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	SEEK Biochar in Shanghai
Registration date (YYYY-MM-DD)	2025-02-25
Production Facility ID	469599
Location of facility	No. 2070 Lvxin Road, Lvxiang Town, Jinshan District, Shanghai, China
Host Country of removal	China
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	Climate Bridge (Shanghai) Ltd.
Supplier address	Block B, 24th Floor, 33 Fushan Road, Pudong New Area, Shanghai, China
Business ID	91310120563113084C
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	4.2
Methodology name	Biochar Methodology
Methodology edition and version	Edition: 2022 Version: 3
Date of audit completion	2026-09-03
Conclusion of audit	The auditor concludes that SEEK Biochar in Shanghai meets the requirements of the Puro Standard General Rules v4.2 for the combined production facility and output audit, and that the Biochar Methodology Edition 2022 v3 was correctly applied for output and CO2 removal calculation.

Auditing body	Earthood Services Limited
Start date of crediting period	2025-05-18
End date of crediting period	2030-05-18
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	At SEEK's production facility, rice straws and urban green cuttings are transformed into biochar, where carbon is stored in a stable form. Without the project, the biomass feedstock would face one of the following disposals: combustion, processing into fertilizer, or natural decay in the fields; all of these scenarios ultimately lead to the release of carbon back into the atmosphere. This project ensures that after carbon is stored in the biochar, it is applied to soil and thus stably removed from the air for extended periods, contributing to climate change mitigation.
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: No.2070 Lvxin Road, Lvxiang Town, Jinshan District, Shanghai, China Coordinates (WSG84, decimal format): Latitude: 30.8533 N Longitude: 121.2025 E
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:* ***Climate Bridge (Shanghai) Ltd.*** *Entity business ID: 91310120563113084C* *Entity address: Block B, 24th Floor, 33 Fushan Road, Pudong New Area, Shanghai, China*

	Role of entity: Consulting (Puro account opening and management, LCA analysis, writing of reports, etc.)
Organization 2	*Entity name:* ***SEEK Bio-Technology (Shanghai) Co., Ltd.*** *Entity business ID: 913101125695895935* *Entity address: Floor 1, Building 14, No. 298, Lane 3509, Hongmei South Road, Minhang District, Shanghai, China* *Role of entity: Operation of the facility (including sourcing of feedstock and sales of products)*
Organization 3	*Entity name:* ***Jiangsu Coastal Eco-Technology Development Co., Ltd.*** *Entity business ID: 913208913212111082* *Entity address: Building D4, No. 15 Wanshou Road, Nanjing Area, China (Jiangsu) Pilot Free Trade Zone* *Role of entity: User of biochar-based fertilizer for soil application*
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.

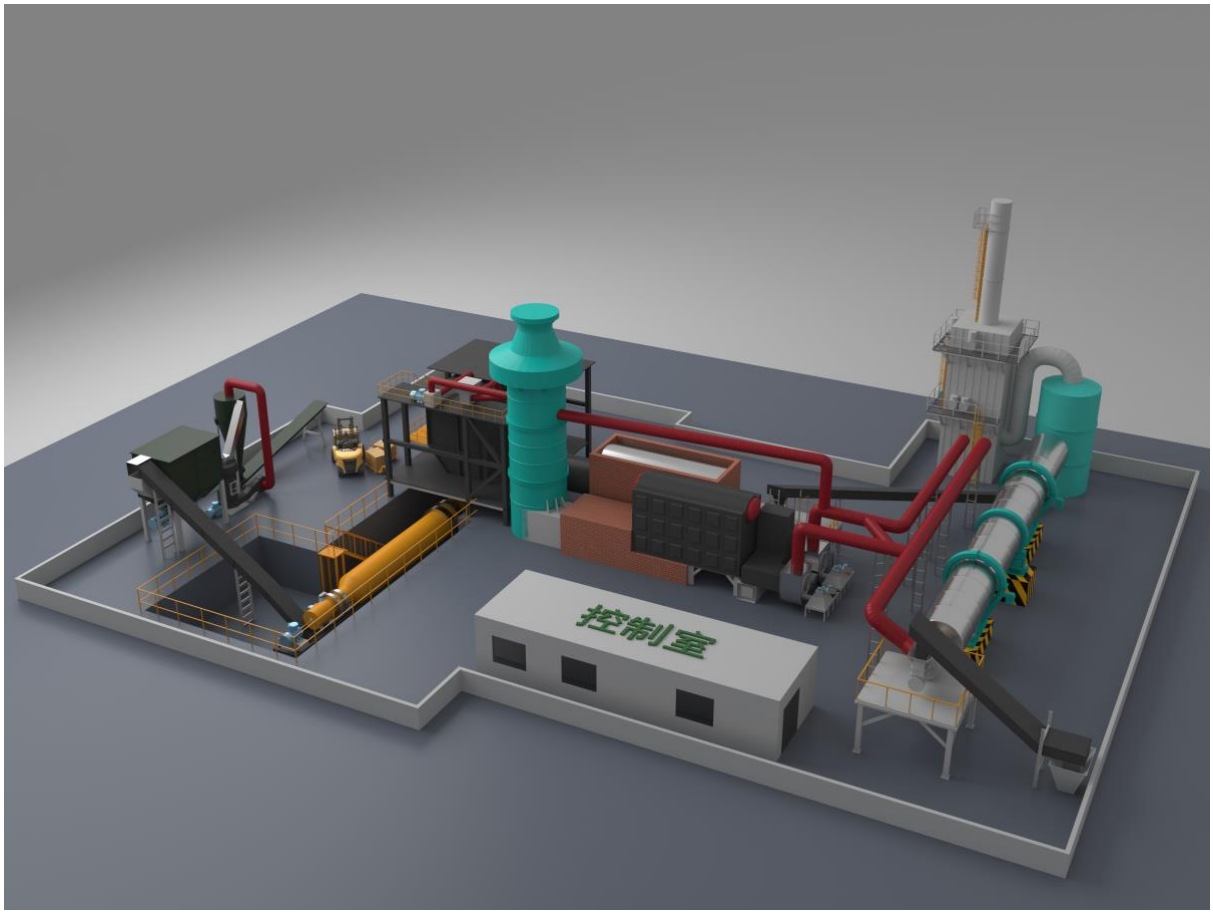
3.1 Technical description

Instructions	*Please provide a technical description of the carbon removal activity taking place at the production facility. Word limit: 500 words.*
Technical description	The biochar production facility in Jinshan District, Shanghai, operated by SEEK Bio-Technology (Shanghai) Co., Ltd., achieves carbon dioxide removal (CDR) through the production and application of biochar derived from agricultural waste, converting biomass carbon into a highly stable form that is sequestered in soils for centuries, preventing its re-release into the atmosphere as CO_2. The process targets high-lignin agricultural residues such as straw, tree branches and waste wood. Upon arrival at the facility, feedstocks undergo mechanically shredding, a preprocessing step that ensures consistent feedstock quality and facilitates the subsequent thermal process. The core CDR activity occurs in the Carbonization Workshop, equipped with a drying rotary furnace, heat exchanger, carbonization rotary furnace, cooling rotary furnace, grinder, combustion furnace, etc.). Shredded materials are first dried in a rotary furnace using heat recovered from the combustion furnace, removing moisture. The dried biomass then enters the sealed carbonization rotary furnace, where pyrolysis occurs under oxygen-limited conditions. This thermochemical process decomposes the biomass into solid biochar, along with gas and liquid byproducts, also known as pyrolysis gas and oil). Such byproducts are captured via sealed pipelines and combusted in the combustion furnace to provide heat for the pyrolysis reactions, achieving energy self-sufficiency and reducing reliance on external fuels. Emissions from combustion (CO_2, SO_2, NO_x, particulates) are controlled via SNCR denitrification (urea injection), cyclone separators, bag filters, and scrubbers, ensuring compliance with standards.

