



PROJECT DESIGN DOCUMENT (PDD) FORM FOR ARTICLE 6.4 PROJECTS

(Version 01.0)

BASIC INFORMATION			
Project title:	>> Buriram Rubber Plantation Carbon Sequestration & GHG Emission Reduction Project: A Cryptocurrency, Blockchain, and Satellite Technology Initiative.		
UNFCCC project reference number:	>> 01BR01S1 (Internal Project ID)		
Host Party:	Thailand		
Other participating Parties:	Thailand		
Activity participant(s): (add rows if needed)	Type of Party	Name of activity participant(s)	Party that is to provide authorization
	Host Party	>> Carbon Solution (Thailand) Limited Partnership	Thailand
	Choose a type of Party.	>>	Choose a Party.
	Choose a type of Party.	>>	Choose a Party.
PDD version number:	>>02.0 (Draft version incorporating project-specific information for PDD submission.)		
PDD completion date:	10/11/2024		
Applied methodologies and standardised baselines, and their versions:	>>Proposed New Methodology: Methodology for Enhanced Carbon Sequestration in Rubber Agri-silviculture via Digital MRV & Tokenization (ECT Standard) (Version 01.0 - Proposed New Methodology, Submitted via A6.4-FORM-METH-001/002)		
Sectoral scope(s):	14. Afforestation and reforestation 15. Agriculture 17. Other activities involving removals		
Type of the project:	☐ Emission reductions activity ☐ Removals activity ☒ Combined emission reductions and removals activity		
Estimated annual emission reductions or net removals over the crediting period (tCO₂e/year):	>> 8,578.98 tCO ₂ e/year (Based on the average annual net sequestration for the 7-year monitoring period, 2016-2022: 60,052.86 tCO ₂ e / 7 years)		

SECTION A. Project description

A.1. Project purpose and general description

>> The project's core purpose is to enhance net Greenhouse Gas (GHG) removals and reduce emissions in the Thai agricultural sector through Sustainable Rubber Agri-silviculture practices across 1,936.15 Rai (310 Hectares) of aggregated smallholder farms (131 farmers) in Buriram Province. The project measure promotes practices that increase Above-Ground Biomass (AGB) and Soil Organic Carbon (SOC), while optimizing fertilizer use to minimize N₂O emissions. The methodology mandates the use of the ECT Standard's Digital MRV (Satellite/AI) system for highly accurate and frequent carbon stock monitoring, with the Blockchain platform ensuring the immutable recording of all data and automated, transparent Carbon Tokenization benefit sharing to all participating farmers.

A.2. Confirmation that the project aligns with the A6.4 activity types indicated by the host Party

>> The project aligns directly with the A6.4 activity types and the policies of the Host Party (Thailand). It falls under the scope of Removals and Combined Emission Reductions by addressing the Agriculture and LULUCF (Land Use, Land-Use Change and Forestry) sectors. The project's contribution to enhancing Thailand's natural carbon sinks and promoting sustainable, low-carbon agriculture is a key objective within the country's Nationally Determined Contribution (NDC) to the Paris Agreement.

A.3. Demonstration that the project, does not constrain, but aligns with the policies, options and implementation plans of the host Party

>> The project fully supports the Government of Thailand's strategic goals, particularly:

1. **Carbon Neutrality 2050:** By directly creating and verifying significant, traceable carbon removals.
2. **Digital Economy/Thailand 4.0:** The mandatory deployment of advanced **Digital MRV** technology (Satellite/AI) and **Blockchain** for immutable data aligns with the national strategy to promote **Smart Farming** and enhance digital capability in the agricultural sector.
3. **Policy Integration:** The project reinforces the implementation plans of the Thailand Greenhouse Gas Management Organization (**TGO**) by establishing a high-integrity, technology-backed model for verifiable carbon activity, which does not constrain but rather strengthens the national framework for climate action.

A.4. Project location

Host Party	Thailand
Region(s)/State(s)/Province(s)	>> Buriram Province.
Cities/towns/communities	>> Lahansai District, Samrong Mai Sub-district,
Geographic coordinates	>> UTM Zone 48P, X 267206, Y 1590783 Latitude 14.37946112 Longitude 102.84117677
Map of project location	
>> A detailed map showing the geographical location of the aggregated project plots within Lahansai District, Buriram Province, is attached as Google Maps. https://www.google.com/maps/d/u/0/edit?mid=1eG1dx782myHDS8z7KTfhOFaWIAfO__o&usp=sharing	

A.5. Technology/measures

A.5.1. Existing technologies/measures prior to project implementation

>> Prior to project implementation, the land was under conventional rubber plantation management (Business-As-Usual or BAU). Existing practices included standard monocropping, fixed tapping cycles, reliance on synthetic mineral fertilizers without precision application, and low-intensity monitoring using infrequent, manual field measurements. This BAU scenario is characterized by a lower potential for carbon stock enhancement and higher non- CO₂ emissions due to inefficient input use.

A.5.2. Technologies/measures implemented/deployed by the project

>> The project implements a suite of interconnected measures and technologies:

1. **Sustainable Land Management:** Implementation of certified **Rubber Agri-silviculture** and optimized soil health practices across the aggregated plots.
2. **Digital MRV (dMRV):** Deployment of **Sentinel-2 Satellite Imagery, AI/ML models, and Allometric Equations** for high-frequency, plot-specific monitoring of AGB. This is validated by periodic ground-truthing and field data capture via GPS-enabled applications.
3. **ECT Standard Tools:** Mandatory use of the **ECT Soil Carbon Stock Calculator** tool for transparent SOC quantification.
4. **Blockchain and Tokenization:** Utilization of the DLT platform (ECT Standard) to deploy **Smart Contracts** for the immutable recording of all monitoring data AGB_{Proj}, SOC_{Proj}, Q_{Fertilizer}), automated data QA/QC, prevention of double-counting, and transparent distribution of **Carbon Tokens** to farmers.

