Fazenda Cristal Conservation Project

1st Monitoring Report

Document Prepared by Vert Ecotech S/A

Project Title	Fazenda Cristal Conservation Project
Version	1.6
Project ID	SOCIALCARBON-4
Date of Issue	31-January-2025
Monitoring Period	16-May-2020 to 31-December-2023
SOCIALCARBON Standard Version	6.1
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1. Project Details

1.1 Summary Description of the Implementation Status of the Project

The conservation management for native formations in Fazenda Cristal, under SocialCarbon methodology SCM0003 (v.1.0), progressed in alignment with the expected framework. The project commenced on 16 May 2020, marking the beginning of material acquisition for conservation practices to preserve property's Legal Reserve areas. These efforts involved systematic conservation activities, carried out continuously and with different periodic frequencies, until 31 December 2023, end of monitoring period, thereby ensuring the preservation of the native ecosystems and biodiversity. To substantiate the actions undertaken, comprehensive supporting evidence has been collected and documented. A total of 5,357 tCO_2 was removed during the review period (16 May 2020 to 31 December 2023), considering a non-permanence risk of 10%, in a project area of 3,938 hectares within the 19,397.90-hectare property.

According to PDD v.1.8, the project is expected to remove 39,630 tCO_2e over 10 years (16 May 2020 to 15 May 2030), with an annual average of 3,963 tCO_2e. Key carbon assurance activities included annual firebreak maintenance, as fences underwent punctual maintenance as part of routine farm activities. Visual inspections ensured the Legal Reserves' perimeter was monitored at least once a year. No other intrusions occurred during the monitoring period.

Remote monitoring for fire and deforestation began in 2023 after the project was formalized for generating carbon credits, as an enhancement to pre-existing project activities. No fire incidents were reported. Firefighting equipment and PPE were made available at the headquarters of Fazenda Cristal. A partnership with the Quiron platform enabled remote monitoring, with frequent reports to anticipate fire outbreaks during the dry season, allowing timely action by involved team. Biodiversity monitoring has been implemented since the project's start date through sightings of animals and recordings made by the staff, and during visits from the project team along 2023. A more comprehensive biodiversity monitoring plan is set to begin in 2024.

Social improvements were mainly driven by enhanced stakeholder relations, although many social initiatives remain in the planning stage, with actions and responsibilities defined in partnership with the NGO Instituto Homem Pantaneiro. The project is compliant with all human, social, and economic safeguards, with the landowner providing all required documents. Improvements in education and health awareness were observed locally. Substantial progress was made in vegetation preservation, and three United Nations' Sustainable Development (SDGs) were fulfilled among those which project is expected to relate: 8, 13 and 15.

1.2 Sectoral Scope and Project Type

This project is registered under the SOCIALCARBON Standard as an Agriculture, Forestry and Other Land Use – AFOLU project, Scope 14, category Afforestation, Reforestation and Revegetation (ARR). It was developed in compliance with the SOCIALCARBON Methodology SCM0003 “Methodology for Carbon Removal in Private Conservation Areas” v1.0. This project is a non-grouped small-scale project with single project activity.

1.3 Project Proponent

Organisation name	Vert Ecotech S/A
Contact person	André Luiz Jardini Munhoz Alexandre Chiachiri Rodrigues Silva André Nogueira Bozza João Gabriel Chaib
Title	André Luiz Jardini Munhoz – CSO Alexandre Chiachiri Rodrigues Silva – CEO André Nogueira Bozza – Project Manager João Gabriel Chaib – Project Coordinator
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Email	jardini@vertecotech.com

1.4 Other Entities Involved in the Project

Organisation name	Insuela Pereira e Conti Investimentos e Participações S/A
Role	Owner of Fazenda Cristal
Contact person	Milton Insuela Pereira Junior
Title	Milton Insuela Pereira Junior - Director
Address	Rua Brilhante, 2079, Vila Bandeirantes, Campo Grande (MS), Brazil
Telephone	+55 (67) 3342-4151 +55 (67) 99651-7901
Email	insuela@gmail.com

Organisation name	Instituto Homem Pantaneiro (IHP)
Role	Beneficiary (Benefit-sharing)
Contact person	Angelo Rabelo
Title	Angelo Rabelo – CEO
Address	Ladeira José Bonifácio, 171 – Porto Geral, Corumbá 79300-010
Telephone	+55 67 3232-3303
Email	faleconosco@institutohomempantaneiro.org.br

1.5 Project Start Date

The start date for this project was 16 May 2020. This year marked a series of significant purchases of materials needed to properly fence off the conservation areas, as well as the launch of a series of substantial activities to manage these areas, as detailed in PDD v.1.8, such as maintaining the fences and firebreaks, monitoring against invasions and fires, among others, which culminated in an exceptional gain in vegetation restoration, implying in carbon component assurance. These activities were developed mainly with a focus on combating fire events, which are recurrent in the biome, as well as the preservation of reserve areas and biodiversity in the property.

Relatively to environmental components, such as monitoring specific sustainable indicators through project lifetime, these are linked with first project's agreement signing between land owner and project proponent, in 22 December 2022, attached to this report, as described in PDD v.1.8, Section 2.1. It is important to note that this first agreement is now obsolete and the actual contract between project proponent and landowner was updated to its latest version from 29 July 2024, version 1.3, also attached. Following this agreement, project activities were improved or enhanced to further ensure the conservation of the areas and, consequently, the associated carbon sequestration. Section 3.1 of this report provides a more detailed description of the mentioned activities.

1.6 Project Crediting Period

The project's crediting period is 10 years, from 16 May 2020 to 15 May 2030, which may be renewable at a maximum of nine times, with a total crediting period of no more than 100 years. Fazenda Cristal Conservation Project Monitoring Report covers from 16-May-2020 to 31-December-2023.

1.7 Project Location

Fazenda Cristal is located in the city of Corumbá, State of Mato Grosso do Sul, Brazil. Its official total area is 19,397.90 ha and it is fully covered by Pantanal biome (IBGE, 2019). Its official Legal Reserve area is 3,976 ha and the KML file with these boundaries is submitted separately from this document. Central geographic coordinates are: Longitude 636,327.00 m E and Latitude 8,025,817.00 m S (Datum SIRGAS 2000 UTM Zone 21 S). An illustration of the exact location of the farm and its context within Brazil is found below. Lately in Section 5.2, different illustrations reveal the specific areas of the property that are objects of this project.

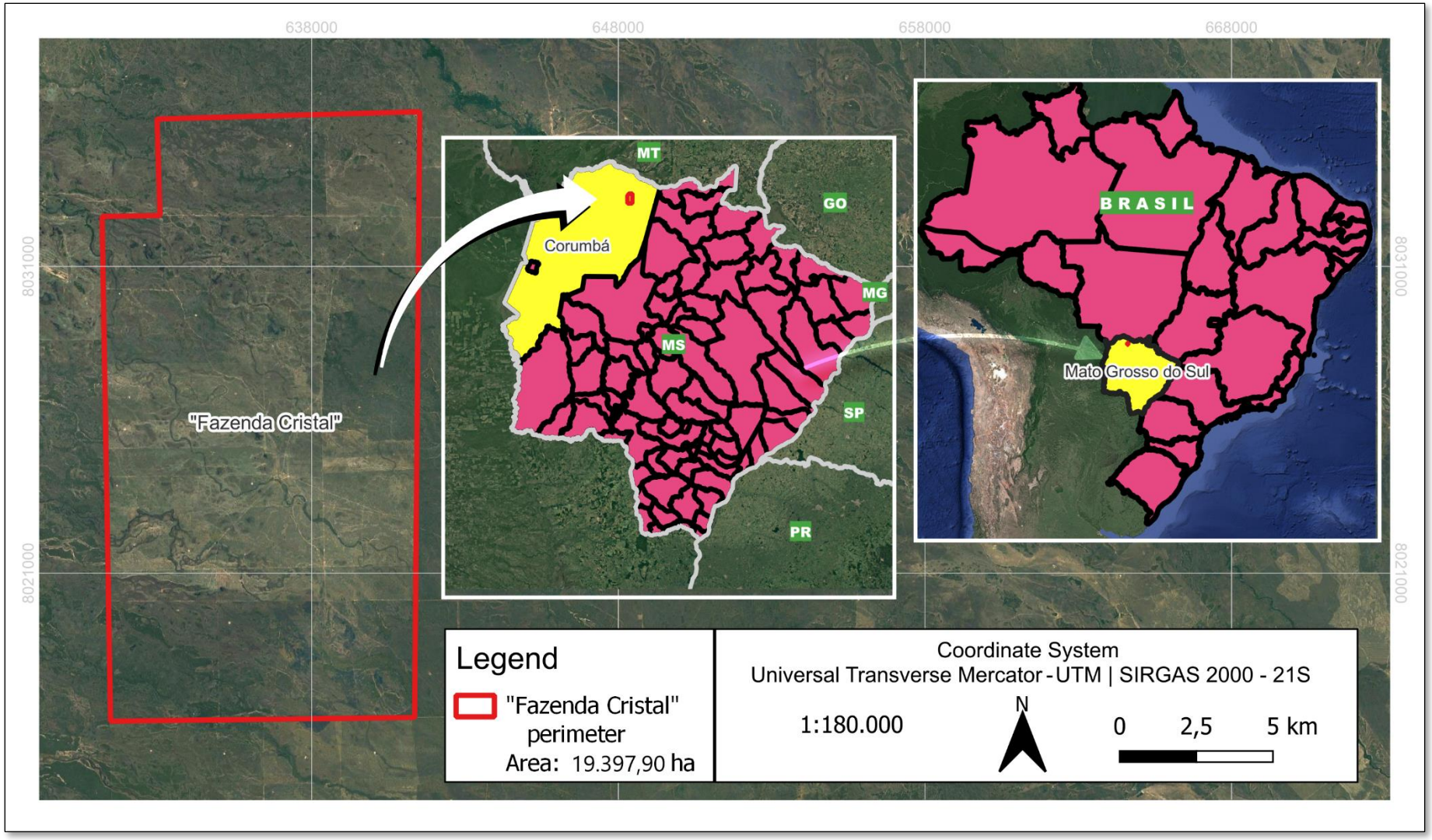
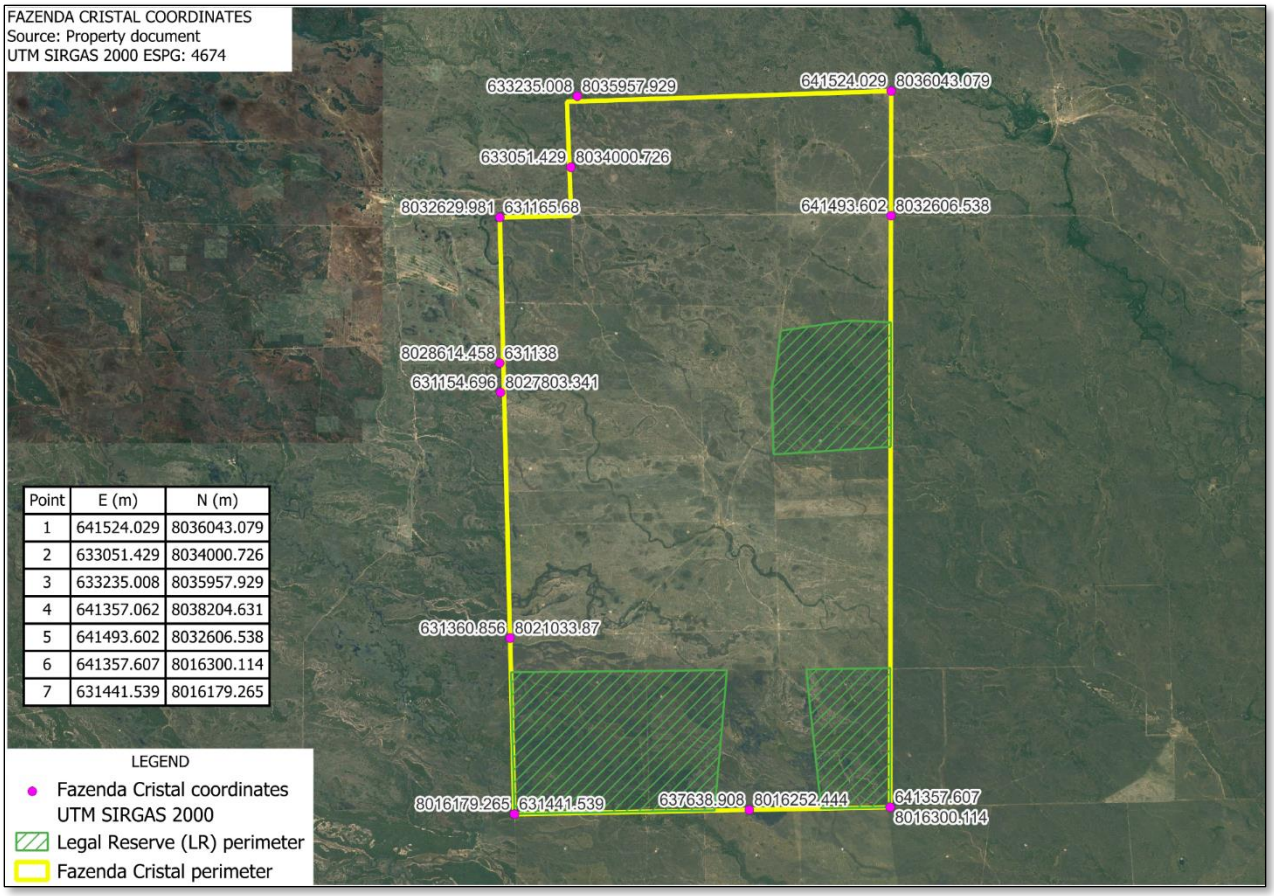


Image 1.7-1: Fazenda Cristal's location and its context within Brazil's territory



Point	E (m)	N (m)
1	641524.029	8036043.079
2	633051.429	8034000.726
3	633235.008	8035957.929
4	641357.062	8038204.631
5	641493.602	8032606.538
6	641357.607	8016300.114
7	631441.539	8016179.265

Image 1.7-2: Fazenda Cristal's Legal Reserves and main coordinates in SIRGAS 2000 (UTM projection)

1.8 Title and Reference of Methodology

This project uses an official methodology approved by SOCIALCARBON and currently in force, which is named SCM0003 – Methodology for Carbon Removal in Private Conservation Areas (Version 1.0), with a release date of 08 February 2023.

This project uses the guidelines tool for the inclusion of additionality items, also approved by SOCIALCARBON, which is named SCT0001 – Tool for the demonstration and assessment of additionality in SOCIALCARBON Agriculture, Forestry and Other Land Use (AFOLU) project activities (Version 1.0), with a release date of 26 September 2022. SOCIALCARBON AFOLU Non-Permanence Risk Report (Version 1.0) and Non-Permanence Risk Calculation Tool (Version 1.1) are also part of this project development.

The indicators applied to this project were extracted from the consolidated list of approved SOCIALCARBON indicators, meaning no other indicators were required to be submitted for adaptation or approval.

1.9 Double Counting and Participation under Other GHG Programs

1.9.1 No Double Issuance

Is the project receiving or seeking credit for reductions and removals from a project activity under another GHG program?

☐ Yes ☒ No

1.9.2 Registered in Other GHG Program(s)

Is the project receiving or seeking credit for reductions and removals from a project activity under another GHG program?

☐ Yes ☒ No

Is the project active under the other GHG program?

☐ Yes ☒ No

1.9.3 Projects Rejected by Other GHG Program(s)

Is the project receiving or seeking credit for reductions and removals from a project activity under another GHG program?

☐ Yes ☒ No

1.10 Double Claiming, Other Forms of Credit, and Scope 3 Emissions

1.10.1 Emissions Trading Programs and Other Binding Limits

Are project reductions and removals or project activities also included in an emissions trading program or binding emission limit? See the SOCIALCARBON Standard Definitions for definitions of emissions trading program and binding emission limit.

☐ Yes ☒ No

1.10.2 No Double Claiming with Other Forms of Environmental Credit

Has the project activity sought, received, or is planning to receive credit from another GHG-related environmental credit system? See the SOCIALCARBON Standard Definitions for definition of GHG-related environmental credit system.

☐ Yes ☒ No

1.10.3 Supply Chain (Scope 3) Emissions

Do the project activities specified in Section 1.12 affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain?

☐ Yes ☒ No

2. Safeguards

2.1 Stakeholder Engagement and Consultation

Stakeholders Identification

Stakeholder Identification	Internal meetings were conducted with project specialized team to facilitate an initial mapping of the project's potential stakeholders. The context of the farm area was analysed, including its usage history, location, main activities, and potential stakeholders were identified, such as the landowner, manager and employees of the farm, NGOs, governmental bodies, private companies in the region, and research institutions. This identification was then refined using a matrix of influence and interest in the project, resulting in the following parties being identified as stakeholders: -Insuela Pereira e Conti Investimentos e Participações S/A ("IPC"; Owner of Fazenda Cristal); -Employees of Fazenda Cristal; -NGO Instituto Homem Pantaneiro; -SEMADESC (Mato Grosso do Sul State Environmental Department); -Federal University of Mato Grosso do Sul (UFMS); -Military Fire Brigade of Mato Grosso do Sul.
Legal or customary tenure/access rights	Not applicable. The project is situated on private land, with the legal property documentation provided and attached to this report. There are no conflicts or overlaps with recognised Traditional Communities or Indigenous Peoples, as evidenced by the attached map "Fazenda Cristal Indigenous Context Map" which demonstrates this separation. It is correct to state that Fazenda Cristal is relatively isolated, being distant from urban centres or areas of significant economic or social interest, which corroborates the reduced list of stakeholders and the inapplicability of this item. The farm employees are under employment agreements (also attached to this report as SEFIP documentation – related to labour and social compliance report) that allow them to work in the areas of the farm, including the project areas, as well as to use the common and residential areas for living and daily activities.
Stakeholder diversity and changes over time	<u>IPC (owner of Fazenda Cristal)</u> -Social and cultural diversity: The owner possesses a high socioeconomic profile, with access to superior financial and educational resources. Culturally, he has a strong connection to traditional livestock practices and a particular interest in environmental preservation.

-Interactions: He interacts directly with the farm employees, playing a decisive role in operations and project implementation. He also collaborates with NGOs and research institutions on conservation projects.

-Changes over time: The composition of this stakeholder is stable.

Employees of Fazenda Cristal

-Social and economic diversity: This group is diverse in terms of socioeconomic backgrounds, including local and migrant workers. They have varying levels of education and skills, ranging from manual labourers to specialised technicians, with current strong cultural connexion with Pantanal preservation.

-Interactions: They are involved daily in farm operations and interact with the owner and occasionally with NGO representatives.

-Changes over time: The composition of this group is somewhat unstable, particularly at the lower function levels, and varies depending on the seasonal work needs of the farm, which may adopt temporary hiring practices.

NGO Instituto Homem Pantaneiro

-Social and cultural diversity: Composed of professionals from various fields, such as biology, ecology, and social sciences. They share a strong commitment to developing socio-environmental projects.

-Interactions: They work closely with the farm owner, employees, and governmental bodies to implement and monitor conservation projects.

-Changes over time: The composition is stable but may vary as new projects are initiated or completed, and as new members join the organisation.

SEMADESC (Mato Grosso do Sul State Environmental Department)

-Social and cultural diversity: This group consists of public officials with diverse academic backgrounds and professional experiences in environmental management.

-Interactions: They maintain a regulatory relationship with the farm owner, ensuring that all activities comply with environmental laws.

-Changes over time: The composition can change with alterations in public policies and government changes.

Federal University of Mato Grosso do Sul (Universidade Federal do Mato Grosso do Sul, UFMS)

-Social and cultural diversity: Includes researchers, professors, and students from various academic disciplines, with a strong focus on research and extension.

	-Interactions: They collaborate with the farm to conduct research and studies, providing data and analyses that support conservation and monitoring efforts. -Changes over time: The composition is stable with the presence of professors who conduct the main research related to the project. <u>Military Fire Brigade of Mato Grosso do Sul</u> -Social and cultural diversity: The brigade consists of public servants with diverse backgrounds, including military training and specialised knowledge in fire prevention and emergency management. Their professional focus is primarily on safety, rescue operations, and environmental protection. -Interactions: They interact with the farm and other stakeholders during emergencies, particularly in fire control and environmental risk management. They also collaborate with SEMADESC and NGOs for preventative measures and response strategies. -Changes over time: The composition of this group can change due to staff rotations, promotions, or reassignments, but the institution remains a stable stakeholder throughout.
Expected changes in well-being	<u>IPC (owner of Fazenda Cristal)</u> -Changes in well-being: The owner is expected to experience increased personal satisfaction and public recognition due to their active role in environmental preservation. The implementation of the project may also increase the property value and provide economic benefits through carbon credits. -Ecosystem services: Improvement in soil health, water quality, and biodiversity, providing a more resilient and productive agricultural environment. <u>Employees of Fazenda Cristal</u> -Changes in well-being: Employees may experience better working conditions, improved infrastructure, and greater job stability due to the long-term sustainability of the project. Training in sustainable practices can enhance their skills and employability. -Ecosystem services: Improvement in the farm's environmental conditions, such as microclimate stability, which promotes resilience to potential climate changes and directly benefits the health and well-being of the workers. <u>NGO Instituto Homem Pantaneiro</u> -Changes in well-being: The NGO may gain greater recognition and support for its conservation activities, strengthen partnerships, and expand its reach. Project success can attract more funding and resources.

	-Ecosystem services: Improvement in biodiversity and natural habitats, facilitating the implementation of other conservation and environmental education projects. SEMADESC (Mato Grosso do Sul State Environmental Department -Changes in well-being: The agency can obtain valuable data for future regulations and environmental initiatives. Project success can also boost public confidence in governmental institutions. -Ecosystem services: Greater protection of natural resources, such as water and vegetation, which are essentially within the agency's scope of action, but also aligned with climate change combat. Federal University of Mato Grosso do Sul (Universidade Federal do Mato Grosso do Sul, UFMS) -Changes in well-being: Researchers and students can obtain valuable field data and research opportunities, resulting in publications and academic advancements. Participation in the project can also enhance the university's prestige and its community outreach capabilities. -Ecosystem services: Better understanding and monitoring of local ecosystems, contributing to the development of improved environmental management and conservation practices. Military Fire Brigade of Mato Grosso do Sul -Changes in well-being: The brigade is expected to enhance its operational effectiveness and public perception through active involvement in environmental management and fire prevention initiatives. Successful collaboration with stakeholders may lead to increased funding and resources, positively impacting the brigade's capabilities and morale. -Ecosystem services: Improved fire management practices will lead to better protection of natural resources, reduced risks of wildfires, and enhanced ecosystem resilience. These efforts contribute to the maintenance of biodiversity and the safeguarding of vital habitats within the region.
Location of stakeholders	IPC (owner of Fazenda Cristal) Represented by office located at Rua Brilhante, 2079, Vila Bandeirantes, Campo Grande, Mato Grosso do Sul, Brazil Employees of Fazenda Cristal Permanent or temporary residents in Fazenda Cristal, Corumbá, Mato Grosso do Sul, Brazil. Longitude 636,327.00 m E and Latitude 8,025,817.00 m S (Datum SIRGAS 2000 UTM Zone 21 S).

	NGO Instituto Homem Pantaneiro Represented by office located at Rua Ladeira José Bonifácio, 171, Corumbá, Mato Grosso do Sul, Brazil. SEMADESC (Mato Grosso do Sul State Environmental Department Represented by office located at Av. Desem José Nunes da Cunha, Jardim Veraneio, Campo Grande, Mato Grosso do Sul, Brazil. Federal University of Mato Grosso do Sul (Universidade Federal do Mato Grosso do Sul, UFMS) Institution represented by installations located at Avenida Costa e Silva, Pioneiros, Campo Grande, Mato Grosso do Sul, Brazil. Military Fire Brigade of Mato Grosso do Sul Represented by headquarters located at Avenida Afonso Pena, 2722, Centro, Campo Grande, Mato Grosso do Sul, Brazil. No Indigenous People, Traditional Community (recognised) and customary rights holder are contemplated within this Stakeholder engagement and consultation as described before. Positive, indirect impacts from the project are expected in the areas where the NGO Instituto Homem Pantaneiro operates, which are yet to be defined, as potential funding opportunities will be mapped based on the return of benefit sharing with the institution. This information will be updated for future monitoring throughout the project. Other impacts will occur within the premises of Fazenda Cristal, to support families, local infrastructure, and related aspects, according to Social Indicators.
Location of resources	Not applicable – given the conditions explained earlier in this section, specific territories and resources within the property are not relevant to the stakeholders and other parties.

Stakeholder Consultation and Ongoing Communication

Date of stakeholder consultation	Several (online) and on-site – From 14 February 2023 to 25 October 2023
Stakeholder engagement process	Separate contacts were developed with each stakeholder. Those with more substantial infrastructure and potential interest and involvement, such as IPC and IHP, were invited in advance to virtual meetings via email. These meetings were conducted on platform such as Google Meets, supported by presentation materials, with screen captures. Meanwhile, the farm employees had an in-person meeting scheduled at the lunch hall, at a time agreed upon between the manager and the employees. This meeting was facilitated by the project proponent's team, and it was not otherwise documented beside photograph images, however, a document containing the content of reunion and signed

	by participants was raised in this occasion in order to evidence the meeting. All documents related to the meetings with the stakeholders are attached to this report, organised by stakeholder.
Consultation outcome	The general aspects of the project, costs and benefits, aspects and impacts, risks and emergency response plans, certification and audit processes, validation and verification, results up to the time of the presentation, grievance procedures, communication channels, and opportunities for receiving comments, feedback, etc., were presented. The presentations are attached to this report. <u>IPC (owner of Fazenda Cristal)</u> The farm owner maintains close involvement with the project, regularly staying in contact with the project proponent through phone calls for updates and to provide guidance to his field managers. He did not raise any concerns and expressed satisfaction with the initial results presented <u>Employees of Fazenda Cristal</u> The farm employees have shown great interest in the project. Specifically, regarding the Pantanal biome, they have important curiosities and contributions that enhance the project's progress. They all expressed interest in the methods of near real-time satellite/remote monitoring of fires in the farm's areas. They were also keen to understand the species captured by the camera traps. Many of them have already met the project auditors during its validation process. No concerns were raised. <u>NGO Instituto Homem Pantaneiro</u> The IHP also maintains close contact with the project, as it is a beneficiary of its benefit-sharing. They are very willing to participate and contribute their expertise, particularly since they are responsible for developing part of the sustainable indicators, as detailed in Section 6. No objections were raised regarding the content presented about the project. <u>SEMADESC (Mato Grosso do Sul State Environmental Department)</u> Although preliminary contacts were made to address matters related to the project, a formal meeting for consultation with this stakeholder was not arranged in 2023 due to scheduling conflicts. It was understood that, given the monitoring period from 2020 to 2023, there would be little useful time to gather any substantial contributions. Therefore, a more deliberate meeting has been scheduled for 2024, and all developments and considerations will be included in the next monitoring report. <u>Federal University of Mato Grosso do Sul (Universidade Federal do Mato Grosso do Sul, UFMS)</u>

	Although preliminary contacts were made to address matters related to the project, a formal meeting for consultation with this stakeholder was not arranged in 2023 due to scheduling conflicts. It was understood that, given the monitoring period from 2020 to 2023, there would be little useful time to gather any substantial contributions. Therefore, a more deliberate meeting has been scheduled for 2024, and all developments and considerations will be included in the next monitoring report. <u>Military Fire Brigade of Mato Grosso do Sul</u> The Fire Brigade was informed about the project and indicated that the nearest base for responding to fire incidents is located in Coxim-MS. Discussions were held regarding the overland distance for response and the availability of the brigade's aircraft, should the need arise. Additionally, the possibility of offering a forest fire brigade training course for the farm employees was discussed, with the expectation that it will be conducted in 2024. No further considerations were drawn.
Ongoing communication	An annual meeting will be held with stakeholders using most suitable and appropriate methods such as virtual platform, also with the community involved, on site, for a didactic presentation of the main results of the project and consider possible feedback. Apart from these meetings, the existence of an open channel of communication with the project proponents for any possible considerations throughout the year is publicised on these occasions for those involved – e-mail, phone number (including WhatsApp) and website, as detailed in Section 2.1 of PDD v.1.8 and below: +55 (19) 97406-1426 (André Jardini – project proponent responsible) jardini@vertecotech.com https://vertecotech.io/
Stakeholder input	During the consultation process, all input received from stakeholders was carefully considered. No significant changes to the project design or monitoring were deemed necessary based on the feedback provided, with one exception. The farm employees suggested the use of a different tractor implement for firebreak maintenance in the farm areas – a blade (or dozer) instead of a disc harrow. This suggestion was evaluated and subsequently discussed with the farm manager and owner, who agreed to make the blade available for firebreak maintenance in the upcoming year, as this task has already been completed for this year across all critical perimeters. Details of this discussion are recorded in the meeting minutes attached. No other modifications or updates to the project design were necessary.

Free Prior and Informed Consent

Obtaining consent	Not Applicable. No IPs, LCs, and customary rights holders are contemplated in this consultation as explained previously. According to Section 2.1 of PDD Fazenda Cristal Conservation Project (v.1.8), meetings were held with stakeholders, either in person or online, to present the project, its main impacts, possible communication channels, and to receive considerations and feedback. Such consultations represented the relative process for obtaining free, prior, and informed consent for the implementation of the project. As mentioned in the document, no comments or feedback were recorded during these occasions.
Outcome of FPIC	Not Applicable. There is no possibility for the establishment of individuals or economic activities in the project area prior to the project. According to Section 2.1 of PDD Fazenda Cristal Conservation Project (v.1.8), no objections to the project were received. The project did not encroach on lands, relocate people without consent, or force physical or economic displacement, as it involves the Legal Reserve areas of a privately-owned rural property established over 10 years ago, as indicated by the property ownership document (attached). There is no possibility for the establishment of individuals or economic activities in the project area prior to the project.

Grievance Redress Procedure

Development process	The process was developed through internal meetings with a team specialised in conflict resolution, considering both external and regional consultants (Campo Grande, Mato Grosso do Sul). These meetings, that took place after the definition of main stakeholders, aimed to identify possible methods for receiving and resolving grievance, prioritising those that would work best for stakeholders with less voice or influence space, such as the employees of Fazenda Cristal, while ensuring that the remaining stakeholders would necessarily be served by the developed process.
Grievance redress procedure	Grievance can be submitted by stakeholders through multiple communication channels, as described in PDD v.1.8. The open channels include email, telephone, in-person or virtual meetings, and website – online platform. As detailed in the cited project, the contacts for receiving complaints are available in accessible location at Fazenda Cristal (headquarters/office), and also provided via email for other interested parties. In the event of a complaint, a conflict resolution team is formed, consisting of one member from the NGO Instituto Homem Pantaneiro (previously consulted and agreed), an independent external mediator, and the project proponent. A meeting, either in-person or virtual, is then scheduled to address the issue, accommodating the availability of the stakeholders. After the meeting, the conflict resolution team analyses the complaints and provides an initial response within 5 business days. The response includes an acknowledgment of the complaint and an outline of the action plan to resolve the raised issue.