	After being cooled down and ground to fine powder, the biochar is then blended with fermented compost from low-lignin waste (e.g., vegetable waste, mushroom residues, etc.) and nutrients like ammonium sulfate and phosphate, forming a range of fertilizer products. When applied to agricultural soils as part of the final fertilizer products, the biochar enhances soil structure, improves water retention, reduces nutrient leaching, and boosts microbial activity. Critically, it durably sequesters carbon with stability up to hundreds of years.
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 production facility transforms eligible organic biomass into biochar via pyrolysis. The biochar stability (H/C_{org} molar ratio < 0.7) and the subsequent use of the biochar in soil ensure long-term carbon removal and storage, which fits within the scope of the methodology. The project quantifies net CO_2 removals by comprehensive accounting for emissions arising from production and supply of the biomass feedstock, biomass conversion into biochar and biochar end use. This approach corresponds directly to the cradle-to-grave system boundaries outlined in the methodology.
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	
Rice straws and woody waste are utilized for various purposes, including composting, animal feed and substrate for edible mushroom (which is a local specialty of Jinshan District). Regardless of the application, the carbon contained in the biomass is ultimately re-released into the atmosphere. The rice straws and woody waste that are not collected or utilized would remain in the fields and naturally decomposes, re-releasing all of the carbon into the atmosphere. In summary, in the baseline scenario, the carbon contained in the biomass feedstock will always end up returning to the atmosphere.	
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	NA
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 baseline scenario involves the carbon contained in the biomass feedstock (rice straws and woody waste) being re-released in the atmosphere, resulting in zero durable carbon removal. The project is not required by any laws or regulations in China. Financially, an investment analysis confirms the project is not viable without carbon credit revenues, as the equity IRR remains significantly below the benchmark rate. CORC income is crucial to overcome this barrier and make the investment feasible. Therefore, the project activity is additional, as it generates durable carbon removals that would not have occurred under the baseline scenario and is heavily dependent on carbon finance.	
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	Baseline Additionality Questionnaire SEEK 469599
	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	
The quantification of net carbon dioxide removals relies on four key components: carbon removals, biomass sourcing emissions, biochar production emissions and biochar use emissions. The latter three are life cycle assessment (LCA) emissions associated with the produced and used biochar. The LCA emissions are calculated using the Puro LCA Model template in Excel, with activity data sourced from on-site operational records and emission factors from the Ecoinvent database. The carbon removals of the biochar are determined based on three critical parameters: dry mass of the biochar, its organic carbon content, and its permanence factor. The permanence factor is established using soil temperature and the H/Corg molar ratio. The dry mass of biochar relies on accurate measurement of biochar moisture content, in accordance with the Protocol for biochar sampling and testing, developed by Climate Bridge and followed by SEEK during operations. The	

H/Corg molar ratio is derived after biochar samples are sent to a qualified laboratory, where hydrogen content and organic carbon content are tested.
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 safety of the removal activity

A detailed *Safe Operation Manual of Equipment* has been developed and provided to each employee. The operators are required to carefully study the equipment instructions, familiarize themselves with safe and correct operating procedures, and must wear appropriate protective equipment all all times. Additionally, the project owner has formulated an emergency rescue plan and regularly organizes fire drills to enhance employees' emergency response capabilities and ensure the overall safety of the project. Regular training sessions are also organized for all employees, covering various aspects of safe operation and relevant case studies.

The eligibility of the removal activity

The production facility complies with applicable national regulations and emissions standards, and where relevant, regional ones in Shanghai that impose stricter requirements than the national counterparts.

The precise quantification of CORCs

The quantification of CORCs is calculated as carbon removals minus LCA emissions for a specific reporting period.

To quantify the carbon removals, biochar weight (wet basis) is recorded during the pyrolysis operations, and the moisture content is determined by drying and weighing representative samples collected from the pyrolysis equipment outlet in an on-site laboratory. Soil temperature is determined by first identifying the soil application location through sales contracts or invoices, and then following the *Protocol for soil temperature selection* to obtain the temperature data. The hydrogen content and organic carbon content of the biochar are sent to a qualified laboratory for testing, with one test conducted for each biochar production batch to ensure data accuracy. With all the information above, the carbon removals are calculated using the formulas specified in Puro.earth Biochar Methodology 2022 V3, incorporating all the data collected in the previous steps.

To quantify the LCA emissions, the key requirement is to properly record and retain all relevant operational data to ensure traceability. The operational data to be collected includes biomass feedstock transportation records, biochar weight measurement records, biochar moisture content measurement records, electricity monitoring records, and diesel machine operation records, among others. Once the operational data is ready, activity data for LCA calculations is extracted directly from these recorded documents. For emission factors, the primary source is the Ecoinvent database, and if specific factors are not available in this database, other reliable sources are used as supplements to maintain calculation accuracy. Finally, data aggregation and LCA emission calculations are performed using Puro's *Biochar LCA Excel Template*, which standardizes the calculation process and avoids errors.

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: The monitoring plan and procedures contain commercially sensitive 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	

The Life Cycle Assessment (LCA) evaluates greenhouse gas emissions associated with the biochar produced at SEEK's production facility in Jinshan, Shanghai, China. Commissioned by SEEK and conducted by Climate Bridge (Shanghai) Ltd., the study complies with ISO 14040:2006, ISO 14044:2006, and Puro.earth Biochar Methodology Edition 2022 V3, adopting a conservative approach.

The system boundary is cradle-to-grave, encompassing biomass sourcing, biochar production (pre-processing and pyrolysis), and biochar use (blended into fertilizers for soil application). Key processes include biomass transport, shredding, pyrolysis, packaging, fertilizer blending, transport to application sites, and soil application. Exclusions include biomass cultivation, as feedstocks are residues treated as burden-free. The functional unit is 1 ton of dry-basis biochar applied to soil for carbon sequestration. Allocation is not involved for the steps of biomass sourcing and biochar production, and for biochar use allocation is based on mass fraction in fertilizers.

Data sources include foreground activity data from facility records (e.g., the mass of biomass transported, the amount of electricity consumed) and background emission factors from Ecoinvent v3.10. Modeling used OpenLCA v2.3 and Puro's Biochar LCA Excel template. Minor data gaps (e.g., ton-bag composition) were addressed conservatively, and insignificant inputs (water, urea <1% emissions) were excluded per ISO 14044 cut-off criteria. Emissions are converted to CO_2-equivalents using IPCC AR6 100-year GWPs (29.8 for methane and 273 for N2O).