A.5.3. Declaration related to the existence of a former project in the same geographical location

>> The project area was not previously registered as an activity under the Clean Development Mechanism (CDM), Joint Implementation (JI), or any other UNFCCC mechanism. Furthermore, the project is not currently registered under any other voluntary or compliance carbon market mechanism (e.g., T-VER, VCS, Gold Standard). The initial registration is sought exclusively under the Article 6.4 Mechanism.

A.6. Parties and activity participants

(Add/remove rows as necessary)

Type of Party	Name of the Party	Activity participant(s)
Host Party	Thailand	Carbon Solution (Thailand) Limited Partnership (Project Owner)
Other participating Party	Thailand	ETM Group Co., Ltd. (Technology Developer/dMRV Operator)
Other participating Party	Thailand	131 Aggregated Smallholder Farmers (Beneficiaries/Data Providers)

SECTION B. Application of methodologies and standardized baselines

B.1. References to methodologies and standardized baselines

>> This project applies the Proposed New Methodology submitted concurrently with this PDD (via A6.4-FORM-METH-001/002).

- (a) **Methodology Title:** Methodology for Enhanced Carbon Sequestration in Rubber Agri-silviculture via Digital MRV & Tokenization (ECT Standard) **Version:** 01.0 (Proposed)
- (b) The methodology integrates principles from the **IPCC 2006 Guidelines for AFOLU** and the **CDM Tool: Tool to determine the baseline scenario and demonstrate additionality in A/R CDM project activities** for foundational A/R accounting principles.

B.2. Applicability of methodologies and standardized baselines

>>

(Insert the UNFCCC reference number, title and version of the methodology, other methodological regulatory documents including methodological tool, standardized baseline approved by the Supervisory Body, or the methodological requirements specified by the host Party)

Applicability condition in the methodological regulatory document or the methodological requirement specified by the host Party	Compliance of the project with the applicability condition in the methodological regulatory document or the methodological requirement specified by the host Party
>> Geographical Scope: Applicable to projects located in the Kingdom of Thailand and the broader Southeast Asian region (ASEAN).	>> Compliance: The project is located in Buriram Province, Thailand.
>> Plant Type: Applicable to rubber plantations and other similar perennial tree crops (Agri-silviculture perennial crops).	>> Compliance: The project is implemented on existing and newly managed rubber plantations.
>> Size Constraint: Minimum area of 500 Rai and maximum area of 50,000 Rai per single project boundary.	>> Compliance: The total project area is 1,936.15 Rai (within the defined range).
>> Technology Requirement: Mandatory implementation and use of the ECT Standard's Digital MRV (dMRV) system and Blockchain platform for monitoring.	>> Compliance: The project mandates the use of satellite imagery, AI/ML models, and the ECT Blockchain for dMRV, as detailed in Section A.5.2.
>> Activity Type: The project involves activities that result in net GHG removals and emission reductions through sustainable land management practices.	>> Compliance: The project activities enhance AGB/SOC carbon stocks (removals) and optimize fertilizer use (emission reductions).

B.3. Project boundary, sources, sinks and greenhouse gases

>> The project boundary is defined at the activity level for the aggregated area of 1,936.15 Rai across 157 plots. The boundary encompasses the physical area of land where the sustainable rubber agri-silviculture practices are implemented and includes all significant GHG sources, sinks, and reservoirs directly controlled or affected by the project activity.

B.3.1. Baseline emissions/removals

Source/reservoir/pool	GHG		Justification/Explanation
Above-Ground Biomass (AGB) (Sequestration)	CO ₂	☒ Included ☐ Not included	>>Primary source of baseline net removals, based on BAU growth rates.
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☐ Included ☐ Not included	>>
	-----	☐ Included ☐ Not included	>>
Soil Organic Carbon (SOC) (Sequestration)	CO ₂	☒ Included ☐ Not included	>>Included as a major carbon pool; baseline assumes conservative zero or non-increasing change.
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☐ Included ☐ Not included	>>
	-----	☐ Included ☐ Not included	>>
Fossil Fuel Combustion (Machinery, BAU)	CO ₂	☒ Included ☐ Not included	>>Emissions from machinery (e.g., tractors) for cultivation/harvesting under BAU are tracked and deducted.
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☐ Included ☐ Not included	>>
	-----	☐ Included ☐ Not included	>>
Synthetic Fertilizer Application	CO ₂	☐ Included ☐ Not included	>>
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☒ Included ☐ Not included	>>N ₂ O emissions from the historical use of nitrogenous fertilizers are accounted for.
	-----	☐ Included ☐ Not included	>>

B.3.2. Project emissions/removals

Source/reservoir/pool	GHG		Justification/Explanation
Above-Ground Biomass (AGB) (Sequestration)	CO ₂	☒ Included ☐ Not included	>>Primary source of enhanced project removals, monitored annually via Digital MRV.
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☐ Included ☐ Not included	>>

	-----	☐ Included ☐ Not included	>>
Soil Organic Carbon (SOC) (Sequestration)	CO ₂	☒ Included ☐ Not included	>>Source of enhanced project removals, monitored periodically via lab analysis and ECT Calculator.
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☐ Included ☐ Not included	>>
	-----	☐ Included ☐ Not included	>>
Fossil Fuel Combustion (Machinery, Project)	CO ₂	☒ Included ☐ Not included	>>Emissions from fuel use for cultivation/harvesting during project activities are monitored and deducted.
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☐ Included ☐ Not included	>>
	-----	☐ Included ☐ Not included	>>
Synthetic Fertilizer Application	CO ₂	☐ Included ☐ Not included	>>
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☒ Included ☐ Not included	>>N ₂ O emissions from project fertilizer use are monitored and deducted. Activity data collected via farmer mobile app.
	-----	☐ Included ☐ Not included	>>
Fire/Biomass Burning	CO ₂	☐ Included ☐ Not included	>>
	CH ₄	☐ Included ☒ Not included	>>Emissions from accidental fire/burning are considered part of the Non-Permanence Risk (NPR) and addressed via the NPR buffer pool deduction (a conservative approach).
	N ₂ O	☐ Included ☒ Not included	
	-----	☐ Included ☐ Not included	>>

B.4. Establishment and description of baseline scenario

B.4.1. Identification of the baseline scenario

>>The baseline scenario is the continuation of the Business-As-Usual (BAU) conventional rubber plantation management practices. This scenario was selected as the most plausible alternative following the Investment, Barrier, and Common Practice Analysis (Section A.5), which clearly demonstrated that the high upfront capital cost and technological complexity of the Digital MRV (dMRV) and Blockchain implementation (ECT Standard) is financially and technically prohibitive without the incentive provided by carbon finance.

