# Methodology for Carbon Removal in Private Conservation Areas

Document Prepared by Earthood Services Private Limited

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| **Methodology Title** | SCM0003: Methodology for Carbon Removal in Private Conservation Areas |
| **Version** | 1.3 |
| **Methodology Category** | Methodology |
| **Sectoral Scope(s)** | Scope 14 – Afforestation, Reforestation and Revegetation (ARR) |
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## Summary

The SCM0003: Methodology for Carbon Removal in Private Conservation Areas (V1.2) determinates the annual removal of $CO_2$ from the atmosphere by areas of native vegetation located on private properties.

Earthood Services Private Limited (hereinafter ESPL), as part of the list of available validation and verification bodies (VVB), has been contracted to perform the validation process of the methodology according to the standard requirements with a confidence level of 95% and a materiality of 5%.

The purpose of this audit is to provide an independent review and determine the methodology compliance with the Social Carbon standard. The Methodology fall into Sectorial Scope 14 of the VCS: Agriculture, Forestry, and Other Land Uses (AFOLU), in the afforestation, reforestation, and revegetation category (ARR).

The eligible area of the project corresponds to "managed primary formations" and "managed secondary formations" of native vegetation. The projects´ start date and the projects´ crediting periods shall be established according to the most recent version of the SOCIALCARBON Standard.

In the course of validation a number of findings were raised by the validation team: 05 requests for clarifications (CL) and 04 requests for corrective action (CAR), which were correctly addressed by the proponent of this methodology.

Methodology for Carbon Removal in Private Conservation Areas (V1.3), as described in the main Document, met all relevant requirements of the SOCIALCARBON standard.

# Contents

# 1. Introduction

## 1.1 Objective

The validation is an independent third-party opinion to evaluate the methodology according to ISO 14.064-3:2019 in regard to the principles of:

1) Completeness: Inclusion of all relevant GHG emission sources, including all relevant information that supports the criteria and procedures.

2) Consistency: Allow meaningful comparisons in GHG-related information.

3) Accuracy and Conservatism: Reduction of bias and uncertainties as far as possible/cost-effective, or use of conservative assumptions, values, and procedures to ensure net emission reductions are not overestimated.

Likewise, validation has the purpose of confirming that the methodology fulfills the established requirements and identified criteria of the Social Carbon Standard, to provide assurance to stakeholders about the quality and consistency of the methodology.

## 1.2 Summary Description of the Methodology

The Carbon Removal SCM0003: Methodology in Private Conservation Areas (V1.3) determines the annual removal of $CO_2$ from the atmosphere by areas of native vegetation located on private properties, when the owners of the areas demonstrate case-by-case additionality conditions and strict compliance with existing legal requirements in Brazil, in accordance with the SOCIALCARBON Standard.

Federal laws nº 6.938/1981 7 ; nº 12.651/2012 8 and nº 9.885/2000 9 in Brazil, provide for the application of legal instruments on private property that make its conservation mandatory, such is the case of an APP (Permanent Preservation Area) or RL (Legal Reserve), as well as for the owner of a property to voluntarily carry out Anthropogenic GHG removals activities based on the *maintenance of native vegetation beyond the minimum level required by law (EVN - Excessive Native Vegetation) or through the creation of a RPPN (Private Reserve of Private Natural Heritage).* The eligible area of a project corresponds to "managed primary formations" and "managed secondary formations" of native vegetation, that are located within the types of areas mentioned above. The project start date and the project crediting period shall be established according to the most recent version of the SOCIALCARBON Standard.

Project proponents shall use the Standard indicators to detail the benefits and impacts generated by the project, encompassing: Social, Human, Financial, Natural, Biodiversity and Carbon. During the verifications foreseen for each project, the sustainability impacts must demonstrate improvement and not decrease in score for the same resource three consecutive times.

# 2. Assessment Approach

## 2.1 Method and Criteria

The validation process included the review and analysis of the main document and the technical tools included as part of the methodology, ensuring their proper use and the consistency of the methodological procedure described.

The validation process included the following steps:

1. Preliminary Information Review and analysis (14/07/2022- 15/07/2022);

2. Issuance of a Findings Report (with non-conformities of audit); 15/07/2022

3. Resolution of the non-conformities (NCs); First Round in 17/08/2022, Second Round in 06/09/2022

4. Issuance of the Draft Validation Report 14/10/2022

5. Technical Review 31/10/2022

6. Issuance of the Final Validation Report 29/11/2022

The lead auditor has extensive expertise in forestry, social, ecological and biodiversity issues in the region and has extensive experience as an auditor qualified according to Standard requirements, as indicates below:

Pablo Rodríguez: Senior Lead Auditor, Forestry Engineer, qualified under the ISO 14064 and 14065 to lead validation and verification processes of Carbon Emission Reduction and removals projects for VCS standard and others. More than 20 years of work and relevant experience in ecological, biodiversity and social aspects in forestry projects. Lead auditor since 2018, successfully auditing carbon projects in Brazil, Colombia, and Paraguay.

## 2.2 Document Review

Parallel to the analysis of the main document and all the CDM tools used, the validation team used additional third-party documentation (e.g. ISO14063), national legislation in Brazil, another sources consulted by the proponent and benchmark GHG program documents:

- Social+Carbon+-+Definitions 1.0
- SOCIALCARBON+-+Methodology+Requirements 1.0
- SOCIALCARBON+-+Standard+Guide+v1.0
- SOCIALCARBON+Standard+v6.0

The documents considered during the validation process are listed in Appendix 1.

## 2.3 Interviews

Not applicable

## 2.4 Assessment Team

The lead auditor has extensive expertise in forestry, social, ecological and biodiversity issues in the region and has extensive experience as an auditor qualified according to Standard requirements, as indicates below:

Pablo Rodríguez: Senior Lead Auditor, Forestry Engineer, qualified under the ISO 14064-2, ISO 14064-3 and 14065 to lead validation and verification processes of Carbon Emission Reduction and removals projects for VCS standard and others. More than 20 years of work and relevant experience in ecological, biodiversity and social aspects in forestry projects, land-use planning or Natural Protected Areas management in Colombia. Lead auditor since 2018, successfully auditing carbon projects in Brazil, Colombia, and Paraguay.

Bibiana Duarte: Technical Reviewer and expert. Forestry Engineer, qualified under the ISO 14064 and 14065 to lead validation and verification processes of Carbon Emission Reduction and removals projects for VCS standard, Socialcarbon and others. More than 10 years of work and relevant experience in ecological, biodiversity and social aspects in forestry projects. Lead auditor since 2017, successfully auditing more than 40 carbon projects in Brazil, Colombia, and Peru. Currently living in Brazil.

## 2.5 Resolution of Findings

The main Findings of the evaluation process were related with the eligibility, additionality and legal requirements, and the Standard procedures and requirements. Fiver (05) requests for clarifications (CL) and four (04) requests for corrective action (CAR) were raised, correctly addressed by the methodology proponent, and successfully closed out.

The CARs were related to the SC Standard compliance and to:

CAR 01: compliance of the Appendix 1 SOCIALCARBON – Methodology Requirements 1.0

CL- 02: compliance of Section 3.4 of SOCIALCARBON – Methodology Requirements 1.0

CL- 03: compliance of Section 3.5 of SOCIALCARBON – Methodology Requirements 1.0

CAR 04: compliance of Section 3.3 of SOCIALCARBON - Methodology Requirements 1.0

CAR- 05: Compliance of Section 3.5 Methodology Requirements 1.0.

CAR 06: Compliance of Section 3.5 of SOCIALCARBON – Methodology Requirements 1.0

The independent third-party technical review process included three additional CLs, the purpose of which is associated with the following items:

CL- 07: Methodology Requirements 1.0 and Sources, Methods Approaches.

CL- 08: Legal instruments for mandatory or voluntary

CL- 09: Carbon pools, GHG Sources, Net GHG Emission Removals and Uncertainty, Baseline Scenario and Leakage

See the consolidated Findings Report in Appendix 2

# 3. Assessment Findings

## 3.1 Relationship to Approved or Pending Methodologies

The methodology proponent reviewed approved or pending methodologies in accordance with the SOCIALCARBON standard and approved GHG programs, which are classified in the same AFOLU project categories, to determine if any existing methodology could reasonably be used for the same objective of the proposal.

The SCM0003: Methodology for Carbon Removals in Private Conservation Areas (V1.3) focuses on landowners who are not eligible for other methodologies and projects, the audit team considered that there is no relationship with existing approved or pending methodologies.

However, the proponent reviewed the methodologies "CDM AR-AMS0003: Afforestation and reforestation project activities implemented in wetlands" and "CDM AR-AMS0007: Afforestation and reforestation project activities implemented on land other than wetlands", which offer similar conditions to those proposed in the eligibility conditions defined for this methodology. The following is a list of the methodologies used in the review conducted by the proponent:

**Table 1 Related Methodologies**

| Methodology | Tittle | GHG Program |
|---|---|---|
| AR-AMS0003 | Afforestation and reforestation project activities implemented on wetlands | CDM |
| AR-AMS0007 | Afforestation and reforestation project activities implemented on lands other than wetlands | CDM |
| IPCC Good Practice Guidance 2003 | Good Practice Guidance for Land Use, Land-Use Change and Forestry | IPCC |
| IPCC Guidelines 2006 | 2006 IPCC Guidelines for National Greenhouse Gas Inventories | IPCC |

## 3.2 Stakeholder Comments

There was no evidence of public comment on the methodology, which is published at the address: *https://www.socialcarbon.org/scm0003*

## 3.3 Structure and Clarity of Methodology

The audit team concludes that the methodology proponent has followed the instructions in the methodology template and ensured that the methodology's various criteria and procedures are documented in the appropriate sections of the template and the consistence with SOCIALCARBON Standard, and GHG programs used as a source.

The proponent of the methodology consistently as requested in the set of findings that the audit team found, which were oriented to meet the requirements of the standard, included in version 1.3 of the main document the necessary guidance to express the procedures in a clear way for users of the methodology, expressing the set of requirements in a technically adequate way.

## 3.4 Definitions

The audit team determines that the definitions and terms were duly developed by the proponent and verifies that terms from other programs are not included, as required by Section 3.1.2 of SOCIALCARBON - Methodology Requirements 1.0 (CL 03 and CL- 08 of TR).

The audit team verified that terms are listed for the methodology proponent in alphabetical order, and terms already defined in the SOCIALCARBON standard should not were used or repeated in the methodology.

## 3.5 Applicability Conditions

ESPL consider that the applicability conditions of the project in areas where is not admitted any intervention or negative impact, with the criteria of additionality and eligibility established for the proponent, are in strict compliance with the Standard Principles and the applicable legislation in Brazil.

The audit team, considering the description provided by the proponent in section 4 of the document, concludes that the applicability conditions are sufficiently clear for the users of the methodology to define the eligibility conditions for each project on a parity basis.