	The main goal is to resolve all complaints within 15 business days of receipt. The resolution process may include additional meetings, mediated negotiations, and, if necessary, the implementation of specific corrective actions. Regional community facilitators or other relevant interactive stakeholders may be involved to ensure all parties understand the process and feel comfortable participating.

Benefit Sharing

Process used to design the benefit sharing plan	Meetings were held with the owner of Fazenda Cristal, as indicated in PDD v.1.8, to define the potential percentages that would satisfy the funding needs of the project's activities in the area, considering the feasibility assessment. Furthermore, after identifying the stakeholders and understanding the context of Fazenda Cristal – previously described as a private farm with little or no relation to the regional context, neighbours, urban centres, etc., due to the significant distances involved – it was proposed to use the NGO Instituto Homem Pantaneiro (IHP) as a vector for social development. This institute would receive a share of the project benefits to then map out possible social actions in the project region. Parallel meetings were held with IHP, which agreed both to the allocated share of benefits and to mapping out potential social development actions that align with the project's financial return foreseen, to be eventually included in the sustainable indicators, as described in Section 6.
Summary of the benefit sharing plan	As per the documentation attached, detailing the Contract Between the Parties, the agreed amount is 60% for the landowner. It was also agreed with IHP that 10% of the return from the credits would be allocated to the aforementioned activities – this agreement has been formalised by meetings and e-mail contact, also attached, and a formal contract is under revision for formalisations.
Approval and dissemination of benefit sharing plan	As previously stated, the agreements are formalised with the interested parties and are available and accessible for consultation or review as needed by affected parties.

2.2 SOCIALCARBON Safeguards

Only the safeguard requirements identified as relevant to the project are described and documented in the table below. A complete Safeguarding Assessment can be found in PDD v.1.8, Appendix 1.

Assessment Area	Requirement	Is this being mitigated?	Evidence
1. Human Rights	The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights	Yes	The project occurs strictly within an area of native formations under conservation, with no original inhabitants residing in the area – it is a private rural property with a history of private ownership. However, it fully complies with all current national laws and universal human rights, labour, and other relevant regulations, as indicated by the monitoring of pertinent indicators. Evidence presented in Section 6.1 Broader Sustainability Results, through Human and Social Resource, regarding worker health and safety and also employment contracts. Additionally, the proponent provides an ethical code of conduct that aligns with the safeguarding of these principles, emphasising the promotion of Human Rights, Respect for diversity, prevention of Moral and Sexual Harassment, Freedom of expression, Safety and health, among other related aspects.
	The Project shall not discriminate with regards to participation and inclusion	Yes	The project includes measures to engage all possible stakeholders, particularly by offering specific communication and transparency programmes with stakeholders. Evidence presented in Section 6.1 Broader Sustainability Results, through Human and Social Resource, regarding communication with stakeholders. Additionally, the proponent provides an ethical code of conduct that aligns with the safeguarding of these principles,

Assessment Area	Requirement	Is this being mitigated?	Evidence
			emphasising the promotion of Human Rights, Respect for diversity, prevention of Moral and Sexual Harassment, Freedom of expression, Safety and health, among other related aspects.
2. Gender Equality	The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women	Yes	The project takes place in an area where the presence of women is typically limited, such as on cattle farms, predominantly made up of rural workers. However, inclusion and equality measures are planned to be implemented throughout the project, which will be monitored by the relevant indicators. Evidence presented in Section 6.1 Broader Sustainability Results, through Human and Social Resource, regarding women inclusion. Additionally, the proponent provides an ethical code of conduct that aligns with the safeguarding of these principles, emphasising the promotion of Human Rights, Respect for diversity, prevention of Moral and Sexual Harassment, Freedom of expression, Safety and health, among other related aspects.
	Projects shall apply the principles of non-discrimination, equal treatment, and equal pay for equal work	Yes	The project takes place in an area where the presence of women is typically limited, such as on cattle farms, predominantly made up of rural workers. However, inclusion and equality measures are planned to be implemented throughout the project, which will be monitored by the relevant indicators. Evidence

Assessment Area	Requirement	Is this being mitigated?	Evidence
			presented in Section 6.1 Broader Sustainability Results, through Human and Social Resource, regarding women inclusion. Additionally, the proponent provides an ethical code of conduct that aligns with the safeguarding of these principles, emphasising the promotion of Human Rights, Respect for diversity, prevention of Moral and Sexual Harassment, Freedom of expression, Safety and health, among other related aspects.
3. Health and Safety	The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community	Yes	The workers involved in the project are fully protected under all relevant laws and labour protections, with measures in place to prevent health risks in their activities. Evidence presented in Section 6.1 Broader Sustainability Results, through Human and Social Resource, regarding workers health and safety.
6. Land Tenure and Rights	The project proponent shall identify all such sites/matters potentially affected by the Project.	Yes	All sites affected by the project are identified and under secure property control and legal documentation. Evidence presented in appendixes related to property documentation and CAR related documentation. Also, relevant identification should be presented in Section 6.1 Broader Sustainability Results, through Social Resource, regarding local indigenous / traditional people.
	The project proponent must hold uncontested project and	Yes	The project proponent holds project and carbon rights for the boundary. Evidence presented in appendixes

Assessment Area	Requirement	Is this being mitigated?	Evidence
	carbon rights for the entire Project Boundary.		related to contract between parties and property documentation.
7. Indigenous people	The project proponent shall recognise and respect the indigenous people's collective rights to own, use, and develop and control the lands, resources and territories that they have traditionally owned, occupied or otherwise used or acquired, including lands and territories for which they do not yet possess title.	Yes	The project occurs on private property with no proximity to indigenous lands, as evidenced by a map with boundaries sourced from official authorities. Evidence presented in Section 6.1 Broader Sustainability Results, through Social Resource, regarding local indigenous / traditional people.
8. Corruption	The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects	Yes	The project demonstrates transparency and due diligence in the measures adopted, as well as in relevant financial matters, which can be tracked through specific indicators, in order to mitigate any associations with corruption. Evidence presented in Section 6.1 Broader Sustainability Results, through Social and Financial Resource, regarding stakeholder's communication and economic viability. Also related to annexed documentation presented regarding due diligence and other related documentation. Additionally, the proponent provides an ethical code of conduct that aligns with the safeguarding of these principles, emphasising the Combating Fraud and Corruption, among other related aspects.

Assessment Area	Requirement	Is this being mitigated?	Evidence
9. Labour Rights	The project proponent shall ensure that there is no forced labour and that all employment is in compliance with national labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards embodied in the International Labour Organization (ILO) fundamental conventions.	Yes	The workers involved in the project are fully protected under all relevant laws and labour protections, with measures in place to prevent health risks in their activities. Evidence presented in Section 6.1 Broader Sustainability Results, through Human and Social Resource, regarding workers health and safety and also employment contracts with further information.
	The project proponent shall use adequate and verifiable mechanisms for age verification in recruitment procedures in order to prevent child labour as defined by the ILO Minimum Age Convention. Exceptions are children for work on their families' property as long as the following requirements are met: a) Their compulsory schooling (minimum of 6 schooling years) is not hindered, AND b) The tasks they perform do not harm their physical and mental development, AND c) They are provided appropriate equipment, training of workers,	Yes	The workers involved in the project are fully protected under all relevant laws and labour protections, with measures in place to prevent health risks in their activities. Evidence presented in Section 6.1 Broader Sustainability Results, through Human and Social Resource, regarding workers health and safety and also employment contracts with further information.

Assessment Area	Requirement	Is this being mitigated?	Evidence
	documentation and reporting of accidents and incidents, and emergency preparedness and response measures.		
10. Financial Sustainability	The project proponent shall demonstrate financial sustainability of the Projects implemented.	Yes	Financial sustainability of the project is demonstrated. Evidence presented in Section 6.1 Broader Sustainability Results, through Financial Resource, regarding economic viability.
11. Climate	Projects shall not increase greenhouse gas emissions over the Baseline Scenario unless this is specifically allowed within Activity Requirements or the applied Methodology.	Yes	The project is composed of activities specifically focused on emission prevention and carbon removal, as outlined in the project's activities, which are at its core, such as the prevention of wildfires and deforestation. Evidence presented in Section 6.1 Broader Sustainability Results and Carbon Resource, regarding project performance. Also, Section 3 details project's activities which attend directly to avoidance of greenhouse gas emissions.
12. Natural Resources	The Project shall ensure that surface water resources are conserved. This includes maintaining credible environmental flows, demonstrated by providing a verifiable calculation that shows conservation is maintained at a level, and ensuring that any discharged wastewater is of a high	No	The project is crucial for preserving surface and groundwater resources. By maintaining these vegetative formations, the project enhances water accumulation, permeability, and infiltration while protecting watercourses from diversion and erosion. Consequently, no mitigation is required.

Assessment Area	Requirement	Is this being mitigated?	Evidence
	enough standard to allow beneficial reuse.		
	The Project shall demonstrate that measures to ensure soil protection and minimised erosion are in place prior to the commencement of the Project.	Yes	Soil protection and erosion are being monitored by specific indicators. However, given the context of the project, they are not subject to negative impacts, as there are no significant degrading factors involved in the project areas, such as soil preparation, slope, removal of vegetation cover, etc. Evidence presented in Section 6.1 Broader Sustainability Results, through Natural Resource, regarding environmental impacts.
	The Project shall demonstrate that measures will be undertaken to ensure that surface and ground waters are protected from erosion and that these measures are in place prior to the commencement of the Project.	No	The project is crucial for preserving surface and groundwater resources. By maintaining these vegetative formations, the project enhances water accumulation, permeability, and infiltration while protecting watercourses from diversion and erosion. Consequently, no mitigation is required.
	The Project shall identify the functions and services provided by the landscape and demonstrate no net degradation in existing landscape function and services.	No	The project is essential for maintaining landscape functions and services. By preserving these formations, the project supports water regulation, soil stability, and biodiversity, while preventing degradation from activities like deforestation or land use changes. This ensures no net loss in landscape functions, preserving ecological integrity and sustainability

Assessment Area	Requirement	Is this being mitigated?	Evidence
	Projects shall maintain or enhance biodiversity and ecosystem functionality in the project area.	Yes	The project maintains and potentially enhances biodiversity and ecosystem functionality by its core activities which as prevention of disturbance and conservation of natural formations. Evidence presented in Section 6.1 Broader Sustainability Results, through Natural Resource, regarding environmental impacts. Specific monitoring is planned throughout the project to characterise these gains with greater precision.
	The Project shall not lead to the reduction or negative impact of any recognised Endangered, Vulnerable or Critically Endangered species.	Yes	The project involves the conservation of natural habitats for potential vulnerable species. Verification of conservation areas monitoring and protection are disposed. Evidence presented in Section 6.1 Broader Sustainability Results, through Natural Resource, regarding environmental impacts. Specific monitoring is planned throughout the project to characterise these gains with greater precision.
	Habitats of endangered species shall be specifically identified and managed to protect or enhance them.	Yes	The project involves the conservation of natural habitats for potential vulnerable species and specific monitoring are under development. Verification of conservation areas monitoring and protection are disposed. Evidence presented in Section 6.1 Broader Sustainability Results, through Natural Resource, regarding

Assessment Area	Requirement	Is this being mitigated?	Evidence
			environmental impacts. Specific monitoring is planned throughout the project to characterise these gains with greater precision.
13. Release of Pollutants	The Project shall avoid the release of pollutants. This applies to the release of pollutants to air, water, and land due to routine, non-routine and accidental circumstances.	Yes	The project does not anticipate the release of significant nor frequent pollutants in its activities; however, their potential occurrence will be monitored. Verification of data related to environmental monitoring of the area – release of pollutants – as necessity or implication. Further details in Section 5.3 and Section 6.1 related to Nature Resources
	All potential pollution sources that may result from the Project that cause the degradation of the quality of soil, air, surface and groundwater within the Project's area of influence shall be identified. Appropriate mitigation measures and monitoring shall be implemented to ensure the protection of resources	Yes	The project does not anticipate the release of significant nor frequent pollutants in its activities; however, their potential occurrence will be monitored. Verification of data related to environmental monitoring of the area – release of pollutants – as necessity or implication. Further details in Section 5.3 and Section 6.1 related to Nature Resources

3. Implementation Status

3.1 Implementation Status of the Activity

In the matter of the methodology applied related to conservation of native formations in Fazenda Cristal (SCM0003, v.1.0), along with proposed project activities (PDD v.1.8), it is found that it is currently under full development. Following the acquisition of specific materials for the conservation of Legal Reserves during 2020 (16 May, as Project Start Date indicates), the following activities described below became part of property's scope, as verified, until 31 December 2023 (end of monitoring period). A photographic register with several related images is found annexed to this project. Annexed documents also reveal evidence of invoices of material and services related to project activities.

Firebreak maintenance: Firebreaks in Fazenda Cristal were implemented every year, since project start date, at the beginning of the dry season – between May and June – based on tacit knowledge from farm manager and employees, an approach similar to recommended by EMBRAPA institute[1].

A shallow plough harrow is used to form strips to exclude grass and pioneer vegetation about 3 metres wide, as illustrated below. The strips are eventually reduced when there is already an internal road within the perimeters, which work as a firebreak.

[1] EMBRAPA, 2015. Guia de restauração do Cerrado: volume 1: semeadura direta. Embrapa Recursos Genéticos e Biotecnologia. 40 p., il. Brasília, DF. Universidade de Brasília: Rede de Sementes do Cerrado, 2015. Available at: https://www.embrapa.br/busca-de-publicacoes/-/publicacao/1044072/guia-de-restauracao-do-cerrado-volume-1-semeadura-direta.

Image 3.1-1: Fazenda Cristal's perimeter with firebreaks (Author records, August-2023)

Image 3.1-2: Fazenda Cristal's perimeter with firebreaks (Author records, August-2023)

Image 3.1-3: Fazenda Cristal's Legal Reserve in drone view with firebreaks along perimeter (Author records, August-2023)

The establishment of firebreaks between farm perimeters is a common practice in Pantanal region, since the presence of fire is equally common in this biome. The further topic "Remote monitoring (fire and deforestation events)" clearly demonstrates how the fire events were limited to the neighbouring property at the time, and this fact was attributed to the implementation of effective firebreaks in Fazenda Cristal – which is then related to avoidance of emissions of GHG in project area, by preventing forest fires in project area.

Satellite images for the years 2021, 2022 and 2023 after the maintenance of the firebreaks are found attached to this monitoring report. These elements may eventually be used as internal roads without impairing its functionality.

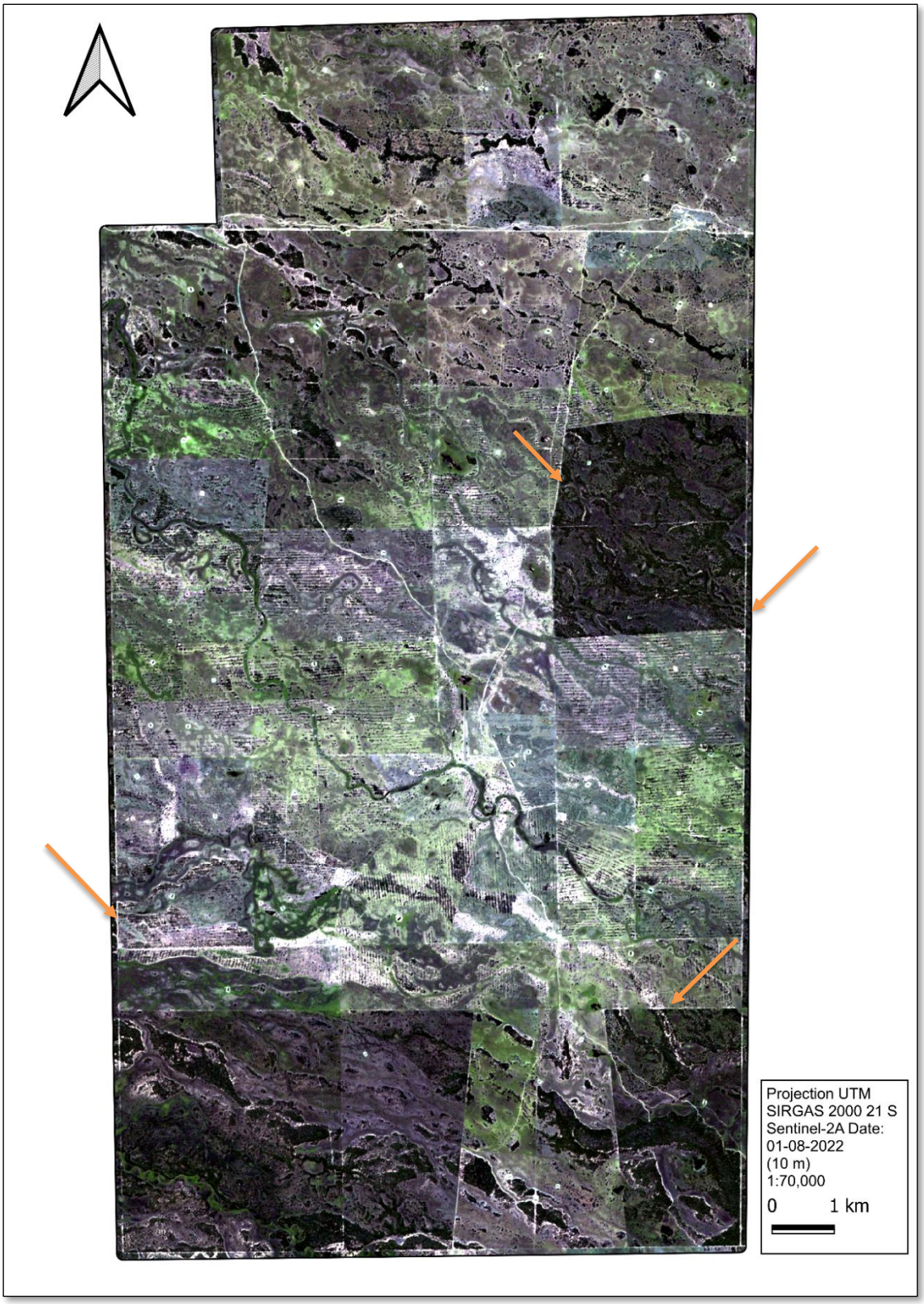


Image 3.1-4: Sentinel-2A image correction from August 2022 – after firebreaks maintenance activities within Fazenda Cristal perimeter and Legal Reserves

Fence maintenance: Over the monitoring period, the fences have undergone punctual maintenance in alignment with the farm's routine, alongside other activities, since project start date. They were repaired in the event of any occurrence that could damage them, such as falling posts or wire breaks. The employees conduct periodic visual inspections during the farm's usual activities, ensuring that the entire perimeter of the Legal Reserves is entirely monitored at least once a year.

Image 3.1-5: Example of fence conformity within Fazenda Cristal perimeter and Legal Reserves (Author records, August-2023)

Local monitoring against intrusions: During the farm's routine activities, since the project start date, over the monitoring years, invasions by cattle into conservation areas were observed – naturally, as this is customary on livestock farms, where animals may take advantage of damaged fences to enter preservation areas and consume forage biomass – and they were properly removed from the areas in the event of these occurrences, along with fence maintenance within these spots. No other intrusions were observed for the monitoring period. It is important to mention, however, that in this biome, particularly in extensive areas like those of Fazenda Cristal, it is highly complex to remove stray cattle from reserve areas. In the event of an incursion, the cattle may roam for days or weeks. These are areas with difficult access, either on horseback or by vehicle, lacking paths or roads, and covering more than 1,000 hectares, which complicates the removal process. The impact caused, however, is negligible, as such incidents do not occur frequently or in large numbers, but rather sporadically, involving only a few cattle in significant areas like the Legal Reserves under report.

The farm manager informed that they usually place salt licks at the entrances of the reserves, as well as artificial water troughs, to attract wandering cattle, making it easier for the patrol team to identify them. According to him, the identification patrol is part of the routine activities of the farm for herd management. Fire-fighting measures: In accordance with the following item, 'Remote monitoring (fire and deforestation events),' no fire events occurred during the monitoring period covered by this report. However, fire-fighting equipment and appropriate PPE (Personal Protective Equipment) have been made available and are stored at the Fazenda Cristal headquarters, as documented below, after the formalisation of the project at the end of 2022, as mentioned in Section 1.5, as an enhancement to pre-existing project activities (described in the previous items).

During the local visits, it was mentioned that discussions are ongoing with the Corumbá Military Fire Brigade regarding the possibility of housing two fire brigade members temporarily at the farm during the dry season, using it as a base for potential responses. Further developments will be updated throughout the project.

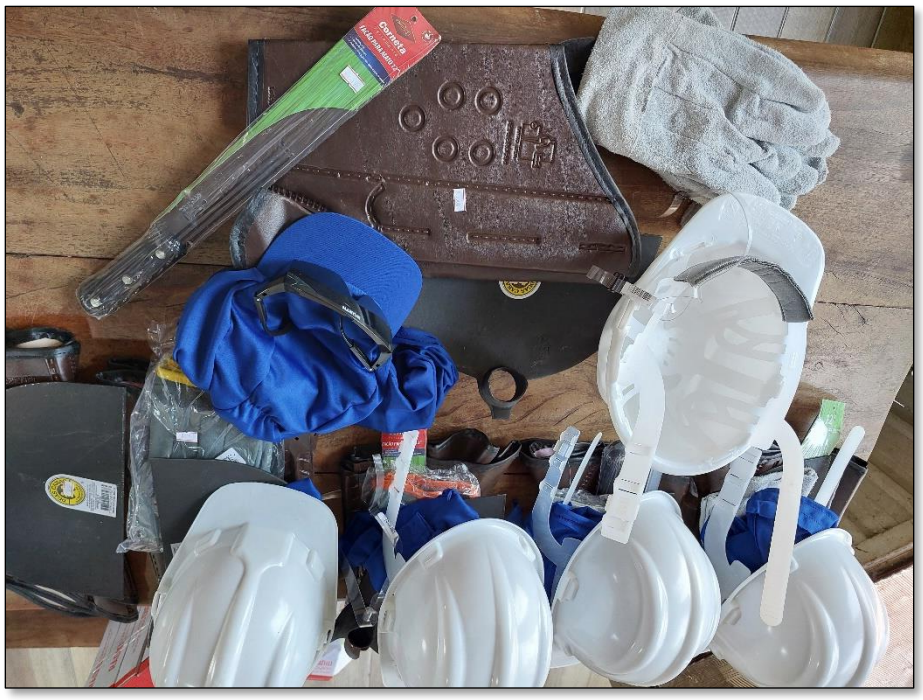


Image 3.1-6: PPE (Personal Protective Equipment) and other fire combat equipment available and stored at Fazenda Cristal headquarters (Author records, August-2023)

It is worth mentioning that the main fire-fighting measures are set out in the attached “Plano de Atendimento a Emergências (PAE) – Fogo e Desmatamento - Fazenda Cristal; in English, Emergency Assistance Plan (EAP) – Fire and Deforestation. In one of its annexes, there is the complete list of materials for fire protection and firefighting on the farm, filled by Fazenda Cristal’s manager.

The first measures mentioned above reflect specific actions being developed by the owner to protect both the productive and reserve areas of the farm. These actions not only facilitate natural regeneration but also reduce the impacts of wildfires and deforestation, thereby preventing GHG emissions and enhancing carbon sequestration by the vegetation. These carbon components were anticipated by the owner to be incorporated into projects that would provide resources for the maintenance of these measures, as outlined in Section 2.1 of the PDD v.1.8. The Appendix 3: Common Practice Analysis presents an analysis of common practice in the region of the project areas, for the project activities described, demonstrating that they were additional during the monitored period.

Remote monitoring (fire and deforestation events): From the moment this project was listed for the certification and future generation of carbon credits, project proponent set up a partnership with Quiron platform, as described in PDD Fazenda Cristal Conservation Project v.1.8, which carries out remote monitoring using high-tech intersections along the project areas plus 500 meters buffer. This activity was implemented as an enhancement to pre-existing project activities (described in the previous items), aiming to contribute to emission reductions and the maintenance of removals within the project area.

The platforms from Quiron used for this monitoring are: 1-FLARELESS: Online platform for daily preventive monitoring of fire risk, with a 10-day prediction for areas at greatest risk; 2-MAPPER: Monitoring of the object area with alerts for changes in land use, such as deforestation and fires, as commented in EAP quoted above.

It is important to state that this monitoring is not in real time – as this technology is not yet available or accessible for such project, – it is predictive and confirmatory. Every day FLARELESS platform is accessed and the places with the greatest risk of fire in the project areas are observed, according to the cross-referencing of environmental parameters, and an alert is sent to the property responsible (manager), with the critical points generated by the platform, maps, coordinates, text on the prediction for the 10-day period, fire danger trend graph and suggested positioning of field teams. Complementarily, in possible event of fire/deforestation, MAPPER platform is activated to check the affected area.

These monitoring reports sent frequently are as seen in the example image below, in order to alert and anticipate possible fire outbreaks, especially during the driest time of the year (dry season – from May to September), through farm's manager precise action to be adopted, if deemed necessary – described in EAP.

In this regard, the proponent has developed a control spreadsheet containing the main alerts generated during the current monitoring period, from the moment Quiron was added as a project monitoring tool, aiming to observe possible trends and plan future actions for fire prevention and control within the project areas. The results are presented in a sheet document attached to this report, which is updated periodically and promptly as alerts are generated. The points are plotted to facilitate spatial analyses of the area, with a map included in the attached table.

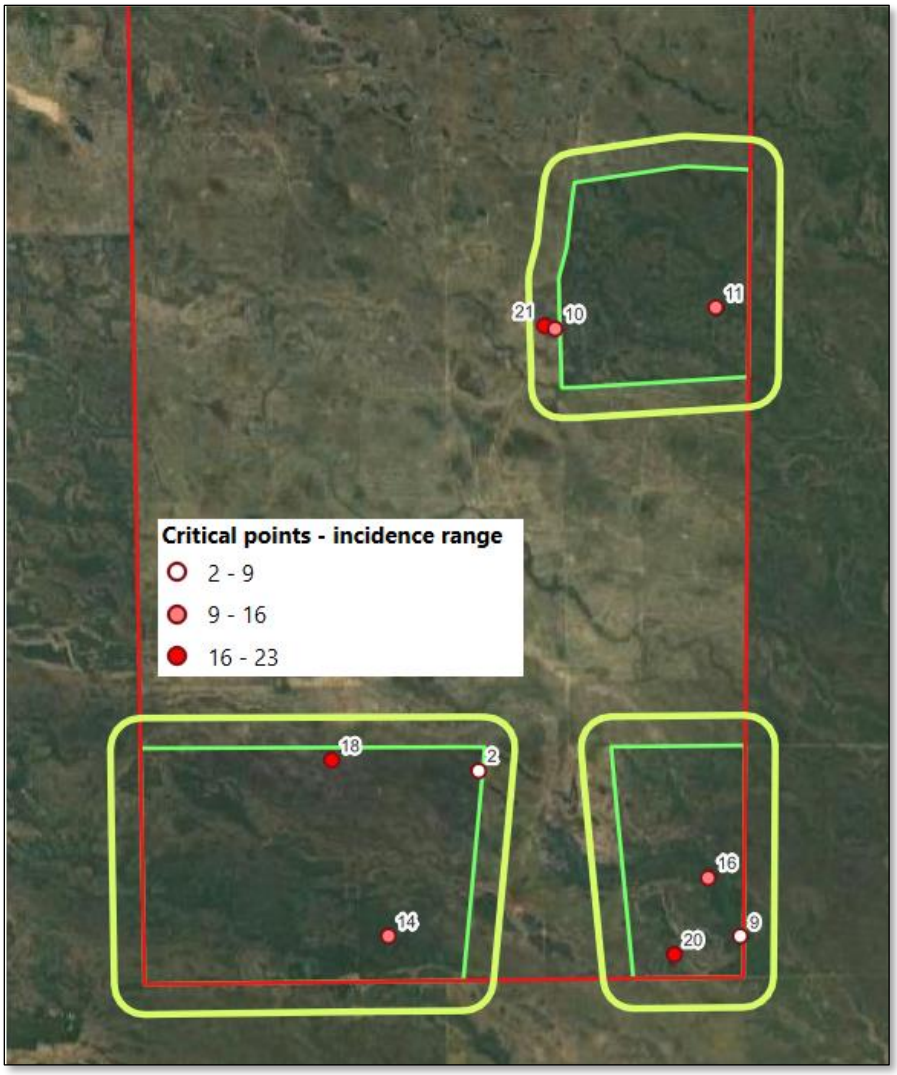


Image 3.1-7: Incidence of critical points from Quiron preventive monitoring platform for 2023 in Fazenda Cristal's project area plus 500 meters of buffer

It is important to mention that, in accordance with the emergency response plan referenced, when a new critical point (which represents a combination of calibrated factors and those currently undergoing calibration for the specific area) is identified in a "extreme" or "very high" pixel, a field team is dispatched to the farm to verify the location. So far, no fire events have been observed during these inspections, but some response points have been recorded in field, as shown in the images below. The mentioned procedure is still undergoing refinement and will be further detailed as occurrences unfold and through exchanges between the monitoring team – project proponent, and the field team – Fazenda Cristal. The full description of this flow can be found in the cited annex related to the EAP.

The project proponent also carries out other prevention monitoring using several different platforms, as described in the EAP annexed, cross-checking data of the project area (i.e., using FIRMS – Fire Information

for Resource Management System[2], from NASA), in order to check for possible events when more severe hotspots are identified by the contracted platform described above.

Image 3.1-8: Quiron's monitoring platform in Vert Ecotech's module, with 4 critical points suggested in "high" for fire risk on 19-November-2023 – dataset from 20-October to 29-November of 2023

[2] FIRMS, NASA, 2023. Available at: https://firms.modaps.eosdis.nasa.gov/map/#d:today;l:fires_all,country-outline,graticule,earth;@-55.70,-17.89,12.90z.

Image 3.1-9: Example of field verification of a critical point identified as “extreme” on the Quiron platform (Flareless) within the 500 meters buffer area from Legal Reserve (project area)

In addition to this contracted monitoring, there was a survey of fire events recorded through MapBiomas Fire Collection 3.0[3] for the years of 2018-2023. Data from INPE[4] was used, as well as data from Global Forest Watch, MapBiomas ALERTA[5], which provides fire events via TIFF (Tagged Image File Format) and Shapefile.

The results are aligned with the actions developed by this conservation project, since there are no fire registers in the years of 2021, 2022 and 2023. There is also an important verification of the effectiveness of the implementation of firebreaks in 2020, project start year, since there are significant records of fire events on neighbouring properties, noting that Fazenda Cristal’s areas were not affected, as reveals Image 3.1-12 below.

