SIMFlor Programme 1

Document Prepared by BVRio

Contact Information

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CONTENTS

1 PROJECT DETAILS

1.1 Summary Description of the Project

The SIMFlor *(Systematic Implementation of the Brazilian Forest Code)* Programme 1, hereinafter known as "SIMFlor1", is a grouped project located in the arc of deforestation within the Amazon biome. SIMFlor1 will provide carbon finance to promote native forest conservation in areas under threat of deforestation for the expansion of extensive cattle ranching thereby promoting compliance with the Brazilian Forest Code.

SIMFlor1 will be conducted in the southern part of the Amazonian states, focusing on the areas of influence (250 km radius) of the slaughterhouses that have been established in the region since 2008 (Figure 1). The programme area lost 78,272 km^2 of forest in the period 2012-2021, with an alarming increase in deforested area from 2019 onwards. Therefore, the remaining areas are of extreme conservation value and are highly threatened.

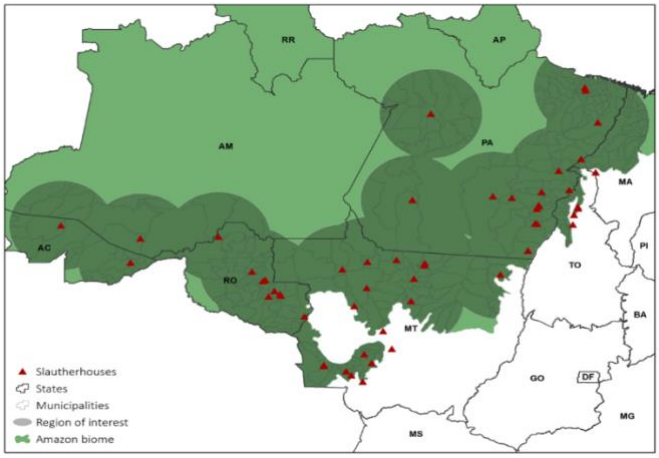


Figure 1. SIMFlor1 project area

SIMFlor1 will utilize carbon finance to acquire and retire Forest Legal Reserve Credits ("CRAs" - *Cotas de Reserva Ambiental* in Portuguese) from landowners that have native vegetation exceeding the minimum amount ("excess legal reserves" or "ELR") required by the Brazilian Forest Code (Brazilian Law 12.651). By acquiring "CRAs", there will be the legal requirement of protection of both the ELRs as well as other areas required by the Forest Code (Forest Legal Reserves and Areas of Permanent Protection - "APPs"). In order to ensure long term protection of these privately-owned areas, the acquisition of CRAs will be made as annual payments over a 30-year period subject to continued compliance with the Forest Code and maintenance of ELR.

It is estimated that once the project is established and more project activity instances added the annual average GHG emission reductions will be in the region of 1,000,000 tCO_2e/year. Over the 30-year lifetime of the project this will lead to total GHG emission reductions in the region of 30,000,000 tCO_2e.

1.2 Sectoral Scope and Project Type

Project scope 14: Agriculture, Forest and other Land Use (AFOLU)

Project Category: Reducing Emissions from Deforestation and Forest Degradation

Activity type: Avoided Planned Deforestation (APD)

Grouped Project: Yes, with 8 farms joining the project at the outset

1.3 Project Eligibility

For a project to be eligible under the scope of the VCS Program v4.3 it must meet the rules and requirements set out in section 3 of the VCS Standard document. For the general requirements, SIMFlor1 meets all the applicable rules and requirements as follows:

1) The project applies a methodology eligible under the VSC program. The methodology SIMFlor1 uses is VM0007 v1.6. It is applied in full, including the full application of the tools and modules referred to in the methodology. A full list of these tools and modules can be found in section 3.

2) The SIMFLor1 project and the implementation of its project activities does not lead to the violation of any applicable law, regardless of whether or not the law is enforced.

3) The methodology used, VM0007 v1.6 does not permit the project proponent to use its own choice of model, and SIMFLor1 does not use a model.

4) All third-party default factors and standards used to ascertain GHG emission data and all supporting data for establishing baseline scenarios and demonstrating additionality meets with the requirements set out in the VCS Program document VCS Methodology Requirements.

5) SIMFlor1 applies a methodology that uses performance methods for determining both additionality and the crediting baseline.

6) SIMFlor1 uses a VCS Program methodology, not a methodology from another approved GHG program so there is no conflict with the rules and requirements, or capacity limits, of the VCS Program.

7) SIMFlor1 will adhere to any new requirements that are issued after the current project crediting period for the following project crediting period renewal.

For the AFOLU specific matters, SIMFlor1 meets all the applicable rules and requirements as follows:

1) SIMFlor1 is a reduced emissions from deforestation and degradation (REDD) project, which is one of the six eligible AFOLU categories under the VCS program.

2) The project is not located within a jurisdiction covered by a jurisdictional REDD+ program.

3) All project proponents, including any implementation partners, are identified in the project description, including their roles and responsibilities with respect to the project.

4) No project activities convert native ecosystems to generate GHG credits. The project will reduce net GHG emissions by reducing deforestation.

5) The project does not take place on wetlands and no project activities drain native ecosystems or degrade hydrological functions to generate GHG credits.

6) SIMFlor1 will demonstrate that project activities that lead to the intended GHG benefit have been implemented during each verification period in accordance with the project or that previously implemented project activities continued to be implemented during the verification period.

1.4 Project Design

☒ The project is a grouped project

Eligibility Criteria

SIMFlor1 is a grouped project and as such, must meet the grouped project requirements listed in the VCS Standard v4.3, SIMFlor1 meets these requirements as follows:

1) SIMFlor1 has a single clearly defined geographic area within which the project activity instances are developed. This area is explained in detail in section 1.12. It consists of the area surrounding slaughterhouses (250km radius) that have been established since 2008 in the Brazilian Legal Amazon.

2) The baseline scenario and demonstration of additionality are based upon the initial project activity instances which are included in this project description document at the time of validation. All project activity instances currently implemented on the issue date of the project description are included in the document. Geographic areas with no initial project activity instances are included in the project because it can be demonstrated that such areas are subject to the same (or at least as conservative) baseline scenario and rationale for the demonstration of additionality as a geographic area that does include initial project activity instances. This is explained in detail in section 3.4. and 3.5.

3) While grouped projects may incorporate multiple project activities, SIMFlor1 only has a single project activity, which is avoided planned deforestation. In order to achieve this goal, long-term forest conservation agreements will be signed between the landowners and SIMFLOR1, backed by the acquisition of Forest Legal Reserve Credits (CRAs), a legally binding instrument in Brazilian law.

4) The baseline scenario for the project activity of avoided planned deforestation has been determined for the designated geographic area in accordance with VM0007, which is the methodology applied to the project. The single baseline covers the whole project area because the area is subject to the same deforestation threats (increased demand for cattle ranching) and regulatory framework (the Brazilian Forest Code).

5) The additionality of the initial project activity instances is demonstrated for the designated geographic area, in accordance with the methodology VM0007, which requires the use of tool

VT0001. This additionality can also be demonstrated for the entirety of the geographic region because the whole area is subject to the same deforestation threats (increased demand for cattle ranching) and regulatory framework (the Brazilian Forest Code) as the initial project activity instances.

6) Common practice, laws, statutes, regulatory frameworks and policies relevant to demonstration of regulatory surplus, as well as historical deforestation and degradation rates are all the same across the defined geographic area of the grouped project.

7) There are no capacity limits for the project activity (avoided planned deforestation) included in SIMFlor1.

Eligibility Criteria for New PAIs

As per the VCS Standard v4.3, grouped projects such as SIMFlor1 must have a set of eligibility criteria for the inclusion of new project activity instances. For the project activity of avoiding planned deforestation within the defined geographic area of the project, any new project activity instances must:

1) Meet the applicability conditions set out in the VCS methodology applied to the project. The methodology applied is VM0007 v1.6, and so project activity instances must comply as follows:

   - The initial PAIs are not registered under any other GHG program.
   - All lands included in the initial PAIs meet or exceed the threshold criteria for native primary forest, according to the Brazilian forest definition.
   - Baseline scenario in the project area is planned deforestation and degradation.
   - Leakage avoidance activities in initial PAIs do not include agricultural lands that are flooded to increase production, neither livestock production through use of feed-lots and/or manure lagoons.
   - The baseline scenario for all the PAIs applied under SIMFlor1 are based in the legal conversion of forest lands to non-forest lands, according to the Brazilian Forest Code.

2) Use the technologies or measures specified in the project description. The measures used to prevent planned deforestation (and therefore avoid GHG emissions) and the signing of long-term forest conservation agreements between landowners and SIMFlor.

3) Apply the technologies or measures in the same manner as specified in the project description. The measures described above (long-term forest conservation agreements) will be applied for all project activity instances.

4) Are subject to the baseline scenario determined in the project description for the specified project activity and geographic area. The analysis used to determine the baseline scenario shows that it

is the same across the defined geographic area of the project and so all is the same for all project activity instances within this area.

5) Have characteristics with respect to additionality that are consistent with the initial instances for the specified project activity and geographic area. New project activity instances will have the same financial, technical and other parameters, as well as the same investment, technological and other barriers as the initial project activity instances. This has been checked because the characteristics of additionality have been determined for the defined geographic area of the grouped project.

Inclusion of New PAIs

According to the VCS Standard v4.3, the inclusion of new PAIs shall meet the following criteria:

1) *Occur within one of the designated geographic areas specified in the project description*.