**Table 2 Evaluation of conditions for the applicability**

| Criteria | Description | Evaluation of audit team |
|---|---|---|
| Type of project | Generating carbon ($CO_2$) removal in private conservation areas | Alternative to landowners who demonstrate management to maintenance carbon pools in conservation areas. |
| Project area | Areas of native vegetation on formally registered private property within Brazil.<br>Eligible areas:<br>Managed primary and secondary formations.<br>Methodology v1.3 | The landowners may demonstrate gestion to management and conservation of this areas. The methodology define clearly the exceptions and restrictions to the eligibility. |

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|---|---|---|
| Project scale | This methodology is applicable to small-scale or large-scale project activities. | Small-scale and large-scale designations are as per CDM definitions, according to the SOCIALCARBON Standard. |
| Eligibility of the property | Areas where all applicability conditions set out in this methodology, including land ownership, can be supported by legal and/or administrative documentation. | The condition is based on legal requirements compliance in Brazil. |
| Eligibility of the property owner | Private Individual (PF) or Legal Entity (PJ) legally established in Brazil. | Is clear the criterion to the VVB. |
| Type of vegetation | Native vegetation cover (managed primary and secondary formations). | Is clear that the criterion is just for native vegetation. |
| Condition of the vegetation | Managed primary formations: human activities have not caused any significant changes in its original characteristics of structure and composition during a minimum period of 20 (twenty) years prior to the project start date.<br>Managed secondary formations: human activities have caused significant changes in its original characteristics of structure and composition, but there has been no conversion to alternative land use within the area or any degradation that would bring about a regression in its status within the process of ecological succession, during the last 10 years prior to the project start date. | The landowners may demonstrate gestion to the conservation of this areas in a specific temporary boundary. |
| Carbon Pools | - Above-ground woody biomass.<br>- Belowground biomass. | The audit team considers that is clearly exposed the criteria. |

## 3.6 Project Boundary

ESPL concludes that the SCM0003: Methodology in Private Conservation Areas (V1.3), correctly defines the project boundaries, according to the compliance of the SOCIALCARBON Standard criteria.

The Audit team consider that the GHG sources, sinks and reservoirs (and carbon pools, for AFOLU methodologies) are appropriate to the project activities covered by the methodology, and the assumptions are consistent with the selected Standard principles. The methodology clearly defines Carbon Pools included and not included within the Project Boundary in Table 3.

The requirements to establish the project boundaries, according to the audit team experience, are based on accuracy analysis of the reference base for the land use and cover performed, using land use and cover classification that is publicly accessible and was carried out by a qualified agency/institution. The methodology explains in a concrete way the procedure to identify the two main typologies of eligible areas.

The methodology determines in Section 5 that in case of events of clear cut of vegetation, or regression of conservation status during the project period, the respective areas shall become ineligible.

## 3.7 Baseline Scenario

The proponent of the methodology establishes that the baseline scenario for small-scale and large-scale projects is that the project does not carry out actions for the conservation and protection of native vegetation, even though the regulations define that this should be the case. In this sense, the baseline scenario is the absence of $CO_2$ removals because of anthropogenic activities, under the concept of carbon removal on managed lands according to the IPCC (2003, 2006).

The audit team considers that the argumentation presented by the methodology proponent is consistent and that despite the legal protection of the areas linked to the methodology being defined, private owners might not have the conditions to ensure compliance with these requirements and effectively conservate these areas.

## 3.8 Additionality

The audit team analyzed the different procedures or methodological steps included in section 7 of the methodology, which establish the criteria and procedures to determine additionality, considering that these are appropriate for the activities defined by the methodology. These steps consider the scale of the project as the structural element, designations are as per CDM definitions, according to the SOCIALCARBON Standard.

The CDM tools used to carry out both the analysis of barriers and the demonstration of regulatory surplus, according to the requirements set out in the most recent version of the document “SOCIALCARBON Methodology Requirements”, is adequate and in the opinion of the audit team ensures the compliance with additionality requirements. On the other hand, the section makes it clear that if the two established conditions are not met, the project shall not be considered additional.

In conclusion, ESPL considers that the additionality analysis proposed in the methodology, as well as the CDM methodological tools used, is consistent with the provisions of the standard and compliance with its principles.

## 3.9 Quantification of GHG Emission and Removals

### 3.9.1 Baseline Emissions

ESPL, based on the analysis in section 8 of the document, concludes that the procedures for calculating baseline emissions and removals are appropriate for the project activities covered by the methodology. The methodology defines the use of the most recent data available from Brazil’s National Communication to the United Nations Framework Convention on Climate Change, which is consistent with the sources

that the proponent selects based in the Intergovernmental Panel on Climate Change (IPCC): "Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories" (1996 Guidelines); "Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories" (Good Practice Guidance 2000); "Good Practice Guidance for National Greenhouse Gas Inventories 2000); "Good Practice Guidance for Land Use, Land-Use Change and Forestry" (Good Practice Guidance 2003) and "2006 IPCC Guidelines for National Greenhouse Gas Inventories" (2006 Guidelines) .

The procedures for calculating baseline emissions and removals cover all GHG sources, sinks, and reservoirs, in the two steps for the project emissions proposed by the methodology. ESPL verified that the algorithms, equations, and formulas used are adequate and do not present errors.

## 3.9.2 Project Emissions

The methodology defines that $CO_2$ emissions resulting from the removal of herbaceous vegetation, burning of fossil fuels, fertilizer application, use of wood, decomposition of the humus layer and fine roots of $N_2$ (nitrogen) fixing trees, construction of minor accesses within the project boundaries and transportation attributable to the project should be considered negligible due to the level of legal restriction that applies in the areas and, therefore, when managed for conservation and reclamation are counted as zero. ESPL concludes that, according with the scope of the methodology, the eligible areas include burning that may occur in the project scenario causing GHG emissions, and the methodology propose calculation procedure, however, areas where this is a common management practice are excluded from eligibility.

The total GHG emissions from biomass burning at year y in the project area at the project scenario ($EBBPSPA_y$) shall be calculated as follows.

$$EBBPSPA_y = BAPA_y * EBBtot_y \quad (7)$$

Where:

$EBBPSPA_y$ = Total actual GHG emissions from biomass burning at year y in the project area in the project scenario ($tCO_2e$)

$BAPA_y$ = Burned area within the project area at year y (ha)

$EBBtot_y$ = Total GHG emission from biomass burning at year y ($tCO_2e/ha$)

Therefore, project emissions during year y ($PE_y$) are equivalent to the total actual GHG emissions from biomass burning at year y in the project area in the project scenario ($EBBPSPA_y$).

## 3.9.3 Leakage

The audit team considers relevant the technical justification assumed by the proponent, according to section 4 of the document, which describes the applicability conditions, areas where changes in land use and land cover ("conversion" to alternative land use) have occurred in the 10 (ten) years prior to the project start date would not be eligible. Therefore, there is no possibility of displacement of agricultural activities from the project area to the outside. Consequently, this methodology does not include emissions from leakage.

The Audit Team considers the assumption adequate.

### 3.9.4 Net GHG Emission and Removals

The net GHG emissions and removals during year y corresponds to the project removals during year y, minus the project emissions during year y, the baseline scenario removals, and the leakage during year y (according to Equation 8).

$$NER\ y = PR\ y - PEy - BRy - LEy \qquad (8)$$

Where:

NER y = Net GHG emissions and removals during year y ($tCO_2$ e)

PR y = Project removals during year y ($tCO_2$ e)

PE y = Project emissions during year y ($tCO_2$ e)

BR y = Baseline removals during year y ($tCO_2$ e)

LE y = Leakage emissions during year y ($tCO_2$ e)

ESPL determines that the procedures for calculating net GHG emission and removals are appropriate for the project activities covered by the methodology. According to the simplicity of the calculations, the proposed equations and formulas are adequate and do not represent errors.

The minimum overall accuracy proposed by the methodology is 90% for the reference base of land use and land cover, as indicated in its Section 5 and 8.5. This procedure also applies to the monitoring plans, described in Section 9 (Monitoring), subsection 9.3. At a figure below 90%, the land use and land cover of the land must be classified by remote sensing, with technical and qualified professional inputs.

Regarding $CO_2$ removal factors and related uncertainties, the uncertainty adopted by the most recent data available from Brazil´s National Communication to the United Nations Framework Convention on Climate Change should be used. According to SOCIALCARBON Methodology Requirements, confidence deductions shall be applied using conservative factors specified in the CDM Meth Panel guidance on addressing uncertainty in its Thirty Second Meeting Report.

## 3.10 Monitoring

### 3.10.1 Data and Parameters Available at Validation

The data/parameter available at validation, are defined in the next tables:

| | Description |
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|---|---|
| **Data / Parameter:** | Annual carbon incrementation parameters |
| **Data unit** | tC/ha |
| **Description** | Annual increase in biomass (tC/ha) of managed primary and secondary forest vegetation, by biome. |
| **Equations** | $\frac{AI^c \times 44}{12} \times A = RV_y$ (1)<br><br>Where: A = Area of the class of vegetation cover (ha)<br>$AI^c$ = Annual carbon increment, which varies according to biome and class of vegetation cover (tC/ha)<br>$RV_y$ = $CO_2$ removal for each class of vegetation cover during year y ($tCO_2e$/year) |
| **Source of data** | BRAZIL. MCTI – Ministry of Science, Technology and Innovation. Brazil's National Communication to the United Nations Framework Convention on Climate Change.[33] |
| **Value applied** | Depends on each project |

| | **Description** |
|---|---|
| **Data / Parameter:** | GWP $N_2O$ |
| **Data unit** | tonnes $CO_2$ e per tonne $N_2O$ ($tCO_2$ e/$tN_2O$) |
| **Description** | Global warming potential of nitrous oxide. |
| **Equations** | $EBBN_2O_y$ = $EBBCO_{2y}$*12/44*NCR*$ERN_2O$*44/28*$GWPN_2O$ (4)<br>Where:<br>$EBBCO_{2y}$ = $CO_2$ emission from biomass burning at year y ($tCO_2$ e/ha)<br>NCR= Nitrogen to Carbon Ratio (IPCC default value = 0.01);<br>dimensionless<br>ER $N_2O$ = Emission ratio for $N_2O$ (IPCC default value = 0.007)<br>GWP $N_2O$ = Global Warming Potential for $N_2O$ |
| **Source of data** | IPCC Fifth Assessment Report. |
| **Value applied** | 265 |

| | Description |
|---|---|
| **Data / Parameter:** | GWP $CH_4$ |
| **Data unit** | tonnes $CO_2$ e per tonne $CH_4$ ($tCO_2$ e/$tCH_4$) |
| **Description** | Global warming potential of methane |
| **Equations** | $EBBCH_{4y} = EBBCO_{2y} * 12/44 * ERCH_4 * 16/12 * GWP\ CH_4$ (5)<br><br>Where:<br><br>$EBBCO_{2y}$= $CO_2$ emission from biomass burning at year y ($tCO_2$ e/ha)<br>$ERCH_4$ = Emission ratio for $CH_4$ (IPCC default value= 0.012)<br>GWP $CH_4$ = Global Warming Potential for $CH_4$ |
| **Source of data** | IPCC Fifth Assessment Report |
| **Value applied** | 28 |

The Audit team considers that the justification of choice of data or description of measurement methods and procedures applied is consistent with the SOCIALCARBON Standard and the CDM Tools used by the methodology. The sources of information defined by the methodology proponent and the technical conditions complies with the requirements.