It is understood that in previous years such as 2019 and even 2020, there were significant fire events throughout the whole Pantanal, however, there were no significant impacts for the property under scope – vegetation remained in its successional stage, as the methodology itself implies.

[3] Available at: https://code.earthengine.google.com/?scriptPath=users%2Fmapbiomas%2Fuser-toolkit%3Amapbiomas-user-toolkit-fire.js.

[4] INPE’s fire monitoring platform (Programa Queimadas do INPE – Focos de Queimadas e Incêndios), available at: http://terrabrasilis.dpi.inpe.br/queimadas/portal/dados-abertos/#da-area-qmd.

[5] MapBiomas ALERTA publishes any loss of native vegetation detected by the alert systems and validated by high-resolution satellite images. Available at: https://plataforma.alerta.mapbiomas.org/.

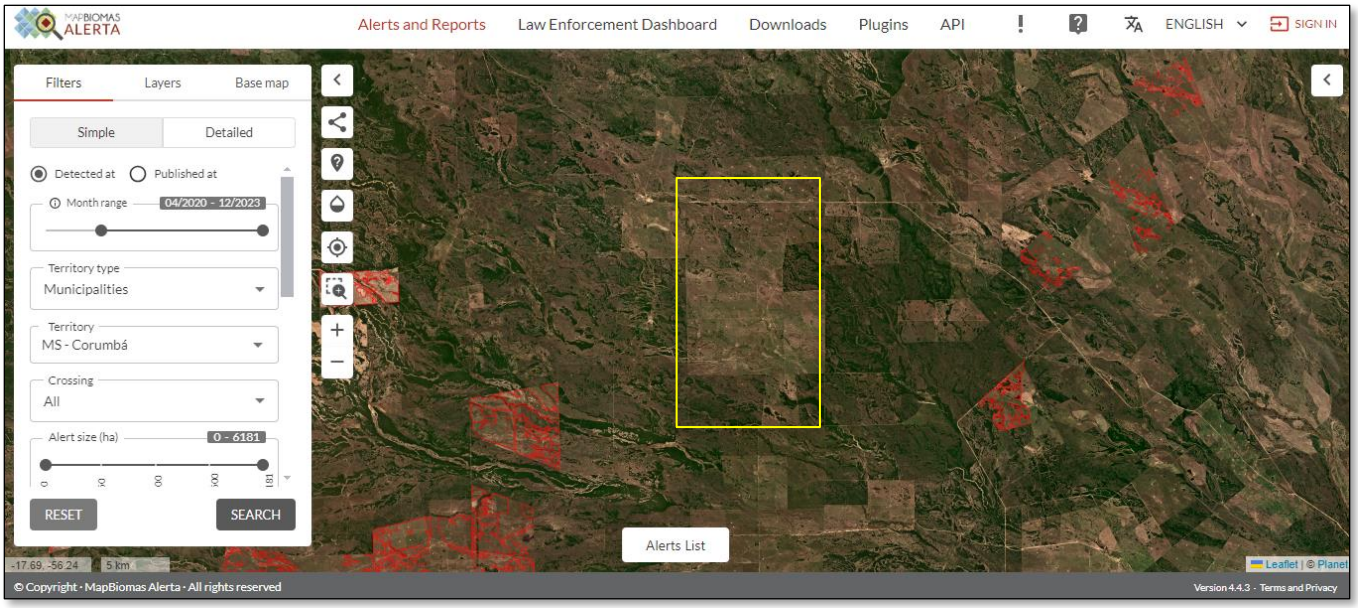


Image 3.1-10: Consultation of the database available from MapBiomas ALERTA revealing zero occurrences within the immediate vicinity of Fazenda Cristal (approximately outlined in yellow)

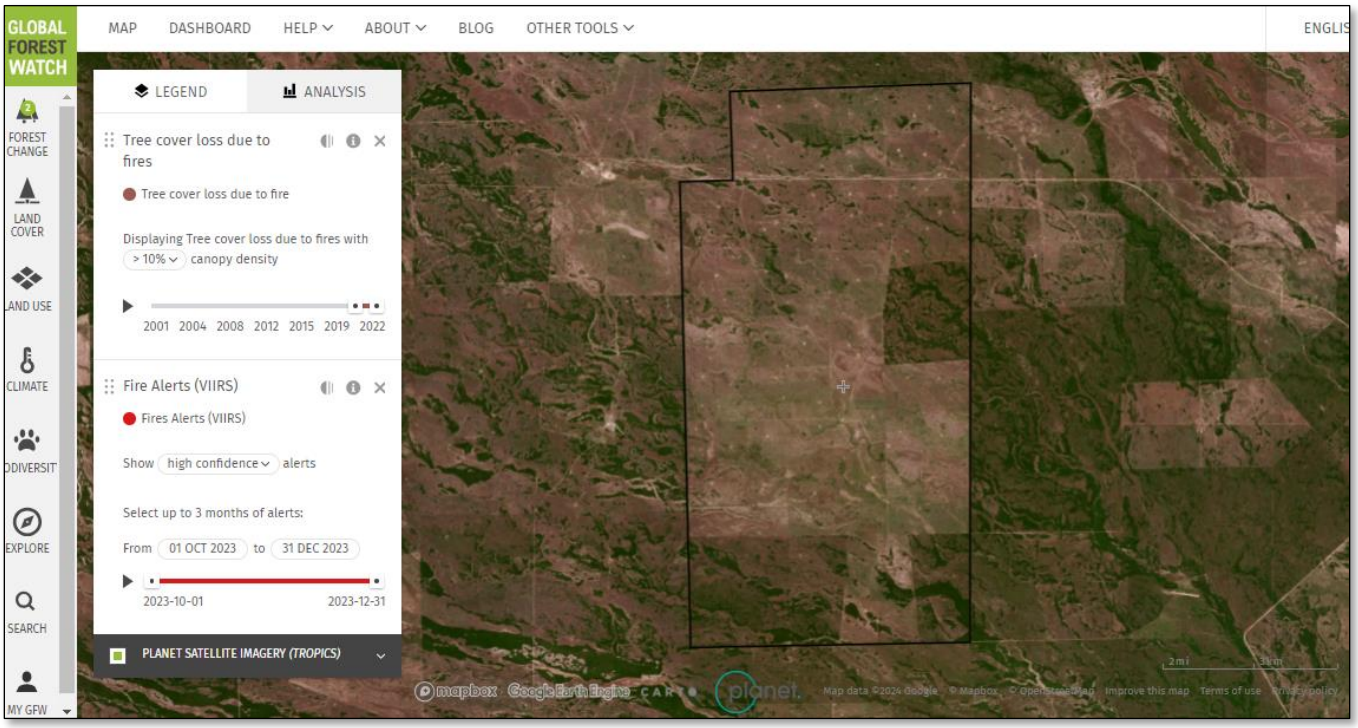


Image 3.1-11: Consultation of the database available from Global Forest Watch revealing no tree cover loss due to fire and fire alerts (VIIRS) consulted throughout the project within the immediate vicinity of Fazenda Cristal (outlined in black)

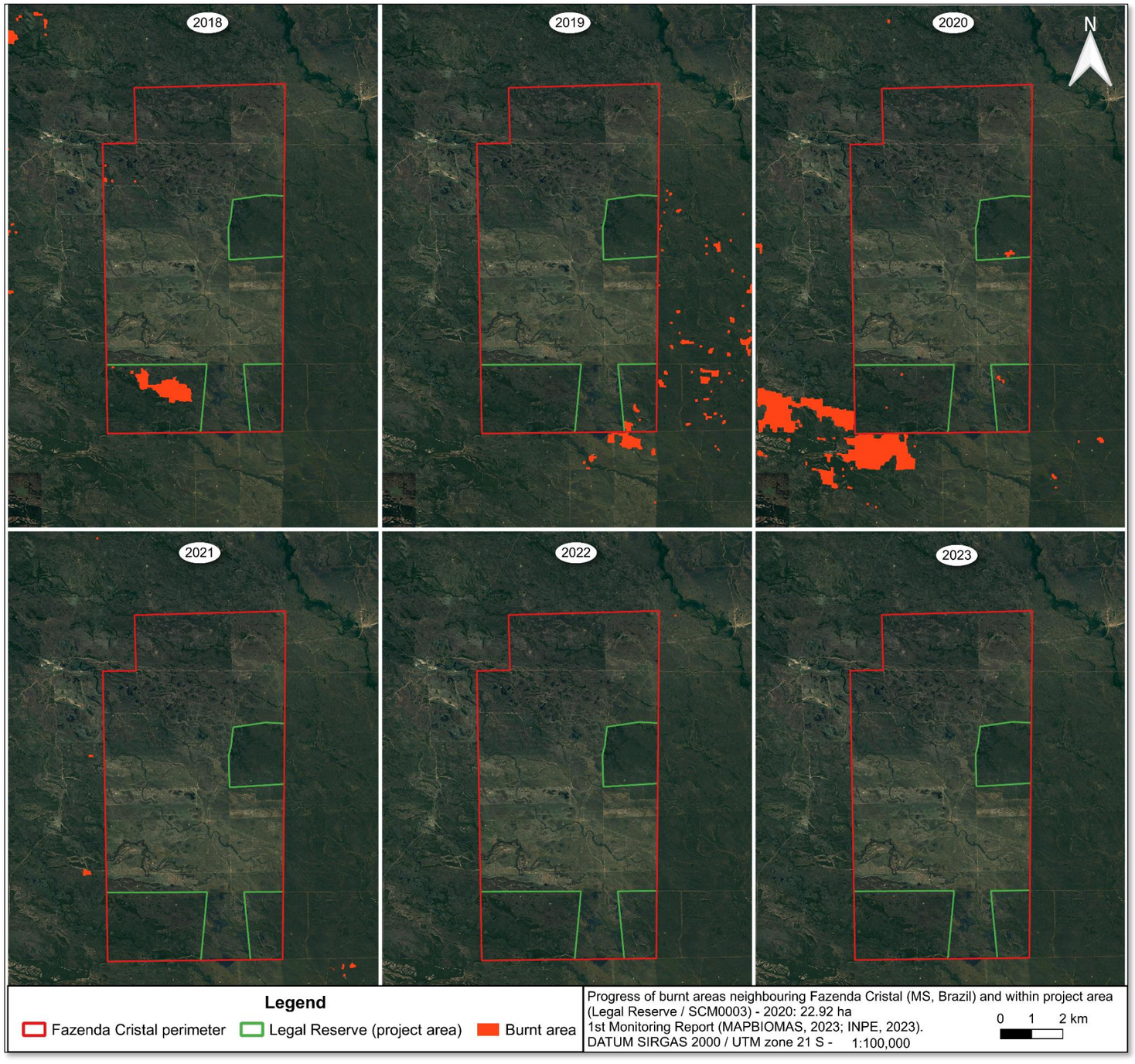


Image 3.1-12: Progress of burnt areas neighbouring Fazenda Cristal's project area – considering 2020 as project start year

Biodiversity monitoring: Since the project start date, the project's flora and fauna monitoring was conducted through observations and sightings by staff involved in routine conservation activities, as well as characterisation campaigns by the project proponent. The campaigns were conducted in February 2023, as noted in PDD v.1.8, within the LR areas of the property (project areas), being reperformed in August 2023, to improve the accuracy of the characterisation and to update some previous identifications.

These efforts enabled the identification and classification of occurring species, which were summarised in a sheet annexed, containing a list characterising animals and vegetation within the project area, including names, species, origin, conservation status, and records, addressing biodiversity indicators to be further detailed in Section 6. More information can be found in Section 6, which contains the results of the relevant indicators, while the photographic records of this monitoring are included in the specific photographic records annex.

A more comprehensive biodiversity monitoring plan shall begin in 2024. The planning includes the installation of two camera traps, initially, which are part of a passive monitoring system for terrestrial fauna movement in the areas for at least 30 running days during each season of the year. The seasons for the region are divided into the Flood or Rainy Season (December to March), Transition Season (April and May), and Dry Season (June to September).

Two cameras were chosen at the start of this comprehensive monitoring, with the understanding that there is potential for expanding the techniques and frequency of monitoring as the project and resources progress. The Legal Reserve areas in the southern part of the farm share the same vegetation zone (predominantly park savannah without gallery forest) and the same “vazantes” (watercourses), which implies a high probability of the same terrestrial fauna species circulating, thus planning only one camera. The LR area in the centre-east of the property, however, has a different vegetation type (predominantly wooded savannah) and is supposed to be under constant monitoring by another camera.

Also, a more specific flora monitoring flora was also designed, involving the allocation of plots within the project areas to assess certain dendrometry parameters of key trees in the Legal Reserves, which will be presented in the next monitoring report.

Image 3.1-13: Ground view of “Gavião-belo” – *Busarellus nigricollis* in Fazenda Cristal (Author records, 2023)

Image 3.1-14: Lowland Tapir’s footprint (*Tapirus terrestris*) classified as vulnerable by IUCN – Fazenda Cristal (Author records, 2023)

Regarding social and environmental components of the project, Section 6, which deals with social, human, financial, natural, biodiversity and carbon aspects, details the relative progress more precisely. Files and documents related to evidence of monitoring of indicators were made available attached to this report.

The sustainability aspects of the project have shown varied progress across different dimensions, reflecting the distinct challenges and advancements experienced over time. In the social aspect, there was a slight improvement driven mainly by enhanced stakeholder relations. Yet, many social initiatives remained in the planning stage, with further definitions of actions and responsibilities currently being detailed in partnership with the NGO Instituto Homem Pantaneiro, despite the project being in compliance with all safeguards regarding human, social, and economic aspects, with the landowner employer presenting all legally required documents related to these topics.

Improvements in awareness of education and health issues within the local farm community was evidenced. Substantial progress was observed in the natural aspect of the project, reflecting the success of monitoring initiatives and effective vegetation preservation.

As supported in PDD v.1.8, this project does not include leakage emissions. However, it should be noted that measures listed above are directly related to the factors surveyed in Non-Permanence Risk analysis, such as: item b of Section 1 (Internal Risk), that relates to patrol activities within conservation areas and remote monitoring and is configured as "Ongoing enforcement to prevent encroachment by outside actors". The same applies to factors in Section 3 (Natural Risks), such as fire and deforestation, which are covered by measures outlined in this section.

Even though certain risks, such as the cattle invasion and the spread of exotic species, are considered extremely low concerning the integrity of the vegetation regarded as a carbon reservoir in this project, the monitoring and control of these measures are conducted through periodic inspections by farm employees during routine activities, as previously explained. However, more significant measures are adopted for control and monitoring, also previously mentioned, such as the remote monitoring platform for fire and deforestation, in addition to the Emergency Assistance Plan - Fire and Deforestation - Fazenda Cristal.

Consequently, the Natural Resource N-010 Environmental Impacts and N-016 Monitoring Methods indicators will reflect the measures adopted in this project in potential follow-ups and the results obtained. The first indicator should reveal the status of the vegetation over the years, noting whether there has been any change in the classified use of the vegetation – a factor directly related to the quantification of carbon removed – as well as the vegetative vigour of the same, which will be detailed in the relevant section.

3.2 Deviations

3.2.1 Methodology Deviations

In this Monitoring Report, the first of the Fazenda Cristal Conservation Project, PDD v.1.8, a methodological deviation was implemented (SCM0003 v.1.0) to enhance the accuracy of carbon monitoring and quantification, due to specific environmental conditions occurring in Pantanal biome, which render some of the proposed methodological procedures potentially outdated when compared to other essentially forested Brazilian biomes.

The proposed deviation aimed to maintain the same classification method framework for primary, secondary, and non-eligible formations over the years within the land use and land cover classification maps on the GIS platform, without introducing exclusions throughout the analysis pairs (e.g., 2010-2015; 2015-2019), thus preserving the classification history of land uses across the entire delineation to comprehend each proposed combination. For example, for a classificatory analysis of the sequence of years 2000 - 2010 - 2015 - 2019 - 2020, the usage pattern would be as follows: Forest - Forest - Flooded Area - Forest - Forest. The area and its corresponding set of pixels retained their historical DNA up to the final quantification year (2020), allowing for a more precise, robust, and appropriate analysis in line with the intrinsic conditions of Pantanal biome, while maintaining a conservative approach regarding classification as either primary, secondary, or non-eligible area. Such analysis and classification followed particular procedural rules outlined in a document attached to this project, and the classification adopted for each set of pixels, for each year of quantification, is presented in the accompanying spreadsheet entitled 'Methodology-Deviation-Fazenda Cristal_1st Verification'.

It is understood that without these changes, classes of areas undergoing constant alternation between wetlands, savannas, forests, and grasslands – native formations involved in the natural processes of flooding, regeneration, and ecological succession in the biome – would eventually and gradually become excluded from project's eligible classes/areas. This would lead the project to 'lose' areas and carbon quantities progressively and annually in an imprecise manner, without these changes representing any regression in the vegetation status, especially associated with any anthropic action within project areas. Therefore, even with the observed alternation in land use classes across the pixels, it is correct to state that the area is under progressive status, not representing any form of degradation, as cited in Section 5 of the applied methodology. This conclusion is further substantiated by the more robust analysis presented within the N-010 Environmental Impacts indicator evidence annexed, in Section 1 - Vegetation Restoration.

This deviation should be maintained for subsequent verifications. Consequently, a minor amendment to the Project was required, as described in the section below.

3.2.2 Project Description Deviations

To comply with the proposed methodological deviation, it is likewise proposed to adopt a usage class to be included within the project's quantification scope: Annual carbon incrementation parameters, in the section GHG Emission Data and Parameters Available at Validation, with the inclusion of the "Wetland class", which should have an incrementation rate of 0.00 tC/ha, allowing this class to retain its classification historical DNA for a given set of pixels, thus enabling future classifications to be more precise. This adoption is supported by the attached spreadsheet relating to this methodological deviation. Sections 4.1 and 4.2 of this report, concerning carbon quantification parameters, have already been duly updated.

4. Data and Parameters

4.1 GHG Emission Data and Parameters Available at Validation

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
Source of data	BRAZIL. MCTI – Ministry of Science, Technology and Innovation. Brazil's National Communication to the United Nations Framework Convention on Climate Change
Value applied	Pantanal - Primary forest formation: 0.20 Pantanal - Primary savanna formation: 0.20 Pantanal - Secondary forest formation: 2.77 Pantanal - Secondary forested savanna formation: 1.69 Pantanal - Secondary park savanna formation: 0.49 Pantanal - Grassland formation: 0.10 Pantanal - Wetland: 0.00
Justification of choice of data or description of measurement methods and procedures applied	Adoption of annual carbon incrementation parameters for the managed forest vegetation and managed grasslands in Brazilian biomes, as presented in the most recent version of Brazil's National Communication to the United Nations Framework Convention on Climate Change - further justification over savanna found in PDD v.1.8 Appendix 2: Savanna Increment Rate Rationale.

Purpose of Data	Calculating the project CO_2 removal
Comments	Although we have available the Fourth National Communication of Brazil to UNFCCC, it was used the data available in the Third National Communication of Brazil to UNFCCC, since the most recent version does not present relevant data for annual carbon increment parameters by biomes.

Data / Parameter	GWP_{N2O}
Data unit	tonnes CO_2e per tonne N_2O (tCO_2e/tN_2O)
Description	Global warming potential of nitrous oxide
Source of data	IPCC Sixth Assessment Report (IPCC, 2021)
Value applied	273
Justification of choice of data or description of measurement methods and procedures applied	The SOCIALCARBON Standard requires that N_2O is converted to CO_2e using the 100-year global warming potential derived from the most recent IPCC Assessment Report.
Purpose of Data	Calculation of project emissions
Comments	-

Data / Parameter	GWP_{CH4}
Data unit	tonnes CO_2e per tonne CH_4 (tCO_2e/tCH_4)
Description	Global warming potential of methane
Source of data	IPCC Sixth Assessment Report (IPCC, 2021)
Value applied	28

Justification of choice of data or description of measurement methods and procedures applied	The SOCIALCARBON Standard requires that CH_4 is converted to CO_2e using the 100-year global warming potential derived from the most recent IPCC Assessment Report.
Purpose of Data	Calculation of project emissions
Comments	Value was conservatively round up from 27.9 – value found in IPCC Sixth Assessment Report.

4.2 GHG Emission Data and Parameters Monitored

Data / Parameter	Area per class of vegetation cover
Data unit	Hectare (ha)
Description	Area per class of vegetation cover within the project area
Source of data	MapBiomas – Collection 9 or above (MAPBIOMAS, 2024); Phytophysiognomies (IBGE, 2019) or more updated related to this classification
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's field calculator ("$area/10000" expression) using the methodology reference detailed in Section 5 – Project Boundary (page 11) and methodology deviations proposed in this report
Frequency of monitoring/recording:	Annual
Value monitored	2020 Pantanal primary forest formation 143.00 Pantanal secondary forest formation 0.77 Pantanal primary savanna formation 821.71 Pantanal secondary savanna formation (forested savannah Sd) 9.96 Pantanal secondary savanna formation (park savannah Sp) 47.57 Pantanal wetland 42.73 Pantanal grassland formation 2872.44 2021 Pantanal primary forest formation 142.83 Pantanal secondary forest formation 0.51 Pantanal primary savanna formation 826.39 Pantanal secondary savanna formation (forested savannah) 10.32

	Pantanal secondary savanna formation (park savannah) 46.34 Pantanal wetland 381.5 Pantanal grassland formation 2529.5 <u>2022</u> Pantanal primary forest formation 143.25 Pantanal secondary forest formation 0.6 Pantanal primary savanna formation 849.89 Pantanal secondary savanna formation (forested savanna Sd) 5.76 Pantanal secondary savanna formation (park savanna Sp) 35.41 Pantanal wetland 1046.85 Pantanal grassland formation 1855.89 <u>2023</u> Pantanal primary forest formation 143,51 Pantanal secondary forest formation 0,68 Pantanal primary savanna formation 851,16 Pantanal secondary savanna formation (forested savanna Sd) 9,69 Pantanal secondary savanna formation (park savanna Sp) 34,10 Pantanal wetland 645,53 Pantanal grassland formation 2248,95
Monitoring equipment	Not applicable
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. In the event that a figure of less than 90% is obtained, the land use and cover must be classified by means of remote sensing, using orbital imaging, by a fully trained and duly qualified professional.
Purpose of data:	Calculating the project CO_2 removal
Calculation method:	Using the GIS software's field calculator ("$area/10000" expression).
Comments:	Such classification considers Section 3.2. Relevant datasets/remote imagery will be uploaded /annexed to facilitate independent reviews of the recorded project outcomes. For the secondary savanna formations, a delineation for each phytophysiognomy present in the incident area should be promoted, using IBGE classification data from 2019 or more recent, to segregate the appropriate application of the annual carbon increment rate, as explained in PDD v.1.8 Appendix 2: Savanna Increment Rate Rationale.

Data / Parameter	$BAPA_y$

Data unit	Hectare (ha)
Description	Burned area within the project area at year y
Source of data	Remote sensing data and GIS Local management team and field data MapBiomas[6]
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: - INMET[7] - INPE[8]
Frequency of monitoring/recording:	Annual
Value monitored	Annual total fire scars area (within project area) 2020: 2.04 ha (forested savanna – Sd) and 11.74 (park savanna – Sp) 2021-2023: 0 ha
Monitoring equipment	Not appliable
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: - INMET - INPE -MapBiomas - Field data from the management team An accuracy analysis shall be applied to the detection of the burned area within the project area, through reclassification by photo interpretation of georeferenced images with 30 m spatial resolution or better. A minimum 90% match must be attained. In the event that a figure of less than 90% is obtained, the burned area must be detected by means of remote sensing, using orbital imaging, by a fully trained and duly qualified professional
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

[6] MAPBIOMAS. Available at: https://brasil.mapbiomas.org/.

[7] INMET. Instituto Nacional de Meteorologia (National Institute of Meteorology in Portuguese). Available at: https://portal.inmet.gov.br/.

[8] INPE. Instituto Nacional de Pesquisas Espaciais (National Institute for Space Research in Portuguese) Available at: http://www.inpe.br/.

Calculation method:	Remote sensing and GIS
Comments:	-

Data / Parameter	C_p
Data unit	tCO_2e/ha
Description	Average carbon stock per hectare in the carbon pool p burnt at year y
Source of data	Brazilian Forest Reference Emissions Level (FREL)[9] Modified version (2024)
Description of measurement methods and procedures to be applied:	The following sources will be monitored: National data - Peer-reviewed scientific studies 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:	Annual
Value monitored	Pantanal's above ground biomass (AGB), below ground biomass (BGB), dead wood (DW) and litter (LI) average carbon stock per hectare per forest phytophysiognomies (tC/ha): S Savanna: AGB 26.69 / BGB 16.94 / DW 3.12 / LI 4.88; total 51.63 tC/ha Sd Forested Savanna: AGB 69.2 / BGB 15.22 / DW 7.61 / 11.17; total 103.21 tC/ha
Monitoring equipment	Not applicable
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
Purpose of data:	This parameter is used to calculate project emissions resulting from biomass burning in the project scenario

[9] Available at: https://redd.unfccc.int/submissions.html?country=bra.

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
Comments:	As per the reference in use, Sd (forested savanna) was associated with project's forested savannah, represented by the Legal Reserve area in the centre-east; and S (savanna) for park savannah without gallery forest for the two RL areas to the south of Fazenda Cristal.

Data / Parameter	$Pburnt_p$
Data unit	%
Description	Average proportion of mass burnt in the carbon pool
Equations	Equation 6
Source of data	Estimated from peer-reviewed academic literature[10]
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:	Annual
Value monitored	Park Savanna without gallery forest (S – Savanna): 100% Forested Savanna (Sd – Forested Savanna): 90%
Monitoring equipment	Not applicable
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
Purpose of data:	This parameter is used to calculate project GHG emissions from biomass burning at year y in the project area (parameter EBBPSPAy)

[10] IBAMA, 2010. Efeitos do regime do fogo sobre a estrutura de comunidades de Cerrado: Projeto Fogo. Organized by Heloisa Sinátora Miranda. Brasília: Ibama, 2010. 144 p. Available at: https://www.ibama.gov.br/sophia/cnia/livros/efeitosdoregimedofogodigital.pdf.

Calculation method:	National data or peer-reviewed scientific studies must be used to estimate the average proportion of mass burnt in the above ground biomass pool
Comments:	There are none or few studies that determine such percentages for the project's pools in the regions, biomes, and phytophysiognomies involved. The IBAMA study was conservatively adopted, which allowed for the segregation of Cp parameters for each phytophysiognomy present in the project area, with Sd representing forested savanna (associated in the referenced study with 'Cerrado Denso') for the Legal Reserve area in the centre-east; and S for park savannah without gallery forest for the two RL areas to the south of Fazenda Cristal (associated in the referenced study with 'Cerrado Sensu Stricto'). The maximum values recorded in the study were chosen, configuring the most conservative approach to emissions calculation.

Data / Parameter	Fburnt
Data unit	%
Description	Proportion of vegetation area burned
Source of data	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
Value monitored	88 %
Monitoring equipment	Not applicable
Frequency of monitoring/recording:	Annual
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 is used to calculate project GHG emissions from biomass burning at year t in the project area (parameter $EBBPSPA_y$)
Calculation method:	The most recent data available from MCTI must be used to estimate the proportion of vegetation area burned

Comments:	-

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
Source of data	Remote sensing data and GIS 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
Value monitored	2020: 229 tCO_2e 2021-2023: 0 tCO_2e
Monitoring equipment	Not applicable
Frequency of monitoring/recording:	Annual
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
Calculation method:	Remote sensing data and GIS Field data
Comments:	-

Data / Parameter	EBB_y
Data unit	tCO_2e/ha
Description	Total GHG emission from biomass burning at year y

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:	Annual
Value monitored	2020: 45.64 tCO_2e/ha 2021-2023: 0 tCO_2e/ha
Monitoring equipment	Not applicable
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
Calculation method:	Determined by IPCC (2003)
Comments:	-

Data / Parameter	$EBBN_2O_y$
Data unit	tCO_2e/ha
Description	N_2O emission from biomass burning at year y
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:	Annual

Value monitored	2020: 0.65 tCO_2e/ha 2021-2023: 0 tCO_2e/ha
Monitoring equipment	Not applicable
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
Calculation method:	Determined by IPCC (2003)
Comments:	-

Data / Parameter	$EBBCH_{4,y}$
Data unit	tCO_2e/ha
Description	CH_4 emission from biomass burning at year y
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:	Annual
Value monitored	2020: 4.89 tCO_2e/ha 2021-2023: tCO_2e/ha
Monitoring equipment	Not applicable
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

Calculation method:	Determined by IPCC (2003)
Comments:	-

Data / Parameter	$EBBCO_{2,y}$
Data unit	tCO_2e/ha
Description	CO_2 emission from biomass burning at year y
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:	Annual
Value monitored	2020: 40.08 tCO_2e/ha 2021-2023: 0 tCO_2e/ha
Monitoring equipment	Not applicable
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
Calculation method:	Determined by IPCC (2003)
Comments:	-

Data / Parameter	Analyzing the Non-Permanence Risk
Data unit	%

Description	Calculating the internal, external and natural risks of the project using the "AFOLU Non-Permanence Risk Tool"
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
Value monitored	10 %
Monitoring equipment	Not applicable
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
Comments:	Appendix 1

4.3 Broader Sustainability Components Data Monitored

SOCIALCARBON Indicator	Social Resource S-002 Communication with stakeholders
Data unit	Documented evidence
Description	Evaluates the process for contacting stakeholders in the planning, implementation and operation stages. Example of stakeholders that should be identified and involved in the consultation process: - project owners - partners - local institutions and NGOs

	- local team responsible for coordinating the implementation additional programs - households - local public agencies and municipalities.
Source of data	Instituto Homem Pantaneiro; Fazenda Cristal's and VERT Ecotech S/A's legal responsible or representant/sharepoint.
Description of methods to collect information and procedures to be applied	Attendance lists, questionnaires, meeting minutes, interviews with the community and program teachers/trainers, reports, among other records. Contact must be developed with stakeholders in order to communicate the most recent situations and updates about project and its considerations.
Purpose of the data	Monitoring Social Resource S-002 Communication with stakeholders
Comments	-

SOCIALCARBON Indicator	Social Resource S-007 Local indigenous / traditional peoples assistance
Data unit	Documented evidence
Description	Evaluate the project developer's socioenvironmental investment to promote the reduction of inequalities among indigenous / traditional people. The indigenous / traditional people can be identified as natives (indigenous) with knowledge regarding cultivation and fauna and flora preservation, and homeopathy, an inherited ancestral practice. The investments can be for: - Education; - Health; - Infrastructure; - Sport; - Culture; - Others (donations, for example).

