



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

Analysis of the adequacy of Suzano's environmental and accounting practices in relation to Law No. 15.042/2024

Analysis of the adequacy of Suzano's environmental and accounting practices in relation to Law No. 15.042/2024

Vinicius Laborda Prata – Undergraduate student in Accounting Sciences, State University of Amazonas

viniciuslaborda.vlp@gmail.com

Paulo Victor Amorim da Silva – Undergraduate student in Accounting Sciences, State University of Amazonas. Email:

pvamorim.39@gmail.com

Elisângela Leitão de Oliveira – <https://orcid.org/0000-0002-8252-1437> – PhD in Environmental Sciences and Sustainability in the Amazon - UFAM – State University of Amazonas Email: eloliveira@uea.edu.br

Summary

This study analyzes the economic, environmental, and accounting impacts resulting from Law No. 15,042/2024, which establishes the Brazilian Emissions Trading System (SBCE), focusing on the company Suzano, which operates in a sector intensive in greenhouse gas (GHG) emissions. The objective is to examine the company's environmental and accounting practices related to emissions, focusing on compliance with the requirements of the new legislation. The research adopts a qualitative approach, is exploratory in nature, and is based on bibliographic research and document analysis. Data collection utilized sustainability reports, emissions inventories, and available financial statements. The analysis, conducted using content analysis techniques, organized evidence according to legal provisions. The results indicate that Suzano shows a high degree of initial alignment with the SBCE, especially regarding the measurement and verification of emissions, the use of internationally recognized methodologies, and informational transparency. Between 2020 and 2024, the company recorded a net negative emissions balance and made progress in trading carbon credits in the voluntary market. However, a lack of detailed information on the accounting and tax treatment of these credits was observed, revealing a gap in the integration between sustainability and accounting. It is concluded that Law No. 15.042/2024 contributes to reducing legal uncertainty and promoting greater standardization of environmental information, strengthening corporate governance. The study demonstrates that the analysis of corporate compliance with the new regulatory framework is still underexplored, offering contributions to the debate on environmental accounting and the carbon market in Brazil.

Keywords: Suzano; Law No. 15.042/2024; Carbon credits; Environmental accounting; Carbon market.

Abstract

This study analyzes the economic, environmental, and accounting impacts resulting from Law No. 15,042/2024, which establishes the Brazilian Emissions Trading System (SBCE), focusing on the company Suzano, which operates in a sector intensive in greenhouse gas (GHG) emissions. The objective is to examine the company's environmental and accounting practices related to emissions, focusing on compliance with the requirements of the new legislation. The research adopts a qualitative approach, is exploratory in nature, and is based on bibliographic research and document analysis. Data collection utilized sustainability reports, emissions inventories, and available financial statements. The analysis, conducted using content analysis techniques, organized evidence according to legal provisions. The results indicate that Suzano shows a high degree of initial alignment with the SBCE, especially regarding the measurement and verification of emissions, the use of internationally recognized methodologies, and informational transparency. Between 2020 and 2024, the company recorded a net negative emissions balance and made progress in trading carbon credits in the voluntary market. However, a lack of detailed information on the accounting and tax treatment of these credits was observed, revealing a gap in the integration between sustainability and accounting.

Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

It is concluded that Law No. 15.042/2024 contributes to reducing legal uncertainty and promoting greater standardization of environmental information, strengthening corporate governance. The study demonstrates that the analysis of corporate compliance with the new regulatory framework is still underexplored, offering contributions to the debate on environmental accounting and the carbon market in Brazil.

Keywords: Suzano; Law No. 15,042/2024; Carbon credits; Environmental accounting; Carbon market.

1. INTRODUCTION

Climate change has become one of the greatest challenges of our time, demanding quick and effective responses from the international community. The increase in average temperature and the planet's pollution, intensified by the emission of greenhouse gases (GHG), is already reflected in phenomena such as the accelerated melting of glaciers, the occurrence of more intense hurricanes, and heat waves, increasingly frequent (Fortoul Van Der Goes, 2022, apud Cimadon; Zynich; Albano, 2025). Given this scenario, it is necessary to implement sustainable mitigation practices, such as reducing GHG emissions, aiming to reduce projected damage to humans and the environment (Cimadon; Zynich; Albano, 2025).

In this context, the carbon credit market emerges as one of the main mechanisms to address the climate crisis, by assigning economic value to emission reductions, encouraging more sustainable production practices and promoting a low-carbon economy (Sousa, 2025).

Carbon credits are generated from initiatives that seek to reduce or avoid carbon emissions, such as reforestation programs, investments in renewable energy sources, and the adoption of more efficient technologies. These credits can be used by companies both to offset part of their emissions and to be traded on the market with other organizations. In this way, in addition to contributing to mitigating the impacts of environmental issues, carbon credits also present themselves as strategic instruments for increasing the competitiveness of organizations, in an increasingly sustainable scenario (Fonseca; Pereira, 2024).

In Brazil, the absence of clear regulations has always represented a challenge for the consolidation of this market. However, this scenario began to change with the enactment of the Law No. 15,042, of December 11, 2024, which provided fundamental guidelines for the creation and operation of carbon credits in the country (Alencar, 2025). This legislation established the Brazilian System of Emissions Trading (ETT), defining instruments such as Reduction Certificates or Verified Emissions Removal (VERC) and the Brazilian Emissions Quota (BEQ), which allow for greater control and transparency over emissions and offsets made by companies.

The creation of this law strengthens legal certainty, but it also imposes the following on organizations:



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

the need to adapt their accounting and environmental practices in order to meet new requirements.

requirements. In this sense, the legislation itself establishes the "gradual implementation of the System, with the establishment of sequential commitment periods and maximum emission limits in compliance with the goals defined in the PNMC" (Brazil, 2024), enabling a transition balanced and gradual adaptation to legal obligations.

