BLUE CARBON CERTIFICATION PROJECT

"CAMERON PATAGONIA BLUE CARBON"

Document prepared by ZERO CARBONO SPA

Project Name	*Carbon Patagonia Blue Carbon Project*
Project Owner	*Cameron Tourism and Trade LLC*
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Other Project Participants	*Zero Carbono SPA (Consulting)*
Version	*3.4*

Date	*06/25/2025*
Project Type	*AFOLU*
Grouped Project	*It is not a grouped project.*
Methodology (ies)	*BCR0007: Inland natural wetlands.*
Project Location (city, region, country)	*Timaukel Municipality, Magallanes and Chilean Antarctica Region, Chile*
Start date	01/01/2022
Period of quantifying the reduction of GHG emissions	01/01/2022 to 31/12/2052
Estimated total and average annual amount of GHG emissions reduction/elimination	*Total estimated reductions: 26,404,906 tons CO2e* *Estimated annual average: 880,167 tons of CO2e*
Sustainable Development Goals	*SDG 6: Clean water and sanitation* *SDG 13: Climate action* *SDG 15: Life on land* *SDG 17: Partnerships for the Goals*
Special category, related to co-benefits	*There is no special category.*

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1 Project Type and Eligibility

1.1 Scope of the BCR Standard

The Carbon Patagonia Blue Carbon Project (The Project) is eligible under the scope of the BCR Standard (see section 6) by meeting one or more of the following conditions (Mark with an X).

The scope of the BCR Standard is limited to:	
The following greenhouse gases are included in the Kyoto Protocol: carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O).	x
GHG projects that use a methodology developed or approved by BioCarbon, applicable to GHG removal activities and REDD+ activities (AFOLU Sector).	x
Quantifiable GHG emission reductions and/or removals generated through the implementation of GHG removal activities and/or REDD+ activities (AFOLU sector).	x
GHG projects that use a methodology developed or approved by BioCarbon, applicable to activities in the energy, transport and waste sectors.	
Quantifiable reductions in GHG emissions generated through the implementation of activities in the energy, transport and waste sectors.	

The Project supports and encourages actions that significantly contribute to the reduction of greenhouse gas emissions. This is achieved by implementing conservation measures and generating income for local ecosystem managers through the marketing of carbon certificates.

These economic incentives play an essential role in conservation and strengthening local governance over the protected area. The main goal of the Project is to effectively contribute to the fight against climate change, the conservation of strategic ecosystems and the sustainable management of clean water. It is estimated that the Project will reduce approximately 26,404,906 tons of CO_2e, avoiding land use change in peatland ecosystems and mitigating peatland degradation on Tierra del Fuego Island, Chile.

The Project uses the voluntary BioCarbon standard Registry and follows the BCR0007 methodology for continental natural wetlands.

1.2 Project Type

Select the type of project under which the Project activities are developed (Mark with an X).

Activities in the AFOLU sector other than REDD+	x
REDD+ Activities	
Activities in the energy sector	
Activities in the transport sector	
Activities related to waste management and disposal	

1.3 Project Scale

Not applicable since it is a GHG Project in the AFOLU sector.

2 Project Overview

The Cameron Patagonia Blue Carbon Peatland Conservation Project, located in the Magallanes and Chilean Antarctic Region, covers an area of 11,300 hectares dedicated to the protection of intact peatlands, whose ecosystem stores carbon and contributes to the mitigation of greenhouse gas (GHG) emissions. These peatlands, formed by layers of living vegetation and peat accumulations, capture and store carbon for thousands of years, and their conservation is essential to maintain their capacity to capture and retain carbon and thus reduce the release of GHGs.

The Project peatlands are currently largely untouched, but face increasing threats from peatland destruction by fires and eventual land use change, pressure from human activities, as well as exotic species and possible public works. These activities could drain the peatlands, seriously affecting their capacity to store carbon and their function as GHG sinks.

To ensure carbon capture and retention, the Project will carry out the following activities: Prevent drainage and maintaining hydrological conditions, protect the natural structure and function of peatlands; Interrupt sediment flow to preserve the composition of peatlands; Implement fire protection and establish control measures on human activities that threaten the integrity of these wetlands and safeguarding native vegetation and biodiversity to preserve the structure and carbon storage capacity.

The Project is classified as a "blue carbon" and undrained peatland conservation initiative, according to international standards, meeting criteria for the protection of intact wetlands. It is aligned with methodologies of the BioCarbon Registry that verify compliance with standards for GHG removal projects in wetlands.

The Project supports the SDGs, highlighting climate action (SDG 13) through the reduction and removal of GHGs, and contributing to the life of terrestrial ecosystems (SDG 15) and sustainable water management (SDG 6) by preserving key wetlands for biodiversity and water resources in the region. In addition, it promotes national and international strategic alliances to strengthen scientific research and the exchange of knowledge in the conservation of peatlands (SDG 17).

The Project peatlands are estimated to capture 880,167 tons of CO_2 equivalent per year, which would add up to approximately 26,404,906 tons of CO_2 captured over the 30-year period covered by the Project.

Through active management and the generation of carbon credits, the Project will encourage the protection of these essential areas, mitigating climate change and preserving ecosystem services vital to the local community and the long-term environmental balance.

2.1 Name of the GHG Project

Cameron Patagonia Blue Carbon.

2.2 Goals

1. *Conservation of peatlands and their biodiversity*
2. *Prevention of land use change in peatlands due to fires, human activity, invasive exotic species, public work, etc.*
3. *Care of underground water tables*
4. *Maintaining ecosystem services for the common good*
5. *Generating blue carbon credits from peatland conservation*
6. *Reduction of Greenhouse Gases.*

2.3 Project Activities

Main activities:

1. *Ecosystem mapping and monitoring*
2. *Control of exotic species and ecological restoration*
3. *Scientific research*
4. *Environmental education and community participation*
5. *Sustainable ecotourism development*
6. *Control and prevention of negative anthropogenic activities by third parties unaffiliated with the Project*

Detailed description:

1. *Ecosystem mapping and monitoring:*
   - *Technology: Satellite images with magnetic spectra to identify the state of the peatland.*
   - *Measures: Creation of a detailed geographic information system (GIS).*
   - *Participants: Scientists, local technicians and the community.*
   - *Expected result: Complete database on the extent, status and dynamics of peatlands.*
   - *Impact: Improved decision-making for conservation and adaptive management.*

2. *Control of exotic species and ecological restoration:*
   - *Technology: Camera traps, removal of harmful plant species and information control system.*
   - *Measures: Analysis of information to control exotic species.*
   - *Participants: Scientists, technicians and local community.*
   - *Expected result: Recovery of degraded areas, increase in biodiversity.*
   - *Impact: Greater carbon sequestration and improved water regulation.*

3. *Scientific research:*
   - *Technology: Establishment of a research center and the implementation of carbon analysis equipment.*
   - *Measures: Collaborations with universities and scholarship programs for local researchers.*
   - *Participants: National and international scientists, students and local community.*
   - *Expected result: Increased knowledge about the Magellanic Peatlands.*

- *Impact: Improvement in conservation practices and international positioning.*

4. *Environmental education and community participation:*
   - *Technology: Development of interactive educational material and citizen science platforms.*
   - *Measures: School programs, community workshops and volunteer events.*
   - *Participants: Local schools, community leaders or educational NGOs.*
   - *Expected result: Greater environmental awareness, active participation in conservation.*
   - *Impact: Behavior change and long-term support for conservation.*

5. *Sustainable ecotourism development:*
   - *Technology: Construction of low-impact infrastructure (elevated trails and observatories).*
   - *Measures: Training of local guides and the development of visiting protocols.*
   - *Participants: Local tour operators, community and sustainable tourism experts.*
   - *Expected outcome: Increase in responsible tourism and generation of local income.*
   - *Impact: Economic diversification and greater appreciation of the ecosystem.*

6. *Control and prevention of negative anthropogenic activities*
   - *Technology: camera traps, citizen reporting platforms through mobile applications.*
   - *Measures: establishment of buffer zones around protected areas, environmental education programs, regular patrols in vulnerable areas*
   - *Participants: universities and research centers, private companies committed to conservation, environmental non-governmental organizations*
   - *Expected outcome: decrease in illegal activities (peat extraction, poaching, etc.), increase in community participation in conservation, effective implementation of protective regulations*
   - *Impact: long-term conservation of peatlands, improvement in the quality of life of local communities, significant contribution to Chile's climate commitments, preservation of critical ecosystem services (water regulation, carbon capture).*

2.4 Project Location

The "Cameron Patagonia Blue Carbon" Project will be developed in the Timaukel municipality, geographically located in the southernmost area of the province of Tierra del Fuego, in the region of Magallanes and the Chilean Antarctic. The Project includes peatlands of 11,300 hectares, located between the coordinates 53°38'29.28"S and 69°39'36.95"W. Below is a series of images showing the location and sector where the Project is located:

Cameron Project Reference Location:

- *Latitude: 53°38'29.28"S*
- *Longitude: 69°39'36.95"W*

Image No. 1: Geodetic Location of Estancia Cameron. Source: Google Earth - own elaboration.

Image No. 2: Map of the Magallanes and Chilean Antarctica region. Location of the Timaukel municipality[1]

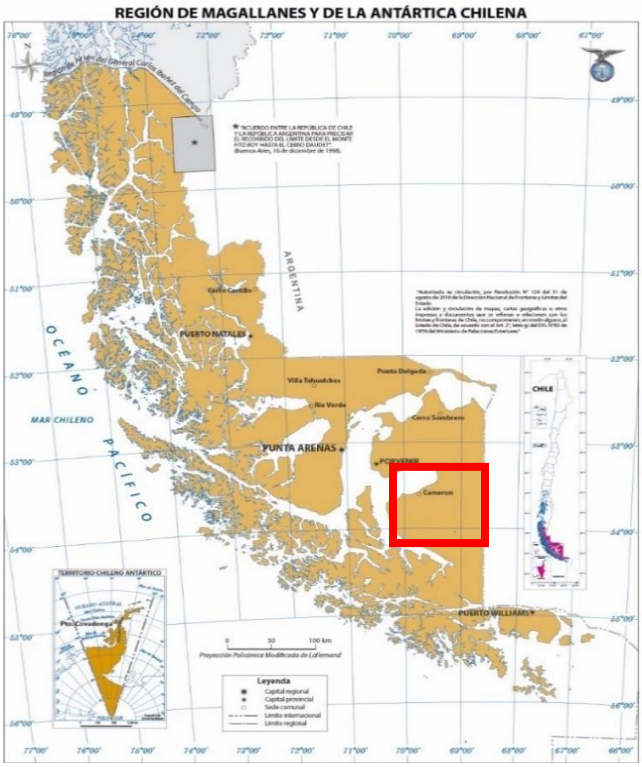
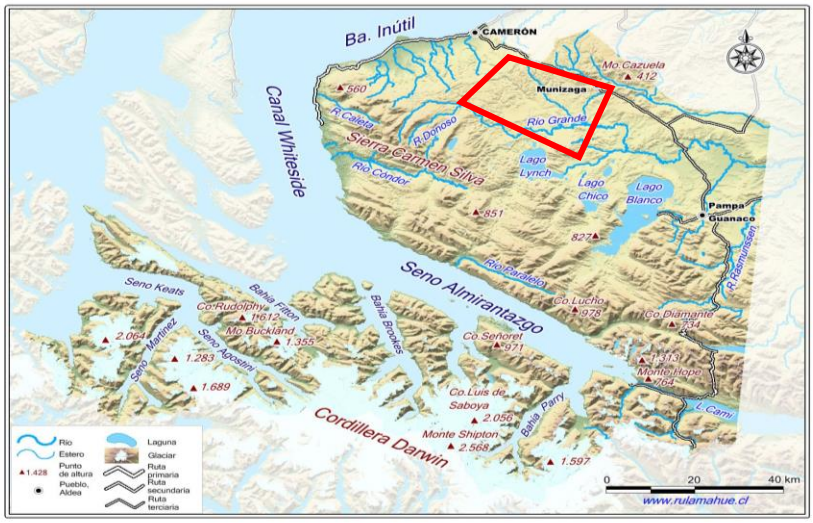
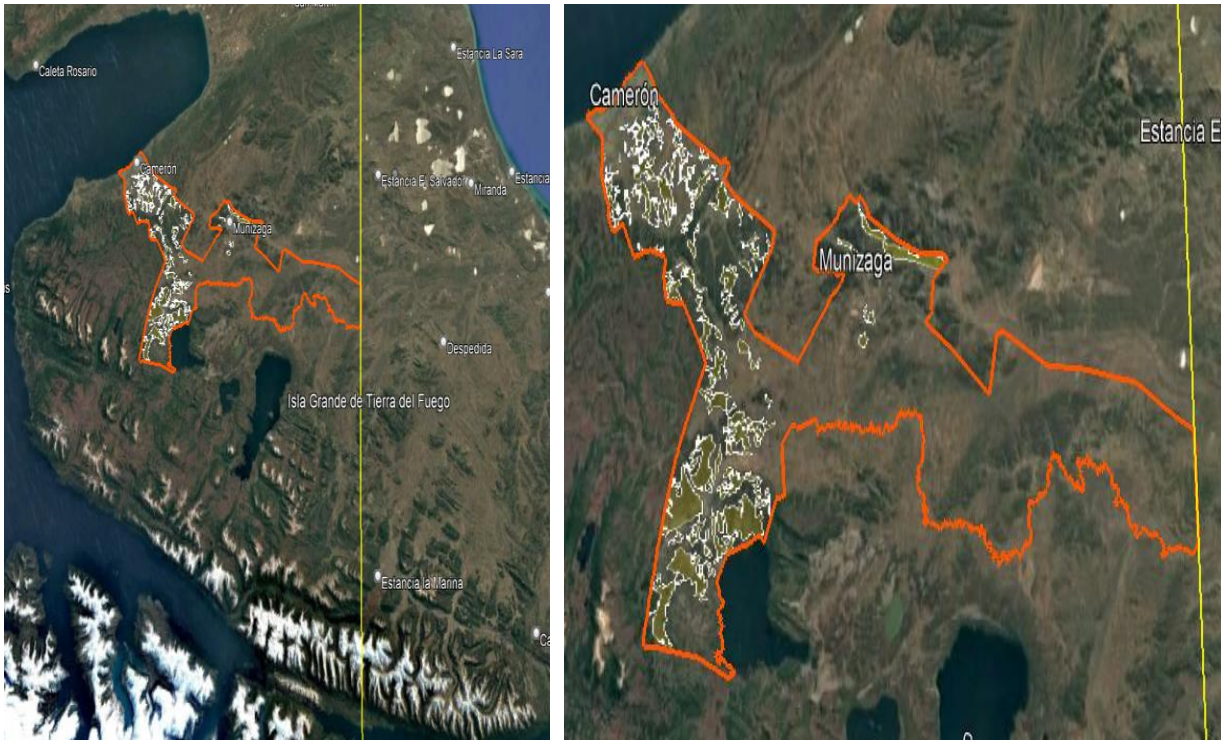


Image No. 3: Approximate location of the Estancia Cameron - Timaukel Municipality.[2]



[1](Military Geographic Institute [IGM], sf).
[2](Rulamahue, n.d.).