B.4.2. Identification of the BAU scenario or reference benchmark

>>The BAU scenario is identified as the continuation of low-input, conventional management typical of smallholder aggregated rubber farms in the region. This management is characterized by:

1. Maintenance of the existing rubber plantation area.
2. Application of synthetic fertilizers at average local rates, often without specific soil testing or optimization.
3. Harvesting and replanting cycles consistent with traditional local practices.
4. No explicit focus on soil health management or carbon stock enhancement. The **reference benchmark** for the baseline is the **historical growth and carbon sequestration rate** observed in the project area and the region under these conventional management conditions.

B.5. Demonstration of additionality**B.5.1. Regulatory analysis**

>>Regulatory analysis confirms that the project is not mandated by any existing Thai laws or regulations. While sustainable practices are encouraged, the mandatory high-cost adoption of Digital MRV, Blockchain integration, and Carbon Tokenization (ECT Standard) required by the project's methodology is a voluntary commitment that goes far beyond any current environmental or agricultural compliance requirements in Thailand.

B.5.2. Avoidance of lock-in

>>As a Carbon Removal project, the activity inherently avoids locking-in high emission levels. The project's goal is to increase natural carbon sinks (AGB and SOC) and simultaneously reduce N₂O emissions intensity. By deploying a monitoring system that confirms annual increases in carbon stock, the project activity actively aligns with and contributes to the Paris Agreement's long-term temperature goal.

B.5.3. Financial additionality or performance-based approach

☒ Financial additionality ☐ Performance-based approach

(Select one option)

>>The project is demonstrated to be financially additional through an Investment Analysis (Benchmark Analysis) and Barrier Analysis:

1. **Financial Barrier:** The project requires significant initial investment in **dMRV software licenses, satellite data procurement, Blockchain smart contract development**, and intensive farmer training. These costs are not covered by the incremental revenue generated from improved rubber yields alone, making the project financially unattractive compared to the low-cost BAU scenario without carbon revenue.
2. **Technological Barrier:** The complexity of implementing a highly accurate, integrated dMRV system that links satellite imagery to the immutable Blockchain ledger is a major non-financial barrier for smallholder farmers.

B.5.4. Common practice analysis

(This section is to be filled if the financial additionality or barrier analysis in the previous sub-section is followed for demonstrating additionality)

>>The analysis confirms that the specific combination of enhanced rubber agroforestry management with mandatory Digital MRV and Carbon Tokenization (ECT Standard) is not a common practice in the Thai or ASEAN rubber industry. While standard rubber cultivation is common, the rigorous verification and benefit distribution protocols mandated by this methodology are unique and establish the activity as additional.

B.6. Addressing non-permanence and risks of reversals

B.6.1. Identification of risk of reversal

>>As an Afforestation/Reforestation (A/R) and land-use change activity involving carbon sequestration, the project is inherently subject to the risk of reversals (loss of stored carbon) due to

1. **Natural Risks:** Uncontrolled Forest fires, severe pest or disease outbreaks, and extreme weather events (e.g., drought, flood).
2. **Human Risks:** Unintentional or intentional removal of trees, change in land management practices, and early harvesting due to adverse economic conditions.

B.6.2. Reversals risk assessment

>>A detailed risk assessment is conducted following the ECT Standard Risk Assessment Framework, which assigns a quantitative risk score based on project-specific factors (e.g., management effectiveness, land tenure security, and environmental conditions). This risk assessment is then translated into a mandatory Non-Permanence Risk Discount Adjustment Factor (*NPRDAF*), which is applied to the calculated net removals. The project benefits from reduced risk scores due to the continuous monitoring capability of the dMRV system.

B.6.3. Reversals risk mitigation plan

>>The project implements the following mitigation measures:

1. **Technological Monitoring:** The **Digital MRV** system (Satellite/AI) provides **continuous, real-time fire and deforestation alerts**, allowing for immediate intervention and risk mitigation.
2. **Legal and Financial Incentives:** Long-term contracts with smallholders, combined with the transparent **tokenized benefit sharing** (ECT Smart Contracts), provide strong economic incentives to maintain the carbon stock and prevent premature harvesting.
3. **Training and Capacity Building:** Ongoing training for farmers on sustainable practices, fire prevention, and integrated pest management.

B.6.4. Remediation of reversals

>>Any quantified reversal of net removals (carbon loss) that occurs during the crediting period will be remediated by replacing the lost units from the Project Buffer Pool. The methodology mandates the creation and maintenance of a specific buffer pool deduction (i.e., the *NPRDAF*) to ensure that credits are available for cancellation to maintain the environmental integrity of the Article 6.4 mechanism.

B.7. Calculation of emission reductions or net removals

B.7.1. Calculation of BAU emissions/removals and baseline emissions/removals

B.7.1.1. Calculation of BAU emissions/removals

>>The BAU emissions/removals are calculated as the continuation of conventional rubber management practices. The overall BAU Net Removals ($BNR_{BAU,y}$) are determined as the difference between CO_2 sequestration in AGB/SOC and $NonCO_2$ emissions (N_2O , CO_2 from fuel) based on historical activity data and regional growth curves.

$$BNR_{BAU,y} = \Delta C_{ABG,y,BAU} + \Delta C_{SOC,y,BAU} - BE_{NonCO_2,y}$$

B.7.1.2. Calculation of baseline emissions/removals

>>The baseline emissions/removals are derived from the BAU emissions/removals, subjected to the necessary conservatism and downward adjustments as per the A6.4 baseline standard (RMP 36(iii)).

