

Preliminary Assessment Public Summary

This *Preliminary Assessment Public Summary*, prepared by Puro.earth, contains general information about the CO₂ Removal Supplier and its project, as evaluated at the time of the Preliminary Assessment (PA). It also includes a *Non-Technical Project Summary* and a *Criteria Assessment Report* detailing: i) key criteria assessed and their associated outcomes, ii) Puro's comments, and iii) evidence provided by the CO₂ Removal Supplier.

The *PA Public Summary* serves as a transparent communication tool, enabling potential investors, buyers, and stakeholders to quickly understand the supplier's carbon removal capabilities and assessment status.

The supplier has also received an extended *Preliminary Assessment Report*. This confidential document offers in-depth insights, including specific remarks and actionable recommendations to guide the supplier's progression through the certification journey.

1. Supplier and Project Information

CO ₂ Removal Supplier	
Company name	G.S.A.D (Cambodia) Co., Ltd.
Company address	No 148EO, St Tonlesab Phnum 1 Sangkat Chrouy Chanvar, Khan Chraoy Chongvar Phnom Penh 12110 - Cambodia
Business ID	K008-902300287
KYC status	Completed (May 6, 2025)
CO ₂ Removal Project	
Methodology	Biochar, Edition 2022, Version 3
Production Facility name	Prey Veng Biochar 1
Facility registration date	May 15, 2025
Production Facility ID	126537
Production Facility location	Street 440 - Prey Veng 021 - Cambodia
Host Country of removal	Cambodia
Has this facility been registered in another registry?	☒ No ☐ Yes, additional information:
Preliminary Assessment Details	
Date of assessment	07/10/2025
Status of assessment	Concluded
Conclusion of assessment	Passed

2. Non-Technical Project Summary*

GSAD Cambodia is leading a transformative sustainability initiative by opening a biochar production facility in Prey Veng Province. By enhancing environmental stewardship, we will boost agricultural productivity by utilising organic methods and supporting sustainable resource cycles. GSAD Cambodia has established a strong reputation for engaging collaboratively with local farmers and government bodies, ensuring that the initiative is rooted in community involvement and sustainable development practices. The company's highly qualified multinational management team underpins the project's success.

Importantly, the facility will produce 1,500 tons of biochar per month, from processing 3,000 tons of rice husks. A waste product generated by the province's cultivation of approximately 1.5 million tons of paddy rice annually, with 450,000 tons of rice husks available. The project addresses waste management challenges while creating valuable resources.

Utilising advanced Puro vetted equipment by Beston (BST-50S), a leading Chinese company recognised for its technological expertise, GSAD Cambodia guarantees the use of reliable, cutting-edge technology that supports quality biochar production.

Overall, the initiative represents a high-impact opportunity, leveraging local resources and ambition. The project is fully supported by the local community, who are set to benefit from increased opportunities and improvements it will bring to the area.

*Filled by the Supplier. Between 150-200 words

The definition of CO₂ Removal Supplier and Production Facility can be found in the Puro Standard.

3. Criteria Assessment Report

Reminder: Sub-criteria either concern the Production Facility's technical eligibility or its maturity and quality. There are three types of sub-criteria:

- **Required to be passed:** These correspond to the core criteria related to the eligibility of a Production Facility. Suppliers must meet these criteria, as they may otherwise be impossible or costly to change at a later stage of the certification journey.
- **Required to be assessed:** These criteria are important for evaluation but do not necessarily determine pass or fail at this stage, as it is understood that the suppliers may be at different stages of development.
- **Not required:** These criteria are optional at this stage. They may provide additional information about the project maturity but are not essential for passing the preliminary assessment.

For a facility to be considered eligible for listing, all the sub-criteria that condition eligibility must be met (i.e. passed or assessed). If one of those sub-criteria is not met, the facility in its current state of development is not eligible for listing.

Disclaimer: The assessment has been made against the criteria in the current version of the methodology. Puro.earth relied on the CO₂ Removal Supplier for the correctness of the provided information during the time of the preliminary assessment and will make no representation as to the accuracy or completeness of this report. The CO₂ Removal Supplier must undergo a third-party audit before issuing CO₂ Removal Credits (CORCs). **Passing the preliminary assessment does not guarantee a success in the third-party audit.**

Important Notice Regarding Biochar Methodology Update: This Preliminary Assessment has been conducted against Edition 2022, but to some extent, reflected some important changes in the updated Biochar Methodology – Edition 2025.

Table 1. Criteria and sub-criteria assessment by Puro based on the documents submitted.