Image No. 4: Location of the Project in Estancia Cameron. Source: Google Earth - own elaboration.



2.5 Additional information on the GEI project

There is no additional information on the GEI project.

3 Quantifying GHG emission reductions

3.1 Quantification methodology

For the development of the Project, the voluntary carbon market standard registry of the BioCarbon program will be used as a reference, because it provides the principles, requirements and guidelines necessary to ensure quality in the quantification and management of greenhouse gas emission reductions and/or removals. In particular, the guidelines established in the METHODOLOGICAL DOCUMENT SECTOR AFOLU BCR0007: Conservation and restoration of inland natural wetlands, version 1.0 (June 13, 2024) will be applied.

3.1.1 Conditions of applicability of the methodology

Conditions of Applicability and Justification:

a) The areas within the geographical boundaries of the Project correspond to the category of continental natural wetlands.

The Project area includes 11,300 hectares of peatlands located in the Timaukel municipality, Magallanes Region, Chile. These peatlands are recognized as natural wetlands according to the Global Peatlands Assessment report and comply with the international definition of wetlands, including their classification as ombrotrophic and minerotrophic.

b) The Project activities prevent land use change in natural continental wetlands.

The Project prevents the drainage and conversion of peatlands for agricultural or livestock uses, including activities such as:

- *Land use change control: Monitoring and establishing exclusion zones to avoid anthropogenic impacts such as intensive livestock farming and peat extraction.*
- *Protection against fragmentation: Implementation of land use plans that minimize divisions and establish ecological corridors.*

c) The Project activities include actions to prevent the transformation of the natural vegetation cover.

The Project protects natural vegetation by:

- *Invasive species control: Implementation of programs to eradicate the American Beaver and other invasive species such as Ulex europaeus, Didymo and Hieracium pilosella, which alter native vegetation.*
- *Fire prevention: Monitoring measures and early warning systems to minimize loss of vegetation cover due to fire.*

d) The Project activities include conservation actions that include preservation, restoration and/or sustainable management of wetlands.
- *Preservation: Conservation of intact peatlands to maintain their ecosystem services and carbon storage capacities.*
- *Sustainable management: Development of low-impact infrastructure for ecotourism and environmental education.*

e) Project activities include assisted natural restoration in transformed areas.

The Project does not include restoration activities, so the applicability condition related to these is not relevant.

f) The Project activities determine changes in the use of nitrogen fertilizers.

The Project's activities do not use nitrogen fertilizers or chemicals of any kind.

g) The Project's activities do not generate changes in the ecosystem or alter the natural cover.

It is a conservation Project; therefore, it does not generate any type of activity that alters the natural coverage of the peatlands, guaranteeing their ecological functionality.

h) The proposed activities do not include the removal of the natural vegetation cover.

The Project's focus is exclusively on conservation, with active measures to protect the existing vegetation cover. Therefore, it does not generate activities that include the removal of the natural vegetation cover.

i) The Project activities do not lead to the alteration of the water regime.

The actions implemented are aimed at preserving this ecosystem, and therefore do not lead to the alteration of the water regime. In this regard, the following activities will be considered:

- *Beaver control and removal of constructed dams, restoring natural water flows.*
- *Implementation of continuous hydrological monitoring to avoid adverse impacts on groundwater and water quality.*

j) Project activities are implemented in areas where no other restoration activities are planned or underway.

The Project area is not covered by previous restoration initiatives, ensuring the additionality of the implemented activities.

3.1.2 Methodological deviations (if applicable)

No methodological deviations are identified in the implementation of the Cameron Patagonia Blue Carbon Project. All proposed activities and quantification approaches strictly follow the guidelines established in METHODOLOGICAL DOCUMENT BCR0007.

3.2 Project boundaries, sources and GHG

a) Classification in natural plant covers during the entire multi-temporal analysis period required:

The 11,300 hectares of the Cameron Patagonia Blue Carbon Project have been verified as natural peatlands through multi-temporal analysis using Google Earth satellite images and corroborated with field data.

The Project area is recognized as a peatland area by Global Peatlands Assessment, an international organization that keeps a complete inventory of peatlands worldwide, which complies with the AFOLU scope, and categorizes them as continental natural wetlands. Its justification lies in what Richard Lindsay, 2010, indicated through his study " Peatbog and Carbon, A critical synthesis", which established that the Peat Bogs (Peat bog or Peatlands), should be considered wetlands. Since that date, certifying bodies have begun to incorporate Peatlands in the Conservation and Restoration regulations, reaching the point of having specific modules and methodologies for peatlands.

These Project peatlands have remained largely intact for the past 10 years, with native vegetation such as Sphagnum magellanicum moss and native flora representative of peat bog ecosystems.

b) Land cover classification according to IPCC or those applicable to the country:

The Project area is classified under the IPCC wetlands category, used in global and national greenhouse gas (GHG) inventories.

In Chile, these peatlands are also recognized within the framework of the National Wetland Inventory as critical ecosystems for conservation, aligning with national land cover guidelines.

c) Classification as continental natural wetlands:

The Project areas meet the definition of continental natural wetlands due to their:

- *Dependence on water accumulation on land with restricted drainage.*
- *Ability to store large amounts of carbon in its peat layers:*

  -Of all terrestrial ecosystems, peatlands are undoubtedly the most efficient at sequestering carbon (C). Although they only cover 4,000,000 km² or 3% of the world's land surface, peatlands have accumulated nearly 600 billion tons of

organic carbon over the past 12,000 years, equivalent to 30% of the world's soil organic carbon stock (Yu et al., 2010).

- *In Southern Patagonia, the peatland area is estimated at 45,000 km² (Yu et al., 2010), equivalent to 1-2% of the world's peatlands. Combining this estimated peatland area with an average peat C density of 154 kg m $^{-2}$ yields a C stock of 6,9 billion tons from Patagonian peatlands alone.*

- *The identification of these areas has been carried out with georeferenced maps and GIS systems, complying with the minimum scale of 1:25,000 required and a coverage layer accuracy of 95%, validated with high-resolution images and field data.*

d) *Cartographic and methodological inputs used for the identification of coverage and changes in land use:*

High-resolution satellite images and field sampling with GPS points were used to identify natural cover. These images and data have been processed using programs such as Google Earth to ensure consistency in the analyses.

The methodology adopted the IPCC categories and the CORINE Land methodology, applicable to identify natural vegetation covers such as peatlands and avoid confusion with other covers such as forests or agricultural areas.

e) *Consistency with the country's land use categories:*

Eligible areas have been recognized within the context of Chile's National Greenhouse Gas Inventory, which classifies peatlands as key carbon sinks.

The Project does not generate changes in land use for livestock or agricultural activities, guaranteeing the conservation of natural cover.

3.2.1 Spatial limits of the Project

The Cameron Patagonia Blue Carbon Project will be developed in the Timaukel municipality, located in the southernmost area of the province of Tierra del Fuego, Magallanes and Chilean Antarctica region. This Project includes 53 sub-zones distributed over a total area of 11,300 hectares of peatlands. Each sub-zone has been precisely delimited using geographic coordinates, ensuring complete coverage of the areas subject to intervention and monitoring. Detailed information on the sub-zones, including their specific coordinates, is presented below:

Table 3.1: Geodetic location of each peatland identified in the Project area (Part 1).

No.	Lat (S)	Long (W)	Hectares	No.	Lat (S)	Long (W)	Hectares
1	-53.650736	-69.589347	87.10	13	-53.950253	-69.516447	1,240
2	-53.666492	-69.579695	26.70	14	-53.907571	-69.415930	1,282
3	-53.665150	-69.544786	48	15	-53.883836	-69.418890	355
4	-53.700860	-69.559593	432	16	-53.891318	-69.504189	1,922
5	-53.688338	-69.529221	72.50	17	-53.854825	-69.403350	656
6	-53.708639	-69.502202	353	18	-53.822547	-69.460568	545
7	-53.709310	-69.460790	267	19	-53.790102	-69.479334	184
8	-53.734487	-69.510245	85.90	20	-53.761811	-69.523103	339
9	-53.718924	-69.426684	44.50	21	-53.740486	-69.576454	10.80
10	-53.719738	-69.405547	17.90	22	-53.739857	-69.604988	27.80
11	-53.744942	-69.395799	160	23	-53.711251	-69.597434	301
12	-53.769729	-69.443379	338	24	-53.708942	-69.652701	244

Table 3.2: Geodetic location of each peatland identified in the Project area (Part 2)

No.	Lat (S)	Long (W)	Hectares	No.	Lat (S)	Long (W)	Hectares
25	-53.687954	-69.603343	261	40	-53.682118	-69.648426	6.37
26	-53.802215	-69.414414	150	41	-53.672245	-69.639814	11.41
27	-53.781095	-69.432563	46	42	-53.660712	-69.651892	15.60

28	*-53.834454*	*-69.373362*	*29.80*	*43*	*-53.672326*	*-69.573233*	*7.91*
29	*-53.781354*	*-69.182590*	*63.50*	*44*	*-53.666599*	*-69.572356*	*2.53*
30	*-53.777523*	*-69.195549*	*8.92*	*45*	*-53.660255*	*-69.554384*	*2.94*
31	*-53.748418*	*-69.242507*	*35.60*	*46*	*-53.657422*	*-69.560707*	*16.80*
32	*-53.744078*	*-69.212798*	*77.80*	*47*	*-53.670545*	*-69.545546*	*36.90*
33	*-53.798907*	*-69.198639*	*72*	*48*	*-53.674180*	*-69.498762*	*22.10*
34	*-53.666507*	*-69.592426*	*67.30*	*49*	*-53.682738*	*-69.493633*	*27.80*
35	*-53.668143*	*-69.621324*	*171*	*50*	*-53.678648*	*-69.485681*	*3.81*
36	*-53.678717*	*-69.676077*	*5.85*	*51*	*-53.689689*	*-69.475986*	*12.20*
37	*-53.677651*	*-69.678330*	*5.23*	*52*	*-53.696231*	*-69.469088*	*1.81*
38	*-53.687013*	*-69.671124*	*8.10*	*53*	*-53.761568*	*-69.071061*	*729*
39	*-53.686365*	*-69.665662*	*5.66*				

3.2.2 Carbon reservoirs and GHG sources

Identify the GHG sources and reservoirs relevant to the Project. Consider the reservoirs and sources included in the methodology(ies) applied in the scope of the Project.

Source or reservoir	**GHG**	**Including (Yes/No/Optional)**	**Justification**
Peat fires	CO_2	YES	The release of CO_2 from the burning of dry peatlands generates high levels of pollution, in addition to producing fires that spread for

			years and years, making them very difficult to control.
	CH_4	NO	Not the main gas from this source. It is excluded for simplicity.
	N_2O	NO	Not the main gas from this source. It is excluded for simplicity.
Sphagnum Moss Exploitation	CO_2	YES	The exploitation of the Sphagnum moss, which is the head of the peat bog, causes it to die as a living organism, leaving its roots or rhizomes without the capacity to continue accumulating organic carbon and, on the other hand, releasing all the water it retains. In a short time, the peat bog becomes a dry organism that releases large quantities of CO_2 into the atmosphere.
	CH_4	NO	Not the main gas from this source. It is excluded for simplicity.
	N_2O	NO	Not the main gas from this source. It is excluded for simplicity.
Peatland Conservation	CO_2	YES	The Project promotes the conservation of the peatland, avoiding any type of anthropogenic activity on it, allowing the high levels of organic carbon stored in above ground and underground biomass to be preserved. Furthermore, conservation ensures high

			levels of water retention as a water-distributing organism.
	CH_4	NO	Not the main gas from this source. It is excluded for simplicity.
	N2O	NO	Not the main gas from this source. It is excluded for simplicity.

3.2.3 Deadlines and periods of analysis

In the Project, the deadlines correspond to the periods defined to quantify the reductions and/or absorptions of greenhouse gas (GHG) emissions. During these periods, annual analyses are carried out as part of the monitoring, reporting and verification (MRV) process, ensuring accuracy in the measurement of the climate benefits generated. This frequency allows the collection of updated and reliable data, guaranteeing that the reductions and absorptions are verifiable and comply with the requirements established by the standard, strengthening the sustainability of the results in the long term.

A key aspect of this process is the annual assessment of carbon stored in peatlands. This annual assessment provides essential information to ensure data quality and allows for timely adjustments in Project management.

In addition, crediting periods for official certification of reductions and absorptions will be carried out every 5 years. This approach combines a detailed annual assessment with a more thorough review at five-year intervals, ensuring the continuity and credibility of the Project in the long term.

3.2.3.1 Project Start Date

The Project start date is January 1, 2022. The Project generates a 3-year retroactive, because it has traceable documentation of all activities from the conservation date and social activities associated with the Project.

3.2.3.2 Period for quantifying GHG emission reductions/eliminations

The period for quantifying GHG emission reductions/eliminations is from January 1, 2022, to December 31, 2052, i.e. a total period of 30 years.

3.2.3.3 Follow-up periods

The evaluation/accreditation periods will be every 5 years.

The proposed difference between assessment periods for GHG capture accounting is considered under the most conservative scenario, estimated at 1% cumulative per year. This figure, explained in item 3.5, includes accounting for possible drought periods that may occur every 5 years.

3.3 Identification and description of the baseline or reference scenario

Historical and current data and protection laws.

Collection of historical and current data.

Extensive literature studies were conducted to gather information on the ecological and environmental characteristics of peatlands in the Project area. In addition, representative soil sampling was carried out to estimate the stored organic carbon and to see the current status of the peatlands. These preliminary data provide an initial basis for understanding the current state of the ecosystem.

Peat bog protection law.

The Government of Chile decreed and published on April 10, 2024, in the Official Gazette, Law No. 21,660 on Environmental Protection of Peat Bodies. Although this law protects the peat bog as such, it allows the extraction of Sphagnum Moss, which is the head of the peat bog and when cut, destroys and renders useless its organic functions, quickly losing its capacity to retain organic carbon, which is progressively released into the atmosphere and on the other hand loses its capacity to retain water and nutrients.

Identification of alternative usage scenarios for the Project.

Irregular tourism in the area.

There is a lot of illegal tourism in the area. Given the large extension of the Project, it is impossible to control the entry and exit of illegal tourists to the site, who carry out illegal fishing and hunting, as well as peat extraction, thus destroying the environment without care.

Change of land use.

The Project Proponent has the capacity to drain and change the land use of peatlands to convert them into grazing lands and there is no law that prevents this. Furthermore, the State can carry out expropriations to build roads on peatlands.

Fires in the area.

Fires, whether intentional or not, in the area around the peat represent a serious danger to the area. Furthermore, there are no park rangers to carry out regular surveillance of the area.

Beaver dams in the surrounding forests.

Beavers have expanded as an invasive exotic species in the Magallanes region, generating large flood zones, suffocating forests, rotting their roots and therefore putting the protection zone of peatlands at risk. We must consider that the peatlands that retain the greatest amount of organic carbon and water retention are those surrounded by forests.

