Public Project Description

This document is a project description made available in the Puro Registry to summarize the information available about a certified production facility. The project description is organized as follow:

1 Production Facility and Supplier information

This project description corresponds to the following **Production Facility** and **CO_2 Removal supplier**, acting as registering entity of the facility.

Production Facility	
Production Facility name	Carbonsate Namibia 1
Registration date (YYYY-MM-DD)	2024-01-09
Production Facility ID	583695
Location of facility	Yakandonga Farm, Otjiwarongo, C33
Host Country of removal	Namibia
Has this facility been registered in another registry?	☒No ☐Yes, additional information (registration periods):
This table is filled in by the CO_2 Removal Supplier.	

CO_2 Removal Supplier	
Supplier name	Carbonsate UG (haftungsbeschränkt)
Supplier address	Invalidenstr. 65, 10557 Berlin
Business ID	HRB 257428 B
KYC status	Completed
This table is filled in by the CO_2 Removal Supplier.	

The above-mentioned production facility has undergone the following audit, during which the project description, alongside other audit documents were verified.

Facility Audit	
Type of audit	Combined Facility and Output Audit
General Rules version	4.1
Methodology name	Terrestrial Storage of Biomass
Methodology edition and version	Edition: 2023 Version: 1
Date of audit completion	2025-12-12
Conclusion of audit	Earthood affirms that the organization has the appropriate equipment, procedures, and protocols in place and documentation to quantify CO2 removal through the terrestrial storage of biomass via storage site design principles, robust monitoring system for storage conditions, risk management plan and appropriate lifecycle analysis in accordance with the

	requirements of the puro. Earth General Rules and TSB methodology.
Auditing body	Earthood Services Limited
Start date of crediting period	2025-01-01
End date of crediting period	2030-01-01
This table is filled in by the Issuing Body.	

2 Overview of activity, its location, and operators

The information in this section provides an overview of how and where carbon dioxide removal is achieved, and by whom.

2.1 Non-technical description

Instructions	*Please provide a non-technical description of the carbon removal activity taking place at the production facility. Word limit: 100 words.*
Non-technical description	Carbonsate's project removes carbon dioxide by storing waste biomass underground in sealed chambers. The biomass, encroacher bush cleared from local land, is placed in oxygen- and moisture-limited conditions that prevent it from decomposing. This process locks the carbon inside the biomass away for over 100 years, avoiding its release as CO_2 or methane. The project is monitored with sensors and certified under the Puro.earth standard. It supports land restoration, reduces wildfire risk, and creates local jobs, while providing a scalable, nature-based solution for durable carbon removal.
This table is filled-in by the supplier and verified by the auditor.	

2.2 Locations

Instructions	*Please provide a list of locations associated with the carbon removal activity. Additional locations or areas can refer to e.g. the location of the storage site, the spatial extent of the area of use of a carbon removal product or sourcing of a specific feedstock.*
Production Facility Location (as registered)	Address: Yakandonga Farm, Otjiwarongo C33 Coordinates (WSG84, decimal format): Latitude: 20.665278 Longitude: 16.330278
Additional location(s)	*Specify purpose, location, address, coordinates, to the extent possible, for one or multiple additional locations relevant to the removal activity.* Click or tap here to enter text.
This table is filled-in by the supplier and verified by the auditor.	

2.3 Operators

Instructions	*Please provide a full list of operators or organizations that contribute to the removal activity. Add rows as necessary. For each entity, provide the name, a business ID, an address, and the role of the entity.*
CO_2 Removal Supplier	*Entity name: Carbonsate UG (haftungsbeschränkt)* *Entity business ID: HRB 257428 B* *Entity address: Invalidenstr. 65, 10557 Berlin*

	Role of entity: Removal Supplier
Organization 2	*Entity name: Hecla Consulting* *Entity business ID:* *Entity address: P.O. Box 34, Kalkfeld, Namibia* *Role of entity: Project Partner*
Organization 3	*Entity name: Endelela Farmin CC* *Entity business ID:* *Entity address: P.O. Box 82, Otjiwarongo Yakandonga Farm 528, Namibia* *Role of entity: Biomass Supplier and Land Owner*
This table is filled-in by the supplier and verified by the auditor.	

3 Technical description of the removal activity

The information in this section provides more technical details about the technologies and processes deployed to achieve carbon dioxide removal.

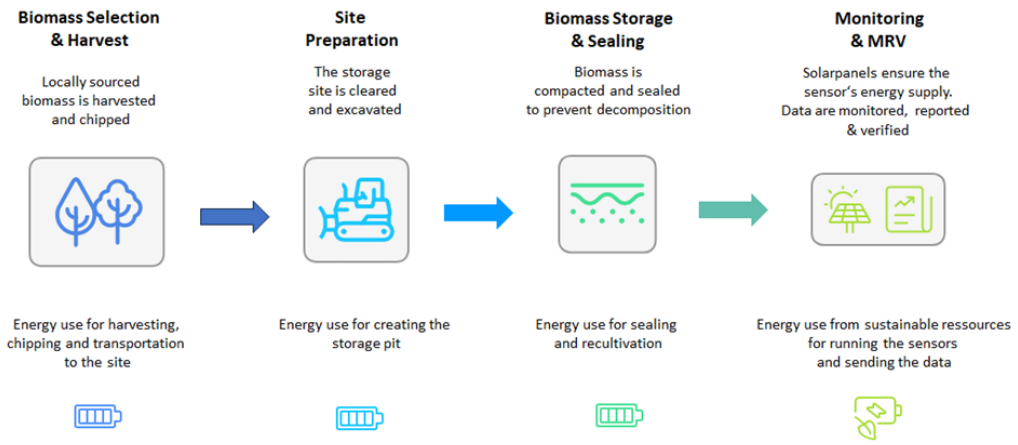
3.1 Technical description

Instructions	*Please provide a technical description of the carbon removal activity taking place at the production facility. Word limit: 500 words.*
Technical description	The Carbonsate biomass storage project removes atmospheric carbon dioxide by preventing the decomposition of biomass through long-term subsurface storage under controlled anaerobic conditions. The project is located near Otjiwarongo, Namibia, and utilizes invasive encroacher bush biomass as its primary feedstock. This type of biomass is cleared from overgrown farmland and rangeland as part of ecological restoration and agricultural productivity efforts. The carbon removal process begins with the harvesting of encroacher bush using mechanical equipment. The biomass is chipped on-site to improve packing density and reduce decomposition risk. Once processed, the biomass is transported to the storage facility and deposited into an engineered storage pit. The storage system consists of a deep pit excavated in stable, low-permeability soil. The pit is lined at the base with a compacted clay layer to prevent water ingress and oxygen infiltration. After loading the biomass, a sealing layer is applied, which typically includes compacted soil, geotextile membranes, and a surface cover designed to shed rainfall. This design minimizes the presence of oxygen and moisture—two key drivers of microbial activity and biomass decay. Once sealed, the storage site enters the monitoring phase. The facility is equipped with a distributed sensor system developed by Carbonsate, which continuously tracks environmental parameters including temperature, oxygen concentration, methane, carbon dioxide, and humidity. Sensors are installed at multiple depths and lateral positions across the storage chamber. Data is transmitted via cellular connection and analyzed to verify that anaerobic, stable storage conditions are being maintained. The core carbon removal mechanism is the physical and chemical stabilization of biomass carbon in the absence of oxygen and excess moisture. This interrupts the natural aerobic decomposition process, which would otherwise return the carbon to the atmosphere in the form of CO_2 or methane. By isolating the biomass for over 100 years, the carbon content is effectively removed from the active carbon cycle.

This table is filled-in by the supplier and verified by the auditor.

3.2 Illustration

Instructions	*Please provide up to three illustrations of the process and technologies described above (e.g. picture of equipment, flowcharts of process).* *Note that you must own the rights to reproduce and publish the illustration and that you also authorize puro.earth to reproduce and publish the illustration in the Puro Registry.*
Authorization to reproduce and publish the illustration	☒ Puro.earth is authorized to reproduce and publish the illustrations below, for use in the Puro Registry.



4 Application of the Puro Standard (boundary, baseline, additionality, quantification)

4.1 Scope and project boundary

Instructions	*Please provide a brief demonstration that the removal activity described above fits within the scope of the methodology and that the system boundaries of the removal activity correspond to the ones defined in the methodology. Word limit: 150 words.*
Scope and system boundary	The Carbonsate Namibia project fully aligns with the Puro.earth "Terrestrial Storage of Biomass" methodology (2023 version). The project involves the long-term storage of lignocellulosic biomass (encroacher bush) in engineered, subsurface storage chambers designed to maintain anaerobic and low-moisture conditions. This corresponds directly to the methodology's definition of eligible storage systems and feedstocks. The system boundaries of the project include biomass harvesting, processing (chipping), transportation, trench construction, storage, sealing, and long-term monitoring, matching the boundaries defined in Section 4.3 of the methodology. Additionally, the baseline scenario used assumes biomass would otherwise decompose or be openly burned, consistent with Section 4.1. The project also incorporates a sensor-based monitoring system to track oxygen, methane, and other relevant indicators as required in Section 4.4. As such, the activity is demonstrably eligible under the methodology and satisfies all requirements related to system design, boundary definition, baseline, and permanence monitoring.
This table is filled-in by the supplier and verified by the auditor.	

4.2 Baseline scenario

*The information in this section provides a summary of the project-specific **baseline scenario**.*

Instructions	*Please provide a summary of the project-specific baseline scenario. The summary shall be based on the additionality questionnaire (available separately). Word limit: 150 words.*

Summary of the project-specific baseline scenario
The baseline scenario for the Carbonsate Namibia project involves the standard end-of-life pathways for harvested encroacher bush biomass: open burning, use in bioenergy (e.g. cement industry heat), or conversion to charcoal. These practices are common due to their low cost and accessibility but result in the rapid re-emission of nearly all stored carbon. None provide durable carbon storage over 100 years. While these pathways may offer short-term utility, they do not achieve net-negative emissions or contribute to long-term sequestration. Moreover, the regional biomass supply is abundant, meaning substitution effects are negligible. In the absence of the project, the biomass would continue to be burned, decomposed, or used in inefficient combustion. The Carbonsate project instead stores biomass in sealed, anaerobic pits to prevent decay and achieve durable removal. Therefore, the project scenario represents a significant increase in carbon permanence and is clearly additional to the baseline alternatives.
This table is filled-in by the supplier and verified by the auditor.

Further information on the baseline scenario:

Instructions	*If the methodology explicitly defines one or several possible baseline scenarios for the removal activity, please specify which ones was selected:*
Selected baseline scenario	Click or tap here to enter text.
This table is filled-in by the supplier and verified by the auditor.	