Source of data	National Foundation of Indigenous Peoples (Fundação Nacional dos Povos Indígenas – FUNAI, in Portuguese)[11] or any official Brazilian updated database; Instituto Homem Pantaneiro; VERT Ecotech S/A's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Questionnaires, documents, meetings with the project proponent and project local supervisors; interviews with the community. Updated vector file must be raised through official Brazilian database and all areas related must be compared to the project's property perimeter, highlighting the minimum distance regarding between both. Data must regard: - Traditionally Occupied Indigenous Lands (homologated or not) - Indigenous Reserve - Indigenous Domain Lands - Areas Under Interdiction - Indigenous Land under Study - Other related to traditional local people
Purpose of the data	Monitoring Social Resource S-007 Local indigenous / traditional peoples assistance
Comments	Documents may concern maps or illustrations developed in GIS platform compiling data referred above, crossed with socioenvironmental actions developed summarized along project's lifetime

SOCIALCARBON Indicator	Social Resource S-012 Social Impact
Data unit	Documented evidence
Description	Evaluates the relevant social impacts occurred due to the project, including additional social programs for the stakeholders and broader community, such as regional social actions developed in Mato Grosso do Sul, Brazil, by the non-governmental organisation "Instituto Homem Pantaneiro". Verification of actions aimed at social theme developed by it, with possibly updating this

[11]Available at: https://www.gov.br/funai/pt-br/atuacao/terras-indigenas/geoprocessamento-e-mapas.

	indicator as the partnership is well stablished and precise. This indicator is linked with social investments to be made within this project, as detailed in Section 3.6 – Additionality Major social areas related to this indicator will be further mapped and described as project develops, along with main beneficiaries.
Source of data	Instituto Homem Pantaneiro; Fazenda Cristal's and VERT Ecotech S/A's legal responsible or representant/sharepoint.
Description of methods to collect information and procedures to be applied	Interviews, questionnaires, or meetings: testimony from the local interested parties; physical evidence: local visits, pictures or others project results records; documentation: activities plan for additional programs implementation or agreements between partners and other organizations; periodic reports on the status of implementation of additional programs. Contact must be developed with Instituto Homem Pantaneiro in order to understand the most recent situations and updates about social actions and documenting the planning over improvements that may come with this project's resources
Purpose of the data	Monitoring Social Resource – S-012 Social Impact
Comments	-

SOCIALCARBON Indicator	Social Resource S-014 Social research
Data unit	Documented evidence
Description	Examines level of research into social, demographic and economic aspects of communities in the project. Relevant research for the project includes: - Community satisfaction survey: gauging opinions of all projects affecting them; - Education levels among the youth and the community; - Economic research such as levels of income, means of subsistence; - Communities' views of their own needs; - Demographic research: numbers of people and profiles.
Source of data	Instituto Homem Pantaneiro; VERT Ecotech S/A's legal responsible or representant/sharepoint

Description of methods to collect information and procedures to be applied	Site visits, surveys, questionnaires with communities, research documents. Contact must be developed with IHP and project proponent in order to understand most recent situations and updates about social research related.
Purpose of the data	Monitoring Social Resource S-014 Social research
Comments	-

SOCIALCARBON Indicator	Social Resource S-019 Women Inclusion
Data unit	Documented evidence
Description	Evaluates initiatives implemented by the company to promote women inclusion in the community activities. Campaigns: Punctual actions that do not have continuity, such as lectures, women's inclusion week, among others. Program: Set of continuous actions to promote women inclusion in the community activities, offering equal opportunities of access to goods and services for all.
Source of data	Fazenda Cristal; Instituto Homem Pantaneiro; VERT Ecotech S/A's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Questionnaire, interviews with communities, reports, among others. Contact must be developed with property owner and project proponent in order to understand most recent situations and updates about women inclusion.
Purpose of the data	Monitoring Social Resource S-019 Women Inclusion
Comments	-

SOCIALCARBON Indicator	Human Resource H-004 Community education and training
Data unit	Documented evidence

Description	Evaluates the relevant education and training programs related to the project, including additional programs to the stakeholders and broader community. The following major areas are considered: - Training: technical; IT and digital; courses, etc. - Education: basic and supplementary, environmental awareness-raising, etc. Checking for documents that verify the increase in qualification, training, awareness and environmental education for project's employees and related community.
Source of data	Fazenda Cristal and VERT Ecotech S/A's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Contact, meetings with project proponent and project area supervisors, questionnaires, interviews with communities, site visits. Contact must be developed in order to understand the most recent situations and updates about qualification, training, awareness and environmental education for project's employees and related community, also to collect and check each document related to this theme
Purpose of the data	Monitoring Human Resource H-004 Community education and training
Comments	Documents may concern copies of evidence of training, qualifications and related, carried out with employees and community related to this project It is expected that the forest fire-fighting/fire-brigade course and the nursery practice course compose this monitoring

SOCIALCARBON Indicator	Human Resource H-008 Equipment and infrastructure
Data unit	Documented evidence
Description	Evaluates the project proponent's investment and encouragement relating to equipment and infrastructure (sanitation, household, electricity, transport, among others) for the community's benefit.

Source of data	Fazenda Cristal's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Communication with project proponent and partners, questionnaires, interviews with communities and program teachers. Contact must be developed in order to understand the most recent situations and updates about equipment and infrastructure related to property, also to collect and check each document related to this theme.
Purpose of the data	Monitoring Human Resource H-008 Equipment and infrastructure
Comments	-

SOCIALCARBON Indicator	Human Resource H-010 Community Health
Data unit	Documented evidence
Description	Evaluates the presence of initiatives and campaigns relating to community health, as well as access and communication with hospitals in neighbouring cities.
Source of data	Fazenda Cristal's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Site visits, surveys, questionnaires with communities and supervisors. Contact must be developed in order to understand the most recent situations and updates about community health – related to property, also to collect and check each document related to this theme.
Purpose of the data	Monitoring Human Resource H-010 Community Health
Comments	-

SOCIALCARBON Indicator	Human Resource H-011 Worker health and safety
Data unit	Documented evidence

Description	Evaluates the health and safety conditions of work, often ignored by employers. Evaluated items include: First aid kit, Re-entry plate in recently sprayed fields, Personal Protective Equipment - PPE, Work safety training, etc. Avoiding community exposure to increased health risks and not affecting the health of the workers and the community Ensuring that there is no forced labour, and that all employment is in compliance with Brazilian labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards embodied in the International Labour Organization (ILO) fundamental conventions.
Source of data	Fazenda Cristal's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Interviews and evidence such as photos, records, farm documents and work-related accident registries. Contact must be developed with Fazenda Cristal in order to understand the most recent situations and updates about its employee's rights, health and safety conditions and work/living sites Also, collect and check each document related to this theme
Purpose of the data	Monitoring Human Resource H-011 Worker health and safety
Comments	Documents may concern copies of official Brazilian's work and safety mandatory documents for "CLT" workers – Work Contract, Work Card (Carteira de Trabalho in Portuguese), "PPRA", "PCMSO", among others

SOCIALCARBON Indicator	Human Resource H-022 Research incentive
Data unit	Documented evidence
Description	Evaluates whether the project promotes innovation through partnerships with universities and socioenvironmental organizations to develop research focused on local development.
Source of data	VERT Ecotech's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Questionnaires, interviews with the community, reports, among others.

Purpose of the data	Monitoring Human Resource H-022 Research incentive
Comments	-

SOCIALCARBON Indicator	Financial Resource F-003 Alternative income sources
Data unit	Documented evidence
Description	Evaluates whether the project created alternative sources of income generation for the communities living within/surrounding the project area.
Source of data	Fazenda Cristal and VERT Ecotech's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Questionnaire, interviews with communities.
Purpose of the data	Monitoring Financial Resource F-003 Alternative income sources
Comments	-

SOCIALCARBON Indicator	Financial Resource F-006 Competitive Advantage
Data unit	Documented evidence
Description	Evaluates if the Company obtained some economic benefits (cost reduction, offering products or services of low-carbon emission) or image improvements due to the project developing or other actions focus on climate change.
Source of data	Fazenda Cristal's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Industry reports, competitor analysis, internal questionnaire.
Purpose of the data	Monitoring Financial Resource F-006 Competitive Advantage

Comments	-

SOCIALCARBON Indicator	Financial Resource F-008 Economic viability
Data unit	Documented evidence
Description	Access if detailed cost/benefit analysis has been undertaken and if available financial resources available are enough to comply with project's objectives. Demonstrating financial sustainability of the project implemented.
Source of data	VERT Ecotech S/A's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Internal questionnaire, cash flow, performance reports, technical and financial feasibility research of the project. Contact must be developed with VERT Ecotech S/A in order to understand the most recent situations and updates about the Economic Plan for the project and to collect and check each document related to this theme.
Purpose of the data	Monitoring Financial Resource F-008 Economic viability
Comments	Documents may concern copies of an updated Economic Plan or similar.

SOCIALCARBON Indicator	Natural Resource N-009 Environmental compliance of the farm
Data unit	Documented evidence
Description	Evaluates structured/certified environmental management initiatives and systems regarding waste, water, air, soil, energy and nature conservation management.
Source of data	Fazenda Cristal's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Consultation to the Rural Environmental Registry (RER). Questionnaires, interviews, photos, site visits. Complementary or supplementary evidence may include receipts, invoices, partnership contracts, statements among other documents. Documents of possession, title or lease, infraction notices,

	embargoed area, overlap with indigenous lands and conservation units.
Purpose of the data	Monitoring Natural Resource N-009 Environmental compliance of the farm
Comments	-

SOCIALCARBON Indicator	Natural Resource N-010 Environmental Impacts
Data unit	Documented evidence
Description	Evaluates the relevant environmental impacts occurred due to the project, including additional environmental programs to the stakeholders and broader community. The following major areas are considered: a) Erosion, landslides, silting, soil quality. B) Water Quality c) Floods d) Others to be defined as applicable
Source of data	Fazenda Cristal and VERT Ecotech's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Reports, management plans, studies, documents, communication with project proponent, among others.
Purpose of the data	Monitoring Natural Resource N-010 Environmental Impacts
Comments	-

SOCIALCARBON Indicator	Natural Resource N-016 Monitoring methods
Data unit	Documented evidence
Description	Measures the progress of the project's monitoring methods, which may be: - High-resolution GIS capable of detecting degradation; - Use of guards/supervisors; - Presence of guard towers or supervision centre in the project area; - Others (Chain of custody system, independent forest audit).
Source of data	VERT Ecotech's legal responsible or representant/sharepoint

Description of methods to collect information and procedures to be applied	Reports, studies, documents, communication with the project proponent, among others.
Purpose of the data	Monitoring Natural Resource N-016 Monitoring methods
Comments	-

SOCIALCARBON Indicator	Biodiversity Resource B-003 Biodiversity monitoring
Data unit	Documented evidence
Description	Evaluates whether the company has actions to identify and monitor the local fauna and flora.
Source of data	VERT Ecotech S/A's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Reports, studies, documents, communication with project proponent, among others. Contact must be developed with VERT Ecotech S/A in order to understand the most recent situations and updates about any kind of fauna monitoring in the project areas, also to collect and check each document related to this theme
Purpose of the data	Monitoring Biodiversity Resource B-003 Biodiversity monitoring
Comments	Documents may concern any updated data related to fauna monitoring like videos, photos, fulfilled data tables, testimonies, among others

SOCIALCARBON Indicator	Biodiversity Resource B-004 Biodiversity research
Data unit	Documented evidence
Description	Evaluates the existence of partnerships with universities and environmental bodies, among others, which contribute to/encourage research on biodiversity in the project area.
Source of data	VERT Ecotech S/A's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Communication with project proponent and partners, research reports, contracts with research bodies.

Purpose of the data	Monitoring Biodiversity Resource B-004 Biodiversity research
Comments	-

SOCIALCARBON Indicator	Biodiversity Resource B-006 Flora and Fauna Local Information
Data unit	Documented evidence
Description	Access the plan or program for monitoring flora and fauna biodiversity, considering its efficiency and the existence of additional control methods (restocking, reintroduction of species, scientific research, etc.).
Source of data	VERT Ecotech S/A's legal responsible or representant/sharepoint
Description of methods to collect information and procedures to be applied	Reports compiling data collected, remote camera trap footage
Purpose of the data	Monitoring Biodiversity Resource B-006 Flora and Fauna Local Information
Comments	-

SOCIALCARBON Indicator	Carbon Resource C-003 Correspondence with Sustainable Development Goals
Data unit	Documented evidence
Description	Evaluates the evolution of the project in relation to the correspondence with the Sustainable Development Goals.
Source of data	VERT Ecotech S/A's legal responsible or representant/sharepoint
Justification of choice of data or description of measurement methods and procedures applied	Reports, studies, documents, communication with the local stakeholders, among others.
Purpose of Data	Monitoring Carbon Resource C-003 Correspondence with Sustainable Development Goals
Comments	-

SOCIALCARBON Indicator	Carbon Resource C-004 Impact Communication Strategy
Data unit	Documented evidence
Description	Evaluates whether the project has marketing strategies geared towards highlighting socio-environmental practices.
Source of data	VERT Ecotech S/A's legal responsible or representant/sharepoint
Justification of choice of data or description of measurement methods and procedures applied	Reports and documents..
Purpose of Data	Monitoring Carbon Resource C-004 Impact Communication Strategy
Comments	-

SOCIALCARBON Indicator	Carbon Resource C-008 Project performance
Data unit	Documented evidence
Description	Evaluates project performance in relation to verified emissions reductions/removals, as compared to expected emission reductions/removals.
Source of data	VERT Ecotech S/A's legal responsible or representant/sharepoint
Justification of choice of data or description of measurement methods and procedures applied	Documentation regarding the emission reduction project (Project Design Document, monitoring reports and equivalent documents).
Purpose of Data	Monitoring Carbon Resource C-008 Project performance
Comments	-

4.4 Monitoring Plan

The procedures employed by the project proponent to assess the data and parameters set out in Section 4.2 (GHG Emission Data and Parameters Monitored) above are the same as those described in PDD v.1.8,

Section 5.4 Monitoring Plan. The monitoring activity was performed over 4 steps, for the years of 2020 (16-May to 31-December), 2021, 2022 and 2023:

Step 1: Validation and Classification of vegetation cover

Validation of the land use and cover for the adopted reference base was carried out by means of an accuracy analysis of the reference base for the land use and cover, following the same procedure for accuracy analysis of the reference base described in methodology SCM0003 v.1.0 Section 5 (Project Boundary), looking for a minimum 90% match. In the event that a figure of less than 90% was obtained, the land use and cover would be classified by means of remote sensing, using orbital imaging. The document attached "SCM0003 Accuracy Analysis" reveals the performance of this procedure promoted for the present monitoring report.

Concurrently, a monitoring of GHG emissions from biomass burning was performed to registry the eventual burning in the project area. If biomass burning occurs during the project scenario, which does not involve land use conversion, these GHG emissions will be accounted for (Step 3). Only burning within managed lands is considered under this methodology.

Step 2: Comparative vegetation cover analysis

All changes in the land use and cover that resulted in a regression in the conservation status implied in the exclusion of the areas from the accounting, for the purpose of issuing credits, as described in Section 5 (Project Boundary) of SCM0003 v.1.0, which then resulted in final Area per vegetation cover, as well described in Sections 4.2.

Step 3: Quantification of the project emissions and removals (tCO_2e)

Calculation of project emissions and removals were developed as provided in sub-section 8.2 of SCM0003 v.1.0. It is important to notice that relevant procedures are well described in Sections 4.2 and 5.2 of this project, which describes how $BAPA_y$, C_p, $Pburnt_p$, Fburnt, $EBBPSPA_y$, EBB_y, $EBBN_2O_{,y}$, $EBBCH_{4,y}$, $EBBCO_{2,y}$, and NPR were monitored.

Step 4: Comparative analysis of the net GHG emissions and removals

Identification of the percentage change in net GHG emissions and removals calculated in the monitoring year, compared to the previous year, according to sub-section 8.3 of SCM0003 v.1.0.

In addition to monitoring GHG removals and emissions parameters related to this project, there was a specific periodic monitoring for the sustainable aspects, in order to attend Broader Sustainability Components and Data Monitored, Section 4.3 above. We have that main information related, such as description of indicators, methods, purpose, responsibilities etc. is gathered and well explained in that section.

In addition, the table further below describes the schedule for collecting and processing information on all the project indicators, covering responsibility for monitoring, methods for storing and processing data, plausible documents and others.

As the aforementioned project described: "*if the project proponent meets any prerequisites for the completion of any indicator independently, they will do so by providing the necessary evidence of experience in the specific area*". Therefore, activities performed by project proponent are also described in table below, along with evidence of experiences related.

It is important to inform that regardless of who is responsible for data collection and processing, all information was compiled and uploaded in the project proponent's platform, titled Vert Ecotech Platform. This platform is a method developed by the proponent for project management, using cloud computing technology, with data traffic on Blockchain, to guarantee information security, data traceability from Tokens and to control and combat any incidents related to the loss or destruction of project data. Also, all documents and reports relating to the project are stored digitally on an external HD and physically, printed, in plastic folders, duly identified according to the date of preparation and the type of document. The materials will be stored for the duration of the project, plus 5 years after completion.

Image 4.4-1: Vert Ecotech Platform main screen for registration

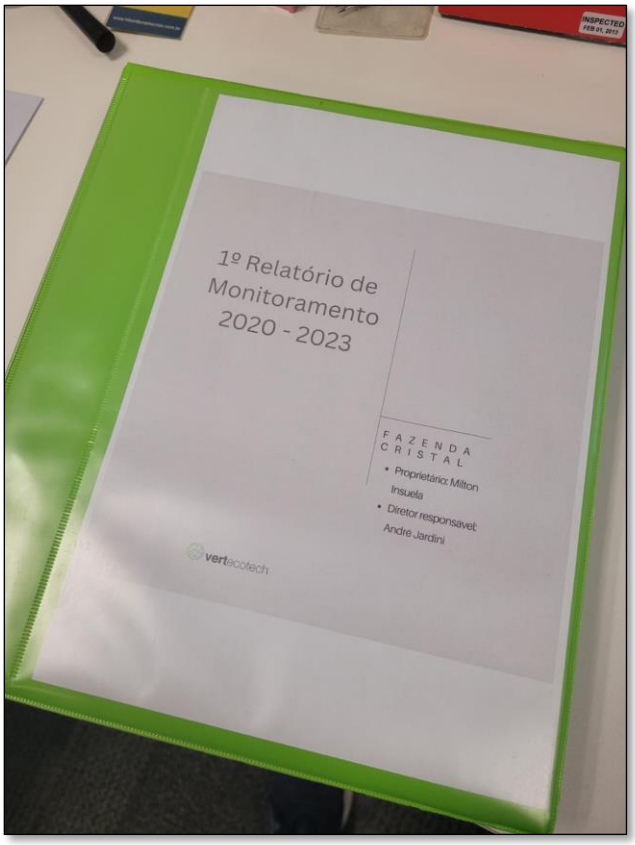


Image 4.4-2: Physical storage of Monitoring documentation in Vert Ecotech's office, located in Campinas, São Paulo (SP)

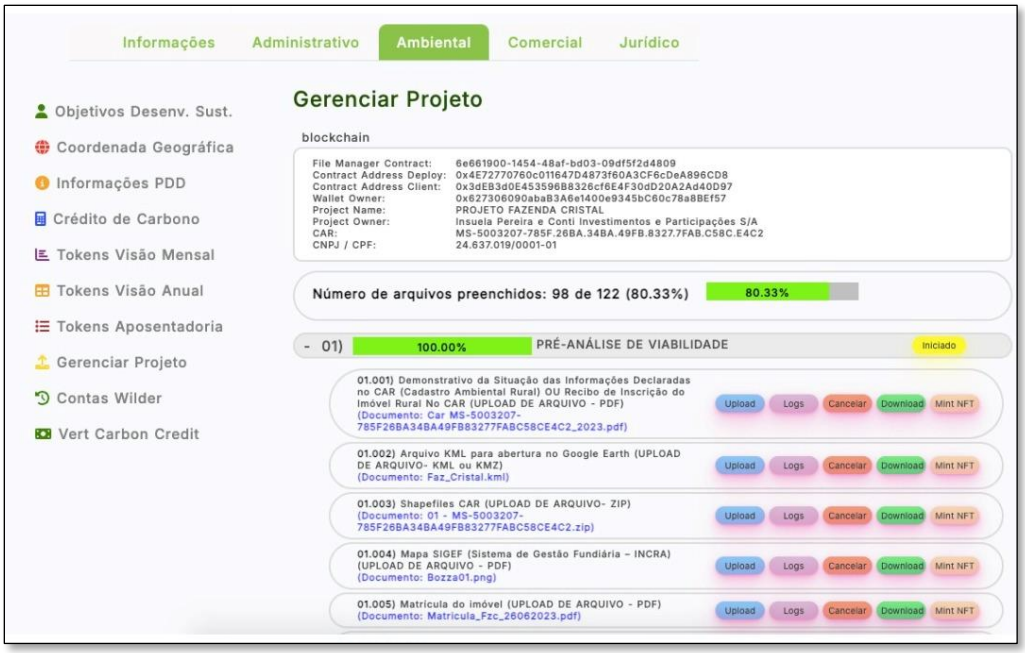


Image 4.4-3: Vert Ecotech Platform management section, where data and information are inserted for traceability and become NFT

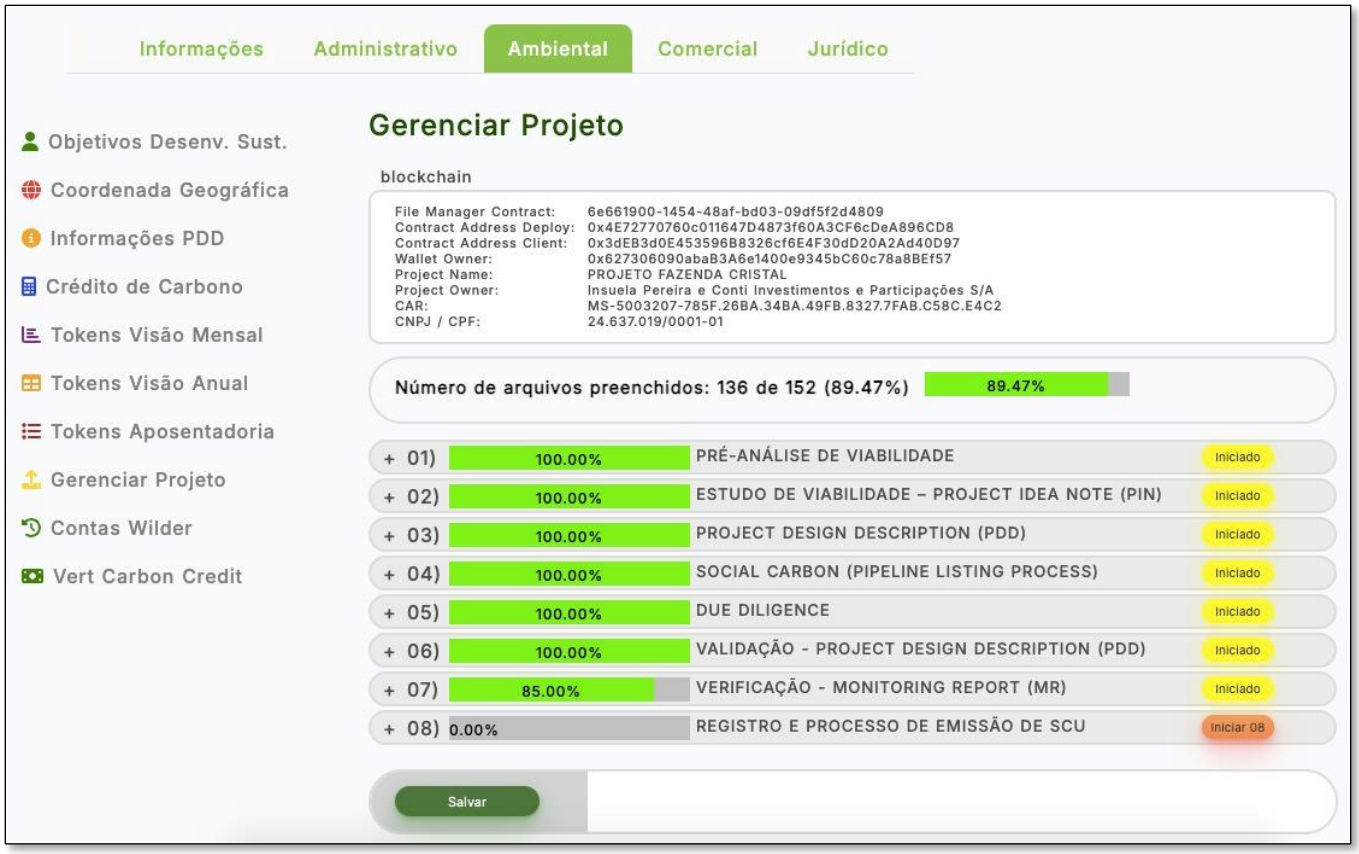


Image 4.4-4: Vert Ecotech Platform in Verification Section, where data and information were inserted for MRV of Fazenda Cristal

Non-conformances found within the Steps 1 to 4 were self-excludable and therefore no longer compose the project from the moment they are identified. Relatively about Sustainability Components data, it should be noted that the procedures for handling any internal auditing performed and any non-conformities identified involve a structured internal verification process to ensure the accuracy and completeness of data and documentation related to sustainability components. The internal check is conducted by the technical review team, represented by project proponent, which evaluates the data provided by the data collection team, also represented by project proponent, along with, if necessary, the property team, represented by IPC, and IHP.

The process starts with the technical review team examining the submitted data and documents to confirm their compliance with the project's sustainability indicators. If any discrepancies or non-conformities are found, the technical review team communicates these issues to the data collection team and the IPC if deemed necessary, outlining the specific requirements and corrections needed. The data collection team then revises the data and provides updated information, which is subjected to a new round of validation by the technical review team. This iterative process continues until all identified non-conformities are resolved. Data or evidence that cannot meet the standards defined in Section 4.3 are not included in the project monitoring, and

a technical justification was developed to align the non-conformities with the status of each indicator, as well as a correction plan for the next project monitoring.

Image 4.4-3 presents this procedure in a flowchart, detailing the steps from the internal audit to the resolution of non-conformities and validation of revised data.

The Non-Permanence Risk Report was prepared using the “SOCIALCARBON Non-Permanence Risk Report Template – Version 1.0”, supported by “SOCIALCARBON AFOLU Non-Permanence Risk Tool - Version 1.1”, which was included in Appendix 1.

Finally, it should be highlighted that the STW Ambiental Consultoria Sustentável LTDA, part involved in consultancy for PDD development exceptionally, as PDD v.1.8 mentions in Section 1.6 Other Entities Involved in the Project, had no further participation in subsequent Monitoring activities nor Monitoring Report development. Therefore, this company is not mentioned in Section 1.4 of this report. The project proponent conducted monitoring activities and report with its own staff/team, along with parties described below, which are already mentioned in Section 1.4.

Quantification	GHG Emission Data/Parameter	Collection responsibility (January – June 2024)	Analysis, organisation, storing and reporting responsibility (July – December 2024)	Proof of experience	Document / related evidence	Storage
Carbon (removals)	Area per class of vegetation cover	Project proponent	Project proponent	Members of the project proponent's team have experience related to this monitoring, as described in their respective CV (attached).	Emissions and Removals spreadsheet and GIS folder (attached)	Fazenda Cristal's dashboard in Vert Ecotech Platform, item 07.132 / 07.133
Carbon (emissions)	$BAPA_y$					
	C_p					
	$Pburnt_p$					
	Fburnt					
	$EBBPSPA_y$					
	EBB_y					
	$EBBN_2O_y$					
	$EBBCH_{4,y}$					
	$EBBCO_{2,y}$					
Analysing the Non-Permanence Risk		Project proponent	Project proponent	Members of the project proponent's team have experience related to this monitoring, as described in their respective CV (attached).	Appendix 1: Non-Permanence Risk Report	Fazenda Cristal's dashboard in Vert Ecotech Platform, item 07.105

Aspect	SOCIALCARBON Indicator	Sustainability Data / Parameter	Collection responsibility (year of verification period; 2023)	Analysis, organisation, storing and reporting responsibility (subsequent to verification year; July – December 2024)	Proof of experience	Document / related evidence	Storage (Vert Ecotech Platform)
Social	S-002 Communication with stakeholders	Documented evidence - descriptions in Section 4.3	Project proponent	Project proponent	Members of the project proponent's team have experience related to this monitoring, as described in their respective Curriculum Vitae (attached). Insuela Pereira e Conti (IPC) is the organisation that owns Fazenda Cristal, with experience and a proven track record in managing rural properties for cattle farming. It has demonstrated organisation and expertise in collecting relevant documentary information concerning various aspects of the farm that align with the project, such as employee records, environmental compliance documents, and the provision of structures and equipment for farm activities, among others. The Instituto Homem Pantaneiro (IHP) is a non-profit civil society organisation. Founded in 2002 and based in the city of Corumbá (Mato Grosso do Sul), the same municipality as Fazenda Cristal, it has over 20 years of experience in the conservation and preservation of the Pantanal biome and local culture. Further information, accessible on its platform[12], substantiates its expertise in managing the project's indicator data.	The related documents are included in the folders attached to the project, related to the SocialCarbon indicators, with the corresponding names / codes for each indicator.	item 07.110
	S-007 Local indigenous / traditional peoples assistance		IHP / Project proponent				item 07.111
	S-012 Social Impact		IHP / Project proponent				item 07.112
	S-014 Social research		IHP / Project proponent				item 07.113
	S-019 Women Inclusion		IHP / Project proponent				item 07.114
Human	H-004 Community education and training		Project proponent				item 07.115
	H-008 Equipment and infrastructure		IPC / Project proponent				item 07.116
	H-010 Community Health		IPC / Project proponent				item 07.117
	H-011 Worker health and safety		IPC / Project proponent				item 07.118
	H-022 Research incentive		Project proponent				item 07.119
Financial	F-003 Alternative income sources		Project proponent				item 07.120
	F-006 Competitive Advantage		IPC / Project proponent				item 07.121
	F-008 Economic viability		Project proponent				item 07.122
Natural	N-009 Environmental compliance of the farm		IPC / Project proponent				item 07.123
	N-010 Environmental Impacts		Project proponent				item 07.124
	N-016 Monitoring methods		Project proponent				item 07.125
Biodiversity	B-003 Biodiversity monitoring		Project proponent				item 07.126
	B-004 Biodiversity research		Project proponent				item 07.127
	B-006 Flora and Fauna Local Information		Project proponent				item 07.128
Carbon	C-003 Correspondence with Sustainable Development Goals		Project proponent				item 07.129
	C-004 Impact Communication Strategy		Project proponent				item 07.130
	C-008 Project performance		Project proponent				item 07.131

[12] Available at: https://institutohomempantaneiro.org.br/quem-somos/.

