

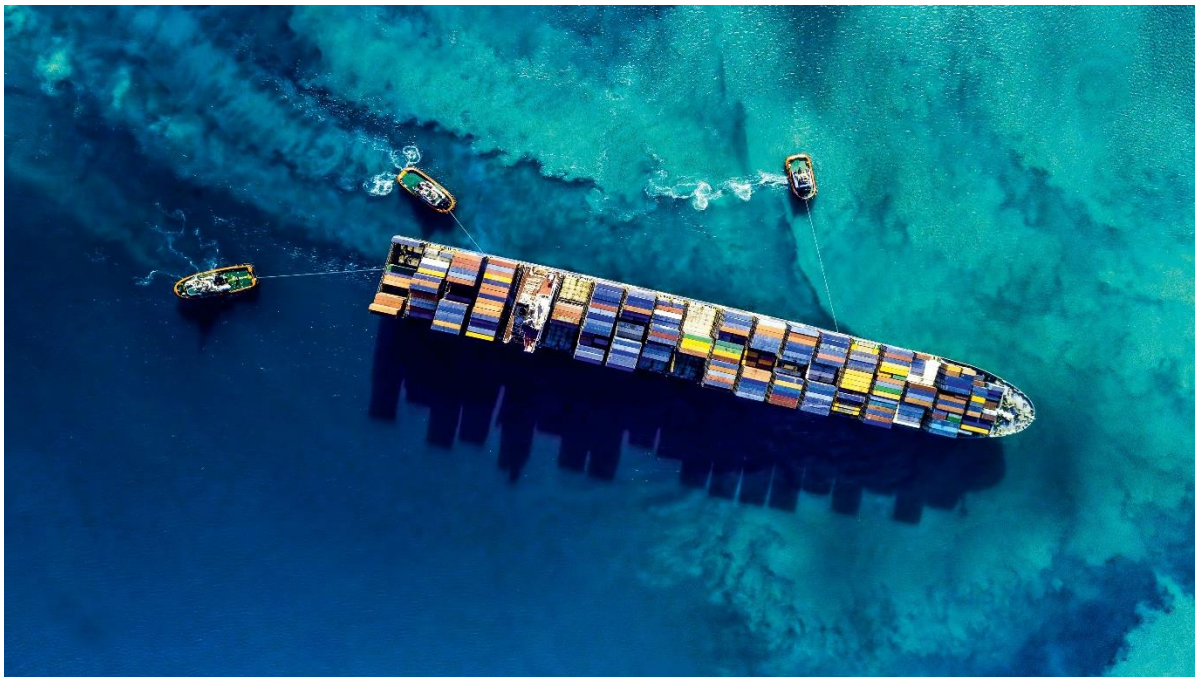


Breakthrough in Organics Landfill Diversion (BOLD) Carbon Credit (CH₄)

Methodology Validation and Second-Party Verification of a
Pilot Project

Methodology developed by Solidos Brasil Ltda for Carrot Foundation

Version number 1 – February 2025





Executive Summary

Bureau Veritas was hired by Solidos Brasil Ltda to perform the Validation of the methodology entitled Breakthrough in Organics Landfill Diversion (BOLD) Carbon Credit (CH₄), Version: 1.0 of January 2025, written by Embrapa researcher Caio de Teves Inácio, a specialist in composting and its relationship with climate change and soil health, for use by the Carrot Foundation. Additionally, the scope of the contracted work included verifying the application of the methodology in a pilot project.

The Validation process followed a comprehensive set of guidelines, methodological principles, actions, and procedures, based on multiple normative references rather than a single document. In addition, the methodology's ability to generate real, measurable, conservatively estimated, additional, permanent, independently auditable, exclusively numbered and transparently presented results was assessed.

The Validation process involved analyzing the proposed methods, exclusions, and cut-off criteria, along with a detailed review of documents, equations, workflows, and processes. An initial diagnosis was conducted, identifying pending issues and opportunities for improvement, as well as analyzing the corrective actions adopted. The on-site verification of the application of the methodology in a real case was also carried out.

Based on the Validation process conducted and the evidence obtained, we conclude that the methodology, when properly applied, generates real, measurable, conservatively estimated, additional, permanent, independently auditable, and transparent results, reinforced by a dMRV process. In addition, the Audit of the pilot project allowed us to conclude that the composting operation carried out by Tera Ambiental meets the requirements of the methodology for Recycler homologation (accreditation) and generates results that can be considered reasonable, based on the confidence interval adopted.

Regarding the unique and exclusive registration, the methodology establishes that the same mass of waste (MassID) can generate two distinct environmental assets, which are: (i) Tokenized Carbon Credits (TCCs), and (ii) Tokenized Recycling Credits (TRCs). To ensure traceability, absence of overlap and avoid double counting, the methodology has mechanisms for segregating records, includes specific rules for the use of each type of credit and quantification is based on independent methodologies. Since TRCs do not claim climate benefits or account for GHG reductions, no evidence of conflict with TCCs was found regarding the Core Carbon Principles (CCP) and double counting, within the scope of this Validation.



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1. Introduction

Anthropogenic greenhouse gas (GHG) emissions have intensified in recent years and, as a result, the planet's average temperature pattern has changed, in a phenomenon called global warming. Given this scenario, limiting the increase in the planet's temperature and combating climate change has become a high priority subject for humanity. To contribute to emission reduction commitments, a mechanism was established in which stakeholders can trade results from projects that reduce, sequester or avoid GHG emissions in a carbon credit market.