4.3 Demonstration of additionality

*The information in this section provides a summary of the project-specific **additionality assessment**.*

Instructions	*Please provide a summary of the project-specific additionality assessment, considering baseline removal, regulatory and financial additionality. The summary shall be based on the additionality questionnaire (available separately). Word limit: 150 words.*
Summary of additionality assessment	
The Carbonsate Namibia project meets the key criteria for additionality. Carbon removal in the baseline scenario does not occur; without the project, biomass would be subject to open burning, decomposition, or limited charcoal or industrial heat use, all of which re-emit carbon quickly and do not provide durable storage. Regulatory additionality is met, as there are no legal mandates in Namibia requiring biomass storage or long-term carbon sequestration. The project is entirely voluntary and goes beyond existing environmental obligations. Financial additionality is demonstrated by the project's full reliance on carbon finance. The construction, biomass procurement, sealing, and monitoring of the storage pits require upfront investment that local stakeholders cannot bear without credit revenue. No alternative funding sources or subsidies are available. The project is therefore not viable without access to the voluntary carbon market, clearly fulfilling the financial additionality requirement of the methodology.	
This table is filled-in by the supplier and verified by the auditor.	

The following files are further made available in the Puro Registry.

Additionality questionnaire (required)	Filename	"Puro Additionality Questionaire Carbonsate Namibia.pdf"
	Description	Additionality questionnaire signed and audited, used to determine the additionality of the project following the Puro requirements for additionality.
Additional file (optional)	Filename	
	Description	

Additional file (optional)	Filename	
	Description	
Add rows as necessary, following same template as for additional file. The filename shall be the exact filename as provided in the audit documentation. The description shall be at most a 3-line summary of what the file contains. This table is filled-in by the supplier and verified by the auditor.		

4.4 Quantification of net carbon dioxide removal

*The information in this section provides a description of how **quantification of net carbon dioxide removal removals** is achieved, including **monitoring** of the removal activity, and calculation of **supply-chain emissions**.*

Quantification implementation

Instructions	*Please describe how the quantification of net carbon dioxide removal, as described in the methodology (see CORC equation), is implemented by the supplier. Word limit: 200 words.*
Description of quantification implementation	
Carbonsate quantifies net carbon dioxide removal using the CORC equation as outlined in the Puro.earth "Terrestrial Storage of Biomass" methodology. The calculation starts with the dry mass of stored biomass, measured at the time of pit loading. Biomass is chipped and weighed on-site, and representative moisture samples are taken to determine the dry weight fraction. The carbon content of the biomass is verified via lab analysis. The resulting biogenic CO_2 equivalent is calculated using stoichiometric factors (44/12). To determine net removal, Carbonsate subtracts all project emissions, including fuel use during harvesting, transport, pit excavation, sealing activities, and sensor system deployment. These emissions are calculated using activity data (e.g. liters of diesel) and standard emission factors. A conservative deduction is applied for potential biomass degradation or losses, especially in early projects according to Section 6 of the methodology. Long-term monitoring will validate these assumptions. Finally, a buffer reserve is held to account for potential non-permanence risks. All data and assumptions are documented and auditable, and the full CORC calculation is provided to the verifier in alignment with Section 5 and 6 of the methodology.	
This table is filled-in by the supplier and verified by the auditor.	

Monitoring and reporting

Instructions	*Please provide a summary of the monitoring procedures and monitoring plan which are in place at the production facility to ensure i) the safety of the removal activity, ii) the eligibility of the removal activity, and iii) the precise quantification of CORCs. The summary shall be project-specific and based on related evidence pieces that were submitted in the audit documentation. Word limit: 500 words.*
Summary of monitoring and reporting plan	
The Carbonsate Namibia project features a dedicated, project-specific monitoring system designed to ensure that the biomass remains in stable, anaerobic, and low-moisture conditions over the long term, in accordance with the Puro.earth "Terrestrial Storage of Biomass" methodology. The core of the monitoring system consists of custom-built sensor units installed directly in the biomass storage pit. Some of these are placed at the bottom of the pit and the rest just below the upper sealing membrane. These sensors are distributed spatially to represent different zones of the storage environment and provide high-resolution data throughout the entire pit. Each sensor unit continuously measures key environmental parameters, including:	

- Oxygen (O_2) to detect aerobic conditions that could indicate decomposition risk
- Carbon dioxide (CO_2) and methane (CH_4) to track potential emissions and validate anaerobic conditions
- Temperature and gas-phase humidity to monitor thermal and moisture dynamics
- Water presence sensors (bottom only) to detect possible infiltration or pooling

Data is collected every 30 minutes and is stored both locally on SD cards and uploaded to a secure cloud-based dashboard. The data pipeline is powered by a solar panel and battery system, ensuring off-grid operability, and includes built-in diagnostic features to detect power interruptions, data loss, or sensor failure. The system design allows physical access to the monitoring pipes so that sensors can be retrieved and recalibrated or replaced if necessary, supporting reliable performance over the full crediting period.
In addition to fixed sensors, portable high-sensitivity methane detectors are used to conduct quarterly perimeter and on-site gas measurements. These mobile checks serve as a secondary validation layer for methane emissions from the storage site, especially valuable in early-stage projects where empirical data is still being collected to refine degradation assumptions and inform conservative accounting.

This table is filled-in by the supplier and verified by the auditor.

Optionally, the following documents may be made available in the Puro Registry once the facility has completed its first Output Audit:

Can the monitoring plan and procedures be made available in the Puro Registry?	
Answer	☐ Yes, entirely. ☐ Yes, in a redacted version. ☒ No. If no, please provide a reason: IP relevant information.
Filename(s) to be made public	

This table is filled-in by the supplier.

Supply-chain emissions

The determination of the supply-chain emissions of the removal activity shall be based on a project-specific life cycle assessment, made of a report and calculations. Calculations are updated at least annually, during the Output Audits, with data captured through above-described monitoring.

Instructions	*Please provide a summary or an abstract of the LCA performed. Word limit: 500 words.*
Summary of life cycle assessment	
A life cycle assessment (LCA) was conducted to evaluate the net climate impact of Carbonsate's terrestrial biomass storage project in Namibia. The assessment quantifies the greenhouse gas (GHG) emissions and removals associated with the full life cycle of the project, from biomass harvesting through site construction and monitoring, to long-term storage over a 100-year time horizon. The study uses the IPCC AR6 100-year global warming potential (GWP100) metric and conforms to ISO 14044 methodological standards. The system boundary includes biomass harvesting and transport, soil disturbance from site preparation, diesel and fuel use for heavy machinery and transport, production and installation of sealing and monitoring systems, and operational emissions from digital infrastructure. The functional unit is the storage of 1,000 tonnes of woody biomass over 100 years. Conservative assumptions were applied throughout the analysis, particularly regarding potential re-emissions from stored biomass and soil carbon loss. Data sources include direct field measurements, standardized emission factors, and peer-reviewed literature. Uncertainty analyses were conducted for key variables such as soil carbon dynamics and moisture content.	

The LCA revealed that the largest share of project emissions originated from diesel consumption during site excavation, biomass harvesting, and transport, accounting for the majority of operational CO_2e output. This was followed by soil disturbance emissions, primarily from land preparation and biomass removal, which contributed a smaller but notable portion to the total. Travel-related emissions, including international flights and local transport by the project team, were also significant, representing a meaningful fraction of the footprint. The production and installation of the HDPE sealing system added further emissions, though relatively limited compared to fuel use. Finally, the sensor-based monitoring system, including electronics, data transmission, and digital infrastructure, contributed a minimal share to overall emissions. In total, these components resulted in project emissions of approximately 67 tCO_2e, substantially outweighed by the durable carbon stored through the burial of 1,000 tonnes of woody biomass.
This table is filled-in by the supplier and verified by the auditor.

Optionally, the following documents may be made available in the Puro Registry once the facility has completed its first Output Audit:

Can the LCA report be made available in the Puro Registry?	
Answer	☐ Yes, entirely. ☐ Yes, in a redacted version. ☒ No. If no, please provide a reason: Project design sensitive information.
Filename(s) to be made public	
This table is filled-in by the supplier.	

5 Social and environmental safeguards

The information in this section provides a summary of the project-specific measures taken to avoid and minimize negative social and environmental effects, as well as maximize positive impacts contributing to the sustainable development goals (SDGs).

5.1 Stakeholder engagement

In line with the Puro General Rules, the CO_2 Removal Supplier must have conducted a stakeholder engagement process and reported its outcome in a written format.

Instructions	*Please reproduce the summary of the stakeholder engagement report. Word limit: 500 words.*
Summary of stakeholder engagement	
The stakeholder engagement process for the Carbonsate Namibia biomass storage pilot project focused on directly relevant local actors. Key stakeholders included Endelela Farming CC (owners of Farm Yakandonga, the project site), farm personnel, the Local Forestry Department in Otjiwarongo, Urban Green Environmental Consultants, and carbon removal expert Colin Lindeque. No indigenous or vulnerable groups were identified, as the project is located on private agricultural land without nearby communities. Engagement activities included a site visit in November 2024 with Endelela Farming to discuss biomass harvesting and storage, and an in-office consultation in January 2025 with Urban Green Environmental Consultants regarding environmental impact and regulatory context. Broader public invitations were not issued, as the pilot project operates entirely on private land. Stakeholders received detailed information about the project's goals, methodology, and anticipated environmental and economic benefits. Feedback was overwhelmingly positive. Local farmers saw the project as a promising opportunity to make productive use of unused biomass and expressed interest in scaling up the initiative. One question raised was why biomass is stored	

rather than converted into biochar. Carbonsate explained that terrestrial storage offers greater carbon removal potential than current practices like open burning or industrial use, while also contributing to land restoration and biodiversity. No significant concerns or objections were raised during the consultations. Urban Green confirmed that while Namibia lacks specific regulations for biomass burial, the project aligns with existing policies on biomass harvesting and sustainable land use. Carbonsate plans to maintain ongoing stakeholder engagement throughout the crediting period. This includes regular project meetings and open communication channels via email and messaging apps. Further stakeholders will be involved as the project develops, ensuring transparency and responsiveness. In summary, the engagement process confirmed strong local support and no social or environmental objections. Stakeholders were enthusiastic about the project's benefits, and Carbonsate remains committed to open, long-term dialogue as the project progresses.
This table is filled-in by the supplier and verified by the auditor.

In addition, the following documents are made available in the Puro Registry once the facility has completed its first Output Audit:

Stakeholder Engagement Report (required)	Filename	Puro Stakeholder Engagement Report Carbonsate Namibia.pdf
	Description	Stakeholder engagement report completed and audited, following the Puro requirements for stakeholder engagement.
The filename shall be the exact filename as provided in the audit documentation. This table is filled-in by the supplier.		