## 3.10.2 Data and Parameters Monitored

The parameters monitored are consolidated in the next tables:

| | Description |
|---|---|
| **Data / Parameter:** | Area per class of vegetation cover |
| **Data unit** | Hectare (ha) |
| **Description** | Area per class of vegetation cover within the project area. |
| **Equations** | $\frac{AI^c \times 44}{12} \times A = RV_y$ (1) |

| | |
|---|---|
| | Where: A = Area of the class of vegetation cover (ha)<br>$AI^c$ = Annual carbon increment, which varies according to biome and class of vegetation cover (tC/ha)<br>$RV_y$ = CO2 removal for each class of vegetation cover during year y (tCO2e/year) |
| **Source of data** | Reference base adopted for the project; Project proponent. |
| **Description of measurement methods and procedures to be applied:** | Calculating the area (hectares) of the classes of vegetation cover in the adopted reference base, using the GIS software's34 field calculator ("$area/10000" expression). There will be subsequent validation of the adopted reference base classes using the MCTI classification for the adoption of nomenclature for the project. |
| **Frequency of monitoring/recording:** | Annual |
| **QA/QC procedures to be applied:** | An accuracy analysis shall be applied to the classification of the reference base adopted for the project, through reclassification by photo interpretation of georeferenced images with 30 m spatial resolution or better. A minimum 90% match must be attained |
| **Purpose of data:** | Calculating the project CO 2 removal. |
| **Calculation method:** | Using the GIS software's field calculator ("$area/10000" expression). |

| | **Description** |
|---|---|
| **Data / Parameter:** | $BAPA_y$ |
| **Data unit** | Hectare (ha) |
| **Description** | Burned area within the project area at year y |
| **Equations** | $EBBPSPA_y = BAPA_y * EBBtot_y$ (7)<br><br>Where:<br><br>$EBBPSPA_y$ = Total actual GHG emissions from biomass burning at year y in the project area in the project scenario ($tCO_2$ e)<br>$BAPA_y$ = Burned area within the project area at year y (ha)<br>$EBBto_y$ = Total GHG emission from biomass burning at year y ($tCO_2$ e/ha) |
| **Source of data** | Remote sensing data and GIS<br><br>Local management team and other field data |

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| **Description of measurement methods and procedures to be applied:** | In addition to field data from the management team, the following sources will also be monitored:<br>- INMET<br>- INPE |
| **Frequency of monitoring/recording:** | The frequency of monitoring of this parameter must be annual or in a shorter time frame that allows accurate detection of the affected area. |
| **QA/QC procedures to be applied:** | Best practices in remote sensing and GIS must be applied. Furthermore, the following sources will be also monitored to confirm the data obtained from remote sensing and GIS:<br>- INMET<br>- INPE<br>- Field data from the management team |
| **Purpose of data:** | This parameter is used to calculate project emissions in the project scenario. Provides an estimation of the area affected by fires within the project area during the project scenario. |
| **Calculation method:** | Remote sensing and GIS |

| | **Description** |
|---|---|
| **Data / Parameter:** | $C_p$ |
| **Data unit** | $tCO_2$ e/ha |
| **Description** | Average carbon stock per hectare in the carbon pool p burnt at year y |
| **Equations** | $$EBBCO_{2y} = Fburnt * \sum_{p=1}^{P} (C_{p,y} * Pburnt_p * CE_p) \quad (6)$$<br>Where:<br>$EBBCO_{2y}$ = $CO_2$ emission from biomass burning at year y ($tCO_2$ e/ha)<br>Fburnt = Proportion of vegetation area burned (%)<br>$C_{py}$ = Average carbon stock per hectare in the carbon pool p burnt at year y ($tCO_2$e/ha)<br>$Pburnt_p$ = Average proportion of mass burnt in the carbon pool p (%) |

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| | $CE_p$ = Average combustion efficiency of the carbon pool p; dimensionless (IPCC default of 0.5)<br><br>p= Carbon pool that could burn, above-ground biomass |
| **Source of data** | Average values for the above-ground biomass may be taken from official data, such as national inventory or Forest Reference Emissions Level (FREL), or from local biomass inventory. |
| **Description of measurement methods and procedures to be applied:** | The following sources will be monitored:<br><br>- National data<br><br>- Local biomass inventories<br><br>The calculation method must be a literature search about the above-ground biomass values that could be determined to accurately represent the values of vegetation within the project area. |
| **Frequency of monitoring/recording:** | The frequency of monitoring of this parameter must be annual or in a shorter time frame that allows accurate detection of the affected area. |
| **QA/QC procedures to be applied:** | National data or peer-reviewed scientific studies must be used to estimate the average above ground biomass per hectare, or to cross-check the data obtained from local biomass inventory. |
| **Purpose of data:** | This parameter is used to calculate project emissions resulting from biomass burning in the project scenario. |
| **Calculation method:** | Literature search about the above-ground biomass values that could be determined to accurately represent the values of vegetation within the project area. |

| | **Description** |
|---|---|
| **Data / Parameter:** | Fburnt |
| **Data unit** | % |
| **Description** | Proportion of vegetation area burned |
| **Equations** | $$EBBCO_{2y} = Fburnt * \sum_{p=1}^{P} (C_{p,y} * Pburnt_p * CE_p) \quad (6)$$<br><br>Where:<br><br>$EBBCO_{2y}$ = $CO_2$ emission from biomass burning at year y ($tCO_2$ e/ha)<br>Fburnt = Proportion of vegetation area burned (%) |

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|---|---|
| | $C_{p,y}$ = Average carbon stock per hectare in the carbon pool p burnt at year y ($tCO_2$ e/ha)<br><br>Pburnt p = Average proportion of mass burnt in the carbon pool p (%)<br>$CE_p$ = Average combustion efficiency of the carbon pool p; dimensionless (IPCC default of 0.5) |
| **Source of data** | Estimated from literature.<br><br>Fburnt data source: BRAZIL. MCTI – Ministry of Science, Technology and Innovation. Brazil's National Communication to the United Nations Framework Convention on Climate Change. |
| **Description of measurement methods and procedures to be applied:** | This parameter must be calculated according to requirements and default values established by the most recent data available from MCTI – Ministry of Science, Technology and Innovation. Brazil's National Communication to the United Nations Framework Convention on Climate Change. |
| **Frequency of monitoring/recording:** | The frequency of monitoring of this parameter must be annual or in a shorter time frame that allows accurate detection of the affected area. |
| **QA/QC procedures to be applied:** | The most recent data available from MCTI must be used to estimate the proportion of vegetation area burned. |
| **Purpose of data:** | This parameter is the average percentage of the area within the project area that is burnt and it is used to calculate project GHG emissions from biomass burning at year t in the project area (parameter EBBPSPA y). |

| | **Description** |
|---|---|
| **Data / Parameter:** | Pburnt |
| **Data unit** | % |
| **Description** | Average proportion of mass burnt in the carbon pool |
| **Equations** | $$EBBCO_{2y} = Fburnt * \sum_{p=1}^{P} (C_{p,y} * Pburnt_p * CE_p) \quad (6)$$<br><br>Where:<br><br>EBBCO $_{2y}$ = $CO_2$ emission from biomass burning at year y ($tCO_2$ e/ha)<br>Fburnt = Proportion of vegetation area burned (%)<br><br>C $_{p,y}$ = Average carbon stock per hectare in the carbon pool p burnt at year y ($tCO_2$ e/ha) |

| | |
|---|---|
| | Pburnt $_p$ = Average proportion of mass burnt in the carbon pool p (%)<br>CE $_p$ = Average combustion efficiency of the carbon pool p; dimensionless (IPCC default of 0.5)<br><br>p = Carbon pool that could burn, above-ground biomass |
| **Source of data** | Estimated from literature. |
| **Description of measurement methods and procedures to be applied:** | The calculation method must use literature reference about biomass burning in the affected carbon pool that could be determined to accurately represent the values of mass burnt. |
| **Frequency of monitoring/recording:** | The frequency of monitoring of this parameter must be annual or in a shorter time frame that allows accurate detection of the affected area. |
| **QA/QC procedures to be applied:** | National data or peer-reviewed scientific studies must be used to estimate the average proportion of mass burnt in the above ground biomass pool, or to cross-check the data obtained from local measurements. |
| **Purpose of data:** | This parameter is used to calculate project GHG emissions from biomass burning at year y in the project area (parameter EBBPSPA $_y$). |

| | **Description** |
|---|---|
| **Data / Parameter:** | EBBPSPA $_y$ |
| **Data unit** | $tCO_2e$ |
| **Description** | Total actual GHG emissions from biomass burning at year t in the project area in the project scenario |
| **Equations** | $EBBPSPA_y = BAPA_y * EBBtot_y$ (7)<br><br>Where:<br><br>$EBBPSPA_y$ = Total actual GHG emissions from biomass burning at year y in the project area in the project scenario ($tCO_2e$)<br><br>$BAPA_y$ = Burned area within the project area at year y (ha)<br><br>$EBBtot_y$ = Total GHG emission from biomass burning at year y ($tCO_2e$/ha) |
| **Source of data** | Remote sensing data and GIS.<br><br>Field data |

| | |
|---|---|
| **Description of measurement methods and procedures to be applied:** | If biomass burning occurs, the resulting GHG emissions will be subject to monitoring and accounting, when significant. In addition to remote sensing data and GIS, which can identify the area affected by forest fire, field data could also confirm the obtained data. |
| **Frequency of monitoring/recording:** | The frequency of monitoring of this parameter must be annual or in a shorter time frame that allows accurate detection of the affected area. |
| **QA/QC procedures to be applied:** | Best practices in remote sensing and GIS. |
| **Purpose of data:** | This parameter will be used to calculate GHG emissions due to biomass burning within the project area in the project scenario. |

| | **Description** |
|---|---|
| **Data / Parameter:** | $EBBtot_{,y}$ |
| **Data unit** | $tCO_2e/ha$ |
| **Description** | Total GHG emission from biomass burning at year y |
| **Equations** | $EBBtot_y = EBBCO_{2y} + EBBN_2O_y + EBBCH_{4y}$ (3)<br><br>Where:<br><br>$EBBtot_y$ = Total GHG emission from biomass burning at year y ($tCO_2$ e/ha)<br>$EBBCO_{2y}$ = $CO_2$ emission from biomass burning at year y ($tCO_2$ e/ha)<br>$EBBN_2O_y$ = $N_2O$ emission from biomass burning at year y ($tCO_2$ e/ha)<br>$EBBCH_{4y}$ = $CH_4$ emission from biomass burning at year y ($tCO_2$ e/ha) |
| **Source of data** | Calculated according to IPCC (2003). |
| **Description of measurement methods and procedures to be applied:** | This parameter must be calculated according to requirements and default values established by the IPCC (2003). |
| **Frequency of monitoring/recording:** | The frequency of monitoring of this parameter must be annual or in a shorter time frame that allows accurate detection of the affected area. |
| **QA/QC procedures to be applied:** | Determined by IPCC (2003). |

| | |
|---|---|
| **Purpose of data:** | This parameter is used to calculate GHG emissions from biomass burning occurred in the project scenario. |