The imminent risks to which the peatland is exposed and the high costs of maintaining a care plan for the entire extent of the Project, fire control and control of invasive exotic species, make it necessary to develop a carbon credit conservation process, which will allow the investment of significant resources throughout the entire useful life of the Project in the conservation of the peatlands.

The conditions existing before the start of the Project correspond to the reference scenario, which are as follows:

- *Ecosystem Type: The Project area consists mainly of peatlands, an ecosystem characterized by the accumulation of organic matter in water-saturated environments.*
- *Current and Historical Land Use: The peatland area has remained unused. Historically, the area surrounding the Project has been used for livestock and forestry production, activities that continue today.*
- *Present and previous environmental conditions of the Project area:*
  - *Climate: It is characterized by being a cold and continental trans-Andean steppe with a steppe influence. Temperatures range between -3°C and 10°C, and humidity varies from north to south, which causes non-homogeneous vegetation and diverse landscapes with forests, scrublands and peatlands.*

- *Hydrology: In the Rio Grande basin where the Project area is located, the hydrology includes important rivers such as the Rio Grande, the Condor River, the Japan River, the Chico River, the San Martin River, the Side River, the Porvenir River, the Santa Maria River, the Russfin River, the Macklelland River and the Bautista River, along with the Lynch, Blanco, Deseado, Despreciado, Fagnano lakes and the Escondida lagoon.*
- *Topography: The Magellanic Pampa stands out in the Project area, which is one of the most characteristic formations in the area. It was shaped by glacial processes produced by the dragging of large ice caps, giving rise to erosion and deposition geoforms.*
- *Soils: The Timaukel municipality has 11 geological units including those closest to the Project area, which according to their categories of sedimentary sequences and soil types are called: Q1G1, EM1m and E1m.*
- *Vegetation and Ecosystems: The main ecosystem of the Project area is peatlands, where the most representative vegetation species is Sphagnum moss, a key species due to its remarkable water retention capacity and its greenhouse gas (GHG) storage capacity.*

3.4 Additionality

To address the additionality criteria, the Project follows the guidelines outlined in the document "Tool Baseline and Additionality" (Version 1.3, dated March 1, 2024). According to this document, AFOLU projects must use the tool developed by the Executive Committee of the Clean Development Mechanism (CDM – UNFCCC) called the Combined Tool to Identify the Reference Scenario and Demonstrate Additionality in CDM A/R Project Activities (AR-TOOL-02).

This tool provides a structured, step-by-step framework for identifying the reference scenario and demonstrating the additionality of the Project activities. Based on this methodology, the following steps were carried out:

3.4.1 STEP 0: Preliminary selection based on the Project start date

The Project began on January 1, 2022, at which time activities aimed at preserving the carbon stocks existing in these ecosystems began to be implemented. The proposed intervention has as its main objective the protection and conservation of peatlands through sustainable management actions, aligned with the objectives of the Project.

3.4.2 STEP 1: Identification of alternative land and/or soil uses.

Sub step 1a: Identification of credible land use scenarios

- *Scenario 1 (Continuation of unregulated extraction of Sphagnum):*
  - *Sphagnum extraction could continue in an unsustainable manner due to the lack of effective oversight.*

- *Scenario 2 (Drainage for agricultural, forestry and/or road use):*
  - *There is a real risk of conversion of peatlands for agricultural and/or forestry activities, considering the economic pressure in the region and the experience in areas surrounding the Project.*

- *Scenario 3 (Inadequate protection under current law):*
  - *Even assuming effective compliance with Law No. 21,660, peatlands would only be partially protected, since, apart from being a new Law, whose regulations have not been issued, making implementation difficult, the impact of the permitted extraction and subsequent collection of Sphagnum would continue to be a significant threat. In addition, Law No. 21,600 excludes the Project's peatlands from protection unless the landowner gives consent, leaving the peatlands at risk.*

Sub step 1b: Consistency of credible alternative land use scenarios with applicable mandatory laws and regulations

In practice, peat production in the Magallanes region consists of the extraction of three types of peat: blond, black and brown. Its main use is as a substrate, mixed with soil, for floriculture and mushroom cultivation in nurseries. This is due to its unique ability to retain up to 20 times its weight in water, which improves plant hydration and development. Table 3.3 presents the annual peat production from 2014 to 2023 in the Magallanes and Chilean Antarctica Region.

Table 3.3: Peat production in the Magallanes Region 2014 to 2023[3].

Year	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*
Production (tons)	*2,276*	*2,306*	*779*	*4,313*	*3,164*	*84*	*243*	*1,594*	*165*	*346*

[3] *(National Geology and Mining Service [SERNAGEOMIN], 2024).*

Peat exports in 2019 reached 4,600 tons [4].

Result of Sub step 1a: The identified scenarios reflect the current threats affecting the Project area, with the 3 alternative Scenarios being fully executable.

1. *Scenario 1: Continuation of unregulated extraction of Sphagnum*
    - *Legal coherence: Although Law 21,660, whose regulations required for its implementation are pending, prohibits peat extraction, it explicitly allows the extraction and collection of Sphagnum moss. Therefore, this scenario is not technically prohibited by law. Furthermore, the lack of effective oversight to ensure sustainable practices and regulatory ambiguity leave room for extraction to continue in an unregulated manner, exacerbating peatland degradation.*
    - *Legal and practical implications: The partial protection offered by the law does not adequately address the impacts of unsustainable extraction, resulting in the loss of stored carbon and the alteration of peatland ecosystems.*

    This scenario reflects insufficient and inappropriate restrictions on threats to peat conservation.

2. *Scenario 2: Drainage for agricultural, forestry and/or road use.*
    - *Legal coherence: Exempt Resolution 734 of 2024 prohibits the drainage of peatlands in delimited areas in the Magallanes and Chilean Antarctic Region. However, the peatlands in this Project are not listed in the protected areas delimited by the General Directorate of Waters (DGA)[5]. This means that, although there is a general prohibition of drainage for protected peatlands, the Project areas do not have this specific safeguard. This lack of inclusion reinforces the vulnerability of the Project peatlands to drainage activities for agricultural, forestry or road uses, which could result in significant impacts, such as the release of large amounts of carbon into the atmosphere.*
    - *Legal and practical implications: The absence of specific protection for the Project's peatlands leaves the possibility of drainage for agricultural, forestry and/or road purposes open. This scenario remains consistent with the current legal framework because the drainage ban does not apply in these areas.*

[4] *(Forest Institute [INFOR], 2019).*
[5] *(General Directorate of Water [DGA] and Ministry of Public Works [MOP], 2024).*

As for Scenario 2, approximately 15% of peatlands[6] or 50 million hectares have been drained worldwide [7]. Peat bog drainage is a progressive process that does not necessarily imply complete drainage. It is carried out by building canals that reduce the water level, allowing access and extraction of peat, a process that is believed to have begun in 1980 in the Magallanes Region [8].

3. *Scenario 3: Inadequate protection under current law*
    - *Legal coherence: This scenario assumes effective compliance with Law No. 21,660, but even under this assumption, if appropriate oversight by the authorities could be achieved, the peatlands would not be fully protected. Indeed, although peat extraction is prohibited, activities such as the collection of Sphagnum moss are still permitted, as well as others that could cause the loss of their hydrological function, so both activities leave peatlands vulnerable to continued degradation. Also, Law No. 21,600 excludes the Project's peatlands from protection unless the landowner gives consent, leaving the peatlands at risk.*
    - *Legal and practical implications: The impact of permitted extraction and other potential impacts on the functionality of peatlands, combined with the lack of resources to enforce compliance, means that the protection offered by law is insufficient to ensure the conservation of these ecosystems. The harvesting of Sphagnum contributes to the weakening of soil structure, the reduction of water retention capacity and the gradual loss of stored carbon.*

Consistency with applicable mandatory laws and regulations:

- *Although Law No. 21,660 prohibits the extraction of peat, it still allows the extraction and collection of Sphagnum moss. It does not prevent drainage or other impacts on peat functions, which implies a partial application of legal protection.*
- *Law No. 21,600 establishes a biodiversity protection service and a new national system of protected areas. However, it excludes the Project's peatlands from protection unless the landowner gives consent, leaving the peatlands at risk.*
- *Exempt Resolution 734 explicitly prohibits the drainage of peatlands in delimited areas in the Magallanes and Chilean Antarctica Region. However, the Project's peatlands are not included in these protected areas, leaving these areas vulnerable to drainage activities and other impacts on the peatlands.*

[6] *(Ramsar Convention on Wetlands, 2017).*
[7] *(Ramsar Convention on Wetlands, 2022).*
[8] *(Agüero, 2013).*

- *The proposed Project, while following the trend of the applicable regulations, has a significantly broader scope by establishing measures for the full and complete protection of the biological composition of peatlands in an active manner, mitigating and overcoming in some cases the legal gaps presented by Law No. 21,660, Law No. 21,600, and Exempt Resolution 734, especially for non-protected areas.*

3.4.3 STEP 2: Barrier analysis

Sub step 2a: Identifying barriers

1. *Financial barriers:*
   - *Chile is among the most underfunded countries for biodiversity conservation.*
   - *There is a chronic lack of economic and human resources for the effective management of protected areas in Chile.*
   - *Financial resources allocated to preventing and combatting fires in remote areas, such as peatlands, are insufficient, which increases the vulnerability of these ecosystems to natural or man-made fires.*

2. *Technological barriers:*
   - *Difficulty in supervising and monitoring the collection of Sphagnum moss due to complex geography, adverse weather conditions and lack of adequate technical means.*
   - *Limitations in the implementation of technology for early detection and monitoring of fires in peatland ecosystems, especially in hard-to-reach regions.*
   - *Lack of monitoring and updating satellite images of peatlands.*

3. *Institutional barriers:*
   - *Critical shortage of personnel to manage protected areas, with each park ranger supervising an average of 63,800 hectares in the Aysén and Magallanes regions.*
   - *Deficiencies in existing protected area management plans.*
   - *Lack of resources and personnel for effective monitoring, especially in remote areas.*
   - *Incomplete legal framework: although Law No. 21,660 prohibits peat extraction, it allows the collection of Sphagnum moss, negatively impacting these ecosystems. In addition, Exempt Resolution 734 prohibits the drainage of peatlands in specific areas, but the Project's peatlands are not included in these protected areas, leaving possibilities for their degradation open. Additionally, Law No. 21,600 excludes the Project's peatlands from protection unless the landowner gives consent, leaving the peatlands at risk in the event of a change of owner.*

- *Lack of inventories and knowledge about peatlands. By 2025, Chile intends to have fully identified the peatland area in the national inventory.*
- *Inter-institutional coordination is limited and in its early stages.*
- *Lack of specific policies and strategies for preventing and combatting fires in highly vulnerable ecosystems, such as peatlands.*

4. *Ecological barriers:*
    - *Invasive exotic species: The American Beaver (Castor canadensis), the American Mink (Neovison vison), the Blackcap (Ulex europaeus), the Hieracium pilosella and Didymo (Didymosphenia geminata) are altering native ecosystems, displacing native species and modifying habitats.*
    - *Fires: Natural and man-made fires destroy habitats, alter vegetation composition, promote invasive species and reduce the capacity of peatlands to retain water.*
    - *Soil degradation: Peat extraction degrades the topsoil, making it vulnerable to erosion and reducing its capacity to store carbon, increasing GHG emissions.*
    - *Compaction and/or fragmentation: The construction of infrastructure for agricultural, forestry or road uses fragments natural habitats, altering ecological processes and accelerating soil degradation.*
    - *Intensive livestock farming: Soil compaction caused by livestock farming erodes the land and affects its biodiversity.*
    - *Hydrological changes: Exotic species such as beavers alter water courses in peatlands, causing permanent flooding and ecosystem degradation.*
    - *Weather conditions: Droughts intensified by climate change can alter the water table of peatlands, affecting the regeneration of Sphagnum moss and promoting invasive species.*

5. *Social and cultural barriers:*
    - *Lack of education and awareness about the importance of peatlands and their sustainable management.*
    - *Since 1980, the Magallanes region has been extracting peat, used in horticulture and bulb export, perpetuating an economic vision of peatlands.*
    - *Lack of road connectivity.*

The identified barriers affect the viability of any peatland conservation Project, with financial difficulties, lack of institutional resources and ecological threats being highlighted as the main challenges.

Sub step 2b: Elimination of land use scenarios that are impeded by barriers

1. *Scenario 1: Continuation of unregulated extraction of Sphagnum*

This scenario remains in place, as it faces technological barriers (difficulty in supervising and monitoring the collection of Sphagnum moss), institutional barriers (lack of resources and personnel for supervision and ambiguous regulation) and social barriers (practice of illegal extraction with commercial interest).

2. *Scenario 2: Drainage for agricultural, forestry and/or road use*

This scenario remains in place, given it faces technological barriers (lack of satellite monitoring and updating), institutional barriers (it is not under protection as a prohibited drainage area), critical ecological barriers (land compaction and/or fragmentation) and social barriers (lack of road connectivity).

3. *Scenario 3: Inadequate protection under current law*

This scenario remains in place, because Laws No. 21,660 and No. 21,600 are in force with their stated regulatory limitations and it is unlikely that they will be corrected because it would be necessary to overcome financial barriers (lack of resources to implement effective protection measures), technological barriers (limited monitoring and protection capacity), institutional barriers (shortage of personnel for oversight, adequate management and poor inter-institutional coordination) and social barriers (lack of awareness and local support for more efficient protection).

Sub step 2c: Determining the baseline scenario

Sub -step 2c only applies if any identified scenario includes afforestation or reforestation without being recorded as a Project activity. Since none of the scenarios consider this possibility, sub- step 2c is not applicable.

3.5 Managing uncertainty

Within the Project, conservative assumptions, values and procedures were adopted to ensure that emission reductions and increases in Greenhouse Gas (GHG) removals are not overestimated. This approach ensures robust and reliable results in baseline and mitigation estimates.

Mechanisms to manage uncertainty:

1. KMZ map generation and coverage validation

KMZ maps were generated using high-resolution images to identify and delimit the conserved peatland areas.

- *Coverage Validation:*
    a) *Field visits were carried out to corroborate the areas identified as peatlands through direct observation and geospatial referencing. These visits were essential to ensure that the coverage data are representative and consistent with the reality on the ground.*

2. Carbon quantification

Carbon values were estimated using a combined approach involving several stages, ensuring the representativeness and quality of the data:

- *Field sampling: Representative soil and biomass samples were collected at different points in the peatlands, considering an equidistant distribution that includes dry and wet areas, as recommended by the IPCC methodology.*
- *Laboratory analysis: Samples were analyzed for organic carbon content using standardized and scientifically supported methodologies.*
- *Application of scientific formulas: The results obtained in the laboratory were processed using formulas recognized in scientific literature and adapted to the local context with the aim of obtaining accurate and consistent estimates of CO_2 emissions/removals.*

To convert organic carbon to CO_2, the standard multiplication factor of 3.67 was used, as established by the IPCC methodology in Chapter 4, Section 7, on wetlands. This factor ensures that the conversion between captured carbon and CO_2 emissions is consistent with international standards. In practice, this means that CO_2 is 3.67 times the amount of organic carbon present in the soil.