2) *Comply with at least one complete set of eligibility criteria for the inclusion of new project activity instances*.

3) *Be included in the monitoring report with sufficient technical, financial, geographic and other relevant information to demonstrate compliance with the applicable set of eligibility criteria and enable sampling by the validation/verification body*.

4) *Be validated at the time of verification against the applicable set of eligibility criteria*.

5) *Have evidence of project ownership, in respect of each project activity instance, held by the project proponent from the respective start date of each project activity instance*.

6) *Have a start date that is the same as or later than the grouped project start date*.

7) Be eligible for crediting from the start date of the instance through to the end of the project crediting period.

SIMFlor1 project activity instances (PAIs) will meet these criteria as follows: Firstly, all PAIs will be located in the single designated geographic area that encompasses all the private landholdings legally constituted in the Legal Amazon surrounding slaughterhouses (250 km radius) with forest cover exceeding the amount required by the Brazilian Forest Code. Secondly, the PAIs will meet the minimum eligibility requirements for entry into the project, namely, be regularized rural properties within the Legal Amazon with forest cover exceeding the amount required by the Brazilian Forest Code, and have a signed long-term forest conservation agreement between the rural landowner and SIMFlor. Thirdly, all future PAIs will be included and described in monitoring reports, with details of how they comply with the eligibility criteria described in this current document. Fourthly, future PAIs included in the grouped project will be validated against the applicable set of eligibility criteria during the grouped project verification. Fifthly, evidence of project ownership for future PAIs will be provided in any further grouped project verifications. Sixthly, for start date for each PAI will be later than the grouped project start date and will be the date of

signature of the long-term forest protection agreement with SIMFlor. Lastly, future PAIs will be eligible for crediting from the start date of the instance through to the end of the project crediting period and will have crediting periods related to their specific baseline as per VMD0006 v1.3 requirements.

1.5 Project Proponent

Provide contact information for the project proponent(s). Copy and paste the table as needed.

Organization name	SIMFlor Ltd
Contact person	Pedro Moura Costa
Title	Director
Address	8 King Edward Street, Oxford, OX14HL
Telephone	+44 7588649367
Email	Pedro.mouracosta@sim.finance

1.6 Other Entities Involved in the Project

Provide contact information and roles/responsibilities for any other entities involved in the development of the project. Copy and paste the table as needed.

Organization name	BVRio
Role in the project	Environmental oversight and PD development
Contact person	Grace Blackham
Title	Director of Land Use
Address	8 King Edward Street, Oxford, OX14HL
Telephone	+44 7588649367
Email	Grace.blackham@bvrio.org

Organization name	Ecosecurities
Role in the project	Environmental oversight and PD development
Contact person	Magno Castelo Branco

Title	Head of Nature Based Solutions
Address	Rue des Noirettes 20 1227 Geneva, Switzerland
Telephone	+55 11 98905.3450
Email	magno.cb@ecosecurities.com

Organization name	SIM Sustainable Investment Management
Role in the project	Environmental oversight and analysis
Contact person	Pedro Moura Costa
Title	Director
Address	8 King Edward Street, Oxford, OX14HL
Telephone	+44 7588649367
Email	Pedro.mouracosta@sim.finance

1.7 Ownership

The SIMFLOR1 ownership is defined by "*An enforceable and irrevocable agreement with the holder of the statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions or removals which vests project ownership in the project proponent.*" (VCS Standard v4.3, section 3.6.1.)

Project ownership details will be provided for each PAI and documented in the Appendix.

1.8 Project Start Date

According to the VCS Standards v4.2 (section 3.7) "*the project start date of an AFOLU project is the date on which activities that led to the generation of GHG emission reductions or removals are implemented*". Table 1 below shows the SIMFlor1 grouped project start date as well as its justification.

Table 1. SIMFlor1 Grouped Project start date

Project start date	Justification

01/08/2022	On this day, SIMFlor and the landowners of the initial PAIs (project participants) signed an agreement to pursue a forest conservation project on their farms rather than clearing their land for other uses.

1.9 Project Crediting Period

Table 2. SIMFlor1 Grouped Project crediting period

Project start date	Project end date	years
01/08/2022	31/07/2052	30

1.10 Project Scale and Estimated GHG Emission Reductions or Removals

The estimated annual GHG emission reductions/removals of the project are:

☐ <20,000 tCO_2e/year

☐ 20,000 – 100,000 tCO_2e/year

☐ 100,001 – 1,000,000 tCO_2e/year

☒ >1,000,000 tCO_2e/year

1.11 Description of the Project Activity

SIMFlor1 is a grouped project located in the arc of deforestation within the Amazon biome. The programme will provide carbon finance to promote native forest conservation in areas under threat of deforestation for the expansion of extensive cattle ranching thereby promoting compliance with the Brazilian Forest Code.

The Brazilian Forest Code (Law 12.651) creates one of the most powerful domestic mechanisms for avoiding deforestation and protecting natural forests anywhere in the world. If fully implemented, it has the potential of conserving over 250 million ha of native vegetation in Brazil and storing ca.100 $GtCO_2$. (More information in Appendix 3).

A series of factors, however, have hindered the implementation of the Code and have the potential to diminish its expected positive effects. The absence of incentives for compliance with the law (or disincentives for non-compliance) and the lack of measures to enforce of the law diminishes the forest conservation objectives of the Forest Code.

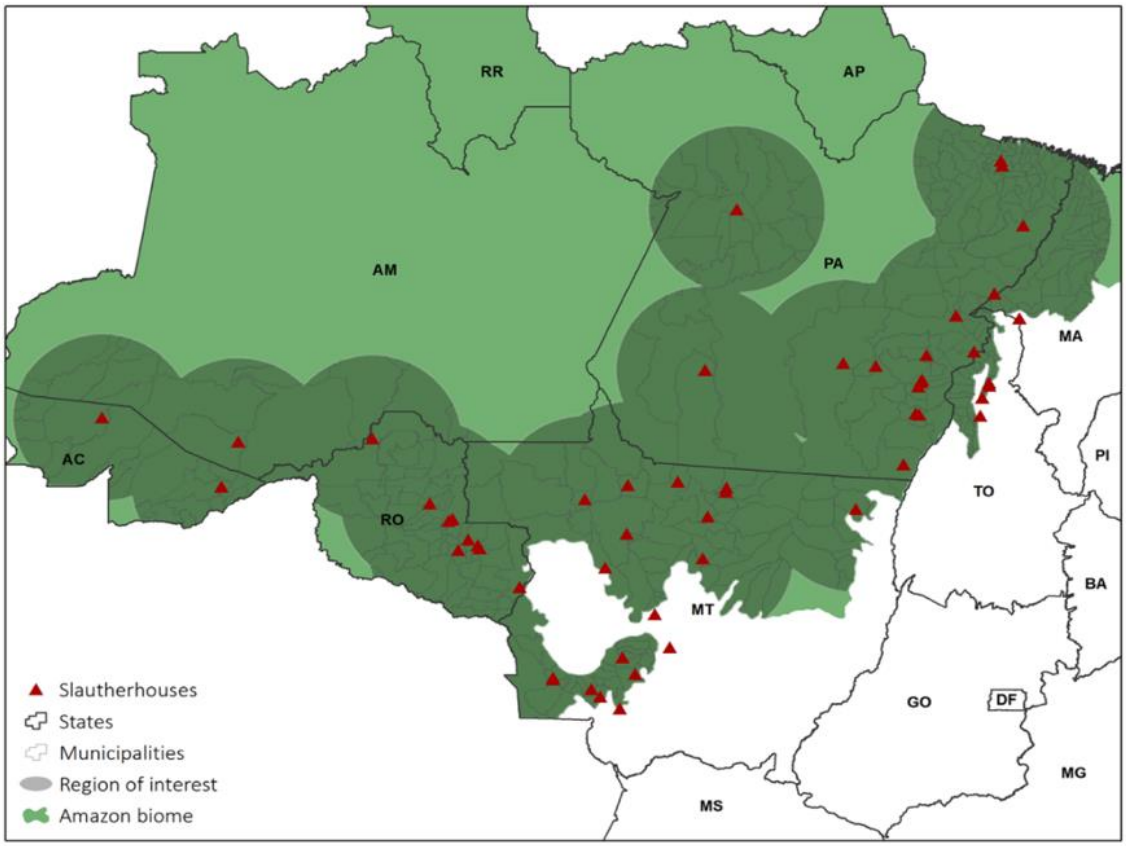
BVRio, one of the entities involved in the project, has focused on promoting implementation of the Forest Code since its promulgation in 2012. SIMFlor1 aims to revert this current situation by providing financial incentives to landholders that protect native vegetation in their farms and fully comply with the requirements of the Forest Code.

Therefore, SIMFLOR1 goal relies on the signature of long-term forest protection agreements with landholders to avoid forest area conversion to cattle raising. SIMFlor1 will utilize carbon finance to acquire and retire Forest Legal Reserve Credits ("CRAs" - *Cotas de Reserva Ambiental*) from landowners that have native vegetation exceeding the minimum amount ("excess legal reserves" or "ELR") required by the Brazilian Forest Code (Brazilian Law 12.651). By acquiring "CRAs", there will be the legal requirement of protection of both the ELRs as well as other areas required by the Forest Code (Forest Legal Reserves and Areas of Permanent Protection – APPs). In order to ensure long term protection of these privately-owned areas, the acquisition of CRAs will be complemented with annual payments over a 30-year period subject to continued compliance with the Forest Code and maintenance of ELR.