| | **Description** |
|---|---|
| **Data / Parameter:** | $EBBN_2O_y$ |
| **Data unit** | $tCO_2e/ha$ |
| **Description** | $N_2O$ emission from biomass burning at year *y* |
| **Equations** | $EBBN_2O_y = EBBCO_{2y} * 12/44 * NCR * ERN_2O * 44/28 * GWPN_2O$ (4)<br><br>Where:<br><br>$EBBN_2O_y$ = $N_2O$ emission from biomass burning at year y ($tCO_2$ e/ha)<br>$EBBCO_{2y}$ = $CO_2$ emission from biomass burning at year y ($tCO_2$ e/ha)<br>NCR = Nitrogen to Carbon Ratio (IPCC default value = 0.01); dimensionless<br>$ERN_2O$ = Emission ratio for $N_2O$ (IPCC default value = 0.007)<br><br>$GWPN_2O$ = Global Warming Potential for $N_2O$ |
| **Source of data** | Calculated according to IPCC (2003). |
| **Description of measurement methods and procedures to be applied:** | This parameter must be calculated according to requirements and default values established by the IPCC (2003). |
| **Frequency of monitoring/recording:** | The frequency of monitoring of this parameter must be annual or in a shorter time frame that allows accurate detection of the affected area. |
| **QA/QC procedures to be applied:** | Determined by IPCC (2003). |
| **Purpose of data:** | This parameter is used to calculate GHG emissions from biomass burning occurred in the project scenario. |

| | **Description** |
|---|---|
| **Data / Parameter:** | Non-Permanence Risk |
| **Data unit** | % (percentage) |

| | |
|---|---|
| **Description** | Calculating the internal, external, and natural risks of the project using the "AFOLU Non-Permanence Risk Tool" |
| **Equations** | NA |
| **Source of data** | AFOLU Non-Permanence Risk Tool |
| **Description of measurement methods and procedures to be applied:** | Performing a non-permanence risk analysis (as described under the "AFOLU Non-Permanence Risk Tool"), to determine the non-permanence risk rating ("risk rating"), which is to be used to determine the number of buffer credits. |
| **Frequency of monitoring/recording:** | Annual |
| **QA/QC procedures to be applied:** | Determined by the "AFOLU Non-Permanence Risk Tool" itself and subsequently verified by the responsible Social Carbon Unit. |
| **Purpose of data:** | Calculating the number of buffer credits (retentions). |
| **Calculation method:** | Determined by the "AFOLU Non-Permanence Risk Tool" itself |

The methodology disposes that Monitoring Plan shall be generated by the project developer in accordance with the project description for each monitoring year. ESPL considers adequate the four steps planned to determinate the accuracy for each monitoring year and the observations about the technical procedures to obtain the remote sensing images that support the construction of the baseline and the monitoring period.

# 4. Assessment Conclusion

ESPL was contracted by JFC Ativos Ambientais Ltda. to carry out an independent validation of methodology: "SCM0003: Methodology for Carbon Removal in Private Conservation Areas", against the principles of:

1) Completeness: Inclusion of all relevant GHG emission sources, including all relevant information that supports the criteria and procedures.

2) Consistency: Allow meaningful comparisons in GHG-related information.

3) Accuracy and Conservatism: Reduction of bias and uncertainties as far as possible/cost-effective, or use of conservative assumptions, values, and procedures to ensure net emission reductions are not overestimated.

The Validation Team of ESPL planned and carried out the validation obtaining evidence, other information, and explanations that ESPL considered necessary to perform the tasks. In the course of validation 09 (nine) NCs were raised and successfully closed out.

ESPL concludes that all the monitoring parameters, equations, sources, methods, frequencies of measurement and QA/QC procedures in the proposed methodology, comply with the Social Carbon Standard principles and that the "*SCM0003: Methodology for Carbon Removal in Private Conservation Areas v 1.3*", met all relevant requirements of the SOCIALCARBON standard.

# 5. Evidence of fulfilment of VVB eligibility requirements

The validation team confirms that SCM0003: Methodology for Carbon Removal in Private Conservation Areas, version 1.3 (21/11/ 2022) complies with all the applicable validation criteria above mentioned.

Earthood Services Private Limited (hereinafter ESPL) as part of the list of available validation and verification bodies (VVB), has been contracted by the proponent of this methodology to carry out the validation process of the project activities under the standard, because it has more than ten years of worldwide experience and accreditation to develop validation and verification processes under twelve different international standards, one of which is SOCIALCARBON. The selected audit team has extensive experience in validation processes under different standards and specializes in the AFOLU sector, as indicated in section 2.4 of this report.

# 6. Signature

Signed for and on behalf of:

Name of entity: *Earthood Services Private Limited*

Signature: _____

Name of signatory: *Dr Kaviraj Singh – Managing Director*

Date: 12/12/2022

# Appendix 1. Documents Revised or Referenced

| N.º | Document |
|---|---|
| 01 | Methodology for Carbon Removal in Private Conservation Areas. V1.2 |
| 02 | SOCIALCARBON Standard v6.0 |
| 03 | SOCIALCARBON Definitions 1.0S |
| 04 | SOCIALCARBON Methodology Requirements 1.0 |
| 05 | SOCIALCARBON Methodology Approval Process 1.0 |
| 06 | "AR-AMS0003: Afforestation and reforestation project activities implemented on wetlands" (V 03.0) |
| 07 | "AR-AMS0007: Afforestation and reforestation project activities implemented on lands other than wetlands" (V. 03.1) |
| 08 | CDM TOOL 02 "*Combined tool to identify the baseline scenario and demonstrate additionality*" should be adopted, considering it is applicable to all types of proposed project activities and its last version dates from 2017 (for Large Projects) |
| 09 | Federal Law 12.651/2012<br>( http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/l12651.htm ) |
| 10 | Federal Law, No. 14.119/2021<br>( http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2021/lei/L14119.htm ) |
| 11 | Federal Law 6,938/1981 |
| 12 | Federal Decree 11.075/2022 |

# Appendix 2. Findings Report

CAR: Corrective Action Request

CL: Clarification Request

FAR: Forward Action Request

**SOCIALCARBON Definitions 1.0S**

**SOCIALCARBON Standard v6.0**

**SOCIALCARBON Methodology Requirements 1.0**

**SOCIALCARBON Methodology Approval Process 1.0**

**CL/CAR from this Validation:**

| **CAR ID** | 01 | **Section no.** | | **Date:** 14/07/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| **Criteria:**<br><br>• Appendix 1 SOCIALCARBON – Methodology Requirements 1.0<br><br>It is stated in section 2 of the proposed methodology that conservation of native vegetation in private properties is "not eligible for REDD projects". Hence it is not indicated under which project category listed in Appendix 1 of the Methodology Requirements the proposed projects applying the methodology fall. | | | | |
| **Project participant response** | | | | **Date:** 02/08/2022 |
| In view of the project categories listed in Appendix 1 of the Methodology Requirements, the following sentence was included in Section 2 of the proposed methodology: *"In view of its particularity, the methodology applies to AFOLU projects, more specifically Afforestation, Reforestation and Revegetation (ARR) project category".* There is also an alignment with the framework of the methodology made by Social Carbon in Scope 14 - Afforestation, Reforestation and Revegetation (ARR), as presented in https://www.socialcarbon.org/scm0003. | | | | |
| **Documentation provided by project participant** | | | | |
| Version 1.1 of the Methodology for Carbon Removal in Private Conservation Areas is generated, the Sectorial Scope is adjusted. | | | | |
| **DOE assessment** | | | | **Date:** 17/08/2022 |

| CAR ID | 01 | Section no. | | Date: 14/07/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| The proponent of the Methodology for Carbon Removal in Private Conservation Areas clarifies in the Sectorial Scope, that it is “Scope 14 – Afforestation and reforestation”.<br><br>Audit conclusion:<br><br>**Finding closed successfully** | | | | |

| CL ID | 02 | Section no. | | Date: 14/07/2022 |
|---|---|---|---|---|
| **Description of CL** | | | | |
| **Criteria:**<br><br>● Section 2.3 GHG-Information Principles of the SOCIALCARBON-Standard, v6.0.<br><br>Quality document management:<br><br>The document to be validated presents some inconsistencies, or situations related to form elements, which require adjustments or clarifications in some sections:<br><br>There are two company names or denominations of the developer of the methodology in the title (Jataí Poliniza Ativos Ambientais Ltda.) and in the section called "Relationship to Approved or Pending Methodologies" (Jatai Capital and Conservation).<br><br>Not all sources listed in the section 1 “Sources” are included within the section 10 “References”. Nor it is included among the sources and references "VM0015 - Methodology for Avoided Unplanned Deforestation", which is cited in section 5 “Project Boundary” of the document.<br><br>In section 3 “Definitions” and 4 “Applicability Conditions”, is not clear the phrase in the underlying text: *“Vegetation cover where it is understood that human activities have not caused any significant changes in its original characteristics of structure and composition during a minimum period of 20 (twenty) years, from the project start date”.* It appears to be a future condition.<br><br>There is no basic description of the guidelines that apply to eligible areas, according to the categories or denominations established in the regulations cited in section 3 under the title "Legal instruments for mandatory or voluntary environmental conservation", which allows understanding the differences between them and the justification of the conditions of applicability.<br><br>The justification incorporated in section 2.1 “Social Motives” does not describe a complete panorama of the current conditions of the eligible areas in accordance with the legal restrictions of use that these private properties present according to their denominations or management categories.<br><br>It is not clear in Section 4 of the methodology whether or not the establishment of non-native forest species is allowed as a habitat rehabilitation strategy and whether these types of actions are eligible. | | | | |
| **Project participant response** | | | | **Date:** 02/08/2022 |

- Two company names

The company's two names were changed and only its corporate name was maintained (Jataí Poliniza Ativos Ambientais Ltda.).

- Sources and References

All sources listed (Section 2) were included within the References (Section 10). "VM0015 - Methodology for Avoided Unplanned Deforestation" was also included in both Sections.

- Phrase in Definitions and Applicability Conditions

The sentence was changed, indicating that it was a past condition: *"(...) during a minimum period of 20 (twenty) years prior to the project start date"* (p. 7 and p. 11)

- Section 3 - "Legal instruments for mandatory or voluntary environmental conservation"

The definition of "Legal instruments for mandatory or voluntary environmental conservation", presented in Section 3, has been updated in order to clarify the guidelines that apply to eligible areas.

- Social Motives

The justification incorporated in section 2.1 "Social Motives" has been updated in order to describe a complete panorama of the current conditions of the eligible areas.

- Non-native forest species

"Non-native forest species" has been included in Ineligible Areas (Table 2, p. 10).

| **Documentation provided by project participant** |
|---|
| Were made adjustments in Sections 2 (2.1), 3 and 10 of the Methodology for Carbon Removal in Private Conservation Areas. |

| **DOE assessment** | **Date:** 17/08/2022 |
|---|---|

The proponent made several adjustments accordingly. However:

-The pages of the revised proposed methodology are not numbered, and it is not easy to find the specific places in the text where the corrections have been made.

-The main document in its version 1.1 does not include change control and does not allow evidence of the location of content insertions and other changes, since not everything found in the response to the findings is consolidated in the main text of the methodology.