For carbon credits to be generated, a project needs to undergo a rigorous Validation and Verification process, carried out by a third-party agency and, once the legitimacy of the project's net benefits has been proven, the credits can be issued and traded. Carbon units can be traded in both regulated and voluntary markets. In both cases, the carbon credit represents one ton of CO₂ that was removed or avoided as a result of a project activity.

Regulated markets have specific rules that are administered by the United Nations Framework Convention on Climate Change (UNFCCC) and addressed to countries so that they can promote ways to make it possible to meet the established goals. The most common type of regulated carbon market is called cap and trade, where a maximum limit of GHG that sectors of the economy can emit (cap) is defined and, from this, it is possible to buy and sell (trade) emission permits (carbon assets).

The voluntary market, in turn, operates independently of national and international regulations, and the rules are defined by voluntary carbon certification standards. The voluntary market certifiers are responsible for providing methodologies to ensure that the credits generated are additional, real and measurable, estimated conservatively, audited independently and, finally, numbered exclusively and listed transparently. These aspects are essential to guarantee the quality and integrity of the carbon credits generated and traded.

In this context, Solidos Brasil Ltda. has developed an innovative methodology that combines technology and science to avoid GHG emissions and consequently mitigate climate change. This approach integrates a digital Measurement, Reporting and Verification (dMRV) process with the UNFCCC – AMS-III.F. (Avoidance of Methane Emissions Through Composting, version 12.0) methodology. Together, these tools allow quantifying avoided emissions in tons of CO₂ equivalent (tCO₂e) and recognizing them as Carbon Credits BOLD (Breakthrough in Organics Landfill Diversion) (CH₄).

These credits have the differential of distributing benefits to participants in the supply chain, encouraging the sorting and composting of organic waste, and ultimately, a transition from a linear economy to a circular economy. Furthermore, all transactions are carried out with full transparency and accessibility, through registration on a public blockchain.

Another strength of the methodology is the use of a digital Measurement, Reporting and



Verification (dMRV) process, which reduces audit and certification costs without compromising the quality of the results. To this end, processors and recyclers, data providers (Network Integrators) and NGO beneficiaries must be approved to participate in the Carrot Network. First, a Request For Information (RFI) approval form must be completed, in which Carrot assesses the compliance of the business and environmental activities. Once preliminary approval has been obtained by the Carrot team, processors and recyclers must undergo an independent third-party audit to complete the approval process.

Once approved by the audit, all data sent by approved Network Integrators (INT) is verified by Carrot's dMRV and credits are generated immediately after composting occurs, with records supported by official documents on waste transportation and processing. Unlike other Programs, Carrot does not require periodic recertification, but requires annual renewal of approval after a 12-month period, including a new third-party audit.

To reinforce reliability, the methodology simultaneously with Carrot adopts a "Proof of Authority" mechanism, which identifies and penalizes inappropriate practices, ensuring integrity to the processes.

Finally, with this approach, BOLD Carbon (CH₄) developed by Solidos Brasil Ltda for Carrot Foundation, offers a technological and innovative solution to issue tokenized carbon credits at scale, encouraging the growth of small composting facilities and the circular economy.

2. Scope

The objective of this scope was to carry out the Validation of the methodology entitled Breakthrough in Organics Landfill Diversion (BOLD) Carbon Credit (CH₄), Version: 1.0 of January 2025, written by Embrapa researcher Caio de Teves Inácio, a specialist in composting and its relationship with climate change and soil health, for the Carrot Foundation. Additionally, the scope of the contracted work included verifying the application of the methodology in a pilot project.

3. Validation and Verification Criteria and Principles

As this is a relevant and complex subject, this Validation process was based on a set of guidelines, methodological principles, actions and procedures contained in various normative references and not just a single piece of material. The following materials served as references for the Validation of Solidos Brasil LTDA's proposed methodology:

- ABNT NBR ISO 14064-2:2007 – Greenhouse gases Part 2: Specification and guidance for projects to quantify, monitor and report on greenhouse gas emission reductions or enhanced removals.
- ABNT NBR ISO 14064-3:2007 – Details and guides the validation and verification of greenhouse gas declarations. It guides the verification and validation processes for GHG inventories and projects.
- The GHG Protocol for Project Accounting (2003).
- Core Carbon Principles, Assessment Framework and Assessment Procedure (2024).



- IPCC - Intergovernmental Panel on Climate Change (2006). Guidelines for National Greenhouse Gas Inventories. General Guidance and Reporting.
- 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. In addition, the Validation stage analyzed the methodology's ability to generate real results, measurable, conservatively estimated, additional, permanent, independently auditable, uniquely numbered and transparently presented results, as detailed below:
- Actual results: All claims of methane emissions avoided by aerobic composting of organic waste must be proven to have genuinely occurred.
- Measurable: All claims of methane emissions avoided by composting must be quantifiable using recognized measurement tools (including adjustments for uncertainty and leakage) against a credible emissions baseline.
- Permanent: When project benefit claims are generated by projects or programs that present a risk of reversibility, adequate safeguards must be implemented to ensure that the risk of reversal is minimized and that, should any reversal occur, a mechanism is in place to ensure that reductions or removals are replaced or compensated for.
- Additional: The claims for methane emissions avoided by composting must be additional to what would have happened in a business-as-usual scenario if the project had not taken place.
- Independent Audited: All claims of methane emissions avoided by composting must be verified with a reasonable level of assurance by an accredited validation/verification body with the necessary expertise both in the country and in the sector in which the project is classified.
- Unique: Each Carbon Credit (CH₄) BOLD (Breakthrough in Organics Landfill Diversion) certified by the methodology must be unique and be associated only with a single GHG emissions reduction or removal activity. There must be no double counting, or double claiming of the environmental benefit, with respect to GHG emissions reductions or removals.
- Transparent: There should be sufficient and appropriate public disclosure of GHG-related information to enable users to make decisions with reasonable confidence.
- Conservative: Conservative assumptions, values and procedures should be used to ensure that GHG emission reductions or removals are not overestimated.

