International Emissions Trading Association (IETA), *Leveraging Brazil's Carbon Market: Private Sector's Key Considerations on the Brazilian Emissions Trading System (SBCE)* (July 2025) 9.

⁵⁹ European Environment Agency, *Use of Auctioning Revenues Generated under the EU Emissions Trading System* (19 December 2024) <<https://www.eea.europa.eu/en/analysis/indicators/use-of-auctioning-revenues-generated>> accessed 29 August 2025.

⁶⁰ European Commission, *Social Climate Fund* (European Commission) <https://climate.ec.europa.eu/eu-action/carbon-markets/eu-emissions-trading-system-eu-ets/social-climate-fund_en> accessed 29 August 2025.

⁶¹ Instituto Brasileiro de Geografia e Estatística (IBGE), *Em 2023, pobreza no país cai ao menor nível desde 2012* <<https://agenciadenoticias.ibge.gov.br/agencia-noticias/2012-agencia-de-noticias/noticias/42043-em-2023-pobreza-no-pais-cai-ao-menor-nivel-desde-2012>> accessed 18 July 2025.

⁶² Rudolph and Aydos (n xiii) 38.

⁶³ Ibid 37.

⁶⁴ Lei Nº 15.042, de 11 de dezembro de 2024 arts. 7, 8, 9, 10, 12, 25, 26.

⁶⁵ Ibid art. 2, III.

⁶⁶ Ibid art. 21, IV, VI, and VII.

evaluation of the CRVE framework is outside the scope of this paper, the acceptance of CRVEs for compliance purposes has significant impacts for the functioning of the SBCE.

The SMR recommends that offset credits be accepted, as long as there is a compensation through a reduction in volume of the general allowances allocated under the cap; qualitative requirements are implemented to guarantee project integrity; and a democratic process of project implementation in the project host countries is in place.⁶⁷ Still, accepting offsets in an ETS increases administrative costs, and the risk of weakening domestic innovation incentives if prices drop significantly due to an influx of cheap offset credits.⁶⁸ The EU ETS, for instance, after acceptance of Kyoto Protocol Flexible Mechanism credits until 2020, has since deliberately abstained from using offset credits.⁶⁹

In the case of the SBCE, the increased administrative costs are compounded due to its amalgamation with the offset crediting scheme, which is unusual. Removal activities are typically incentivised through separate carbon offset schemes, for instance, the National Forestry Offsets in California.⁷⁰

The NZ ETS provides a cautionary lesson on the complexities of consolidating an offset scheme and a domestic ETS. The use of forestry removal New Zealand Units (NZUs) for compliance under the NZ ETS has not only lessened innovation incentives in the traditional emitting sectors, but also impaired the Government's capacity to control the overall GHG emissions through the cap.⁷¹ The separation and independence between the SBCE and the CRVE scheme is recommended to avoid similar issues.

5 The Ugly

Some critical aspects of the SBCE legislation do not fit neatly within the two categories outlined above ("The Good" and "The Bad"). These concern areas of uncertainty and problematic features spanning several design elements, which — especially when taken together — pose potential risks to the long-term viability of the SBCE. This section discusses the regulatory uncertainties and the preemptive exclusion of the highest polluting sector in Brazil from the SBCE framework.

5.1 Up in the Air: Regulatory Uncertainty Remains

The SBCE legislation is unusual in the limited detail it provides on the scheme's regulatory framework. Despite general directions and some details being laid out already, as described above, other key design details of the SBCE have been left for regulation by the federal executive branch, within the brief timeframe of Phase I, including:

- a) Polluter coverage:

⁶⁷ Rudolph and Aydos (n xiii) 30 – 41.

⁶⁸ Ibid 40.

⁶⁹ European Commission, *Use of International Credits* (European Commission) <https://climate.ec.europa.eu/eu-action/carbon-markets/eu-emissions-trading-system-eu-ets/use-international-credits_en?prefLang=de> accessed 29 August 2025.

⁷⁰ California Air Resources Board, *Compliance Offset Program* (California Air Resources Board) <<https://ww2.arb.ca.gov/our-work/programs/compliance-offset-program>> accessed 29 August 2025.

⁷¹ New Zealand Ministry for the Environment, *Annual Updates to the New Zealand Emissions Trading Scheme Limits and Price Control Settings for Units 2023* (2023); Elena Aydos and Sven Rudolph, *Public Submission on the Review of the New Zealand Emissions Trading Scheme: Annual Updates to the New Zealand Emissions Trading Scheme Limits and Price Control Settings for Units 2023* (2023) <<https://www.newcastle.edu.au/research/centre/law-and-social-justice/submissions>> accessed 30 July 2025.