During the monitoring period (18 May 2025 to 31 August 2025), 154.6 tons of dry-basis biochar were produced and used in soil, with total LCA emissions of around 126 tCO_2e. Biochar production contributes about 89%, mainly from electricity (37%), N_2O emissions from pyrolysis, and embodied emissions of capital goods. Biochar use and biomass sourcing add around 6% and 5%, respectively. The total LCA emissions were less than biochar carbon removals, demonstrating net GHG negativity, supporting Puro.earth certification for CO_2 Removal Certificates (CORCs).

Future LCA studies will follow the same methodology, updated annually with operational data to ensure accuracy and compliance.

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: The LCA report contains commercially 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	
SEEK identified a range of stakeholders relevant to its biochar facility. These included Heping Village residents (local stakeholders) and the village collective (the landowner) and representatives from local authorities (Government of Lvxiang Town, Commission of Agriculture and Rural Affairs of Jinshan District, and Environment Bureau of Lvxiang Town). An expert from the Shanghai Academy of Agricultural Sciences was also identified as a relevant industry expert. No indigenous peoples, NGOs, or vulnerable and marginalized groups were present in the project vicinity. Stakeholders were informed and mobilized through a combination of WeChat messages and direct village visits approximately one week prior to the main consultation event. Invitations were sent via WeChat to the official representatives, while news of the event was disseminated among villagers by the village committee. A public stakeholder consultation meeting was successfully held on 15 August 2025. Attendees included eighteen villagers (encompassing two village committee members) and representatives from the three local government departments. The consultation involved a detailed presentation on biochar, its agricultural applications, the specific production process at the facility, and the project's environmental contributions to climate change mitigation and the circular economy. Key feedback from the consultation included concerns from one villager regarding odours near the facility, which was corroborated by a subsequent site inspection requested by the Environment Bureau representative. SEEK responded by acknowledging the issue, explaining the dilution effect over distance to residential areas, and detailing ongoing and planned mitigation	

measures including technical upgrades to the Fermentation Workshop. No other critical feedback or concerns were raised. For the expert who could not attend, a separate consultation was conducted via phone call on 08 August 2025. Plans for continued engagement emphasize an open-door policy. Stakeholders are welcome to conduct spot checks at the facility at their convenience. A direct and accessible communication mechanism is established, allowing stakeholders to voice any future concerns or suggestions directly to SEEK via phone or WeChat, or indirectly through the Heping Village committee.
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	Stakeholder Engagement Report SEEK 469599
	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 Impacts and Management The key environmental impacts identified are air emissions, noise, and waste generation. The production processes generate air pollutants, including particles, SO_2, NO_x, NH_3, and H_2S. These are mitigated through a combination of low-nitrogen combustion, selective non-catalytic reduction (SNCR), and treatment systems comprising cyclone dust collectors, spray towers, and electrostatic precipitators. There are no direct pollutant discharges to water; process wastewater is reused in fertilizer production, while laboratory and domestic wastewater is sent to a municipal treatment plant. Risks of soil contamination from leaks are minimized through ground hardening, reinforced concrete structures, and anti-leakage measures compliant with national standards. Noise from machinery (60-75 dB) is controlled with vibration damping pads, soundproofing structures, and enclosed operations to meet national noise standards. Hazardous waste (e.g., laboratory chemicals, used oil) is stored in a designated warehouse and handled by qualified disposal companies in compliance with regulations. The facility is not located near any environmentally sensitive areas, with the nearest conservation zones over 70 km away, resulting in no identified risks to biodiversity. Water consumption is minimal compared to regional usage, and measures like water circulation and wastewater reuse are implemented.	

Biomass feedstock used in the biochar production facility is sourced sustainably: rice straws are agricultural residues collected with a portion left on fields to maintain soil fertility, and tree branches are from urban green waste, ensuring no conversion of natural forests or high conservation habitats. Social Impacts and Community Relations The primary social focus is on labor practices and worker safety. The company complies with Chinese labor laws, ensuring all employees are legally hired adults with signed contracts, enjoying equal pay and opportunities without discrimination. Key occupational hazards identified include fire/explosion, mechanical injuries, electrical shock, and exposure to toxic gases. Mitigation measures include strict adherence to national safety standards for construction, providing personal protective equipment (PPE), detailed safe operation manuals, regular training, and emergency drills. For the local community, potential health and safety risks from routine operations are addressed through the aforementioned pollution controls. Risks from non-routine events, such as explosions, are minimized through the internal focus on worker safety and proper operation to prevent such incidents. The project did not cause physical or economic displacement. No indigenous peoples are present near the project location, and no cultural, religious, or heritage sites are affected, making FPIC requirements non-applicable.
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:

Environmental and social safeguard questionnaire (required)	Filename	Environmental and Social Safeguard Questionnaire SEEK 469599
	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: Approval for the Construction Project of the Agricultural Waste Comprehensive Utilization Facility in Jinshan District ID of permit: Jin Nong [2021] No. 280 Issuer of permit: Commission of Agriculture and Rural Affairs of Jinshan District Date of issuance: 22-December-2021 Permit file (.pdf): SEEK Jinshan Project Approval (Chinese); SEEK Jinshan Project Approval (English) Permit URL (if available): NA

	Name of permit: Approval of the EIA Report for the Construction Project of the Agricultural Waste Comprehensive Utilization Facility in Jinshan District ID of permit: Jin Huan Xu [2024] No. 119 Issuer of permit: Ecology and Environment Bureau of Jinshan District Date of issuance: 27 August 2024 Permit file (.pdf): SEEK Jinshan EIA Report Approval (Chinese); SEEK Jinshan EIA Report Approval (English) Permit URL (if available): NA Name of permit: ID of permit: Issuer of permit: Date of issuance: Permit file (.pdf): Permit URL (if available): NA Name of permit: ID of permit: Issuer of permit: Date of issuance: Permit file (.pdf): Permit URL (if available): NA
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: Environmental Impact Assessment Report of Construction Project of the Agricultural Waste Comprehensive Utilization Facility in Jinshan District Filename of report: SEEK Jinshan EIA Report (Chinese); SEEK Jinshan EIA Report (English) Can the report be published in the Puro Registry: 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 have. If those impacts are certified as SDG Attributes, then the summary shall be based on related pieces that were submitted in the audit documentation (SDG Reporting files). If those positive impacts are not certified as SDG Attributes, then the summary shall be limited to a qualitative description of positive impacts in relation to SDGs. Word limit: 150 words.*
Summary	The project does not claim any Puro-approved SDG indicators. However, the project does generate co-benefits beyond climate change mitigation that align with the UN's SDGs. The project creates skilled job positions in rural areas of Shanghai through the operation of biochar production and its associated supply chain, thereby supporting local economic development, contributing to SDG 8 (Decent Work and Economic Growth). The use of biochar-based fertilizer improves soil fertility, water retention, and nutrient-use efficiency in agricultural soils, indirectly contributing to increased crop productivity and food security, thus contributing to SDG 2 (Zero Hunger). By converting agricultural residues into a stable, long-term carbon sink and soil-enhancing material, the project promotes circular-economy principles and sustainable production patterns, contributing to SDG 12 (Responsible Consumption and Production).
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	NA
	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	Baseline Additionality Questionnaire SEEK 469599	9
2	Environmental and Social Safeguard Questionnaire SEEK 469599	13
3	Environmental Evaluation Report SEEK 469599	4
4	Stakeholder Engagement Report SEEK 469599	7
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.