5.2 Environmental and social safeguards

In line with the Puro General Rules, the CO_2 Removal Supplier must ensure that environmental and social safeguards are in place.

Instructions	*Please summarize the environmental and social impacts relevant to the project, based on the answers provided to the corresponding questionnaire in the audit documentation. Word limit: 500 words.*
Summary of environmental and social safeguards questionnaire	
Environmental and Social Impacts Summary The Carbonsate biomass storage project in Namibia delivers both environmental restoration and long-term climate benefits while maintaining a low-impact project footprint. The initiative targets the widespread problem of bush encroachment, a major ecological issue in Namibia that reduces biodiversity, depletes groundwater, and impairs rangeland productivity. By harvesting and storing excess biomass underground, the project sequesters carbon for over 100 years and restores degraded savanna ecosystems. **Environmental Impacts** *Positive Impacts:* The removal of encroacher bush, such as *Senegalia mellifera* and *Vachellia reficiens*, improves grazing capacity, enhances biodiversity, and increases groundwater availability. Land cleared of invasive woody species supports the regrowth of native grasses and forbs, benefitting both agriculture and wildlife. Biomass harvesting is coupled with restoration strategies like replanting and regrowth suppression to ensure long-term ecological balance. The carbon sequestration process itself is highly controlled. Biomass is dried, chipped, and stored in a sealed underground pit lined with a high-density polyethylene (HDPE) geomembrane, ensuring no decomposition occurs. Real-time monitoring systems track gas concentrations, moisture, and temperature inside the storage site to guarantee permanence and detect anomalies.	

Negative Impacts and Mitigation: Environmental drawbacks are minimal and largely localized. Soil compaction may occur along biomass transport routes and at the storage site, but these effects are limited due to the use of existing roads and the small project footprint. Excavation disturbs soil and vegetation, but the site was selected to avoid sensitive ecosystems. Nutrient-rich topsoil is removed, stored, and reapplied after project closure to support land recovery. Hydrological risks are minimal. The excavation depth of 3 meters does not reach the groundwater table, which lies over 10 meters below the surface. Natural rainwater drainage is preserved, and the project does not interfere with surface water flows. Construction and transport-related emissions are quantified in a Life Cycle Assessment (LCA), and the overall emissions are negligible compared to the amount of CO_2 permanently stored. **Social Impacts** The project supports local employment through biomass harvesting and transport. It aligns with national strategies for bush control and biomass utilization, contributing to the development of a sustainable biomass economy. The use of commercial farmland simplifies land access and supports farmer income while avoiding the need for communal land use approvals. By integrating Namibia's national rangeland management goals and biomass strategies, Carbonsate promotes inclusive rural development and climate resilience. The project also contributes knowledge and infrastructure for future scaling and replication in similar arid regions.
This table is filled-in by the supplier and verified by the auditor.

In addition, the following document is made available in the Puro Registry once the facility has completed its first Output Audit:

Stakeholder Engagement Report (required)	Filename	Puro Stakeholder Engagement Report Carbonsate Namibia.pdf
	Description	Questionnaire based on a template provided by Puro, to ensure compliance with the Puro General Rules, regarding social and environmental safeguards.
The filename shall be the exact filename as provided in the audit documentation. This table is filled-in by the supplier.		

5.3 Permits, risk assessments and impact assessments

Depending on the nature and scale of the removal activity, the CO_2 Removal Supplier may have obtained permits or conducted specific environmental assessments (e.g. Environmental and Social Impact Assessment, Environmental Risk Assessment) for compliance with local laws and regulations.

Were the obtention of one or several construction or environmental permits required for the removal activity, for compliance with local laws and regulations?	
Answer	☐Yes, permits were required and successfully obtained. ☒ No, permits were not required.
Permits obtained	Name of permit: ID of permit: Issuer of permit: Date of issuance: Permit file (.pdf): Permit URL (if available):
If several permits were obtained, provide the information for each of them. This table is filled-in by the supplier and verified by the auditor.	

Was an environmental and social impact assessment study (EIA) conducted?	
Answer	☐ Yes, an EIA was legally required and thereby conducted. ☒ Yes, an EIA was not legally required but conducted voluntarily. ☐ No, an EIA was not legally required and not conducted.
EIA Report (if conducted)	Title of study: Carbonsate Namibia I EIA 2025 Filename of report: Carbonsate Namibia I EIA 2025 DRAFT.pdf Can the report be published in the Puro Registry: Yes/**No**
This table is filled-in by the supplier and verified by the auditor.	

Was an environmental risk assessment study (ERA) conducted?	
Answer	☐ Yes, an ERA was legally required and thereby conducted. ☐ Yes, an ERA was not legally required but conducted voluntarily. ☒ No, an ERA was not legally required and not conducted.
ERA Report (if conducted)	Title of study: Filename of report: Can the report be published in the Puro Registry: Yes/No
This table is filled-in by the supplier and verified by the auditor.	

5.4 Positive impacts on SDGs

Depending on the nature of the removal activity, the activity may have positive impacts on the UN Sustainable Development Goals (SDGs).

Instructions	*Please provide a summary of the positive impacts on the SDGs that the removal activity has or plans to has. This summary shall be project-specific and based on related evidence pieces that were submitted in the audit documentation (SDG Reporting files). Word limit: 150 words.*
Summary	The Carbonsate Namibia biomass storage project contributes positively to several UN Sustainable Development Goals (SDGs). By removing invasive encroacher bush and restoring degraded rangelands, the project supports SDG 15 (Life on Land) through biodiversity enhancement and habitat restoration. Reduced bush density improves groundwater recharge and grazing capacity, benefitting local agriculture in line with SDG 2 (Zero Hunger). The project creates local employment in biomass harvesting, site preparation, and monitoring, contributing to SDG 8 (Decent Work and Economic Growth). By securely sequestering 1,728 tCO_2e of carbon and avoiding open burning, it directly advances SDG 13 (Climate Action).
This table is filled-in by the supplier and verified by the auditor.	

In addition, the following document is made available in the Puro Registry once the facility has completed its first Output Audit:

SDG Reporting (required)	Filename	**insert filename of SDG Reporting**
	Description	SDG Reporting based on a template provided by Puro, disclosing with SDG indicators are reported and how they are or will be demonstrated.
The filename shall be the exact filename as provided in the audit documentation. This table is filled-in by the supplier.		

6 Other documents available in the Puro Registry

Alongside this project description, several other documents are made available in the Puro Registry for more details.

The documents referenced in this project description are compiled in the following table:

Instructions	To finalize the project description, please list the names of all the public documents to be made available in the Puro Registry, in the order they appear, specifying the number of pages of each document. Add rows as necessary.	
#	**Document names**	**No of pages**
1	Puro Additionality Questionaire Carbonsate Namibia.pdf	11
2	Puro Stakeholder Engagement Report Carbonsate Namibia.pdf	6
3		
4		
5		
6		
7		
8		
9		
10		
This table is filled-in by the supplier.		

Besides the documents referenced in this project description, the 3rd-party auditor has reviewed a complete audit package containing numerous documents, performed a site visit, and prepared an audit report and statement.

The facility described here will further be audited annually, in Output Audits, to verify the performance of the removal activity, resulting in the issuance of CORCs. All audits lead to audit reports and statements, which will be available in the Puro Registry, alongside further details on CORC quantification for each monitoring period.

Carbonsate Namibia Project
Baseline and Additionality Assessment

The baseline and additionality assessment is a requirement for eligibility under the Puro Standard. The assessment is made by the CO2 Removal Supplier and verified by the independent 3rd party auditor. **The assessment made in this document will be publicly available in the Puro Registry.**

The Puro Standard only certifies durable carbon removals from the atmosphere that are net-negative and does not certify emissions reductions or avoidance. The CORCs (Carbon dioxide removal certificates), issued therefore represent a net carbon removal (1 $tCO_2eq.$ net) from the atmosphere to a durable storage of minimum 100 years, and for mineralization and geological storage minimum 1000 years. Net carbon removal is determined from stored gross CO_2 volume by subtracting supply-chain emissions from the project, any re-emissions over the guaranteed storage time, any baseline removals taking place in a baseline scenario, and any negative indirect leakage effects relative to the baseline scenario.

The CO_2 Removal Supplier must in this assessment:

- **Define** and quantify all reasonable **baseline alternatives** to the proposed project activity to remove carbon with carbon financing. A baseline is a scenario that reasonably represents the natural and anthropogenic carbon removals to a permanent storage (storage durability over 100 or 1000 years) in the absence of the carbon removal activity proposed by the CO_2 Removal Supplier. Although anthropogenic emissions may take place in the baseline scenarios, these emissions do not constitute a reference point for the quantification of CORCs (only the baseline removals do).
- Demonstrate **carbon additionality to the baseline,** meaning that the project must convincingly demonstrate that it is resulting to higher volumes of carbon removals than the likely baseline alternatives (question A1 and A2.).
- Demonstrate **regulatory additionality,** meaning that the project is not required by existing laws, regulations, or other binding obligations (question A4.).
- Demonstrate **prior consideration of carbon credits** through documentation demonstrating that the time period between the commitment date and production facility audit is max. 3 years. (question A5)
- Demonstrate **financial additionality,** meaning that the CO_2 removals achieved are a result of carbon finance. This means that the CO_2 Removal Supplier must show that the carbon credits were needed to secure the investment or to overcome specific barriers to the investment.
- To support the claim the of financial additionality, the project activity cannot already be *common practice* without carbon finance (question A6).

Reference documents: Puro Standard general Rules v4.0, section 6.5 and Additionality Assessment requirements v2.0.