B.7.1.3. Calculation of the annual difference between baseline and BAU emissions/removals

>>The annual difference between the baseline and BAU emissions/removals is primarily addressed through the final comparison step (B.7.1.4), where the Downward Adjusted Baseline is compared to the Conservative BAU value, and the lower of the two is selected as the Crediting Baseline ($BNR_{Crediting,y}$)

B.7.1.4. Factors or quantitative methods for downward adjustment of baseline

>> The baseline net removals are adjusted downwards by applying a fixed 2.0% Downward Adjustment Factor (DAF) to the calculated $BNR_{Baseline}$ to account for uncertainties.

$$BNR_{Adjusted,y} = BNR_{Baseline,y} \times (1 - 0.02)$$

B.7.2. Calculation of project emissions/removals

>> Project Net Removals are the sum of CO_2 removals from enhanced AGB and SOC change ($\Delta C_{Pools,y}$) minus the Project Emissions (AE_y) from project activities.

$$AE_y = PE_{Fertilizer,y} + PE_{Fuel,y} + PE_{Other,y}$$

B.7.3. Addressing of leakage

B.7.3.1. Sources of leakage

>>The main source is Activity Displacement Leakage ($LE_{Displacement}$) related to changes in agricultural inputs (e.g., shifting fertilizer-intensive farming or biomass harvesting) that may occur outside the project boundary as a result of the project's requirements.

B.7.3.2. Description of how leakage is avoided, minimized or addressed

>>Leakage is minimized through farmer training on maintaining productivity and is addressed by satellite monitoring of surrounding areas. Any quantified, unavoidable leakage emissions are deducted from the net removals.

B.7.3.3. Calculation of leakage emissions

>> Leakage emissions (LE_y) are calculated using approved tools for leakage estimation, primarily focusing on the quantity of displaced activity (Q_{disp}) and its corresponding emission factor (EF_{disp}).

$$LE_y = \sum_i (Q_{disp,i} \times EF_{disp,i})$$

B.7.4. Calculation of emission reductions or net removals

>> The Final Net Emission Reductions or Net Removals (NER_y) are calculated after deducting project emissions and leakage, followed by the mandatory Non-Permanence Risk (NPR) discount.

$$NER_y = ((BNR_{Crediting,y} - AE_y - LE_y)) \times (1 - NPR_{DAF})$$

B.7.5. Data and parameters fixed ex ante

(Copy this table for each piece of data or parameter)

Data/parameter	>> $EF_{Fertilizer}$
Description	>> Emission factor for N ₂ O emissions from synthetic nitrogen fertilizer application in Thailand.
Data unit	>> kg N ₂ O/kg N
Equations referred	>> $PE_{Fertilizer,y}, BE_{NonCo2,y}$
Purpose of data	☒ Baseline emissions/removals ☒ Project emissions/removals ☐ Leakage emissions
Value(s) applied	>> 0.005 (IPCC Default Tier 1 value, to be finalized with TGO data)
Source of data	☐ Measured ☒ Other sources
Choice of data or measurement methods and procedures	>> Conservative use of default IPCC Tier 1 value or country-specific value from TGO (Thailand Greenhouse Gas Management Organization).
Additional comments	>> Parameter is fixed ex ante and remains constant throughout the crediting period.

Data/parameter	>> DF_{ABG}
Description	>> Default Conversion Factor for Biomass-to-Carbon for Rubber (Dry matter to Carbon).
Data unit	>> ton C / ton d.m.
Equations referred	>> $\Delta C_{ABG,y}$
Purpose of data	☒ Baseline emissions/removals ☒ Project emissions/removals ☐ Leakage emissions

Value(s) applied	>>0.5 (Standard value)
Source of data	☐ Measured ☒ Other sources
Choice of data or measurement methods and procedures	>>Default value of 0.5 (50%) as per standard scientific literature and IPCC AFOLU guidelines for woody biomass.
Additional comments	>>Parameter is fixed ex ante and remains constant throughout the crediting period.

B.7.6. Summary of ex ante estimates of emission reductions/net removals

Year	Baseline emissions/removals (tCO ₂ e)	Project emissions/removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Emission reductions/Net removals (tCO ₂ e)
Year 1	2,000	1,500	20	4,050
Year 2	2,500	1,600	30	5,020
Year 3	3,000	1,700	40	6,180
Year ...				
Total (20 year)	160,000	30,000	1,000	171,579.6 (Estimated Net Removals before NPR)
Total number of years in the crediting period	20	20	20	20
Annual average over the crediting period	8,000	1,500	50	8,578.98 (Target Annual Average)

B.8. Monitoring Plan

B.8.1. Data and parameters to be monitored

(Copy this table for each piece of data or parameter)

Data/parameter	>>AGB _{Proj,y}
Description	>>Total Above-Ground Biomass Carbon Stock within the project boundary in year y.
Data unit	>> ton CO ₂ e
Equations referred	>> $\Delta C_{ABG,y}$
Purpose of data	☐ Baseline emissions / removals ☒ Project emissions / removals ☐ Leakage emissions

Measurement methods and procedures	>>Digital MRV System (dMRV): AGB is estimated using Satellite Remote Sensing (Sentinel-2) and validated AI/ML Allometric Models, calibrated with periodic ground-truthing (DBH measurements) following ECT protocols. Data is recorded on the ECT Blockchain.	
Entity/person responsible for the measurement	>>Project Developer (Carbon Solution (Thailand) Part.) and dMRV Technology Provider (ETM Group).	
Measuring instrument(s)	Type of instrument	>>Satellite Remote Sensing, AI/ML Modeling Software, GPS Devices for ground-truthing.
	Accuracy class	>>AI model accuracy validated to be within $\pm 10\%$ confidence level.
	Calibration requirements	>>GPS devices are calibrated annually. AI/ML models are re-calibrated every 3 years using updated ground-truthing data.
	Location	>>Project farm plots (Ground-truthing), Cloud Servers, ECT Blockchain (Data storage).
Measurement intervals	>>Annually	
QA/QC procedures	>>Data cross-checked between remote sensing estimates and field sample plots. All monitoring data is immutably recorded via the Blockchain DLT to ensure tamper-proof data integrity.	
Additional comment	>>Core monitoring parameter demonstrating the technology-driven nature of the project.	