1.12 Project Location

The project will focus on the arc of deforestation within the Amazon biome – located in the southern part of the Amazonian states (see map below). In particular, it focuses on the area of influence (250 km radius) of the slaughterhouses that have been established in the region since 2008 (Figure 2). The programme is not located in a jurisdiction covered by a jurisdictional REDD+ programme.

Figure 2. SIMFlor1 Programme location. Areas in the dark green circles delineate the region where project instances will be located, and the red triangles show the slaughterhouses that create demand for beef and resulting pressure for forest conversion for cattle raising.



SIMFlor's initial PAIs are located in the municipality of Pauini in the state of Amazonas. More details can be found in Table 3.

Table 3. SIMFlor1 grouped project initial instance's location showing the two initial farms located in Pauini municipality in the state of Amazonas

PAI	Farm name	Latitude	Longitude
#01	Pauini_01		
#02	Pauini_02		

1.13 Conditions Prior to Project Initiation

The baseline scenario is the same as the conditions existing prior to the project initiation, so please refer to Section 3.3 (Baseline Scenario) for more information on this subject. Additionally:

Ecosystem type:

All PAIs are inserted in the Brazilian Amazon, in the predominant vegetation types associated with the forest: open and dense Ombrophilous Forests (humid forests).

Current and historical land-use:

The entire land covered by SIMFLOR1 PAIs were covered by native forest 10 years prior to project start and this forest cover was still entirely intact at project start date

Has the land been cleared of native ecosystems within 10 years of the project start date?

☐ Yes ☒ No

1.14 Compliance with Laws, Statutes and Other Regulatory Frameworks

National laws

SIMFlor1 and its proponents are in full compliance with all relevant state, and national laws, statues and regulatory frameworks which are provided in Table 4 below.

Table 4. Relevant national laws in Brazil in relation to SIMFlor1 and its proponents.

Law	Provisions	SIMFlor compliance
Brazilian Constitution	Article 225. Paragraph 4 - The Brazilian Amazonian Forest, the Atlantic Forest, the Serra do Mar, the Pantanal Mato-Grossense and the coastal zone are part of the national patrimony, and they shall be used, as provided by law, under conditions which ensure the preservation of the environment.	As a REDD project, SIMFlor1 fully complies with the Brazilian Constitution.
Law 12.651 of May 25, 2012 (The Brazilian Forest Code)	Chapter 1. General Provisions Article 1 - A. This act lays down general rules on the protection of vegetation, Permanent Preservation Areas and Legal Reserves, forest exploitation, the supply of forest raw materials, control the origin of forest products and the prevention and control of forest fires, and provides economic and financial instruments for the achievement of its objectives.	By providing the reduction of GHG emissions and the issuance of VCUs by avoiding planned deforestation activities, SIMFlor1 reinforces Article 1 of the Brazilian Forest Code.

	II. This act reaffirms the importance of the strategic role of farming and the role of forests and other forms of native vegetation in sustainability, economic growth, improving the quality of life of the population and the country's presence in the domestic and international food and bioenergy. VI. This act states the creation and mobilization of economic incentives to encourage the preservation and restoration of native vegetation and to promote the development of sustainable productive activities.	
	Article 3. For the purposes of this Act, the following definitions apply: I - Amazon: the states of Acre, Pará, Amazonas, Roraima, Rondônia, Mato Grosso and Amapá and the regions north of latitude 13°S, the states of Goiás and Tocantins, and west of 44°W , State of Maranhão; II - Permanent Preservation Area - APP: protected area, or not covered by native vegetation, with the environmental function of preserving water resources, landscape, geological stability, biodiversity, facilitate gene flow of fauna and flora, soil protection and ensure the well-being of human populations; III - Legal Reserve area located within a rural property or ownership, demarcated according to Article 12, with the function of ensuring a sustainable economic use of natural resources of rural property, assist the conservation and rehabilitation of ecological processes and to promote the conservation of biodiversity, as well as shelter and protection of wildlife and native flora; VI - alternative land use: replacement of native vegetation and succeeding formations other ground covers such as agricultural activities, industrial, power generation and transmission of energy, mining and transport, urban settlements, or other forms of human occupation	SIMFlor1 is located in the Amazon Biome. All project landholdings are fully georeferenced (APPs and Legal Reserve documented) and registered in the Cadastro Ambiental Rural (CAR). Furthermore, as can be documented via satellite imagery, the Project's landholdings maintain the required permanent preservation areas (APPs) and legal reserves and will receive financial incentives to protect and main these areas and the areas of excess legal reserve (ELR)
	Chapter 2. Areas of permanent preservation (APPs)	

	Section I. Delimitation of Areas of Permanent Preservation Licensing is done by a competent environmental authority. The property will be registered in the Rural Environmental Registry (i.e., CAR).	
	Chapter 4. Legal reserve area Section I. Delimitation of the Legal Reserve Area Article 12. All property must maintain native vegetation cover in rural area, as a legal reserve, without prejudice to the application of the rules on the Permanent Preservation Areas, subject to the following minimum percentages in relation to the area of the property, except as specified in art. 68 of this Act: (Amended by Law No. 12,727, 2012). • 80% of farms located in the Amazon • 35% of farms located in the Cerrado • 20% of farms located in other regions of the country	
	Chapter 5. The suppression of vegetation for alternative use of soil Article 26. The removal of native vegetation for conversion to alternative land uses, both public domain and private domain, depend on the registration of the property in CAR, mentioned in Article 29, and the prior authorization of the competent state agency, SISNAMA [Sistema Nacional do Meio Ambiente].	SIMFlor1 landholdings are, and will remain, in full compliance with the Brazilian laws and regulations. In addition, SIMFlor1 will provide financial incentives to avoid conversion of forest areas exceeding the Legal Reserve, even though such conversion is authorised under law.

1.15 Participation under Other GHG Programs

1.15.1 Projects Registered (or seeking registration) under Other GHG Program(s)

Not applicable. The SIMFlor1 is not registered or seeking registration with any other GHG program.

1.15.2 Projects Rejected by Other GHG Programs

Not applicable. SIMFlor1 was not rejected by any other GHG program.

1.16 Other Forms of Credit

1.16.1 Emissions Trading Programs and Other Binding Limits

Does the project reduce GHG emissions from activities that are included in an emissions trading program or any other mechanism that includes GHG allowance trading?

☐ Yes ☒ No

1.16.2 Other Forms of Environmental Credit

Has the project sought or received another form of GHG-related credit, including renewable energy certificates?

☐ Yes ☒ No

1.17 Sustainable Development Contributions

According to the Brazilian NDC to decisions 1/CP.19 and 1/CP.20, the Government of the Federative Republic of Brazil commits to reduce greenhouse gas emissions by 37% below 2005 levels in 2025, with a subsequent indicative contribution of reducing greenhouse gas emissions by 43% below 2005 levels in 2030.

The Brazilian iNDC document submitted to UNFCC, states that:" Specifically concerning the forest sector, the implementation of REDD+ activities and the permanence of results achieved require the provision, on a continuous basis, of adequate and predictable results-based payments in accordance with the relevant COP decisions." The document also highlights that "Brazil is a developing country with several challenges regarding poverty eradication, education, public health, employment, housing, infrastructure and energy access". It also important to highlight that the iNDC also emphasises the following points:

- "Strengthening and enforcing the implementation of the Forest Code, at federal, state and municipal levels".

- "Strengthening policies and measures with a view to achieve, in the Brazilian Amazonia, zero illegal deforestation by 2030 and compensating for greenhouse gas emissions from legal suppression of vegetation by 2030".
- "Enhancing sustainable native forest management systems, through georeferencing and tracking systems applicable to native forest management, with a view to curbing illegal and unsustainable practices"

The SIMFlor1 was specifically designed to contribute to these objectives, as well as other national sustainable development priorities. It involves not only climate change mitigation through emission reductions by reducing deforestation, but also promotes climate change adaptation by providing alternatives of sustainable income generation for the forest population.

Therefore, the SIMFlor1 is aligned with several UN Sustainable Development Goals (SDGs) described in Table 5.

Table 5. SIMFlor1 contributions to UN's SDGs

UN SDG	SIMFlor1 contribution
13.1 – Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	Though the emission avoidance of 12,991,632 tCO2 to the atmosphere and the contribution to the conservation of the hydrological cycle.
15.1. – By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	The SIMFlor1 direct conservation of private forests that exceed the legal requirements is fully aligned with this goal
15.1 – By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	
15.5 – Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	

1.18 Additional Information Relevant to the Project

1.18.1. Leakage Management

Not included in draft project description.

1.18.2. Commercially Sensitive Information

No commercially sensitive information has been excluded from the public version of the project description.

Further Information

None.

2 SAFEGUARDS

2.1 No Net Harm

Not included in draft project description.

2.2 Local Stakeholder Consultation

Not included in draft project description.

2.3 Environmental Impact

Environmental impact assessments are not applicable to the SIMFlor1.

2.4 Public Comments

The public comment period is not yet finalized by the date of submission of this document version.

2.5 AFOLU-Specific Safeguards

Not included in draft project description.