3. Managing baseline uncertainty and mitigation

Uncertainty associated with carbon data was managed by:

- *Representative sample collection: To minimize uncertainty, samples were taken at varying depths of 5, 25, 50, 75, and 100 cm, considering different strata of the same ecosystem. The average of the samples from each depth ensures that the data is representative of the entire variability of the peatland ecosystem.*
- *Quality Control: In the analysis of the samples, strict quality protocols were applied in the laboratories to ensure the accuracy of the results and reduce the uncertainty associated with the data, establishing the following:*
  a. *Samples were taken from 100 sampling points (20 points per 5 samples), with values varying between 2,000 tons CO_2/ha in degraded peatlands up to 4,800 tons CO_2/ha in wetter peatlands (among forests).*
  b. *The 25% vegetation cover percentage is then defined as the standard percentage that captures carbon above ground, a value that is also part of the IPCC calculation for wetlands.*
  c. *Finally, an average was calculated to represent site variability and a conservative accumulation factor of 1% per year was used.*

4. Conservative accumulation factor

In Patagonian peatlands, the long-term average weighted carbon accumulation rates over the Holocene time are 17.1 ± 2.9 g C m2 yr-1 and show an increasing trend throughout the Holocene, from 7.8 g C m^{-2} yr^{-1} 12,000 years ago to 19.8 g C m^{-2} yr. (Domínguez and Vega, 2015) [9].

The above implies an organic carbon accumulation rate of 1.01% per year, which when converted to CO2, implies a growth rate of 3.76% per year. For the purposes of this Project, in a conservative projection, we consider the accumulation factor of 0.1% per year.

[9] *(Domínguez and Vega, 2015, pp. 307-309).*

3.6 Leaks and non-permanence

The leakage emissions of a project are represented by all emissions that do not have a pre-established control or have not been monitored in advance. In the specific case of the Magallanes peat bog and according to the international studies carried out regarding leaks, these are produced when the drainage of the peat soils is generated, which leaves the anaerobic spaces exposed that were previously covered with water, releasing large quantities of CO_2 and low quantities of CH_4. As this is a conservation Project that does not generate drainage of the peat bogs but on the contrary, its care throughout its useful life, it does not have leak agents.

3.7 Mitigation results

Compliance with ISO 14064-3:2019, complemented by a third-party audit, guarantees the quality and transparency in the verification of the mitigation results of the Peatland Conservation Project in Tierra del Fuego, Chile. This strengthens confidence in the reduction of GHG emissions and in the effective contribution to combatting climate change in this southern region. It should be noted that the samples analyzed within the framework of the Project will be processed in the Laboratory of the Faculty of Agronomy of the Catholic University of Chile, which ensures high-quality technical and scientific management.

External verification reinforces the credibility of the Project and ensures the long-term sustainability of the environmental and social benefits generated. By having an objective and independent evaluation of the results, the integrity of the Project is ratified and the Proponent's commitment to environmental responsibility in all its conservation and climate change mitigation actions is demonstrated.

This approach is essential to ensure that the environmental and social benefits derived from the Project are effective and sustainable in the long term, reaffirming its positive impact on the region and its contribution to the global climate protection effort.

3.7.1 Eligible areas within the boundaries of GHG Projects (AFOLU sector projects)

All areas included within the Project's geographical boundaries have been verified and classified as peatlands, complying with the applicable national definitions and the requirements established by the BCR standard. This compliance has been documented in other sections of this report through an exhaustive analysis based on high-resolution geographic data, satellite images and field validations.

The management of geographic data has followed international standards established by organizations such as ISO, guaranteeing the integrity, consistency and reproducibility of the analyses.

3.7.2 Stratification (Projects in the AFOLU sector)

Since the distribution of carbon reservoirs is not homogeneous, a stratification was carried out in 21 stations (Table 3.4), considering variations in altitude, latitude and sediment characteristics.

Table 3.4: GPS positions of the sampling stations at different depths for the sampling site.

Station ID	***Height***	***Lat (S)***	***Long (W)***
CA_01	*165,422*	*-69.67170*	*-53.70450*
CA_02	*148,017*	*-69.63378*	*-53.70304*
CA_03	*146,524*	*-69.63295*	*-53.70729*
CA_04	*230,039*	*-69.54986*	*-53.75454*
CA_05	*157,897*	*-69.54502*	*-53.68271*
CA_05b	*152,458*	*-69.54834*	*-53.6774*
CA_06	*214,523*	*-69.52986*	*-53.74947*
CA_07	*241,299*	*-69.51705*	*-53.73687*
CA_08	*247,226*	*-69.62329*	*-53.65735*
CA_09	*229,935*	*-69.49427*	*-53.77272*
CA_10	*258,971*	*-69.45321*	*-53.75637*
CA_11	*270,364*	*-69.39997*	*-53.73289*
CA_12	*204,335*	*-69.42852*	*-53.82037*

CA_13	*202,218*	*-69.43865*	*-53.84638*
CA_14	*188,082*	*-69.39540*	*-53.88342*
CA_15	*193,611*	*-69.44628*	*-53.89045*
CA_16	*199,565*	*-69.49083*	*-53.90244*
CA_17	*168,725*	*-69.43211*	*-53.91165*
CA_18	*178,359*	*-69.53529*	*-53.92853*
CA_19	*194,576*	*-69.54748*	*-53.95733*
CA_20	*265,438*	*-69.26670*	*-53.73288*

- *Sampling Process:*
  - *Excavation: Profiles up to 1.2 m deep at all stations, extended to 2 m at 2 stations.*
  - *Sampling: Use a 50 cm^3 vacuum sampler to prevent compaction, collecting layers parallel to the surface.*
  - *Definition of Strata: Based on altitude, location and depth of carbon.*

- *Optimization:*
  - *b) Error reduction through compaction.*
  - *c) Representativeness through wide geographic distribution.*
  - *d) Inclusion of deep reserves up to 2 m.*

This approach ensures accurate estimates of GHG reduction/removal, maximizing the reliability and representativeness of the data.

3.7.3 Reference GHG emissions.

1. *Reference emissions of N2O due to the Project, not applicable because this Project does not generate this type of emissions.*
2. *Reference emissions of CH_4 due to the Project, not applicable because this Project does not generate this type of emissions. According to international studies, the drained peat bog is the only one that generates small emissions of CH_4, which does not occur in this conservation Project.*

3. *Reference CO_2 emissions due to the Project do not apply because this is a conservation Project and the peat bog as such captures organic carbon in an anaerobic environment, so it does not emit CO_2, as long as it is maintained with live and uncut Sphagnum Moss.*

3.7.4 Project GHG Emissions

Not applicable, because it is a Peat Conservation Project, which allows for permanent net capture of organic carbon in an anaerobic environment for hundreds or thousands of years as long as the Sphagnum moss remains alive and uncut.

3.7.5 GHG leaks

Reference is made to item 3.6, which addresses the issue of "Leaks" from the Project in detail. The information is supported by bibliographical references on peatlands in Patagonia.

4 Compliance with laws, statutes and other regulatory frameworks

4.1 National and local laws

1. *Law No. 21,660 on the Protection of Peatlands*

Promulgated on March 26, 2024, it establishes a legal framework prohibiting the extraction of peat and allowing the sustainable management of the Sphagnum magellanicum moss vegetation cover. The regulations of the Law have not been issued. The Project, being about the conservation of peatlands, fully complies with this law.

2. *Law No. 24,435 Reform of the Water Code*

The Peatland Conservation Project complies with Law No. 21,435 enacted in 2022, by not intervening in the water courses that run through it and having the water rights granted by the General Directorate of Water (DGA).

3. *Urban Wetlands Law (Law No. 21,202)*

Law 21.202, enacted in January 2022 in Chile, establishes a robust legal framework for the protection of urban wetlands, including marshes, swamps and urban peatlands. Although not in these types of areas, this Law is relevant to the Project, because it provides a regulatory context that supports the indirect preservation of ecosystems such as non-urban peatlands.

4. *Ramsar Convention*

The Ramsar Convention, established in 1971 and to which Chile is a signatory, is an international treaty that promotes the conservation and rational use of wetlands, valuing their ecological, economic and cultural importance.

Although the Convention does not directly affect peatlands, its institutional backing strengthens preservation efforts by regulating strict protection of peatlands, facilitating access to resources, technical support and international collaborations, and highlighting the importance of peatlands in mitigating climate change and caring for biodiversity, aligning the Project with global environmental protection objectives.

5. *Law No. 21,600 - Creates the Biodiversity and Protected Areas Service and the National System of Protected Areas*

Law 21,600, enacted in 2023 in Chile, establishes the Biodiversity and Protected Areas Service (SBAP) and the National System of Protected Areas (SNAP). This law establishes principles for the preservation of protected ecosystems and biodiversity that coincide with the purposes of the Project, although the Law does not strictly apply to it. The regulations of the Law have not been issued.

6. *General Law on Environmental Bases (Law No. 19,300)*

Law 19,300, known as the "Law on General Environmental Bases", enacted in 1994, establishes the legal framework for environmental protection in Chile. This law regulates activities that may affect the environment, establishes the principles of the country's environmental policy, and creates mechanisms for environmental impact assessment and conservation of natural resources. The Project is aligned with its general principles of environmental protection and sustainability.

7. *Framework Law on Climate Change (Law No. 21,455)*

Chilean Law 21,455, approved in 2022, establishes a legal framework to address climate change, with emissions neutrality targets for 2050 and adaptation measures. Its principles include the protection of ecosystems, caution in environmental management, and the prohibition of backtracking on the levels of protection achieved.

If the Project's potential to store carbon and thus mitigate climate change is recognized, it is an important instrument for achieving the objectives of the Law.

8. *Hunting Law (Law No. 19,473)*

Law 19,473, enacted in 1996, seeks to protect and conserve native wildlife by restricting hunting and regulating the management of these species. It indirectly has implications for the control of invasive exotic species as a way of protecting vulnerable native species.

In relation to the Project, it allows the objective of the law since peatlands are sensitive habitats of great ecological value, where the action of invasive exotic species could seriously alter the ecological balance.

9. *Rights under the Water Code*

The Project benefits from various water use rights granted by the General Directorate of Water (DGA) of the Magallanes and Chilean Antarctic Region for Agrícola Cameron Ltda, which is the owner of Estancia Cameron. These rights are detailed below for each corresponding river:

a) *Japan River: By DGA Resolution No. 31 of November 17, 2015, rectified by Resolution No. 113 of April 22, 2016.*
b) *Russfin River: By DGA Resolution No. 3 of July 9, 2014.*
c) *Macklelland River: By DGA Resolution No. 26 of November 26, 2014.*
d) *Río Bautista: By DGA Resolution No. 22 of August 3, 2016.*
e) *Río Grande: By DGA Resolution No. 1 of February 21, 2024, approved on March 13, 2024, a concession was granted for the right to use surface and running waters of a consumptive nature for the Río Grande, located in the Timaukel municipality. The concession is for irrigation use, with a duration of 30 years, automatically renewable unless non-use of the water or an impact on the sustainability of the source is proven. The distance traveled by the river in the Estancia corresponds to 155,74 km.*

4.2 Laws and regulations related to workers' rights

In Chile, labor laws guarantee a series of fundamental rights for workers, the aim of which is to ensure fair and dignified conditions. Among the main relevant laws and regulations are:

a) *Fundamental Rights: Workers have the right to freedom of work, non-discrimination, and decent treatment. Practices that violate freedom of work, such as forced labor or coercion, are prohibited.*
b) *Vacations and Leave: Workers are entitled to paid vacations of at least 15 days per year, depending on the type of contract. They also have maternity and paternity leave, as well as sick leave.*

c) *Pensions and Seniority: The laws include benefits related to disability pensions and seniority, which protect employees in the event of situations that limit their work capacity.*
d) *Guaranteed Working Conditions: Chilean labor legislation establishes rights regarding job security, minimum salary conditions, and guarantees against unjustified dismissals, ensuring comprehensive protection.*

At the level of legislative regulation and organizations we can establish:

1. *Labor Code*

It regulates labor relations, including rights and duties of employers and workers, hiring, working hours, remuneration, among other fundamental aspects of labor law in Chile.

2. *Decree Law No. 3,500 - Establishes a New Pension System*

Each worker must contribute to his or her personal account managed by an AFP (Pension Fund Administrator). The accumulated funds are invested to generate returns, and upon retirement, the worker receives a pension based on the amount saved and the returns obtained.

3. *Law No. 19,728 - Establishes Unemployment Insurance*

The insurance provides a temporary income to workers who have lost their jobs, provided they meet certain requirements. It is made up of two components: an Individual Severance Account (CIC), funded by contributions from the worker and employer, and a Solidarity Severance Fund (FCS), which covers workers who exhaust their individual accounts or do not meet the requirements to access them.

4. *Law No. 16,744 - Establishes Standards on Workplace Accidents and Occupational Diseases*

It establishes rules on work accidents and occupational diseases, creating mandatory insurance that protects workers in the event of work accidents and occupational diseases.

5. *Decree No. 594 - Approves Regulations on Basic Sanitary and Environmental Conditions in the Workplace*

This regulation establishes the minimum conditions of hygiene and safety in the workplace, including rural environments such as farms and livestock farms. It regulates aspects such as ventilation, lighting, sanitary facilities, and air quality, which is crucial in agricultural, and livestock work environments.

6. *Decree No. 40 - Approves Regulations on Prevention of Occupational Risks*

This regulation specifies the measures that employers must adopt to prevent risks at work, with a particular focus on activities with common risks in agriculture and livestock farming, such as the handling of agricultural machinery and exposure to chemicals.

5 Ownership and rights over carbon

5.1 Project Owner

Individual or organization	Cameron Tourism and Trade LLC
contact person	Carlos I. Larrain
Workstation	President
ADDRESS	Address 1: Cameron s/n and c/o (Street without proper numbering, please send correspondence to Address 2) Address 2: Avda. El Bosque Sur 130, 12th Floor, Las Condes, Santiago, Chile
Phone number	+562 2463-5802
Email	cilarrain@cameronbluecarbon.org Cc: mlarrain@cameronbluecarbon.org

5.2 Other Project Participants

Individual or organization	**ZERO CARBONO SPA**
Role in the Project	Consultant
Contact person	Patricio Montecinos Bravo
Workstation	CEO
Address	Av. Presidente Kennedy 7440, Of.611, Vitacura, Santiago de Chile
Phone number	+56-9-49805123
Email	pmontecinosb@zerocarbono.org

5.3 Agreements related to carbon rights

For the Project, it is confirmed that the Proponent that has an agreement related to carbon rights is the private owner of the land in question. Since the Project area is on private land and the private owner is the sole owner, there are no third-party owners belonging to any local community, indigenous people or other external actors. This ensures that there are no additional rights or claims on the use of the land or on the benefits derived from the carbon credits that may be generated. The absence of interested external actors guarantees a direct and conflict-free administration, ensuring that the Project operates under the principles of no net harm and fair and equitable compensation.

5.4 Land tenure (Projects in the AFOLU sector)

The Project is located within the surface of Estancia (Ranch) Cameron in the Timaukel municipality, Tierra del Fuego Province, Magallanes and Chilean Antarctica Region.