ID	Criteria / Sub-criteria	Outcome	Comment	Evidence reviewed	Requirement for listing	Purpose of criteria
c1	Planned biomass feedstock(s) is(are) eligible	Passed	----	---	Passed if required sub-criteria are met	
c1.1	Biomass feedstocks are identified and compatible with EBC positive list	Passed	The supplier intends to use rice husks as the biochar feedstock. These have been identified as AG-05 on the ECB positive list. This is an appropriate feedstock that has been categorized correctly. <i>Under the forthcoming Biochar Methodology – Edition 2025, the biomass feedstock must be categorized according to Puro's Biomass Sourcing Criteria.</i>	Biomass Types and Origins List - BCH	Required to be passed	Technical eligibility
c1.2	Biomass feedstock sustainability and chain-of-custody can be demonstrated, if applicable	Passed	The supplier indicates that rice husks available as feedstock are abundant Cambodia's Preh Veng province. No specific certification is required for this specific feedstock type. The supplier will need to	Biomass Types and Origins List – BCH, Puro Environmental and	Required to be passed	Technical eligibility

CORC and Puro.earth are registered trademarks

			share their sourcing contracts as well as other sustainable sourcing and traceability documentation for the Facility Audit. <i>Under the forthcoming Biochar Methodology – Edition 2025, the traceability and sustainability criteria for the specific biomass category as per Puro's Biomass Sourcing Criteria must be met.</i>	Social Safeguards, Biochar Production - 14.04 (1)		
c1.3	Bioenergy leakage related to feedstock use is minimal	Assessed	It is declared that rice husk is used in minimal quantities as fuel or as animal feed. The quantity of rice produced per annum is declared to result in an abundance of rice husk. Therefore, the leakage is expected to be minimal and would arise if biomass became scarce. <i>Bioenergy leakage risks may require further re-assessment under the forthcoming Biochar Methodology – Edition 2025.</i>	Biomass Types and Origins List – BCH, Puro Environmental and Social Safeguards	Required to be assessed	Technical eligibility
c1.4	Land use change related to feedstock use is minimal	Assessed	Rice husks are produced as a byproduct of ongoing agriculture. Using these residues as biochar feedstock will not result in land use changes.	Biomass Types and Origins List – BCH, Puro Environmental and Social Safeguards	Required to be assessed	Technical eligibility
c1.5	Sourcing of biomass is secured (e.g. letters of intent, contracts)	Assessed	The supplier indicates that rice husks available as feedstock are abundant Cambodia's Preh Veng province. No specific letters of intent or biomass sourcing contracts were provided. These will be needed for the Output Audit.	Biomass Types and Origins List – BCH, Puro Environmental and Social Safeguards, Biochar Production - 14.04 (1)	Not required	Maturity & Quality
c2	Planned biochar production equipment is technically sound	Passed			<i>Passed if required sub-criteria are met</i>	
c2.1	Several options of reactor design have been identified	Passed	The supplier intends to use the Beston BST-50s biochar reactor. This reactor has been vetted by Puro under Edition 2022.	Biochar Production - 14.04 (1), Biochar production equipment questionnaire	Required to be passed	Technical eligibility
c2.2	Reactor design has been decided, contracted, or purchased	Assessed	The Beston BST-50s reactor has been selected. It had not yet been commissioned at the time of the application.	Biochar Production - 14.04 (1), Biochar production equipment questionnaire, Baseline and Additionality Questionnaire v1.9	Required to be assessed	Maturity & Quality
c2.3	Reactor design is vetted, regarding production of biochar with H/C ratio below 0.7	Passed	A report from the manufacturer was provided indicating that the design can produce biochar below the H/C _{org} threshold ratio of 0.7 (H/C _{org} reported as 0.29). Lab reports from the installed unit will be necessary for the actual Facility Audit. The reactor design has been vetted and shown to be capable of meeting technical requirements.	Biochar Production - 14.04 (1), Biochar production equipment questionnaire, CH Ratio verification. Commercial Risk Husk Facility	Required to be passed	Technical eligibility
c2.4	Reactor design is vetted, regarding risk for CH ₄ emissions	Passed	An emissions report was provided by the reactor manufacturer that shows methane evaluation and negligible emissions. Lab reports from the installed unit will be necessary for the actual Facility Audit.	MOE Cambodian Air pollution specs for Immobile Machinery, Biochar production equipment questionnaire, SGS report for	Required to be passed	Technical eligibility