4. Solidos Brasil and Carrot Foundation team involved in the Validation and Verification process

Table 1. Team responsible for providing information during the Validation and Verification process.

Name	Position/Function	Contact
Ian McKee	Member of the Board of Solidos Brasil LTDA and President at Carrot Foundation	ian@carrot.eco



Marcelo Doria	Member of the Board of Solidos Brasil LTDA and Vice-President at Carrot Foundation	marcelo@carrot.eco
Rodrigo Moraes	Tech Lead, Product and People at Carrot	rodrigo.moraes@carrot.eco
Stella Câmara	Environmental Analyst and Biz Dev at Solidos	stella.camara@solidos.com
Laura Budzisz	Operations Lead at Carrot	laura.budzisz@carrot.eco
Christine Reimer	Intern at Carrot	christine.reimer@carrot.eco
Caio Teves	Methodology Author, Professor and Researcher at Emprapa (Brasil)	caio.teves@gmail.com

5. Responsibilities of Solidos Brasil and Bureau Veritas

The preparation of the methodology for quantifying methane emissions avoided by aerobic composting of organic waste is the sole responsibility of the technical team appointed by Solidos Brasil, as well as the provision of sufficient information and documentation for the verification of the pilot project. Bureau Veritas is responsible for providing an independent opinion to Stakeholders in accordance with the scope of work defined in this report.

6. Materiality

The concept of materiality recognizes that some matters, whether individually or in aggregate form, are important if the responsible party's GHG statement is to be presented fairly in accordance with internal requirements or those to which the GHG program subscribes.

Therefore, to ensure consistency, an acceptable materiality threshold of $\pm 5\%$ was assumed for the GHG emission reduction estimates generated by the Breakthrough in Organics Landfill Diversion (BOLD) Carbon Credit (CH₄) methodology developed by Solidos Brasil. Absolute confidence is not achievable due to the inherent limitations of control and the qualitative nature of some types of evidence.

7. Validation and Verification Approach

The validation process was based on the following activities:

- Validation of the proposed methods, assumptions, exclusions and cut-off criteria.
- Detailed study of documents, equations, flows and processes developed.
- Provision of an initial diagnosis including requests for clarification, notes on pending issues (mandatory items) and opportunities for improvement. The focus of this material was to provide guidance on what should be done, but without indicating how to do it.
- Analysis of actions taken in relation to pending issues.
- Documentation of the process in a final report.

The verification process in a pilot project, in turn, included the following activities:

- Planning activities and drawing up the audit plan.
- Validation of documents required for approval of BOLD Carbon Participants (CH₄).
- On-site verification of documents and operation records.
- Interviews with those responsible for Compliance Management and Operational



Management.

- Visit to the operational site and interviews with employees.
- Preparation of the Auditor's conclusions.
- Audit closing meeting.
- Completion of the audit report.

8. Limits and Exclusions

- Validation of other methodologies developed by Solidos Brasil Ltda for Carrot Foundation.
- Activities outside the agreed scope.
- Validation and Verification of the Program. The Validation process was only carried out at the methodology and pilot project level, and not at the Program level.
- Validation and Verification of the Carbon Credit Pricing Structure
- Tokenized Credits (TCCs) and Tokenized Recycling Credits (TRCs).
- Validation and Verification of Carrot's blockchain and tokens.
- Validation and Verification of Terms and Conditions of use of the platform.
- Validation and Verification of scripts and verification codes used in Carrot APIs, for validation of bulk supply chain data activities, bulk coding and chain of custody.
- Validation and Verification of the Tokenized Recycling Credits (TRCs) Methodology.
- Validation and Verification of Co-benefits.
- Validation and Verification of procedures or systems for purchase transactions, transfers and settlement (retirement) of credits.
- Validation and Verification of credit purchase contracts.
- Verification of applicable legal requirements at municipal, state and national levels and related to carbon market regulation.

9. Validation Results

9.1 Quantification Methodology

The quantification of avoided GHG emissions, in tons of CO₂ equivalent (tCO₂e), follows the guidelines of the UNFCCC methodology: AMS-III.F.: Avoidance of methane emissions through composting — Version 12.0.

To determine representative baseline scenarios, composting facilities must identify scenarios for each type of waste received within a 200 km radius of the project. The baseline reflects what the most likely scenario would be for the area in the absence of project activities (absence of the intervention). Possible baseline scenarios for composting activities include the following:

1. Sanitary landfills with methane burning (and/or biogas capture).
2. Sanitary landfills without methane gas burning.
3. Open air dumps.



This identification is carried out by the composting facility, by filling out a form that must be updated each year during the audit (approval) process.