The Estancia was acquired in 2008 by its current owners, who are also partly the owners of the Proponent, as stated in a public deed of 2008 granted before a public notary of Punta Arenas and registered in the property registry of the Registrar of Real Estate of Tierra del Fuego on page 156 number 180 of the year 2008.

It covers 11,300 hectares of the total extension of the Estancia, which reaches around 95.8 thousand hectares.

6 Adaptation to climate change

This Project contributes to climate change adaptation through specific activities directly derived from GHG conservation actions. Below are the criteria and indicators that demonstrate how these activities strengthen the resilience of the peatland ecosystem and promote adaptive management in the face of climate change impacts.

1. *Ecosystem Mapping and Monitoring*

To assess the vulnerability of peatlands and their response to climate change, a geographic information system (GIS) is implemented using satellite images with magnetic spectra, which allows identifying the current state and changes in the Sphagnum ecosystem. This monitoring tool facilitates adaptive decision-making and planning for future environmental changes.

- *Criteria: Implementation of a robust GIS system that records Sphagnum dynamics and areas affected by climate change.*
- *Indicators: Semi-annual/annual GIS update; training for technicians and the community in data analysis; peatland area monitored in relation to total extension.*

2. *Exotic Species Control and Ecological Restoration*

Removing invasive species and restoring degraded areas strengthens ecosystem resilience. These actions improve the capacity for carbon sequestration and water retention, promoting ecosystem stability in the face of climate stress.

- *Criteria: Control and eradication of invasive species and restoration of degraded areas with native species.*
- *Indicators: Number of exotic species controlled; area restored; percentage of recovered areas contributing to carbon sequestration.*

3. *Scientific Research*

Research is encouraged to understand the response of peatlands to climate change, with the aim of developing science-based adaptive strategies. This activity includes collaboration with universities and scholarship programs for local researchers.

- *Criteria: Conducting studies on the impact of climate change on peatlands and carbon storage.*
- *Indicators: Number of scientific studies conducted annually; collaborations with academic institutions; percentage of scientific recommendations applied in adaptive management.*

4. *Environmental Education and Community Participation*

Environmental education and local community involvement are essential to strengthen capacity to adapt to climate change. Activities include workshops, school programs, and citizen science platforms that promote conservation practices and adaptation to climate risks.

- *Criteria: Development of educational programs on the importance of peatlands in climate and water regulation.*
- *Indicators: Number of workshops and educational events; percentage of community participation in activities; level of knowledge on the importance of peatlands in climate adaptation.*

5. *Sustainable Ecotourism Development*

Sustainable and climate-resilient ecotourism is developed through low-impact infrastructure that minimizes effects on the ecosystem. The income generated by these activities is reinvested in conservation and adaptation measures.

- *Criteria: Low environmental impact infrastructure and reinvestment of ecotourism revenues in adaptation.*

- *Indicators: Number of visitors participating in sustainable ecotourism; revenue generated, and percentage reinvested in conservation; annual environmental impact assessments on infrastructure.*

7 Risk management

To ensure proper management, the Project carried out a rigorous analysis of the factors related to the execution of its main activity, which is conservation. This analysis allowed for a response to the associated causes and consequences, classifying the risks according to their level of criticality, probability of occurrence, impact, and their direct or indirect effect on the Project. Likewise, the changes generated by natural and anthropogenic actions were identified after studying the external and internal environment of the Project from financial and environmental aspects.

It is important to note that the Project does not present social risks, since it will be executed in private territory, which guarantees that it will not generate negative impacts on the community in the surrounding areas.

Finally, a classification of the potential risks that could arise during the development of the Project was carried out, using a measurable indicator and establishing a categorization in three levels: high, medium and low. Risk is defined as the effect generated by a situation that can compromise lives, economic activities or cause environmental damage, and is calculated as the product between the probability of occurrence of an event and its impact. By crossing the values assigned to these two variables, a result is obtained that allows classifying the risk in the mentioned categories. For each level of risk identified, one or more mitigation actions were defined.

Probability x Impact = Risk (High, Medium, or Low)

Table 7.1: Project risks for the Environmental and Financial dimensions, and probability of impact[10].

<table>
<tr><th>Dimension</th><th>Risk</th><th>Probability of Impact</th></tr>
<tr><td rowspan="2">Environmental</td><td>Climate change</td><td rowspan="2"><table>
<tr><td colspan="2" rowspan="2">Risk Classification (R.C)
Probability x Impact</td><td colspan="3">Probability</td></tr>
<tr><td>3</td><td>2</td><td>1</td></tr>
<tr><td rowspan="3">Impact</td><td>3</td><td>High (9)</td><td>High (6)</td><td>Medium (3)</td></tr>
<tr><td>2</td><td>High (6)</td><td>Medium (4)</td><td>Low (2)</td></tr>
<tr><td>1</td><td>Medium (3)</td><td>Low (2)</td><td>Low (1)</td></tr>
</table></td></tr>
<tr><td>Presence of invasive alien species</td></tr>
</table>

[10] *Own elaboration.*

	Peat bog exploitation	
	Fires	
	Land fragmentation	
	Change of land use	
Financial	*Fluctuations in operating costs*	
	Changes in carbon credit revenues	

The results of the risk classification for each of the identified risks are presented in the following table, where the values assigned in terms of probability and impact for each are specified.

Table 7.2: Classification results for each identified Project risk.

Identified risk	***Probability***	***Impact***	***Value obtained***	***Classification***
Environmental Dimension				
Rain shortage due to climate change	*2*	*2*	*4*	*Medium*
Presence of beaver (Castor canadensis)	*2*	*2*	*4*	*Medium*
Presence of mink (Neovison vison)	*2*	*2*	*4*	*Medium*
Presence of thorn (Ulex europaeus)	*2*	*2*	*4*	*Medium*

Presence of Heracium pilosella	*2*	*2*	*4*	*Medium*
Presence of Didymo (Didymosphenia geminata)	*2*	*2*	*4*	*Medium*
Exploitation of Sphagnum peatlands	*1*	*3*	*3*	*Medium*
Fires	*1*	*3*	*3*	*Medium*
Land fragmentation	*1*	*3*	*3*	*Medium*
Change of land use from peatlands to agricultural activities	*1*	*3*	*3*	*Medium*
Financial Dimension				
Fluctuations in operating costs	*1*	*2*	*2*	*Low*
Changes in carbon credit revenues	*1*	*2*	*2*	*Low*

A detailed analysis of each identified risk is then carried out according to its dimension.

Environmental Dimension:

Table 7.3: Environmental risk analysis.

Identified risk	***Context***	***Mitigation actions***	***Procedure***	***R.C***
Lack of rain due to climate change, causing the drying up of peatlands and generating an ecological disaster	*Peatlands are key ecosystems for carbon storage, biodiversity and water regulation, but they are vulnerable to climate change. Decreased rainfall*	*-Protect peatlands to enhance their function as carbon sinks.* *-Prohibit or restrict activities that may damage peatlands,*	*A diagnosis of the peatlands will be carried out to assess their ecological status, water levels and carbon storage capacity.*	*Medium*

	can dry them out, releasing greenhouse gases and affecting biodiversity and ecosystem services.	*such as water extraction or drainage.* *-Implement water monitoring of peatlands to preserve their hydrological function.* *-Implement natural barriers to conserve soil moisture.*	*Restrictions will be established to prohibit activities that affect their integrity, such as water extraction or drainage. In addition, constant monitoring of stored carbon, water levels and the state of the ecosystem will be implemented to ensure its conservation.*	
Presence of introduced exotic species: Beaver (Castor canadensis)	*Destruction of forested areas of peatlands by beavers due to their activity of damming watercourses for their habitat. This action can result in flooding and submersion of large areas of forest, which in turn leads to the weakening and deterioration of the tree mass affecting the water table of peatlands.*	*-Control and eradication programs: Strengthen and support existing projects such as the "GEF Castor Project" with a focus on the capture and eradication of beavers in critical areas of the Project, with specialized equipment and appropriate technology.* *- Monitoring beaver populations: Implement a monitoring system using capture traps, camera traps, and satellite tracking to*	*Establish a surveillance system using selective traps and camera traps, complemented by centralized databases that allow tracking the movements of these species. Produce reports with success indicators to evaluate the effectiveness of the actions.*	*Medium*

		identify the spread and assess the impact on the forest and peatland ecosystem. *Develop risk maps and implement early warning systems.* *-Working with local stakeholders: Involving them in the implementation of strategies to prevent the advance of these species and protect peatlands.*		
Presence of introduced exotic species: American mink (Neovison vison)	*It is an exotic carnivore whose predation on native fauna and flora generates significant ecological impacts. Its invasion of aquatic and semi-aquatic habitats, peat bogs and even forests causes damage by scraping, altering biodiversity and modifying the invaded ecosystems.*	*-Early detection and management programs: Develop and implement an early detection system through regular patrols and camera traps. This includes identifying vulnerable areas where mink can cause the most damage.* *-Active population control: Implement a comprehensive plan for the capture and management of minks using capture techniques, minimizing the*	*Establish a surveillance system using selective traps and camera traps, complemented by centralized databases that allow tracking the movements of these species. Produce reports with success indicators to evaluate the effectiveness of the actions.*	*Medium*

		impact on other native species.		
Presence of Espinillo (Ulex europaeus)	*The Ulex Invasion europaeus can alter the structure and composition of native vegetation, potentially reducing the peatland's ability to store carbon. In addition, accelerated decomposition of organic matter due to soil and hydrological alteration by Ulex europaeus could increase emissions of carbon dioxide (CO_2) and methane (CH_4), two important greenhouse gases.*	*-Control programs: Apply chemical, biological and mechanical control techniques, such as manual removal of Ulex europaeus, in key areas to reduce its presence and prevent its expansion (in accordance with National Control Methods approved and authorized for use).*	*Comply with existing programs specific to its control, using satellite monitoring and selective traps, preventing its spread. In addition, correctly apply biological, mechanical and chemical methods.*	*Medium*
Presence of Heracium pilosella	*Like other invasive alien species, Hieracium pilosella can alter the vegetation found in peatlands. This can affect the capacity of these areas to store carbon, as invasive plants can change*	*-Biological and mechanical control programs: Implement control measures by introducing biological agents that can inhibit the expansion of Hieracium pilosella, along*	*Comply with existing programs specific to its control, using satellite monitoring and selective traps, preventing its spread. In addition,*	*Medium*

	soil dynamics and the decomposition of organic matter. *The presence of Hieracium pilosella can influence peatland hydrology by enhancing peat oxidation and increasing CO_2 and CH_4 emissions. This may counteract the role of peatlands as carbon sinks.*	*with mechanical techniques such as manual removal and grazing control in affected areas.* *-Monitoring and management adjustment: Establish a monitoring plan that assesses the density of Hieracium pilosella in the intervention areas and adjust management techniques according to the ecosystem response.*	*correctly apply biological, mechanical and chemical methods.*	
Presence of Didymo (Didymosphenia geminata)	*Didymo can alter water quality and carbon cycling in aquatic ecosystems. Didymo blooms can affect the photosynthesis of other aquatic plants and photosynthetic organisms, potentially altering the carbon balance and reducing the peatland's ability to act as a carbon sink.*	*-Preventive measures and physical control: Implement preventive measures such as cleaning and disinfection of equipment and vehicles in aquatic areas. Implement access restrictions in contaminated water bodies and carry out regular controls to prevent the spread.* *-Water quality monitoring: Implement continuous monitoring stations in affected water bodies, measuring*	*Comply with existing programs specific to its control, using satellite monitoring and selective traps, preventing its spread. In addition, correctly applying biological, mechanical and chemical methods. It also requires strict preventive measures such as disinfection of equipment and periodic*	*Medium*

		water quality parameters such as nutrients, turbidity and dissolved oxygen levels, to determine the impact of Didymo on the carbon cycle. *- Manual removal in sensitive areas: In areas where Didymo is already present, develop manual removal campaigns.*	*monitoring of water quality.*	
Exploitation of sphagnum peatlands by mining and/or as raw material for various agricultural, horticultural or gastronomic purposes, making their natural recovery impossible.	*Surface extraction of sphagnum releases large amounts of stored carbon, such as CO_2 and CH_4, into the atmosphere, exacerbating global warming and climate change. It also reduces the capacity of peatlands as organic carbon sinks, further exacerbating the climate problem by decreasing their ability to absorb atmospheric CO_2.* *Peat extraction destroys unique habitats and threatens species that depend on these ecosystems for survival, resulting in biodiversity loss and disruption of local ecosystems.*	*-Monitoring illegal extraction: implement a surveillance system that detects and sanctions illegal extraction activities of Sphagnum moss and peat.*	*To mitigate this, a robust surveillance system must be implemented to detect and sanction illegal extractions, complemented by community awareness campaigns.*	*Medium*

	Along with this, it can cause conflicts over land use and the loss of key natural resources for local communities, such as water and ecosystem services.			
Fires	*The peatland fires in Tierra del Fuego contribute to climate change by releasing large amounts of carbon into the atmosphere. Forests also represent a global carbon reserve, which after each fire becomes a source of carbon emitted into the atmosphere. When the forest does not recover, this reserve is lost in the long term.* *Post-fire flooding is a common consequence, as the soil becomes compacted and with the loss of vegetation there is less water retention. The consequences not only involve material damage, but can also change the water quality of rivers.*	*-Early detection and prevention systems: Implement early warning and surveillance systems through drones and satellite platforms, especially during the spring and summer seasons.* *-Training and equipping forest firefighters: Provide training and appropriate equipment to fire departments in nearby towns to improve their ability to respond quickly and effectively to these emergencies.* *-Specialized fire brigade: Equip a Forest Fire Brigade in the area specialized in the prevention and*	*To address this risk, it is crucial to establish early detection systems, train forest firefighters and improve access to water resources to fight fires in remote areas.*	*Medium*

	Except for the ñire (Nothofagus antarctica), trees lack adaptations to survive and recover after fire, resulting in a transition from closed to open forest, grassland or shrubland in fire-affected areas. *During the summer of 2022, a fire raged for 10 days in Timaukel, affecting more than 1,600 hectares, including peatlands. Estancia Cameron provided equipment, personnel, and accommodation for 85 people. The native forest was the most affected ecosystem.* *The town of Timaukel lacks a secure supply of drinking water and relies on a rural drinking water supply (APR). During forest fires, water supply problems arise in the community. This situation highlights the urgent need to improve water supply infrastructure and management, especially in*	*control of fires in forest areas.* *-As a preventive measure, install a water supply supported by the acquisition and installation of a fire pump to ensure a rapid response to any eventuality.* *-Awareness campaigns and collaborative work with local actors: Raise community awareness about fire prevention and promote collaboration between different entities for coordinated and effective management of forest fire risk.* *-Enable a landing strip to supply tanker planes and helicopters.*		

	emergency situations such as fires, to ensure access to this vital resource for the community.			
Land fragmentation (due to road layouts and territorial divisions)	*Fragmentation of land in a peatland can release stored carbon and reduce the capacity of these areas to act as organic carbon sinks, contributing to climate change. It also affects local communities by reducing the availability of natural resources, disrupting water regulation, and reducing recreational and tourism opportunities.* *In terms of biodiversity, fragmentation causes habitat loss and ecosystem alteration, putting many species and their ecological interactions at risk.*	*-Land use plans: Implement land use plans that minimize fragmentation, protecting key areas and establishing ecological corridors to connect habitat fragments. These corridors allow species mobility, avoiding genetic isolation and facilitating the dispersion of plant and animal species.* *-High Biodiversity Areas: Identify critical biodiversity zones within the Project area and designate them as strict conservation zones. These areas must be excluded from anthropogenic activities that may alter their ecological function.*	*Critical areas for ecological connectivity will be delimited, establishing exclusion zones for activities involving layouts or infrastructure construction. If access is required, sustainable designs that minimize impact will be prioritized, such as perimeter roads outside peatlands.*	*Medium*

Change of land use from the peat wetland to land intended for agricultural activities such as livestock farming	*Drainage and drying of peatlands and the consequent loss of ecosystem services.*	*-Ensure that the lands are maintained in their ecological use as peat bogs, avoiding transformation for agricultural activities.* *-Land use planning: Establish a management plan for the Project area that includes zoning of high biodiversity areas in peatlands, as exclusion zones from other anthropogenic risks.* *-Work with the local community: Carry out awareness campaigns with the nearby community to educate about the importance of peatlands in mitigating climate change and protecting biodiversity, encouraging sustainable productive alternatives.*	*Establish a plan for regular monitoring of activities in the Project area. This involves identifying any human interventions, such as zoning changes, and systematically documenting their impact on peatlands.*	*Medium*

		-Continuous monitoring of activities: Regularly monitor activities near peatlands to prevent possible illegal uses.		