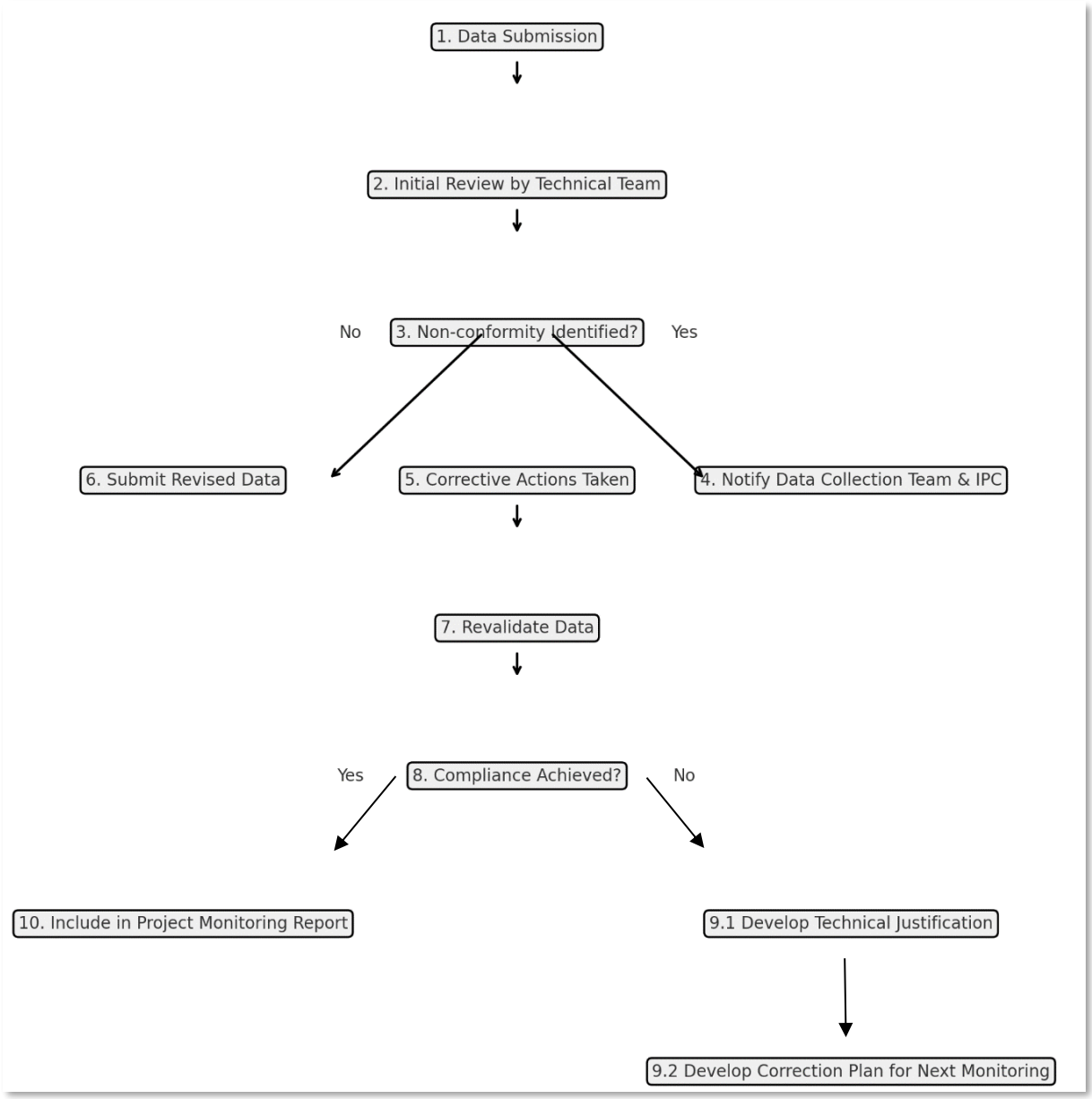


Image 4.4-5: Flowchart – steps from the internal audit to the resolution of non-conformities and validation of revised data

5. Quantification of GHG Emissions Reductions and Removals

5.1 Baseline Emissions

According to Section 6 - Baseline Scenario of SCM0003 Methodology v.1.0, for small-scale projects, the baseline is the scenario where no investments or conservation activities are undertaken by the project proponent, leading to a situation where native vegetation formations are not anthropically managed and protected. Consequently, the baseline scenario implies the absence of CO_2 removals as a result of anthropogenic GHG removals activities, since the area is not classified under the concept of carbon removal on managed lands according to the IPCC. Finally, as the main conservation activities started in 2020, as described in Section 1.5, the Fazenda Cristal Conservation Project presents zero GHG emissions reductions and removals in the baseline scenario.

5.2 Project Emissions

- **Year 2020**

According to SCM0003 Methodology for Carbon Removals in Private Conservation Areas v.1.0, in order to account for carbon removal and stock, and considering the annex disposal of Project Boundary as *shapefile* and *kmz*, the following steps were carried out:

Land Use and Occupation maps were extracted from MapBiomas (Collection 9) platform for the years 2000, 2010, 2015, 2019 and 2020. The maps were treated and cut using geoprocessing software QGIS v.3.28.3 for the project boundaries (Legal Reserve areas of Fazenda Cristal). The eligibility delineation of the areas proposed in the methodology (SCM0003 Section 5) was carried out, and ineligible areas were excluded, resulting in project area presented in PDD v.1.8, leaving a total of areas classified between primary and secondary forest and savanna formations, along with grassland and wetland formation. Classification was conducted following Section 3.2 and its documentation associated.

The annual carbon increment parameters were surveyed using the Third National Communication of Brazil to the UNFCCC for Pantanal biome, and applied based on the respective area and condition of the vegetation in each class of the vegetation cover within the project area, according to the calculation presented in the following equations.

$[(AI^c \times 44)/12] * A = RV_y$

Where:

A = Area of that class of vegetation cover (ha);

AI^c = Annual carbon increment, which varies according to the biome and class of vegetation cover (tC/ha);

RV_y = CO_2 removal for each class of vegetation cover, during year y (tCO_2e/year).

The sum of CO_2 removals for each class of vegetation cover during year y (tCO_2e/year) yields the total removals (tCO_2e/year) for the project area during year y, according to equation below:

$\sum RVy = PRy$

Where:

∑RVy = Sum of CO_2 removals for each class of vegetation cover during year y (tCO_2e);

PRy = CO_2 removal under the project during year y (tCO_2e).

Specifically for secondary savannas, an additional classification based on the prevailing phytophysiognomies was applied to better adapt the annual carbon increment rates, as outlined in Section 4.2 and detailed in Appendix 2 of PDD v.1.8. Calculation sheet for either removals or emissions is found attached to this report.

Vegetation class	AI^c (tC/ha)	A (ha)	RV_{2020} (ton CO_2e/year)
Pantanal primary forest formation	0.20	143.00	104
Pantanal secondary forest formation	2.77	0.77	7
Pantanal primary savanna formation	0.20	821.71	602

Vegetation class	AI^c (tC/ha)	A (ha)	RV_{2020} (ton CO_2e/year)
Pantanal secondary savanna formation (Forested Savanna)	1.69	9.96	61
Pantanal secondary savanna formation (Park Savanna)	0.49	47.57	85
Pantanal wetland	0.00	42.73	0
Pantanal grassland formation	0.10*	2,872.44	1,053
PR_{2020}**			**1,912**

*Belowground exceptionally.
**Not considering NPR buffer discount.

Respectively for the year of 2020, as the start of the project is set for 16-May, the final removal value was calculated based on the annual increment proportional to the period from this date to 31-December (230 days), totalizing 1,201 tCO_2, as per calculation sheet attached, not considering yet the buffer of NPR discount.

Biomass burning have occurred within the project boundary causing GHG emissions in 2020, as it was considered for net GHG emission as burning within managed lands.

GHG emissions from biomass burning were estimated based on IPCC (2003).

$$EBBy = EBBCO_{2,y} + EBBN_2O_y + EBBCH_{4,y}$$

Where:

EBBy = Total GHG emission from biomass burning at year y (tCO_2e/ha);

$EBBCO_{2,y}$ = CO_2 emission from biomass burning at year y (tCO_2e/ha);

$EBBN_2O_y$ = N_2O emission from biomass burning at year y (tCO_2e/ha);

$EBBCH_{4,y}$ = CH_4 emission from biomass burning at year y (tCO_2e/ha).

$$EBBN_2O_y = EBBCO_{2,y} * 12/44 * NCR * ERN_2O * 44/28 * GWPN_2O$$

Where:

$EBBN_2O_y$ = N_2O emission from biomass burning at year y (tCO_2e/ha);

$EBBCO_{2,y}$ = CO_2 emission from biomass burning at year y (tCO_2e/ha);

NCR = Nitrogen to Carbon Ratio (IPCC default value = 0.02);

ERN_2O = Emission ratio for N_2O (IPCC default value = 0.007);

$GWPN_2O$ = Global Warming Potential for N_2O.

$$EBBCH_{4,y} = EBBCO_{2,y} * 12/44 * ERCH_4 * 16/12 * GWPCH_4$$

Where:

$EBBCH_{4,y}$ = CH_4 emission from biomass burning at year y (tCO_2e/ha);

$EBBCO_{2,y}$ = CO_2 emission from biomass burning at year y (tCO_2e/ha);

$ERCH_4$ = Emission ratio for CH_4 (IPCC default value = 0.012);

$GWPCH_4$ = Global Warming Potential for CH_4.

$$EBBCO_{2,y} = Fburnt * \sum_{p=1}(C_{p,y} * Pburnt_p * CE_p)$$

Where:

$EBBCO_{2,y}$ = CO_2 emission from biomass burning at year y (tCO_2e/ha);

F_{burnt} = Proportion of vegetation area burned (%);

$C_{p,y}$ = Average carbon stock per hectare in the carbon pool p burnt at year y (tCO_2e/ha);

$Pburnt_p$ = Average proportion of mass burnt in the carbon pool p (%);

CE_p = Average combustion efficiency of the carbon pool p (IPCC default of 0.4);

p = Carbon pool that could burn, above-ground biomass.

According to IPCC (2003), the default value for combustion efficiency of 0.5 should be used. The Nitrogen to Carbon Ratio (NCR) is approximated to be about 0.01.

Thus, 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:

$$EBBPSPA_y = BAPA_y * EBB_y$$

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 (ha);

EBB_y = Total GHG emission from biomass burning at year y (tCO_2e/ha).

Therefore, project emissions during year 2020 (PE_{2020}) are equivalent to the total actual GHG emissions from biomass burning at year 2020 in the project area in the project scenario ($EBBPSPA_y$).

In order to achieve data related to $BAPA_{2020}$ platform MapBiomas Fire Collection 3.0[13] was used, accessible through Google Earth Engine, while the following inputs were added:

- Region: mapbiomas-brazil
- Collection: collection-3.0
- Tables: city
- Properties: name-pt-br
- Features: Corumbá (MS)
- Data type: annual-burned-coverage
- Buffer: none
- Corumbá (MS) 2020.

Images were then exported as *geotiff* to QGIS and lately cut according to project boundaries (Legal Reserve areas). Final polygon area (hectares) composed $BAPA_{2020}$.

[13] Available at: https://code.earthengine.google.com/9966ca45f3bbb261fa993cd24810318a?accept_repo=users%2Fmapbiomas%2Fuser-toolkit.

According to SCM0003 values related to GHG emissions from biomass burning were composed of the following:

Parameter	Value	Source
F_{burnt}	88 %	Brazil's Third National Communication to the UNFCCC (TCN)
$C_{AB,DW,LI,2020}$ Sd (Forested savanna)	87.98	Brazil's Forest Reference Emissions Level (FREL)
$C_{AB,DW,LI,2020}$ Sp (Park savanna)	34.69	Brazil's Forest Reference Emissions Level (FREL)
Pburnt $_{AB,DW,LI,2020}$ Sd (Forested savanna)	90 %	IBAMA, 2010
Pburnt $_{AB,DW,LI,2020}$ Sp (Park savanna)	100 %	IBAMA, 2010
CE_{AB}	0.40	IPCC default
$EBBCO_{2,2020}$	27.87	Calculation (Emissions Removals Sheet annexed)
$ERCH_4$	0.012	IPCC default
GWP-CH_4	28	IPCC Sixth Assessment Report
$EBBCH_{4,2020}$	3.40	Calculation (Emissions Removals Sheet annexed)
NCR	0.02	IPCC default
ERN_2O	0.007	IPCC default

Parameter	Value	Source
GWP-N_2O	273	IPCC Sixth Assessment Report
$EBBN_2O_{2020}$	0.45	Calculation (Emissions Removals Sheet annexed)
EBB_{2020}	31.73	Calculation (Emissions Removals Sheet annexed)
$BAPA_{2020}$	13.78 ha	MapBiomas Fire Collection 3.0
$EBBPSPA_{2020}$	**229 tCO_2e**	Calculation (Emissions Removals Sheet annexed)

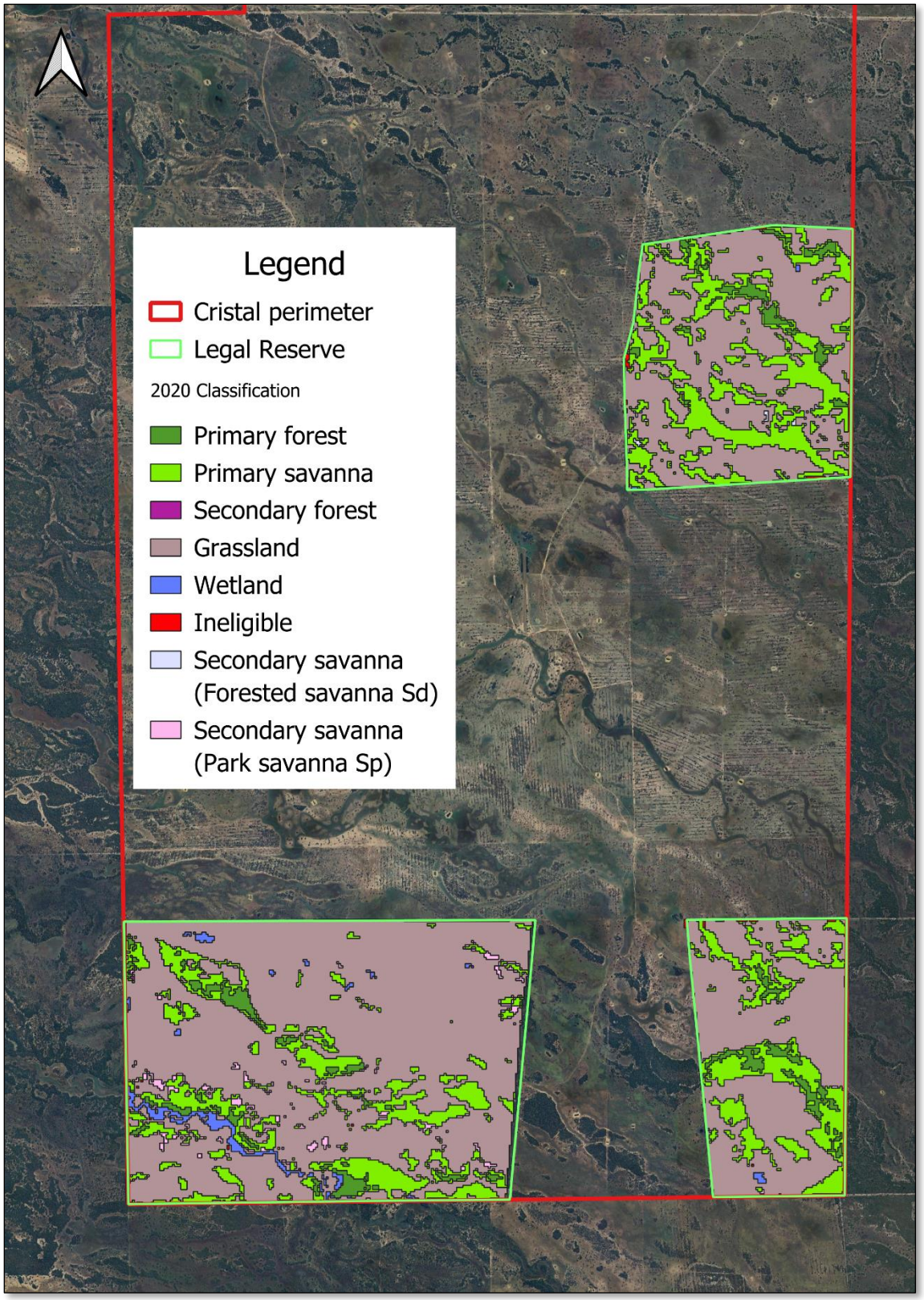


Image 5.2-1: Final classification for 2020 in project area using methodology proposed

➢ **Year 2021**

The same procedures were applied as for 2020, but with the final target of classification of 2021's Land Use and Occupation map from MapBiomas (Collection 9.0) within delineation applied before, leading to the following:

Vegetation class	AI^c (tC/ha)	A (ha)	RV_{2021} (ton CO_2e/year)
Pantanal primary forest formation	0.20	142.83	104
Pantanal secondary forest formation	2.77	0.51	5
Pantanal primary savanna formation	0.20	826.39	606
Pantanal secondary savanna formation (Forested Savanna)	1.69	10.32	63
Pantanal secondary savanna formation (Park Savanna)	0.49	46.34	83
Pantanal wetland	0.00	381.50	0
Pantanal grassland formation	0.10*	2,529.50	927
PR_{2021}**			**1,788**

*Belowground exceptionally.
**Not considering NPR buffer discount.

In order to achieve data related to $BAPA_{2021}$, platform MapBiomas Fire Collection 3.0 was used, accessible through Google Earth Engine, while the following inputs were added:

- Region: mapbiomas-brazil
- Collection: collection-3.0
- Tables: city
- Properties: name-pt-br
- Features: Corumbá (MS)

- Data type: annual-burned-coverage
- Buffer: none
- Corumbá (MS) 2021.

As a result, it was observed that there are no fire event areas this year within project areas, meaning that $BAPA_{2021}$ = 0 ha. This leads to the conclusion that **$EBBPSPA_{2021}$ is 0 tCO_2e**.

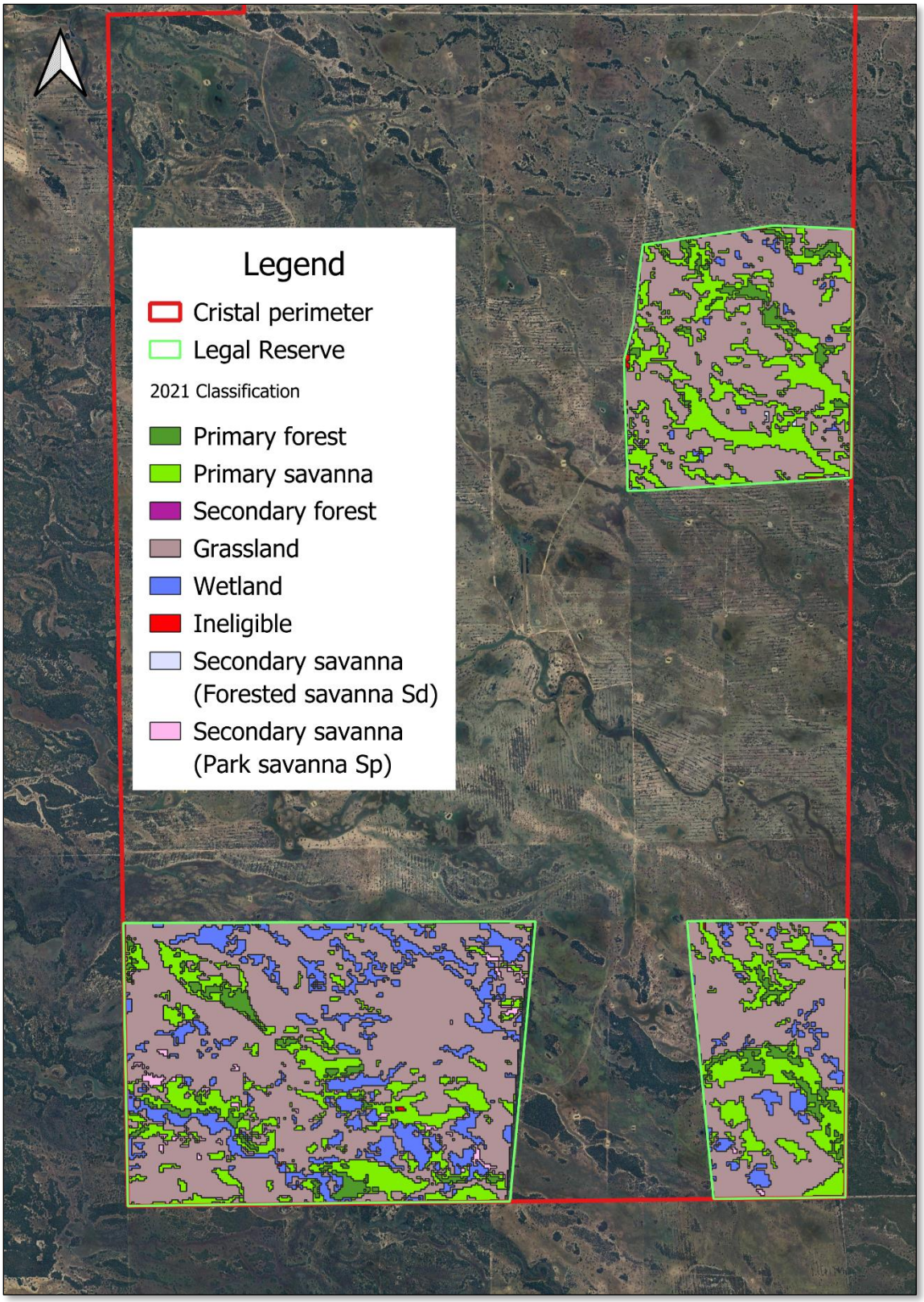


Image 5.2-2: Final classification for 2021 in project area using methodology proposed

➢ **Year 2022**

The same procedures were applied as for 2021, but with the final target of classification with of 2022's Land Use and Occupation map from MapBiomas (Collection 9.0) within delineation applied before, leading to the following:

Vegetation class	AI^c (tC/ha)	A (ha)	RV_{2022} (ton CO_2e/year)
Pantanal primary forest formation	0.20	143.25	105
Pantanal secondary forest formation	2.77	0.60	6
Pantanal primary savanna formation	0.20	849.89	623
Pantanal secondary savanna formation (Forested Savanna)	1.69	5.76	35
Pantanal secondary savanna formation (Park Savanna)	0.49	35.41	63
Pantanal wetland	0.00	1,046.85	0
Pantanal grassland formation	0.10*	1,855.89	680
PR_{2022}**			**1,512**

*Belowground exceptionally
**Not considering NPR buffer discount.

In order to achieve data related to $BAPA_{2022}$, platform MapBiomas Fire Collection 3.0 was used, accessible through Google Earth Engine, while the following inputs were added:

- Region: mapbiomas-brazil
- Collection: collection-3.0
- Tables: city
- Properties: name-pt-br
- Features: Corumbá (MS)

- Data type: annual-burned-coverage
- Buffer: none
- Corumbá (MS) 2022.

As a result, it was observed that there are no fire event areas this year within project areas, meaning that $BAPA_{2022}$ = 0 ha. This leads to the conclusion that **$EBBPSPA_{2022}$ is 0 tCO_2e**.

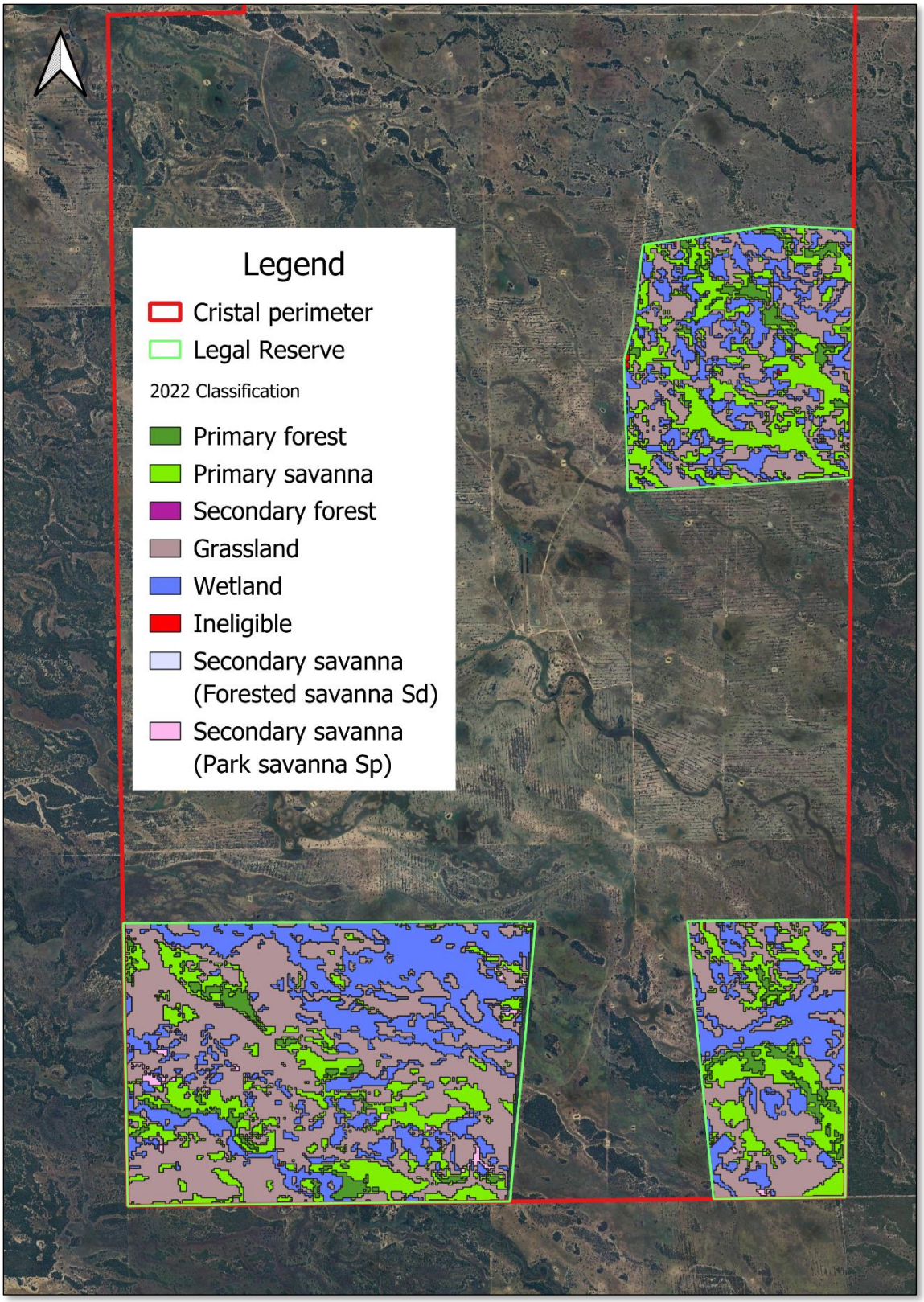


Image 5.2-3: Final classification for 2022 in project area using methodology proposed

➢ **Year 2023**

The same procedures were applied as for 2022, but with the final target of classification of 2023's Land Use and Occupation map from MapBiomas (Collection 9.0) within delineation applied before, leading to the following:

Vegetation class	AI^c (tC/ha)	A (ha)	RV_{2023} (ton CO_2e/year)
Pantanal primary forest formation	0.20	143.51	105
Pantanal secondary forest formation	2.77	0.68	6
Pantanal primary savanna formation	0.20	851.16	624
Pantanal secondary savanna formation (Forested Savanna)	1.69	9.69	60
Pantanal secondary savanna formation (Park Savanna)	0.49	34.10	61
Pantanal wetland	0.00	645.53	0
Pantanal grassland formation	0.10*	2,248.95	824
PR_{2023}**			**1,680**

*Belowground exceptionally
**Not considering NPR buffer discount.

In order to achieve data related to $BAPA_{2023}$, platform MapBiomas Fire Collection 3.0 was used, accessible through Google Earth Engine, while the following inputs were added:

- Region: mapbiomas-brazil
- Collection: collection-3.0
- Tables: city
- Properties: name-pt-br
- Features: Corumbá (MS)

- Data type: annual-burned-coverage
- Buffer: none
- Corumbá (MS) 2023.

As a result, it was observed that there are no fire event areas this year within project areas, meaning that $BAPA_{2023}$ = 0 ha. This leads to the conclusion that **$EBBPSPA_{2023}$ is 0 tCO_2e**.

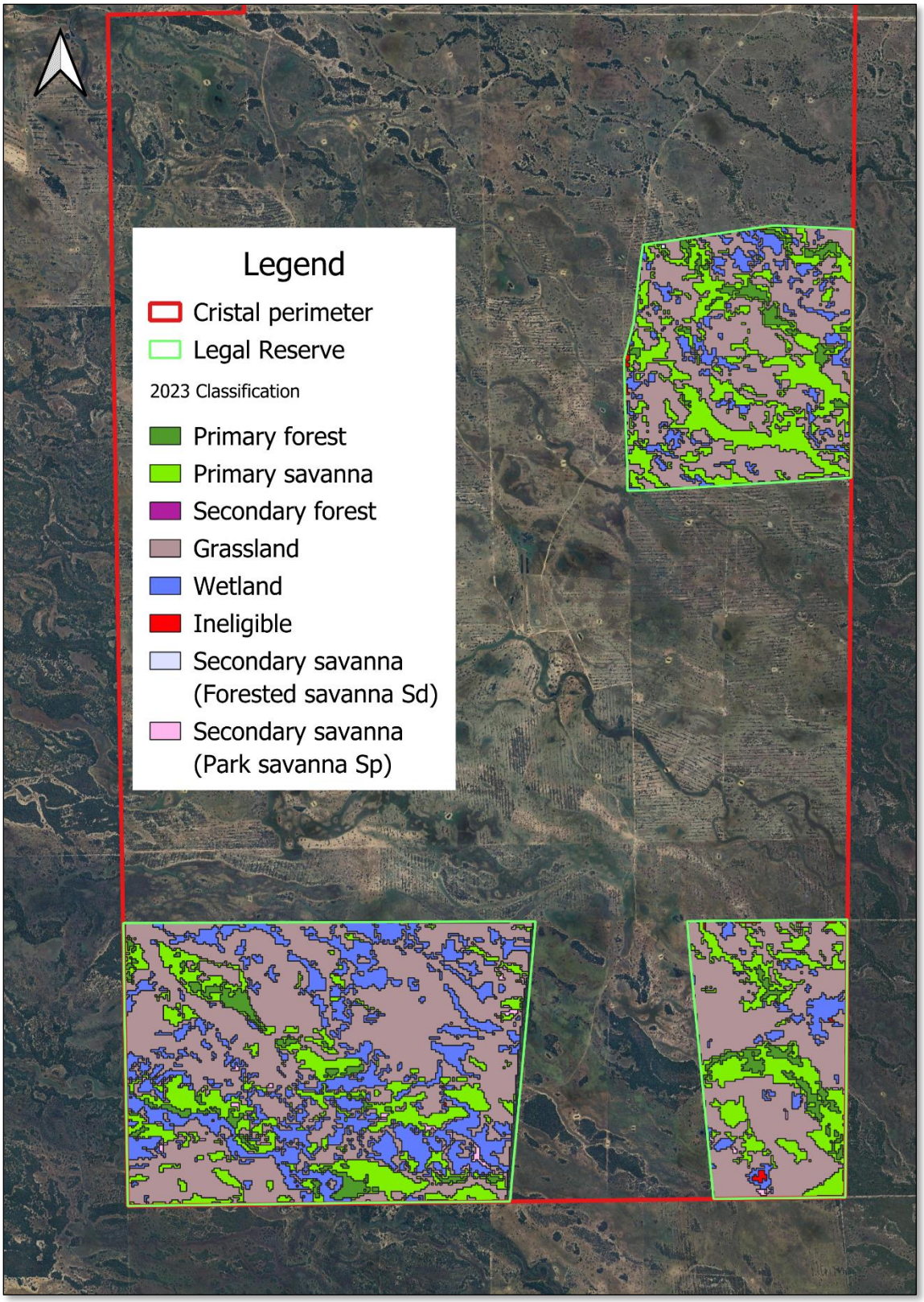


Image 5.2-4: Final classification for 2023 in project area using methodology proposed

5.3 Leakage

According to methodology applied, areas where there have been changes in the land use and cover ("conversion" to alternative land use) within the 10 years prior to the project starting date shall be ineligible. Therefore, there is no possibility of displacement of pre-project agricultural activities from the project boundary to outside the project area. Consequently, due to this methodology, this monitoring report does not include leakage emissions.