If more than one baseline treatment is available and it is reasonable that any of them could be used, the most conservative option should be selected. For example, between a sanitary landfill and a landfill with burning, the sanitary landfill with burning should be selected.

For projects whose baseline involves landfills with methane flaring and/or biogas capture, it is mandatory to provide documentation proving the amount of methane collected and flared/captured. In addition, the condition of the landfill, including control of emissions from flare burning or for power generation, must be verified annually, with information provided by the recycler and audited during the approval process.

Furthermore, the developed methodology includes an approach to quantify leaks, which are quantified in accordance with the specifications of AMS-III.F. and CDM TOOL4.

Uncertainties are also covered by the methodology, which maps qualitative uncertainties associated with the market, technology and adoption by participants. For baseline emissions, emissions from the project activity (composting) and leaks, the methodology presents a proposal for quantifying uncertainties.

Finally, the avoided emissions (in tonnes of CO₂ equivalent) by the composting project are calculated as the difference between the baseline emissions and the emissions from the composting project, including any leakages that occurred.

In addition, it should be noted that the methodology proposes that processors, recyclers, INTs and NGO beneficiaries be approved to participate in the Carrot Network, through comprehensive audits carried out by independent third parties in person. These audits include site visits to verify compliance with legal and scientific standards, composting processes, as well as the operational capacity of the facility.

Tokenized Carbon Credits (TCC) are issued immediately after the composting process is completed (ex post), provided that compliance with the methodology is confirmed. This is ensured by partner approval audits and the digital Measurement, Reporting and Verification (dMRV) process, carried out by the Carrot platform.

Independent audits conducted for accreditation supported by data collection and analysis from Carrot's dMRV platform, ensure traceability, transparency, and accuracy in quantifying emissions reductions. In addition, the use of the scientifically recognized AMS-III.F. methodology, which includes the quantification of uncertainties and leaks in relation to a reliable baseline, ensures that claims for emissions avoided by composting are based on a complete, scientific and conservative quantification method, giving reliability to the results generated.

9.2 Permanence

Ensuring the permanence of GHG emissions mitigation activities is essential to be aligned with the long-term temperature objectives established by the Paris Agreement.

According to the developers of the BOLD Carbon (CH₄) methodology, there is no risk of non-permanence in composting projects, as the project activity works to eliminate the root cause



of the problem, avoiding the generation of methane. Therefore, there is no capture and storage of carbon, which would pose a risk of eventual reversals. This dynamic tends to be different from projects based on carbon sequestration, where, for example, carbon stored in forests or in soil reservoirs can be released at any time due to changes in land use, forest fires, degradation or unforeseen leakage. Thus, composting offers a permanent solution by diverting organic waste before the anaerobic decomposition responsible for methane emissions occurs.

Therefore, as methane prevention is instantaneous and irreversible, there is no risk of reversal, eliminating the need for additional risk mitigation measures, such as credit reserves or insurance pools. However, there are still risks related to the continued issuance of credits, such as:

- Potential damage or destruction of facilities: Fires or extreme weather events can disrupt composting operations.
- Financial Constraint: Composting may remain more expensive than landfilling, even with the financial incentive generated by carbon credits, and economic difficulties may force operators to reduce or stop their operations, leading to waste being landfilled.

To mitigate these risks, in addition to having the entire process verified digitally, Carrot requires all recyclers to inform the organization of any significant operational downtime and to commit annually to complying with accreditation guidelines. This process includes third-party audits, compliance checks and verification of composting activities to ensure continued eligibility under the BOLD Carbon (CH₄) methodology.

9.3 Additionality

In order to issue quality carbon credits, a project needs to prove that the net environmental benefit resulting from its activities is additional to what would occur in the absence of the project. Thus, additionality means that the climate impact of a carbon project exceeds what would be achieved in a “business-as-usual” scenario.

This concept is fundamental in carbon projects, and methodologies must present clear approaches to ensure that project activities are truly additional.

The BOLD Carbon (CH₄) methodology establishes rigorous criteria to verify whether greenhouse gas (GHG) reductions resulting from composting are additional, as detailed in Section 6.3.1. To determine additionality, projects must meet one of two structured tests: the Common Practice Test or the Implementation Barrier Test.

1. Common Practice Test: A project meets this test if biological treatment of organic waste, such as composting, is not widely implemented in the region where it operates, thus ensuring adequate mitigation of methane emissions from landfills. According to the methodology, composting is only considered common practice when the rate of diversion of organic waste from landfill to biological treatment, such as composting, in the region exceeds 90% by weight. As composting still represents a tiny fraction of waste treatment worldwide, most projects qualify under this criterion.



2. Implementation Barrier Test: Projects that do not automatically meet the Common Practice Test must demonstrate the existence of barriers that would prevent their implementation without the incentive of carbon credits. These barriers are analyzed in three dimensions:

- Financial: Biological treatment of organic waste, such as composting, generally has higher costs compared to alternatives such as landfilling and incineration. Projects that demonstrate that carbon credits are essential to their economic viability are considered additional.
- Technological: Many regions face technological barriers due to a lack of adequate infrastructure, appropriate equipment, or skilled labor to operate composting facilities. If the financing from the credits makes it possible to overcome these barriers, the project is considered additional.

Institutional: Composting may face regulatory, cultural or social obstacles that hinder its large-scale adoption. The existence of incentives, such as carbon credits, can help mitigate these challenges.