1. General questions to all CO_2 Removal Suppliers

A1. Baseline Determination			
Activity name	**Activity description**	**Removals to storage (100+ yr) due to project activity (human activity)**	**Natural removals to storage (100+ yr), not man-made**
Baseline: *Pile burning or bioenergy production*	***Baseline Description*** *The baseline scenario for this project involves the removal of invasive bush biomass by local farmers. This biomass is harvested as part of land restoration activities aimed at recreating the natural savannah ecosystem. Restoring the savannah benefits local biodiversity, including fauna and flora, and supports sustainable animal farming on these lands. Currently, the harvested biomass is handled in three primary ways:* 1. ***Pile Burning****: The biomass, consisting primarily of smaller branches and bushes, is often pile-burned directly after harvesting. This results in the release of stored carbon back into the atmosphere as CO2, contributing to greenhouse gas emissions without any long-term carbon storage benefits.* 2. ***Bioenergy Production****: Alternatively, the biomass is chipped and sold to a cement factory in Windhoek for use as a source of heat generation. While this process substitutes fossil fuel energy in the cement industry, it does not lead to the long-term sequestration of carbon, as the carbon in the biomass is released during combustion.* 3. ***Charcoal Production****: In some cases, the biomass is converted into charcoal through traditional kiln-based methods. This practice is common in the region and is a key source of income for local communities. However, traditional charcoal production is associated with significant inefficiencies and carbon emissions during the charring process. Moreover, the carbon contained in the charcoal is ultimately released when it is burned as fuel,*	None, all the in the biomass stored carbon is being emitted into the atmosphere directly.	None

	preventing long-term carbon sequestration. ***Baseline Assessment*** *None of the baseline practices—pile burning, bioenergy production, or charcoal production—result in permanent carbon removal or durable carbon storage (defined as over 100 years). These approaches represent typical end-of-life pathways for invasive bush biomass in Namibia, where economic and logistical factors make them the most accessible and feasible options for farmers.* • ***Pile Burning**: This approach emits nearly all the carbon stored in the biomass within a very short period (a matter of hours). While it clears land, it provides no offset or carbon removal benefits.* • ***Bioenergy Production**: Although this option reduces reliance on fossil fuels, the carbon in the biomass is released during the combustion process. This activity only leads to a temporary displacement of emissions and does not contribute to net-negative carbon removal or permanent storage.* • ***Charcoal Production**: Traditional charcoal production emits significant amounts of carbon during the production process, with conversion efficiencies as low as 20–30%. The final product, charcoal, is typically used as fuel, releasing its stored carbon into the atmosphere. This practice neither avoids emissions nor achieves long-term carbon storage.* *Moreover, the availability of biomass in Namibia is so abundant due to widespread bush encroachment that bioenergy and charcoal producers will always find other sources of biomass from ongoing debushing efforts. As a result, utilizing this specific biomass for energy or charcoal does not prevent the substitution of fossil fuels or wood from other sources. Consequently, the baseline practices do not achieve additional carbon reductions or permanent carbon removal.*		
Project activity: *Carbonsate Biomass Storage in Namibia 1*	The harvested invasive bush biomass is dried and permanently stored underground in the specifically engineered Carbonsate biomass storage facilities.	Around 1500 tonnes of CDR	None

Alternative scenarios	*The alternative scenario involves not harvesting the invasive bush biomass, leaving the ecosystem in its current degraded state. This would perpetuate the following negative consequences:* 1. ***Biodiversity Loss**: The unchecked spread of invasive bush leads to the displacement of native savannah vegetation, reducing habitat diversity for local fauna and flora. Over time, this degrades the ecosystem's ability to support a rich variety of species, including those critical for sustainable grazing and farming activities.* 2. ***Increased Risk of Bushfires**: The excessive accumulation of invasive bush biomass increases the risk of bushfires. Such fires can result in the rapid release of large amounts of stored carbon back into the atmosphere while causing significant environmental and economic damage.* 3. ***Reduced Land Productivity**: Invasive bush encroachment limits the availability of open grasslands needed for grazing and agricultural activities. This directly affects the livelihoods of farmers and communities that rely on these lands for sustenance and income.* 4. ***Carbon Release from Natural Decomposition**: In the absence of harvesting, the biomass continues to decay naturally over time, releasing stored carbon back into the atmosphere as CO_2 or methane, depending on the decomposition conditions. This contributes to greenhouse gas emissions without providing any long-term sequestration benefits.* *By not addressing the invasive bush issue, the ecosystem's degradation would continue, exacerbating both environmental and socio-economic challenges. This alternative scenario demonstrates the importance of active intervention through the harvesting and permanent storage of the biomass to restore ecosystem balance and achieve durable carbon removal.*	None	None

A2. Does the project lead to higher volumes of durable carbon removal than the baseline?	**Yes / No**

The projects leads to higher volumes of durable carbon removal because all the in the biomass stored carbon would be emitted to the atmosphere.	Yes

A3. Is the project scenario aligned with net-zero transition? The following activities are considered not to be aligned with net-zero transition: a) directly leading to an increase in the extraction of fossil fuels, b) relating to coal-fired electricity generation, or c) involving other unabated fossil fuel-powered electricity generation, other than new gas-fired generation that is part of increased zero-emissions generation capacity in support of national low carbon energy transitions	**Yes / No**
The use of the biomass for carbon removal is not related to the extraction of fossil fuels und does not lead to an increase in fossil fuel use.	Yes

A4. Is the project required by existing laws, regulations, or other binding obligations?	**Yes / No**
No law requires the removal of invasive bush, although it is a widely recognized problem in Namibia and there is no law requiring the storage of the harvested bush biomass.	No

A5. What was the Commitment Date of this facility? Commitment Date is defined as "The calendar date on which the CO_2 Removal Supplier committed to implementing the CO_2 Removal activity (e.g., the date when contracts for the purchase or installation of equipment required for the mitigation activity were signed). In the case where a mitigation activity does not involve capital expenditure, it refers to the date when the first physical actions were taken to implement the mitigation activity." If an exception listed in clause 2.1.3 of the Additionality Assessment Requirement applies, describe the situation here.	**Date**
Construction on the storage site started on the 20th of January 2025.	20.01.2025

A6. Is the Technological Readiness Level of the Methodology 8 or 9?	**Yes/No**
The biomass storage technology employed in this project is currently at **TRL 6**, with the specific system validated in a relevant environment through prior pilot-scale implementations. While the core principles and engineered solutions for biomass storage have been demonstrated successfully in controlled conditions, this project represents a step toward scaling the technology to a larger, operational environment. The goal of this project is to achieve **TRL 7** by demonstrating the system's performance, durability, and scalability in an operational environment. Upon completion, this project will validate the technology as a fully operational system, providing the foundation for subsequent commercial-scale implementations. While there are examples of biomass storage solutions implemented on a larger scale in operational environments, these projects remain at pilot or demonstration scale, indicating the innovative nature and the need for further validation of this approach.	No

If the answer to question A6 is Yes, please answer question A6.1 to A6.3. Questions A6.2 and A6.3 are different based on whether you are applying a distributed technology (such as enhanced rock weathering) or more centralized technology based on plants/factories producing something. See clauses 3.2.5 and 3.2.6 in the Puro Additionality Assessment Requirements with references for more information.

A6.1. Please define the region being considered and explain why it is relevant level of aggregation for the assessment if different from the host country.
[Information]

A6.2. Market size or current installations

Distributed technology: What is your estimate for a realistic target market size and what constraints to the market size growth have you identified? **Centralized technology (plants):** What projects have you identified that fulfil the criteria in Additionality Assessment Requirements clause 3.2.6? a) output range of +/- 50% of the project, b) located in the same region, c) applying the same measure, d) produce comparable goods or services in terms of quality, properties, and applications, e) started commercial operation before the proposed start date of the project, and f) are not registered in a carbon crediting program. How many of them apply a different technology? **Please mention or link to any sources you have.**
[Information]

A6.3. Market penetration rate **Distributed technology:** What is your estimate of the market penetration rate of the activity? How common or widespread is the project activity or similar activities in the relevant sector and region, and what is the trend of adoption over time? **Centralized technology (plants):** Provide your calculation of market penetration rate based on the formula in clause 3.2.6 in Additionality Assessment Requirements.
[Information]

A7. Does the carbon removal project have other income sources besides carbon finance? Include also information about any subsidies you receive or expect to receive. Please describe your business model here, in a short answer (max. 100 words).	**Yes / No**
No other income source than carbon finance is available for this project.	No

Please note: Questions under headings '2. Simple cost analysis', '3. Investment analysis', and ' 4. Barrier Analysis' are mutually exclusive options.

2. Simple cost analysis or investment analysis

Some projects may demonstrate additionality through simple cost analysis: this is applicable for projects that have no other source of income besides carbon finance or where ex-ante investment analysis is not applicable, because capital expenditure (capex) is modest compared to operating expenditure (opex). This can include e.g. enhanced rock weathering projects.

B1. Describe how the criteria above applies to your project
The Carbonsate Biomass Storage Project in Namibia fully meets the criteria for additionality through a simple cost analysis. The project relies solely on carbon finance as its only income source, with no alternative revenue streams available. This dependency highlights the critical role of carbon credits in enabling the implementation and operation of the project.

B Simple cost analysis	**Project response**
B2. Please describe your cost structure here and include evidence in attachment.	The cost structure for the Carbonsate Biomass Storage Project in Namibia is straightforward and underscores the project's reliance on carbon finance as its sole revenue source. The primary cost categories include: 1. **Site Construction**: The excavation of the storage pit requires equipment rentals, personnel, and fuel. These are essential upfront costs for establishing the infrastructure necessary for biomass storage. 2. **Biomass Handling and Storage**: Costs associated with harvesting, chipping, transporting, and loading invasive bush biomass into the storage facility. These activities require both specialized equipment and personnel. 3. **Sealing and Monitoring**: The sealing materials, such as membranes, and monitoring systems (e.g., sensors and pipes) are critical for ensuring the long-term stability and durability of the storage system. These items are either procured or self-produced by Carbonsate. 4. **Consumables and Operational Costs**: Small items and consumables necessary for the project's operations, as well as costs related to transportation, accommodation, and compliance (e.g., environmental assessments). All project costs must be prepaid by the developer, with no alternative revenue streams to offset these expenditures. The successful implementation and operation of the project are entirely dependent on revenue from carbon credits, which makes carbon finance critical to its financial viability.
B3. Please summarize the simple cost analysis here. Please include any public subsidies	The cost structure for the Carbonsate Biomass Storage Project in Namibia is simple and predominantly driven by operational expenses. These include the costs of

received or expected. Compare with alternative scenarios, if relevant.	constructing the storage site, harvesting and handling biomass, and implementing monitoring and sealing systems. All expenses must be prepaid by the project developer, and there are no additional revenue streams beyond carbon finance. This reliance on carbon credits underscores the financial additionality of the project. If no carbon credit revenue can be generated, the use of the biomass for charcoal production or for energy generation is more profitable for the farmer than implementing the biomass storage project.
B4. Please provide additional calculation spreadsheet in attachment. All formulas used in the spreadsheet shall be readable to the verifier and all relevant cells shall be viewable and unprotected. Mark confidential when needed.	"Puro Baseline and Additionality Questionnaire Annex - Financial Additionality Carbonsate.xls"
B5. Are you willing to provide full calculation spreadsheet to be visible in Puro Registry? If yes, please specify the name of the file that has been provided. If not, please ensure that there is sufficient information provided in your answers in this document.	No
B6. Is the information shared here consistent with information presented to the company's decision-making management, investors or lenders?	Yes
B7. Is the information shared here consistent with the information in the audit documentation presented to Puro and its verifiers (e.g. LCA model)? If not, please explain why there are differences.	Yes

3. Investment Analysis

CO_2 Removal Suppliers can be guided by the CDM Methodological Tool 27 of the UNFCCC Clean Development Mechanism "Investment Analysis" to demonstrate financial additionality with Investment Analysis.