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: Utilization of rice straws and woody waste for various purposes	Part of the rice straws and woody waste are utilized for various purposes, including composting, animal feed and substrate for edible mushroom (which is a local specialty). Regardless of the application, the carbon contained in the biomass is ultimately re-released into the atmosphere.	None	None
Alternative scenario 1: Non utilization of rice straws or woody waste	Not all the rice straws and woody waste in Jinshan District are collected and utilized. A portion remains in the fields and naturally decomposes, re-releasing all of the carbon into the atmosphere.	None	None
Alternative scenario 2: NA	NA	None	None
Project activity: Conversion of rice straws and woody waste into biochar via pyrolysis	The project uses rice straws and woody waste to produce biochar, and then mixes with other materials to produce biochar-based fertilizer.	The annual net CO2 removals is expected to be about 2205 tCO2eq if full capacity is reached[1].	None

A2. Does the project lead to higher volumes of durable carbon removal than the baseline?	Yes / No
The project produces biochar which contains durable carbon. The subsequent soil application will ensure that the durable carbon can be durably stored in soil.	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 project does not involve any of these activities.	Yes

[1] 5250 × 0.42 = 2205, calculated based on the following assumptions.

- Annual output of 5250 tons (dry basis) of biochar according to the FSR and the EIA report
- Net CO_2 removals of 0.42 tCO_2eq per tonne (dry basis) of biochar calculated from the 1st monitoring period: 65 CORCs were claimed for producing and using 154.6 tonnes of biochar

A4. Is the project required by existing laws, regulations, or other binding obligations?	Yes / No
There are no laws, regulations or binding obligations that require the production of biochar in China.	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
On this date, SEEK signed the construction contract with the contractor. As this was the earliest contract involving a major capital expenditure, this date is hence the commitment date.	24 August 2023

A6. Is the Technological Readiness Level of the Methodology 8 or 9?	Yes/No
According to Puro Additionality Assessment Requirements, the technology readiness level of biochar is 6-7.	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.
NA

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.**
NA

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.
NA

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
Context: The carbon removal facility, the Carbonization Workshop, is an integrated part of a larger facility officially named as "Agricultural Waste Comprehensive Utilization Facility in Jinshan District", which produces organic fertilizer that may or may not contain biochar. As an add-on to the entire facility, the Carbonization Workshop does not generate separate revenue, as its biochar is used internally in organic fertilizer production. The broader plant received a one-time government subsidy that supports initial investment (construction and equipment). A portion of this subsidy is allocated to the Carbonization Workshop in the analysis below.	Yes

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
NA

B Simple cost analysis	Project response
B2. Please describe your cost structure here and include evidence in attachment.	NA
B3. Please summarize the simple cost analysis here. Please include any public subsidies received or expected. Compare with alternative scenarios, if relevant.	NA
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.	NA
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.	NA
B6. Is the information shared here consistent with information presented to the company's decision-making management, investors or lenders?	NA
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.	NA

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.**	The only alternative scenario is to carry out the project without CORCs. The financial analysis was evaluated on a real-term basis using Chinese Yuan (CNY) as the currency. The equity IRR was calculated and compared to a benchmark rate set by the authorities in China. The analysis conclusively shows that the biochar production facility is not financially viable in the "Without-CORC" scenario, as the IRR falls significantly below the benchmark. Please refer to the spreadsheet for details.
C2. Please state how CORC revenues change the expected IRR or NPV of the project.	The CORC revenues significantly increase the expected IRR, raising it from below to above the benchmark.
C3. Please conduct a sensitivity analysis in relation to the investment analysis and summarize the results here.	A sensitivity analysis was conducted on four key parameters: total investment, biochar output, unit price of biochar (internal valuation of biochar), and O&M costs. The results demonstrate that even with a ±10% variation, the project IRR remains consistently well below the benchmark in the absence of CORC revenues.
C4. Is the information shared here consistent with information presented to the company's decision-making management, investors, or lenders?	Yes.
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.	Yes.
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.	No.
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**	- **Overall description**: The spreadsheet calculates the equity IRR of the biochar production facility over a lifetime of 10 years. All calculations are in real terms using Chinese Yuan (CNY). - **Capital structure**: The investment analysis is based on a 100% equity financing from SEEK, as the project is not funded by any debt. - All information used in the model, including main revenues and costs, is sourced from the Feasibility Study Report of the project. - **Income**: The biochar production facility does not generate any income on its own; its economic value is realized internally by enhancing the value of downstream fertilizer products. This effect is quantified in the model as an internal transfer

• **Expected or already received public subsidies** • **Growth assumptions** • **Model duration and a comparison with expected lifetime**	price for biochar, which is the only cash inflow during the project operation in the absence of CORCs. - **Subsidy**: The one-time government investment subsidy is treated as a cash inflow during the 1st year of project construction. - Growth assumption is not involved. Key parameters are held constant. - The model duration is 10 years, which is consistent with the expected project 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.

X 

Date, Place: 24 Nov.2025, Shanghai
Representative name, title, organization Gao Zhiwen, General Manager, Climate Bridge (Shanghai) Ltd.

Environmental evaluation report

Document description and purpose:

A report prepared by the supplier summarizing the main negative environmental impacts entailed by the biochar production activity (e.g. emissions of pollutants to air, water, and soil, generation of solid and liquid waste, accumulation of materials in stock).

The report shall demonstrate the knowledge of the project regarding the negative impacts arising from the activity. The report shall be factual, scientific, and concise, listing sources of impacts, quantifying whenever possible the relevant emissions and waste streams on a yearly basis, and identifying measures for improvement of the environmental performance.

This report is prepared for the following Production Facility:

- SEEK Biochar in Shanghai, managed by SEEK Bio-Technology (Shanghai) Co., Ltd.
- An important remark:
  The carbon removal facility (pyrolysis reactor and its associate equipment), known as the "Carbonization Workshop", is part of the larger "Agricultural Waste Comprehensive Utilization Facility in Jinshan District", which produces organic fertilizer that may or may not contain biochar.
  An EIA report has been prepared for the entire plant, though not specifically for the Carbonization Workshop alone. The information provided below is drawn from this EIA Report and reflects the operations of the entire facility, rather than focusing solely on the biochar production within the Carbonization Workshop. For example, NH_3 and H_2S emissions to air are not relevant to the Carbonization Workshop. We believe that this holistic approach offers a more comprehensive assessment of all environmental dimensions.

1. Identification of sources of environmental impacts

For the biochar production activity at the given production facility, list all potential sources of negative environmental impacts for each category listed below, and provide a brief description. Whenever possible provide details on the applicable regulation and yearly quantification of emissions.