5.4 Net GHG emission reductions and removals

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)	Buffer allocation (tCO_2e)	SCUs eligible for Issuance
2020 (16-May to 31-December)	0	972	0	972	97	875
2021	0	1,788	0	1,788	179	1,609
2022	0	1,512	0	1,512	151	1,361
2023	0	1,680	0	1,680	168	1,512
Total	0	5,952	0	5,952	595	**5,357**

6. Broader Sustainability Results

6.1 Broader Sustainability Results

6.1.1 Social Resource

Indicator	S-002 Communication with stakeholders

Description	Evaluates the process for contacting stakeholders in the planning, implementation and operation stages. Example of stakeholders that should be identified and involved in the consultation process: - project owners - partners - local institutions and NGOs - local team responsible for coordinating the implementation additional programs - households - local public agencies and municipalities.				
Situation	Stakeholders were communicated about the project monitoring, as described and detailed in Section 2, in order to meet the premises of the SocialCarbon standard, to assess the local needs and present the carbon project to the local stakeholders.				
There is no communication with local stakeholders	Some consultations were held, but with some gaps and they did not fulfil legal obligations of the SOCIALCARBON Standard's minimal requirements	Fulfilment of legal obligations only and obligations of the SOCIALCARBON Standard	**Additional consultation process was held to assess the local needs and/or to present the carbon project to the local stakeholders**	Permanent feedback opportunity to stakeholders involved	Existence of a systematic and permanent approach for communicating with stakeholders, such as creation of specific forums, groups or committees
Score	4				
Prospects	To develop permanent and systematic communication with all those involved in the project, building possible interfaces with similar communication networks so that feedback may be used by other related projects or project proponents				
SDG Contributions	8 – Decent work and economic growth 10 – Reduce inequalities				
Rationale	Communication with stakeholders can create jobs, training, and promote inclusive economic growth, ensuring shared benefits for local communities. The projects can maximize positive impacts and develop sustainably, ensuring participation, transparency, and fair distribution of benefits, thus reducing social and economic inequalities and improving local quality of life through investments in infrastructure and services.				

Indicator	S-007 Local indigenous / traditional peoples assistance
Description	Evaluate the project developer's socioenvironmental investment to promote the reduction of inequalities among indigenous / traditional people. The indigenous / traditional people can be identified as natives (indigenous) with knowledge regarding cultivation and fauna and flora preservation, and homeopathy, an inherited ancestral practice. The investments can be for: - Education;

	- Health; - Infrastructure; - Sport; - Culture; - Others (donations, for example)				
Situation	According to the "Environmental Characterization Map – Fazenda Cristal" that includes shortest distance to indigenous lands, there are no interference in Indigenous Lands regarding this project. Also, no socioenvironmental investment associated to indigenous or traditional community identified. However, there are traditional families who live and work in the project area and they may be assisted through project activities/actions after project incomes. The actions are in the planning phase by the socio-environmental partner and benefit-sharing entity of the project, the Instituto Homem Pantaneiro.				
There is no socio-environmental investment directed to indigenous / traditional communities.	The company promotes socioenvironmental actions for at least one of the following topics: - Education; - Health; - Infrastructure; - Sport; - Culture; - Others.	The company executes socioenvironmental actions for two of the following topics: - Education; - Health; - Infrastructure; - Sport; - Culture; - Others.	The company executes socioenvironmental actions for three of the following topics: - Education; - Health; - Infrastructure; - Sport; - Culture; - Others.	The company executes socioenvironmental actions for four or more of the following topics: - Education; - Health; - Infrastructure; - Sport; - Culture; - Others.	Besides de previous scenario, the project proponent sought new ways to benefit the local people.
Score	1				
Prospects	This project expects to provide any support to sensible indigenous or traditional communities within the Pantanal biome, aiming as topics as possible/applicable along project's lifetime.				
SDG Contributions	3 – Good health and well-being 10 – Reduced Inequalities				
Rationale	By providing any support to sensible indigenous / traditional communities within the Pantanal biome, this project aims to reduce inequalities and improve well-being. Policies should be universal in principle, paying attention to the needs of disadvantaged and marginalized populations like the Indigenous / traditional locals.				

Indicator	S-012 Social Impact
Description	Evaluates the relevant social impacts occurred due to the project, including additional social programs for the stakeholders and broader community, such as regional social actions developed in Mato Grosso do Sul, Brazil, by the non-governmental organisation "Instituto Homem Pantaneiro". Verification of actions aimed at social theme developed by it, with possibly updating this indicator as the partnership is well stablished and precise. This indicator is linked with social investments to be made within this project, as detailed in Section 3.6 – Additionality

	Major social areas related to this indicator will be further mapped and described as project develops, along with main beneficiaries.				
Situation	IHP and the project proponent are under specific contractual definitions, but are developing the partnership and planning the activities, awaiting incomes of the project to start implementing the activities.				
Not known.	**Project is expected to deliver some benefits, but there is no evidence that benefits are actually happening (e.g. Actions are in planning stage with high uncertainty that benefits can be delivered).**	Actions are in place, but there is high need of corrective actions or deviations in the plan of activities so benefits can be delivered.	Some programs were held successfully, but project delivers benefits in to only one of the major areas	Some programs were held successfully and Project delivers benefits in to two of the major areas.	Project delivers benefits in to three or more of the major areas. And/or There is a comprehensive framework and plan for the assessment of social effects of the project.
Score	2				
Prospects	To develop relevant and measurable contribution crossing project and social organisation (IHP), reaching, as applicable, all the major areas within social indicator.				
SDG Contributions	3 – Good health and well-being 10 – Reduced Inequalities				
Rationale	Having the support of renowned institutions in the area of environment and society, such as IHP, to carry out actions and measure social impacts, is a fundamental part of the development and success of the project through social programs.				

Indicator	S-014 Social research				
Description	Examines level of research into social, demographic and economic aspects of communities in the project. Relevant research for the project includes: - Community satisfaction survey: gauging opinions of all projects affecting them; - Education levels among the youth and the community; - Economic research such as levels of income, means of subsistence; - Communities' views of their own needs; - Demographic research: numbers of people and profiles.				
Situation	IHP and the project proponent are under specific contractual definitions, but are developing the partnership and planning the research activities, awaiting incomes of the project to start implementing the activities.				
No research was conducted	Social research involving	Social research involving	Social research	Social research involving	As well as the previous

involving communities in the project area.	communities in the project area, but it has not been updated for over 5 years.	communities in the project area has been conducted in the last 5 years, but it only covers up to two relevant aspects.	involving communities conducted in the last 5 years, and covers up to four relevant aspects.	communities conducted in the last 5 years, and covers all relevant aspects.	scenario, there is a partnership with an institution involving social research on communities in the project area.
Score	1				
Prospects	It is expected that the partnership with IHP will evolve to the point where the institution will map and research all relevant social aspects involving the project area, aiming to foster other projects and future parallel social actions.				
SDG Contributions	10 – Reduced Inequalities 11 – Sustainable Cities and Communities				
Rationale	By mapping and understanding social aspects of a region, social actions to promote communities become more assertive and precise, potentializing the reduction of social inequality, as well as the promotion of sustainable and resilience practices within communities.				

Indicator	S-019 Women Inclusion				
Description	Evaluates initiatives implemented by the company to promote women inclusion in the community activities. Campaigns: Punctual actions that do not have continuity, such as lectures, women's inclusion week, among others. Program: Set of continuous actions to promote women inclusion in the community activities, offering equal opportunities of access to goods and services for all.				
Situation	According to Fazenda Cristal's manager and to the visit made to the property by the project proponent, there is only one woman registered between workers, and not related to project. Landowner and project proponent are intended to promote female positions in the project chain, whether related to the project or not, such as hiring women to monitor the areas, biodiversity, training, etc, but also roles as cooking and cleaning, which are more likely to be accepted within a farm, among others, ensuring equal conditions related to men's positions. IHP and the project proponent are under specific contractual definitions, but are developing the partnership and planning the inclusion activities, awaiting incomes of the project to start implementing the activities.				
There are no initiatives related to women inclusion.	**There are plans to implement actions to promote women inclusion in the community activities.**	There are campaigns aiming to promote women inclusion in the community activities.	There are monitored programs to promote women inclusion in the community activities.	In addition to the previous scenario, there are positive results related to women inclusion in the communities.	There is no barrier and women are fully integrated into the community.
Score	2				

Prospects	It is expected that the partnership with IHP will evolve to the point where the institution will map and research all relevant social aspects involving the project area, aiming to foster other projects and future parallel social actions.
SDG Contributions	10 – Reduced Inequalities 11 – Sustainable Cities and Communities
Rationale	By mapping and understanding social aspects of a region, social actions to promote communities become more assertive and precise, potentializing the reduction of social inequality, as well as the promotion of sustainable and resilience practices within communities.

6.1.2 Human Resource

Indicator	H-004 Community education and training				
Description	Evaluates the relevant education and training programs related to the project, including additional programs to the stakeholders and broader community. The following major areas are considered: - Training: technical; IT and digital; courses, etc. - Education: basic and supplementary, environmental awareness-raising, etc.				
Situation	According to Fazenda Cristal's manager, there is a strong environmental awareness and education regarding the prevention of resources, waste, energy, etc., which is conveyed through its management to the residents and community of the farm. However, no training, awareness or environmental education related to conservation of native areas of the property.				
The project does not offer any education and training activities.	**The project offers only one education or training activity.**	The project offers two education or training activities.	The project offers three education or training activities.	The project offers four education or training activities.	The project offers more than four education or training activities.
Score	2				
Prospects	Increasing employees and community's environmental conscience about conservation of native vegetation areas and related themes				
SDG Contributions	13 – Climate Action				
Rationale	By increasing community and employee's environmental conscience, this project offers an opportunity for people to think about each common action related to their biome and to native vegetation, which may approach them to relevant attitudes regarding climate change.				

Indicator	H-008 Equipment and infrastructure
Description	Evaluates the project proponent's investment and encouragement relating to equipment and infrastructure (sanitation, household, electricity, transport, among others) for the community's benefit.
Situation	According to Fazenda Cristal's manager, landowner invests annually in improvements to community structures, such as home improvements, and is planning to invest in

	equipment/vehicles/road maintenance to better serve the project's monitoring needs. An investment was made by proponent in a specific drone to support the project's activities, and training the local community to use is foreseen. The future plans are to invest in other more technological equipment, together with training for the community to improve measurements related to the project.				
The project proponent has not provided equipment and does not promote/ invest in infrastructural improvements for the benefit of communities in the project area.	**The project proponent has provided the community with equipment relating to monitoring the project area (e.g. GPS).**	The project proponent has provided the community with equipment relating to monitoring the project area (e.g. GPS) and also provides equipment for other purposes.	The project proponent promotes/ invests in infrastructural improvements for the benefit of communities in the project area, but the initiatives are not yet implemented.	The project proponent promotes/ invests in infrastructural improvements for the benefit of communities in the project area, but the initiatives benefit few community members (e.g. building a house).	The project proponent promotes/ invests in infrastructural improvements for the benefit of communities in the project area, and the initiatives benefit a significant proportion of the community (e.g. access to transport).
Score	2				
Prospects	Developing household infrastructure as applicable to better serve the communities involved, as well as to improve logistical issues such as roads for transportation and improving the quality of transportation to the nearest town or school. Training local community to use specific equipment related to monitoring the areas.				
SDG Contributions	9 – Industry, Innovation and Infrastructure				
Rationale	With improvements in equipment and infrastructure for the community, the aim is to foster solutions in innovation that will allow us to improve work related to the project, as well as boosting the economic development, well-being and resilience of communities, with appropriate improvements.				

Indicator	H-010 Community Health
Description	Evaluates the presence of initiatives and campaigns relating to community health, as well as access and communication with hospitals in neighbouring cities.
Situation	According to Fazenda Cristal's manager, the property provides a small medicine distribution centre for the community, operated punctually by the property manager, but there are no health professionals involved. Other forms of support are also in place, such as the availability of the owner's aircraft for emergency situations, as reported by the staff. In addition, there is consultative support from doctors associated with the farm, including those related to the owner and the project proponent.

No activities relating to community health are being undertaken.	There are isolated initiatives, which have little impact, in the health area, for example: distribution of informative pamphlets.	**Project area has ONE of the following: (i) There are active health campaigns; (ii) There are active clinics and/or health centres with a doctor present available to the community; (iii) basic medicines are available to the community.**	Project area has TWO of the following: (i) There are active health campaigns; (ii) There are active clinics and/or health centres with a doctor present available to the community; (iii) basic medicines are available to the community.	Project area has ALL of the following: (i) There are active health campaigns; (ii) There are active clinics and/or health centres with a doctor present available to the community; (iii) basic medicines are available to the community.	As well as the previous scenarios, in case of emergency, means of communication and access to the nearest hospital to the community are available.
Score	3				
Prospects	Raising community awareness of health issues in general, ensuring access to necessary medicines and vaccinations, as well as support for medical referrals when necessary.				
SDG Contributions	3 – Good Health and Well-Being 8 - Decent Work and Economic Growth				
Rationale	Through this action, the project is related to reducing specific mortality rates for all ages, as well as reducing epidemics and IST, preventing drug and alcohol use, among others.				

Indicator	H-011 Worker health and safety				
Description	Evaluates the health and safety conditions of work, often ignored by employers. Evaluated items include: First aid kit, Re-entry plate in recently sprayed fields, Personal Protective Equipment - PPE, Work safety training, etc. Avoiding community exposure to increased health risks and not affecting the health of the workers and the community. Ensuring that there is no forced labour, and that all employment follows Brazilian labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards embodied in the International Labour Organization (ILO) fundamental conventions.				
Situation	According to Fazenda Cristal's manager and to conference of documents, all workers are under the regulatory "CLT" contract, in accordance with the applicable Brazilian legislation – named "Consolidação das Leis Trabalhistas", Law No. 5,452, May 1st, 1943. Also, all legal obligation from employer have occurred with such documentation annexed. This is the main law that covers and guarantees the rights of workers in this country. No specific actions have been implemented yet by projects context.				
The project did not carry out	Campaigns, training, or	Campaigns, training, or	Campaigns, training, or	In addition to scenario 4, the	In addition to the previous

actions or activities to promote safety to employees.	partnerships with entities linked to occupational safety occur occasionally, but they are considered not to be effective, (accidents have occurred despite them).	partnerships with entities linked to occupational safety occur occasionally and are effective (no accidents have occurred in the monitoring period)	partnerships with entities linked to occupational safety occur frequently (monthly or bimonthly) and are effective (employees use the acquired knowledge and no accidents have occurred in the monitoring period)	Proponent has safety plans and goals that are satisfactorily executed.	scenario, the Proponent has an active/valid certification regarding health and safety aspects, fully complies with legislation and provides additional benefits that contribute to health and safety at work.
Score	1				
Prospects	Regular improvements of employees working equipment, consciousness and conditions are expected to be performed with time, along with specific campaigns, training, or partnerships.				
SDG Contributions	8 – Decent Work and Economic Growth				
Rationale	Guaranteeing compliance with work and safety conditions, as well as regular improvements in working conditions may promote conditions that allow people to have quality jobs.				

Indicator	H-022 Research incentive				
Description	Evaluates whether the project promotes innovation through partnerships with universities and socioenvironmental organizations to develop research focused on local development.				
Situation	The project proponent is in contact to establish partnerships with the federal university of Mato Grosso do Sul (UFMS), as well as the federal institute of Mato Grosso do Sul. A project is being planned and designed for funding by FINEPx[14], for 1- the development of a project management platform, which is in operation for managing the current project (processes and documents), as well as for commercializing eventual carbon credits, and 2- the development of an environmental multiparameter station (EMA, in Portuguese, for Estação Multiparmétrica Ambiental) for real-time monitoring of plant health, growth and biodiversity.				
The project proponent has no partnership with a research	The project proponent has no partnership with a research	The project proponent has no partnership with a research	**The project proponent maintains a partnership**	The project proponent maintains a partnership with	In addition to scenario 5, the research brought

[14] FINEP. Brazilian public institution with the aim of promoting the economic and social development of Brazil through the public promotion of Science, Technology and Innovation in companies, universities, technological institutes and other public or private institutions. Available at: http://finep.gov.br/.

body/researchers/university/ public agency/ institution and does not have partnership plans.	body/researchers/university/ public agency/ institution but has plans to establish partnerships.	body/researchers/university/ public agency/ institution but invests in academic research.	**with a research body/researchers/university/ public agency/ institution but there is no security that the research will be continued in a medium term.**	a research body/researchers/university/ public agency/ institution and provides funding for research ensuring the continuity of the research.	benefits to the local community.

Score	4
Prospects	It is expected that the research carried out in partnership with the project will potentially be funded by this or future projects in the region, bringing significant developments to the applicable project areas, such as the accuracy of measuring social benefits or ecosystem services in the project areas.
SDG Contributions	9 – Industry, Innovation and Infrastructure 15 – Life on land
Rationale	The development of cutting-edge technology for more reliable measurements of environmental data in the field, as well as platforms for managing this data, are important to support sustainability actions in the face of climate change, as well as to technologically develop educational institutions.

6.1.3 Financial Resource

Indicator	F-003 Alternative income sources
Description	Evaluates whether the project created alternative sources of income generation for the communities living within/surrounding the project area.
Situation	The property holds an exclusive income source from its only activity, which is cattle grazing. There is a plan to be developed in order for the community to be able to extract non-timber forest products sustainably, such as Baru nuts and other seeds for seedlings, which are present within the project area. Potential bioproducts are still under analysis and an analysis draft is already under development.

The Project does not generate any alternative income sources for the local communities.	**Project proponent, in partnership with the surrounding communities/ workers, is planning how it can create an alternative income source and/or alternative use of the soil.**	The project generates one alternative income source for the local communities/ workers.	The project generates two alternative income sources for the local communities/ workers.	The project generates three alternative income sources for the local communities/ workers.	The project generates four or more alternative income sources for the local communities/ workers.

Score	2
Prospects	It is expected that the project will initially find a solid and safe alternative source of income for its community within project areas, with new sources being explored later.
SDG Contributions	1 – No Poverty
Rationale	This initiative aims to ensure that all men and women, particularly the poor and vulnerable, have equal rights to economic resources, as well as access to natural resources that may potentially reduce their economic vulnerability.

Indicator	F-006 Competitive Advantage				
Description	Evaluates if the Company obtained some economic benefits (cost reduction, offering products or services of low-carbon emission) or image improvements due to the project developing or other actions focus on climate change.				
Situation	The project integrates with the farm's strategic plan to align with global sustainability demands by synchronising beef/cattle production, its main product, with forest conservation and socio-environmental practices, thereby presenting a potential competitive advantage in the market it operates within. Awaiting the verification process to start the development of such strategy.				
The company already had economic or image loss, related to the absence of initiatives to mitigate climate change.	The project had a negative impact on the company's economic performance or in its image.	The project didn't have a significant impact on company's economic performance or image improvement.	**The project didn't have a significant impact on company's economic performance; however the project makes part of a sustainability strategy of the company.**	The project had a positive impact on the company's economic performance or in its image.	The project is aligned with business strategies related to the offering of sustainable products or services or low carbon emission.
Score	4				
Prospects	It is expected that the project will impact the economic performance of the farm's main product by aligning with sustainable development goals, offering, in a near future instance, products with low carbon emissions throughout their production chain.				
SDG Contributions	8 – Decent work and economic growth 12 – Responsible consumption and production				
Rationale	More sustainable management of a property brings benefits and commercial advantages to the entire supply chain of which it is part, from production to the final consumer.				

Indicator	F-008 Economic viability

Description	Access if detailed cost/benefit analysis has been undertaken and if available financial resources available are enough to comply with project's objectives.				
Situation	According to the Feasibility Assessment and to the contract held by the stakeholders, the project is considered financially sustainable in long term. Some specific items, however, present a relative degree of uncertainty for any accurate conclusion on this subject, such as the value of the carbon credit to be traded on the voluntary market.				
No analysis carried out or likelihood of project failing to gather enough financial support to meet its objectives.	Analysis carried out and indicates high degree of uncertainty in relation of getting enough financial support to meet its objectives.	Analysis carried out and indicates moderate degree of uncertainty in relation of getting enough financial support to meet its objectives.	**Analysis carried out and indicates some degree of uncertainty in relation of getting enough financial support to meet only part of its objectives.**	Analysis carried out and indicates high confidence that financial resources are available to meet the main project's objectives.	Analysis carried out and indicates very high confidence that financial resources are available to meet project's objectives.
Score	4				
Prospects	The project aims to be updated to its feasibility as possible, including alternative sources of income and financial management during its development while deemed necessary. As the project develops, it is expected that there will be a greater degree of certainty about the items related to the economic viability of the project, with safe and more reliable projections				
SDG Contributions	8 – Decent work and economic growth 12 – Responsible consumption and production				
Rationale	Economic viability is the main component that leads to the project's longevity. Monitoring discussions on the global and local carbon market, as well as political discussions on the topic, fostering partnerships with the carbon sales market and searches for different resource alternatives, are practices that help to reduce losses and adapt the financial flow for the project to continue.				

6.1.4 Natural Resource

Indicator	N-009 Environmental compliance of the farm				
Description	Evaluates structured/certified environmental management initiatives and systems regarding waste, water, air, soil, energy and nature conservation management.				
Situation	In accordance with the documentation presented as annexes of this project, the property is free from any environmental infractions or embargoes, presents its active RER and it does not interfere with conservation units or indigenous lands. Furthermore, the current activities on the farm comply with the prevailing environmental regulations for the Pantanal, as stipulated by Law 6.160/2023, which governs the conservation, protection, restoration, and ecologically sustainable exploitation of the Restricted Use Area of the Pantanal Plain (AUR-Pantanal) within the State of Mato Grosso do Sul. It is also in compliance with the Forest Code, as detailed in Section 1.14.				
The farm does not have environmental	The farm has environmental management	The farm has environmental management	**In addition to the previous scenario, the**	In addition to the previous scenario, there is	In addition to the previous scenario, the

management documents. The Proponent does not know how to comply with existing regulation and has no interest in doing so.	documents, but there are disorganized and/or missing documents (such as an active RER).	documents and its documents are organized, but with some expired documents	**farm manages the documents properly and all are active and valid.**	one or more people formally in charge of managing the environmental compliance of the farm.	farm has active/valid certification that attests to good environmental conditions.

Score	4
Prospects	The project aims to enhance the management of environmental documents related to this indicator, as well as to obtain specific certifications for the farm, attesting to good environmental practices across all its activities.
SDG Contributions	13 – Climate Action 15 – Life on Land
Rationale	Compliance with environmental legislation by this farm contributes by reducing greenhouse gas emissions, promoting carbon sequestration, as well as conserving forests, protecting biodiversity, managing soil sustainably, restoring degraded areas, and using natural resources sustainably.

Indicator	N-010 Environmental Impacts
Description	Evaluates the relevant environmental impacts occurred due to the project, including additional environmental programs to the stakeholders and broader community. The following major areas are considered: a) Erosion, landslides, silting, soil quality. B) Water Quality c) Floods d) Others to be defined as applicable
Situation	As detailed in the annex document 'N-010 Environmental Impacts - Environmental-Impacts-CRISTAL,' NDVI analyses (2020–2023) and land cover data revealed a consistent 4% increase in forested areas since 2019, reflecting significant positive impacts on vegetation health. The conservation of native vegetation supports water preservation and ecological functionality, with no significant erosion risks observed due to controlled firebreak practices. Pollutant release is minimal, arising from annual firebreak maintenance using diesel-powered tractors in remote areas, where rapid dispersion ensures negligible environmental impact. Any significant impacts from these pollutants will be monitored and addressed in future reports under indicator N-010.

Significant negative environmental impacts. OR There is no knowledge.	Not significant relevance of negative environmental impacts.	There are no significant impacts.	Is expected that the project produces some positive impacts, but there is no evidence if benefits are really happening.	Significant positive impacts, however not measured.	**Measured and significant positive impacts.**

Score	6
Prospects	The project is expected to monitor all its environmental impacts in order to understand and measure all the aspects and promote evidences pointing to their significance

SDG Contributions	13 – Climate Action 15 – Life on Land
Rationale	Monitoring environmental impacts on this farm ensures sustainable land management practices that mitigate climate change effects and preserves biodiversity and ecosystems. This involves tracking emissions, maintaining habitat integrity, and promoting conservation efforts.

Indicator	N-016 Monitoring methods				
Description	Measures the progress of the project's monitoring methods, which may be: - High-resolution GIS capable of detecting degradation; - Use of guards/supervisors; - Presence of guard towers or supervision centre in the project area; - Others (Chain of custody system, independent forest audit).				
Situation	The project currently employs three primary monitoring methods: near real-time (NRT) remote sensing monitoring – using particular platforms such as Quiron Mapper and Flareless, described in Section 3; on-site monitoring by farm employees, involving patrols and sightings; and periodic drone monitoring, for which a drone has been acquired specifically for the project. Drone evidences are presented in Indicator H-008 and native vegetation cover results are potentially presented in Indicator N-010.				
Currently, the project does not have monitoring methods.	The project has a monitoring method, but it presents significant problems that lead to Illegal activities within the project area.	The project has a monitoring method in operation.	The project has two monitoring methods in operation.	The project has two monitoring methods, including at least one onsite.	**The project has three or more monitoring methods, including at least one onsite, with excellent results in maintaining native vegetation cover.**
Score	6				
Prospects	It is expected that effective vegetation maintenance will be observed through the monitoring activities, and possibly, the implementation of a multiparameter environmental station currently under development to complement the project's monitoring efforts.				
SDG Contributions	13 – Climate Action 15 – Life on Land				
Rationale	Monitoring environmental impacts on this farm ensures sustainable land management practices that mitigate climate change effects and preserves biodiversity and ecosystems. This involves tracking emissions, maintaining habitat integrity, and promoting conservation efforts.				

6.1.5 Biodiversity Resource

Indicator	B-003 Biodiversity monitoring				
Description	Reports, studies, documents, communication with project proponent, among others. Contact must be developed with VERT Ecotech S/A in order to understand the most recent situations and updates about any kind of fauna monitoring in the project areas, also to collect and check each document related to this theme				
Situation	A fauna and flora characterisation was carried out in 2023 to update the biodiversity characterisation carried out for the project design, also including the origin of species (native or exotic) and conservation status (IUCN) for better comprehension of conducts.				
There is no process of identification and monitoring of fauna and flora, nor cataloguing of timber.	There are plans to implement identification and monitoring of fauna and flora.	There is monitoring and identification of fauna OR flora.	**There is monitoring and identification of fauna AND flora annually.**	In addition to the previous scenario, there is botanical collection of flora and herbarium.	In addition to the previous scenario, there is a catalogue of identified woods (e.g. xiloteca).
Score	4				
Prospects	Biodiversity is expected to gradually reveal itself to be of better quality/quantity with project within years, reaching precise catalogues.				
SDG Contributions	15 – Life on Land				
Rationale	The conservation of native vegetation areas, which may lead into to a maintenance or increase in biodiversity, implies into halt of biodiversity loss.				

Indicator	B-004 Biodiversity research				
Description	Evaluates the existence of partnerships with universities and environmental bodies, among others, which contribute to/encourage research on biodiversity in the project area.				
Situation	There are no studies on biodiversity in the project area; however, discussions are underway with potential university partners, specifically from Mato Grosso do Sul, to initiate related research in the area.				
No scientific studies of the project area are available, and the project proponent has no partnerships with researchers/research bodies relating to biodiversity.	Scientific studies on biodiversity are available; however the project proponent has no partnerships with researchers/research bodies relating to biodiversity.	Project proponent has formal partnerships with researchers/research bodies relating to biodiversity; however no studies of the fauna and flora in the project	Project proponent has formal partnerships with researchers/research bodies relating to biodiversity, and studies of fauna OR flora in the project area	Project proponent has formal partnerships with researchers/research bodies relating to biodiversity, and studies of fauna AND flora in the project area	As well as the previous scenario, there is constant monitoring in order to update the list of species present in the project area.

		area are currently available.	have been conducted	have been conducted.	
Score	1				
Prospects	It is expected that partnerships will be established with research institutions to promote studies in the project area, aiming to specify and update the existing biodiversity inventories.				
SDG Contributions	15 – Life on Land				
Rationale	The research involving conservation of native vegetation areas, may lead into to a better comprehension of maintenance or increase in biodiversity, implying potentially into improvements of management and halt of biodiversity loss.				

Indicator	B-006 Flora and Fauna Local Information				
Description	Access the plan or program for monitoring flora and fauna biodiversity, considering its efficiency and the existence of additional control methods (restocking, reintroduction of species, scientific research, etc.).				
Situation	A fauna and flora characterisation was carried out in 2023 to update the biodiversity characterisation carried out for the project design, also including the origin of species (native or exotic) for better comprehension of conducts. The program is considered valuable as it updates the 2023 campaign from validation by incorporating both field data and literature, including new species and more detailed classifications regarding conservation status (IUCN). However, improvements in the research methodology and data publication are anticipated in the coming years, with the use of camera traps and other classification strategies, such as a registration database of each species identification and publication of data.				
No research or absence of program or plans or no process to obtain flora and fauna information.	Limited research with major gaps. Weak process for identifying basic information required to establish the project (e.g. biomass, carbon stock, tree growth, etc.)	Less than satisfactory level of research. Gaps in program or plans to complete basic information required to establish the project.	**Adequate research or program or plans to complete basic information required to establish the project**	Well researched or program or plans to complete basic information required to establish the project, including comprehensive process for identifying relevant species for conservation.	Community and/or regulator support in the research program or plan to obtain relevant fauna and flora information for the project.
Score	4				
Prospects	It is expected to promote actions to improve the methods of characterisation and management of fauna and flora, aiming for greater information on relevant species and involving the community.				
SDG Contributions	15 – Life on Land				

Rationale	The improvements involving conservation of native relevant species may lead into to a better comprehension of maintenance or increase in biodiversity, implying potentially into improvements of management and halt of biodiversity loss.