Financial Dimension:

Table 7.4: Financial risk analysis.

Identified risk	**Context**	**Mitigation actions**	**Procedure**	***R.C***
Fluctuations in operating costs	*Possible increases in costs associated with the implementation and maintenance of the Project due to external or internal factors.*	*-Long-term financial planning, considering possible contingencies.*	*Detailed projections are made, with contingency margins in estimated costs. Periodic updating of the budget to reflect changing conditions.*	*Low*
Changes in carbon credit revenues	*Revenues dependent on the sale of carbon credits, susceptible to variations in demand and price in the carbon market.*	*-Long-term sales contracts with reliable buyers. -Income diversification through complementary activities, such as sustainable ecotourism.*	*Negotiation and signature of stable contracts with carbon credit buyers. Development of an operational plan to initiate and manage complementary income-generating activities.*	*Low*

7.1 Reversal risk

To maintain and enhance the climate, community and biodiversity benefits of this Peatland Conservation Project beyond its lifetime, the following measures are proposed:

Long-term management and monitoring

1. *Establish a continuous monitoring system:*
    - *Implement a scientific monitoring program to assess ecosystem health, carbon storage levels and biodiversity.*
    - *Use technologies such as remote sensors for efficient and low-cost monitoring.*

2. *Create a conservation trust fund:*
    - *Establish a dedicated financial fund that generates income to maintain conservation activities in perpetuity.*
    - *Seek diverse sources of funding, including payments for ecosystem services, grants and government allocations.*

3. *Community participation and education*

a) *Develop environmental education programs:*
    - *Create educational programs for local schools on the importance of peatlands.*
    - *Organize guided tours and citizen science activities to engage the community in conservation.*

b) *Promote sustainable ecotourism:*
    - *Develop low-impact infrastructure for tourism, such as trails and interpretation points.*
    - *Train local guides to provide educational tours, generating income for the community.*

4. *Legal and political integration*

a) *Integration into climate policies:*
    - *Incorporate peatland conservation into Chile's Nationally Determined Contributions (NDC).*
    - *Promote the inclusion of peatlands in national and international carbon markets.*

In addition, for AFOLU projects, during each verification registration, a 20% reserve of the quantified GHG emission reductions or removals is automatically deducted, with 10% allocated to a project-specific reserve account and the other 10% to a General Reserve Account in the BioCarbon registry. At the end of the quantification period and following the last verification, the remaining funds in the Project reserve are transferred to the BCR Reserve, intended to cover possible future reversals. Reserve credits may be released and traded in subsequent verifications if the Project remains active under the BCR Standard and in the BioCarbon registry, ensuring a balance between the general reserve and deductions to ensure environmental protection.

5. *Research and development*

a) *Promote a research center for Patagonian peatlands:*
   - *Create a facility for initial scientific research directly in Patagonian peatlands.*
   - *Promote collaborations with national and international universities.*

b) *Develop restoration practices:*
   - *Investigate restoration techniques for degraded peatland areas.*
   - *Create a native species nursery to support restoration efforts.*

6. *Adaptive management*

a) *Implement an adaptive management plan:*
   - *Develop a flexible plan that can be adjusted in response to observed climatic and ecological changes.*
   - *Conduct periodic reviews of the plan with the participation of scientists and local communities.*

b) *Addressing emerging threats:*
   - *Establish protocols for early detection and rapid response to invasive alien species.*
   - *Develop contingency plans for extreme events such as droughts or fires.*

7. *Regional and international collaboration*

a) *Establishing cross-border alliances:*
   - *Collaborate with conservation initiatives in Argentina to create a binational conservation corridor.*
   - *Participate in international peatland conservation networks to share knowledge and best practices.*

b) *Promote comparative research:*
   - *Promote studies that compare Patagonian peatlands with other similar ecosystems globally.*
   - *Participate in international peatland carbon monitoring initiatives.*

These measures are designed to ensure that the benefits of the conservation Project are maintained and enhanced over the long term. By combining legal protection, community participation, scientific research and adaptive management, a sustainable model of conservation can be created that benefits the climate, biodiversity and local communities well beyond the initial lifespan of the Project.

7.1.1 Loss Event Report

The Project Proponent undertakes to submit a loss report within a period of no more than one year from the occurrence of the event that causes the loss or decrease of the Verified Carbon Certificates (VCC) issued and registered on the corresponding platform. This report must include a conservative estimate of carbon losses, based on previously verified emission reductions or absorptions, taking as a reference the results of the Project monitoring report. Likewise, the Proponent must demonstrate, in a reasoned manner and with verifiable evidence, that said estimate is true and accurate in all material aspects, guaranteeing the transparency and reliability of the information presented.

8 Sustainable Development Safeguards (SDS)

The Project has a highly positive environmental impact. While Chile has a total of 1,099,600 hectares of peatlands (UNEP, 2022), the penetration of the Project activity is 11,300 hectares in total, corresponding to 1.02% of the total peatlands in the national territory. According to the Sustainable Development Safeguards (SDS), the following key points are highlighted:

- *Biodiversity and ecosystems:*

Conservation of key ecosystems is expected to be achieved by strengthening ecological connectivity. Peatlands are a refuge for unique species, and their conservation will help prevent biodiversity loss. Peatlands are of great ecological importance worldwide. They play a fundamental role in biodiversity conservation, since they are a refuge for some rare and unusual species (Domínguez and Vega, 2015).

To prevent negative impacts, measures will be adopted to control invasive species such as the beaver (Castor canadensis) and the American mink (Neovison vison), which negatively affect hydrological functions and biodiversity. Also, measures such as the continuous monitoring of biological diversity to detect and mitigate any threats will be implemented.

The impacts of each invasive alien species are detailed below (UNDP, 2017):

a) *Beaver (Castor canadensis):*
   - *Destruction of riparian forests and soil destabilization*
   - *Modification of habitat structure and aquatic biota*
   - *Modification of hydrology and geomorphology*
   - *Modification of nutrient cycles*
   - *Impact on carbon capture*

b) *American mink (Neovison vison):*
   - *Impact on food chains*
   - *Environmental pollution and derived effects*
   - *Effects on local agricultural activity*

- *Water resources:*

The protection of peatlands will improve water quality and increase water storage capacity, benefiting both ecosystems and downstream communities. Because they intervene in the hydrological cycle, due to their great capacity to retain water: these ecosystems are recharged by precipitation, and the water that is captured is gradually released into the basins. They also directly influence water quality, since they operate as a natural filter towards groundwater, reducing the mobilization and transport of sediments, and fixing harmful compounds such as heavy metals (Domínguez and Vega, 2015).

Sustainable practices will be implemented to ensure that there is no contamination of water bodies, such as (Guadarrama et al. 2016):

c) *Reducing chemicals: Reducing the use of fertilizers and pesticides, along with protecting peatlands as natural filters, is essential to preserve water quality and ensure the conservation of aquatic biodiversity.*

- *Climate change:*

Peat bogs play a vital role in carbon storage by accumulating layers of peat and fixing carbon dioxide (CO_2). They are also key regulators of the global climate, capturing CO_2 from the atmosphere and storing it beneath the soil surface over the long term (Domínguez and Vega, 2015).

Resilient practices will be integrated into Project management to adapt to changing climate conditions. These practices will include (FOA, 2013):

a) *Ecosystem maintenance and restoration: Strengthening the capacity of peatlands to store carbon by restoring degraded areas and connecting native habitats.*
b) *Management of invasive alien species: Implement monitoring, early detection and control of invasive species, with emphasis on methods that minimize impacts on the ecosystem.*
c) *Sustainable land use and planning: Incorporate climate change models into protected area planning and limit human activities in critical areas.*
d) *Community engagement: Training local communities in peatland restoration and invasive species management.*
e) *Fire management: Implement integrated fire management strategies to protect peatlands and their biodiversity.*
f) *Research and ongoing monitoring: Conduct long-term monitoring to assess the effectiveness of actions and changes in the ecosystem.*

The Project is estimated to achieve greenhouse gas emission reductions and removals totaling 118,100,609 tCO2eq over its lifetime.

- *Expected social impacts*

The Project itself, being a conservation project, will require community involvement and training in various conservation measures, promoting environmental awareness. As it is a fairly small settlement with a lot of mobility due to the natural barriers inherent to the area, important social benefits will also be generated in the nearby local communities, highlighting the following aspects:

d) *Job creation: The Project will expand the job offer in the area, offering formal employment to both men and women through the implementation of new lines of work in activities such as tourism, maintenance and monitoring, promoting gender equality.*
e) *The Project envisages the initial creation of 32 direct jobs per year, of which 50% will be occupied by women. This promotes inclusion and local economic development through the equitable distribution of these jobs and the integration of women in local economic activities.*

These activities will comply with Chilean labor laws, guaranteeing safe and fair working conditions.

- *Community training:*

Technical training will be provided to strengthen the skills of local workers, which will improve their ability to participate in the Project and their future employability.

f) Environmental education workshops: Workshops on biodiversity monitoring and peatland restoration will be integrated, benefiting 100 local people in the first 5 years from the start of the Project. This activity not only strengthens technical skills, but also encourages the active participation of communities in conservation and environmental awareness in the locality.

g) Sustainable ecotourism: The development of low-impact infrastructure, such as elevated trails and observatories, seeks to diversify economic opportunities in the region and provide local women with new jobs. It also allows for a closer relationship between the protected ecosystem and the community, generating greater knowledge of it and encouraging the community to get involved in its care.

To ensure a net positive impact, the Project will implement the following actions:

- *Impact mitigation: In the event of any identified risk, mitigation measures will be implemented such as sustainable agricultural practices, strict protection of critical areas and constant monitoring of the Project's progress.*
- *Monitoring and validation: A detailed monitoring plan will be developed and reviewed periodically to ensure compliance with environmental and social standards.*

The Project ensures that activities not only do not cause harm, but generate additional benefits, both in environmental and social terms:

- *Ecosystem services, reduce and remove carbon emissions, and protect key species.*
- *In the social sphere, the Project promotes inclusion, enhances quality of life through job creation, and fosters the empowerment of the local community.*

Annex A of this document details the application of the BCR tool "Sustainable Development Safeguards (SDS)", which ensures that the Project activities comply with the established criteria to avoid negative impacts and maximize environmental and social benefits.

9 Stakeholder participation and consultation

The stakeholder identification process for the Project was carried out by selecting representative members of the community, considering the low population in the area and the fact that the Project is located on a single agricultural property. Among the stakeholders is Estancia Cameron, owner who assigned its carbon rights to the Proponent.

Government entities from the area, which represent the State of Chile in Tierra del Fuego, were included. These entities included the Mayor and Councilor of the Timaukel municipality, the Agricultural and Livestock Service, Firefighters, and Carabineros of Chile (police). In turn, the social organizations of Villa Cameron are relevant to the Project, since they represent the organized community and its interests. Among them were the Ignacio Carrera Pinto School, the President of the Parents Center of the school, the mixed Tejo club and the mixed hopscotch club.

Other interested parties included companies from the area surrounding the Project that carry out activities in Tierra del Fuego, such as Constructor Vilicic (construction company), Aserradero San José (sawmill), Forestal Russfin (forestry), Turismo Tres Victorias Austral (tourism), Cameron Lodge and Parque Karukinka. In addition, workers from the area who live near the Project were considered, including Jonatan Molina, Martín Aedo, Matias Aguilar, Miguel Villegas, Karla Vera, Ivan Landeros, Mauricio Gallardo, Jose Pedro Baraona and Patricia López.

Full Project documentation will be permanently available to interested parties through the Project website (www.cameronbluecarbon.org) and at the administration offices in Villa Cameron. A public presentation of the Project for interested parties was also held on July 18, 2024, in Villa Cameron.

9.1 Summary of comments received

For the public presentation on July 18, 2024, a survey was conducted on natural and legal entities, as well as authorities and representatives of public and private organizations with influence in the Project area. Participants were contacted by phone and/or email, formalizing the invitation and confirming their attendance.

During the presentation, a number of questions were addressed regarding the scope of the Conservation Project, the planned activities to protect peatland ecosystems, and the potential local benefits that could be derived. Soil sampling methodologies applied in carbon sequestration analysis were explained, including in hard-to-reach areas, and restoration measures for degraded peatlands were discussed. Ways in which government and private agencies could be involved in the effective care and protection of these wetlands were also explored. Other topics of interest included economic and market aspects related to carbon credits, implementation timelines, peatland extensions needed, and the possibility of collaboration with other landowners.

All questions were answered in detail, to the satisfaction of the attendees. At the end of the presentation, a fellowship meeting was held that allowed for a deeper understanding of the opportunities and implementation of tools available at an international level for the protection of these wetlands.

9.2 Consideration of the comments received

The comments received and the actions taken in response to each are detailed below.