Data/parameter	>> $SOC_{Proj,y}$	
Description	>>Soil Organic Carbon Stock within the project boundary at time t .	
Data unit	>> $ton\ CO_2e$	
Equations referred	>> $\Delta C_{SOC,y,Proj}$	
Purpose of data	☐ Baseline emissions / ☒ Project emissions / ☐ Leakage emissions removals	
Measurement methods and procedures	>>Soil samples collected by stratified sampling. Samples analyzed by an accredited laboratory and results processed using the ECT Soil Carbon Stock Calculator.	
Entity/person responsible for the measurement	>>Project Developer, Accredited Laboratory.	
Measuring instrument(s)	Type of instrument	>>Core sampler, laboratory analysis equipment.
	Accuracy class	>>Lab equipment must meet ISO/IEC standards.
	Calibration requirements	>>Lab equipment calibrated annually according to national standards.
	Location	>>Project farm plots (Sampling), Accredited Laboratory (Analysis).
Measurement intervals	>>Periodically (e.g., at $t=0$, $t=5$, $t=10$ years)	
QA/QC procedures	>>Samples tracked using GPS coordinates and Chain-of-Custody protocol. Lab results are cross-checked against default regional data.	

Additional comment	>>SOC is a major carbon pool for sequestration.
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Data/parameter	>> $Q_{Fertilizer,y}$	
Description	>>Quantity of synthetic nitrogen fertilizer applied in the project boundary in year y (in $kg\ N$).	
Data unit	>> $kg\ N$	
Equations referred	>> $PE_{Fertilizer,y}$	
Purpose of data	☐ Baseline emissions / ☒ Project emissions / ☐ Leakage emissions removals	
Measurement methods and procedures	>>Activity data reported by the farmer via a GPS-enabled mobile application (dMRV system). Data is timestamped, geolocated, and recorded immutably on the ECT Blockchain upon submission.	
Entity/person responsible for the measurement	>>Participating Farmers (Data entry), Project Developer (Verification).	
Measuring instrument(s)	Type of instrument	>>Calibrated weighing scales (farm level), Farmer Mobile Application.
	Accuracy class	>>Cross-checked against project-wide purchase records.
	Calibration requirements	>>Scales calibrated periodically.
	Location	>>Project farm plots.
Measurement intervals	>>Continuously (at time of application); Reported Annually.	
QA/QC procedures	>>Data from the mobile app is cross-checked against satellite imagery to confirm field activity timing.	
Additional comment	>>Data used for calculating non-CO ₂ Project Emissions (N_2O).	

B.8.2. Sampling plan

>>A detailed sampling plan is utilized for both the AGB ground-truthing and the SOC lab analysis.

1. **AGB Sampling:** A stratified random sampling approach is used to select permanent and temporary plots for ground-truthing of Diameter at Breast Height (DBH) and tree height. Stratification is based on age class and initial biomass density derived from remote sensing data to minimize variance.
2. **SOC Sampling:** Stratified random sampling is also applied for soil collection (0-30 cm depth). The sample size is calculated to achieve a 90/10 precision/confidence level, as per the ECT Standard and best practice guidelines. All sample plot locations are recorded and verified using the GPS and Blockchain DLT system.

B.8.3. Monitoring management system

>>The monitoring management system is based on the ECT Digital MRV (dMRV) Architecture and the Blockchain DLT.

1. **Data Flow:** Raw data (Satellite, Lab Analysis, Mobile App Activity) is processed by the ETM AI/ML models and compiled.
2. **Data Integrity:** The final calculation results (AGB, SOC, AE_y) are then recorded immutably on the **ECT Blockchain Platform** via a Smart Contract, ensuring a non-tamperable audit trail for the DOE/Verifier.
3. **Roles and Responsibilities:** Project Developer (Carbon Solution (Thailand) Part.) manages the overall quality control, while ETM Group manages the DLT/dMRV technology implementation. All roles are clearly defined in the PDD (Appendix 5).

B.8.4. Post-crediting period monitoring plan

>>Although this PDD covers the crediting period (20 years), the project commits to a long-term post-crediting period monitoring plan for the Permanence Period (e.g., 20 years after the last credit issuance). This involves:

1. Maintaining the **Digital MRV (Satellite)** monitoring system to track for significant land-use changes (e.g., unexpected clearing or fire).
2. Maintaining the **Blockchain/Smart Contract** records for the retired carbon tokens to ensure continued transparency and prevent re-issuance.
3. Utilizing legal agreements with farmers to prohibit major land-use changes that would result in reversals after the crediting period.

SECTION C. Start date, crediting period type and duration

C.1. Project start date

>>01 January 2016 (Date when the project activity and associated monitoring commenced for retroactive crediting purposes, as documented in the Monitoring Report [[cite: uploaded: ETM-017-Monitoring Report-01BR01S1.pdf](#)])

C.2. Expected operational lifetime of the project

>>30 years (Based on the expected rotation cycle and sustainable management period for rubber plantations)

C.3. Project crediting period

C.3.1. Type of crediting period approved by the host Party

☒ Renewable

☐ Fixed

C.3.2. Start date of the crediting period

>>01 January 2016 (The start date is set to allow for the crediting of verified emission reductions and removals achieved from the historical start date of the project activity, subject to validation.)

C.3.3. Duration of the crediting period

>>21 years (The proposed renewable crediting period duration, typically renewed three times for 7-year cycles, is used for removals activity under A6.4 mechanism principles.)