3 APPLICATION OF METHODOLOGY

3.1 Title and Reference of Methodology

Methodology

VM0007 – REDD+ Methodology Framework (REDD-MF) V1.6

Modules of the Methodology

1. VMD0001 Estimation of carbon stocks in the above- and belowground biomass in live tree and non-tree pools (CP-AB), v1.1
2. VMD0005 Estimation of carbon stocks in the long-term wood products pool (CP-W), v1.1
3. VMD0006 Estimation of baseline carbon stock changes and greenhouse gas emissions from planned deforestation/forest degradation and planned wetland degradation (BL-PL), v1.3
4. VMD0009 Estimation of emissions from activity shifting for avoided planned deforestation/forest degradation and avoided planned wetland degradation (LK-ASP), v1.3
5. VMD0011 Estimation of emissions from market-effects (LK-ME), v1.1
6. VMD0013 Estimation of greenhouse gas emissions from biomass and peat burning (E–BPB), v1.2
7. VMD0015 Methods for monitoring of GHG emissions and removals in REDD and CIW projects (M-REDD) V2.2
8. VMD0016 Methods for stratification of the project area (X-STR), v1.2
9. VMD0017 Estimation of uncertainty for REDD project activities (X-UNC), v2.2

3.2 Applicability of Methodology

The applicability conditions and justifications for the modules required by the VM0007 – REDD+ Methodology Framework (REDD-MF) V1.6 are explained in the Tables 6 to 15 below:

Table 6. Applicability Conditions and Justifications of VMD0007 REDD Methodology Framework Module (VM0007 v1.6)

Applicability Condition	Justification
Land in the project area has qualified as forest at least 10 years before the project start date.	The project area complies with this condition as mentioned in Section 3.3 with complete forest cover demonstrated for the years 2012-2021.

The project area can include forested wetlands (such as bottomland forests, floodplain forests, mangrove forests) as long as they do not grow on peat. Peat shall be defined as organic soils with at least 65% organic matter and a minimum thickness of 50 cm3. If the project area includes a forested wetlands growing on peat (e.g. peat swamp forests), this methodology is not applicable.	No organic soils (or peatlands) exist within the project area.
Project proponents must be able to show control over the project area and ownership of carbon rights for the project area at the time of verification.	As demonstrated in section 1.7, the project proponents have the control of the project area and the ownership of the carbon credits.
Baseline deforestation and forest degradation in the project area is planned deforestation (VCS category APD)	Baseline deforestation in the project area falls within the planned deforestation category, as the agents of deforestation are the project proponents.
Baselines shall be renewed every 6 years from the project start date.	The baseline will be renewed in March 2028.
Conversion of forest lands to a deforested condition is legally permitted.	It is legal to deforest 20% of a landholding in the Amazon biome, however, common practice is for more than 20% to be deforested.
Leakage avoidance activities does not include: • Agricultural lands that are flooded to increase production (eg, paddy rice); • Intensifying livestock production through use of feed-lots and/or manure lagoons.	Leakage avoidance activities do not include flooding agricultural land or creating feed-lots or manure lagoons. See section 4.3 for details.

Table 7. Applicability Conditions and Justifications of VMD0001 Estimation of carbon stocks in the above- and belowground biomass in live tree and non-tree pools (CP-AB), v1.1

Applicability Condition	Justification
This module is applicable to all forest types and age classes. Inclusion of the aboveground tree biomass pool as part of the project boundary is mandatory as per the framework module REDD-MF.	Aboveground biomass pool is included
Non-tree aboveground biomass must be included as part of the project boundary if the following applicability criteria are met (per framework module REDD-MF): • Stocks of non-tree aboveground biomass are greater in the baseline than in the project scenario, and • Non-tree aboveground biomass is determined to be significant (using the T-SIG module).	Non tree aboveground biomass is included in the aboveground biomass pool, which is optional per the methodology requirements.

Table 8. Applicability Conditions and Justifications of VMD0005 Estimation of carbon stocks in the long-term wood products pool (CP-W), v1.1

Applicability Condition	Justification
This module is applicable to all cases where wood is harvested for conversion to wood products for commercial markets, for all forest types and age classes. This module is applicable in the baseline if the wood products pool is included as part of the project boundary as per applicability criteria in the framework module REDD-MF, specifically: • Timber harvest occurs prior to or in the process of deforestation, and where timber is destined for commercial markets • The wood products pool is determined to be significant (using T-SIG).	Applicable but conservatively excluded. Timber harvest occurs in the process of deforestation but the timber is typically used on the landholding and is not destined for commercial markets.

Table 9. Applicability Conditions and Justifications of VMD0006 Estimation of baseline carbon stock changes and greenhouse gas emissions from planned deforestation/forest degradation and planned wetland degradation (BL-PL), v1.3

Applicability Condition	Justification
The module is applicable for estimating the baseline emissions on forest lands (usually privately or government owned). The methodology states that proportion of the total parcel area planned to be deforested are based on the legally authorized conversion mandates, *unless common practice in a proxy area shows that such mandates are not enforced.*	The baseline agents of deforestation are private landowners in the Legal Amazon and have permission to clear up to 20% of the project property, subject to a deforestation permit issued by the state environmental agency (Vegetation Suppression Authorizations – "ASVs"). However, the common practice in the region is that these requirements are systematically ignored, and landholders deforest a significantly larger proportion of their land and do not apply for ASVs. According to a recent study by MapBiomas (2021), 99.9% of deforestation in the Amazon biome has some degree of irregularity. The most impacting contravention is to exceed the land conversion limits authorized by the Forest Code for private properties. And, given that such limits are commonly exceeded, landholders also ignore the administrative procedures of requiring ASVs prior to deforestation. More information on this topic in Section 4 (Baseline Scenario). The objective of the SIMFlor1, however, is exactly to provide financial incentives for farmers to adhere to the requirements of the Brazilian Forest Code and remain in full compliance with all national and state legislation.
Where, pre-project, unsustainable fuelwood collection is occurring within the project boundaries modules BL-DFW and LK-DFW shall be used to determine potential leakage.	Not applicable to the project, as there is no fuelwood collection in the project areas.

Table 10. Applicability Conditions and Justifications of VMD0009 Estimation of emissions from activity shifting for avoided planned deforestation/forest degradation and avoided planned wetland degradation (LK-ASP), v1.3

Applicability Condition	Justification
The module is applicable for estimating the leakage emissions due to activity shifting from forest lands that are legally authorized and documented to be converted to non-forest land, including activity shifting to forested wetland that is drained or degraded as a consequence of project implementation. The module is also applicable for estimating the leakage emissions due to activity shifting from non-forested wetlands that are legally authorized and documented to be converted and degraded. Under these situations, displacement of baseline activities can be controlled and measured directly by monitoring the baseline deforestation or wetland degradation agents or class of agents.	Applicable. SIMFlor1 is an avoided planned deforestation project. The module has been used but, as per the guidance, leakage is not considered because it can be demonstrated that the land-use designations of the deforestation agent's other lands have not materially changed as a result of the project.
The module is mandatory if Module BL-PL has been used to define the baseline, and the applicability conditions in Module BL-PL must be complied with in full.	The Module BL-PL has been used to define the baseline.

Table 11. Applicability Conditions and Justifications of VMD0011 Estimation of emissions from market-effects (LK-ME), v1.1

Applicability Condition	Justification
The process of deforestation involves timber harvesting for commercial markets[1]	Not applicable. The participating landowners are not timber producers and timber harvesting occurring during deforestation is only for personal use, not destined to commercial markets.
The baseline is calculated using BL-DFW AND fuel wood or charcoal is harvested for commercial markets	Not applicable. Baseline is calculated using BL-PL.

[1] Commercial markets here defined as sale of products to end users and public and private companies with sales conducted distant (>50km) from the project area

Table 12. Applicability Conditions and Justifications of VMD0013 Estimation of greenhouse gas emissions from biomass and peat burning (E–BPB), v1.2

Applicability Condition	Justification
This module is applicable to REDD project activities with emissions from biomass burning and REDD-WRC project activities with emissions from biomass and/or peat burning. This module is also applicable to RWE and ARR-RWE project activities with emissions from peat burning.	Applicable. Mandatory emissions module. In general, deforestation is followed by burning biomass to clear land for pasture.

Table 13. Applicability Conditions and Justifications of VMD0015 Methods for monitoring of GHG emissions and removals in REDD and CIW projects (M-REDD) V2.2

Applicability Condition	Justification
Emissions from logging may be omitted if it can be demonstrated the emissions are de minimis using T-SIG.	Logging emissions have been omitted as no commercial timber harvest occurs in the project scenario.
If emissions from logging are not omitted as *de minimis*, logging may only take place within forest management areas that possess and maintain a Forest Stewardship Council (FSC) certificate for the years when the selective logging occurs.	Not applicable
Logging operations may only conduct selective logging that maintains a land cover that meets the definition of forest within the project boundary.	Not applicable
All trees cut for timber extraction during logging operations must have a DBH greater than 30 cm.	Not applicable
During logging operations, only the bole/log of the felled tree may be removed. The top/crown of the tree must remain within the forested area.	Not applicable
The logging practices cannot include the piling and/or burning of logging slash	Not applicable
Volume of timber harvested must be measured and monitored.	Not applicable

Table 14. Applicability Conditions and Justifications of VMD0016 Methods for stratification of the project area (X-STR), v1.2

Applicability Condition	Justification
Any module referencing strata i must be used in combination with this module. In case of REDD, aboveground biomass stratification is only used for pre-deforestation forest classes, and strata are the same in the baseline and the project scenario. Post-deforestation land uses are not stratified. Instead, average post-deforestation stock values (e.g., simple or historical area-weighted approaches are used, as per Module BL-UP).	Non-applicable. As per the module guidance, stratification is not required where it is proven irrelevant to key variables for estimating net GHG emissions or removals. SIMFlor1 is conservatively using average

	carbon stock values derived from the data on the different vegetation types found in the project area.