Audit conclusion:

**Finding remains open.**

| **Project participant response** | **Date:** 06/09/2022 |
|---|---|

The pages of the proposed methodology have been numbered to facilitate finding of the specific places where the corrections have been made. In addition, the corrections made in the last Findings Report are presented below with the respective pages:

- Two company names - Title and “Relationship to Approved or Pending Methodologies”

The company's two names were changed and only its corporate name was maintained (Jataí Poliniza Ativos Ambientais Ltda.) in the sections quoted above (these sections are not numbered considering the numbering starts in page 5, where the contents properly begin).

- Sources (page 5) and References (page 26 to 27)

All sources listed (Section 2) were included within the References (Section 10). "VM0015 - Methodology for Avoided Unplanned Deforestation" was also included in both Sections.

- Managed Primary Formations - Definitions (page 8 to 9) and Applicability Conditions (page 12)

The definition for “Managed Primary Formations” sentence was changed, indicating that it was a past condition: *“(...) during a minimum period of 20 (twenty) years prior to the project start date”*.

- Legal instruments for mandatory or voluntary environmental conservation - Definitions (page 8)

The definition of “Legal instruments for mandatory or voluntary environmental conservation”, presented in Section 3, has been updated in order to clarify the guidelines that apply to eligible areas.

- Social Motives (page 7)

The justification incorporated in Section 2.1 “Social Motives” has been updated in order to describe a complete panorama of the current conditions of the eligible areas.

- Non-native forest species (Table 2, page 11 to 12)

“Non-native forest species” have been included in Ineligible Areas.

In order to allow evidence of the location of content insertions and other changes, it will be sent the main version of the proposed methodology including the change control in PDF format. However, these corrections had already been made in the last version of the revised methodology (version 1.1), which will be sent once again to the auditor’s team to help locate the modifications.

| **DOE assessment** | **Date:** 30/09/2022 |
|---|---|

The audit team verified all the adjustments incorporated in the document and a response is correctly given in the terms requested to this Finding.

Audit conclusion:

**Finding closed successfully**

| CL ID | 03 | Section no. | | Date: 14/07/2022 |
|---|---|---|---|---|
| **Description of CL** | | | | |
| **Criteria:**<br>• Section 3.1.2 of SOCIALCARBON – Methodology Requirements 1.0: *"Defined terms shall be used within the methodology and methodologies shall not define terms that are already included in the SOCIALCARBON Standard Definitions."*<br><br>The provisions of the indicated section of the Standard are not complied with, since methodology proponent includes the definition of REDD in section 3.1 List of Abbreviations and Acronyms. | | | | |
| **Project participant response** | | | | **Date:** 02/08/2022 |
| The REDD definition was excluded from Section 3.1 - List of Abbreviations and Acronyms of the proposed methodology. | | | | |
| **Documentation provided by project participant** | | | | |
| Version 1.1 of the Methodology for Carbon Removal in Private Conservation Areas is generated. | | | | |
| **DOE assessment** | | | | **Date:** 17/08/2022 |
| The methodology proponent has done the change in correspondent section of the proposed methodology.<br><br>Audit conclusion:<br><br>**Finding closed successfully** | | | | |

| CAR ID | 04 | Section no. | | Date: 14/07/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| **Criteria:**<br>• Section 3.3 of SOCIALCARBON - Methodology Requirements 1.0<br>The justification for defining criteria for the selection of GHG sources and sinks (Table 3) of the Methodology is not clear, according to what is established in section 3.3 of the Requirements. | | | | |
| **Project participant response** | | | | **Date:** 02/08/2022 |
| Additions and corrections were made to the selection of GHG sources and sinks (Table 3) of the proposed methodology and, consequently, to the Applicability Conditions (Section 4, Table 2), based on what is established in Section 3.3 of SOCIALCARBON Methodology Requirements. | | | | |
| **Documentation provided by project participant** | | | | |

| CAR ID | 04 | Section no. | | Date: 14/07/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| Version 1.1 of the Methodology for Carbon Removal in Private Conservation Areas is generated. | | | | |
| **DOE assessment** | | | | **Date:** 17/08/2022 |
| The methodology proponent has done the changes in correspondent sections of the proposed methodology.<br><u>Audit conclusion:</u><br>**Finding closed successfully** | | | | |

| CAR ID | 05 | Section no. | | Date: 14/07/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| **Criteria:**<br>• Section 3.4 of SOCIALCARBON – Methodology Requirements 1.0<br><br>Section 3.4 of SOCIALCARBON – Methodology Requirements state that:<br>*"The baseline scenario represents the activities and GHG emissions that would occur in the absence of the project activity. The baseline scenario must be accurately determined so that an accurate comparison can be made between the GHG emissions that would have occurred under the baseline scenario and the GHG emission reductions and/or removals that were achieved by project activities."*<br>In section 4 of proposed methodology, it is stated that eligible project areas are: "*areas of native vegetation on formally registered private property, independent (understood as regardless) of any legal instruments (eg.: RPPN, RL, APP, EVN), within Brazil".*<br>As it is mandatory per Brazilian law to conservate RL and APP, it is not understood how the BL scenario for these areas would be set as zero removals, considering them as "unmanaged" areas, as established in Section 6 Baseline Scenario, whereas there is a legal requirement to protect them. And how regulatory surplus required by SC and mentioned in Section *7. Additionality* can be proven by allowing inclusion of such areas within projects.<br>Further, it is not clear how it is required from project proponents to demonstrate that the project scenario (conservation of native areas within their properties) is not the baseline scenario as well, i.e. business as usual, continuation of current practice. | | | | |
| **Project participant response** | | | | **Date:** 02/08/2022 |

The obligation to maintain APP and RL is defined in Federal Law 12.651/2012 (http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/l12651.htm) in chapters II and IV, respectively . In fact, it is an “administrative limitation of use” imposed by legislation that obliges rural landowners to maintain a minimum percentage as RL according to the biome and compliance with a series of physical situations of the property as an APP, such as riverside and hilltop. Both institutes provide for their own rules and regime of use, established in the same law and regulations.

By providing for the protection of native vegetation, the same federal law, in its Chapter X, establishes the “Program of Support and Incentive to the Preservation and Recovery of the Environment”. For what matters to us, it is necessary to bring to light what governs article 41, item I, subparagraph a, in verbis:

> Art. 41. É o Poder Executivo federal autorizado a instituir, sem prejuízo do cumprimento da legislação ambiental, programa de apoio e incentivo à conservação do meio ambiente, bem como para adoção de tecnologias e boas práticas que conciliem a produtividade agropecuária e florestal, com redução dos impactos ambientais, como forma de promoção do desenvolvimento ecologicamente sustentável, observados sempre os critérios de progressividade, abrangendo as seguintes categorias e linhas de ação:
>
> I - pagamento ou incentivo a serviços ambientais como retribuição, monetária ou não, às atividades de conservação e melhoria dos ecossistemas e que gerem serviços ambientais, tais como, isolada ou cumulativamente:
>
> ***a) o sequestro, a conservação, a manutenção e o aumento do estoque e a diminuição do fluxo de carbono; (grifos não presentes no original)***
> --
> Art. 41. The Federal Executive Power is authorized to institute, without prejudice to compliance with environmental legislation, a program to support and encourage environmental conservation, as well as to adopt technologies and good practices that reconcile agricultural and forestry productivity, with a reduction in environmental impacts, as a way of promoting ecologically sustainable development, always observing the progressivity criteria, covering the following categories and lines of action:
>
> I - payment or incentive to environmental services as retribution, monetary or not, for the activities of conservation and improvement of ecosystems and that generate environmental services, such as, individually or cumulatively:
>
> ***a) the sequestration, conservation, maintenance and increase of carbon stock and decrease in the carbon flow; (emphasis not presented in the original)***

In addition, what is provided in §4 of the same article mentioned above:

> § 4º As atividades de ***manutenção das Áreas de Preservação Permanente, de Reserva Legal e de uso restrito são elegíveis*** para ***quaisquer pagamentos ou incentivos*** por serviços ambientais, ***configurando adicionalidade para fins de mercados nacionais e internacionais*** de reduções de emissões certificadas de gases de efeito estufa. ***(grifos não presentes no original)***
> --

> § 4 The **maintenance activities of Permanent Preservation Areas, Legal Reserves and restricted use are eligible** for **any payments or incentives** for environmental services, **constituting additionality for the purposes of national and international markets** of certified greenhouse gas emission reductions. ***(emphasis not presented in the original)***

The grammatical interpretation of the framework leaves no doubt about the legal provision that carbon removal in areas of native vegetation maintained by private individuals is eligible for projects to generate removal carbon credits, including in areas where conservation is mandatory, such as APP, RL and restricted use, configuring additionality for purposes of national and international markets. That is, the conception presented in the methodology respects and observes the parameters brought in the legislation relevant to the subject, strictly complying with the letter of the law.

The full reading of “Chapter X” of Federal Law 12.651/2012 highlights the spirit of the legislator who, when legislating on the subject, worked to give value to biodiversity conservation and include mandatory conservation mechanisms (notably APP and RL) in a series of mechanisms and possibilities for receiving, including, public resources.

Moreover, other norms of environmental legislation that deal with the subject are still left with the intention to add value and provide remuneration to areas of mandatory conservation such as APP and RL. Otherwise, see:

Federal law 6,938/1981 (http://www.planalto.gov.br/ccivil_03/leis/l6938.htm), which establishes the "National Environmental Policy", advocates in its article 9, item XIII, as one of its instruments, “XIII - economic instruments, such as forest concession, environmental easement, environmental insurance and others.” Next, Article 9 A provides:

> Art. 9º-A. ***O proprietário ou possuidor de imóvel***, pessoa natural ou jurídica, ***pode***, por instrumento público ou particular ou por termo administrativo firmado perante órgão integrante do Sisnama, ***limitar o uso de toda a sua propriedade ou de parte dela para preservar, conservar ou recuperar os recursos ambientais existentes, instituindo servidão ambiental. (grifos não presentes no original)***
> --
> Art. 9-A. ***The owner or possessor of property***, natural or legal person, ***may***, by public or private instrument or by administrative term signed before an organ that is part of Sisnama, ***limit the use of all his property or part of it to preserve, conserve or recover the resources existing environmental rights, instituting environmental easements. (emphasis not presented in the original)***

In other words, the rule makes an express provision for the individual to voluntarily create an administrative limitation on the use of his property - equivalent to RL - and makes it clear that this mechanism can be used as a financial instrument and it is desirable that it be so.

To corroborate this understanding, we cite another federal law, No. 14.119/2021 (http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2021/lei/L14119.htm), which establishes the Payment for Environmental Services”, which, when dealing with “contracts for payment for environmental services”, provides in its article 12, sole paragraph:

> Art. 12. O regulamento definirá as cláusulas essenciais para cada tipo de contrato de pagamento por serviços ambientais, consideradas obrigatórias aquelas relativas:
>
> (...)