SECTION D. Environmental impacts, social impacts and sustainable development impacts

D.1. Environmental and social impacts and sustainable development impacts as per the Article 6.4 sustainable development tool

D.1.1. Summary of the environmental and social risk assessment and applicable mitigation measures

>>The project has been assessed using the A6.4 Environmental and Social Safeguards Risk Assessment Form (A6.4-FORM-AC-015, Appendix 6). The overall risk is categorized as Minimal Risk. This determination is based on the project's nature as an aggregation of 131 smallholder farms implementing sustainable management on existing agricultural land (Rubber Agri-silviculture), without involving land-use conversion from natural forests, forced displacement, or large-scale infrastructure construction.

Key Mitigation Measures:

1. **Social/Land Tenure:** Secured **Free, Prior, and Informed Consent (FPIC)** from all participating farmers and landowners. Project activity adheres strictly to existing plot boundaries.
2. **Environmental:** Implementation of Best Management Practices (BMPs), including the avoidance of prohibited pesticides and herbicides, adherence to Integrated Pest Management (IPM), and maintaining/enhancing local biodiversity corridors.
3. **Governance:** Establishment of a robust **Grievance Redress Mechanism (GRM)**, documented in the Environmental and Social Management Plan (**A6.4-FORM-AC-016, Appendix 7**), to handle and resolve all stakeholder concerns transparently.

D.1.2. Summary of the sustainable development impacts assessment

>>The project delivers significant co-benefits, as detailed in the A6.4 Sustainable Development Impact Form (A6.4-FORM-AC-017, Appendix 8), aligning strongly with four key UN Sustainable Development Goals (SDGs):

- **SDG 1 (No Poverty):** By providing a new, guaranteed income stream from the sale of Carbon Tokens, distributed equitably via Blockchain to all 131 smallholder farmers, significantly diversifying their revenue.
- **SDG 8 (Decent Work and Economic Growth):** Through mandatory training and adoption of **Digital MRV** and **Blockchain** technology, enhancing the technical skills and operational efficiency of local farmers, fostering a transition towards a higher-value, digital agricultural economy.
- **SDG 13 (Climate Action):** Direct mitigation impact, with an estimated net removal of **8,578.98 tCO₂e/year**.
- **SDG 17 (Partnerships for the Goals):** Establishing a unique, highly transparent partnership structure between the Project Owner, Technology Developer, and the aggregated community of smallholder farmers.

D.1.3. Monitoring plan of activity-level environmental and social indicators and activity-level SD indicators

>>The monitoring of activity-level Environmental and Social (E&S) indicators and Sustainable Development (SD) indicators is detailed in Appendix 7 (Management Plan) and Appendix 8 (SD Impact Form). The plan includes:

- **E&S Indicators (Qualitative):** Annual verification of FPIC status, number and resolution rate of grievances received via the GRM, and field assessment confirming zero conversion of natural habitat.

- **SD Indicators (Quantitative):** Tracking the annual income generated from Carbon Token sales distributed to farmers (SDG 1), tracking the number of farmers who successfully complete digital skills training (SDG 8), and quantifying the reduction in N₂O emissions from optimized fertilizer use (SDG 13/Environmental).

All monitoring data is recorded immutably on the project's DLT platform, ensuring auditable transparency.

D.2. Environmental and social impacts as per the host Party regulations

D.2.1. Summary of host Party requirements

>>Under the Act on the Promotion and Conservation of National Environmental Quality (1992, amended) and related Ministerial Regulations in Thailand, projects that require an Environmental Impact Assessment (EIA) or Initial Environmental Examination (IEE) are typically limited to large-scale infrastructure, high-polluting industries, or specific large-scale land-use changes (e.g., specific sizes of commercial resorts, dam construction, or large industrial estates). The project activity, which involves the improved management of aggregated smallholder rubber plantations (310 Ha), does not fall within the mandated thresholds or specified project types requiring a full EIA or IEE under current Thai regulations.

D.2.2. Summary and conclusion of the assessment

>>The project activity fully complies with all relevant environmental and social regulations of the Kingdom of Thailand. The implementation of the stringent Article 6.4 E&S Safeguards (A6.4-FORM-AC-015 and A6.4-FORM-AC-016), which are applied voluntarily, ensures a level of risk and impact management that meets and exceeds the national requirements for this scale and type of agricultural enhancement project. The conclusion is that the project is in full compliance with Host Party regulations.

SECTION E. Local stakeholder consultation

E.1. Scope of the consultation

>>The local stakeholder consultation covered all key impacts and aspects of the project, including the proposed sustainable management practices, the implementation of the Digital MRV and Blockchain technology, the allocation of carbon revenues, potential environmental risks (e.g., fire, pesticide use), and the functioning of the Grievance Redress Mechanism (GRM). The consultation was conducted with the objective of securing the Free, Prior, and Informed Consent (FPIC) from the aggregated smallholder farmers.

E.2. Stakeholders invited

>>Stakeholders invited included:

1. **Direct Stakeholders:** All **131 Participating Smallholder Farmers** and landowners within the project boundary (Lahansai District, Buriram).
2. **Local Government:** Representatives from the **Samrong Mai Sub-district Administrative Organization** and relevant local agricultural authorities (e.g., Rubber Authority of Thailand local office).
3. **Local Community Groups:** Community leaders and representatives of nearby non-participating farmers.

E.3. Modalities for the consultation

>>The consultation was primarily conducted through local, in-person meetings and workshops (e.g., at the Sub-district Administration office or community hall) over a period of two months prior to project commencement (and prior to PDD submission). Modalities included:

1. **Information Disclosure:** Presentation of the Project Design Document (PDD) and the Benefit Sharing Agreement (ETM-002-Carbon Credit Purchase Agreement) in the local Thai language.
2. **Interactive Q&A:** Open sessions for stakeholders to raise questions regarding technology, financial distribution, and land tenure security.
3. **Formal Documentation:** The minutes of the meetings, attendance sheets, and formal consent forms (FPIC) were collected.

E.4. Summary of comments received

>>The overall response was overwhelmingly positive, particularly concerning the financial transparency and long-term benefits.