Emissions to air

- **Particle matters**, **SO_2** and **NO_X**: particles, SO_2 and NO_X are primarily generated in the combustion chambers of the Carbonization Workshop and the Fertilizer Workshop; these pollutants are released through Exhaust Stack 1# and 2#. The particle matters, SO_2 and NO_X emissions are estimated to be 0.4662 t/a, 0.4156 t/a and 0.944 t/a, respectively. They are also emitted from fuel consumption of vehicles and other machinery; their emissions from such sources are unquantified. The emissions of particles, SO_2 and NO_X are regulated by the regional standard of Shanghai DB 31/933—2015 (*Integrate emission standards of air pollutants*).
- **NH_3** and **H_2S**: NH_3 and H_2S are generated during the composting process in the Fermentation Workshop as well as during the fertilizer granulation process in the Fertilizer Workshop; these pollutants are released through Exhaust Stack 1# and Exhaust Stack 2#. The NH_3

emissions and H_2S emissions are estimated to be 0.4598 t/a and 0.0132 t/a, respectively. The emissions of NH_3 and H_2S are regulated by the regional standard of Shanghai DB 31/1025—2016 (*Emission standards for odor pollutants*). These emissions are not relavant to the Carbonization Workshop.

Emissions to water

- There are no direct emissions to water. Refer to "Generation of liquid waste".

Emissions to soil

- No emissions to soil are expected under normal operating conditions unless seepage occurs, in which case pollutants may enter the soil.

Generation of solid waste

- **Regular industrial solid waste**: waste packaging materials (0.18 t/a), used GORE membranes from the composting process (1.2 t over 8 years), as well as dust collected by cyclone and bag dust collectors.
- **Hazardous waste** (both solid and liquid): waste liquid from the QA/QC laboratory (0.304 t/a), used engine oil (1.14 t/a) as well as oil-soaked rags (0.06 t/a), and packaging materials from QA/QC operations and machinery maintenance (0.12 t/a).
- **Domestic waste** (4.95 t/a): generated from daily activities of the personnel, including waste from the canteen.

Generation of liquid waste

- **Liquid waste from production**: wastewater from the spray towers and the electrostatic precipitators.
- **Wastewater from QA/QC operations**.
- **Domestic wastewater**: generated from daily activities of the personnel, including liquid waste from the canteen.
- The combined volume of wastewater from QA/QC operations and domestic wastewater is estimated to be 623.81 t/a; it contains 0.258 t/a COD_{Cr}, 0.019 t/a NH_3-N, 0.161 t/a BOD_5, 0.17 t/a suspended solids (SS), 0.031 t/a total nitrogen (TN), 0.004 t/a total phosphorus (TP), 0.01 t/a cooking oil, and 0.002t/a linear alkylbenzene sulfonates (LAS).
- **Hazardous liquid waste**: refer to "Generation of solid waste".

Accumulation of materials in stock at the facility

- Accidental leakage or seepage of raw materials, oil, hazardous waste, and finished products might occur due to their accumulation, leading to soil or water pollution.

2. Measures currently in place to mitigate negative environmental impacts

For the biochar production activity at the given production facility, list all measures that are currently implemented to mitigate any negative environmental impacts or associated risks.

Emissions to air

- **Particles**, **SO_2** and **NO_X** from fuel combustion: the combustion chamber employs low-nitrogen combustion technology, internal denitrification using selective non-catalytic reduction (SNCR). This approach minimizes the formation of NO_X and promotes the conversion of NO_X into N_2 or NH_3. Subsequently, the combustion flue gas undergoes treatment by a cyclone dust collector, a spray tower, and an electrostatic precipitator. These devices effectively reduce the levels of particles, SO_2, and excessive NH_3.

- **NH_3** and **H_2S**: the GORE membrane technology significantly reduces NH_3 and H_2S formation during composting; the flue gas is then further processed by an acid-base spray tower which further reduces the concentrations of NH_3 and H_2S.

Emissions to water

- Refer to "Generation of liquid waste".

Emissions to soil

- The entire plant adopts ground hardening to prevent soil contamination from potential leaks.
- In addition to ground hardening, reinforced concrete structures and waterproof materials are adopted in sedimentation tanks, warehouses, storage tanks, chemical cabinets in the QA/QC laboratory, and acid-base spray tower, to enhance their anti-seepage capabilities.
- The hazardous waste warehouse employs the strictest anti-seepage measures which include epoxy flooring as well as reinforced concrete. Its design complies with the requirements in the national standard GB 18597-2023 (*Standard for pollution control on hazardous waste storage*). The Carbonization Workshop does not involve generation and storage of hazardous waste.

Generation of solid waste

- Waste packaging materials and used GORE membranes from composting, which are regular solid waste, are sent to recycling facilities. Dust collected is reused in composting.
- Hazardous waste is temporarily stored in a designated warehouse and collected by qualified companies for disposal. The storing and handling of hazardous waste must comply with the national standard GB 18597-2023.
- Domestic waste is collected by the municipal solid waste management department for disposal.

Generation of liquid waste

- Wastewater from the spray towers and the electrostatic precipitators enters a sedimentation tank and is subsequently used in fertilizer production, without being discharged to any waterbody.
- Domestic wastewater and wastewater from the QA/QC laboratory are discharged into the municipal wastewater treatment plant operated by Shanghai Jinshan Langxia Engineering Co., Ltd. which has a capacity of 20,000 t/d, i.e., over 7 million t/a. The annual discharge from this project is 623.81 t, accounting for less than 0.01% of the plant capacity.
- Hazardous liquid waste: refer to "Generation of solid waste".

Accumulation of materials in stock at the facility

- Dedicated storage facilities for raw materials, oil, hazardous waste, and finished products, along with tanks, are equipped with advanced anti-seepage measures (refer to "Emissions to soil").
- Hazardous waste storage is designed to meet a minimum 15-day capacity requirement, in compliance with Shanghai regulations.

3. Measures possible to implement for improving environmental performance

For the biochar production activity at the given production facility, list measures that are not yet implemented but have been identified as possible ways to improve the environmental performance of the production facility.

Emissions to air

- No identified improvement measure.

Emissions to water

- No identified improvement measure.

Emissions to soil

- No identified improvement measure.

Generation of solid waste

- No identified improvement measure.

Generation of liquid waste

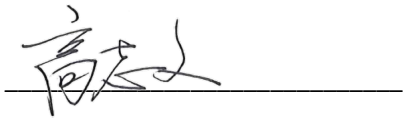
- No identified improvement measure.

Accumulation of materials in stock at the facility

- No identified improvement measure.

CO_2 Removal Supplier

Date: 14 / NOV / 2025

Signature: 

Name: Gao Zhiwen

Title: General Manager

Environmental and social safeguards questionnaire

CO_2 Removal Supplier	Climate Bridge (Shanghai) Ltd.
Production Facility	SEEK Biochar in Shanghai
Production Facility ID	469599
Date of report last update (YYYY-MM-DD)	2025-09-01

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.