CORC and Puro.earth are registered trademarks

			The reactor design has been vetted and shown to be capable of meeting technical requirements.	waste gas with high-standard emission system, SGS report for Waste gas with standard emission system		
c2.5	<i>Reactor design is vetted, regarding air pollutant emissions in line with local regulation</i>	Passed	The supplier provided the air quality emissions standards for Cambodia as well as an emission report from the manufacturer of the reactor, which indicate that local regulation may be passed if operated according to specifications. Actual performance will need to be verified during the Facility Audit.	MOE Cambodian Air pollution specs for Immobile Machinery, Biochar production equipment questionnaire, SGS report for waste gas with high-standard emission system, SGS report for Waste gas with standard emission system	Required to be passed	Technical eligibility
c2.6	<i>Facility design is vetted, regarding disposal of waste streams, including any liquid streams (wastewater, oil, tars)</i>	Passed	An outline of the solid and liquid waste disposal plan was provided, and preliminary amounts of waste generation were estimated. This plan indicates the intention to pass liquid waste through gravel filtration systems, followed by constructed wetlands, and run solid waste through anaerobic digesters. Further details on these systems, along with a demonstration of compliance with local regulations, will be required for the Facility Audit.	Biochar production equipment questionnaire, Waste Management, Mass and energy balance of production process	Required to be passed	Technical eligibility
c2.7	<i>Facility is co-producing bioenergy (e.g. heat, power) for internal use</i>	Assessed	Energy generated during the pyrolysis process will be recirculated to support the pyrolysis reaction.	Biochar production equipment questionnaire, Waste Management	Required to be assessed	Maturity & Quality
c2.8	<i>Facility is co-producing bioenergy (e.g. heat, power, fuel) for external use</i>	Assessed	Excess heat from the pyrolysis is not valorized externally. However, solid waste from the reactor will be used in anaerobic digesters to generate biogas that is expected to provide energy to the facility kitchen. Biogas that is not being used within the facility may be made available in the surrounding community.	Biochar production equipment questionnaire, Waste Management	Required to be assessed	Maturity & Quality
c3	Biochar planned end-use(s) is(are) eligible	Passed			<i>Passed if required sub-criteria are met</i>	
c3.1	<i>Biochar end-uses are eligible</i>	Passed	The supplier intends to produce and distribute a mixed-biochar-fertilizer product which will be used by local rice cultivation and feedstock providers. This agricultural biochar use is an eligible end-use.	Biochar Production - 14.04 (1), Process stages, Project Description v1.0	Required to be passed	Technical eligibility
c3.2	<i>Plans of biochar end-uses are tangible</i>	Assessed	The plan to create a vertically-integrated rice product operation is compelling and tangible. Additional details, including the relevant contractual arrangements, will be required for the Facility Audit.	Biochar Production - 14.04 (1), Process stages, Project Description v1.0	Required to be assessed	Maturity & Quality
c3.3	<i>Biochar environmental quality thresholds are known for the identified end-uses</i>	Assessed	The supplier has identified the relevant WBC thresholds for biochar production and agricultural use and provided plans to demonstrate compliance with those regulations.	Biochar Production - 14.04 (1), Process stages, Project Description v1.0, GSAD Licences_Permits	Required to be assessed	Maturity & Quality

CORC and Puro.earth are registered trademarks

c4	Additionality is demonstrated	Passed			<i>Passed if required sub-criteria are met</i>	
c4.1	<i>Carbon storage additionality to baseline</i>	Passed	The baseline scenarios for rice husks in Cambodia is to burn them or allow them to accumulate and decay. The project would provide additional carbon storage by converting the rice husk into biochar for use in agricultural soils.	Biochar Production - 14.04 (1), Baseline and Additionality Questionnaire v1.9	Required to be passed	Technical eligibility
c4.2	<i>Financial additionality of facility</i>	Passed	Future financial projections include revenue from biochar sales. These revenue sources are insufficient to cover the project costs. Carbon credits will be the primary revenue source and are essential for the project's financial viability.	Biochar Production - 14.04 (1), GSAD factory Puro (1), Baseline and Additionality Questionnaire v1.9	Required to be passed	Technical eligibility
c4.3	<i>Regulatory additionality</i>	Passed	The suppliers indicate that the project is not required by existing laws, regulations, or other binding obligations.	Biochar Production - 14.04 (1), Baseline and Additionality Questionnaire v1.9	Required to be passed	Technical eligibility
c4.4	<i>Production equipment is newly built (i.e. not an existing facility or a retrofit of existing facility)</i>	Assessed	The equipment will be newly commissioned for this facility.	Biochar Production - 14.04 (1), Baseline and Additionality Questionnaire v1.9	Required to be assessed	Maturity & Quality
c5	Facility has monitoring, reporting, and LCA capabilities or tangible plans	Passed			<i>Passed if required sub-criteria are met</i>	
c5.1	<i>Protocol for biomass and biochar record keeping is prepared</i>	Assessed	The supplier has provided a monitoring schedule summary for each stage of biochar production and delivery with the equipment, responsible party, key measurements, and data entry components for each.	Biochar Production - 14.04 (1), GSAD Licences_Permits, Process stages, Propose monitoring schedule with summary	Required to be assessed	Maturity & Quality
c5.2	<i>Protocol for dry mass determination of biochar is prepared</i>	Assessed	A plan for how the biochar wet weight and dry mass determination (including the drying time and temperatures) was provided.	Process stages, Propose monitoring schedule with summary	Required to be assessed	Maturity & Quality
c5.3	<i>Protocol for biochar sampling and laboratory analysis is prepared (permanence and environmental quality)</i>	Assessed	The protocol for preparing the biochar samples for laboratory analysis was provided as well as the guidelines for laboratory testing. For the Facility Audit, the laboratory results from an accredited lab will be required.	Process stages, Propose monitoring schedule with summary	Required to be assessed	Maturity & Quality
c5.4	<i>Monitoring and reporting plan of facility emissions is prepared</i>	Assessed	The supplier provided an account of the regulatory requirements regarding emissions and waste disposal. Monitoring of supply chain emissions has also been described in the monitoring schedule summary.	MOE Cambodian Air pollution specs for Immobile Machinery, Process stages, Propose monitoring schedule with	Required to be assessed	Maturity & Quality