6.1.6 Carbon Resource

Indicator	C-003 Correspondence with Sustainable Development Goals				
Description	Evaluates the evolution of the project in relation to the correspondence with the Sustainable Development Goals.				
Situation	According to the project's SDG compliance overview spreadsheet, project have met at least 4 (total of 5) proposed Sustainable Development Goals (SDGs) in accordance with the PDD v.1.8.				
The project does not have any correspondence with the Sustainable Development Goals.	The project has correspondence with at least two Sustainable Development Goals.	**The project has correspondence with at least four Sustainable Development Goals.**	In addition to the previous scenario, the project proponent offers training courses related to the Sustainable Development Goals to workers and/or stakeholders.	In addition to the previous scenario, at least one target is established for each one of the Sustainable Development Goals related to the project in order to continue improving them.	In addition to the previous scenario, at least one target established by the project proponent is accomplished for each one of the Sustainable Development Goals related to the project.
Score	3				
Prospects	It is expected that the number of SDGs related to the project will gradually increase as socio-environmental actions are implemented and developed, with potential community training activities.				
SDG Contributions	13 – Climate action				
Rationale	Promote mechanisms for building capacity for climate change-related planning and effective management in least developed countries, including with a focus on women, youth, local and marginalized communities.				

Indicator	C-004 Impact Communication Strategy
Description	Evaluates whether the project has marketing strategies geared towards highlighting socio-environmental practices.
Situation	The project currently only uses social media to promote itself and its potential related socio-environmental actions. However, since this is the first monitoring period of the project and no credits have yet been issued, there are zero or low development of practices, and consequently no improvement in communication or marketing strategies.

The project does not have impact communications strategies.	**The project have impact communications strategies using one means of communication. Example: magazine.**	The project have impact communications strategies using more than one means of communication. Example: magazine and social media.	The project have impact communications strategies using more than two means of communication. Example: magazine and social media (more than one app).	In addition to the scenario 4, the project has an established impact communication strategy plan.	As well as the previous scenario, the project combines face-to-face events and campaigns with a variety of digital strategies.
Score	2				
Prospects	It is expected to create a strategic communication plan for the dissemination of socio-environmental actions, as project develops, including participation in conferences, lectures, events, etc.				
SDG Contributions	12 – Responsible consumption and production				
Rationale	Use publicity tools to be an inspiration for the development of other carbon credit projects, as well as being transparent in the development of activities, which helps to foster partnerships, obtain financing and boost the quality of the project.				

Indicator	C-008 Project performance				
Description	Evaluates project performance in relation to verified emissions reductions/removals, as compared to expected emission reductions/removals.				
Situation	The carbon credits estimated by the project in PDD v.1.8 for 2020, 2021, 2022 and 2023 achieved over 51% of the predicted removals that actually occurred.				
0% of carbon credits predicted for the period were generated.	Between 1% and 25% of carbon credits expected for the period were verified.	Between 26% and 50% of carbon credits expected for the period were verified.	**Between 26% and 50% of carbon credits expected for the period were verified.**	Between 75% and 95% of carbon credits expected for the period were verified.	More than 95% of carbon credits expected for the period were verified.
Score	4				
Prospects	It is expected that with the development of the project, all anticipated carbon credits will be verified and issued, achieving maximum removal and minimal GHG emissions.				
SDG Contributions	13 – Climate Action				
Rationale	GHG removals from this project is fully aligned with SDG 13 goals, by reducing global warming potentiality in its context by the period the project is running.				

6.2 Analysis of Results

6.2.1 Current performance

Resource	Critical	Satisfactory	Sustainable	Average Score	Performance
Social	80.0%	20.0%	0.0%	2.0	Critical
Human	60.0%	40.0%	0.0%	2.4	Critical
Financial	33.3%	66.7%	0.0%	3.3	Satisfactory
Natural	0.0%	33.3%	66.7%	5.3	Sustainable
Biodiversity	33.3%	66.7%	0.0%	3.0	Satisfactory
Carbon	33.3%	66.7%	0.0%	3.0	Satisfactory

The project currently under monitoring stands out significantly regarding its natural aspects. This prominence is due to the fact that it has been ongoing since a couple of years (but officially 2020), with the project activities in full swing, as well as the landowner's keen interest in this area, yielding positive results in terms of vegetation maintenance, biodiversity, impact mitigation, and compliance with environmental requirements for the property itself. However, having only commenced as an inclusive socio-economic project in 2023, few actions have translated into gains in social and human aspects, given that the project is still in its initial verification stage, with most actions being in the planning phase and scheduled for the coming years. Consequently, alignment with the UN's SDGs and project dissemination efforts remain lagging at this time.

6.2.2 Historical Performance

Social	Point Zero	Point One	Point Two	Point Three
	1.80	2.00	-	-
Historic Analysis: Many actions remained in the planning stage, as the project commenced its socio-economic aspect in the same year as the verification. A slight improvement in stakeholder relations was observed.				
Human	**Point Zero**	**Point One**	**Point Two**	**Point Three**
	2.00	2.40	-	-

Historic Analysis: The situation remained virtually unchanged from the starting point, with a slightly increased awareness observed regarding education and health issues within the local farm community.

Financial	Point Zero	Point One	Point Two	Point Three
	3.33	3.33	-	-

Historic Analysis: The situation remained unchanged, given the conditions of the project's initial verification for credit issuance.

Natural	Point Zero	Point One	Point Two	Point Three
	4.30	5.30	-	-

Historic Analysis: The project achieved positive results from the proposed monitoring, demonstrating effectiveness in vegetation preservation and in the proposed methods.

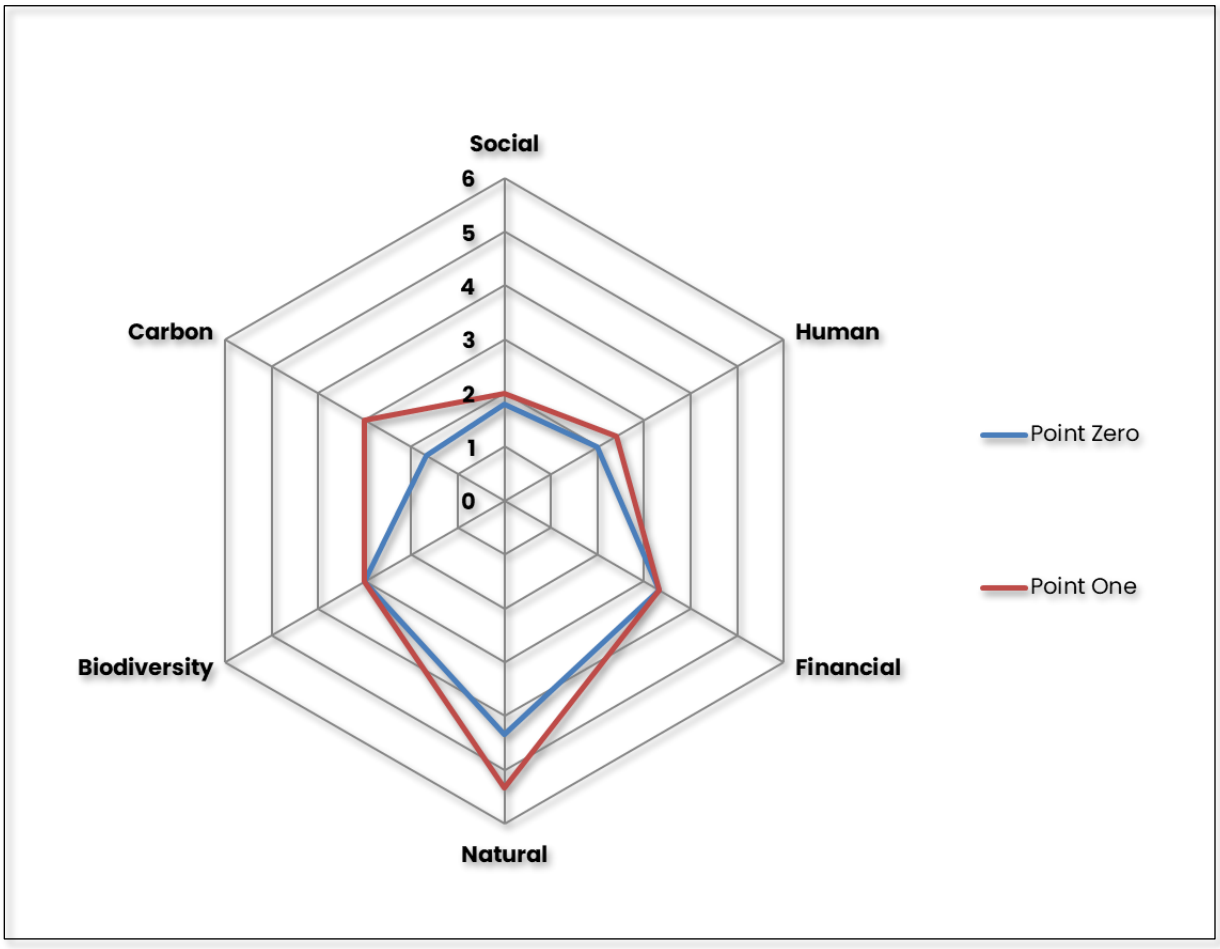
Biodiversity	Point Zero	Point One	Point Two	Point Three
	3.00	3.00	-	-

Historic Analysis*:* Minor improvements were made in biodiversity monitoring; however, they have not yet resulted in a higher score, with the situation remaining at the starting point.

Carbon	Point Zero	Point One	Point Two	Point Three
	1.70	3.0	-	-

Historic Analysis: There was an important achievement in the expected credit generation, as well as compliance with the UN's SDGs. Additionally, minor improvements were made in the project's communication on the proponent's digital platforms.

6.2.3 Performance Hexagon



6.3 Prospect Status

6.3.1 Achieved Prospects

Human	
Indicator	H-010 Community Health
Prospect	Raising community awareness of health issues in general, ensuring access to necessary medicines and vaccinations, as well as support for medical referrals when necessary.
Details	The project's development during this initial monitoring period has contributed to increased health awareness within the local community. A medication centre has been made available at the headquarters for employees, with access facilitated by the manager. Other forms of support are also present, such as the availability of the owner's aircraft for emergencies, as

	previously reported by staff. Additionally, there is consultative support from doctors associated with the farm, including those linked to the owner and the project proponent.

Financial	
Indicator	F-008 Economic viability
Prospect	The project intends to update its financial plan frequently to ensure greater reliability of financial resources for achieving its main objectives, including alternative income sources and financial management throughout its development and monitoring phases. As the project progresses, a higher degree of certainty is expected regarding items related to its maintenance and monitoring, with secure and more reliable projections for the inclusion or enhancement of project activities.
Details	The project is currently undergoing an update to its financial plan, with more precise and realistic values assessed based on the project's actual and proportional costs. This measure is expected to continue throughout the project's duration to monitor cost trends and associated gains.

Natural	
Indicator	N-010 Environmental Impacts
Prospect	The project is expected to monitor all its environmental impacts in order to understand and measure all the aspects and promote evidences pointing to their significance
Details	The project's impacts are being extensively monitored with technical backing, as detailed in the attached related document, ensuring the significance of the measured results.

6.3.2 Not Achieved Prospects

Social	
Indicator	S-007 Local indigenous / traditional peoples assistance
Prospect	This project expects to provide any support to sensible indigenous or traditional communities within the Pantanal biome, aiming as topics as possible/applicable along project’s lifetime.
Details	The project is in the phase of articulating and planning actions on this topic, in partnership with NGO Instituto Homem Pantaneiro.

Social	
Indicator	S-012 Social Impact
Prospect	To develop relevant and measurable contribution crossing project and social organisation (IHP), reaching, as applicable, all the major areas within social indicator.
Details	The project is in the phase of articulating and planning actions on this topic, in partnership with NGO Instituto Homem Pantaneiro.

Social	
Indicator	S-014 Social research
Prospect	It is expected that the partnership with IHP will evolve to the point where the institution will map and research all relevant social aspects involving the project area, aiming to foster other projects and future parallel social actions.
Details	The project is in the phase of articulating and planning actions on this topic, in partnership with NGO Instituto Homem Pantaneiro.

Social	
Indicator	S-019 Women Inclusion
Prospect	It is expected that the partnership with IHP will evolve to the point where the institution will map and research all relevant social aspects involving the project area, aiming to foster other projects and future parallel social actions.
Details	The project is in the phase of articulating and planning actions on this topic, in partnership with NGO Instituto Homem Pantaneiro.

Human	
Indicator	H-008 Equipment and infrastructure
Prospect	Developing household infrastructure as applicable to better serve the communities involved, as well as to improve logistical issues such as roads for transportation and improving the quality of transportation to the nearest town or school.

Details	There are plans for infrastructure improvements, with some already identified; however, these were not implemented during this monitoring period and are expected to be part of future activities.

Human	
Indicator	H-011 Worker health and safety
Prospect	Regular improvements of employees working equipment, consciousness and conditions are expected to be performed with time, along with specific campaigns, training, or partnerships.
Details	No actions related to this topic have been planned yet, as they are not considered immediate priorities, given that the farm maintains regular health and safety documentation. However, such actions are expected to be gradually implemented throughout the project, addressing specific and relevant issues for rural workers in the Pantanal.

Financial	
Indicator	F-003 Alternative income sources
Prospect	It is expected that the project will initially find a solid and safe alternative source of income for its community within project areas, with new sources being explored later.
Details	The project proponent has not yet created income alternative source for the local communities/workers, but will enter into the planning of future actions.

Natural	
Indicator	N-009 Environmental compliance of the farm
Prospect	The project aims to enhance the management of environmental documents related to this indicator, as well as to obtain specific certifications for the farm, attesting to good environmental practices across all its activities.
Details	Although the property complies with relevant environmental laws and obligations, no active measures have yet been planned to pursue specific certifications. This is expected to take place as the project matures.

Biodiversity

Indicator	B-004 Biodiversity research
Prospect	It is expected that partnerships will be established with research institutions to promote studies in the project area, aiming to specify and update the existing biodiversity inventories.
Details	No partnerships for biodiversity research in the project's areas have been established. This initiative is expected to be included in the plans for the coming years, focusing on topics relevant to the project's region.

Carbon	
Indicator	C-003 Correspondence with Sustainable Development Goals
Prospect	It is expected that the number of SDGs related to the project will gradually increase as socio-environmental actions are implemented and developed, with potential community training activities.
Details	Socio-environmental actions have not been fully or directly developed, as most social initiatives are still in the planning phase.

Carbon	
Indicator	C-004 Impact Communication Strategy
Prospect	It is expected to create a strategic communication plan for the dissemination of socio-environmental actions, as project develops, including participation in conferences, lectures, events, etc.
Details	Communication strategies should be implemented as the project develops further, with more targeted socio-environmental actions.

6.3.3 Identified Prospects

Social	
Indicator	S-002 Communication with stakeholders
Prospect	To develop permanent and systematic communication with all those involved in the project, building possible interfaces with similar communication networks so that feedback may be used by other related projects or project proponents
Details	The project has not yet developed communication with stakeholders as prospected; however, this is expected to occur gradually in the coming years, including the

	establishment of a specific platform on the website for permanent communication in the 2nd Monitoring Report.

Human	
Indicator	H-004 Community education and training
Prospect	Increasing employees and community's environmental conscience about conservation of native vegetation areas and related themes
Details	Training on environmental awareness and wildfire prevention is scheduled for the local community next year, to be outlined in the 2nd Monitoring Report.

Human	
Indicator	H-022 Research incentive
Prospect	It is expected that the research carried out in partnership with the project will potentially be funded by this or future projects in the region, bringing significant developments to the applicable project areas, such as the accuracy of measuring social benefits or ecosystem services in the project areas.
Details	The proponent is underway in submitting research projects for funding from research institutions, in collaboration with the Federal University of Mato Grosso do Sul, to promote areas related to the project, such as the monitoring station for vegetation areas and the platform for carbon credit management.

Financial	
Indicator	F-006 Competitive Advantage
Prospect	It is expected that the project will impact the economic performance of the farm's main product by aligning with sustainable development goals, offering, in a near future instance, products with low carbon emissions throughout their production chain.
Details	The owner, in partnership with the proponent, is currently preparing an inventory of greenhouse gases from recent years of livestock activities to support the identification of the production chain of Fazenda Cristal – this will be included in the 2nd Monitoring Report, enabling the owner to engage in competitive actions within their market.

Natural

Indicator	N-016 Monitoring methods
Prospect	It is expected that effective vegetation maintenance will be observed through the monitoring activities, and possibly, the implementation of a multiparameter environmental station currently under development to complement the project's monitoring efforts.
Details	Despite observing positive monitoring results in the project's areas using effective methods, the project intends to adopt and test a multiparametric environmental station in the coming years to further develop this topic.

Biodiversity	
Indicator	B-003 Biodiversity monitoring
Prospect	Biodiversity is expected to gradually reveal itself to be of better quality/quantity with project within years, reaching precise catalogues.
Details	The owner, in partnership with the proponent, has invested in the installation of camera traps in the project's areas, which is expected to enhance the quality of biodiversity monitoring. Additionally, specific campaigns are planned for the next year, which will be included in the 2nd Monitoring Report.

Biodiversity	
Indicator	B-006 Flora and Fauna Local Information
Prospect	It is expected to promote actions to improve the methods of characterisation and management of fauna and flora, aiming for greater information on relevant species and involving the community.
Details	The owner, in partnership with the proponent, has invested in the installation of camera traps in the project's areas, which is expected to enhance the quality of biodiversity monitoring and involve the community. Additionally, specific campaigns are planned for the next year, which will be included in the 2nd Monitoring Report.

Carbon	
Indicator	C-008 Project performance
Prospect	It is expected that with the development of the project, all anticipated carbon credits will be verified and issued, achieving maximum removal and minimal GHG emissions.

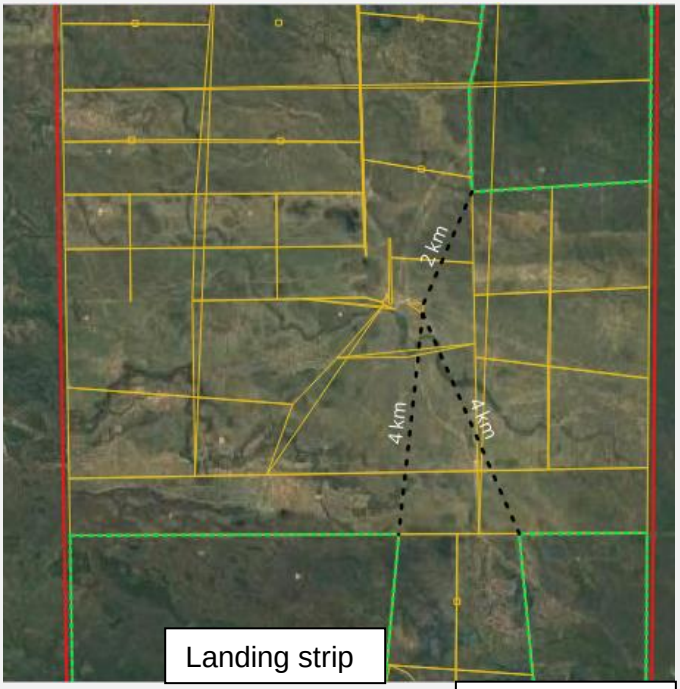
Details	Due to the methodological changes in carbon quantification in the project's areas, aimed at greater precision and conservatism, the maximum removal has not yet been achieved. Consequently, it is anticipated that in the next verification year – 2nd Monitoring Report – the project shall achieve carbon quantities close to those in this report, which must serve as the prospect to be reached within this indicator, considering % performance analyses to be performed over next MRs.

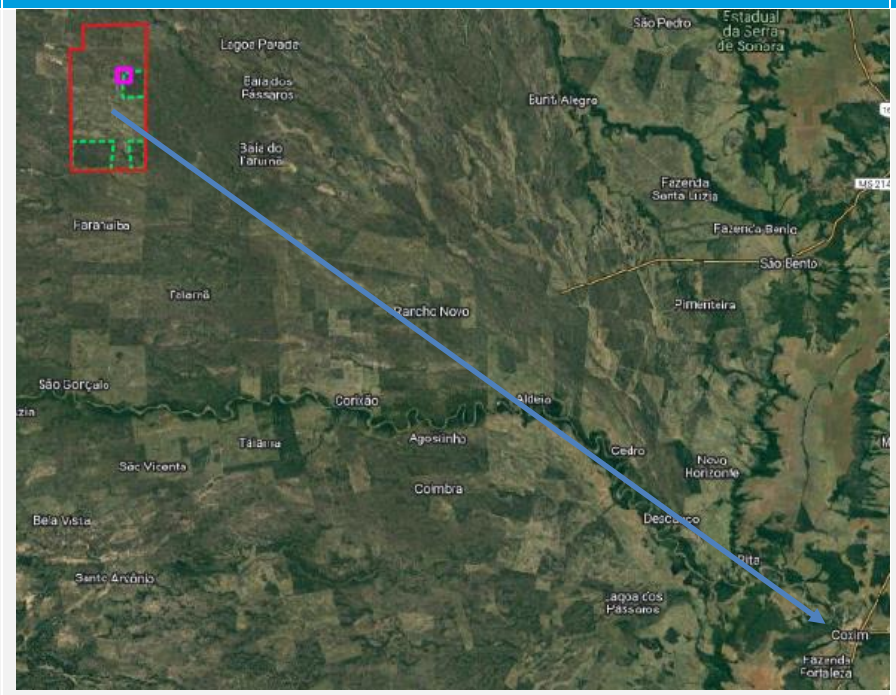
Appendix 1: Non-Permanence Risk Report

1. Internal Risk

Project Management		
Risk Factor	**Risk Factor and/or Mitigation Description**	**Risk Rating**
a)	Species planted (where applicable) associated with more than 25% of the stocks on which GHG credits have previously been issued are not native or proven to be adapted to the same or similar agroecological zone(s) in which the project is located. Not applicable.	0
b)	Ongoing enforcement to prevent encroachment by outside actors is required to protect more than 50% of stocks on which GHG credits have previously been issued. No GHG credits have previously been issued as this report stands for first monitoring and verification – see documentation “Declaration of non-Participation” annexed. However, since the area is relatively large and the logistics of monitoring its fences is not simple, as Section 3.1 explains, there is a risk factor for external invasions.	2

Project Management		
Risk Factor	**Risk Factor and/or Mitigation Description**	**Risk Rating**
	 All three Legal Reserve areas within the scope of the project (green) have significant extension of border areas (red), which potentially put them at risk of invasion by external agents - animals, neighbours, others.	
c)	Management team does not include individuals with significant experience in all skills necessary to successfully undertake all project activities (ie, any area of required experience is not covered by at least one individual with at least 5 years experience in the area). The management team counts on extremely qualified and experienced employees and managers, with more than 30 years of experience in a couple of activities over Pantanal biome, including local environmental management and rural property management - details of management team attached to this report.	0

Project Management		
Risk Factor	**Risk Factor and/or Mitigation Description**	**Risk Rating**
d)	Management team does not maintain a presence in the country or is located more than a day of travel from the project site, considering all parcels or polygons in the project area. The management team remains on site – as image below reveals - living at the property's headquarters, with access about 2 and 4 kilometres to the project areas, by car on an internal road. Also the closest municipality to the property, with direct access to it through 1-2 hour particular airplane (Coxim-MS).  	0

Project Management		
Risk Factor	**Risk Factor and/or Mitigation Description**	**Risk Rating**
		
e)	**Mitigation**: Management team includes individuals with significant experience in AFOLU project design and implementation, carbon accounting and reporting (eg, individuals who have successfully managed projects through validation, verification and issuance of GHG credits) under the SOCIALCARBON Program or other approved GHG programs. Management team is not significantly experienced in AFOLU projects as it is first of its kind in the region, also considering this is the very first monitoring and verification of this conservation project as and AFOLU project reporting.	0
f)	**Mitigation**: Adaptive management plan in place There is a management plan in progress as Section 3.1 details, along with the Emergency Assistance Plan (EAP) – Fire and Deforestation annexed. It aims to promote employees to specific functions within the property, related to the project, as well as carry out specific training foreseen by project indicator, as Section 6.1 details. Employees are already aware of the specific conservation functions of the Legal Reserve areas, receiving guidelines from their	-2

Project Management		
Risk Factor	**Risk Factor and/or Mitigation Description**	**Risk Rating**
	managers, according to the evidence presented in the PDD v.1.8, which indicate the progress of conservation activities since 2020.	
Total Project Management (PM) [as applicable, (a + b + c + d + e + f)] Total may be less than zero.		**0**

Financial Viability		
Risk Factor	**Risk Factor and/or Mitigation Description**	**Risk Rating**
a)	Project cash flow breakeven point is greater than 10 years from the current risk assessment	-
b)	Project cash flow breakeven point is between 7 and up to less than 10 years from the current risk assessment	-
c)	Project cash flow breakeven point between 4 and up to less than 7 years from the current risk assessment	-
d)	Project cash flow breakeven point is less than 4 years from the current risk assessment Project cash flow breakeven point is less than 4 years for the conservation activities, as inferred by updated financial analysis in attached documentation (Financial-Plan-1MR-CRISTAL)	Q 0
e)	Project has secured less than 15% of funding needed to cover the total cash out before the project reaches breakeven	-
f)	Project has secured 15% to less than 40% of funding needed to cover the total cash out required before the project reaches breakeven	-
g)	Project has secured 40% to less than 80% of funding needed to cover the total cash out required before the project reaches breakeven	-
h)	Project has secured 80% or more of funding needed to cover the total cash out before the project reaches breakeven	-

i)	**Mitigation**: Project has available as callable financial resources at least 50% of total cash out before project reaches breakeven As detailed in validation process, project has no external funding promoted, as independent financial resources (project proponent) are available for at least 50% of total cash out before project reaches breakeven	-2
Total Financial Viability (FV) [as applicable, ((a, b, c or d) + (e, f, g or h) + i)] Total may not be less than zero.		**0**

Opportunity Cost		
Risk Factor	**Risk Factor and/or Mitigation Description**	**Risk Rating**
a)	NPV from the most profitable alternative land use activity is expected to be at least 100% more than that associated with project activities; or where baseline activities are subsistence-driven, net positive community impacts are not demonstrated	-
b)	NPV from the most profitable alternative land use activity is expected to be between 50% and up to 100% more than from project activities	-
c)	NPV from the most profitable alternative land use activity is expected to be between 20% and up to 50% more than from project activities	-
d)	NPV from the most profitable alternative land use activity is expected to be between 20% more than and up to 20% less than from project activities; or where baseline activities are subsistence-driven, net positive community impacts are demonstrated	-
e)	NPV from project activities is expected to be between 20% and up to 50% more profitable than the most profitable alternative land use activity	-
f)	NPV from project activities is expected to be at least 50% more profitable than the most profitable alternative land use activity It is understood from analyses made in PDD v.1.8 (Additionality) that the alternative uses of the conservation area represent its	Q -4

	continuation under the effects of the Legal Reserve (Brazilian Forest Code), with maintenance activities planned as in this project. In this case, we have the possibility of submitting the area to the Payment for Environmental Services (PES) modality, as it was revealed through the same section that the implementation of an RPPN is essentially different and cannot be considered as an alternative scenario for the area. In a recent research into PES in the state of Mato Grosso do Sul[15], an open call for proposals was published in 2023[16], exclusively for the municipalities of Bonito-MS and Bodoquena-MS (touristic poles), which promotes guidelines for rural landowners to receive payments for, among other activities, "Conservation of existing forests and other forms of private natural vegetation; Ecological restoration of forests and other forms of private natural vegetation; and Productive conversion of pastures and degraded land to alternative land uses with greater carbon storage." The same notice informs that the maximum amount per participant is R$27,000 (around $5,300). Payments are made annually on the basis of specific annual verification. Considering the example above, as there was no available PES programmes for Fazenda Cristal region (PDD v.1.8), the hypothetical scenario of the maximum amount received by Fazenda Cristal for the conservation of its areas of native formations, excluding the costs related to the implementation of this project as a SOCIALCARBON AFOLU project, but keeping part of the conservation costs (in order to properly preserve the area), we have an estimated hypothetical analysis (included as 2 extra sheets within Financial-Plan-1MR-CRISTAL, annexed), which indicates that NPV from project activities is expected to be at least 50% more profitable than this alternative land use activity.	
g)	**Mitigation**: Project proponent is a non-profit organization Private organization.	0

[15] Publication from IMASUL, 26th December 2023. Available at: https://www.imasul.ms.gov.br/novo-programa-que-paga-por-servicos-ambientais-em-bonito-e-bodoquena-tem-135-inscritos/.