> Parágrafo único. ***No caso de propriedades rurais, o contrato pode ser vinculado ao imóvel por meio da instituição de servidão ambiental. (grifos não presentes no original)***
> --
> Art. 12. The regulation will define the essential clauses for each type of contract for payment for environmental services, those related to:
>
> (...)
>
> Single paragraph. ***In the case of rural properties, the contract can be linked to the property through the institution of environmental easement. (emphasis not presented in the original)***

The same rule, when dealing with areas eligible to receive public resources as PSE (Payment for Environmental Services, also known as Payment for Ecosystem Services), also governs that:

> Art. 9º Em relação aos imóveis privados, são elegíveis para provimento de serviços ambientais:
>
> (...)
>
> Parágrafo único. ***As Áreas de Preservação Permanente, Reserva Legal e outras sob limitação administrativa nos termos da legislação ambiental serão elegíveis para pagamento por serviços ambientais com uso de recursos públicos***, conforme regulamento, com preferência para aquelas localizadas em bacias hidrográficas consideradas críticas para o abastecimento público de água, assim definidas pelo órgão competente, ou em áreas prioritárias para conservação da diversidade biológica em processo de desertificação ou avançada fragmentação. ***(grifos não presentes no original)***
> –
> Art. 9 In relation to private properties, the following are eligible for the provision of environmental services:
>
> (...)
>
> Single paragraph. ***Permanent Preservation Areas, Legal Reserves and others under administrative limitation under the terms of environmental legislation will be eligible for payment for environmental services using public resources***, according to regulation, with preference for those located in hydrographic basins considered critical for public water supply , as defined by the competent body, or in priority areas for the conservation of biological diversity in the process of desertification or advanced fragmentation. ***(emphasis not presented in the original)***

Thus, from a systemic reading of Brazilian environmental legislation, it is clear and evident that areas of mandatory maintenance such as APP, RL and restricted use constitute additionality and must be eligible to carry out payment projects for environmental services that benefit the conservation of biodiversity, the mitigation of the effects of climate change and the water security of the regions in which they are located.

Lastly, it is important to mention the Federal Decree 11.075/2022 (http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2022/decreto/D11075.htm), which “Establishes the

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procedures for the preparation of Sectoral Plans for Mitigation of Climate Change, institutes the National System for the Reduction of Greenhouse Gas Emissions", which, by defining the concept of "carbon credit" within Brazilian environmental legislation, corroborates the above argumentation and as defined in its article 2, item I:

> Art. 2º Para fins do disposto neste Decreto, consideram-se:
>
> I - ***crédito de carbono*** - ***ativo financeiro, ambiental, transferível e representativo de*** redução ou r***emoção de uma tonelada de dióxido de carbono equivalente,*** que tenha sido reconhecido e emitido como crédito no mercado voluntário ou regulado; ***(grifos não presentes no original)***
> –
> Art. 2 For the purposes of the provisions of this Decree, the following are considered:
>
> I - ***carbon credit - financial, environmental, transferable asset representing the*** reduction or ***removal of one ton of carbon dioxide equivalent***, which has been recognized and issued as a credit in the voluntary or regulated market; ***(emphasis not presented in the original)***

Thus, the understanding of removal in environmental legislation is foreseen, which can be generated in areas of mandatory maintenance with the proper additionality configuration for all purposes necessary for its constitution.

Still, to reinforce the understanding, it is worth highlighting the reason why the legislation considers the APP and RL areas as eligible for the remuneration of environmental protection services, which is related to the fact that, for the illegal deforester, it is indifferent what is the legal quality of the area to be deforested. Indeed, APP and RL qualities are mere formal legal structures that assign certain obligations to owners, but this does not necessarily result in greater factual protection.

While the APP and RL status normally assigns negative obligations to the owner, that is, a non-doing (eg, not deforesting), protection and conservation projects go further, establishing positive measures against illicit action by third parties.

In this context, the possibility of financial remuneration (either carbon credit generation or payment for environmental services) is a greater incentive for the owner to increase the protection of APP or RL areas. Additionality, therefore, derives exactly from this plus: a financial incentive is added to the existing legal obligation that, ultimately, results in factual measures to improve the protection of areas, which would not exist in a business as usual scenario.

As a result, the consideration of the “zero” baseline is due to the fact that, since additionality exists from the moment the project begins, it is possible to identify the exact moment when the conservation activities actually start to happen. Therefore, this is the reason why the baseline scenario should be set as zero, since until the moment of evidence of the conservation initiative (project start date), the areas were subject to other alternative land uses, as no resources were available for conducting concrete conservation activities.

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| **Documentation provided by project participant** | | | | |
| Legal analysis of regulations that would support the additionality of projects related to the conservation of APP, RL and RPN:<br>- Federal Law 12.651/2012<br>- Federal Law 6,938/1981<br>- Federal Law, No. 14.119/2021<br>- Federal Decree 11.075/2022 | | | | |
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The legal analysis is pertinent and clarifies the legal support for compliance with additionality requirements in the areas covered by the methodology.

In relation to Federal Law 12,651/2012, it is pertinent to point out that the purpose of generating incentives is not specifically for Permanent Preservation Areas (APPs), Legal Reserves (RLs) or Natural Heritage Private Reserve (RPPNs), as indicated in the following section:

*"(…) I - payment or incentive to environmental services as retribution, monetary or not, for the activities of conservation and improvement of ecosystems and that generate environmental services, such as, individually or cumulatively*".

It is considered that Federal Law 12,651/2012 provides support to the ´*possibility*` of additionality in APPs and RLs in the cited section: *"§ 4 The maintenance activities of Permanent Preservation Areas, Legal Reserves and restricted use are eligible for any payments or incentives for environmental services, constituting additionality for the purposes of national and international markets of certified greenhouse gas emission reductions."*

However, it is not understood by validation team that the mere text of this paragraph grants automatic additionality to all ARR project in any private property in Brazil. Let alone in RL and APP, as the restrictions of use imposed by the law for APP and RL, do not prevent a rural property to be fully productive and profitable, and be able to absorb the cost of protection of this areas as part of the operation costs of the rural activity in the property, which also provides benefits to the same rural activity, such as conservation of water supplies, presence of pollinizing bees, cooler temperatures, wind shield for agricultural fields, etc.

The remaining regulations cited refer to the possibility that private property owners have of registering their real estate in conservation activities in order to contribute to the generation of ecosystem services through the creation of environmental easements and reiterate the right that APP, RL and other areas tend to receive payments for environmental services. Finally, Federal Decree 11,075/2022 highlights the scope of carbon credits as a financial asset.

1) The analysis made by the proponent of the methodology in relation to defining the start date of the initiative as the zero point is considered adequate, but the supporting argument is not completely clear.

The above taking into account the phrase in the answer *"(…) since until the moment of evidence of the conservation initiative (project start date), the areas were subject to other alternative land uses, as no resources were available for conducting concrete conservation activities"* (underlining outside the original text). Is not clear how alternative land uses which provoke deforestation or degradation could be given in RL or APP since they are on private land, as law does not permit them.

2) It is still not clear in the proposed methodology how regulatory surplus has to be proven.

3) The cited sections of the Federal Law 12.651/2012 also establish another series of applicable incentives, such as deduction from the tax calculation base, preferential participation in support programs for the commercialization of agricultural production; allocation of resources for scientific and technological research and rural extension related to the improvement of environmental quality, among others.

In this sense, the proposed methodology does not also propose eligibility criteria in relation to areas that are already subject to other types of incentives indicated in the first mentioned rule, in the *Table 2 – List of conditions for the applicability of the Methodology for Carbon Removal in Private Conservation Areas (V1.0)*. This would be based on compliance with the principles of the SC standard, including Transparency and Conservativeness.

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4) On the other hand, understanding that the legal support of the additionality of these areas would allow supporting those who carry out activities in favour of the conservation of ecosystems, a negative incentive could be generated. This situation could be presented given the real situation of other owners who made the decision in past years to intervene these areas (APP, RL) and change the forest for areas for the development of cattle breeding activities or for the establishment of cultivation areas.

In this sense, it is not clear how, under the eligibility criteria proposed in the methodology, the possibility that the APPs or RLs have presented this type of situation in the past and currently intend to opt for the sale of carbon credits for start a recovery process.

5) In relation with the conclusion phrase:

*"Thus, from a systemic reading of Brazilian environmental legislation, it is clear and evident that areas of mandatory maintenance such as APP, RL and restricted use constitute additionality and must be eligible to carry out payment projects for environmental services that benefit the conservation of biodiversity, the mitigation of the effects of climate change and the water security of the regions in which they are located.".*

This audit considers that the phrase cannot be assumed in a general way and that although private properties that include APPs or RLs can indeed opt for payments for environmental services, the condition of additionality for GHG mitigation projects should be analysed on a case-by-case basis. The methodology establishes eligibility criteria that must be strictly followed.

Audit conclusion:

**Finding remains open.**

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Regarding the request for clarification on how alternative land uses that cause forest degradation or deforestation can take place on APP or RL, it is worth mentioning the appropriateness of the baseline scenario and the demonstration of additionality shall be demonstrated at the project level, following the procedures proposed under Sections 6 (Baseline Scenario) and 7 (Additionality) of the revised methodology. Therefore, the likelihood of alternative land uses and the additionality of the conservation measures shall be demonstrated and assessed as part of the project development, using the procedures proposed by the methodology and the referred tools.

Moreover, the mere mention of "configuration of additionality" in Federal Law 12.651/2012 does not result in automatic additionality for projects seeking to conserve private areas inside or outside APP and RL. Regarding the demonstration of additionality (Section 7), the methodology was revised in order to establish requirements for the additionality analysis depending on the scale of the project. In addition, Section 3 of the methodology (Definitions) was also revised in order to ensure that the additionality analysis should be conducted.

The assessment of additionality for small-scale projects is detailed in Appendix 1 of the Methodology, according to the appendix of the CDM methodologies "AR-AMS0003: Afforestation and reforestation project activities implemented on wetlands" (V 03.0) and "AR-AMS0007: Afforestation and reforestation project activities implemented on lands other than wetlands" (V. 03.1). On the other hand, for large-scale projects, the most recent version of the CDM TOOL 02 "*Combined tool to identify the baseline scenario and demonstrate additionality*" should be adopted, considering it is applicable to all types of proposed project activities and its last version dates from 2017.