Among the Brazilian companies that fall under the new legislation is...

Suzano, which is recognized for its performance in the paper and pulp sector and its commitment to... Sustainability. The company acknowledges that its operations will be impacted by emissions.

industrial sectors, which will now need to be compensated through CBEs, as well as for their potential of carbon removals in forests, which can be used as self-compensation.

(insetting) or marketed on the market (offsetting), provided they are converted into CRVEs (Suzano, 2024). Thus, the company presents itself as a relevant object for analysis, allowing verification of the

The structures of their environmental and accounting practices and how the new requirements of the legislation may to affect her.

Based on this context, the following problem arises: how has Suzano structured...

their environmental and accounting management practices to meet the criteria established by the new legislation? In this sense, the objective of this study is to analyze environmental practices and accounting analysis of the Suzano company regarding greenhouse gas (GHG) emissions, focusing on its Compliance with the requirements of Law No. 15.042/2024.

This research is justified by its relevance in addressing the relationship between accounting, Sustainability and the regulation of the carbon market in Brazil. As a theoretical contribution, the This study seeks to broaden the debate on the adequacy of accounting and environmental practices in light of... requirements of Law No. 15.042/2024. In practical terms, it aims to offer subsidies that help Companies need to understand the impacts of legislation and develop adaptation strategies. It is hoped that this work will make it possible to understand how large organizations, Companies like Suzano are structuring their management practices to meet new demands. regulatory.

2. THEORETICAL FRAMEWORK

2.1 Environmental Accounting and Carbon Credits

Environmental accounting has established itself as a branch of accounting science focused on to measure, record and document the economic impacts of business activities on the environment environment. Its development, both in Brazil and internationally, is associated with growing demand for corporate social responsibility and the pursuit of greater transparency in disclosure of environmental externalities arose from the need to incorporate them into the records and



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

Corporate reports detail the economic effects stemming from activities that impact the environment.

Historically, the emergence of environmental accounting is related to the movement of

Corporate social responsibility and the demand for greater transparency of externalities.

environmental issues emerged in the final decades of the 20th century, evolving into a discipline that encompasses measurement,

Disclosure and auditing of environmental liabilities and assets (Fonseca; Pereira, 2024). Published studies

Specialized accounting journals show that the maturity of environmental accounting

It varies according to the regulatory framework and the pressure from investors and stakeholders.

From a conceptual point of view, carbon credits have come to be treated as

Negotiable economic instruments that represent verified reductions or removals of

Greenhouse gas (GHG) emissions. In the accounting context, the question arises of the asset-related nature of these instruments:

They can be classified as intangible assets (if they meet the recognition criteria of the CPC).

04 / IAS 38), such as inventories (CPC 16) when the objective is sale in the normal course of operations,

or as financial instruments in specific situations. Brazilian and international literature has...

The appropriate classification was debated, emphasizing that recognition depends on the existence of

likely future economic benefits and reliable measurement of the cost or value of credit.

(CVM, 2024). Empirical studies indicate practical divergence among companies regarding classification.

and measurement, which reinforces the need for clear normative guidelines (Uhlmann et al., 2021).

The correct accounting of carbon credits directly influences three dimensions.

corporate: (i) informational transparency, by improving the quality of disclosures about risks and

climate opportunities; (ii) market value, because recognized environmental assets and liabilities and

well-measured factors affect financial indicators and assessments; and (iii) governance, as they require

Internal controls, segregation of duties, and technical auditing (projects, methodologies, and verifications).

Classic and contemporary authors emphasize the adoption of robust accounting practices for assets.

Environmental initiatives contribute to reducing information asymmetries and mitigating reputational and legal risks.

(Ribeiro, 2010; Tinoco & Kraemer, 2011; Santos, 2019).

Finally, the literature points to recurring technical challenges: initial measurement (historical cost).

vs. fair value), impairment tests for intangible assets arising from removal projects

carbon, revenue accounting when credits are sold, and policy disclosure.

methods and assumptions (CVM, 2024). This complexity justifies the role of standards (CFC, 2024) and

of technical guidelines to standardize practices and facilitate comparability between entities (CA; ACCA,

2023).

2.2 The Carbon Market in Brazil and Law No. 15.042/2024 The carbon

market in Brazil had been developing, mainly on a voluntary basis,

until the enactment of Law No. 15,042/2024, which established the Brazilian Emissions Trading System.

(SBCE) and introduced legal instruments such as the Verified Reduction or Removal Certificate



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

of Emissions (CRVE) and the Brazilian Emissions Quota (CBE). The law created a legal infrastructure for to transact emissions and integrate different credit sources, as well as modify devices.

related to public records and the actions of the CVM (Brazilian Securities and Exchange Commission). The law constitutes an essential regulatory framework.

for the carbon credit market, bringing greater legal certainty, transparency and

predictability for the sector's operations. The authors highlight that the enactment of the law tends to reduce

The legal uncertainty that characterized the national market until then was eliminated by establishing clear rules.

for monitoring, verification and commercialization of credits (Lima; Fazio, 2025).

The SBCE was structured in five phases, designed to allow for the gradual adaptation of companies to meet regulatory requirements and to enable the future integration of the Brazilian system to international markets (Rocha Cerqueira, 2024). The adoption of the tiered model foreseen by the Law

Law No. 15,042/2024 requires companies to have an advance accounting plan, since each phase

The implementation of SBCE expands the obligations for measurement, recording, and disclosure.

related to emissions and carbon credits, the new regulation tends to reduce uncertainties.

legal aspects, but it also increases the complexity of environmental reporting requirements, reinforcing the

The need for robust accounting systems capable of keeping pace with the increasing obligations.

legal (Instituto Talanoa, 2024).