2 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.
The production facility is located in Lvxiang Town, Jinshan District, Shanghai, China. The pyrolysis feedstock is rice straws and tree branches which are sourced locally. After biochar is produced from pyrolysis, it is mixed with other materials to produce biochar-based fertilizer. **The Chinese government actively encourages sustainable disposal of agricultural and forestry waste, although there is no mandatory requirement to produce biochar from such waste.** **As a legally operating entity registered in China, the project owner is required to go through a strict and complex approval process involving multiple authorities at different project phases, and must continuously comply with a comprehensive framework of laws and regulations throughout the project's entire lifecycle.**

Provide an overview of the material environmental and social impacts and risks in your operations, and how they were determined.
The following key focus areas have been identified in the materiality assessment: **a) emissions and discharges during the operation (high severity, continuous operation), and** **b) worker safety (high severity, mandatory under Chinese law).** **The project owner commissioned a qualified third-party to evaluate environmental risks and impacts covering air, water, waste, noise and other aspects. The results were compiled into**

an EIA report. For more details, refer to Section 3 (Environmental impact and management) of this Questionnaire as well as Environmental Evaluation Report. **Social risks mainly revolve around worker safety during operation. Refer to Section 2 (Labor practices and rights) of this Questionnaire.**

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 has obtained all approvals required by law from various government agencies. These include: - **Project approval from Commission of Agriculture and Rural Affairs of Jinshan District.** - **Environmental impact assessment approval from the Ecology and Environment Bureau of Jinshan District, in line with Environmental Impact Assessment Law of China.**	
Identify any documents or other records that you rely upon to verify compliance.	
The approval documents mentioned above.	

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 sources biomass from local village collectives and legally operating companies; agreements are signed after negotiation and intent from them. During the factory operation, employees benefit from all defined labour rights by law and are free from any discrimination or harassment.	

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
There are no indigenous peoples near the project location. Local communities related to the project are residents in nearby villages.	

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.

3 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?	
All employees working at the production site are Chinese citizens over 18 years old who have been legally hired on a voluntary basis and have signed a legally binding labour contract that obeys the Labor Law of China.	
Identify any documents or other records that you rely upon to verify compliance.	
Labor contracts, Labor Law of China	

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.	
The project owner has identified the following occupational health and safety hazards: - **Fire and explosion: may occur due to high-temperature processes, flammable substances and gases, along with electrical malfunctions.** - **Mechanical injuries: absence of proper protection during equipment operation and operator negligence could result in injuries.** - **Electrical shock: may occur due to non-compliance with electrical safety regulations.** - **Scalding and burning: improper handling of high-temperature substances or chemicals could cause scalds and burns.**	

- **Struck-by hazard: equipment failures and inadequate equipment management could cause objects to strike staff; exacerbated when proper protective measures are not implemented.** - **Poisoning and asphyxiation: may occur following toxic gas leaks and improper confined-space procedures.** - **Container explosion: may occur due to improper maintenance of the compressed air storage tank.** - **Fall from a height: Inadequate safety protection during work at heights could cause falls.** - **Vehicle-related injuries: Poor vehicle conditions and improper driving could lead to injuries.** - **Lifting-related injuries: Overloading and improper inspection of lifting equipment could lead to injuries.**
Describe the measures undertaken to mitigate the hazards.
During the project construction, strict compliance with the requirements of national standards such as GB 50016-2014 (*Code for Fire Protection Design of Buildings*) and GB 50187-2012 (*Code for General Layout Design of Industrial Enterprises*) is ensured. This guarantees reasonable fire - fighting distances, an appropriate number of safety exits, and proper evacuation distances, among other aspects. **The power distribution room is equipped with comprehensive waterproofing, drainage, and small animal prevention measures. Fire-fighting facilities are in full compliance with standards and are subject to regular inspections and maintenance. Lightning protection devices are installed and undergo regular testing to ensure their effectiveness. Additionally, workers are provided with personal protective equipment that meets relevant standards to safeguard their safety during operations.** **A detailed *Safe Operation Manual of Equipment* has been developed and provided to each employee. The operators are required to carefully study the equipment instructions, familiarize themselves with safe and correct operating procedures, and must wear appropriate protective equipment at all times. The project owner also formulates an emergency rescue plan and regularly organizes fire drills to enhance employees' emergency response capabilities and ensure the overall safety of the project. Regular training sessions are organized for all employees, covering various aspects of safe operation and relevant case studies.**

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?	

Both male and female employees enjoy equal pay for equal work, the same perks as well as the same career development opportunities, and female employees also enjoy maternity leave and breastfeeding leave based on national and local laws.
Identify any documents or other records that you rely upon to verify compliance.
Payroll statistics.

4 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	
Particles, SO_2 and NO_X are primarily generated in the combustion chambers of the Carbonization Workshop and the Fertilizer Workshop. The combustion chamber employs low-nitrogen combustion technology, internal denitrification using selective non-catalytic reduction (SNCR). This approach minimizes the formation of NO_X and promotes the conversion of NO_X into N_2 (a small amount of NH_3 could be produced during this process). Subsequently, the combustion flue gas undergoes treatment by a cyclone dust collector, a spray tower, and an electrostatic precipitator. These devices effectively reduce the levels of particles, SO_2, and excessive NH_3. **NH_3 and H_2S are generated during the composting process in the Fermentation Workshop as well as during the ingredient mixing process in the Fertilizer Workshop. The GORE membrane technology significantly reduces NH_3 and H_2S formation during composting; the flue gas is then further processed by an acid-base spray tower which further reduces the concentrations of NH_3 and H_2S.**	
b. Pollutant discharges to water	
There are no pollutant discharges to water. **Wastewater from the spray towers and the electrostatic precipitators enters a sedimentation tank and is subsequently used in fertilizer production, without being discharged to any waterbody.** **Wastewater from QA/QC operations and domestic wastewater, with a combined volume of 623.81 t/a, are discharged into the municipal wastewater treatment plant operated by Shanghai Jinshan Langxia Engineering Co., Ltd. which has a capacity of 20,000 t/d, i.e., over 7 million t/a. The annual discharge from this project is 623.81 t, accounting for less than 0.01% of the plant capacity.**	
c. Pollutant discharges to soil	