- a.1 definition of activities, installations, sources and GHG for each compliance period (through the NAPs), except for the agriculture sector;
- a.2 the possibility to increase the liability thresholds for monitoring, reporting and surrendering obligations.⁷²
- b) Allocation:
 - b.1 allocation methodology after the first year of the SBCE, including the percentage of CBEs to be auctioned or otherwise sold;
 - b.2 the criteria for determining the volume of free-of-cost CBEs to be allocated to individual operators;
- c) Price Management: definition (if any) of a price stabilization mechanism;
- d) Flexibility Mechanism: the maximum percentage of CRVEs that operators can use for meeting liability.⁷³

These design elements are crucial, not only to the equity and environmental effectiveness of the SBCE, but also the economic efficiency of the system. Polluter coverage, e.g., determines which share of GHG emissions fall under the cap, allocation after the first year determines the application of the polluter-pays-principle, and the definition of price stabilization mechanisms can be crucial for the efficient micro-allocation of emission rights. These decisions are now in the hands of the Interministerial Committee on Climate Change (*Comitê Interministerial sobre Mudança do Clima, CIM*)⁷⁴ and the SBCE Managing Body (*órgão gestor do SBCE*),⁷⁵ supported by a permanent technical advisory committee (*Comitê Técnico Consultivo Permanente*).⁷⁶ Together, they comprise the SBCE's governance structure.⁷⁷

The CIM is “[...] a permanent ministerial-level collegiate body whose purpose is to monitor and promote the implementation of actions and public policies within the federal executive branch relating to the National Policy on Climate Change.”⁷⁸ Within the CIM, a temporary technical group (GTT – SBCE) was formed with the objective of regulating the SBCE.⁷⁹ The GTT – SBCE is currently composed of 13 federal Ministries (including two Ministries for Agriculture), representatives of the *Casa Civil da Presidência da República* (Chief of Staff), *Advocacia-Geral da União* (Attorney General), *Secretaria-Geral da Presidência da República* (Secretariat-General), with two guests, the *Banco Nacional de Desenvolvimento Econômico e Social* (Brazilian Development Bank) and *Empresa de Pesquisa Energética* (public company linked to the federal Ministry of Mines and Energy).

Eight months into phase I, the SBCE Managing Body is yet to be constituted and public consultations around the design elements mentioned above (a – d) have not been initiated. There is no question that the composition of the GTT – SBCE is political in nature and that there is an asymmetry in information between the public and the private sectors. The regulation of key factors affecting the sustainability of the SBCE is, therefore, particularly vulnerable to pressure from interest groups.

⁷² Lei Nº 15.042, de 11 de dezembro de 2024 art. 8, IV and V.

⁷³ Ibid art. 8, IV and V.

⁷⁴ Ibid art. 7.

⁷⁵ Ibid art. 8.

⁷⁶ Ibid art. 9.

⁷⁷ Ibid art. 6.

⁷⁸ Brazilian Government (n ii) 26.

⁷⁹ Resolução nº 4, de 14 de setembro de 2023, *Diário Oficial da União*, 26 October 2023, Edição 204, Seção 1, 23.

Furthermore, given the increasing polarisation of Brazilian politics,⁸⁰ the SBCE will remain highly susceptible to shifts resulting from future changes in government, potentially impacting the predictability, transparency and the equity of the scheme in the long term.

5.2 Against the Grain: The Highest Emitter Left Out

Coverage is one of the key ETS features that determines environmental effectiveness, enhances efficiency and delivers intra-generational national equity. While the SME recommends full emissions and emitters coverage, the SBCE explicitly excludes the agricultural sector. However, in 2022, this sector represented a share of 48.38 per cent of Brazil's total GHG emissions excluding land-use change and forestry.⁸¹

The original text of the SBCE Bill provided for comprehensive polluter coverage, subject to regulation by the Managing Body.⁸² This was amended in 2023, when the *Frente Parlamentar da Agropecuária* (FPA)⁸³ negotiated the exclusion of the agriculture sector from the SBCE coverage as a condition for approval of the Bill at the Senate's Environment Commission (*Comissão de Meio Ambiente*).⁸⁴ In addition to not having its emissions capped, the agriculture sector will not face the monitoring and reporting obligations that are otherwise imposed upon other operators emitting above 10,000 tCO₂e.⁸⁵

In other words, the agriculture sector, despite being the highest emitter, was the only one pre-emptively excluded from the SBCE by law. Senator Tereza Cristina argued this was because other ETSS don't currently regulate the sector, while Senator Zequinha Marinho pointed to a lack of reliable methods for measuring agricultural emissions.⁸⁶ The latter does not justify the special treatment in the SBCE legislation, given that the SBCE Managing Body will regulate covered activities contingent on the availability of credible methodologies for monitoring, verification and reporting (MVR) – rendering the amendment unnecessary.⁸⁷