Regarding the regulatory surplus, the project proponents must demonstrate a regulatory surplus, according to the requirements set out in the "SOCIALCARBON Methodology Requirements" (V 1.0, page 24): *"The project shall not be mandated by any law, statute or other regulatory framework, or for UNFCCC non-Annex I countries, any systematically enforced law, statute or other regulatory framework. For UNFCCC non-Annex I countries, laws, statutes, regulatory frameworks or policies implemented since 11 November 2001 that give comparative advantage to less emissions-intensive technologies or activities relative to more emissions-intensive technologies or activities need not be taken into account (...)"*. This instruction has been added to the proposed methodology in Section 7 (Additionality) for small-scale projects and, in case of large-scale projects, the steps provided by the most recent version of the CDM TOOL 02 must be used to demonstrate the regulatory surplus. It is also established in the "SOCIALCARBON Methodology Requirements" ("note" in page 23), *"(...) methodologies may directly reference the SOCIALCARBON Standard requirements on regulatory surplus and do not need to further develop a procedure for demonstrating and assessing regulatory surplus)".*

In order to guarantee the compliance with the principles of the SC standard, especially Transparency and Conservativeness, and to avoid double counting, the following sentence was included in the revised methodology (Section 4, Applicability Conditions): *"Areas where incentives are provided for conservation activities (such as the Payment for Environmental Services - PES) are eligible under this methodology, as long as: (i) compliance with the applicability conditions on Table 2 are satisfied; (ii) the demonstration of additionality is satisfied (as per procedures provided on Section 7); (iii) the project does not result in double counting with other GHG programs and, as per the principles of the SOCIALCARBON Standard, especially Transparency and Conservativeness."*

In "Project Boundary" (Section 5), the proposed methodology establishes that areas converted to alternative use within the 10-year period prior to the project start date are not eligible: "*With regard to the project area, this usually corresponds to the area of primary and/or secondary vegetation, excluding: (i) areas where there were changes in land use and cover during the period under analysis*

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| *("conversion" to alternative land use within a period of 10 (ten) years prior to the project start date);* (...)". It is important to clarify that the procedure for the verification and description of the condition of the vegetation is detailed in the same Section 5, and shall be carried out on a case-by-case basis. | | | | |
| **DOE assessment** | | | | **Date:** 11/10/2022 |
| The proponent of the methodology makes the pertinent clarifications and adjustments in the corresponding sections of the document, where clarifications are made regarding the tools to be used to demonstrate additionality on a case-by-case basis in the projects that opt for the use of the methodology.<br><br>Audit conclusion:<br>**Finding closed successfully** | | | | |

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| **Description of CAR** | | | | |

**Criteria:**

- Section 3.5 of SOCIALCARBON – Methodology Requirements 1.0

It is not clear how the guidelines set forth in section 7 of the methodology and appendix 2 comply with and develop the steps provided in numerals 3.5.2, 3.5.3, 3.5.4 and 3.5.5 of SOCIALCARBON-Methodology Requirements 1.0.

It is not clear how the methodology proponent take into account the note provided in page 24 of the methodology requirements: *"Note – Reference in a methodology to the SOCIALCARBON Standard requirements on additionality is insufficient. The SOCIALCARBON Standard requirements are high level requirements and do not represent a full and detailed procedure for the demonstration of additionality…." (Underline outside text).*

It is not clear how the demonstration of regulatory surplus indicated in section *7.Additionality* is consistent with inclusion of APPs, RL in project areas, which conservation is mandatory per the law or in biomes with mandatory conservation even outside APP/RL (e.g. Mata Atlântica).

It is not clear, even for project areas as APPS, RL, etc, how only the application of Common Practice analysis (using respective CDM TOOL), is enough to demonstrate additionality of a project, as it is used in CDM to *confirm* additionality but not alone to *demonstrate* additionality of a project. In other words, how demonstrating that a project is not a common practice equals demonstrating that additionality, i.e. that the project activity (conservation of native vegetation if private properties) is not the baseline scenario.

In Appendix 2:

- It is stated that "*proponents must show that the process would not have occurred naturally*". It is not clear what process is meant by this (conservation of native areas in the property?);
- It is stated in footnote 34 that the barriers are adapted from Guidelines for objective demonstration of barriers. However such guidelines do not present any of the listed barriers;
- It is not understood why In bullet (a) (iii) only international capital markets are included and not national, as a project can have access to national capital markets but not to international capital markets;
- In footnote 34 it is stated that proponents "can" refer to CDM guidelines objective demonstration and assessment of barrier, which means it is not required. Hence, it is not ensured by the proposed methodology the objective demonstration and assessment of barriers.

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- Section 7 and Appendix 2 - Additionality

With regard to items 3.5.2, 3.5.3, 3.5.4 and 3.5.5, the CDM Methodological Tool (*"Tool for the demonstration and assessment of additionality"* - Version 07.0.0) has been adopted, corresponding to the first method described as accepted by the SOCIALCARBON Methodology Requirements (p. 23) for demonstration and assessment of additionality: *"(...) New methodologies developed under the SOCIALCARBON Standard shall meet this requirement by doing one of the following: i) Referencing and requiring the use of an appropriate additionality tool that has been approved under the SOCIALCARBON Standard or an approved GHG program. (...)".* In this sense, Appendix 2 has been excluded from the proposed methodology.

- Note - Page 24 - Methodology Requirements

As mentioned above, the CDM Methodological Tool (*"Tool for the demonstration and assessment of additionality" - Version 07.0.0*) has been adopted to demonstrate the additionality of the project.

- Demonstration of regulatory surplus - Additionality

As mentioned above (CAR 05 - Project participant response), APP and RL qualities are mere formal legal frameworks that assign certain obligations to owners, but this does not necessarily result in greater factual protection of these areas. In addition, as previously discussed, Federal Law 12.651/2012 provides in its article 41:

> § 4º As atividades de ***manutenção das Áreas de Preservação Permanente, de Reserva Legal e de uso restrito são elegíveis*** para ***quaisquer pagamentos ou incentivos*** por serviços ambientais, ***configurando adicionalidade para fins de mercados nacionais e internacionais*** de reduções de emissões certificadas de gases de efeito estufa. ***(grifos não presentes no original)***
>
> § 4 The **maintenance activities of Permanent Preservation Areas, Legal Reserves and restricted use are eligible** for **any payments or incentives** for environmental services, **constituting additionality for the purposes of national and international markets** of certified greenhouse gas emission reductions. ***(emphasis not present in the original)***

The grammatical interpretation of the framework leaves no doubt about the legal provision that carbon removal in areas of native vegetation maintained by private individuals is eligible for projects to generate removal carbon credits, including in areas where conservation is mandatory, such as APP, RL and restricted use, configuring additionality for purposes of national and international markets.

- Application of Common Practice - Additionality

As mentioned above, the CDM Methodological Tool (*"Tool for the demonstration and assessment of additionality" - Version 07.0.0*) has been adopted to demonstrate the additionality of the project, which resulted in the exclusion of the Common Practice analysis.

- Appendix 2

As mentioned above, the adoption of the CDM Methodological Tool resulted in the exclusion of the Appendix 2 from the proposed methodology.

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| **Description of CAR** | | | | |
| **Documentation provided by project participant** | | | | |
| Version 1.1 of the Methodology for Carbon Removal in Private Conservation Areas is generated, Chapter 7 has been adjusted. | | | | |
| **DOE assessment** | | | | **Date:** 17/08/2022 |
| As it shows in the answer phrase: *"(…) APP and RL qualities are mere formal legal frameworks that assign certain obligations to owners, but this does not necessarily result in greater factual protection of these areas"*, the proponent considers that the law is a **mere legal framework**, which does represent factual protection. The audit team considers that compliance with the law should not be assumed in this way, when a methodology is being proposed for a standard that requires compliance with legal requirements as an element of project eligibility.<br><br>The validation team strongly considers that the mere mention of "configuration of additionality" in Federal Law 12.651/2012 does not result in automatic additionality for projects seeking to conservate private areas inside or outside APP and RL.<br><br>The proponent of the methodology has adjusted chapter 7. Common Practice analysis and Appendix 2 were excluded from the proposed methodology. CDM Methodological TOOL 01 (demonstration and assessment of additionality), as well as CDM TOOL 21 (demonstration of additionality of small scale project activities) have been adopted to demonstrate the additionality of the project.<br><br>However, the proposed CDM TOOLs[1] are not meant for AFOLU projects, as they are not A/R TOOLs, whereas CDM AR-TOOL 02 "combined tool to identify baseline scenario and demonstrate additionality in A/R CDM projects activities" is.<br><br>It is also still not clear in the proposed methodology how regulatory surplus has to be proven.<br><br><u>Audit conclusion:</u><br><br>**Finding remains open** | | | | |
| **Project participant response** | | | | **Date:** 06/09/2022 |

[1] TOOL 01, parag 13(b) footnote 3

As correctly pointed out by the validation team, the mere mention of "configuration of additionality" in Federal Law 12.651/2012 does not result in automatic additionality for projects seeking to conserve private areas inside or outside APP and RL. However, additionality shall be demonstrated in accordance with the specific procedures for small or large-scale projects (Section 7 of the methodology). In addition, the text below was added (in bold) in order to clarify the text, included in "Legal instruments for mandatory or voluntary environmental conservation" (Section 3): *"**Regarding the aforementioned legal instruments, it should be noted that their existence does not guarantee the preservation of the areas.** That said, for the purposes of the Methodology for Carbon Removal in Private Conservation Areas, all areas of "Managed Primary Formations" and "Managed Secondary Formations" on private land are considered to be eligible for the project, **as long as the applicability conditions (set out in Section 4) and the demonstration of additionality (set out in Section 7) are met**."*

Therefore, the eligibility criteria described in Table 2 – *"List of conditions for the applicability"* also apply to areas where APPs, RLs and/or RPPNs exist, provided that they comply with the definition of "managed primary formations" and/or "managed secondary formations". In addition, the demonstration of additionality shall be conducted, according to Section 7 of the methodology.

Regarding the demonstration of additionality (Section 7), the methodology was revised in order to establish requirements for the additionality analysis depending on the scale of the project. The assessment of additionality for small-scale projects is detailed in the Appendix 1 of the Methodology, according to the CDM methodologies "AR-AMS0003: Afforestation and reforestation project activities implemented on wetlands" (V 03.0) and "AR-AMS0007: Afforestation and reforestation project activities implemented on lands other than wetlands" (V. 03.1). On the other hand, for large-scale projects, the most recent version of the CDM TOOL 02 "Combined tool to identify the baseline scenario and demonstrate additionality" should be adopted, considering it is applicable to all types of proposed project activities and its last version dates from 2017, which is more recent than CDM AR-TOOL 02 (most recent version dated from 19 October 2007).

In addition, the project proponents must demonstrate the regulatory surplus, according to the requirements set out in the "SOCIALCARBON Methodology Requirements" (V 1.0, page 24): *"The project shall not be mandated by any law, statute or other regulatory framework, or for UNFCCC non-Annex I countries, any systematically enforced law, statute or other regulatory framework. For UNFCCC non-Annex I countries, laws, statutes, regulatory frameworks or policies implemented since 11 November 2001 that give comparative advantage to less emissions-intensive technologies or activities relative to more emissions-intensive technologies or activities need not be taken into account (...)"*. This instruction has been added to the proposed methodology in Section 7 (Additionality) for small-scale projects and, in case of large-scale projects, the steps provided by the most recent version of the CDM TOOL02 must be used to demonstrate the regulatory surplus. It is also established in the "SOCIALCARBON Methodology Requirements" ("note" in page 23), *"(...) methodologies may directly reference the SOCIALCARBON Standard requirements on regulatory surplus and do not need to further develop a procedure for demonstrating and assessing regulatory surplus)."*

It is worth mentioning that small-scale and large-scale designations are as per CDM definitions, according to the SOCIALCARBON Standard (V 6.0, page 9, footnote 1). In this sense, this clarification was included as footnote 30 in Section 7 (Additionality) in the last version of the methodology.