C. Financial Additionality – Investment analysis	Project response
C1. Describe the relevant alternative scenarios in terms of investments analysis. **If the only alternative scenario is to carry out the project without CORCs, please answer the following questions:** **Please show your calculations to determine the benchmark rate for either equity IRR or WACC, whichever you are using. Please include documentation of how the rate is suitable for the technology and region. Please specify the currency and whether the rate is nominal or real.**	
C2. Please state how CORC revenues change the expected IRR or NPV of the project.	
C3. Please conduct a sensitivity analysis in relation to the investment analysis and summarize the results here.	
C4. Is the information shared here consistent with information presented to the company's decision-making management, investors, or lenders?	
C5. Is the information shared here consistent with the information in the audit documentation presented to Puro and its verifiers (e.g. LCA model)? If not, please explain why there are differences.	
C6. Are you willing to provide full calculation spreadsheet to be visible in Puro Registry? If yes, please specify the name of the file that has been provided.	
C7. If you are not willing to disclose the full spreadsheet, please provide here a summary of the confidential file that has been provided to the Auditor and Puro.earth. Please include: • **Overall description of the spreadsheet, including type of terms (real/nominal), currency, forecasting periodicity** • **Capital structure, if the measure is based on equity return** • **Information sources on main revenues and costs** • **Expected breakdown of income from the different sources** • **Expected or already received public subsidies** • **Growth assumptions** • **Model duration and a comparison with expected lifetime**	

4. Barrier Analysis

In Barrier Analysis only one barrier needs to be demonstrated but there needs to be clear, objective, and verifiable evidence to demonstrate its existence. If possible, please provide quantitative estimates for the barrier.

D. Barrier Analysis	No/yes	Project response
D1. Are there financial barriers? (e.g., financing is not accessible for the type of activity in the country due to the risks)		
D2. Are there institutional barriers? (e.g., the investor not being the beneficiary of cost savings associated with the investment)		
D3. Are there information barriers? (e.g., lack of awareness of the financial benefits of by-products)		
D4. Please explain how CORC revenues are crucial element in overcoming identified barrier(s)		
D5. Are there subsidies for the carbon removal activity? If yes, please explain how they are not sufficient to overcome the barrier.		
D6. Please attach verifiable evidence for the existence of the barrier and describe the evidence here. If the file can be included publicly in the Puro registry, please specify the name of the file here. If the evidence is not public, please ensure		

that you describe it in sufficient detail.		
D7. Please demonstrate that at least one other alternative in baseline determination (first question) does not face any significant barriers, including the barriers faced by your project.		

I hereby declare that all information provided is truthful and precise to the best of my knowledge.

11.08.2025, Berlin, Fabian Sperling, Co-Founder, Carbonsate UG (haftungsbeschränkt)

X F. Sperling

Date, Place:
Representative name, title, organization

Environmental and social safeguards questionnaire

CO_2 Removal Supplier	Carbonsate
Production Facility	Carbonsate Project Namibia
Production Facility ID	583695
Date of report last update (YYYY-MM-DD)	20205-08-05

PURO.EARTH Puro.earth Oy, Tammasaarenkatu 1, 00180 Helsinki, Finland

Environmental and Social Safeguards Questionnaire

The purpose of this document is to provide a summary of how the CO_2 Removal Supplier complies with the environmental and social safeguards, as defined in Section 6.4 of the Puro General Rules 4.0. The responses from the supplier are expected to be commensurate with the identified impacts and risks.

This document consists of five sections, noting that the fifth section does not apply to all suppliers:

1. General overview and compliance
2. Labor practices and rights
3. Environmental impact and management
4. Social impact and community relations
5. Biomass sustainability

This document forms part of the evidence needed for the Production Facility Audit. It is corroborated by other documents and evidence provided by the supplier to Puro.earth and the 3rd-party auditors, demonstrating environmental and social safeguards. This questionnaire will be made **publicly available** in the Puro Registry.

1 General overview and compliance

Provide a description of your operations and the context where you are operating in, as relevant for environmental and social safeguards.
Carbonsate operates a terrestrial biomass storage project located near Otjiwarongo, Namibia. The project involves the harvesting, chipping, transporting, and long-term sub-surface storage of approximately 1,000 tonnes of woody biomass (wet weight) for the purpose of generating durable carbon dioxide removal (CDR) credits. This carbon removal method is designed to permanently store biogenic CO_2 by preventing biomass decomposition through engineered burial systems. The operational model adheres to the principles and requirements of the Puro Standard, particularly those outlined in the Puro.earth General Rules v4.0, including environmental and social safeguards, stakeholder engagement, leakage prevention, and monitoring. The system boundary of the life cycle assessment (LCA) follows a cradle-to-grave approach, capturing emissions from all relevant project stages—biomass sourcing, excavation, storage, monitoring, travel, and future emissions. The functional unit is defined as the sourcing and storage of 1 dry metric tonne of biomass. Operations are carried out in a semi-arid, low-infrastructure context, utilizing solar-powered sensors and a digital monitoring infrastructure to track environmental conditions such as CO_2, O_2, CH_4 concentrations, temperature, and moisture. These conditions are critical to ensuring storage stability and environmental integrity over a modeled 100-year horizon. A third-party critical review of the LCA was conducted by One Carbon Labs, confirming full compliance with ISO 14040 and ISO 14044 standards. The methodology and modelling approach were found to be scientifically valid, conservative, and transparent, supporting certification and public disclosure of results. This project demonstrates a scalable and low-complexity negative emissions solution aligned with Puro.earth's certification process and the broader goals of durable carbon sequestration with environmental and social co-benefits.

Provide an overview of the material environmental and social impacts and risks in your operations, and how they were determined.
The environmental and social impacts and risks of Carbonsate's terrestrial biomass storage project in Namibia were assessed through a detailed Life Cycle Assessment (LCA) carried out in accordance with ISO 14040 and ISO 14044 standards. The assessment covered all stages from biomass harvesting to long-term monitoring and storage. The project is located on private farmland in a semi-arid region near Otjiwarongo. Material environmental impacts include greenhouse gas emissions from diesel used in machinery during biomass harvesting, transport, and excavation. Soil disturbance during site preparation and biomass removal contributes to additional emissions. The use of industrial sealing materials and minor future emissions from cloud-based monitoring infrastructure and travel were also identified. The land area used for storage forms part of an existing farm. Therefore, potential land-use impacts were evaluated. However, the project does not displace food production, cause deforestation, or alter water availability. No new infrastructure with significant ecological disruption was constructed. The biomass targeted for removal consists of encroacher wood that would otherwise have been harvested and openly burned. The project instead redirects this material into permanent storage, thereby avoiding combustion-related emissions. Once the woody biomass is cleared, natural grassland regeneration is enabled. This improves the availability of forage for both farm livestock and local wildlife and contributes to better land health and ecological resilience. No relevant working groups or vulnerable or marginalized communities were identified within the project boundary. The site is located entirely on private agricultural land, and there are no known communities, land users, or customary rights holders that would be directly impacted by the project activities. No displacement, loss of access, or infringement on rights occurred. As such, no formal stakeholder consultation was required under Puro.earth stakeholder engagement rules, and no grievances or objections have been recorded to date. Stakeholder engagement with relevant local actors, including the landholder and local authorities, was conducted during the project preparation phase. No objections or concerns were raised. The LCA was based entirely on primary data collected during the full implementation of the project. While the LCA report itself was compiled after project completion, all relevant data inputs such as fuel consumption, transport activities, material usage, and site-specific parameters were continuously recorded throughout the operational phase. This ensures that the environmental impacts reflect actual measured performance rather than estimates or projections. Primary data were collected on-site and supplemented by standard secondary sources, including Ecoinvent, IPCC, and UBA databases. Sensitivity analysis was applied to evaluate model robustness. The assessment and resulting documentation were independently reviewed and verified by an accredited third party. The total project emissions amount to 81.34 tonnes CO_2 equivalent, while the net CO_2 removal benefit is 876.42 tonnes. Monitoring and site control are ongoing to ensure that environmental performance and overall integrity are maintained over time.

Requirement: Abide by national and local laws, objectives, programs, and regulations and, where relevant, international conventions and agreements.	**Rule** 6.4.1.1.i

Do you comply with the requirement?	☒ Yes ☐ No
If not, how and why do you not comply? If yes, how do you know that you comply with the requirement? Please provide details considering the laws and regulations that are most relevant to your operations. Also, include any regulations that are specifically related to your carbon removal activities.	
The project complies with all relevant national and local laws and regulations in Namibia. It was implemented on private agricultural land with full knowledge and consent of the landowner. Biomass removal focused on encroacher bush, in alignment with Namibia's national bush control strategies and land restoration programs. Based on the applicable Namibian regulatory framework, certain authorisations may be required depending on the scope and nature of activities, including bush harvesting permits, transport permits, or environmental clearance under the Environmental Management Act (No. 7 of 2007). The project team has reviewed these requirements and is in the process of confirming and documenting compliance where applicable. No objections or legal notices have been issued by relevant authorities. Legal and policy review was conducted in collaboration with Urban Green Environmental Consultants. No specific regulation was identified for terrestrial biomass storage; however, applicable provisions for biomass harvesting and environmental compliance were considered. The project also complies with international standards through adherence to ISO 14040 and ISO 14044, as confirmed by third-party verification. No activities have been identified that conflict with international conventions or environmental agreements applicable in Namibia.	
Identify any documents or other records that you rely upon to verify compliance.	
• Land ownership and consent documentation from the landowner • Biomass sourcing and harvest records (e.g. logs of harvested volumes, dates) • Fuel logs and machinery use records collected during project implementation • Transport records (where applicable) • Life Cycle Assessment (LCA) report • Critical Review Report by One Carbon Labs (dated 24 July 2025) • Stakeholder Engagement Report (confirming absence of directly affected communities) ➔ All part of certification documentation	

Requirement: Respect for **human rights** and avoiding discrimination; abiding by the International Bill of Human Rights and universal instruments ratified by the host country.	**Rule** 6.4.1.1.ii
Do you comply with the requirement? Motivate below.	☒ Yes ☐ No
The project complies with the requirement to respect human rights and avoid discrimination. It is located entirely on private land (Yakandonga Farm), with the full knowledge and consent of the landholder, Endelela Farming CC, which holds formal land tenure rights. No vulnerable or marginalized groups were identified within the project boundary. The project does not affect	

indigenous peoples, cultural heritage, ancestral knowledge, or local access to resources. No resettlement or restriction of rights occurred.
Namibia is a signatory to the core human rights conventions under the International Bill of Human Rights. No activities associated with the project have been found to conflict with these principles.
Stakeholder engagement was conducted through targeted consultations with directly relevant parties. Key stakeholders included Endelela Farming CC, the Local Forestry Department in Otjiwarongo, Urban Green Environmental Consultants, and industry expert Colin Lindeque. Site visits and meetings took place in November 2024 and January 2025. As the project is located on private agricultural land and does not affect communal or public land, no broader public consultations were required.
Stakeholders were informed about the project's methodology, objectives, and expected environmental and economic outcomes. Feedback was consistently positive. Local actors expressed strong support for the use of encroacher biomass for climate purposes and welcomed co-benefits such as improved grazing conditions and potential local employment.
No complaints or grievances were raised, and regular communication channels remain open. Ongoing stakeholder engagement is planned throughout the crediting period to ensure transparency and inclusion.