Table 15. Applicability Conditions and Justifications of VMD0017 Estimation of uncertainty for REDD project activities (X-UNC), v2.2

Applicability Condition	Justification
This module is mandatory when using methodology REDD+ MF. It is applicable for estimating the uncertainty of estimates of emissions and removals of CO2-e generated from REDD and WRC project activities. The module focuses on the following sources of uncertainty:	Applicable. SIMFlor1 relies on REDD+ MF.

3.3 Project Boundary

The following carbon pools are considered in SIMFlor1:

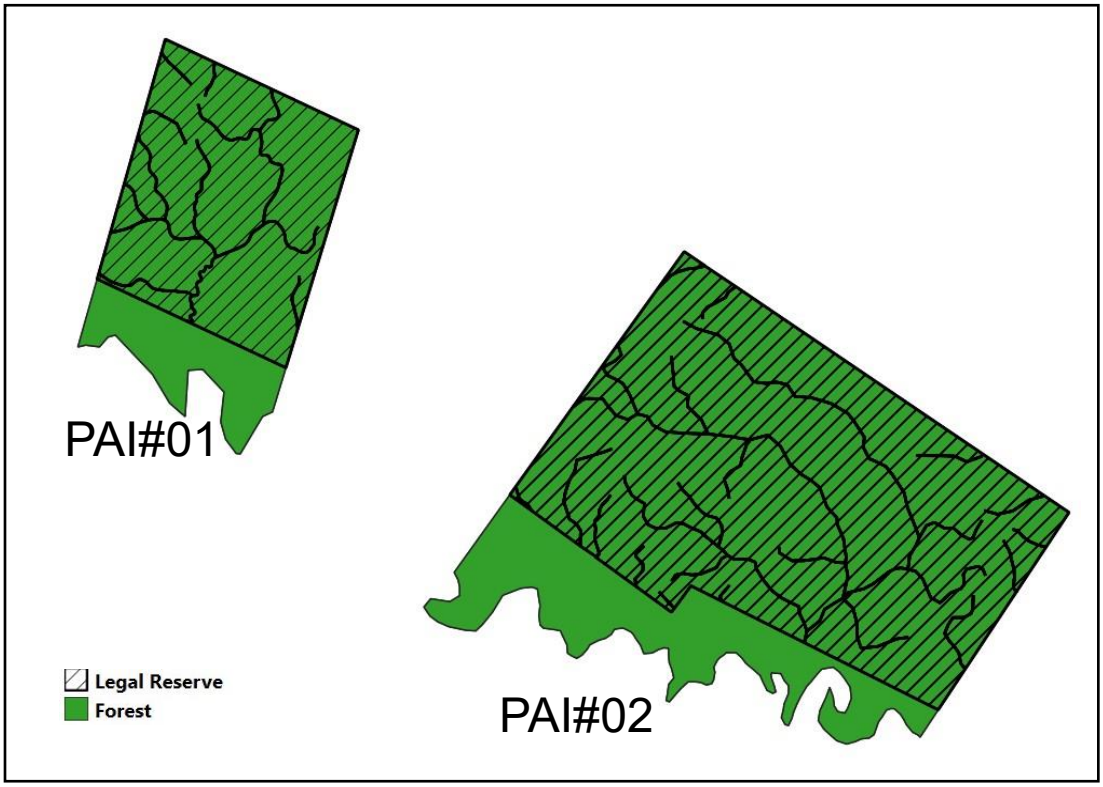
Table 16. Carbon pools considered in the SIMFlor1 programme

Source		Gas	Included?	Justification/Explanation
Baseline	Planned deforestation	CO_2	Yes	Aboveground and belowground biomass losses, including litter, resulting from deforestation are included.
		CH_4	No	No other GHG gases were considered in this baseline activity.
		N_2O	No	No other GHG gases were considered in this baseline activity.
		Other	No	No other GHG gases were considered in this baseline activity.
	Wood Products	CO_2	Yes	Wood extracted for use as wood products is included.
		CH_4	No	No other GHG gases were considered in this baseline activity
		N_2O	No	No other GHG gases were considered in this baseline activity
		Other	No	No other GHG gases were considered in this baseline activity
	Biomass burning	CO_2	No	Excluded as recommended by the applied methodology. Counted as carbon stock change.

Source		Gas	Included?	Justification/Explanation
		CH_4	Yes	Included as non-CO2 emissions from biomass burning, including dead wood, in the baseline scenario, according to the methodology.
		N_2O	Yes	Included as non-CO2 emissions from biomass burning, including deadwood, in the baseline scenario, according to the methodology.
		Other	No	No other GHG gases were considered in this baseline activity.
Project	Deforestation	CO_2	No	Deforestation does not occur in the project scenario.
		CH_4	No	Deforestation does not occur in the project scenario.
		N_2O	No	Deforestation does not occur in the project scenario.
		Other	No	Deforestation does not occur in the project scenario.
	Biomass burning	CO_2	No	Aboveground biomass burning does not occur in the project scenario.
		CH_4	No	Aboveground biomass burning does not occur in the project scenario.
		N_2O	No	Aboveground biomass burning does not occur in the project scenario.
		Other	No	Aboveground biomass burning does not occur in the project scenario.

SIMFlor1 is a grouped project, with the project area shown in Figure 2. For this Project Description, two initial PAIs are included, both located in the municipality of Pauini in the state of Amazonas. The total area of the two properties is 59,903 ha, of which 11,981 ha has been delimited as the project area (forested area outside of the Legal Reserve). Figure 3 shows the property and project boundaries.

Figure 3. Project Boundary of the two PAIs



3.4 Baseline Scenario

SIMFLor1 has the objective to change the current trend of deforestation of native vegetation for the expansion of extensive cattle ranching in the 'arc of deforestation' covering the southern areas of the Brazilian Amazon. This section describes the trends and practices currently taking place in this region based on a survey of the land use change since 2008.

The baseline scenario was calculated using the criteria set out in VMD0006v1.3.

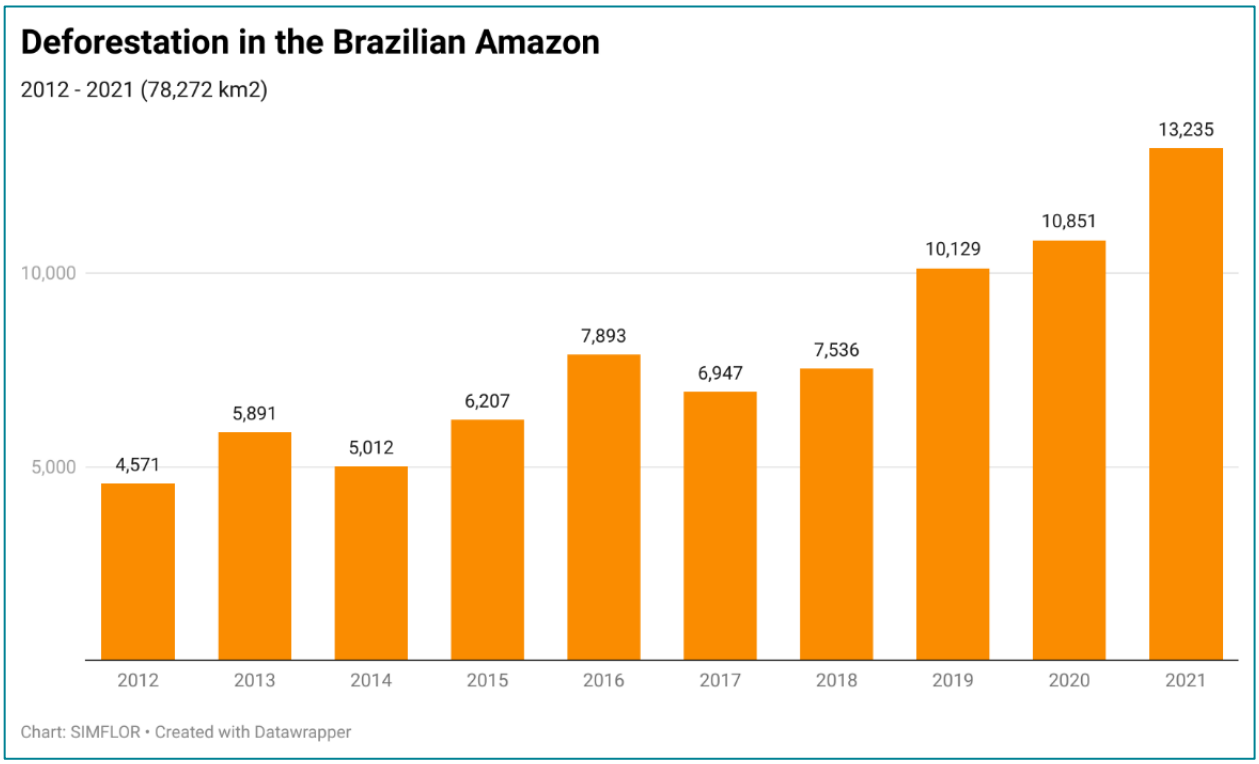
3.4.1 Agent of Planned Deforestation

The agent of planned deforestation in all PAIs is the landowner.