However, criticism arises regarding the initial exclusion of the agricultural sector, which is responsible for...

approximately 74% of national emissions, which may limit the scope and effectiveness of

system (CONJUR, 2025a). Furthermore, experts point to the need for regulations

supplementary provisions detailing issues such as quota allocation, compensation mechanisms, and...

Interoperability with voluntary markets (Talanoa Institute, 2024).

Another relevant point is the punitive aspect of the law, which provides for severe penalties.

including fines of up to 3% of annual revenue, suspension of activities and restrictions on

contracting with the public sector, to companies that fail to meet their obligations (CONJUR, 2025b).

These sanctions aim to ensure adherence to the system and demonstrate the State's commitment to it.

effective implementation of environmental goals.

Thus, the carbon market in Brazil is becoming established as a regulated environment and legally secure, requiring accounting to adapt its procedures and expand its

transparency in records related to carbon credit transactions (CONJUR, 2025b).

Before the law, researchers and market operators pointed out important gaps:

legal uncertainty (lack of uniform rules for recognition and registration), lack of definition

Tax issues in some areas and difficulties for interoperability between the voluntary market and

potential regulated systems. These weaknesses limited investments and generated heterogeneity.

in the accounting and disclosure of credits. Law 15.042 seeks to remedy some of these gaps by

establish registration criteria (central registration and methodological requirements) and mechanisms for



supervision (CONJUR, 2025b).

Among the instruments provided for by law, the following stand out: (i) CRVE — credits eligible for (i) registration in the SBCE, resulting from validated methodologies; (ii) CBE — quotas allocated to sources regulated; and (iii) provisions on interoperability between the voluntary and regulated markets, making the conversion of voluntary credits into CRVEs conditional on technical requirements. These Mechanisms directly impact company accounting: they require formal records in centralized system, proper custody, and chain of custody evidence for recognition and transactions (Azevedo, 2024).

Economically, the law tends to increase the liquidity and attractiveness of carbon credits. as an asset class, while imposing new compliance requirements and potential Compliance costs (audits, methodological validations, control systems). Initial studies. And analyses from consulting firms are already highlighting distributional effects: regulated sectors will have costs of compliance and potential need to acquire credits/quotas, while companies with The ability to generate CRVEs can translate that into additional revenue, which alters decisions. strategic and fiscal implications. For accounting, the immediate consequence is the demand for Standardization and registration procedures that ensure transparency and traceability of transactions (Azevedo, 2024).

2.3 The Suzano Company and Its Environmental Practices

Suzano SA is one of the world's largest producers of pulp and paper and is a case study. of interest for studies on corporate environmental practices, given their operational scale and the The company makes its sustainability initiatives visible. It publishes sustainability reports. and emissions inventories in accordance with the GHG Protocol, containing information on scopes 1, 2 and 3 and on mitigation and removal projects (e.g., biomass gasification, energy efficiency, projects (forestry). These reports provide important empirical material for evaluating adherence to company to meet SBCE requirements (Suzano, 2024).

In its public disclosures, Suzano details its policies, emissions reduction targets, and... compensation projects. The literature and technical reports highlight the need for that such information is aligned not only with best practices for voluntary reporting (GRI, TCFD, GHG Protocol), but also to the emerging institutional requirements of the SBCE, which They require validated methodologies, independent verifications, and records in a central system. Or In other words, established sustainability practices do not automatically eliminate the need for Technical and fiscal adjustments for regulatory compliance (Suzano, 2024)

Comparing the practices observed at Suzano with the recommendations found in In the literature, it is possible to identify successes (relative transparency in inventories and certifications) and Points to improve (methodical standardization as required by SBCE, evidence of chain of



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

Custody for receivables, and clarity regarding the accounting treatment adopted for receivables generated/held/sold.

(Suzano, 2024). The critical analysis to be developed in the study must confront the demonstrations and

Suzano's reports with the recognition and measurement criteria foreseen in the standards.

accounting standards (CPC 04/IAS 38; applicable NBC TG) and the legal requirements introduced by Law

15.042/2024.

Finally, studying Suzano as a case allows us to discuss practical implications: how the company measures potential revenue from the sale of CRVEs; what internal controls and corporate governance are in place?

She adopted this to ensure the integrity of the projects; as evidence of climate risks and opportunities.

in the explanatory notes and management reports; and whether their practices already fully or partially meet the requirements.

SBCE requirements.

3. MATERIALS AND METHODS

This research is classified, with regard to its approach to the problem, as qualitative; with regard to

The objectives are exploratory; and, regarding technical procedures, it is documentary and bibliographic.

The research has a qualitative approach, as it seeks an in-depth analysis and

The interpretative analysis of phenomena involves data reduction, categorization, interpretation, and...

report writing (Gil, 2002). This approach allows for the interpretation of information related to

This study examines the economic and environmental activities of the Suzano company, aiming to understand how these practices are...

How do they align with Law No. 15.042/2024, and what impacts do they generate in the corporate context?

According to Gil (2002), exploratory research has as its main objective the improvement of ideas or the discovery of intuitions, providing greater familiarity with the problem of

study. For this reason, from the point of view of objectives, the study is exploratory, given that Law No.

Law 15.042/2024 and the Brazilian Emissions Trading System (SBCE) are recent topics that require...

The investigation into the initial adjustments and impacts on the practices of the Suzano company.

Regarding the technical procedures, this is a bibliographic and documentary research.

bibliographic research, according to Severino (2014, p. 106), "is carried out based on available records, resulting from previous research in printed documents, such as books, articles, theses, etc." A

This research is characterized as bibliographical, since articles are used for the theoretical foundation.

scientific papers, dissertations, theses, and other academic materials that theoretically support the discussion.

and contextualize the observed practices.

Additionally, the research is characterized as documentary, since it uses materials that...

They have not yet undergone formal analytical treatment and may be reorganized according to the

study objectives (Gil, 2002). In this sense, the analysis focuses on annual reports, inventory

GHG emissions, sustainability reports and financial statements disclosed



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

publicly by Suzano, which are used to confront the company's practices with the framework.

regulatory.