The methodology applies these additionality tests in all cases, demonstrating a structured and reasoned approach to assessing the additionality of a project and the issuance of carbon credits.

9.4 Independent Audits

Robust, independent third-party audits are essential to ensure the accuracy, consistency, transparency and integrity of carbon credits on the voluntary market.

In this process, it is essential that the auditors undergo an accreditation process by Carrot and receive clear guidelines so that they can apply a rigorous independent auditing process. It is also important that rules are established to guarantee the absence of conflicts of interest and the impartiality of the auditors. Finally, it is necessary to monitor the performance of the auditors and establish rules so that they remain accredited under the BOLD (Breakthrough in Organics Landfill Diversion) Carbon Certification Program.

In this sense, the methodology developed by Solidos establishes that INTs are subjected to an independent third-party audit, in order to assess the dynamics of the operation, composting capacity, as well as whether the units are operating in accordance with legal and compliance standards established by the methodology.

This step is called accreditation and occurs before the data begins its journey into Carrot's dMRV system. The methodology contains clear information on how audits should be performed and what should be checked. In addition, the Auditor's guide (under construction; expected completion date January 31, 2025) provides specifications for auditors to be accredited and qualified to perform audits on Carrot's behalf.

The methodology establishes that audits are carried out by an auditor specializing in Sustainability and the Environment with proven experience in measuring, reporting and verifying



greenhouse gas (GHG) emissions, emission reductions and removals. It is also essential that the auditor is familiar with carbon credit certification standards in voluntary and regulated markets. It is preferable that the auditor has proven experience in composting and is in the country where the participant carries out his/her work.

Finally, an auditor's guide and a document (checklist) with required requirements, a description of the technical objectives for each requirement, as well as the recommended levels of requirement for each item are made available, aiming to ensure that all audits meet a minimum quality standard required by the methodology.

9.5 Unique and exclusive registration

According to Carrot's methodology, the same mass of recycled waste (MassID) can result in the emission of two environmental assets, each generated by a specific methodology and with its own purpose: (i) Tokenized Carbon Credits (TCCs), which measure methane emissions avoided in landfills and dumps through composting, and are used to offset GHG emissions; and (ii) Tokenized Recycling Credits (TRCs), which represent the proper disposal and recycling of organic waste, including environmental contributions (minus the carbon avoided in landfills through composting) and co-benefits associated with the sorting, transportation and processing of these materials within the logic of the Circular Economy. A purchased TRC cannot be used to offset GHG emissions unless it is complemented by a TCC, and the opposite also applies.

Although it is not prohibitive for the same credit to contribute to multiple objectives, the simultaneous issuance of carbon credits and recycling credits is not a common market practice, due to the risks of double counting, the need for different methodologies and environmental objectives, the lack of standardized structures and mechanisms that allow the issuance of both credits simultaneously, the use of a generalized cautious approach by large certifiers to maintain the integrity and credibility of the Voluntary Market, economic factors and market demand.

Therefore, to legitimize the coexistence of both credits, it is essential to ensure traceability and avoid double counting, overlapping use of benefits or monetization. To this end, it is necessary to implement a robust traceability system and clear methodologies that allow the proportional attribution of benefits generated by both emissions mitigation and adequate waste management. In addition, it is necessary to ensure that a single environmental benefit (e.g., diverting waste from landfills) is not monetized twice.

In this sense, the methodology has mechanisms to segregate records, specific rules for the use of each type of credit and quantification based on independent methodologies. These mechanisms aim to ensure that the benefits generated by proper waste management and emissions mitigation are appropriately attributed and accounted for in a transparent manner.

With regard to the Core Carbon Principles (CCP), established by the Integrity Council for the Voluntary Carbon Market (ICVCM), the importance of avoiding double issuance, double use and double claiming is emphasized.

In this context, although TCCs and TRCs are issued for the same activity, therefore, diverting waste from landfills, the methodology proposes that they should not be used in an



overlapping manner to offset emissions. Thus, as TRCs do not claim climate benefits or account for GHG reductions, they do not conflict with TCCs from the perspective of CCP double counting.

However, we emphasize that only the BOLD Carbon (CH₄) methodology is included in this Validation scope, requiring additional studies on the methodology for quantifying TRCs and the impact of Co-benefits, the dynamics of credit management by the Program and the pricing structure, proving that the environmental benefit is not being monetized twice. These measures are necessary to absolutely validate issues related to the absence of overlapping benefits and double counting.

9.6 Transparency

Transparency is the watchword in the voluntary carbon market. To meet the principles of transparency and ensure that high-integrity credits are generated, it is essential that there is adequate and comprehensive public disclosure of information related to the methods used to quantify the net benefits of projects, including how additionality is assessed and the environmental and social impacts associated with mitigation activities are measured. This information should be presented in a clear, accessible and detailed manner, to allow users to evaluate the data with confidence and make informed decisions.

A high level of transparency is vital and, in accordance with the BOLD Carbon (CH₄) methodology, all data inputs and outputs associated with the issuance of a credit will be disclosed in a public and immutable database that can be easily accessed and verified by all Participants in the ecosystem. In addition, the issuance of credits provides self-verifiable data related to supply chain activities and reward distribution to each Participant.