In terms of other international ETS, New Zealand is a relevant country for comparison, as agriculture accounted for 52.99% of total emissions in 2022.⁸⁸ Since 2012, meat processors, dairy processors, fertiliser manufacturers and importers, and live animal exporters have faced monitoring and reporting obligations under the NZ ETS.⁸⁹ The full integration of the sector in the NZ ETS, including surrendering obligations, has been deferred multiple times and in 2024, the agricultural sector was removed from the NZ ETS.⁹⁰ However, in its place, a "standardized calculation method" to support measurements of on-farm emissions will be made available in 2025, and a pricing system of on-farm

⁸⁰ David Samuels, Fernando Mello and Cesar Zucco, 'Partisan Stereotyping and Polarization in Brazil' (2023) *Latin American Politics and Society*, Cambridge University Press.

⁸¹ Climate Watch, 'Brazil: Greenhouse Gas Emissions by Sector' (2022) World Resources Institute.

⁸² Projeto de Lei Nº 412/2022.

⁸³ The FPA is an influential coalition of over 200 Brazilian federal deputies and senators that advocates for agribusiness interests. Frente Parlamentar da Agropecuária (FPA), 'About' <<https://fpagropecuaria.org.br/>> accessed 4 August 2025.

⁸⁴ Anna Beatriz Anjos, 'Agro Emplaca Demandas em Projeto de Lei do Mercado de Carbono; Entenda Quais' *Agência Pública* (5 October 2023).

⁸⁵ (n xviii).

⁸⁶ Anjos (n lxxxvi).

⁸⁷ Lei Nº 15.042, de 11 de dezembro de 2024 art. 30, § 2º.

⁸⁸ Climate Watch, 'European Union: Greenhouse Gas Emissions by Sector' (2022) World Resources Institute.

⁸⁹ Climate Change Response Act 2002 (NZ).

⁹⁰ Climate Change Response (Emissions Trading Scheme Agricultural Obligations) Amendment Act 2024 (NZ).

emissions will be implemented by 2030.⁹¹ In the European Union, where agriculture makes up about 12 per cent of total emissions,⁹² there is increasing debate around a specific ETS for the agriculture sector.⁹³

The deliberate exclusion of agriculture from the SBCE legislation creates a barrier to the inclusion of the sector once credible MVR frameworks become available. It is also a move against emerging international efforts and trends toward future coverage of agricultural emissions in ETS.

6 Conclusions

Emissions Trading Systems have proven to be both effective and efficient instruments of climate policy, increasingly adopted not only in industrialised nations but also in developing countries. Brazil's bold step in establishing ETS legislation and setting a timeline for full implementation of the SBCE within the coming years marks a significant advance in global climate governance.

Several design features of the SBCE are already on a clear path towards sustainability according to the SMR. However, other features—most notably the free allocation of CBEs, the rules for revenue use, and the amalgamation of the CRVE offset scheme with the SBCE—remain inconsistent with our recommendations. The greatest uncertainty lies in the undecided design elements, which will ultimately determine whether the SBCE delivers environmental effectiveness, economic efficiency, and social and climate justice.

To strengthen the SBCE and ensure its alignment with the SMR, we recommend that policymakers and the (soon to be established) SBCE Management Body focus on the following elements:

- Polluter coverage: ensure broad polluter coverage and adopt a stringent emissions cap, which must be then adjusted in line with the volume of offset credits accepted.
- Allocation: review the allocation methodology after the first year of the SBCE, moving to 100% auctioning as soon as possible; and ensure that the primary and secondary market are equally accessible to all interested parties.

In Sergio Leone's *The Good, the Bad and the Ugly*, Blondie and Tuco attempt to escape what he believes to be Confederate soldiers by praising General Lee—though Tuco forgets the general's name and shouts: "Hurrah for General ... what's his name?". In Brazilian climate policy, particularly in the SBCE legislation, it is our hope that *environmental effectiveness* and *social justice* are not the forgotten names. Just as Blondie provides the reminder in the film, this paper has aimed to do the same: to underscore the centrality of these criteria for a truly sustainable ETS design.

⁹¹ New Zealand Government, *Our journey towards net zero: New Zealand's second emissions reduction plan 2026-30* (2024) 65 – 66.

⁹² Climate Watch, 'European Union: Greenhouse Gas Emissions by Sector' (2022) World Resources Institute.

⁹³ *Carbon Pulse*, 'BRIEFING: "Perfect Moment" to Talk EU ETS for Agriculture, as Commission Considers Next Steps' (19 February 2025); Mathieu Mal, *Reducing Emissions from Agriculture: Reflection on the Potential Design and Scope of an EU Emissions Trading System for Agriculture* (European Environmental Bureau 2024).