The present research focuses on the analysis of environmental management practices and accounting for Suzano SA, one of the world's largest producers of pulp and paper.

Suzano is recognized for its commitment to sustainability and for adopting practices aimed at...

to the reduction of environmental impacts, operating in several Brazilian states (Suzano, 2024). A

The company was chosen as the object of study because it possessed characteristics relevant to the topic, being

a major emitter of greenhouse gases, possess projects for environmental mitigation and compensation, and present

data accessible to the public.

The focus of the analysis is justified by the enactment of Law No. 15.042/2024, which regulates the

In Brazil's carbon credit market, companies like Suzano are now taking on the responsibility.

to adapt their practices and communications to established legal parameters, such as the System

Brazilian Emissions Trading System (SBCE), the Brazilian Emissions Quota (CBE) and the generation of

Verified Emission Reduction or Removal Certificates (VERCs) (Brazil, 2024).

The data analysis was performed using the Content Analysis technique (Bardin, 2016).

based on a comparison between the guidelines established by legislation and the information

environmental and accounting data disclosed by the company Suzano in its sustainability reports,

inventories of emissions and financial statements. This technique made it possible to identify convergences.

and any gaps between the company's practices and the requirements defined by the Brazilian System.

Emissions Trading System (SBCE).

Law No. 15.042/2024 establishes criteria for measurement, reporting, verification, and compensation.

and the commercialization of Greenhouse Gas (GHG) emissions. Therefore, the content analysis...

The documents were organized into categories corresponding to the main provisions of the legislation.

structured as follows:

- Measurement, reporting and verification of emissions;
- Carbon offsets and carbon credit generation (CRVE and CBE);
- Traceability and transparency of environmental information;
- Accounting and tax aspects related to carbon credits.

The application of Content Analysis followed three stages, according to the methodology of

Reference (Bardin, 2016):

- Preliminary analysis: involving the selection of documents and exploratory reading;
- Exploration of the material: with the categorization of information according to the provisions of the law;
- Treatment and interpretation of results: seeking to identify the degree of conformity, the progress and the areas that require improvement in the company's environmental and accounting practices.



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

This procedure made it possible to assess the extent to which the information disclosed by Suzano aligns itself with the SBCE requirements and what aspects require adjustments for compliance. total of the legislation.

4. RESULTS AND DISCUSSION

The results presented below are based on the established requirements. by Law No. 15.042/2024, which establishes the Brazilian Emissions Trading System (SBCE) and defines mandatory parameters for measuring, verifying and reporting greenhouse gas emissions by companies. Based on this regulatory framework, reports and indicators were analyzed. provided by Suzano, with the aim of verifying the extent to which current practices of Companies are approaching the guidelines set out in the legislation. This comparison allows us to identify compliance levels, progress already achieved, and remaining gaps in the process of Alignment with the new legislation.

Law No. 15.042/2024 establishes, in its articles 31 and 32, that all companies subject to The Brazilian Emissions Trading System (SBCE) must measure and report its emissions. emissions and removals of greenhouse gases (GHG), using recognized methodologies and duly verified. Article 5, item VI, of the regulation also determines that the information The reported data must be compatible with international standards of measurement and verifiability. aiming at data comparison and possible interoperability with other systems. Furthermore, the Article 8 reinforces that the reporting of emissions must observe methodological guidelines defined by The governing body of SBCE, in accordance with international protocols and methodologies, such as GHG. Protocol and guidelines from the Intergovernmental Panel on Climate Change (IPCC).

With regard to Suzano, it is observed that the company already has a measurement structure and Report in brief, aligned with legal requirements, anticipating key steps of regulatory process. As described in your article, Balance (removals and emissions), removals and carbon stocks (Suzano, 2024), the calculation of the emissions balance is done by the difference between The total emissions from scopes 1, 2, and 3 and direct removals from land use. The company already uses the inventory method foreseen in the IPCC Guidelines for National Greenhouse Gas Inventories Greenhouse, considering the increase in biomass in its planted and conservation forest areas. This procedure allows you to calculate the volume of carbon absorbed or emitted according to variations. Annual land use studies, representing a robust and internationally recognized methodology. Table 1 below presents a breakdown of Suzano's total emissions classified by scope.



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

Table 1: Suzano's total emissions classified by scope

	2020	2021	2022	2023	2024
Scope 1 emissions (tCO ₂ e)	2,155,102.69	2,328,335.53	2,378,304.09	2,421,049.08	2,283,987.65
Scope 2 emissions (tCO ₂ e)	59,531.90	137,822.64	49,216.75	49,237.12	87,000.59
Scope 3 emissions (tCO ₂ e)	1,568,893.44	1,842,093.64	1,737,960.57	1,643,791.84	1,546,971.50
Total annual emissions (tCO ₂ e)	3,783,528.03	4,308,251.81	4,165,481.41	4,114,078.04	3,917,959.74

Source: Prepared by the authors based on: Suzano (2024).

The breakdown of emissions by scope demonstrates the level of detail adopted by Suzano in the measurement and reporting process, also aiming for advantages that may arise in the future. This structure also highlights the company's concern with maintaining transparency and standardization in accounting for their emissions, which facilitates the verification and monitoring of targets established over time.

Furthermore, Suzano adopts the GHG Protocol Land Sector and Removals Guidance, which complements the IPCC guidelines and provides parameters for accounting for and reporting emissions and removals associated with changes in land use (Suzano, 2024). Emission inventories and the company's removals undergo independent verification, carried out by Bureau Veritas, which ensures compliance with the verification and integrity principles set out in Article 44. Results are reported annually, publicly, through articles on their own website and published documents, such as the Sustainability Indicators Handbook, are documents that are fundamental for the transparency and traceability of the SBCE.