Additionally, the BOLD Carbon (CH₄) methodology proposes the integration of the dMRV system with blockchain technology, which further contributes to increasing transparency and trust in the legitimacy of carbon credits generated, purchased, transferred and retired, in addition to allowing trust to be established between Participants in a way that was not possible before the advent of blockchains.

10. Verification Results

The objective of this stage of the validation work was to verify the implementation of the methodology in a pilot project. The first to apply the BOLD Carbon (CH₄) methodology was the project developed by Tera Ambiental Ltda, located in Jundiaí, São Paulo.

Tera Ambiental is a leading company in receiving organic waste for treatment through the thermophilic composting process. The company receives waste such as sludge from biological sewage treatment plants (mainly from CSJ), agro-industrial materials (diatomaceous earth), expired food and food waste from supermarkets and restaurants.

The organization has a covered area of 30,000 m² and is licensed by CETESB and MAPA, complying with legislation and ensuring safety and quality in operations. In addition, the company has ISO 14001 and IBD certifications, ensuring quality and safety. The monthly treatment capacity is 7,500 tons, and it currently operates with an average of 6,000 tons.



Waste management is monitored through the SISREM system, which tracks disposal, manages environmental documents (CADRI), and records financial information. All waste received is assessed in accordance with previously established procedural and quality requirements and is discarded or returned in the event of inconsistencies.

The composting process begins with the formation of windrows using organic sludge and wood chips (ratio 1:1 to 1:1.5), evaluated by agricultural engineers. The windrows are turned every two or three days for 90 days, promoting aeration and reaching temperatures of up to 70°C, eliminating pathogens. Laboratory analyses guarantee the quality of the waste and fertilizers produced, following compostability and safety parameters.

The company adopts strict occupational health and safety standards. Personal Protective Equipment (PPE) is distributed according to functions, and regular training ensures employee qualifications. Environmental aspects and impacts are continually mapped, with preventive actions implemented.

In addition, the company holds educational events with carriers and maintains an ombudsman channel to receive suggestions and complaints, which are evaluated by an internal committee to ensure continuous improvements. Internal and external audits confirm the compliance of operations, reinforcing the commitment to sustainability and operational excellence.

Auditor Flávio Guiera, a Forestry Engineer with extensive experience in carbon credit projects and certification standards for the Voluntary Carbon Market, was responsible for leading the Verification stage of the pilot project. The Verification was carried out in a documentary and operational audit format, aiming to achieve a reasonable level of assurance, in accordance with the ISO 14064-3:2019 standard.

The audit period took place between November 07 and 20, 2024, with the on-site audit at Tera Ambiental's facilities, carried out specifically on November 14, 2024.

Verification Opinion:

- It was verified that Tera Ambiental's geographic operating limit is within the expected range, with the 200 km limit not being exceeded.
- The compliance of the mechanisms adopted by Tera for controlling access to the facilities and the signage of the area was adequately verified.
- It was also confirmed that the receipt of waste segregated at source is being carried out appropriately.
- The composting equipment was found to be properly calibrated and in suitable condition for its intended functions, ensuring reliable results.
- It was found that the organization adopts effective measures to control odors, liquid generation, vectors and inconvenience to the community.
- In the composting process, the risks of environmental damage are being mitigated as much as possible.
- The company maintains appropriate records of materials added to composting, aiming to increase the efficiency of the process.



- The adoption of necessary measures was verified to ensure that the decomposition process occurs properly and that the thermophilic period is reached.
- It was confirmed that Tera Ambiental adopts efficient composting practices, optimizing the decomposition of organic waste and minimizing adverse environmental impacts as much as possible, resulting in high-quality compost.
- It was verified that the minimum thermophilic period required for the reduction of pathogenic agents in the composting process is adequately met.
- There is efficient control of odors, leaking liquids, insects and other vectors in Tera Ambiental's facilities.
- The compost sieving process is carried out correctly, ensuring the quality and uniformity of the product.
- It was verified that the compound produced complies with the relevant legislation.
- The Final Waste Disposal Certificates (CDF) adequately reflect the characteristics, quantities and technologies applied in the treatment and/or final disposal of solid waste.
- It has been confirmed that Tera Ambiental complies with all applicable legal requirements.
- The audit proved the additionality of the project.
- The stated baseline scenarios were considered representative and conservatively determined.
- It was verified that Tera Ambiental adopts high standard data quality management, which guarantees reliability in the declared operations.
- The adequacy of Tera Ambiental's operating license, which meets the annual reduction limit of 60 kt CO₂ equivalent, was confirmed.
- The legal ownership of carbon credits has been clearly defined in accordance with the BOLD Carbon (CH₄) methodology.
- Finally, it was verified that Tera Ambiental has adequate human and financial resources to ensure the viability of generating carbon credits.

In this way, in conclusion, Tera Ambiental meets the Recycler's approval requirements and is recommended for approval by Carrot.

11. Conclusion and Recommendations

Based on the Validation process performed, and the evidence obtained, we conclude that the Breakthrough in Organics Landfill Diversion (BOLD) Carbon Credit (CH₄) methodology, Version: 1.0 of January 2025, developed by Solidos Brasil Ltda, if applied correctly, generates real results, measurable, conservatively estimated, additional, permanent, independently auditable and transparently presented results, strengthened by a dMRV process. In addition, the Verification of the pilot project allowed us to conclude that the composting operation carried out by Tera Ambiental meets the requirements of the methodology for Recycler approval and



generates results that can be considered reasonable, based on the confidence interval adopted.