[16] PUBLIC NOTICE FOR PAYMENT FOR ENVIRONMENTAL SERVICES TO RURAL PROPERTIES PSA MULTIPLE USE OF THE SCENIC RIVERS BETIONE, FORMOSO, DA PRATA AND SALOBRA IN THE MUNICIPALITIES OF BODOQUENA, JARDIM, BONITO AND MIRANDA, MATO GROSSO DO SUL. 25th September 2023. Available at: https://www.spdo.ms.gov.br/diariodoe/Index/Download/DO11280_27_09_2023.

h)	**Mitigation**: Project is protected by legally binding commitment to continue management practices that protect the credited carbon stocks over the length of the project crediting period (see project longevity) Project relies on a formal contract between parties, as described in attached documentation Contract Between Parties. Clause related to Assignment and Succession states: "*The present Contract obliges the parties and their successors to any title, irrevocably and irreversible, so that neither party may assign or transfer it in full or partially without the prior consent of writing from the other party*." Complementarily, contract's Clause 5 – TERM AND TERMINATION describes: "*This Agreement is entered into for a term until the commercialization of carbon credits, with automatic extensions for periodic commercialization's defined for the Project*. (…)". Therefore, the 'FIRST AMENDMENT TO THE CONSULTING AND ADVISORY SERVICES AGREEMENT FOR THE GENERATION AND COMMERCIALIZATION OF CARBON CREDITS' (attached), in its first clause, specifies this aspect agreed by the parties (10–100-year timing). Finally, as PDD v.1.8 describes, project area is protected by legally binding commitment (Legal Reserve from Forest Code Federal Law no.12,651/2012) to continue management practices that protect carbon stocks over the length of the project crediting period.	-2
i)	**Mitigation**: Project is protected by legally binding commitment to continue management practices that protect the credited carbon stocks over at least 100 years (see project longevity)	0
Total Opportunity Cost (OC) [as applicable, (a, b, c, d, e or f) + (g + h or i)] Total may be less than 0.		**-6**

Project Longevity		
a)	Without legal agreement or requirement to continue the management practice Not Applicable.	0

b)	With legal agreement or requirement to continue the management practice As per PDD v.1.8, it is stated the project start date and crediting period, comprising a 10-year project, as methodology SCM0003 implies – AFOLU project within SOCIALCARBON Standard v6.1: "For all other AFOLU projects the project crediting period shall be 10 years, which may be renewed at most ten times with a total project crediting period not to exceed 100 years". Therefore, the project relies on a formal contract between parties, as described in attached documentation Contract Between Parties. Clause related to Assignment and Succession states: "*The present Contract obliges the parties and their successors to any title, irrevocably and irreversible, so that neither party may assign or transfer it in full or partially without the prior consent of writing from the other party*." Complementarily, contract's Clause 5 – TERM AND TERMINATION describes: "*This Agreement is entered into for a term until the commercialization of carbon credits, with automatic extensions for periodic commercialization's defined for the Project. (…)"*. Therefore, 'FIRST AMENDMENT TO THE CONSULTING AND ADVISORY SERVICES AGREEMENT FOR THE GENERATION AND COMMERCIALIZATION OF CARBON CREDITS' (attached), in its first clause, specifies this project aspect agreed by the parties (10–100-year timing). Finally, as PDD v.1.8 describes, project area is protected by legally binding commitment (Legal Reserve from Forest Code Federal Law no.12,651/2012) to continue management practices that protect carbon stocks over the length of the project crediting period.	-40
Total Project Longevity (PL) May not be less than zero		**0**

Internal Risk	
Total Internal Risk (PM + FV + OC + PL) Total may not be less than zero.	**0**

2. External Risks

Land Tenure and Resource Access/Impacts		
Risk Factor	**Risk Factor and/or Mitigation Description**	**Risk Rating**
a)	Ownership and resource access/use rights are held by same entity(s) Not applicable.	0
b)	Ownership and resource access/use rights are held by different entity(s) (eg, land is government owned and the project proponent holds a lease or concession) Ownership and resource access/use rights are held by different entities as described in PDD v.1.8 and annexed Contract Between Parties.	2
c)	In more than 5% of the project area, there exist disputes over land tenure or ownership No existing disputes over land tenure, as property documentation is regular and disposed attached (Property Documentation), also along with Stakeholder analysis described in Section 2.1.	0
d)	There exist disputes over access/use rights (or overlapping rights) No existing disputes over land tenure, as property documentation is regular and disposed attached (Property Documentation), also along with Stakeholder analysis described in Section 2.1.	0
e)	WRC projects unable to demonstrate that potential upstream and sea impacts that could undermine issued credits in the next 10 years are irrelevant or expected to be insignificant, or that there is a plan in place for effectively mitigating such impacts	0

	Not applicable – not a WRC project.	
f)	**Mitigation**: Project area is protected by legally binding commitment (eg, a conservation easement or protected area) to continue management practices that protect carbon stocks over the length of the project crediting period Brazilian's Federal Law No 12,651/2012, named as the "Forest Code" (Código Florestal in Portuguese) establishes the Legal Reserve (Reserva Legal, in Portuguese), which states that rural properties must allocate a minimum percentage of their total area for this purpose, which includes project area (detailed in PDD v.1.8).	-2
g)	**Mitigation**: Where disputes over land tenure, ownership or access/use rights exist, documented evidence is provided that projects have implemented activities to resolve the disputes or clarify overlapping claims Not applicable. No existing disputes over land tenure.	0
Total Land Tenure (LT) [as applicable, ((a or b) + c + d + e + f + g)] Total may not be less than zero.		**0**

Community Engagement		
Risk Factor	**Risk Factor and/or Mitigation Description**	**Risk Rating**
a)	Less than 50 percent of households living within the project area who are reliant on the project area, have been consulted Not applicable as no households living within the project area - these areas are composed of native formations in their natural state, subject to potential degradation over the years, designated as Legal Reserve areas, for at least 10 years, in accordance with the Brazilian Forest Code, Law No. 12,651/2012, and as recorded in the land register of the property in question - attached to this report. The attached document classifies the specific areas as a Legal Reserve, which implies the impossibility of any habitation within the area. The project area is a reserve within a rural property - Fazenda	0

	Cristal, with regular households located in another part of the property, but distant from the project area.	
b)	Less than 20 percent of households living within 20 km of the project boundary outside the project area, and who are reliant on the project area, have been consulted Not applicable as no households relies on the project area (these would be different property/farm with different reliance or Fazenda Cristal's employees with regular rural livestock job reliance). Furthermore, as explained above and also in PDD v.1.8 and Section 2.1 of this report, 100% of households living within Fazenda Cristal, but outside the project area – classified as employees/local stakeholders, – have been consulted. It is important to reinforce, however that there were no inputs or feedbacks relative to project activities, as explained, also that there is no reliance in project areas as they are composed of native formations with conservation activities.	0
c)	**Mitigation**: The project generates net positive impacts on the social and economic wellbeing of the local communities who derive livelihoods from the project area Local community is composed of employees from the property Fazenda Cristal, since it is a remote site, as seen in the PDD, v.1.8. It is understood that the project, through conservation activities to be developed, aims to promote training and environmental education with the community, while also seeking to monitor issues relating to human rights, workers' health and safety, among other factors that directly impact on the community's life – see each indicator in PDD Section 6. Socioenvironmental impact has been observed and detailed in this report, Sections 3.1 and 6.1. However, with the development of the project along further years, there is a greater possibility of generating income and employment for the community – also to be monitored – providing them with a better quality of life, in general. Along with social and economic wellbeing of employees, PDD Section 2.1 reveals partnership with the Instituto Homem Pantaneiro, a NGO, which is the benefit sharing part of the project and responsible to plan and develop social projects related to Social Resource (Section 6.1.1) within community and/or Pantanal region.	-5
Total Community Engagement (CE) [where applicable, (a + b + c)]		**-5**

Total may be less than zero.	

Political Risk		
Risk Factor	**Risk Factor and/or Mitigation Description**	**Risk Rating**
a)	Governance score of less than -0.79	0
b)	Governance score of -0.79 to less than -0.32 Brazil's governance score is -0,59 (The Global Economy, 2023)[17]	4
c)	Governance score of -0.32 to less than 0.19	0
d)	Governance score of 0.19 to less than 0.82	0
e)	Governance score of 0.82 or higher	0
f)	"Mitigation: Country implementing REDD+ Readiness or other activities such as: a) The country is receiving REDD+ Readiness funding from the FCPF, UN-REDD or other bilateral or multilateral donors b) The country is participating in the CCBA/CARE REDD+ Social and Environmental Standards Initiative c) The jurisdiction in which the project is located is participating in the Governors' Climate and Forest Taskforce d) The country has an established national FSC or PEFC standards body e) The country has an established DNA under the CDM and has at least one registered CDM A/R project" Brazil participates in programs and incentives related to REDD+ (Reduction of Emissions from Deforestation and Forest Degradation). The country has been a global leader in implementing REDD+. In 2010, Brazil launched the Program for the Prevention	-2

[17] Available at: https://www.theglobaleconomy.com/Brazil/.

	and Control of Deforestation in the Legal Amazon (PPCDAm) as part of its contribution to reducing greenhouse gas emissions. Brazil also participates in other REDD+-related programs and incentives, including the International Rainforest Protection Initiative (ITFI), the Alliance of Tropical Forest Countries (ATCF), the Forest Investment Program (FIP) and the in Sustainable Energy (ESI).	
Total Political (PC) [as applicable ((a, b, c, d or e) + f)] Total may not be less than zero.		**2**

External Risk	
Total External Risk (LT + CE + PC) Total may not be less than zero.	**0**

3. Natural Risks

Natural Risk (Fire)	
Significance	Minor (5% to less than 25% loss of carbon stocks) Using this Monitoring Report annexes (sheet 'Emissions 2020 LR 2and3 (S)') – emissions calculated for year 2020 is 229 tCO_2e. Compared to carbon stocks accounted for the same year through methodology in use (1,750 tCO_2 for the complete year of 2020) it represents 13%.
Likelihood	Less than every 10 years According to MapBiomas Fire Collection 3.0[18] – analysis of fire annual scars for plotted area.

[18] MapBiomas Fire Collection 3.0. Available at: https://plataforma.brasil.mapbiomas.org/.

Score (LS)	5
Mitigation	0.25 As per specific measures implemented for project related to fire monitoring, preventing and combating – Emergency Attendance Plan (EAP), that includes prevention measures such as Near Real Time monitoring); along with observation of project activities related to fire risk mitigation, such as firebreaks; including historical analysis of prevention and effectiveness detailed in annex 'Environmental-Impacts-CRISTAL', this mitigation is considered as significative including both of the measures described.

Natural Risk – Other natural risk: Cattle invasion	
Significance	Minor (5% to less than 25% loss of carbon stocks) As explained in PDD v.1.8, the State Law 6,160/2023 establishes, it is commonly permitted to practice controlled pasture activity regarding state's private Legal Reserve areas. This occurs due to grazing contribution to the reduction of native grassland biomass and consequently to the incidence of forest fires. However, even considering that this project is not using this permission by no means, and using the same justification as this risk analysis, item 1b (Internal Risk - Project Management), it is found that there is relative difficulty in monitoring and maintaining the entire perimeter of the project areas. Fazenda Cristal surrounding areas are 100 per cent composed of other farms whose activities include livestock with the potential to encroach project areas. Such complexity is also explained in Section 3.1. Therefore, in a conservative manner, a "Minor" impact was used, based on the long-term effects, such as edge effects and soil compaction.
Likelihood	Less than every 10 years Same justification above – Significance.
Score (LS)	5
Mitigation	0.25 Prevention measures applicable, like fences monitoring and maintenance are implemented as detailed in Section 3.1 and also comprehended by Emergency Attendance Plan (EAP); Project proponent has proven history of effectively containing this risk, as it

	maintains a long period of years (since 2020) of monitoring and effective actions related.

Score for each natural risk applicable to the project (Determined by (LS × M)	
Fire (F)	1.25
Other natural risk (ON) – Cattle Invasion	1.25
Total Natural Risk (as applicable, F + PD + W + G + ON)	**3**

4. Overall Non-Permanence Risk Rating and Buffer Determination

4.1 Overall Risk Rating

Risk Category	Rating
Internal Risk	0
External Risk	0
Natural Risk	3
Overall Risk Rating (a + b + c)	**10**

4.2 Calculation of Total SCUs

Total Risk Assessment		**10%**
Net change in the project's carbon stocks	2020 (16-May to 31-December) + 2021 + 2022 + 2023	5,952
Total number of buffer credits to be deducted from the issuance		**595**

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Appendix 3: Common Practice Analysis

This analysis proactively clarifies a potential issue raised regarding the monitored project activities described in Section 3.1, which are encompassed by state laws applicable to the project area, such as State Decree 15.654/2021.

This legislation establishes general guidelines for the State Integrated Fire Management Plan (PEMIF). creating planning and management instruments for fire management, promoting actions aimed at the prevention and combat of wildfires. It is important to note that:

a) does not directly require a landowner to implement specific fire management practices;
b) foresees that private agent (including landowners) may develop and implement Integrated Fire Management Plans (PMIF) (Article 29);
c) sets out liability in cases where a fire originates within a property, spreads out of control, and causes environmental damage (Article 42).

Furthermore, Article 8, which addresses the approval and oversight of Integrated Fire Management Plans (PMIF), confirms that enforcement and compliance requirements are relatively superficial. This is because the PMIF does not require prior approval: it must contain only basic information about fire-prone areas, vegetation types, and priority areas for protection, but it does not undergo a prior review process by the issuing authority. The landowner merely completes a form within the PREVENIR system of the Military Fire Department of Mato Grosso do Sul (CBMMS) and automatically receives a certificate of compliance (§3).

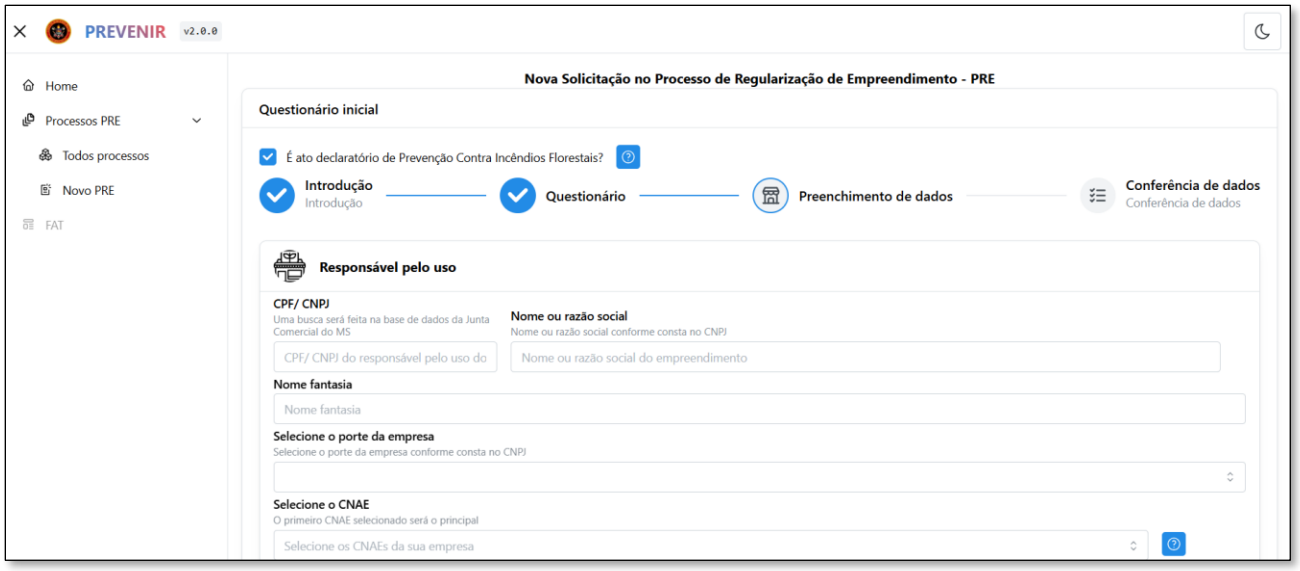

Image 1: Screen from the PREVENIR system registration, with a simple questionnaire to be completed by the owner

In other words, there is no prior inspection for approval – the document is generated automatically, based solely on the information declared by the applicant. Consequently, enforcement is occasional rather than systematic: the article states that landowners' declarations may be inspected "at any time", but there is no requirement for mandatory inspections (§4). In practice, enforcement appears to rely on complaints or occasional inspections, without a structured system for systematic and preventive verification.

This introduction serves to contextualise that, although legislation exists, its enforcement is not necessarily ensured, given the nature of its requirements. In this regard, the context indicates a lack of adoption of Integrated Fire Management Plans by landowners in the state, which is further corroborated by the following evidence:

A document requested by project proponent for the State Environmental Agency (IMASUL) via official correspondence, annexed to this report, reveals that among all rural properties in the State of Mato Grosso do Sul, only two (02) private properties have an officially registered PMIF on the platform. For comparison purposes, the municipality of Corumbá-MS alone (where Fazenda Cristal is located) has approximately 1,900 rural properties with an active CAR database (Cadastro Ambiental Rural).

Thus, the application of the legislation across private properties is not common practice in the region. The same rationale applied to Federal Law 12.651/2012 (Forest Code), as detailed in Section 3.6 – Additionality of the PDD v.1.8, could be used in this analysis without any loss of legal validity or applicability.

Finally, considering an additional hypothesis that the lack of compliance with the Decree via the CBMMS PREVENIR system may be due to the reasons outlined above – lack of monitoring, enforcement, bureaucratic

hurdles, among other possible factors – it could be inferred that landowners in the region might already be implementing fire control measures independently, without any formalisation. In such a case, it would not be possible to confirm the widespread occurrence of individual fire management plans across properties, for reasons such as lack of information. However, if this situation was indeed followed, fire events in the region should have shown a reduction over recent years, particularly after the Decree's publication.

An initial and expedient analysis of the fire event history within the Pantanal biome suggests, as images below reveal, a slight increasing trend in fire events between 2018 and 2023, based on public data from MapBiomas Fire Collection v.3.0. Notably, despite a reduction from 2021 to 2022, there was an increase from 2022 to 2023, which contradicts the notion that the Decree neither independent action has had any significant influence. Furthermore, although the updated version of fire event data for 2024 has not yet been published within this platform, the total burnt area for 2024 has been publicly announced – "*1.9 million hectares were affected by fire between January and December 2024"* (MAPBIOMAS, 2025)[19]. When incorporating the burnt area for the Pantanal biome alongside previous years, a significant increase from 2023 to 2024 is observed, as well as an upward trend in the applied trend line.

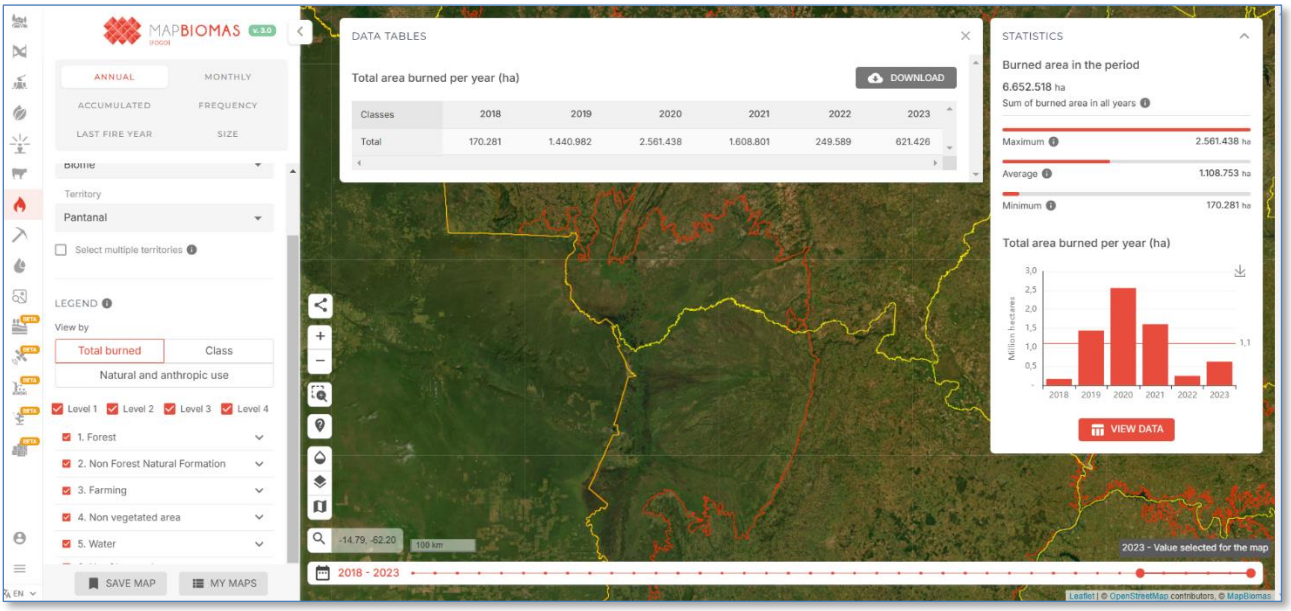

Image 2: Total burnt area per year (hectares) in Pantanal biome from 2018 to 2023 (MapBiomas Fire Collection 3.0)

[19] MAPBIOMAS, 2025. Publication from MAPBIOMAS – burnt area in each Brazilian biome in 2024. Available at: https://brasil.mapbiomas.org/2025/01/22/area-queimada-no-brasil-cresce-79-em-2024-e-supera-os-30-milhoes-de-hectares/.

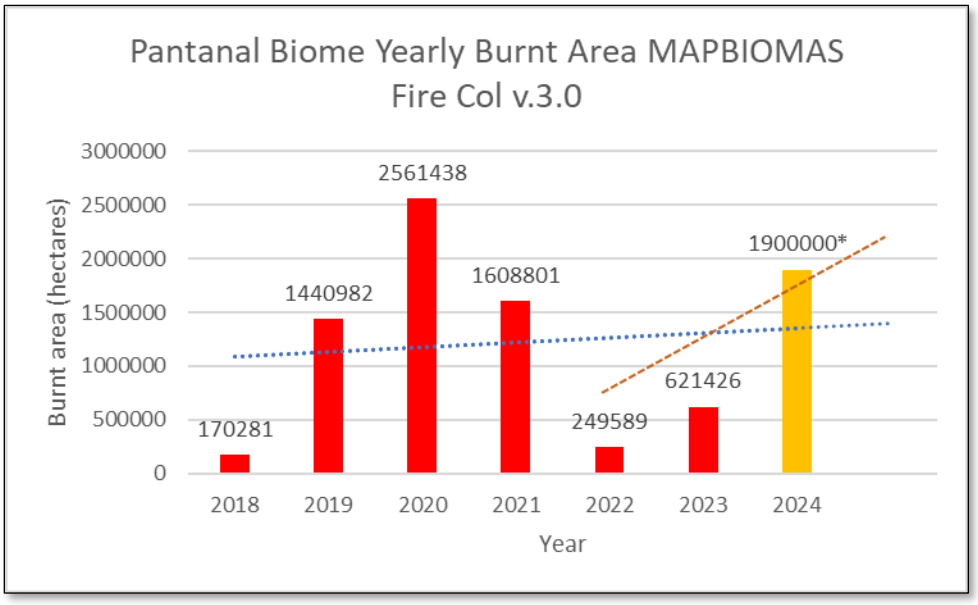

Image 3: Summary and tendency lines of Pantanal yearly burnt area from 2018 to 2024 (MapBiomas Fire Collection 3.0; MAPBIOMAS, 2025)

Moreover, examining a more specific dataset for the municipality of Corumbá-MS, other evidences gathered, presented in this section, corroborates the previous analysis, confirming that the project activities are not common practice in the considered region (Corumbá Municipality, MS), despite the existence of the legislation. These evidences, illustrated below, indicate the percentage of burnt area (public data from MapBiomas Fire Collection 3.0) within Legal Reserves in the municipality (perimeters extracted from the public Brazilian 2023 CAR Database), revealing that up to approximately 20% of Legal Reserve areas in rural properties were burnt, whereas Fazenda Cristal, with its implemented activities, recorded approximately 0% burnt area between 2020 and 2024.

Year	Burnt area (MAPBIOMAS Fire Col. v.3.0) inside Legal Reserves in Corumbá city (MS) - ha	%	Burnt area (MAPBIOMAS Fire Col. v.3.0) inside Legal Reserves in Fazenda Cristal (MS) - ha	%
2020	258,994.51	20,23%	13.78	0,34%
2021	199,468.39	15,58%	0	0,00%
2022	42,621.63	3,33%	0	0,00%
2023	65,015.91	5,08%	0	0,00%
2024 (expected)*	-	*20,00%*	*0*	*0,00%*

*According to MapBiomas 2025 data publishing related to burnt area for 2024 for each biome in Brazil. Percentage is due considering Legal Reserve areas in Corumbá-MS is approximately 1,280,000 hectares (geoprocessing 2023 CAR database extracted), and that Legal Reserve areas in Fazenda Cristal (hectares) is approximately 4,000 hectares (GIS data annexed).

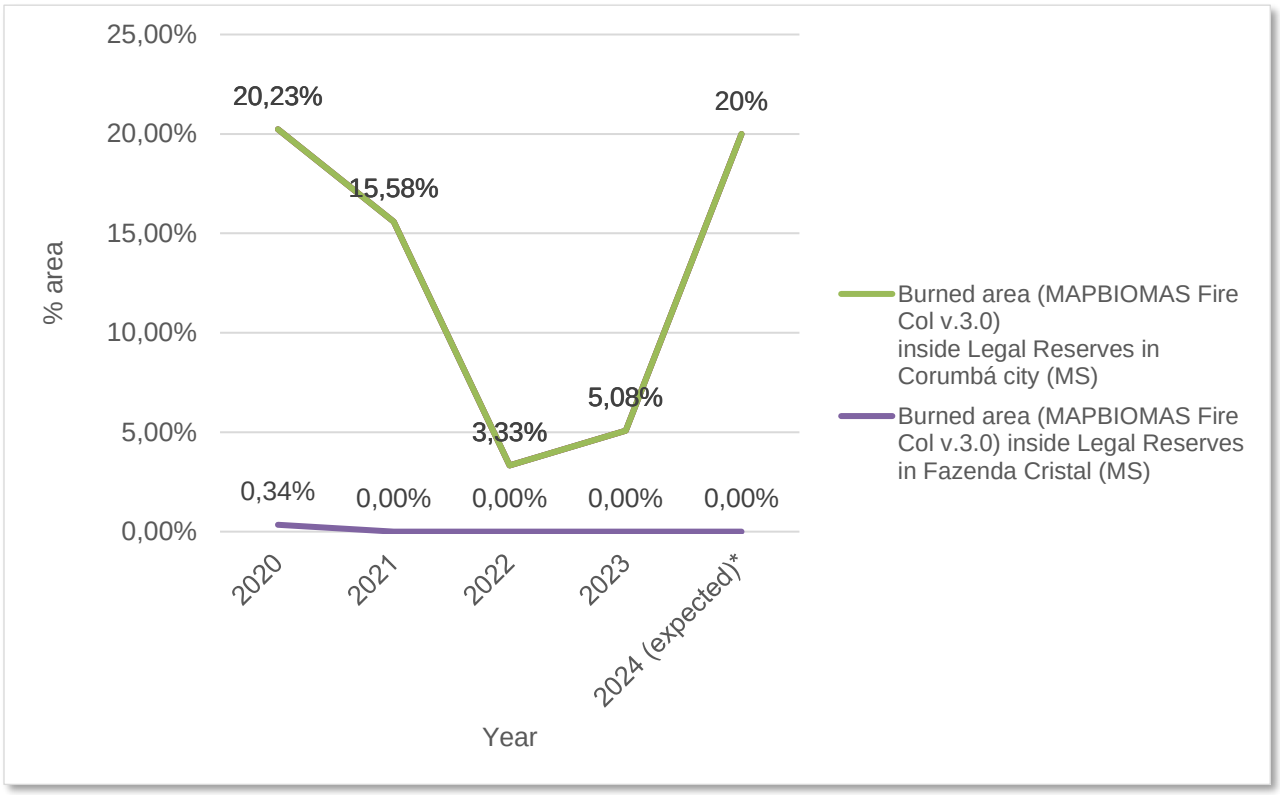

Image 4: Percentage of burnt areas in relation to total areas – Legal Reserve areas in Corumbá-MS and Legal Reserve areas in Fazenda Cristal, between 2020 and 2024

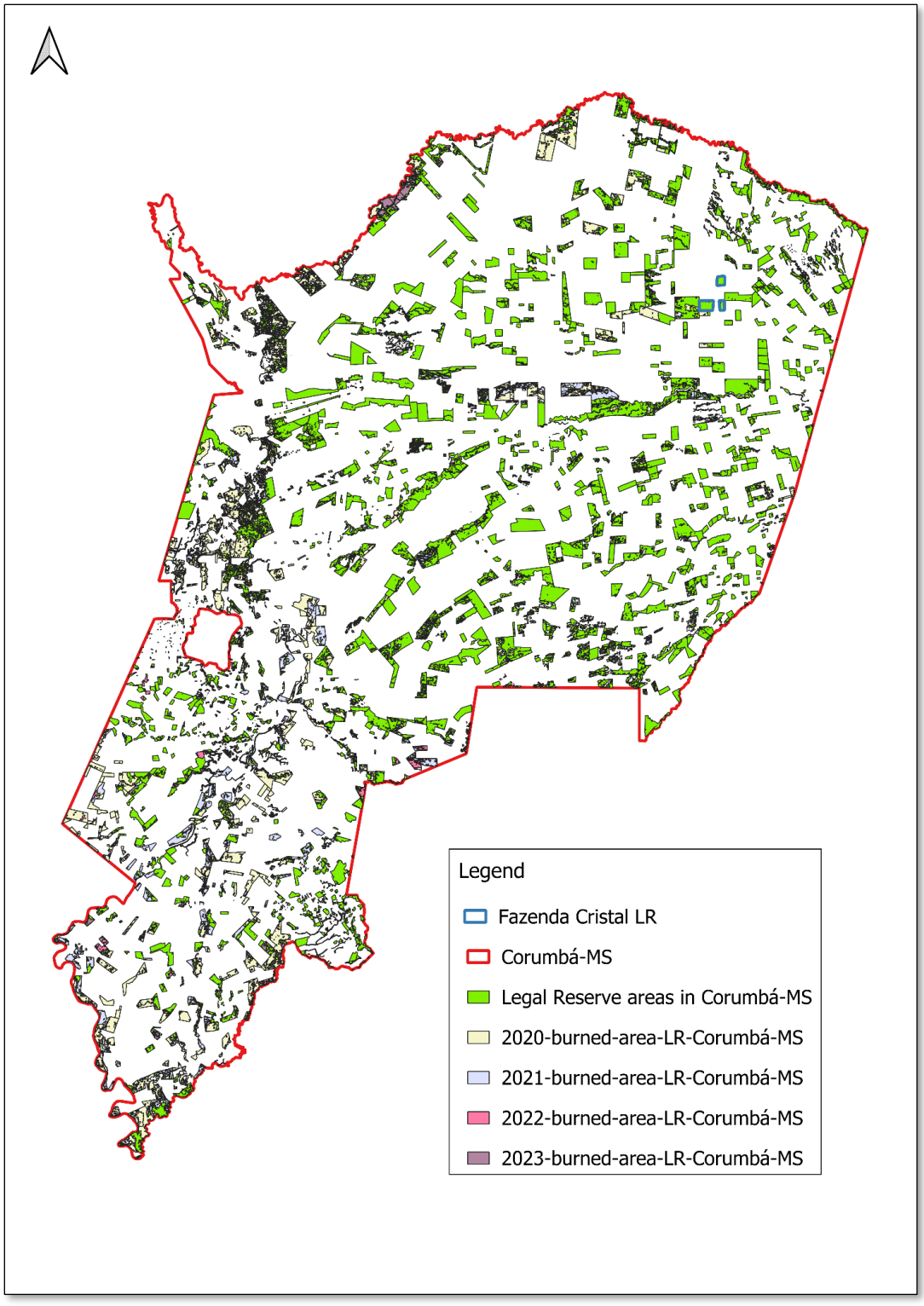

Image 5: Illustrative map of the total Legal Reserve areas in the municipality of Corumbá-MS, revealing the incident related burnt areas from 2020 to 2023 (MapBiomas Fire Collection 3.0)