In its article 5, item IV, and article 44 of the Law, it determines that the Brazilian System of Emissions Trading (SBCE) should be implemented gradually and establish a basis for its operation, determining that officially recognized carbon credits (CRVE) must originate from accredited methodologies, measured, verified by an independent entity and duly registered in the Central Registry of the System. Article 34 stipulates that companies must perform periodic reconciliations between their net issuances and the total number of units. Brazilian Emissions Reports (CBE) and Certificates of Verified Emission Reductions or Removals (CRVE) detained, allowing greater control over what is issued and how it is cleared. (Brazil, 2024).

In the case of Suzano, it was observed that the company adopts some practices that anticipate part of these legal requirements. In institutional documents provided by the company, such as the Notebook of Indicators 2025 (Suzano, 2025) and the Independent Verification Statement made by the Bureau Veritas (Bureau Veritas, 2024) already demonstrates the existence of an accounting system for carbon that integrates both its industrial emissions and forest removals in its inventories



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

Annual audits conducted by independent verifiers. The methodologies used follow standards.

international certifications, such as the GHG Protocol and Verra certifications, meeting the technical requirements.

described in article 44, items I and II, of Law No. 15.042/2024. This structure reinforces credibility and...

traceability of the results presented by the company.

Regarding their compensation, Suzano's reports indicate that part of the credits generated through their forestry projects that are certified by Verra, such as Horizonte.

Carbon and Cerrado Carbon are both already used internally with the aim of neutralizing the Operational emissions, characterizing a form of insetting, while the surpluses are allocated

to the voluntary market, in offsetting operations (Suzano, 2025). This dynamic is in

In accordance with the provisions of Article 42 of the Law, which authorizes the trading of generated credits.

through programs that involve the reduction or removal of GHG emissions in the voluntary market, respecting the legal conditions. Although formal conversion to CRVEs and linking are not yet possible.

According to CBEs, Suzano's credits demonstrate technical compatibility with the standards presented up to this point.

now by SBCE. Table 2 below details Suzano's total net GHG removals in

period from 2020 to 2024.

Table 2: Carbon balance (removals and emissions)

	2020	2021	2022	2023	2024
Total emissions (tCO ₂ e)	3,783,528.03	4,308,251.81	4,165,481.41	4,114,078.04	3,917,959.74
Total net removals (tCO ₂ e)	-18,983,839.64	-13,204,509.36	-2,080,751.67	-9,238,526.38	-6,219,533.72
carbon credits traded (tCO ₂ e)	0.00	0.00	0.00	25,139.00	19,580.00
Total net emissions (tCO ₂ e)	-15,200,311.61	-8,896,257.55	2,084,729.74	5,099,309.34	-2,281,993.98
Total net for the period (2020-2024)	-29,393,142.74				

Source: Prepared by the authors based on: Suzano (2024).

Table 2 shows that, for the years 2020 to 2024, Suzano has a balance...

Negative net emissions, which indicates that its removals of greenhouse gases (GHG)

Industrial emissions surpassed those of the industry during this period. This highlights the role of forests.

planted areas and the company's conservation areas act as carbon sinks, contributing to

Neutralizing emissions and achieving low-carbon targets.

Furthermore, starting in 2023, the commercialization of credits began.

carbon in the voluntary market, reflecting progress in its offsetting practices and

preparing the company for integration into the Brazilian Emissions Trading System (SBCE),

as provided for in Law No. 15.042/2024, especially in articles 5 and 34, which deal with conciliation.



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

Periodicity and transparency of verified reductions (Brazil, 2024).

Regarding traceability and transparency, also highlighted in Article 5, sections V and VIII, These constitute essential pillars and determine the need for a reliable structure.

consistent and transparent for the measurement, reporting and verification of greenhouse gas emissions.

Greenhouse gas (GHG). These devices reinforce the importance of ensuring the integrity and comparability of data disclosed by companies, in order to avoid inconsistencies and increase

The credibility of the regulated carbon market.

In the case of Suzano, it is observed that the company adopts traceability mechanisms.

compliant with legal requirements. Sustainability reports, emissions inventories and

Greenhouse gas (GHG) verification statements are audited by independent entities, such as the Bureau.

Veritas, which ensures greater reliability of the reported information. In addition, the company uses

digital platforms, such as the Suzano Sustainability Center, where it provides indicators of

emissions, removals and trading of carbon credits, ensuring public access and

transparency regarding its environmental results.

Another relevant aspect is the methodological detail presented regarding the origin.

of credits and environmental compensation practices. Suzano reports on projects that generate

carbon credits, such as Horizonte Carbono and Cerrado Carbono, and describes the processes of

Auditing and validation methods are used, allowing for tracking the origin, use, and destination of these items.

credits. This traceability is fundamental to meeting the principle of integrity foreseen in the law and

to strengthen corporate environmental governance.

An analysis of Suzano's corporate reports, including the 2024 Indicators Booklet,

This reveals that the company presents consistent data regarding its participation in the carbon market.

Carbon capture projects and verified volumes of credits traded are highlighted.

or retirees, in addition to the socio-environmental impacts of these operations. However, it is observed that the

The company neither measures nor discloses the tax treatment of earnings from carbon credits.

their public documents (Suzano, 2024).

This gap becomes relevant because, from a regulatory standpoint, Brazilian legislation already...

provides clear guidelines. The creation of the Brazilian Greenhouse Gas Emissions Trading System

Greenhouse (SBCE), through Law No. 15.042/2024, structured a regulated carbon market in a model

cap-and-trade. Although detailed regulation is still being implemented, both

The Brazilian Federal Revenue Service and the Administrative Council of Tax Appeals (CARF) have already understood that

The sale of carbon credits constitutes taxable income, subject to corporate income tax (IRPJ).

CSLL (Brazil, 2024).

Given this, a mismatch is perceived between the legislation and the corporate disclosure of...