3.4.2 Area of deforestation

As per the requirements of VMD0006 v1.3., there is an immediate site-specific threat of deforestation that would lead to deforestation within the next 10 years. Deforestation in the Amazon region has increased year on year in the last decade. This trend has accelerated in the last three years, due to a reduced effort on law enforcement, reduced budgets available for environmental agencies, and increased emphasis on production as opposed to conservation.

Figure 4. Deforestation in the Brazilian Amazon in the 2012-2021 period



Intent to deforest: Cattle ranching as a vector of deforestation

The baseline agent of deforestation is the landowner. Intention to deforest is based on an analysis of documented history of deforestation activities, described below, showing that similar planned deforestation activities have taken place in the project geographic area.

The intent to deforest is driven by cattle ranching, and in particular, the demand for cattle created by slaughterhouses. Cattle ranching is one of the strongest drivers of deforestation in the Brazilian Amazon. While there is some spontaneous deforestation, the speed of conversion is much accelerated by the demand created by the establishment of slaughterhouses. Once a slaughterhouse is established in a region, it can be observed that it increases the speed of deforestation in a radius of up to 250 km from them.

Since 2018, more than 57 large slaughterhouses were established in the southern arc surrounding the Amazon biome (see Figure 5). This has led to 33% increase in the total cattle herd in the region (from 55 to 73 million heads). A historic series analysis shows that there was an associated increase of deforestation in the areas of influence of these slaughterhouses, leading to the loss of ca. 7.5 mi ha of native vegetation in this area.

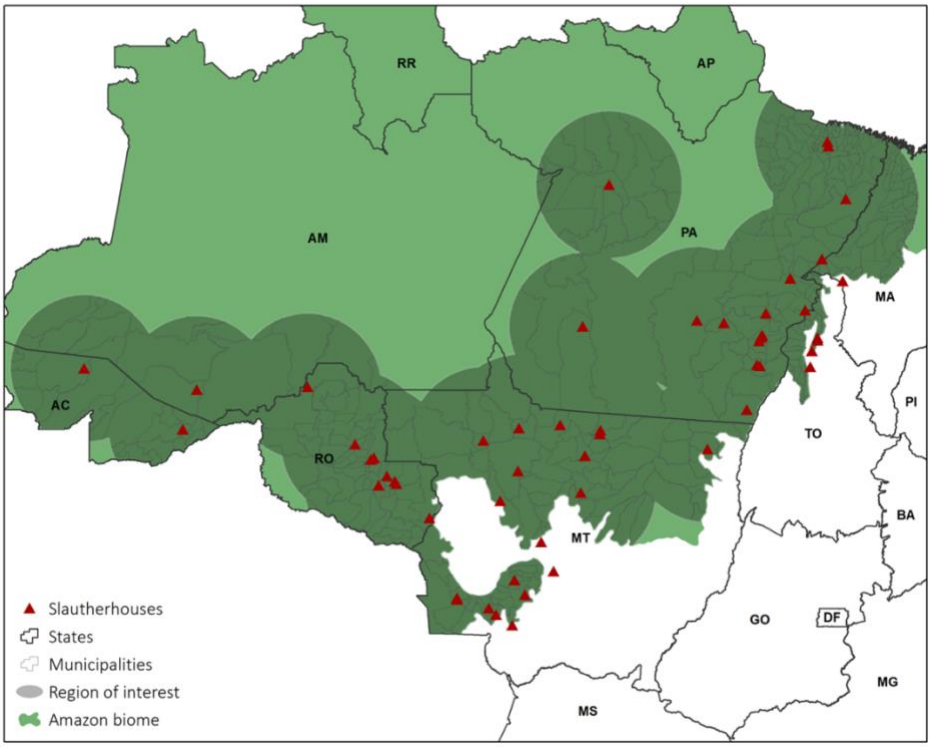


Figure 5. The arc of deforestation in the Brazilian Amazon, showing the area of influence surrounding the slaughterhouses (250 km radius). Source: SIMFlor analysis

Suitability of project area for conversion to alternative non-forest land use

All PAIs are located within a 250km radius of a slaughterhouse that has been established since 2008. Satellite imagery of the area shows recent conversion of similar landholdings to pasture, showing that the land is suitable for pasture use.

Legal permissibility for deforestation & Government approval

The agents of deforestation are the landowners who, according to the Brazilian Forest Code, are legally allowed to deforest any native vegetation in excess of their legal reserve and APP requirements. However, common practice is to exceed the land conversion limits authorized by the Forest Code for private properties. And, given that such limits are commonly exceeded, landholders also ignore the administrative procedures of requiring Vegetation Suppression Authorizations (ASVs) prior to deforestation. According to a recent study by MapBiomas (2021), 99.9% of deforestation in the Amazon biome has some degree of irregularity (see Table 18 and Figure 6).

Table 18. 2020 deforestation alerts with indications of irregularity or illegality in the Amazon region as a whole. Source: MapBiomas 2021[2]

[2] MapBiomas 2021. Annual report on deforestation in Brazil. https://s3.amazonaws.com/alerta.mapbiomas.org/rad2020/RAD2021_-_MapBiomasAlerta_EN.pdf.

	Alerts	% of the total of alerts	Area (ha)	% of the total area
Amazon Biome	58,878	99.88%	838,189	99.43%

Figure 6. Legal and illegal deforestation occurring in Mato Grosso State since 2008. Source: ICV, 2022.[3]

Non-compliance with deforestation limits established by the Forest Code.

The Brazilian Forest Law 12.651 (Commonly referred to as the Forest Code) requires that all rural properties in the country maintain a certain amount of land under native vegetation (called "Forest Legal Reserves" – "Reserva Legal", in Portuguese). The size of Forest Legal Reserves can vary from 20% to 80% of rural properties, according to the type of vegetation (biome) and the region in which the properties are located. In the case of landholdings in the Amazon biome, the Forest Legal Reserve required corresponds to 80% of the area.

In addition, all rural landholdings must maintain natural vegetation along water courses and steep slopes, in order to protect water resources and prevent erosion. These areas are called Permanent Protection Areas (APPs, from the Portuguese 'areas de preservação permanente') and their size varies depending on the width of the water course, the slope and the size of the farm. Areas exceeding the legal reserve (ELR) requirements may be deforested pending authorization, provided they respect the requirements of maintaining Forest Legal Reserves and APPs.

The reality is different, and deforestation in the Amazon region commonly goes beyond the ELR limit. Once farmers start clearing their land, it is common practice that they do not respect the limits

[3] https://www.icv.org.br/website/wp-content/uploads/2020/06/traseissuebrief4pt.pdf

established by the law, and clear areas of Legal Reserve and APPs. A recent study has shown that in 92% of cases, deforestation goes beyond the areas of ELR (Trase, ICV, Imaflora 2022)[4].

Our internal analysis in the proxy area confirms these facts. Based on a sample of 1,813 farms that converted some native vegetation since 2010, 94% of the farms deforested more than the legal limit of 20% ELR, and on average cleared 61% of their total land. The speed of deforestation was also calculated – once landowners decide to clear their land, the average deforestation rate is 30% of the total land per year (see section below: 'Speed of deforestation within individual landholdings').

Non-compliance with the requirement for deforestation licenses (ASVs)

In addition to the area restrictions to deforestation, state legislation introduces an administrative requirement for landowners to apply for Vegetation Suppression Authorizations (ASVs) prior to deforestation. Application for an ASV is a lengthy, bureaucratic and expensive process. In order to require an ASV, the landholder has to conduct a full inventory of fauna and flora, which is costly.

Consequently, in most cases, landowners do not apply for such permits (0.4% of cases in 2020, see Table 19). And, another study MapBiomas shows that, out of 60,857 deforestation alerts in the state of Pará, for instance, only 25 had an ASV (Figure 7). This type of irregular behaviour is encouraged by the lack of enforcement - only a very small number of cases of illegality result in any legal case against the landowner (see section "Lack of enforcement" below).

The common practice, therefore, is for landowners to deforest their land without any authorization, and in the rare occasion of law enforcement, pay the required fines. Indeed, the value of fines associated with irregular deforestation are often lower than the cost associated with requiring an ASV.

Table 19. Proportion of alerts with Vegetation Suppression Authorization (ASV) (2019-2020) in the Amazon Biome (ha). Source: MapBiomas 2021.[5]

	Alerts that overlap with properties that have ASV		Area of alerts that overlaps with properties that have ASV	
Amazon Biome	2019	2020	2019	2020
	0.5%	0.4%	3.3%	4.0%

[4] https://www.icv.org.br/website/wp-content/uploads/2020/06/traseissuebrief4pt.pdf

[5] MapBiomas 2021. Annual report on deforestation in Brazil. https://s3.amazonaws.com/alerta.mapbiomas.org/rad2020/RAD2021_-_MapBiomasAlerta_EN.pdf

Figure 7. Proportion of deforestation alerts in the state of Pará that overlapped with ASVs, from 2019-2022. Source: MapBiomas, 2022. [6]

There are several hypotheses to justify the reality observed in Brazil: the excessive time that it takes for the approval, the complex bureaucratic process, the common lack of know-how, the associated costs, the impunity that accompanies non-compliance and others.

Even though the justifications may vary from landowner to landowner, the overall conclusion is the same: the common practice observed at a national level is the non-compliance with the regulatory framework defined by the Brazilian Forest Code.