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| The proponent of the methodology makes the pertinent clarifications in the corresponding sections of the document, where clarifications are made regarding the tools to be used to demonstrate additionality on a case-by-case basis in the projects that opt for the use of the methodology.<br><br>Audit conclusion:<br>**Finding closed successfully** | | | | |

**Technical Review Findings:**

The technical review identified some gaps in the correct description of the contents of the templates of the main document of the methodology, in which it is considered necessary to expand the justification, seeking compliance with all the principles established by the Social Carbon Standard.

| CL ID | 07 | Section no. | | Date: 04/11/2022 |
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| **Description of CL** | | | | |
| Criteria:<br>● Methodology Requirements 1.0 and Sources<br>It is not clear how the VM00015 methodology, of another typology in this sector, has contributed to the proposed methodology.<br>● Methods Approaches<br>The delimitation of the term "managed areas", the specificities of what is included or excluded from the methodology and what is considered as human-induced GHG removal, the sources and justification of the scope of the methodology are not clear. | | | | |
| **Project participant response** | | | | **Date: 14/08/2022** |

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| **Description of CL** | | | | |

- *"It is not clear how the VM00015 methodology, of another typology in this sector, has contributed to the proposed methodology."*

Although VM0015 is a methodology for another project typology (i.e. REDD AUD), its land use and land cover analysis process seeks to identify areas with persistence of native vegetation cover, which is in line with the purpose of the present methodology. However, since it is another typology in the sector, the references made to VM0015 were excluded from SCM0003.

- *"The delimitation of the term "managed areas", the specificities of what is included or excluded from the methodology and what is considered as human-induced GHG removal, the sources and justification of the scope of the methodology are not clear."*

SCM0003 considers all areas with native vegetation cover on private properties as potentially eligible, through the application of methodological procedures to verify the temporality and quality of these areas as "managed areas" to define the project area, described in Section 4 (Applicability Conditions) The definition of "managed areas" is found in Section 3 (Definitions, p. 9) as "managed primary formations" and "managed secondary formations".

Once the native vegetation cover has been qualified, the applicability of SCM0003 will take place through the demonstration that there are significant anthropogenic conservation activities being carried out in the area to maintain the aforementioned native vegetation cover and, consequently, permanence of the carbon removal capacity from the atmosphere. In order to clarify the methodology, a definition for "anthropogenic conservation activities", in line with IPCC (2006), has been included in Section 3 (Definitions, p. 8).

The table indicating the GHG Sources included in or excluded from the Project Boundary was inserted in SCM0003 (Table 4, p. 18).

Regarding the justification of the scope of the methodology, according to SOCIALCARBON Standard v6.0 (Appendix 1), Afforestation, Reforestation and Revegetation (ARR) fits as one of the eligible AFOLU project categories under the standard. SCM0003 was considered as ARR Methodology as it is based on increasing carbon sequestration by establishing, increasing or restoring vegetative cover (forest or non-forest). Please notice a similar methodology was developed by the SOCIALCARBON team (SCM0006 ) that provides a similar approach to the present methodology. Such methodology was classified by the SOCIALCARBON team under Scope 14 and quantifies net GHG emission removals (NERs) from project activities that conserve terrestrial habitats of significant biodiversity and/or ecosystem value. Therefore, applying the same scope to SCM0003 is considered appropriate by the Proponents.

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| **Description of CL** | | | | |
| The audit team verifies the exclusion of the reference to the AUD VM00015 methodology from the main document, the inclusion of the requested definition and the respective source consistent with that established by the IPCC and the adjustment of Section 3 of the document. In last version of Methodology, the proponent replaces the term "Anthropogenic conservation activities" for "Anthropogenic GHG removals activities".<br><br>Audit conclusion:<br><br>**Finding closed successfully** | | | | |

| CL ID | 08 | Section no. | | Date: 04/11/2022 |
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| **Description of CL** | | | | |
| **Criteria:**<br>• Legal instruments for mandatory or voluntary<br>It is not clear whether the applicable standards can be updated or modified, the description of the status of the applicable standards is not included, nor are the procedures for defining the spatial boundaries of the project in accordance with the regulations specified. | | | | |
| **Project participant response** | | | | **Date: 14/08/2022** |
| • *"It is not clear whether the applicable standards can be updated or modified, the description of the status of the applicable standards is not included, nor are the procedures for defining the spatial boundaries of the project in accordance with the regulations specified."*<br>As established in section 3 (Definitions), the existence of "Legal instruments for mandatory or voluntary environmental conservation" (e.g. APP, RL, EVN, RPPN) does not guarantee, in practical terms, the conservation of these areas. In this sense, the portions that correspond to managed primary formations and managed secondary formations in such areas may be considered eligible for the project, provided that the eligibility conditions described in section 4 (Applicability Conditions, Table 2, p. 11-13) are observed, as well as the procedure for defining the Project Boundary (Section 5) and for the demonstration of additionality (Section 7).<br>Any updates or changes in the regulatory framework and resulting normative instruments must be considered during the preparation of the Project Design Document by the project proponent. This was included in the definition of "Legal instruments for mandatory or voluntary environmental conservation" (Section 3. Definitions, p. 8). | | | | |

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| **Description of CL** | | | | |
| **Documentation provided by project participant** | | | | |
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| **DOE assessment** | | | | **Date:** 17/08/2022 |
| The audit team verifies the inclusion of the relevant clarifications in section 3 of the document and the expansion of the definition of legal instruments for mandatory or voluntary conservation and that adjustments are made in relation to the procedure for establishing the spatial boundaries of projects in section 5 of the document.<br><br>Audit conclusion:<br><br>**Finding closed successfully** | | | | |

| CL ID | 09 | Section no. | | Date: 04/11/2022 |
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| **Description of CL** | | | | |

**Criteria:**

- Carbon pools

In the section on additionality, as in the section on boundaries, the following statement is not clear: "This carbon pool will be included when project activities may significantly reduce the pool", with respect to whether it refers to reduction of GHGs or enhancement of carbon pools. It is unclear whether the intent is to state that carbon pools are optional for inclusion when there are significant changes in those carbon pools.

- GHG Sources

The sources of GHGs that are included are not clear or there is no description of these sources within the project boundaries.

- Net GHG Emission Removals and Uncertainty

Quantification of Net HGH is not included and there is no justification as to why it is not included.

The methodological requirements for the calculation of uncertainty and the discounts applied are not described in the main document, no source is included, and it is not clear why this gap is not justified.

The SC Template determines:

*"Include an explanation of whether and how:*

- *All algorithms, equations and formulas used are appropriate and without error.*
- *Any uncertainties associated with the quantification of net GHG emission reductions and removals are addressed appropriately"*

- Baseline Scenario

It is not clear why the project scales of the methodology are not defined, in accordance with CDM definitions, e.g., the CDM states that in small-scale projects, project activities should be developed or implemented by low-income communities and individuals, as determined by the host Party. The CDM tool used by the project proponent is used without discriminating the scale of the project and there is no justification for this.

- Leakage

The proponent of the methodology does not include a justification for the exclusion of leakage for primary and secondary formation management projects.

The SC Report Template establishes *"For AFOLU methodologies, include an explanation of how the procedures for calculating leakage comply with the SOCIALCARBON rules for the relevant AFOLU project category(s)."*

| Project participant response | Date: 14/08/2022 |
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- *Carbon pools: In the section on additionality, as in the section on boundaries, the following statement is not clear: "This carbon pool will be included when project activities may significantly reduce the pool", with respect to whether it refers to reduction of GHGs or enhancement of carbon pools. It is unclear whether the intent is to state that carbon pools are optional for inclusion when there are significant changes in those carbon pools.*

As pointed out by the technical review, the intention was to indicate that carbon pools are optional for inclusion when there are significant changes in those carbon pools by project activities. The changes were made in section 5 (Project Boundary, Table 3, p.16-17). The following definition for significance was also included in the same section (p. 16): *"Carbon pools may be deemed insignificant and do not need to be accounted for if any carbon pool result in an increment of less than 5% of the total $CO_2$ removals or if the total omitted increase in GHG emissions amounts to less than 5% of the total GHG benefit generated by the project"*. The following sentence was also added to section 8 ("Quantification of GHG Emissions Reductions and Removals", p. 19 and "Project Emissions and Removals", p. 20, footnote 35) and sub-section 9.1 ("Data and Parameters Available at Validation", p. 25): *"If new and more accurate carbon removal data become available, these can be used to estimate the annual increase in biomass."*

- *GHGs Sources: The sources of GHGs that are included are not clear or there is no description of these sources within the project boundaries.*

The table indicating the GHG Sources included in or excluded from the Project Boundary was inserted in SCM0003 (Table 4 - p. 17). According to CDM AR methodologies (AR-AMS0003 and AR-AMS0007), the only GHG source included should be burning biomass. In this sense, additions were made to sections 5, 8.2, 8.4, 9.1, 9.2 and 9.3 ("Project Boundary", "Project Emissions and Removals", "Net GHG Emissions and Removals", "Data and Parameters Available at Validation", "Data and Parameters Monitored" and "Description of the Monitoring Plan", respectively) to align with the procedures to calculate project scenario emissions due to burning biomass.

- *Net GHG Emission Removals and Uncertainty: Quantification of Net HGH is not included and there is no justification as to why it is not included. The methodological requirements for the calculation of uncertainty and the discounts applied are not described in the main document, no source is included, and it is not clear why this gap is not justified.*

"Net GHG Emissions and Removals" (sub-section 8.4, p. 23 and sub-section 9.3, p. 33) was properly updated, according to additions and clarifications made in SCM0003. "Uncertainty" section is not included in the SOCIALCARBON template, but was added to the methodology (sub-section 8.5, p. 24), as requested by the technical review.

- *Baseline Scenario: It is not clear why the project scales of the methodology are not defined, in accordance with CDM definitions, e.g., the CDM states that in small-scale projects, project activities should be developed or implemented by low-income communities and individuals, as determined by the host Party. The CDM tool used by the project proponent is used without discriminating the scale of the project and there is no justification for this.*

The project scale definition was included in section 4 (Applicability Conditions - Table 2, p. 11, "Project scale"), in accordance with CDM definitions. In section 6 (Baseline Scenario, p. 18), the different approaches to establishing the baseline scenario were described, depending on the scale of the project.

| CL ID | 09 | Section no. | | Date: 04/11/2022 |
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| **Description of CL** | | | | |
| • *Leakage: The proponent of the methodology does not include a justification for the exclusion of leakage for primary and secondary formation management projects.*<br><br>According to CDM AR methodologies (AR-AMS0003 and AR-AMS0007), possible sources of leakage for AR projects are associated with the displacement of agricultural activities, which should be estimated through CDM AR-TOOL15. However, according to Section 4 (Applicability Conditions), which describes the applicability conditions for SCM0003, areas where there have been changes in the land use and cover ("conversion" to alternative land use) within the 10 (ten) years prior to the project starting date shall be ineligible. It is understood, therefore, that there is no possibility of displacement of alternative land use from the project area to outside it. Hence, the leakage is assumed to be zero.<br><br>These clarifications were included in subsection 8.3, Leakage (p. 23). | | | | |
| **Documentation provided by project participant** | | | | |
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| **DOE assessment** | | | | **Date: 17/08/2022** |
| Clarifications and text inclusions were made by the proponent in the corresponding sections of the document, and the description of the main topics that the Social Carbon standard requires in the methodological procedure was expanded.<br><br><u>Audit conclusion:</u><br><br>**Finding closed successfully** | | | | |