Suzano. While the law already mandates taxation, the company emphasizes only the environmental benefits.



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

social and strategic implications of the credits, without addressing the fiscal repercussions. This lack of information
It limits transparency and hinders a comprehensive assessment of the economic and financial impacts of
The company's carbon strategy.

Among the possible reasons for this omission, the following stand out:

- Regulatory uncertainty: despite the creation of the SBCE, there is still no specific tax regulation detailing the calculation method, classification, or possible tax benefits applicable to the credits carbon emissions. This can lead companies to adopt a conservative stance, avoiding positions public services until the legislation is clearer.
- Lack of accounting standardization: there is no consolidated Brazilian standard (CPC/CVM) that establishes uniform criteria for the recognition, measurement and disclosure of carbon credits and their Taxation. This lack of standardization generates a diversity of practices and hinders comparability between companies.
- Disclosure strategy: it is possible that Suzano, by emphasizing environmental and social aspects in its In your reports, seek to reinforce your image of leadership in sustainability, without leaving room for... discussions that could link carbon credits to a higher tax burden. This, however, This undermines the integrated view of environmental and economic impacts.
- Operational complexity: the nature of carbon credits (intangible assets, with different Forms of recording (sale, retirement, internal use) increase the difficulty of measuring effects. Tax information can be presented in a simple and straightforward way. This may justify the lack of detail in non-fiscal reports. financial.

Thus, it can be observed that Suzano, although a benchmark in socio-environmental transparency, does not publicly measure the tax impacts associated with its market share. carbon.

In both academic and practical terms, this finding highlights the need for greater... Integration between sustainability, accounting, and taxation. The trend is that, with consolidation... Regarding the SBCE and the evolution of regulations, companies like Suzano may be pressured to include in Their corporate reports not only detail the environmental and social impact of carbon credits, but also... also its economic and fiscal effects, in order to ensure greater transparency and comparability. for investors, regulators and society.

Suzano's participation in the carbon credit market represents an important The company has made progress within its socio-environmental strategy. This is reflected in its reports. consistent information on forest restoration and carbon capture projects, describing



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

the volumes of credits generated, traded and retired, as well as the allocation of resources to social and environmental projects. These elements demonstrate alignment with the guidelines. national and international measures for mitigating greenhouse gases and with the principles that They form the basis of the Brazilian Emissions Trading System (SBCE) (Suzano, 2024).

Among the points of convergence with the legislation, the following stand out: the adoption of methodologies. internationally recognized certifications, conducting independent audits, registration of credit volumes in official reports and the incorporation of governance practices, such as the use of data monitoring systems and the definition of an internal carbon price to guide strategic decisions. Furthermore, since 2023 the company has included in its total balance sheet... information regarding traded carbon credits, demonstrating an attempt to Integration between environmental indicators and corporate reports (Suzano, 2024).

Despite these advances, significant gaps remain. The most evident point is the lack of information regarding the accounting and tax treatment of revenues from credits carbon. Although Law No. 15.042/2024 established the basic structure of the SBCE and defined the applicable tax framework, subjecting it to the incidence of IRPJ and CSLL (Art. 17 and §5º), a Suzano does not explicitly state this in its corporate reports, nor does it cite specific policies regarding... recognition (Brazil, 2024).

This gap should be interpreted considering the current stage of SBCE implementation. which, according to article 50 of Law No. 15.042/2024, determines that it will be implemented in progressive phases. Phase 1, lasting 12 to 24 months, includes initial regulation, the creation of the managing body, and... The definition of the regulated sectors. In Phase 2, over 12 months, the system will be operationalized. Monitoring, Reporting and Verification (MRV) mechanisms, requiring companies to report their emissions. in a standardized way. Phase 3, with a 24-month timeframe, will require the submission of emissions reports. and monitoring plans, providing data for the first National Allocation Plan (NAP). Phase 4 will mark the beginning of the allocation of CBEs and the holding of the first auctions, while... Phase 5 will consolidate the full implementation of the market, with regular auctions and the formation of a... secondary market (Brazil, 2024). To date, SBCE has not yet set an official price. initial allocation of permissions and no finalized guidelines on asset accounting have been established. making it difficult to measure fiscal effects.

Another aspect that requires adaptation is the insufficient integration between reports of Sustainability and financial statements. Although the company provides detailed evidence of the Regarding the environmental and social impacts of its operations, there are no explanatory notes or accounting policies. clear on how credits are recorded as assets, when revenue is recognized, and from what. The way applicable taxes are provisioned. This lack of standardization increases the risk of Inconsistency makes it difficult to compare with other companies in the sector.



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

Given this scenario, some adjustments are necessary. First, it is recommended- if the disclosure of a formal accounting policy for carbon credits, addressing criteria of Recognition, measurement, and classification of revenues. Secondly, the inclusion of notes. specific explanations regarding the tax treatment adopted, detailing the incidence of taxes, provisions and potential contingencies. Furthermore, it would be important to adopt analyses of Sensitivity regarding the future impacts of SBCE, allowing stakeholders to understand the risks. and regulatory compliance costs. Finally, an explicit reconciliation between the indicators. Environmental and financial categories would increase the transparency and credibility of the information. disclosed.

In practical terms, the Suzano case offers relevant lessons for other companies. from the forest-based sector and for organizations that intend to enter the carbon market. Firstly, the importance of integrating ESG practices and accounting should be highlighted. corporate, allowing environmental initiatives to be translated into financial information. auditable and comparable. Furthermore, Suzano's experience reinforces the need for Development of specific accounting models for carbon credits, capable of capturing non-returns to the market. not only the economic value of the assets, but also their regulatory and fiscal risks.