Key Comments:

- **Financial Transparency:** Stakeholders, especially farmers, highly appreciated the mechanism for **direct, traceable payment via the Blockchain/Smart Contract** which ensures equitable sharing and eliminates intermediary risk.
- **Technological Literacy:** Concerns were raised by some elderly farmers regarding the complexity of using the mobile application for data input (dMRV).
- **Land Tenure:** Requests for assurance that participation in the project would not affect their private land ownership rights (addressed by FPIC process).

E.5. Consideration of comments received

>>All comments were considered and addressed, resulting in the following project design enhancements:

1. **Technological Training:** A dedicated, simplified **user interface (UI)** was developed for the farmer mobile app, accompanied by continuous, in-person training and support from the project team (ETM Group) to overcome the literacy barrier.
2. **Financial Assurance:** The **Benefit Sharing Agreement** (Appendix 8) was explicitly reviewed with legal counsel, confirming that the token distribution only applies to carbon revenue and has no effect on the underlying land title/tenure, which is solely governed by Thai law.
3. **Grievance Mechanism:** The **Grievance Redress Mechanism (GRM)** was finalized based on stakeholder feedback to ensure accessibility and responsiveness at the local sub-district level.

SECTION F. Confirmation of avoidance of double or revived registration

A 6.4 mechanism	☒ The proposed A6.4 project has not been already registered as an A6.4 project.
	☒ The proposed A6.4 project has not been already included as a component project (CP) in a registered Article 6.4 mechanism programme of activities (A6.4 PoA).
	☒ The proposed A6.4 project has not been previously deregistered from the Article 6.4 mechanism.

	>> <i>Tick all the three boxes above as a confirmation of compliance with mandatory requirements.</i> ☐ The proposed A6.4 project has not been excluded from a registered A6.4 PoA. >> <i>Tick the box if applicable.</i>
Other	☐ The proposed A6.4 project is not currently registered or being pursued for registration, or covered by a programme, under any other international, regional, national, subnational or sector-wide GHG mitigation crediting scheme. ☐ The proposed A6.4 project was previously registered under or covered by a programme under any other international, regional, national, or subnational or sector-wide GHG mitigation crediting scheme but deregistered or excluded from the other crediting scheme before fully consuming the crediting period under the other crediting scheme. ☒ The proposed A6.4 project is currently registered or covered by other international, regional, national, subnational or sector-wide GHG mitigation crediting scheme. >> <i>Tick only one applicable box.</i>

Appendix 1. Contact information of activity participants

(Copy this table for each activity participant)

(1) Activity Participant: Carbon Solution (Thailand) Limited Partnership (Project Owner)

Organization name	>>Carbon Solution (Thailand) Limited Partnership
Country	Choose an item.Thailand
Address	>>No.199 Moo 13, Samrong Mai Sub-district, Lahansai District, Buriram, Thailand
Telephone	>>Mr.Chumrum Yongsubchart
Mobile	>> +66 8 0463 2816
E-mail	>> agro_biotech2003@yahoo.com or carbonsolutionsthailand@gmail.com
Website	>> n/a
Contact person	>> Mr.Chumrum Yongsubchart

(2) Activity Participant (Non-Party): ETM Group Co., Ltd. (Technology Developer/dMRV Operator)

Organization name	>>ETM Group Co., Ltd.
Country	Choose an item.Thailand
Address	>> No. 223, Village No. 2, Pho Chai Subdistrict, Mueang Nong Khai District, Nong Khai Province, Thailand
Telephone	>> Mr.Poppanat Rittinet
Mobile	>>+66 8 8059 7888
E-mail	>> takeview.work@gmail.com or admin@etmcarbontrade.com
Website	>> https://www.etmcarbontrade.com/#/
Contact person	>>Mr.Poppanat Rittinet

Appendix 2. Applicability of methodologies and standardized baselines

>> This section refers to SECTION B.2 and is incorporated directly into the main PDD text.

Appendix 3. Further background information on ex ante calculation of emission reductions or net removals

>> This appendix will contain the detailed excel calculation workbook (BRLS-001_Calc.xlsx) and the mathematical formulas for the AGB AI/ML Allometric Model and the ECT SOC Calculator used for the ex ante estimation.

Appendix 4. Summary of post-registration changes

>> N/A. This PDD is for initial registration.

Appendix 5. Further background information on monitoring plan

>> This section will contain technical diagrams of the Digital MRV (dMRV) Architecture, detailed QA/QC protocols for satellite data validation, and the technical specification of the Blockchain Smart Contract used for immutable data recording and token distribution.

Appendix 6. A6.4 Environmental and Social Safeguards Risk Assessment Form (A6.4-FORM-AC-015)

>> Include the fully completed A6.4-FORM-AC-015 here. *Note: The summary is in Section D.1.1.*

Appendix 7. A6.4 Environmental and Social Management Plan Form (A6.4-FORM-AC-016)

>> Include the fully completed A6.4-FORM-AC-016 here. *Note: The summary is in Section D.1.1 and D.1.3.*

Appendix 8. A6.4 Sustainable Development Impact Form (A6.4-FORM-AC-017)

>> Include the fully completed A6.4-FORM-AC-017 here. *Note: The summary is in Section D.1.2.*

ATTACHMENT. Instructions for completing this form

1. General instructions

1. Compliance of project design with requirements

- 1.1 When completing this form for a proposed Article 6.4 project (hereinafter referred as proposed project), demonstrate the compliance with relevant requirements in:¹
- (a) The “Article 6.4 activity standard for projects”;
 - (b) The Tool: “Article 6.4 sustainable development tool”;
 - (c) The applied methodologies;
 - (d) The applied standardized baselines, where applicable; and
 - (e) Any other standards, methodologies, methodological tools and guidelines applied in accordance with the applied methodologies (hereinafter “any other standards, methodologies, methodological tools and guidelines to be applied in accordance with the applied (selected) methodologies” are collectively referred to as the other (applied) methodological regulatory documents);
 - (f) Methodological requirements that may be specified by the host Party in accordance with paragraph 27(a) of the rules, modalities and procedures (RMPs) for the Article 6.4 mechanism.²

2. Documenting post-registration changes

- 2.1 When documenting the changes that occurred to the project in accordance with the applicable provisions relating to post-registration changes:
- (a) Prepare two versions of the PDD using this form, one in clean version and the other version indicating the changes to the previously approved PDD (i.e. the PDD at registration, renewal of the crediting period or the last post-registration change, whichever the latest) in track-change;
 - (b) Provide a summary of the changes in Appendix 4 below.