Table 9: Comments received, and actions taken

Summary of the feedback received	***Actions taken***
Scope of the Conservation Project	*The information was explained in detail, and the Project committed to sharing the information on its website.*
How a landowner can carry out a Project	*The stages were briefly described, consisting of: Process on the ground via satellite to obtain an approximation of the quality / the state of the peatland, soil sampling, studies, SDGs, Public Presentation and international registration.* *Not necessary to follow up as it was more a question out of curiosity on how a third party can generate this type of Project.*

What would be the benefits at the local level?	*It was stated that the Project is under development, outlining possible benefits and, as progress progresses, it will be published on its website.*
What are the methodologies applied for soil sampling in the analysis of carbon capture in these ecosystems and how is this carried out in difficult-to-access areas?	*The methodology applied for soil sampling at the site was described (random determination of peatland sectors to generate samples at various depths, analysis in a specialized soil laboratory, obtaining results, average calculations).* *The methodology did not affect the Project.*
What restoration measures for degraded peatlands can be implemented?	*The consequences of burning peatlands and extracting their surface were described, as well as a restoration format in the same space by planting similar species.* *No actions were taken as it is a conservation Project.*
How government and private organizations can become involved in the effective protection and care of these types of wetlands.	*It was explained that in Chile such organizations are only just becoming involved in the care of this type of wetlands.* *Not necessary to follow up due to the generic nature of the comment.*

10 Sustainable Development Goals (SDG)

The BCR standard states that the Project owner must demonstrate how the activities contribute to the fulfillment of the Sustainable Development Goals (SDGs). This is achieved by selecting specific criteria and using relevant indicators. For this purpose, the "Tool for determining contributions to the fulfillment of the SDGs of Greenhouse Gas (GHG) mitigation projects" (also known as SDG Tool), developed by BioCarbon is used.

The AFOLU Project applies this tool to identify relevant indicators, aligning field activities with the selected SDGs. The SDGs applicable to the Project are detailed below based on their scope and contributions.

Image No. 5: Selection of SDGs applicable to the Project (part 1).

Selection of SDGs applicable to the project			
Sustainable Development Goals	**Targets and Indicators**	**Project contribution**	**Project contribution summary**
 End poverty everywhere, in all its forms	SDG 1	Not applicable	
 End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	SDG 2	Not applicable	
 Ensure healthy lives and promote well-being for all, at all ages	SDG 3	Not applicable	
 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	SDG 4	Not applicable	
 Achieve gender equality and empower all women and girls	SDG 5	Not applicable	
 Ensure availability and sustainable management of water and sanitation for all	SDG 6	Yes	Peatlands improve water quality by filtering sediments and absorbing pollutants. Conserving them protects local water resources and enhances their function as natural filters.
 Ensure access to affordable, reliable, sustainable and modern energy for all	SDG 7	Not applicable	
 Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all	SDG 8	Not applicable	
 Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation	SDG 9	Not applicable	

Image No. 6: Selection of SDGs applicable to the Project (part 2).

Selection of SDGs applicable to the project			
Sustainable Development Goals	**Targets and Indicators**	**Project contribution**	**Project contribution summary**
Reduce inequality within and among countries	SDG 10	Not applicable	
Make cities and human settlements inclusive, safe, resilient, and sustainable	SDG 11	Not applicable	
Ensure sustainable consumption and production patterns	SDG 12	Not applicable	
Take urgent action to combat climate change and its impacts	SDG 13	Yes	Peatlands are carbon sinks, regulate water and prevent disasters such as floods and droughts. Their conservation improves climate resilience and local community adaptation.
Conserve and sustainably use the oceans, seas and marine resources for sustainable development	SDG 14	Not applicable	
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss	SDG 15	Yes	Peatland's freshwater reservoirs are key to biodiversity, water cycling and carbon sequestration. Their conservation protects vital functions and essential ecosystem services.
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	SDG 16	Not applicable	
Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	SDG 17	Yes	The Project fosters alliances to promote research on Magellanic peatlands, strengthen scientific capacities, promote international cooperation and ensure its financial viability.

Contribution to the SDGs

Based on the analysis of the activities mentioned in item 2.3, Project Activities, it was determined that these contribute to the fulfillment of the following SDGs, due to their positive impact on key aspects related to sustainability and environmental conservation. Below are the SDGs with which these activities are aligned and how they do so:

Table 10.1: SDGs contributed by the Project.

SDG	Type of activity	Indicator	Goal
 **Clean water and sanitation**	*Permanent*	*6.1.1*	*Proportion of the population with access to safely managed drinking water supply services.*
	Permanent	*6.3.2*	*Proportion of good quality bodies of water.*
	Temporary	*6.4.1*	*Change in water use efficiency over time.*
	Permanent	*6.6.1*	*Change in the extent of water-related ecosystems over time.*
	Permanent	*6.a.1*	*Volume of official development assistance allocated to water and sanitation that is part of a coordinated government spending plan.*
	Temporary	*6.b.1*	*Proportion of local administrative units with established policies and operational procedures for the participation of local communities in water and sanitation management.*
 **Climate Action**	*Permanent*	*13.1.3*	*Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies.*

	Permanent	*13.2.1*	*13.2.1 The number of countries with nationally determined contributions, long-term strategies, national adaptation plans, and strategies outlined in adaptation communications and national communications.*
	Permanent	*13.2.2*	*Total greenhouse gas emissions per year.*
	Temporary	*13.3.1*	*Extent to which i) global citizenship education and ii) education for sustainable development are incorporated into a) national education policies, b) curricula, c) teacher training and d) student assessment.*
	Permanent	*13.b.1*	*Number of least developed countries and small island developing States with nationally determined contributions, long-term strategies and plans, national adaptation strategies and strategies indicated in adaptation communications and national communications.*
 ***Life on land***	*Permanent*	*15.1.2*	*Proportion of important sites for terrestrial and freshwater biodiversity that are part of protected areas, broken down by ecosystem type.*
	Permanent	*15.2.1*	*Progress in sustainable forest management.*
	Permanent	*15.3.1*	*Proportion of degraded land compared to the total area.*

	Permanent	*15.5.1*	*Red List Index.*
	Permanent	*15.8.1*	*Proportion of countries that have adopted relevant national legislation and allocated sufficient resources for the prevention or control of invasive alien species.*
	Permanent	*15.a.1*	*a) Official development assistance specifically targeted at biodiversity conservation and sustainable use and b) revenue generated and financing mobilized through biodiversity-relevant economic instruments.*
 ***Partnerships to achieve goals***	*Permanent*	*17.9.1*	*Dollar value of financial and technical assistance (including through North-South, South-South and triangular cooperation) pledged to developing countries.*
	Permanent	*17.16.1*	*Number of countries reporting progress on multi-stakeholder development effectiveness monitoring frameworks that support the achievement of the Sustainable Development Goals.*
	Permanent	*17.17.1*	*Amount in US dollars pledged to public-private partnerships focused on infrastructure.*

1. ***SDG 6: Clean water and sanitation***

The Project activities that will contribute to the fulfillment of this SDG will do so in the following manner:

- ***Hydrological protection of peatlands by removing dams to channel water into surrounding areas:***
  - *Control over the increase in water availability in the areas surrounding the Project. (Indicator 6.1.1)*

- ***Control of invasive species that alter water quality, such as the beaver (Castor canadensis):***
  - *Improved water quality by restoring natural hydrological functions and reducing impacts associated with hydrological flow. (Indicator 6.3.2)*

- ***Conservation of the 11,300 hectares of peatlands for the protection and maintenance of their ecosystem services:***
  - *ecosystem services, such as a natural filter, improving water quality by retaining sediments and absorbing pollutants. Its vegetation captures nutrients, pollutants and sediments, cleaning the water and improving its quality. (Indicator 6.3.2)*
  - *Increase in water storage capacity and stabilization of its ecosystem services. (Indicator 6.6.1)*

- ***Promoting sustainable water use practices to the local community:***
  - *Increased water use efficiency by combining conservation activities with traditional practices in a sustainable manner. (Indicator 6.4.1)*

- ***Promote scientific research by promoting a research center for Patagonian peatlands:***
  - *Knowledge exchange and local capacity building through technical cooperation. (Indicator 6.a.1)*

- ***Promote the participation of the local community and stakeholders in environmental education programs:***
  - *Increased environmental awareness, inclusion and active participation in conservation. (Indicator 6.b.1)*

2. *SDG 13: Climate action*

Below are the Project activities that will contribute to the achievement of this SDG and how they will do so:

- ***Fire and land fragmentation prevention plan:***
  - *Reduces the risk of wildfires, ensures ecological connectivity and protects key ecosystem services, including carbon sequestration. (Indicator 13.1.3)*

- ***Promoting the integration of peatlands into national climate change mitigation policies, such as NDCs (Nationally Determined Contributions):***
  - *Highlights the potential of peatlands as carbon sinks and climate regulators, promotes their inclusion in nationally Determined Contributions (NDCs) and carbon markets. (Indicator 13.2.1)*

- ***Conservation of the 11,300 hectares of peatlands:***
  - *Reducing GHG emissions by protecting peatlands as carbon sinks. (Indicator 13.2.2)*

- ***Promote the development of environmental education and training programs for the local community on the value of peatlands in mitigating climate change:***
  - *Increases knowledge on peatlands as carbon sinks and regulates climate risks, strengthening local adaptive and preventive measures. (Indicator 13.3.1)*

- ***Implement a management plan in relation to adaptive management:***
  - *Strengthen local governance and build capacity to implement climate change mitigation and adaptation measures, with an emphasis on peatland conservation. (Indicator 13.b.1)*

3. SDG 15: Life on land

The Project initiatives that will contribute to the achievement of this SDG will do so through the following actions:

- ***Conservation of the 11,300 hectares of peatlands*:**
  - *Peatlands are key ecosystems for biodiversity, the water cycle and carbon sequestration. Their conservation ensures freshwater storage, regulates the water cycle, stores carbon and protects unique habitats, strengthening resilience to resource extraction and climate change. (Indicator 15.1.2)*

- ***Integrated management of forested areas adjacent to peatlands, ensuring their ecological functionality:***
  - *Increasing connectivity between peatlands and native forests strengthens ecological corridors, reduces forest degradation, reinforces ecological connectivity and protects the habitat of associated species. (Indicator 15.2.1)*

- ***Implementation of Land Use Plan:***
  - *Protects key areas (water recharge areas and forest-peat transition zones), reduces human impacts and establishes biological corridors to enhance biodiversity. (Indicator 15.3.1)*

- ***Monitoring and surveillance plan for illegal extraction of Sphagnum moss and peat.***
  - *Preventing the release of stored carbon and irreversible ecosystem degradation. (Indicator 15.3.1)*

- ***Control of invasive alien species:***
  - *Protection of native habitats and stabilization of local biodiversity. (Indicator 15.5.1)*

- ***Control and monitoring plan for invasive alien species:***
  - *Reduction of negative ecological impacts associated with these invasive alien species and restoration of the ecological and hydrological functionality of peatlands. (Indicator 15.8.1)*

- ***Generating income through the sale of blue carbon credits:***
    - *Fundraising to continue and maintain conservation activities in perpetuity. (Indicator 15.a.1)*

4. SDG 17: Partnerships to achieve goals

The Project actions that will support the fulfillment of this SDG will be carried out through the following activities:

- ***Creation of a research center for carbon and biodiversity analysis, with collaboration from universities and scholarship programs:***
    - *Increase technical and scientific capacities at the local level, promoting research on the Magallanes peatlands and their conservation. (Indicator 17.9.1)*

- ***Establishing cross-border alliances:***
    - *International collaboration fosters global partnerships through the exchange of knowledge, best practices in peatland conservation and the promotion of joint initiatives. (Indicator 17.16.1)*

- ***Establishment of alliances with financial institutions, NGOs and companies for carbon footprint compensation and technical support:***
    - *Collaborate with companies interested in offsetting their carbon footprint or improving their corporate social responsibility. (Indicator 17.17.1)*

In summary, the Project implements key actions that contribute to the fulfillment of SDGs 6, 13, 15 and 17, promoting the conservation of peatlands, the improvement of water quality, the mitigation of climate change, the protection of biodiversity and alliances to achieve the necessary objectives.

11 REDD+ Safeguards (for REDD+ Projects)

Not applicable since it is not a REDD+ Project.

12 Special categories, related to co-benefits (optional)

Not Applicable, the Project does not aspire to have special categories.

13 Grouped projects (if applicable)

Not applicable since it is not a grouped Project.

14 Other GHG programs

Not applicable since the Project is not in another GHG program.

15 Avoid double counting

The Project complies with the principles and requirements established by the BCR Program to avoid double counting of greenhouse gas (GHG) emission reductions and eliminations. The following describes how the "Avoid Double Counting (ADC)" tool is applied, guaranteeing the uniqueness, traceability and transparency of the carbon credits generated.

Preventing Double Counting

The Project ensures that emissions reductions are accounted for, issued and retired under strict controls to avoid any duplication. This includes:

- *Prohibition of double counting: GHG reductions generated are not simultaneously used or claimed for other purposes or programs.*
- *Prohibition of double issuance: Credits are issued only "ex-post", after verification by an independent body that confirms compliance with the requirements of the BCR Program.*
- *Double withdrawal ban: Withdrawn credits are permanently recorded, ensuring that they cannot be resold or used again.*

Application of the ADC Tool

This Tool is used to ensure that each credit generated is unique and traceable, and that emissions reductions are not claimed by multiple projects or jurisdictions. It is structured in three stages:

a) Avoid Double Issuance

1. Exclusive Registration

- *The Project is registered solely in the BCR Program system, with no duplication in other carbon standards or programs.*
- *The Project owner provides documented evidence that the peatlands have not previously been used to generate carbon credits under other programs.*

2. Independent Validation and Verification

- *All emission reductions are validated and verified by an independent assessment body (VVB) accredited by the BCR Program, ensuring the accuracy and uniqueness of the credits issued.*

b) Avoid Dual Use

1. Serialization of Credits

- *Each credit generated will be identified with a unique serial number detailing the location, mitigation period and Project activities.*
- *The traceability of credits is guaranteed through the BCR Program's registration system.*

2. Tracking and Transparency

- *The BCR Program's public registry allows you to check the status of each loan online (active, transferred or withdrawn), ensuring transparency and avoiding duplication.*

c) Avoid Double Claiming

1. Annual Reports

- *The Project reports emissions reductions and removals annually, facilitating accountability to national and international authorities.*
- *Annual reports include details on credits issued, transferred and retired, ensuring that all claims for emission removals and/or reductions are transparent and verifiable.*

d) Supervision

The Project applies robust monitoring mechanisms to ensure compliance with the requirements:

- *Continuous Monitoring: The Project area is monitored using geospatial tools (such as KMZ files), ensuring the accuracy of the Project boundaries and avoiding overlaps with others.*
- *Periodic Verification: An external auditor conducts reviews to confirm that the removals and/or reductions of emissions generated are reported in a unique manner and there are no duplications in their accounting.*

16 Monitoring plan

16.1 Description of the monitoring plan

Components of the Monitoring Plan

(a) Monitoring Project Boundaries

- *Method: An annual review will be conducted using high-resolution satellite imagery and GIS/KMZ files to validate the physical boundaries of the Project. This analysis will verify the stability of the Project area and the absence of unauthorized land use alterations.*
- *Frequency: Annual review.*
- *Indicators:*
  - *Consistency of physical boundaries compared to maps established at the start of the Project.*
  - *Absence of unauthorized alterations in the Project area.*

(b) Monitoring the Execution of Project Activities

- *Method: Detailed record of activities such as invasive species control, ecological restoration and environmental monitoring, including their alignment with specific Project objectives.*
- *Frequency: Annual report.*

- *Indicators:*
  - *Compliance with the established schedule of activities.*
  - *Verifiable progress in ecological restoration, control of invasive species and improvement of environmental conditions.*

(c) Monitoring the Quantification of Project Emissions Reduction/Absorption

- *Method: Using BCR-approved models to estimate carbon reductions and removals. Calculations will be based on variables such as accumulated biomass and Sphagnum cover, following the applied methodological procedures.*
- *Frequency: Annual analysis.*
- *Indicators:*
  - *Amount of CO_2e reduced or absorbed in the quantification period.*

(d) Quality Control and Quality Assurance Procedures

- *Method: Implementation of annual internal checks to assess the accuracy of the data collected. Independent external audits will be conducted every five years to validate compliance with BCR standards.*
- *Indicators:*
  - *Percentage of accurate data in annual reports.*
  - *Demonstrated compliance with international standards during external audits.*

(e) Field Data Verification

- *Method: Direct monitoring of key variables such as Sphagnum cover, water levels in peatlands and biodiversity through field inspections.*
- *Frequency: Annual field data collection.*
- *Indicators:*
  - *Agreement between field data and Project reports.*

(f) Review of Information Processing

- *Method: Statistical validation of the collected data and cross-review to detect and correct inconsistencies before inclusion in the annual reports.*
- *Frequency: Annual review prior to issuing monitoring reports.*
- *Indicators:*
  - *Percentage of inconsistencies detected and corrected.*

(g) Data Registration and Archiving System

- *Method: Use of a secure digital platform to store and manage all collected data, ensuring traceability and accessibility during external audits.*
- *Frequency: Annual updates before reports are issued.*
- *Indicators:*
  - *Availability of updated and complete records.*
  - *Data accessibility for internal and external reviews.*

2. Information for Monitoring and Mitigation Results

(a) Data to Estimate GHG Emissions Elimination/Reduction

- *Key Variables:*
  - *Sphagnum mulch.*
  - *Accumulated biomass.*
  - *Carbon capture rates per hectare.*
- *Procedures: Obtaining representative samples in the field, analyzed in specialized laboratories. The results will be integrated into estimation models approved by the BCR Standard.*

(b) Data to Establish the Base Scenario

- *Key Variables:*
  - *Historical rates of degradation.*
  - *Average emissions in the absence of intervention.*
- *Procedures: Analysis of satellite imagery and historical data to ensure that the baseline scenario is additionally and methodologically robust.*

(c) Leaks

The Project does not generate leakage, since the implemented activities are not expected to displace emissions outside the defined limits.