Requirement: Recognize, respect, and promote the protection of the rights of IPs & LCs (**indigenous peoples and local communities**) in line with applicable international human rights law, and the United Nations Declaration on the Rights of Indigenous Peoples and International Labor Organization (ILO) Convention 169 on Indigenous and Tribal Peoples.	**Rule** 6.4.1.1.iii
Do you comply with the requirement? Motivate below.	☒ Yes ☐ No

The project complies with the requirement to recognize, respect, and promote the protection of the rights of indigenous peoples and local communities (IPs and LCs) in accordance with applicable international human rights law, including the United Nations Declaration on the Rights of Indigenous Peoples and ILO Convention 169.
The project area is located entirely on privately owned agricultural land (Yakandonga Farm), held by Endelela Farming CC, and does not overlap with any indigenous territories, customary land, or community-managed resources. No indigenous peoples or traditional communities are present within or adjacent to the project boundary. No cultural heritage, traditional knowledge, or access to land or resources has been affected by the project activities.
Consultations with relevant stakeholders, including local authorities and environmental experts, confirmed that the project does not intersect with any indigenous land claims, practices, or rights. Accordingly, no free, prior and informed consent (FPIC) process was required.
Stakeholder feedback has been consistently positive, and no objections or concerns related to indigenous or local community rights have been raised. The project remains committed to maintaining open communication and respecting all applicable rights frameworks throughout the crediting period.

Note that there is an additional question on free, prior, informed consent below (section 4), and there is a requirement to publish a separate stakeholder engagement report based on a Puro template.

2 Labor practices and rights

Requirement: Labor rights and working conditions, including prohibiting forced labour, child labour or trafficked persons whether in own operations or employed by third parties, fair treatment of employees.	**Rule** 6.4.1.1.iv
Do you comply with the requirement?	☒ Yes ☐ No
If not, how and why do you not comply? If yes, how do you know that you comply with the requirement?	
The project complies with the requirement to uphold labor rights and ensure fair working conditions. No forced labor, child labor, or trafficked persons were involved in any phase of the project. All activities were carried out in accordance with Namibian labor laws and in line with international labor standards. The project was implemented on private agricultural land and involved a small number of local contractors and service providers for activities such as biomass harvesting, transport, and excavation. All workers were of legal working age, received fair compensation, and worked under safe and lawful conditions. No third-party labor brokers or high-risk labor arrangements were used. The project team monitored working conditions directly during implementation. No labor-related grievances, incidents, or violations were reported. Where applicable, service providers were informed of the labor requirements and expected to comply with them as a condition of their engagement. Namibia is a signatory to the ILO's core conventions, including the prohibition of forced and child labor. The project aligns with these obligations and maintains a zero-tolerance approach to any form of labor exploitation.	
Identify any documents or other records that you rely upon to verify compliance.	
No formal employment contracts were issued, but all work was carried out by adult individuals known to the landholder and under direct supervision. The project team monitored all labor activities on site.	

Requirement: Ensuring a safe working environment and mitigating occupational health and safety hazards.	**Rule** 6.4.1.1.iv
Describe occupational health and safety hazards that you have identified.	
During project implementation, several occupational health and safety (OHS) hazards were identified and addressed: Use of heavy machinery: Biomass harvesting, and excavation involved diesel-powered equipment, such as tractors and loaders. Potential hazards included physical injury due to machine operation, rollover risk, and noise exposure. Manual handling: Workers were occasionally required to handle biomass manually during loading or placement. This posed a risk of musculoskeletal strain or minor injuries (e.g. cuts, splinters). Heat exposure and dehydration: The project site is located in a semi-arid region with high daytime temperatures. Outdoor work during harvesting and burial activities presented risks of heat exhaustion and dehydration.	

Dust and particulate exposure: Excavation and biomass movement generated dust, particularly in dry conditions, posing inhalation risks without proper protection. On-site vehicle movement: Operation of multiple vehicles on uneven terrain introduced collision or vehicle-pedestrian interface risks. Slips, trips and falls: Especially during excavation and sealing work within biomass storage cells. These risks were considered moderate and manageable, given the scale and duration of the project. Workers were instructed on safe practices, supervised directly, and provided with appropriate rest periods and access to drinking water. Use of protective clothing (e.g. gloves, masks) was encouraged where applicable. No occupational incidents or injuries were reported during the project implementation phase.
Describe the measures undertaken to mitigate the hazards.
A number of measures were implemented to mitigate the identified occupational health and safety hazards: Personal protective equipment (PPE): All workers were equipped with appropriate equipment to reduce the risk of injury from falling objects, sharp biomass, or equipment contact. In dusty conditions, masks were made available. On-site supervision: All work activities were monitored by project staff or the landowner to ensure safe practices and immediate response in case of unsafe conditions. Training and instruction: Workers received verbal instructions regarding the safe operation of equipment, manual handling procedures, and awareness of site-specific risks. Heat and hydration management: Given the high temperatures at the project site, work was scheduled during cooler hours where possible. Workers had access to clean drinking water at all times, and rest breaks were provided as needed. Safe vehicle operation: Movement of vehicles and machinery was coordinated to avoid unnecessary overlap and reduce collision risks. Operators were instructed to maintain visibility and low speed in shared work areas. Site preparation: The work area was cleared of tripping hazards where possible, and storage pits were marked and managed to avoid falls or accidental access. No occupational accidents or health incidents occurred during the implementation phase.

Requirement: Providing for equal opportunities in the context of gender; providing equal pay for equal work and protecting against and appropriately responding to violence against women and girls.	**Rule** 6.4.1.1.v
Do you comply with the requirement?	☒ Yes ☐ No
If not, how and why do you not comply? If yes, how do you know that you comply with the requirement?	
The project complies with the requirement to provide equal opportunities regardless of gender. While only male workers were involved in the field operations on-site, this reflects the structure of the farm workforce and was not the result of any exclusionary practice. No gender-based restrictions were applied in the selection or engagement of workers.	
Identify any documents or other records that you rely upon to verify compliance.	
No formal documentation exists, but the project team monitored on-site conditions directly and confirms that no gender-based discrimination or exclusion occurred.	

3 Environmental impact and management

Requirement: Pollution prevention, including pollutant emissions to air, water, and soil as well as noise and vibration, and generation of waste and release of hazardous materials, chemical pesticides, and fertilizers.	**Rule** 6.4.1.1.vi
Does the carbon removal activity result in the following impacts? For **each potential impact**, please provide detailed information about its extent and the current measures in place to mitigate these negative impacts.	
a. Pollutant discharges to air	
The project resulted in minor temporary air emissions due to diesel combustion from machinery used for biomass harvesting, transport, and excavation. These included CO_2, NO_x, and particulate matter. All equipment was operated in compliance with standard fuel use and maintenance practices. The impact was limited in time and scope. No continuous or process-based emissions occurred.	
b. Pollutant discharges to water	
No discharges to water occurred. The project does not involve industrial processing, chemical inputs, or liquid effluents. The storage site is located away from any surface water bodies or drainage lines. Standard precautions were taken to avoid fuel spills during machinery use.	
c. Pollutant discharges to soil	
No intentional discharges to soil occurred. Minor risk of localized contamination (e.g. diesel leakage) was mitigated by refueling equipment on stable surfaces and monitoring machinery for leakage. No hazardous materials were stored on-site. The biomass burial process itself does not introduce foreign substances to the soil.	
d. Noise	
The use of agricultural machinery and a biomass chipper during harvesting and processing generated temporary noise. The project site is located on a remote farm with no nearby residential areas, and all operations were conducted during daylight hours. Given the limited duration and rural setting, the noise impact is considered low and localized. No complaints or disturbances were reported.	
e. Vibration	
No significant vibration was produced. Only light to medium agricultural machinery was used. No blasting, piling, or industrial construction took place.	
f. Waste	
The project did not generate conventional waste streams. Biomass was processed and stored on-site. Minimal packaging or operational waste was handled by the project team and disposed of in accordance with local regulations. No hazardous or medical waste was generated.	
g. Release of hazardous materials	
No hazardous materials were used or released. Fuel and lubricants for machinery were handled in small volumes under controlled conditions. No chemicals, solvents, or hazardous substances were applied during any project phase.	
h. Chemical pesticides and fertilizers	
No chemical pesticides or fertilizers were used in any part of the project. Vegetation management was limited to manual and mechanical removal of encroacher bush without chemical treatment.	

Requirement: Biodiversity conservation and sustainable management of natural resources, including avoiding or minimizing negative impacts on terrestrial and marine biodiversity and ecosystems; protecting the habitats of rare, threatened, and endangered species, including areas needed for habitat connectivity.	**Rule** 6.4.1.1.viii
Is the activity taking place in or near environmentally sensitive areas, including protected areas (e.g. nature reserve or national park), or other areas included in a conservation plan? Describe where the nearest such areas are.	
No. The project is located on private farmland in the Otjozondjupa Region of Namibia, outside any officially designated protected areas, national parks, or conservation zones. The nearest environmentally sensitive area is Waterberg Plateau Park, which lies over 50 km from the project site. No critical habitats, key biodiversity areas, or priority conservation corridors are located within or adjacent to the project boundary.	
Describe impacts and risks that you have identified	
The main ecological risk relates to the removal of woody biomass (encroacher bush), which could alter microhabitats or food availability for some local fauna if not conducted selectively. Soil disturbance during excavation and vehicle movement may temporarily affect local vegetation and invertebrate life. However, no rare, threatened, or endangered species were identified in the project area during site assessments or through existing biodiversity data. No introduction of invasive species or chemical inputs occurred.	
Describe the measures undertaken to minimize and address the impacts and the risks.	
Biomass removal was limited to encroacher bush species, consistent with national bush control and land restoration programs. The process was carried out selectively to avoid overclearing and to allow for natural savannah regeneration. No pesticide or fertilizer use took place. Machinery movement was restricted to designated areas to reduce soil compaction and plant damage. The burial site was placed on degraded land not used for grazing or cultivation, minimizing ecological disruption. The project supports biodiversity indirectly by reducing bush encroachment, improving rangeland health, and allowing native grassland species to recover, which benefits both livestock and local wildlife.	