No pollutant discharges to soil are expected under normal conditions. Leakage may cause pollutants to enter the soil. **The entire plant adopts ground hardening to prevent soil contamination from potential leaks.** **In addition to ground hardening, reinforced concrete structures and waterproof materials are adopted in sedimentation tanks, warehouses, storage tanks, chemical cabinets in the QA/QC laboratory, and acid-base spray tower, to enhance their anti-leakage capabilities.** **The hazardous waste warehouse employs the strictest anti-leakage measures which include epoxy flooring as well as reinforced concrete. Its design complies with the requirements in the national standard GB 18597-2023 (Standard for pollution control on hazardous waste storage).**
d. Noise
A variety of machineries, including cutter, dryer, heat exchanger, mixer, granulator, etc. generate noise during operation. Each piece of equipment generates about 60 ~ 75 dB noise. **Vibration damping pads have been installed at the bottom of each piece of equipment. The walls of the plants are double-layer steel structure with soundproofing fabrics. Doors and windows are closed during operation to reduce noise transmission.** **Outdoor noise sources include fans and exhaust outlets, for which vibration damping pads, sound enclosures with soundproofing fabrics and other sound-absorbing components are installed.** **These measures will ensure that noise during the project operation complies with category-1 requirements in the national standard GB 12348-2008 (*Emission standard for industrial enterprises noise at boundary*), i.e., 55 dB at daytime and 45 dB at night at the site boundary.**
e. Vibration
See above (Noise).
f. Waste
Waste includes regular industrial solid waste, hazardous waste (see below) and domestic waste. **Regular solid waste: waste packaging materials and used GORE membranes from the composting process are sent to recycling facilities; dust collected by cyclone and bag dust collectors is reused in composting.** **Hazardous waste: see below.** **Domestic waste is generated from daily activities of the personnel, including waste from the canteen. It is collected by the municipal solid waste management department for disposal.**
g. Release of hazardous materials
Hazardous waste includes waste liquid from the QA/QC laboratory, used engine oil as well as oil-soaked rags from machinery maintenance, and packaging materials from QA/QC operations and machinery maintenance. It is temporarily stored in a designated warehouse

and collected by qualified companies for disposal. The storing and handling of hazardous waste must comply with the national standard GB 18597-2023.
h. Chemical pesticides and fertilizers
Chemical pesticides are not involved. The project is a fertilizer production facility. The final products are various types of fertilizers (organic fertilizer, microbial organic fertilizer, water-soluble fertilizer, bulk blending fertilizer and soil amendment) that are eventually sold and applied in soil. They must comply with corresponding standards.

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 following sources have been referenced:** - **Annex 1 and Annex 2 of *Notice of the State Council on Issuing the National Major Functional Area Planning*, released by the State Council of China** - **Ecological Redline of Shanghai, released by the Government of Shanghai** - **Key biodiversity areas of IUCN** - **UNESCO World Heritage List** **The nearest environmentally sensitive areas identified are "Eastern tidal flat of Nanhui" and "Hangzhou Wan", both more than 70 km away from the project location. Therefore, the project activity is not taking place in or near any environmentally sensitive areas.**	
Describe impacts and risks that you have identified	
Not applicable.	
Describe the measures undertaken to minimize and address the impacts and the risks.	
Not applicable.	

Requirement: Minimizing soil degradation and soil erosion.	**Rule 6.4.1.1.viii**
Describe impacts and risks to soil that you have identified.	

Some of the impacts and risks to soil have been discussed previously in "Pollutant discharges to soil". **Other risks to soil include unsustainable sourcing of biomass feedstock that could lead to soil organic carbon loss, especially in the case of rice straws.**
Describe the measures undertaken to minimize and address the impacts and the risks.
Rather than removing the entire rice plants from the fields, local farmers usually leave a 15 to 20-centimeter stubble. This practice effectively safeguards soil fertility, preventing its depletion and maintaining the long-term productivity of the farmland.

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		
2023 Shanghai Water Resources Bulletin [1] **shows that total available water resources of Shanghai were more than 720 billion m^3, while water consumption amounted to 7.327 billion m^3 in 2023, among which 1.368 billion was used in agriculture, 3.462 billion in industry, 2.418 billion for domestic use and 0.079 billion for ecological purposes.** **The project activity is estimated to consume about 18,420 m^3 of tap water per year from local utility system and purchases 0.21 m^3 of distilled water per year for QA/QC activities, negligeable compared to the overall water consumption in Shanghai.** **The project activity will have little impact on local water stress.**		
Describe any agreements and/or regulations relating to water sourcing.		
Shanghai Water Supply Management Regulation **covers aspects like source protection, infrastructure construction, facility protection, water use management, and sets penalties for violations to ensure water supply safety.**		
Describe the measures undertaken to minimize water consumption.		
The cooling water is circulated and is only supplemented periodically, which significantly reduces water consumption. **Wastewater is also reused. Wastewater from the spray towers and the electrostatic precipitators enters a sedimentation tank and is then used in fertilizer production.**		

[1] https://swj.sh.gov.cn/szy/20241014/672d10c0e5124d9a84d1bf76c7c1afe6.html

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 does not source any biomass from conversion of forests or high conservation value habitats. Rice fields are not high conservation value habitats. The tree branches come from urban green cutting.	
Identify any documents or other records that you rely upon to verify compliance.	
Biomass sourcing and transport records as well as on-site photos will be provided.	

5 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.	
Potential negative environmental impacts on community health and safety during routine operation have been described in Section 3 (Environmental impact and management) of this Questionnaire. **Non-routine circumstances might involve, for example, an explosion and a fire triggered by improper management and operation. Such incidents might lead to the spread of toxic and harmful substances to neighbouring villages.**	
Describe the measures undertaken to minimize and address the impacts and the risks.	
The mitigation measures for negative environmental impacts on community health and safety during routine operation have been described in Section 3 (Environmental impact and management) of this Questionnaire. **The project owner prioritizes worker safety and proper operation. The staff undergoes regular training on the safe and correct handling and operation of equipment to prevent the occurrence of serious operational accidents. This proactive approach aims to minimize the risks associated with non-routine events and protect the well-being of both workers and the surrounding community.**	

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 or religious sites have been identified in the vicinity of the project. Therefore, currently, no such impacts or risks have been detected.
Describe the measures undertaken to minimize and address the impacts and the risks.
Not applicable.

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?	
Not applicable.	
Provide a comprehensive description of the process that was undertaken, compensation arrangements and measures to mitigate the negative impacts.	
Not applicable.	
Also describe in detail how you minimized forced physical or economic displacement.	
Not applicable.	

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?	

Not applicable.
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.
Not applicable.
b. Describe how and when the indigenous communities were identified and approached for the FPIC process.
Not applicable.
c. Describe the mutually agreed process for the negotiations.
Not applicable.
d. Describe how the indigenous communities were informed about the potential impacts of the activity on their livelihoods, ancestral knowledge, or cultural heritage.
Not applicable.
e. Describe the outcome of the negotiations.
Not applicable.
f. Describe how the ongoing consent process is managed to ensure that the indigenous communities continue to agree with the activity as it progresses.
Not applicable.
g. Describe grievance mechanisms that are in place for the indigenous communities.
Not applicable.
h. Describe how the impacts on the indigenous communities are monitored and addressed during the operation of the Production Facility.

Not applicable.

6 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 biochar production utilizes rice straws and tree branches as feedstock. Both types are sourced locally. Rice straws are generated during local villagers' harvesting, while tree branches are collected from urban green cutting.	