FINAL CONSIDERATIONS

This research analyzed the degree of compliance of Suzano's environmental practices in with regard to the new regulatory framework that establishes the Brazilian Emissions Trading System (SBCE), based on the evaluation of corporate reports, environmental indicators and documents institutional information provided by the company itself. The results indicated that the company demonstrates high level of alignment with environmental requirements stipulated by legislation, especially regarding This refers to the measurement of emissions, the adoption of recognized methodologies, and the disclosure of information. related to the carbon market. However, it was identified that there are significant gaps in Integration between sustainability and accounting, especially regarding the lack of information. Regarding accounting measurements and tax impacts that are not disclosed.

At the end of the analysis, it was observed that the absence of accounting and tax information did not This necessarily stems from flaws in the company's structure, but also from the fact that SBCE still... It is in the initial implementation phase, without consolidated guidelines on measurement and recording. accounting and pricing of carbon credits. Thus, the lack of specific explanatory notes reflects It's more a matter of the current regulatory framework than a direct breach of legal requirements. However, The lack of tax information is a point of concern, considering the growing... The relevance of the topic for investors, regulatory bodies, and users of financial statements.

In light of the above, it can be concluded that Suzano demonstrates a high degree of compliance with the Law.



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

No. 15.042/2024 regarding the environmental, structural and procedural requirements of SBCE.

The main gaps identified are the absence of measurement of tax impacts and the lack of...

integration with the financial statements, which stems from the initial stage of

The implementation of the law and the absence of fully defined accounting and tax standards. Thus, the

The company demonstrates significant consistency with legal guidelines, even though it depends on future developments.

regulations to fully consolidate the accounting and tax aspects related to credits

carbon.

This study contributes by demonstrating that, although large companies already exhibit

Despite significant progress in environmental governance, a gap still exists between the ESG agenda and the ESG agenda.

and corporate accounting, especially the measurement and recognition of receivables of

Carbon as assets. By highlighting these gaps, the research reinforces the importance of integrating

Sustainability and accounting in the business environment, encouraging the development of practices.

more standardized and transparent, especially in sectors that operate in the market of

carbon.

Furthermore, this research highlights the relevance of the topic to the field of Accounting.

Environmental and for future academic research, given the SBCE implementation process.

This will require new models for measurement, recognition, and disclosure in the coming years.

of carbon credits. Thus, it is suggested that further studies explore the evolution of the regulations.

Specific accounting principles, analyze how companies will adapt their financial statements to

Regulatory progress will occur as the market becomes fully operational.

REFERENCES

ALENCAR, Monalisa Rocha. **Tax repercussions of the carbon credit market in Brazil. 2025.** 149 p. :
Dissertation (Master's in Law) - Faculty of Law, Federal University of Ceará, Postgraduate Program in
Law, Fortaleza, 2025. Available at: <http://repositorio.ufc.br/handle/riufc/79692>. Accessed on: September
15, 2025.

AZEVEDO. **Law No. 15,042, which establishes the Brazilian Emissions Trading System, has been enacted.** Azevedo
Sette Advogados, 2024. <https://www.azevedosette.com.br/noticias/pt/sancionada-a-lei-n-15042-que-institui-o-sistema-brasileiro-de-comercio-de-emissoes-de-gases-de-efeito-estufa-sbce/7690> Available in:
<https://www.azevedosette.com.br/noticias/pt/sancionada-a-lei-n-15042-que-institui-o-sistema-brasileiro-de-comercio-de-emissoes-de-gases-de-efeito-estufa-sbce/7690> Accessed on: June 6, 2025.

BARDIN, Laurence. **Content Analysis.** Lisbon: Edições 70, 2016.

Available at: [Content Analysis by Laurence Bardin.pdf](#). Accessed on: October 21, 2025.

BRAZIL. Law No. 15,042, of December 11, 2024. Establishes the Brazilian Greenhouse Gas Emissions Trading System (SBCE); and amends Laws No. 12,187, of December 29, 2009, No. 12,651, of May 25, 2012 (Forest Code), No. 6,385, of December 7, 1976 (Securities and Exchange Commission Law), and No. 6,015, of December 31, 1973. **Official Gazette of the Union, Brasília –**



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

DF, 2024. Available at: <https://www2.camara.leg.br/legin/fed/lei/2024/lei-15042-11-dezembro-2024-796690-publicacaooriginal-173745-pl.html> . Accessed on: August 20, 2025.

BUREAU VERITAS CERTIFICATION BRAZIL. **Declaration of Independent Verification of the Greenhouse Gas Emissions Inventory 2023-24.** Available at:

https://stsprdscentind.blob.core.windows.net/site/documents/Declara%C3%A7%C3%A3o%20de%20Verifica%C3%A7%C3%A3o%20do%20Invent%C3%A1rio%20de%20Emiss%C3%B5es%20de%20Gases%20de%20Efeito%20Estufa%202023.24_PT.pdf. Accessed on: September 20, 2025.

CA; ACCA. **Accounting for Carbon Credits under IFRS. 2023.** Available at: <https://www.caxacca.com/accounting-for-carbon-credits-under-ifrs/> Accessed on: September 18, 2025.

CIMADON, Pedro; ZYNICH, Samanta; ALBANO, Filipe. **Systematics for the preparation of greenhouse gas inventories in a research institute.** Product & Production, Porto Alegre, v. 26, n. 1, p. 1–20, 2025. Available at: <https://doi.org/10.22456/1983-8026.145102>.

Accessed on: September 15, 2025.

Brazilian Securities and Exchange Commission (CVM). **CVM Resolution No. 223, of June 13, 2024.** Approves OCPC 10 applied to publicly traded companies. Brasília: CVM, 2024.

Available at: <https://conteudo.cvm.gov.br/legislacao/resolucoes/anexos/200>. Accessed on: August 16, 2025.