Requirement: Minimizing soil degradation and soil erosion.	**Rule** 6.4.1.1.viii
Describe impacts and risks to soil that you have identified.	
The primary soil-related risks identified during the project were: • Soil compaction and disturbance caused by machinery used during biomass harvesting, chipping, and burial activities, especially in areas with sandy or fragile soils. • Localised erosion risk on cleared areas, particularly if vegetation cover is not re-established promptly after biomass removal or excavation. • Potential disruption of soil structure at the burial site due to excavation, backfilling, and biomass decomposition processes. No large-scale topsoil removal or chemical contamination occurred. The project area is not located on steep slopes or in erosion-prone zones.	
Describe the measures undertaken to minimize and address the impacts and the risks.	

- Controlled machinery access: Vehicle and equipment movement was limited to defined routes and work areas to prevent unnecessary soil compaction.
- Selective biomass removal: Only encroacher bush was removed, leaving native grasses and other ground cover in place where possible to maintain soil stability.
- Burial site management: The biomass burial cell was excavated and sealed in a way that preserves surrounding topsoil and reduces erosion risk.
- Natural regeneration: Disturbed areas were left to regenerate naturally with native grass cover, which helps stabilise the soil and restore organic matter.
- No chemical inputs: No pesticides, herbicides, or fertilizers were used that could degrade soil health.
- Monitoring during implementation: Project staff monitored excavation and transport to identify signs of erosion or instability, with adjustments made as needed.

These measures ensured that soil degradation was minimized and that the project contributes to the long-term recovery of degraded rangeland through bush control and natural vegetation regrowth.

Requirement: Minimizing water consumption and stress.	**Rule** 6.4.1.1.viii
Are you located in an area impacted with water stress?	☐ Yes ☒ No
If yes, describe local conditions in terms of water stress and any risk analysis done on the impacts of the CO_2 removal activity on water stress	
Click or tap here to enter text.	
Describe any agreements and/or regulations relating to water sourcing.	
Click or tap here to enter text.	
Describe the measures undertaken to minimize water consumption.	
Click or tap here to enter text.	

Requirement: The CO_2 Removal Supplier shall not convert **natural forests or high conservation value habitats.**	**Rule** 6.4.1.1.viii
Do you comply with the requirement?	☒ Yes ☐ No
If not, how and why do you not comply? If yes, how do you know that you comply with the requirement?	

The project complies with the requirement not to convert natural forests or high conservation value (HCV) habitats. The carbon removal activity took place entirely on previously degraded agricultural land that has been impacted by long-term bush encroachment. No natural forest, wetland, or ecologically sensitive area was cleared or altered. Only encroacher bush species were selectively harvested, in alignment with national bush control and rangeland restoration strategies. Prior to implementation, the site was reviewed for ecological sensitivity in collaboration with Urban Green Environmental Consultants. No high conservation value habitats or legally protected ecosystems were identified within or near the project boundary. The activity contributes positively to the landscape by facilitating the regeneration of native savannah vegetation.
Identify any documents or other records that you rely upon to verify compliance.
• Biomass sourcing records showing targeted encroacher species • Stakeholder Engagement Report (confirming land conditions and usage) • LCA documentation and spatial assessment inputs • Statement of environmental context by Urban Green Environmental Consultants • Visual documentation and field visit records from project implementation

4 Social impact and community relations

Requirement: Avoiding or minimizing adverse impacts **to community health and safety**.	**Rule** 6.4.1.1.vii
Describe potential sources of impact, taking into account all relevant factors in the given context. Consider both routine and non-routine circumstances.	
The project is located on privately owned agricultural land without any nearby settlements or public infrastructure. No local communities live within or adjacent to the project boundary. Therefore, the overall risk to community health and safety was minimal. Potential sources of impact, although unlikely, could have included: • Vehicle movement on access roads shared with other farm users, posing minor risk of dust or collision. • Fire risk during biomass handling under dry conditions. • Unauthorized access to the burial site during or shortly after implementation. No routine or non-routine operations (e.g. chemical use, blasting, or processing) were involved that would pose significant health or safety risks to the surrounding area.	
Describe the measures undertaken to minimize and address the impacts and the risks.	
• Project area access was restricted to authorized personnel only. Warning signs were posted during excavation and burial. • Machinery operation was supervised to ensure safe driving speeds and routes on shared paths. • Work was conducted during daylight hours only to maintain visibility and reduce accident risk. • Fire prevention was ensured by avoiding biomass handling during periods of high fire danger and prohibiting open flames near work areas. • No hazardous materials or emissions were introduced to the site that could affect local air or water quality. • Stakeholder communication ensured that land users were aware of the work schedule and safety measures. No incidents affecting community health or safety occurred during the project.	

Requirement: Preserves and protects **cultural heritage** and cultural and religious sites.	**Rule** 6.4.1.1.ix
Describe the impacts and the risks to cultural heritage and cultural and religious sites that you have identified.	
No cultural heritage sites, religious structures, burial grounds, or areas of cultural or spiritual significance were identified within or near the project boundary. The project area consists entirely of privately owned farmland that has been used for agricultural purposes for many years. A review of available land records, site history, and consultations with local stakeholders did not reveal any known or suspected cultural or religious heritage in the project area. Therefore, the risk of impacting cultural heritage or religious values is considered negligible.	
Describe the measures undertaken to minimize and address the impacts and the risks.	
• A site review was conducted prior to implementation to identify any visible or documented cultural features. • The landholder confirmed that no cultural or religious sites exist on the property. • Consultations with relevant stakeholders and local authorities (including Urban Green Environmental Consultants) yielded no indication of cultural or spiritual sensitivities in the project area. • The project team remained alert during excavation activities and was instructed to halt operations in the unlikely event of encountering any artifacts or features of cultural significance. No cultural or religious impacts occurred during or after the project.	

Requirement: Avoiding **forced physical** and/or **economic displacement**. If avoidance is not feasible, CO_2 Removal Suppliers shall minimize physical and/or economic displacement. This applies also to any access restrictions to lands, territories, or resources, and any customary rights of local right holders.		**Rule** 6.4.1.1.x
Did/does the activity result either in forced physical or economic displacement?	☐ Yes ☒ No	
If yes, describe the impact to local communities and how it was assessed?		
Click or tap here to enter text.		
Provide a comprehensive description of the process that was undertaken, compensation arrangements and measures to mitigate the negative impacts.		
Click or tap here to enter text.		
Also describe in detail how you minimized forced physical or economic displacement.		
Click or tap here to enter text.		

Requirement: When the activity directly or indirectly impacts **indigenous peoples** or their livelihoods, ancestral knowledge or cultural heritage, the CO_2 Removal supplier shall develop the Production Facility with free, prior, informed consent (FPIC).	**Rule** 6.4.2
Is the CO_2 removal activity taking place in an area inhabited by or claimed by indigenous people, or does it influence such an area?	☐ Yes ☒ No
If yes: does the activity directly or indirectly impact indigenous peoples or their livelihoods, ancestral knowledge or cultural heritage? How was that determined?	
Click or tap here to enter text.	
If there is a direct or indirect impact:	
a. Provide a description of the impact and the measures that were taken to minimize the impact.	
Click or tap here to enter text.	
b. Describe how and when the indigenous communities were identified and approached for the FPIC process.	
Click or tap here to enter text.	
c. Describe the mutually agreed process for the negotiations.	
Click or tap here to enter text.	
d. Describe how the indigenous communities were informed about the potential impacts of the activity on their livelihoods, ancestral knowledge, or cultural heritage.	
Click or tap here to enter text.	
e. Describe the outcome of the negotiations.	
Click or tap here to enter text.	
f. Describe how the ongoing consent process is managed to ensure that the indigenous communities continue to agree with the activity as it progresses.	

Click or tap here to enter text.
g. Describe grievance mechanisms that are in place for the indigenous communities.
Click or tap here to enter text.
h. Describe how the impacts on the indigenous communities are monitored and addressed during the operation of the Production Facility.
Click or tap here to enter text.

5 Biomass sustainability

Puro methodologies require that whenever biomass feedstock is used in the carbon removal activity, it must be sourced in a sustainable manner.	
Is your carbon removal activity based on using biomass feedstock?	☒ Yes ☐ No
Describe how you ensure that it is sourced sustainably.	
The carbon removal activity is based on the use of encroacher bush biomass sourced directly from Yakandonga Farm, a privately owned property in the Otjozondjupa Region of Namibia. The harvesting was conducted in line with national bush control and land restoration strategies. Measures to ensure sustainable sourcing include: • Local sourcing: All biomass was harvested from within the project site. No external feedstock was acquired or transported in. • Species selection: Only invasive encroacher bush species (e.g. Acacia mellifera) were removed. Native vegetation, grasses, and ecologically valuable trees were preserved. Ecological function: The removal of bush supports rangeland regeneration, enhances biodiversity, and reduces pressure on water and soil systems. • No land use conflict: The biomass would otherwise have been burned or left to decay. Its removal did not displace existing land uses or impact food production. • No chemical inputs: No herbicides, fertilizers, or pesticides were applied at any stage of the biomass harvesting or storage process. • Documentation: Harvest volumes and timing were documented throughout the implementation phase. The sustainable approach was reviewed during the Life Cycle Assessment (LCA) and verified by independent experts. The project is fully aligned with Puro.earth's sustainability requirements for biomass feedstock and contributes to Namibia's national land management and climate objectives.	

Note that additional evidence will be required to demonstrate adequate biomass sourcing as per the Puro Biomass Sourcing Criteria, where applicable.

Stakeholder Engagement Report

CO_2 Removal Supplier	Carbonsate
Production Facility	Carbonsate Project Namibia
Production Facility ID	583695
Date of report last update (YYYY-MM-DD)	2025-03-13

PURO.EARTH Puro.earth Oy, Tammasaarenkatu 1, 00180 Helsinki, Finland

Stakeholder Engagement Report

The purpose of this document is to gather results of the Stakeholder Engagement that has been conducted by the CO_2 Removal Supplier, for its Production Facility, in line with Section 6.4 of the Puro General Rules 4.0 and the Puro Stakeholder Engagement Requirements.