In conclusion, almost as a rule, deforestation in Brazil is occurring outside the law, either without the right documentation or in areas that should be conserved.

Lack of enforcement

While rampant illegal deforestation has been observed, environmental agencies have been historically unprepared to monitor, verify and enforce the legislation.

While modern remote sensing technology has made this job easier, a systematic dismantling of the capacity of environmental agencies have been observed in recent years. In the first year of the current government (2018), the budget of the Federal Environmental Agency, IBAMA, was reduced by 51%. Declarations from the Minister of Environment at the time incited farmers to clear land for agricultural production and resulted in a significant increase in deforestation rates compared to previous years.

The result of these actions is that there is no capacity and no political willingness to monitor, verify and enforce the law – only 1.2% of the illegal deforestation alerts raised in 2020 resulted in infraction notices (MapBiomas 2021). Another study MapBiomas shows that in the state of Pará, for instance, there were

[6] MapBiomas Monitor da Fiscalização (Inspection Monitor), 2022. https://datastudio.google.com/embed/u/0/reporting/edba4d53-ed1d-40e7-9da7-0ad4050d55c8/page/p_ervp1r4arc

there were 60,857 deforestation alerts from 2019 to end of 2021; 59,774 of these had indication of illegalities but no enforcement action was taken.[7]

The combination of these factors results in an increase in illegal deforestation in the region – a common practice in the Amazon biome.

Behaviour of the landowners selected for SIMFlor Programme 1

Irrespective of the trends described here, SIMFlor1 screened a large number of landholders to select those willing to comply with the requirements of the Forest Code.

The landowners selected for the programme have secured ASVs to clear the excess legal reserves in their lands and are prepared to forego the right of legal deforestation if they benefit from the sale of Forest Legal Reserve Credits (CRAs) and/or carbon finance.

3.4.3 Rate of deforestation

The rate of deforestation is established by examining a wide proxy area which matches the geographic area of SIMFlor1. The use of a proxy area is applicable for determining the deforestation rate because it meets the necessary criteria: Land conversion practices are the same as those used by the baseline agent; the post-deforestation land use is the same in the proxy area as expected in the project area under business as usual; the proxy area has the same management and land use rights type as the proposed area under business as usual; the proxy area is in the immediate area of the project; the agents of deforestation in the proxy areas have deforested their land under the same criteria that the project lands follow; and the forest types, soil types and elevation classes of the proxy area all meet requirements. The deforestation examined occurred between 2011 and 2020, which is the closest data available to the 10-year period prior to the baseline typically required.

The proxy area adopted is the area of influence of 250 km from each slaughterhouse established since 2008. In practice, the proxy area creates an arc of deforestation in the southern and eastern margins of the Amazon biome, where access is facilitated by a growing road network.

The proxy area adopted by SIMFlor1 is shown shaded in grey in Figure 8 below, and the slaughterhouses (drivers) as triangles located at the center of each grey circle. Red dots indicate deforestation since 2008.

[7] https://datastudio.google.com/embed/u/0/reporting/edba4d53-ed1d-40e7-9da7-0ad4050d55c8/page/p_ervp1r4arc

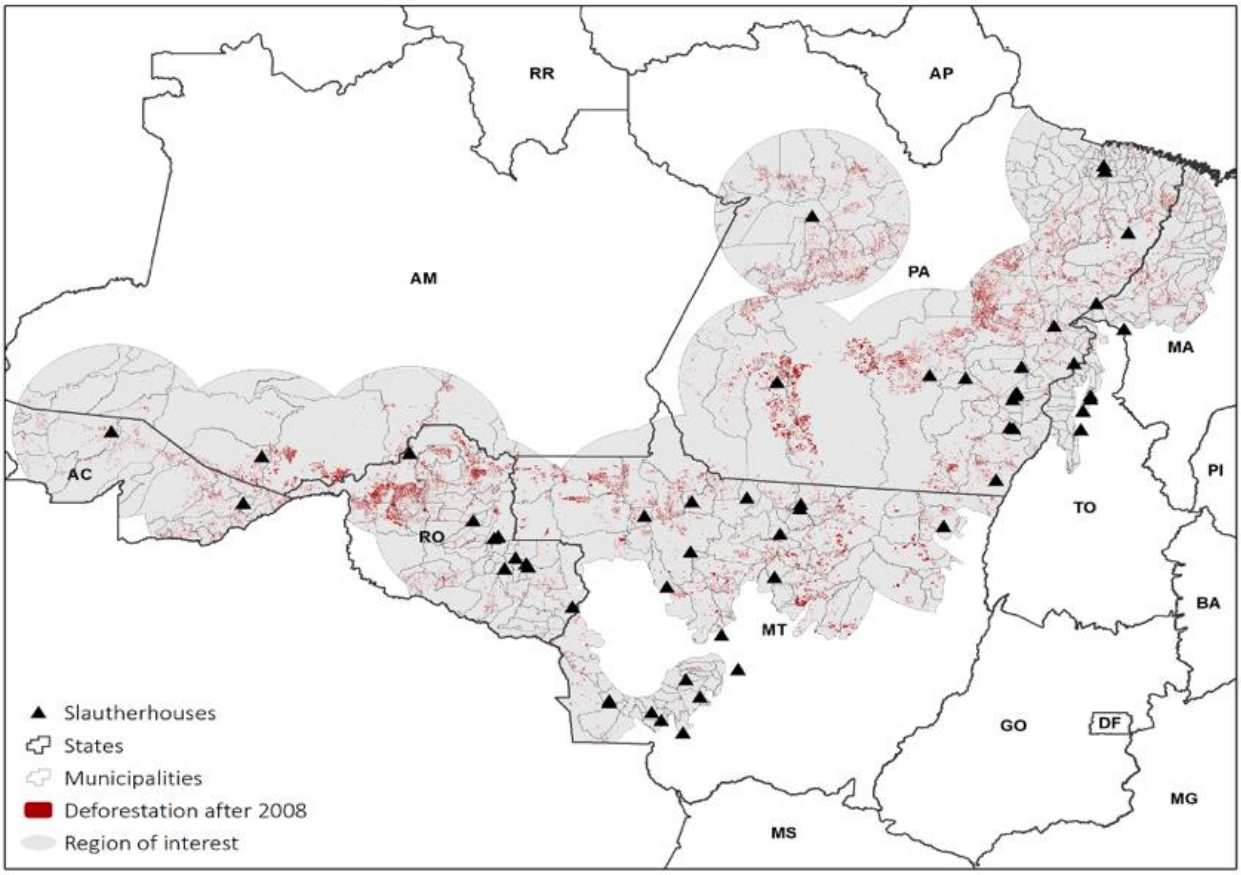


Figure 8. Deforested area (after 2008) in the programme area surrounding the slaughterhouses (250 km radius). Source: BVRio analysis

Deforestation in the proxy area is rampant, and the rates of deforestation in these regions are growing year on year, as shown in Figure 9 below. Such demand for pastureland creates a continuous pressure for individual farmers to make the decision to deforest their land, and this pattern can be seen at landscape level in such areas (see Figure 10).

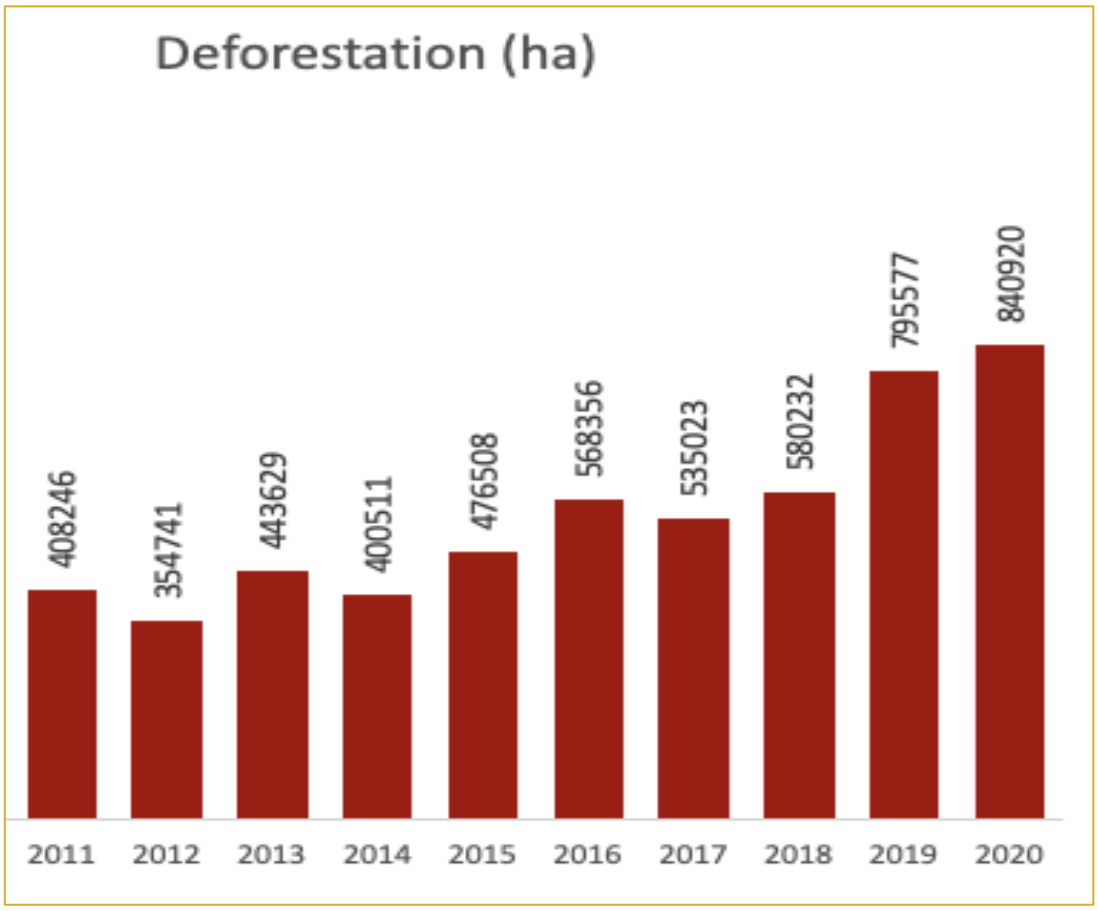


Figure 9. Deforestation rates in the proxy areas. Source: BVRio analysis

Figure 10. Landscapes showing private lands deforested for cattle ranching in the proxy area.