(d) Environmental Impact Assessment

- *Key Variables:*
  - *Biodiversity.*
  - *Water quality.*
  - *Soil stability.*

- *Procedures: Annual inspections to measure changes in these variables in relation to initial conditions.*

(e) Emissions Reductions/Removals Management and Quality Control

- *Method: Internal validations with standardized procedures and periodic external audits to ensure the quality of the reported reductions.*

(f) Periodic Calculation of GHG Reductions

- *Method: Application of formulas approved by the BCR Standard for the calculation of reduced and removed emissions, using validated field data***.**

(g) Assignment of Roles and Responsibilities

- *Project Manager: Responsible for overall supervision, monitoring and annual reporting.*
- *Technical Team: Responsible for field data collection and initial analysis.*
- *External Auditors: Independent verification of results.*

(h) Procedures for Evaluating Contribution to the SDGs

- *The Project contributes directly to the following SDGs, which are explained in more detail in item 10:*
  - *SDG 6: Clean water and sanitation, through water regulation in peatlands.*
  - *SDG 13: Climate action through emissions reduction.*
  - *SDG 15: Life on land, promoting biodiversity conservation.*
  - *SDG17: Partnerships to achieve goals, fostering strategic alliances to strengthen research and knowledge exchange in peatland conservation.*

(i) SDG Criteria and Indicators

- *Criteria:*
  - *Increase in ecosystem resilience.*
  - *Increase in carbon storage capacity.*
  - *Strengthening local technical and scientific capacities for peatland conservation.*

- *Indicators:*
  - *Annual increase in biomass.*
  - *Verifiable improvements in water regulation.*
  - *Increase in local research initiatives funded or developed.*

(k) Monitoring of Co-benefits

The Project does not contemplate special category co-benefits at this time, but monitors benefits associated with biodiversity and general ecosystem services as part of environmental monitoring.

The MRV system ensures a robust process, based on methodologies approved by the BCR Standard, with a high level of accuracy in data collection, analysis and archiving. Annual reports will include mitigation results, contributions to the SDGs and progress in Project activities, supported by independent audits that reinforce the transparency and credibility of the process.

16.2 Data and parameters determined at registration and not monitored during the quantification period, including default values and factors

Data/Parameters	*Organic carbon.*
Data unit	*kg C m3*
Description	*Organic carbon of soil samples.*
Data source used	*Soil sample taken from the same representative sampling points during each year of validation/verification.*
Values)	*0*
Please indicate what the data is used for (baseline emissions calculations/Project/leakages)	*Project Emissions Removal and Reduction Calculation*
Justification of the choice of data or description of the measurement methods and procedures applied	*The organic carbon density of peat layers can be measured directly in the laboratory using standard methods (Chambers et al., 2010). Organic carbon density (g C cm3) is quantified as the product of the organic matter density (g cm3) and the total C content (% gravimetric) of a peat sample. To measure organic matter density, samples of a given volume of peat are dried overnight at 105°C, weighed to determine bulk density, fired at 550°C for two hours, and weighed again to determine their organic matter content. Total C content is usually measured*

	directly by combustion and elemental analysis of dried peat samples.
Additional comments	*Soil sampling is carried out by qualified personnel, together with cold chain care for all samples, and then analysis of the sample in the agranomy laboratory of the Catholic University of Chile, an organization that has the machinery and international certificates to ensure optimal quality of the results.*

16.3 Data and parameters monitored

Data/Parameters	*Organic carbon*
Data unit	*kg C m3*
Description	*Organic carbon from soil samples*
Measured/Calculated/Default:	*2,619.8 average of all sampling sites*
Data source	*Soil sample taken from the same representative sampling points during each year of validation/verification*
Value(s) applied	*0*
Please indicate what the data is used for (baseline emissions calculations/Project/leakages)	*Calculation of removal and emission reduction of the Project.*
Monitoring frequency	*It is carried out in each validation/verification process.*
Measurement/reading/recording frequency	*It is carried out in each validation/verification process.*
Measurement/calculation method (if applicable)	*Method is already explained in section 16.2*
Quality control procedures applied	*Cold chain monitoring is carried out to ensure that samples are not affected by ambient temperature.* *All QA/QC procedures are followed by the respective laboratory that performs the analysis and that meets the highest international standards to obtain the respective Organic Carbon result.*

17 Bibliography

Agüero, T. (2013). *Sphagnum moss: sustainable resource management*. Office of Agricultural Studies and Policies [ODEPA] – Ministry of Agriculture. https://www.odepa.gob.cl/wp-content/uploads/2018/05/Musgo-sphagnum-Manejo-sostenible-del-recurso.pdf

BioCarbon Registry. (2023). *BCR Tool. Sustainable Development Goals (SDG) – Version 1.0.* BioCarbon Cert.

BioCarbon Standard. (2023b). *Sustainable Development Goals (SDG) – Version 1.0.* BioCarbon Cert.

BioCarbon Standard. (2024b). *Baseline and additionality – Version 1.3.* BioCarbon Cert.

BioCarbon Standard. (2023a). *Monitoring, Reporting and Verification (MRV) – Version 1.0.* BioCarbon Cert.

BioCarbon Standard. (2024e). *Permanence and risk management – Version 1.1.* BioCarbon Cert.

BioCarbon Standard. (2024f). *Sustainable Development Safeguards (SDS) – Version 1.1.* BioCarbon Cert.

BioCarbon Standard. (2024a). *Avoiding Double Counting (ADC) – Version 2.0.* BioCarbon Cert.

BioCarbon Standard. (2024d). *BCR0007 Conservation and restoration of inland natural wetlands – Version 1.0.* BioCarbon Cert.

BioCarbon Standard. (2024c). *BCR Standard – Version 3.4*. BioCarbon Cert.

Chile Agenda 2030. (nd). *Chile's strategy for the implementation of the 2030 agenda.* Sustainable Development Goals. Government of Chile. https://www.chileagenda2030.gob.cl/storage/docs/Estrategia_de_Implementacion_Agenda2030.pdf

Ramsar Convention on Wetlands. *(2015). The Ramsar Convention: What is it about?* https://www.ramsar.org/sites/default/files/fs_6_ramsar_convention_sp_0.pdf

Ramsar Convention on Wetlands. (2017). *Keeping peatlands wet for a better future.* https://humedaleschile.mma.gob.cl/wp-content/uploads/2017/10/turberas.pdf

Ramsar Convention on Wetlands. (2022). *Restoring drained peatlands: a necessary step towards achieving global climate goals.* https://www.ramsar.org/sites/default/files/documents/library/rpb5_restoring_drained_peatlands_s_1.pdf

Cycles Environmental Solutions [CES]. (2024). *Study of carbon reservoirs in coastal subpolar ecosystems in Chile.* Technical report.

General Directorate of Water [DGA] and Ministry of Public Works [MOP]. (2024). *Prohibited drainage area in peatlands. Magallanes and Chilean Antarctica Region.* https://sitministerial.maps.arcgis.com/apps/View/index.html?appid=9b016a5df84744b8955632cc616f25fc

Domínguez, E. and Vega, D. (2015). *Ecosystem functions and services of peatlands in Magallanes.* Agricultural Research Institute. https://biblioteca.inia.cl/items/57828c31-601a-4d1e-a5aa-f9c20d0268b9

Domínguez, E., Vega-Valdés, D. and Muñoz, C. (2015). *Ecological restoration of a Sphagnum peatland in the Magallanes region.* Agricultural Research Institute [INIA]. https://biblioteca.inia.cl/server/api/core/bitstreams/48a450f0-7dfe-412a-981e-ebe4bf4fdcb2/content

Food and Agriculture Organization [FOA]. (2013). *Climate change adaptation measures.* https://openknowledge.fao.org/server/api/core/bitstreams/40c70ee6-45b6-401c-93fa-9d70a177b914/content/i2498s05.pdf

Guadarrama, R., Kido, J., Roldan, G. and Salas, M. c Water pollution. *Journal of Environmental Sciences and Natural Resources.* 2(5), 1-10. https://www.ecorfan.org/spain/researchjournals/Ciencias_Ambientales_y_Recursos_Naturales/vol2num5/Revista_de_Ciencias_Ambientales_y_Recursos_Naturales_V2_N5_1.pdf

Forestry Institute [INFOR]. (2019). *Forestry Yearbook 2019.* Ministry of Agriculture. [Downloadable document]. https://wef.infor.cl/?option=com_wef&task=GetFile&format=raw&id=11&f=17&n=2019

Military Geographic Institute [IGM]. (n.d.). *Map of the Magallanes and Chilean Antarctica region.* https://www.igm.cl/MAPAIGM/CHILE%20REGIONES/DPA/region_de_magallanes_y_de_la_antartica_chilena.jpg

IPCC. (2006). *Chapter 7 – Wetlands.* https://www.ipcc-nggip.iges.or.jp/public/2006gl/spanish/pdf/4_Volume4/V4_07_Ch7_Wetlands.pdf

Law No. 19,300 of 1994. Approves the law on general bases of the Environment. March 1, 1994. DO No. 34810.

Law No. 19,473 of 1996. Substitutes the text of Law No. 4,601 on hunting and Article 609 of the Civil Code. September 4, 1996.

Law No. 21,202 of 2020. Modifies various legal bodies with the aim of protecting urban wetlands. January 16, 2020. DO No. 42560.

Law No. 21,455 of 2022. Framework Law on Climate Change. May 30, 2022. DO No. 43277.

Law No. 21,600 of 2023. Creates the Biodiversity and Protected Areas Service and the National System of Protected Areas August 21, 2023. DO No. 43646.

Law No. 21,660 of 2024. On the Protection of Peatlands. March 26, 2024. DO No. 43822.

Law No. 24,435 of 2022. Reform of the Water Code. March 25, 2022. DO No. 43222.

Lindsay, R. (2010). *Peatbogs and carbon: a critical synthesis to inform policy development in oceanic peat bog conservation and restoration in the context of climate change.* RSPB Scotland. www.iucn-uk-peatlandprogramme.org/sites/default/files/2019-07/Peatbogs_and_carbon.pdf

Loisel, J. (2015). *Peatlands as carbon sinks.* Punta Arenas: INIA Books Collection - Institute of Agricultural Research. no. 33. https://hdl.handle.net/20.500.14001/3588

Ministry of the Environment. (nd). *Nationally Determined Contribution (NDC).* https://cambioclimatico.mma.gob.cl/contribucion-determinada-ndc/descripcion-del-instrumento/

Ministry of the Environment. (2015). *National Wetlands Inventory Program.* *https://humedaleschile.mma.gob.cl/inventario-humadales/*

United Nations [UN]. (1992). *United Nations Framework Convention on Climate Change.* https://unfccc.int/resource/docs/convkp/convsp.pdf

Online navigation platform. (sf). *ISO 14064-3:2019(es).* https://dgn.isolutions.iso.org/obp/ui#iso:std:iso:14064:-3:ed-2:v1:es:sec:3

United Nations Development Programme [UNDP]. (2017). *Economic valuation of the impact of seven invasive alien species on productive sectors and biodiversity in Chile.* Santiago de Chile. https://especies-exoticas.mma.gob.cl/wp-content/uploads/2018/12/1.-LIBRO-Valoracion-economica-EEI-FINAL.pdf

Resolution 734 EXEMPT of 2024 [Ministry of Public Works; General Directorate of Water]. Delimits areas of prohibition of drainage of peatlands in the region of Magallanes and Chilean Antarctica, according to art. 47 of the water code. April 2, 2024.

Rulamahue. (sf). *Timaukel Municipality.* https://www.rulamahue.cl/archive/cl12303_archivos/12303_401_timaukel.jpg

National Geology and Mining Service [SERNAGEOMIN]. (2024). *Chilean Mining Yearbook.* https://www.sernageomin.cl/anuario-de-la-mineria-de-chile/

National Greenhouse Gas Inventory System. (2022). *Chile National Inventory Report 2022: National inventory of greenhouse gases and other climate pollutants 1990-2020.* Ministry of Environment. [Downloadable document]. https://snichile.mma.gob.cl/wp-content/uploads/2023/04/2022_IIN_CL.pdf

United Nations Environment Program [UNEP]. (2022). *Global Peatlands Assessment – The State of the World's Peatlands: Evidence for action toward the conservation, restoration, and sustainable management of peatlands. Main Report.* [Document downloadable]. Global Peatlands Initiative. United Nations Environment Programme, Nairobi. https://www.unep.org/resources/global-peatlands-assessment-2022

UNFCCC/CCNUCC. (2007). *A/R Methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities"* (Version 01). https://cdm.unfccc.int/methodologies/ARmethodologies/tools/ar-am-tool-02-v1.pdf

Zero Carbono. (2024). Public Presentation Report, "Cameron Project". Studies of Timaukel Municipality, Chile.

NOTE: This Project Document (PD) must be completed following the instructions included therein. However, it is important to note that these instructions are complementary to the BCR STANDARD, and the Methodology applied by the Project owner, in which more information on each section can be found.