				summary, Waste Management, Puro Environmental and Social Safeguards		
c5.5	An LCA model specific to the facility's operation is prepared	Assessed	An outline of expected vehicle emissions was provided. But the submission did not include an LCA plan or preliminary LCA model aligned with the monitoring plan.	Gas emission from mobile sources Cambodia, Process stages, Propose monitoring schedule with summary	Not required	Maturity & Quality
c6	Facility has likely co-benefits and positive SDG impacts	Passed			<i>Passed if required sub-criteria are met</i>	
c6.1	Facility-specific co-benefits have been identified	Assessed	Several co-benefits from this project and facility have been identified. These benefits include increased crop yields and flood and drainage control from increased moisture retention. There are additional co-benefits including economic development and development of sustainable agricultural practices.	SDG Reporting v1.1, Puro Environmental and Social Safeguards, Biochar Production - 14.04 (1)	Required to be assessed	Maturity & Quality
c6.2	Facility-specific SDG targets or indicators have been identified	Assessed	The suppliers have identified SDG 2 Target 2.4 relating to sustainable food production. They have identified multiple agricultural benefits as well as plans to satisfy the specific SDG target evaluation requirements.	SDG Reporting v1.1, Puro Environmental and Social Safeguards, Biochar Production - 14.04 (1)	Required to be assessed	Maturity & Quality
c7	Facility team has access to relevant knowledge and skills	Passed			<i>Passed if required sub-criteria are met</i>	
c7.1	Relating to biomass sourcing, handling, processing	Assessed	The leadership team has experience in paddy farming, fertilizer, and biochar as well general operational and logistics experience.	Biochar Production - 14.04 (1)	Not required	Maturity & Quality
c7.2	Relating to thermochemical processes	Assessed	Team leaders have deep experience with engineering, maintenance, and operations that are appropriate for reactor selection, fabrication oversights, and operation.	Biochar Production - 14.04 (1)	Not required	Maturity & Quality
c7.3	Relating to biochar use	Assessed	The GSAD team includes speakers on production and agricultural use of biochar as well as experience with local agricultural practices and the farming community.	Biochar Production - 14.04 (1)	Not required	Maturity & Quality
c7.4	Relating to monitoring and carbon accounting	Assessed	Prior experience with carbon removal and carbon accounting projects and practices may be limited. The team does have experience with audit management and working in regulated markets.	Biochar Production - 14.04 (1),	Not required	Maturity & Quality
c8	Environmental and social safeguards	Passed			<i>Passed if required sub-criteria are met</i>	
c8.1	Stakeholder consultations have been planned or conducted	Assessed	Stakeholder groups have been identified among the local landowners, farmers, authorities, NGOs, indigenous, and religious organizations and communities. These stakeholder engagements are on-going or still in the planning stages.	Biochar Production - 14.04 (1), Puro Environmental and Social Safeguards, Puro Stakeholder Engagement Report	Required to be assessed	Maturity & Quality

CORC and Puro.earth are registered trademarks

c8.2	<i>Regulation applicable to facility has been identified</i>	Assessed	Regulation and permitting authorities have been identified along with the regulatory requirements across commercial, environmental, agricultural, and production needs.	Environmental and Social Safeguards, Puro Stakeholder Engagement Report, GSAD Licences_Permits, MOE Cambodian Air pollution specs for Immobile Machienry	Required to be assessed	Maturity & Quality
c8.3	<i>Procedures to acquire relevant permits have been identified, started, or completed</i>	Assessed	The list of necessary licenses and permits to satisfy operational, environmental, and production has been compiled. Several of these have been granted, others are in the application process. All of these will need to be provided for the Facility Audit.	Environmental and Social Safeguards, Puro Stakeholder Engagement Report, GSAD Licences_Permits, Process stages	Required to be assessed	Maturity & Quality