Extent and speed of deforestation within individual farms

Given that most of the deforestation occurring in the proxy area is illegal, there is no documentation stating the proportion of the area of individual landholdings that is typically deforested, and at what speed. This information would be included in ASVs, but as shown above, nearly the entirety of deforestation in this region occurs without this license. Consequently, it is important to define what are the patterns of illegal deforestation in relation to these parameters.

BVRio conducted an analysis of the proportion of landholding and speed of deforestation by analyzing events of deforestation in the proxy area between 2011 and 2020. This calculation was based on data analyzed by Imaflora (2021)[8] that used landholdings registered in the CAR and overlayed with historic deforestation figures calculated using satellite imagery provided by MapBiomas.

The data analyzed by Imaflora contained landholdings of all sizes. Since the SIMFlor Programme will only work with landholdings of a minimum size of 300ha (≥ 4 legal modules) a subset of the data was used which only included landholdings of this size. Apart from differences in size, all landholdings share the same characteristics in terms of vegetation type, declivity, and soil types. In total, deforestation events in 414 landholdings were considered.

For the analysis, a deforestation event for cattle ranching is defined as clearance of native vegetation above a threshold of 5% of the landholding. The Accountability Framework[9] defines a minimum level of deforestation as a "small amount of deforestation or conversion that is negligible in the context of a given site because of its small area and because it does not significantly affect the conservation values of natural ecosystems or the services and values they provide to people. In order to me considered as the minimal level the deforested area must not exceed cumulative thresholds that are small both in absolute terms and relative to the area in question. The median size of landholdings analyzed was 788.5 ha, which gives a 5% threshold of 39.4 ha, typically enough land for only 20 cows. In total, 885 deforestation events were considered.

The analysis showed that 94% of the landholdings deforested beyond the maximum allowed proportion of 20% of their lands. The subsequent analyses focused on the behaviour of this majority of landholders that deforest illegally.

The analysis showed that deforestation occurs in short periods of time, once individuals decide to convert their forests to pastureland. The speed of deforestation does vary depending on the size of the landholding, as well as the resources available to the landowner (e.g., tractors, chainsaws, etc.) to effectively remove native vegetation and clear the land to allow cattle ranching. Table 20 below shows the speed of deforestation in different landholding size classes (as categorized the Secretary of Environment of Pará State – small farms were excluded from the analysis).

[8] Valdiones, A.P. et al. 2021 Desmatamento Ilegal na Amazônia e no Matopiba: falta transparência e acesso à informação (https://www.imaflora.org/index/download/arquivo/dmFsaWRpbG9lc19ldF9hbF8yMDIxX3JlbGF0b3Jpb19jb21wbGV0b19kZXNtYXRhbWVudG9faWxlZ2FsX25hX2Ftel9lX21hdG9waWJhLnBkZg==)

[9] https://accountability-framework.org/wp-content/uploads/2020/09/Definitions-2020-5.pdf

Table 20. Speed of deforestation of individual landholdings. Source: BVRio internal analysis

Farm size	Median farm size (ha)	No. of landholdings analyzed	Average deforestation per year (ha)	% of farm area deforested/yr	# Deforestation events
Medium	737	384	72.6	30.3%	753
Large	2527	30	312	22.5%	132
Total	788	414	94	30%	885

Using the same sample as above, an analysis was conducted to determine the proportion of the total area of each individual landholdings that were deforested during the period 2011-2020. This was based on a sample of 414 landholdings, 100% of which having deforested more than 20% of the total farm. On average, 62% of a landholding was deforested over the 10-year period.

Table 21. Average proportion of total area typically deforested in individual landholding over a 10 year period from 2011-2020. Source: BVRio internal analysis

No. of landholdings analyzed	Median size (ha)	Average % of the total area deforested in period
414	788.5	62%

Behaviour of the landowners selected for SIMFlor Programme 1

Irrespective of the trends described here, SIMFlor1 screened a large number of landholders to select those willing to comply with the requirements of the Forest Code.

The proportion of the area that these landholders would have deforested is restricted to the 20% legally authorized by the Forest Code in the Amazon biome, and the speed of deforestation is determined on a case-by-case basis, as stated in their deforestation permits (ASVs).

3.4.4 Likelihood of deforestation

The likelihood of deforestation (L-Di) is set to be 100%, according to the VMD0006, section 1.4 criteria. The private landholdings participating in SIMFlor1 are not zoned for deforestation by any level of government (state, countrywide, etc).

3.4.5 Risk of abandonment

4,997 landholdings with deforestation by the same class of deforestation agent as SIMFLor1 – the landowner – were analyzed. In total, 527,569 ha were deforested up until 2010. An analysis of the same area in 2020 found that just 3% of the land (19,160 ha) had secondary vegetation, suggesting that the area had been abandoned. Based on this tiny percentage of abandonment, it is confirmed that the planned deforestation activity is eligible for the use of the module VMD0006v1.3.

3.4.6 Annual area of deforestation

The annual area of deforestation is determined according to equation 5 in VMD0006 v1.3.

3.5 Additionality

Additionality is assessed as per the stepwise approach provided in tool VT0001 version 3.0. The results are shown below.

Step 1. Identification of alternative land use scenarios to the proposed VCS AFOLU project activity.

Based on current practices and economic trends, the three credible alternative land use scenarios for the PAIs (and project area in general) were identified as:

a) Continuation of the pre-project land use e.g., no deforestation occurring in the landholding, through conservation activities other than participation in SIMFlor1.

b) Deforestation of 20% of the landholding for pasture for cattle ranching.

c) Deforestation of ca, 60% of the landholding for pasture for cattle ranching.

Scenario a – no deforestation occurring in the landholding - is possible but unlikely, due to the opportunity cost associated with maintaining forest cover when there is the requirement for the annual payment of a series of fees and taxes for rural properties, thus creating the need to develop productive activities on the farm. This scenario is in compliance with all mandatory applicable legal and regulatory requirements.

Scenario b – deforestation of 20% of the landholding - is a realistic and credible scenario because the landowners in SIMFlor1 have secured ASVs to clear the excess legal reserves in their landholdings. According to the Brazilian Forest Code, landholdings in the Amazon Biome have the right to deforest 20% of their land. This scenario is in compliance with all mandatory applicable legal and regulatory requirements.

Scenario c – deforestation of c.60% of the landholding - is a realistic and credible scenario because analysis of deforestation in the project area between 2011 – 2020 shows common practice is to deforest

60% of the landholding for pasture for cattle ranching (see section 3.4 for more details). The analysis shows that in the project area the mandatory legal and regulatory requirements are systematically not enforced and that non-compliance with these requirements is widespread across the project area.

Scenario "b" is considered the most plausible baseline scenario because the land is expected to be legally (documented with ASV) converted to non-forest land .

Step 2 Investment analysis

Investment analysis is used to determine whether the proposed project activity, without the revenue from the sale of GHG credits, is economically or financially less attractive than the baseline scenario (scenario b). The project activity, without the revenue from the sale of GHG credits, is financially less attractive than the baseline scenario, therefore it is not necessary to do a barrier analysis.

Simple cost analysis

A simple cost analysis is used because, as per the tool guidance, SIMFlor1 generates no financial or economic benefits other than VCS related income. The project activity produces no revenue as the project area will be managed for conservation purposes and no economic activity will take place. The costs associated with SIMFlor1 are documented in Table 22.

Table 22. Costs associated with SIMFlor1

<INSERT TABLE>

Common practice analysis

Common practice analysis is used to measure the extent to which similar activities have already diffused into the geographical area of the proposed SIMFLor Programme project activity (excluding other registered VCS AFOLU project activities).

It is a credibility check to demonstrate additionality that complements the investment analysis carried out above. In Brazil, there is a lack of effective market mechanisms or policies aimed at preventing legal deforestation on private farms in the Legal Amazon. On the contrary, the current Brazilian government is dismantling forest protection legislation and encouraging landowners to deforest. Therefore, no similar activities do occur in the same geographical area as the SIMFlor Programme. Hence, SIMFLOR1 is additional.

3.6 Methodology Deviations

Not included in draft project description.

4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

4.1 Baseline Emissions

Not included in draft project description.

4.2 Project Emissions

Not included in draft project description.

4.3 Leakage

Not included in draft project description.

5 MONITORING

5.1 Data and Parameters Available at Validation

Not included in draft project description.

5.2 Data and Parameters Monitored

Not included in draft project description.

APPENDIX

Not included in draft project description.