Regarding the unique and exclusive registration, the methodology establishes that the same mass of waste (MassID) can generate two distinct environmental assets, which are: (i) Tokenized Carbon Credits (TCCs), which measure methane emissions avoided in landfills and dumps through composting, used to offset greenhouse gas (GHG) emissions, and (ii) Tokenized Recycling Credits (TRCs), generated by an independent methodology focused on the traceability of organic waste recycling, considering the environmental contributions and co-benefits associated with the sorting, transportation and biological treatment of these materials.

To ensure traceability, absence of overlap and avoid double counting, the methodology proposes the segregation of records, includes rules for the use of each type of credit and quantification is based on independent methodologies. Furthermore, since TRCs do not claim climate benefits or account for GHG reductions, no evidence of conflict between TCCs and TRCs was found, from the perspective of double counting of the Core Carbon Principles (CCP), restricted to the limits of the scope of this Validation.

However, it is recommended that credit buyers understand the differences between the two methodologies, ensuring the appropriate use of each asset as indicated by the Program. It is also recommended that additional studies be carried out on the methodology for quantifying TRCs and the impact of Co-benefits, the dynamics of credit management by the Program and the pricing structure. These measures are necessary to absolutely validate issues related to the absence of overlapping benefits and double counting, since these items were not included in this Validation scope.



ANNEXES

Annex 1. Mini-CV of the Bureau Veritas Sustainability team involved in the project.

Camila Chabar has over 15 years of experience in sustainability management and climate planning. She holds a degree in international relations from PUC-SP and an extension in corporate sustainability from FGV-SP. She has an MBA in economics from UFSCar and a master's degree in sustainable development from the University of Sussex – UK.

She has experience in large multinationals and international organizations, took over as secretary of the environment and sustainable development for a city in the interior of São Paulo and, more recently, has been working in consultancies for 8 years, supporting companies and governments to align their activities with ESG, decarbonization and climate resilience.

Rodrigo Oliveira – Technical coordinator specializing in carbon

A biologist with a Master's degree in Environmental and Sanitary Engineering and an MBA in Sustainability, he has worked for over 15 years in the area of QHSE consulting and management in a company in the oil and gas segment. He has extensive experience as a Leader in Project Management, ESG and Sustainability, working in all Strategic Planning in the area, from the preparation of the Materiality Matrix, Structuring of the Code of Ethics and Conduct, Compliance to the preparation of the Sustainability Report (GRI), Greenhouse Gas Inventory (GHG) and Indicators for the area.

Preparation of Social and Environmental Responsibility Policy and effective participation in the contribution and creation of Decarbonization Projects, Preparation of Life Cycle Analysis Studies (LCA), Circular Economy, Energy Transition and Climate Change. Certified as Lead Auditor in NBR ISO 14001:2015, and as Internal Auditor in OHSAS 18001 and NBR ISO 9001 by Bureau Veritas.

Camila Viana Vieira Farhate – Consultant and Lead Validation Auditor

Agronomist graduated from the State University of Maringá - UEM (2012), with a master's degree (2015) and a doctorate (2019) in Agricultural Engineering from the State University of Campinas - UNICAMP. Post-doctorate from the Faculty of Agricultural and Veterinary Sciences of the São Paulo State University - UNESP (2022). She is trained as a Lead Consultant for ISO 14001/IRCA. She has experience in both Academic Research and Research and Development and Innovation Management (R,D&I), auditing and consulting. She has worked on the preparation and review of greenhouse gas (GHG) inventories in several organizations, in addition to preparing GHG emissions mitigation and compensation plans. She has also participated in several projects that required technical knowledge in standards related to life cycle assessment (NBR ISO 14040, 14044, 14067), and international certification standards for the voluntary carbon market, such as the Voluntary Carbon Standard (VCS), Climate, Community & Biodiversity (CCB), Gold Standard (GS), Social Carbon (SC), among others. She is currently an independent consultant and auditor



in the sustainability services and solutions department at Bureau Veritas.

Flávio Guiera – Consultant and Lead Auditor for Verification

A forestry engineer who graduated from the Federal University of Paraná in 1996. He has extensive experience in the forestry segment of plantations and natural forests, with an emphasis on risk analysis of the primary production chain and processing units. He is an IRCA Lead Auditor for ISO 14001, with 18 years of experience in FSC/Cerflor audits for Forest Management and Chain of Custody. He works as an instructor to train professionals in audits and interpretation/implementation of ISO 14001, 9001, 19011, 19600 and 31000 certification standards, FSC/PEFC Cerflor Certification, LIFE Certification and schemes for verifying the legality of forestry activities (Due Diligences & Compliance). He develops diagnoses of socio-environmental impacts and corporate responsibility programs for companies and consumers of forestry products. He has experience with carbon sequestration projects (CDM), with skills in carbon footprint calculations in accordance with GHG Protocol standards and acts as a lead auditor for the carbon sequestration project certification schemes, Gold Standard for Global Goals and Plan Vivo.



Annex 2. Execution schedule and activities completed in the period between November 06 to 20, 2024.