This report is divided in the following sections:

1 Identified stakeholders
2 Consultation activities and outcomes
3 Plans for continued consultation during crediting period
4 Summary

This report will be made **publicly available** in the Puro Registry. It shall not contain information about private individuals (e.g. name, personal address) for privacy reasons. Such information shall be provided separately (e.g. list of participants to consultation activity, as an appendix to the report).

1 Identified stakeholders

Provide an overview of the stakeholders that have been identified as relevant to include in the stakeholder engagement process, following the categories defined below:

Stakeholder categories	Identified stakeholders
Local Stakeholders, i.e. stakeholders in the immediate environment of the facility of the CO2 Removal Supplier, and most prone to experience direct or indirect effects of the respective carbon removal activity.	Farm Yakandonga, including owners and personnel.
Stakeholders with **land-tenure rights** within the vicinity of the project boundary	Endelela Farming CC (owners of Yakandonga farm)
Representatives of relevant **local authorities** and relevant **local politicians**	Local Forestry Department in nearby town, Otjiwarongo
Local **non-governmental organizations** (NGOs) or international NGOs who are active in the region and relevant to the topic	Urban Green Environmental Consultants
Representatives of relevant **working groups** or **vulnerable** and **marginalized** groups within the vicinity of the project boundary	None (No relevant working groups or vulnerable and marginalized groups have been identified within the project boundary. The project is located on private agricultural land with no known communities or groups that would be directly impacted.)
Relevant **industry experts**, given there are any in the near environment	Colin Lindeque
Other, please specify:	none
Answers are to be written in the second column without disclosing private information. For instance, instead of the name of a specific resident, use terminology like "local residents". Likewise, instead of naming specific public employees, prefer to mention the roles and departments. *In case there are no identified stakeholders in a given category, provide a brief justification instead.*	

contact@puro.earth Puro.earth Oy, Tammasaarenkatu 1, 00180 Helsinki, Finland https://puro.earth

Activity directly or indirectly impacting indigenous peoples or their livelihoods, ancestral knowledge or cultural heritage:

Question	Answer
Does the list of identified stakeholders include any indigenous peoples or communities?	☐ Yes ☒ No
If answer is "Yes" to the question above, has the free, prior and informed consent (FPIC) been obtained from those indigenous peoples or communities?	☐ Yes. Please provide evidence of the obtention of the FPIC in a separate document.
As per rule 2.1.6 in the Puro Stakeholder Engagement Requirements, note that "FPIC is distinct from stakeholder engagement in that it is derived from indigenous peoples' right to self-determination. While stakeholder engagement involves consultation and collaboration with all parties affected by a project, FPIC goes a step further by requiring the explicit consent of indigenous peoples before proceeding with activities that impact them."	

2 Consultation activities and outcomes

Provide an exhaustive list of all the **stakeholder consultation activities** that have been conducted. Add as many rows as necessary. The activity categories can for instance be one of the followings (but not limited to these ones): public meeting, online webinar, paper questionnaire, electronic questionnaire, interviews, focus group, site visit, door-to-door visits, etc.

Activity categories	Activity name	Activity date (YYYY-MM-DD)
Urban Green Consultants	In-office visit: Environmental Impact Assessment	January 2025
Endelela Farming / Yakandonga Farm	Site visit and consultation: Harvesting and Terrestrial Storage	November 2024

Provide a list of all the **stakeholder invitations** that have been sent out, grouping whenever relevant the invitations (e.g., for all local residents as one row). Add as many rows as necessary. The invitation format can be one of the followings (but not limited to these ones): postal letters, email, social media publication, public board information, telephone calls, verbal communication, etc.

Invitation format	Invitation name	Invitation date (YYYY-MM-DD)
Verbal (telephone)	Stakeholder invitations for Urban Green	2024-12-04
Verbal (telephone)	Stakeholder invitations for Yakandonga/Endelela	2024-10-14

As **supporting evidence** to this report, please provide in a separate subfolder, the following:

- Example of invitations sent out, for different consultation activities (e.g. letters, emails, website announcements).
- Lists of all stakeholders invited to the consultation activities and stakeholders participating in the consultation activities. The lists will not be made public, as they can contain private information.

In case identified relevant stakeholders (section 1) were not invited to the consultation activities, please provide clear **reasons for not inviting** them. Add as many row as necessary. Leave blank if not applicable.

Identified stakeholders	Reasons for not inviting
	n/a

Provide an extensive summary of i) the **information that was provided to stakeholders** during the consultation activities, ii) the **feedback received** during the consultation activities (with a particular focus on concerns, potential issues and critiques), and iii) the **responses provided to stakeholders** about their feedback.

Summary of the feedback received during the consultation activities

During the initial phase of the project, various farmers with available biomass were approached to identify the most suitable project location. None of the farmers opposed the initiative; on the contrary, all were open to discussions and expressed strong interest in hosting such a project on their private land.

Information Provided to Stakeholders:
Stakeholders received detailed information about the terrestrial biomass storage project, including its methodology, objectives, and expected environmental and economic benefits. A Q&A session allowed for clarifications and discussions.

Feedback from Stakeholders:
Stakeholders saw significant potential in the project, both as a business opportunity and as a sustainable way to utilize unused biomass. They expressed strong support for the initiative and, if successful, were highly interested in expanding its scale. One key question raised was why biomass is stored in a concentrated location rather than being processed into biochar, which could provide additional soil benefits.

Responses to Stakeholders:
It was explained that terrestrial biomass storage offers a greater carbon sequestration potential than other existing methodologies currently practiced in Namibia. Typically, harvested biomass is either burned in the open for land clearing or used as fuel in industrial biomass furnaces, such as in cement production. In contrast, this project serves as a catalyst for debushing, restoring savannah landscapes, increasing biodiversity, and creating local employment, thus contributing to social and economic upliftment. Additionally, given the vast availability of biomass, no competition for its use is expected.
Stakeholders responded positively to these explanations and remain engaged in the project's progress and future potential.

In case any relevant stakeholders **could not take part** in the consultation activities due to reasons such as lack of mobile access or physical disability, please describe and summarize how you engaged with them, what their specific feedback was, and how it was answered. Leave blank if not applicable.

Consultation of stakeholders that could not take part in the scheduled consultation activities

none

As **supporting evidence** to this report, please provide in a separate subfolder, the following:

- Materials presented during the consultation activities (e.g. presentations)
- Documentation of the feedback received (e.g. meeting notes, questionnaire answers)

- Documentation of the responses provided to stakeholders (e.g. consultation reports)

Provide an extensive description of the **changes made to the project** plans to address the concerns and issues raised during the consultation activities.

Description of the changes made to the project for addressing concerns and issues
No significant issues or concerns were raised during the stakeholder consultations, as the project is located on private agricultural land with the full support of the landowners. Stakeholders expressed interest in the project's expansion and its long-term benefits. However, Carbonsate remains committed to ongoing engagement and will address any future concerns or opportunities for improvement as they arise.

3 Plans for continued consultation during crediting period

Provide a description of the current plans for maintaining a continued engagement of the stakeholders during the crediting period.

Description of the plans for continued consultation of stakeholders during the crediting period
Stakeholder engagement will be maintained throughout the crediting period through regular project meetings, providing a structured forum for updates, feedback, and discussion. In addition, stakeholders will have open lines of communication via email and Whatsapp, allowing them to raise concerns or ask questions at any time, including anonymously if desired. All feedback and grievances are logged in a structured internal system, recording the nature of the input, response provided, any corrective actions taken, and the final resolution. This log is reviewed regularly and forms the basis for reporting in our periodic Output Reports to Puro. As the project progresses, further engagement opportunities will be explored to ensure transparency, address emerging issues, and strengthen collaboration with relevant stakeholders.

4 Summary

Based on all the information provided above and the evidence provided separately, write an overall summary of the stakeholder engagement. This summary must follow the structure of this report, tackling identified stakeholders, consultation activities and outcome, and plans for continued consultation. This summary is limited to 500 words. This summary must be re-used in the Project Description.

Overall summary (500-word limit)
Identified Stakeholders The stakeholder engagement process for Carbonsate Namibia focused on the most relevant stakeholders, as this is a pilot project. Key local stakeholders included Farm Yakandonga and its owners, Endelela Farming CC, which holds land tenure rights within the project area. Representatives from the Local Forestry Department in Otjiwarongo were engaged as relevant local authorities. Urban Green Environmental Consultants participated as an involved environmental organization. Additionally, Colin Lindeque was consulted as a relevant industry expert. No vulnerable or marginalized groups were identified within the project boundary, and the project does not impact indigenous peoples or their livelihoods, ancestral knowledge, or cultural heritage.

Consultation Activities and Outcomes

Consultation activities were conducted through targeted site visits and discussions with directly relevant stakeholders. Meetings included an in-office consultation with Urban Green Environmental Consultants regarding the Environmental Impact Assessment in January 2025 and a site visit with Endelela Farming and Yakandonga Farm in November 2024 to discuss biomass harvesting and terrestrial storage. Since the project is located on private property, no broad public invitations were issued.

Parallel to these activities, Urban Green Environmental Consultants were engaged to assess whether national policies and regulations exist for terrestrial biomass storage. While no specific regulation was identified for this type of storage, various relevant acts and policies govern general biomass harvesting and utilization (see list of policies and regulations).

During the consultations, stakeholders were informed about the project's methodology, objectives, and potential environmental and economic impacts. Feedback was highly positive, with local farmers recognizing an opportunity to utilize unused biomass in a meaningful and climate-friendly way. There was strong interest in expanding the project if successful.

A key question raised was why biomass is stored in a concentrated location rather than used for applications like biochar production, which could provide soil benefits. In response, Carbonsate explained that terrestrial biomass storage offers a greater carbon sink effect compared to other existing methods in Namibia. Unlike common practices where biomass is combusted in cement kilns or openly burned for land clearing, the project actively contributes to long-term carbon sequestration. Additionally, the project supports landscape restoration by promoting savannah regeneration, biodiversity, and local employment. Given the vast availability of biomass, no competition for resources is expected.

Plans for Continued Consultation

Stakeholder engagement will remain an ongoing process throughout the crediting period. Regular project meetings will be held to maintain open communication, and stakeholders will have continuous access to project representatives via email for inquiries, concerns, or suggestions. Additionally, as the project progresses, further interested parties will be invited to assess potential future issues and explore opportunities for broader engagement.

Overall, the engagement process confirmed strong local support, with no concerns or objections raised. Stakeholders expressed enthusiasm about the project's long-term benefits, and further consultation will be conducted as the project evolves to ensure transparent and inclusive stakeholder involvement.