CONJUR. **New regulation of the carbon market: perspectives and impacts of Law No.**

15.042/2024. Consultor Jurídico, January 28, 2025b. Available at: [https://www.conjur.com.br/2025-](https://www.conjur.com.br/2025-Jan-28/new-carbon-market-regulation-perspectives-and-impacts-of-law-15-042-24)

[Jan-28/new-carbon-market-regulation-perspectives-and-impacts-of-law-15-042-24](https://www.conjur.com.br/2025-Jan-28/new-carbon-market-regulation-perspectives-and-impacts-of-law-15-042-24) Accessed on: June 6, 2025.

CONJUR. **Taxation and the carbon market: a comparative overview and challenges for implementation in Brazil.** Consultor Jurídico, April 16, 2025a. Available at: <https://www.conjur.com.br/2025-abr-16/tributacao-e-mercado-de-carbono-um-panorama-comparado-e-desafios-para-a-implementacao-no-brasil/>

Accessed on: June 6, 2025.

Brazilian Federal Accounting Council (CFC). **CTG 10 – Carbon Credits, Emission Permits and Decarbonization Credits.** Brasília: CFC, 2024. Available at: <https://legislacao.contabil.business/1734360099>. Accessed on:

September 15, 2025.

DIAS, R. **Environmental management: social responsibility and sustainability.** 2nd ed., São Paulo: Atlas, 2011

FONSECA, Jozeney Mendes; PEREIRA, Bartolomeu Miranda. **Challenges and opportunities of environmental accounting and carbon credits in Brazil: a literature review.** Revista Sociedade Científica, vol.7, n. 1, p.5793-5818, 2024. Available at: <https://doi.org/10.61411/rsc202491017>.

Accessed on: September 15, 2025.

GIL, Antônio Carlos. **How to prepare research projects.** 4th ed. São Paulo: Atlas, 2002.

Available



Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

from: https://files.cercomp.ufg.br/weby/up/150/o/Anexo_C1_como_elaborar_projeto_de_pesquisa_-_antonio_carlos_gil.pdf. Accessed on: October 20, 2025.

INSTITUTO TALANOA. **A regulatory framework for the carbon market. 2024.** Available at: <https://politicaporinteiro.org/wp-content/uploads/2024/11/Analise-Aprovacao-PL-do-Mercado-de-Carbono-Instituto-Talanoa-20241121.pdf>. Accessed on: November 16, 2025.

LIMA, Maria Isabel; FAZIO, Giuliana. The regulatory framework in the Brazilian carbon market: fundamentals and perspectives of Law 15.042/2024. Nasser Advogados, 2025. Available at: <https://nasser.adv.br/publicacoes/o-marco-regulatorio-no-mercado-de-carbono-brasileiro/> Accessed on: November 16, 2025.

RIBEIRO, MS . **Environmental Accounting.** 5th ed., São Paulo: Saraiva, 2010.

ROCHA CERQUEIRA. **Carbon market: fiscal and operational implications of Law No. 15.042/24.** Rocha & Cerqueira Consultoria, 2024. Available at: <https://rochacerqueira.com.br/mercado-de-carbono-lei15042-24/> Accessed on: June 6, 2025.

SEVERINO, Antônio Joaquim. **Methodology of scientific work.** 23rd ed. São Paulo: Cortez, 2014. Available at: https://www.ufrb.edu.br/ccaab/images/AEPE/Divulga%C3%A7%C3%A3o/LIVROS/Metodologia_do_Trabalho_Cient%C3%ADfico_-_1%C2%AA_Edi%C3%A7%C3%A3o_-_Antonio_Joaquim_Severino_-_2014.pdf. Accessed on: October 20, 2025.

SOUSA, Fabio Henrique. **Regulation of the carbon credit market in Brazil: challenges and perspectives.** 2025. 102 p. Dissertation (Postgraduate Program in Energy and Environment/CCET) - Federal University of Maranhão, São Luís, 2025. Available at: <https://tedebc.ufma.br/jspui/handle/tede/6461>. Accessed on: September 15, 2025.

SUZANO SA **Balance of removals and emissions (Carbon removals and stocks).** 2024. Available at: <https://centraldesustentabilidade.suzano.com.br/indicadores/?ind=balanco-remocoes-e-emissoes-remocoes-e-estoques-de-carbono-6562072b37a13>. Accessed on: September 20, 2025.

SUZANO SA **Indicators Booklet Suzano 2025.** São Paulo: Suzano SA, 2025. Available at: <https://centraldesustentabilidade.suzano.com.br/documentos/>. Accessed on: September 15, 2025.

SUZANO SA **Carbon Market at Suzano.** 2024. Available at: https://centraldesustentabilidade.suzano.com.br/indicadores/?ind=mercado-de-carbono-na-suzano-6562072b8b61c&filter_tag=temas_materiais Accessed on: September 20, 2025.

SUZANO SA **Climate change at Suzano.** 2024. Available at: https://centraldeconsciente.suzano.com.br/indicadores/?ind=mudancas-climaticas-na-suzano-6562072b2f4e3&filter_tag=temas_materiais. Accessed on: September 16, 2025.

SUZANO SA **Sustainability Report 2024.** 2024. Available

Year V, v.2 2025 | Submission: 11/21/2025 | Accepted: 11/23/2025 | Publication: 11/25/2025

from: <https://stszprdscentind.blob.core.windows.net/site/documents/Relatorio-Sustentabilidade-Suzano-2024.pdf>. Accessed on: September 15, 2025.

TINOCO, JEP; KRAEMER, MEP. **Accounting and environmental management**. 3rd ed., São Paulo: Atlas, 2011.

UHLMMAN, VO; SOUZA, MM; RABELO, EC; FREY, IA **Accounting treatment of carbon credits: an analysis in light of the standards of the Accounting Pronouncements Committee**.

Proceedings of the Brazilian Cost Congress, 2021. Available at: <https://anaiscbc.abcustos.org.br/anais/article/view/627>. Accessed on: August 16, 2025.