Legenda

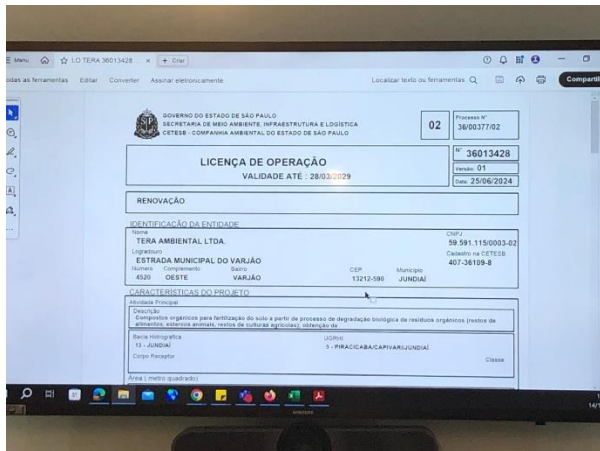
	Atividades Previstas
	Em andamento
	Em atraso
	Concluídas

Atividades Remotas	06/11/2024	12/11/2024	13/11/2024	20/11/2024
Apresentação do Plano de auditoria				
Validação dos documentos exigidos para homologação de Participantes BOLD Carbon Credits				
Feedback sobre a validação da documentação				
Apresentação do Relatório de Auditoria				

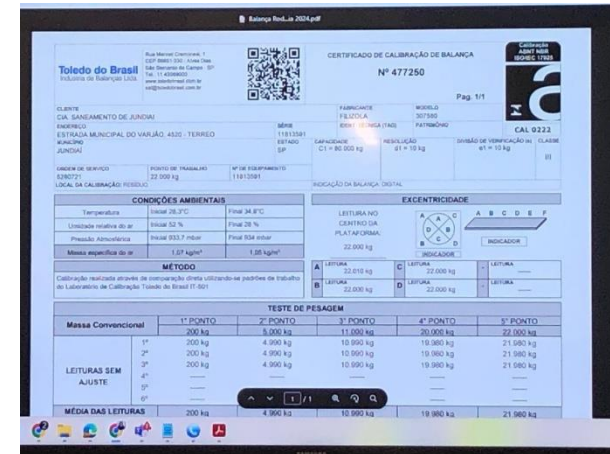
Atividades Presenciais	14 de Novembro de 2024					
	08:30 - 8:45	8:45- 10:00	10:00 - 10:30	10:30- 11:30	11:30- 11:45	11:45- 12:00
Reunião de abertura e apresentação das atividades						
Verificação dos documentos e registros da operação						
Entrevistas com responsáveis pela Gestão de Compliance e Gestão Operacional						
Visita à planta operacional e entrevistas com colaboradores						
Elaboração das conclusões do Auditor						
Reunião de encerramento da auditoria						



Annex 3. Documentary and operational audit carried out on November 14, 2024, at Tera Ambiental Ltda.



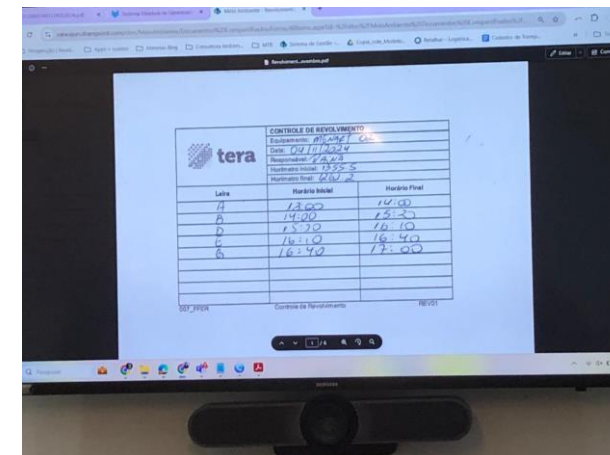
Company's Local Operating License (Environmental and Regulatory Compliance)



Evidence of Equipment Calibration



Composting Shed View



Demonstration of composting process control



Annex 4. Recommendations for the next improvement cycles.

- The development of the methodology is a journey of continuous improvement, and the Validation process was conducted in accordance with the prevailing science and experience available at the time of preparation of this document. However, given that the voluntary carbon market is dynamic, and that the science is constantly evolving, we recommend that the methodology and processes adopted by the Carrot Foundation be reviewed regularly to ensure that the credits generated are of high quality and adhere to the most current versions of best practices. In this sense, the developers of the methodology have already committed to this need and plan to initially conduct annual reviews and, after a period of stabilization, reviews will occur every two to three years.

- Since this validation does not have an expiration date, it is necessary to carry out strict control of the methodology versions, as well as to retain information on modifications made, requirements added and/or deleted in each improvement cycle.

The coverage of this validation process is specific to the Breakthrough in Organics Landfill Diversion (BOLD) Carbon Credit (CH₄) methodology, Version: 1.0, from January 2025. If there are any changes to the current version of the document, updates to the normative references used during the validation or normative references used in the preparation of the methodology (e.g.: UNFCCC: AMS-III.F.), the file must be submitted again for external Validation.

- We also recommend that robust procedures be established for accrediting auditors, and it is essential that the methodology and procedures for accreditation are publicly available.
- Finally, we recommend that Carrot provide maximum transparency of information regarding the registered projects, publicly disclosing on its website the project design document and approval reports, in order to generate trust in the results generated, as well as to allow scrutiny of the proposed project activities. To comply with this recommendation, caution must be taken to account for the General Data Protection Law (LGPD) and to not disclose sensitive business or personal information, such as Tax and personal IDs: CNPJ, CPF, etc.