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	Climate Bridge (Shanghai) Ltd.
Production Facility	SEEK Biochar in Shanghai
Production Facility ID	469599
Date of report last update (YYYY-MM-DD)	2025-12-02

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.	All villagers in Heping Village (The project facility is built on the collective land of Heping Village, Lvxiang Town, Jinshan District, Shanghai.)
Stakeholders with **land-tenure rights** within the vicinity of the project boundary	Heping Village collective (There are two types of land ownership in China, state ownership and collective ownership. Rural land is usually collectively owned by all villagers of a village. In this case, the project facility is built on the collective land of Heping Village.)
Representatives of relevant **local authorities** and relevant **local politicians**	Government of Lvxiang Town, represented by Mr. Zhang Commission of Agriculture and Rural Affairs of Jinshan District, represented by Mr. Sun Environment Bureau of Lvxiang Town, represented by Ms. Chen
Local **non-governmental organizations** (NGOs) or international NGOs who are active in the region and relevant to the topic	There are no NGOs active in the region.
Representatives of relevant **working groups** or **vulnerable** and **marginalized** groups within the vicinity of the project boundary	There are no relevant working groups or vulnerable and marginalized groups within the vicinity of the project boundary.
Relevant **industry experts,** given there are any in the near environment	Shanghai Academy of Agricultural Sciences, represented by Mr. Zhou
Other, please specify:	NA

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.

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)
Public meeting	Stakeholder consultation meeting	2025-08-15
Phone call	Telephone consultation with Mr. Zhou, expert from Shanghai Academy of Agricultural Sciences, who was unable to attend the meeting due to a schedule conflict	2025-08-08

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)
WeChat and village visit	*Invitation letter*, sent via WeChat to the representative from Heping Village; Visit of Heping Village to meet with village committee members.	2025-08-06 and 2025-08-12

	The village representative and village committee members then spread the news of the event among all villagers.	
Phone call	Phone call with the expert from Shanghai Academy of Agricultural Sciences	2025-08-08
WeChat	*Invitation letter*, sent via WeChat to the following stakeholders: - Representative from Government of Lvxiang Town - Representative from Commission of Agriculture and Rural Affairs of Jinshan District - Representative from Environment Bureau of Lvxiang Town	2025-08-12

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
NA	

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
Information provided to stakeholders: The invitation letter contained details such as the plant's name and operator, the purpose of the stakeholder consultation, and its date, time and location. During the public meeting on 2025-08-15, Ms. Jiang of SEEK presented the following content using slides: - Part 1: Introduction of biochar - Part 2: Applications of biochar in agriculture - Part 3: Introduction of the biochar production facility and its environmental contributions This is the main part of the slide presentation and includes the production process, biomass sourcing, product utilization as well as how the project contributes to climate change mitigation and circular economy.

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In addition, the pollution from the biochar production and the mitigation measures adopted are also presented.
- Part 4: Introduction of SEEK the company

Feedback received from stakeholders:
One stakeholder expressed concerns regarding odours emanating from the facility, mentioning that the smell was noticeable whenever he passed by the factory. This feedback focused on the Fermentation Workshop and not the Carbonization Workshop where biochar is produced.

The representative from the Environment Bureau of Lvxiang Town requested a tour of the plant and its surrounding areas. Following the meeting, plant staff accompanied her on the inspection. While she expressed overall satisfaction with the visit, she emphasized the need to address odours generated by the fermentation process.
No additional feedback was received from the other stakeholders.

Responses provided to stakeholders:
Staff of SEEK acknowledged that the odour is noticeable in close proximity to the facility, a point which the stakeholder confirmed. They further explained that, given the distance to the nearest residential area, the odour becomes diluted to negligible levels by the time it reaches the houses. SEEK assured attendees that the odour does not pose any health risks to the community.

Nevertheless, SEEK organized reinforced trainings to its staff regarding strict adherence to odour-minimisation protocols and daily checks. (refer to the table "Description of the changes made to the project for addressing concerns and issues" below for details).

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

NA

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

The concern raised by stakeholders was about the odor from the Fermentation Workshop. The facility had designed the following odor-control measures prior to stakeholder engagement:
- Composting biomass is fully covered with impermeable membranes at all times.
- During non-production periods, the Fermentation Workshop doors remain closed, and wall-mounted exhaust fans automatically activate to capture any fugitive gases. These gases are directed through dedicated collection pipelines to the acid–base spray tower for treatment before release.

It was identified that while the systems were designed and installed, they were not consistently applied during early operations. This led to temporary odour dispersion.

Consequently, following the stakeholder consultation, the operational staff received reinforced training on strict adherence to odour-minimisation protocols. Daily checks were introduced requiring verification of complete membrane coverage, closed doors, and proper functioning of fans and gas-collection pipelines.

No further complaint has been raised so far since the stakeholder consultation.

Please note that this change pertains specifically to the Fermentation Workshop of the plant, which consists of multiple production units, and is not related to the biochar production facility (Carbonization Workshop).

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

All stakeholders are welcome to conduct spot checks at the facility at the facility at their convenience. For any feedback, concerns, or suggestions, the stakeholders can contact SEEK directly by phone or WeChat. Alternatively, villagers may also communicate their concerns through the village committee if they prefer a more indirect and anonymous channel. These mechanisms ensure accessibility for all stakeholders, while permitting anonymous submission.

Upon receiving feedback, SEEK will acknowledge receipt within 48 hours and provide a response within 10 business days. All feedback will be duly evaluated, and potential revisions to the project design and implementation could be made if deemed necessary. If feedback cannot be incorporated or reacted to, SEEK will provide a clear justification in the response to the stakeholder.

All ongoing feedback exchanges, responses, and any resulting actions (or justifications for non-action) will be documented as a report available for the next Output Audit.

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)

SEEK identified a range of stakeholders relevant to its biochar facility. These included Heping Village residents (local stakeholders) and the village collective (the landowner) and representatives from local authorities (Government of Lvxiang Town, Commission of Agriculture and Rural Affairs of Jinshan District, and Environment Bureau of Lvxiang Town). An expert from the Shanghai Academy of Agricultural Sciences was also identified as a relevant industry expert. No indigenous peoples, NGOs, or vulnerable and marginalized groups were present in the project vicinity.

Stakeholders were informed and mobilized through a combination of WeChat messages and direct village visits approximately one week prior to the main consultation event. Invitations were sent via WeChat to the official representatives, while news of the event was disseminated among villagers by the village committee.

A public stakeholder consultation meeting was successfully held on 2025-08-15. Attendees included eighteen villagers (encompassing two village committee members) and representatives from the three local government departments. The consultation involved a detailed presentation on biochar, its agricultural applications, the specific production process at the facility, and the project's environmental contributions to climate change mitigation and the circular economy.

Key feedback from the consultation included concerns from one villager regarding odours near the facility, which was corroborated by a subsequent site inspection requested by the Environment Bureau representative. SEEK responded by acknowledging the issue, explaining the dilution effect over distance to residential areas, and detailing ongoing and planned mitigation measures including technical upgrades to the Fermentation Workshop. No other critical feedback or concerns were raised.
It is important to note that the feedback focused on the Fermentation Workshop. Regarding the Carbonization Workshop where biochar is produced, no comment was received.

For the expert who could not attend, a separate consultation was conducted via phone call on 2025-08-08.

Plans for continued engagement emphasize an open-door policy. Stakeholders are welcome to conduct spot checks at the facility at their convenience. A direct and accessible communication mechanism is established, allowing stakeholders to voice any future concerns or suggestions directly to SEEK via phone or WeChat, or indirectly through the Heping Village committee.