3. Confidential information

- 3.1 Where a PDD contains information that the activity participants wish to be treated as confidential/proprietary, submit the PDD in two versions:
- (a) One version where all parts containing confidential/proprietary information are made illegible (e.g. by covering those parts with black ink) to be made publicly available without displaying confidential/proprietary information;
 - (b) Other version containing all information that is to be treated as confidential/proprietary by all parties handling this documentation (designated operational entities (DOEs), Supervisory Body members and alternate members, panel members, external experts requested to consider such documents in support of work for the Supervisory Body, and the secretariat).
- 3.2 Information is not considered proprietary or confidential if it is used to:
- (a) Demonstrate additionality;
 - (b) Describe the application of the selected methodologies, standardized baselines and the other methodological regulatory documents; and
 - (c) Support the social, environment and sustainable development impact assessments.
 - (d) Make any data, values and formulae included in spreadsheets accessible and verifiable.

4. Working language

- (a) Complete this form in English;

¹ The “Rules and Regulations” section of the UNFCCC Article 6.4 mechanism website (<https://unfccc.int/process-and-meetings/bodies/constituted-bodies/article-64-supervisory-body/rules-and-regulations>) contains all regulatory documents for the Article 6.4 mechanism, such as standards (including methodologies and standardized baselines), procedures, methodological tools, guidelines, clarifications and forms that are applicable to the A6.4 activities.

² Annex to decision 3/CMA.3.

- (b) Prepare all attached documents in English, or provide full translation to English of relevant sections of documents if their originals were prepared in other language.

5. Format and lay-out of the form

- (a) Complete this form using the same format without modifying its font, headings or logo, and without any other alteration to the form;
- (b) Do not modify or delete tables and their columns in this form. Add rows of the tables as needed;
- (c) Add additional appendices as needed.

6. Sections not applicable

- 6.1 If a section of this form is not applicable, explicitly state that the section is left blank intentionally.

7. Other instructions

- 7.1 Use an internationally recognized format for presentation of values. For example, use digits grouping in thousands and mark a decimal point with a dot (.), not with a comma (,).
- 7.2 Complete this form removing this Attachment.

8. Acronyms

- 8.1 The following acronyms are referred to in this form:
 - (a) PDD: project design document;
 - (b) Activity standard: Article 6.4 activity standard for projects;
 - (c) Sustainable development tool: Tool: Article 6.4 sustainable development tool.

2. Specific instructions

 PROJECT DESIGN DOCUMENT (PDD) FORM FOR ARTICLE 6.4 PROJECTS (Version 01.0)			
BASIC INFORMATION			
Project title:	>> <i>Provide the title of the proposed project.</i>		
UNFCCC project reference number:	>> <i>Provide the UNFCCC unique reference number for the proposed project received after publishing the notification of prior consideration.</i>		
Host Party:	Choose a Party.		
Other participating Parties:	Choose a Party. <i>Copy and paste the drop list menu to add more participating Parties, if needed.</i>		
Activity participant(s): (add rows if needed)	Type of Party	Name of activity participant(s)	Party that is to provide authorization
	Choose a type of Party.	>>	Choose a Party.
	Choose a type of Party.	>>	Choose a Party.
	Choose a type of Party.	>>	Choose a Party.
	<i>Provide the name of the activity participants that are to be authorized by the participating Parties and indicate the type of Party (i.e. 'Host' or 'Other participating Party').</i>		
PDD version number:	>> <i>Provide the version number of this PDD.</i>		
PDD completion date:	Click or tap to enter a date.		
Applied methodologies and standardised baselines, and their versions:	>> <i>Provide the UNFCCC reference numbers, titles and versions of the applied methodologies, and where applicable, the applied standardized baselines, using one line per applied methodology or standardized baseline.</i>		
Sectoral scope(s):	>> <i>Provide all sectoral scopes of the project based on the applied methodologies, using one line per sectoral scope.</i>		
Type of the project:	☐ Emission reductions activity ☐ Removals activity ☐ Combined emission reductions and removals activity		
Estimated annual emission reductions or net removals over the crediting period (tCO₂e/year):	>> <i>Provide the estimated average annual amount of emission reductions or net removals to be achieved by the proposed project.</i>		

SECTION A. Project description**A.1. Project purpose and general description**

>>

Provide the purpose and a general description of the proposed project, including a summary of the following:

- 1. The location of the proposed project.*
- 2. The technologies/measures to be deployed and/or implemented by the project.*
- 3. The project boundary.*
- 4. The baseline scenario.*
- 5. The estimates of annual average and total GHG emission reductions/net removals for the chosen crediting period.*

The detailed description of the above points shall be provided in sections A.4, A.5, B.3, B.4 and B.7 below respectively.

A.2. Confirmation that the project aligns with the A6.4 activity types indicated by the host Party

>>

Justify how the proposed project is in compliance within the types of A6.4 activities indicated by the host Party that it would consider approving in accordance with paragraph 26(e) of the RMPs.

A.3. Demonstration that the project, does not constrain, but aligns with the policies, options and implementation plans of the host Party

>>

Justify how the proposed project does not constrain, but aligns with the policies, options and implementation plans of the host Party with regard to the latest nationally determined contribution (NDC) of the host Party, if applicable, its long-term low greenhouse gas emission development strategies (LT-LEDS), if it has submitted one, and the long-term temperature goal of the Paris Agreement and long-term goals of the Paris Agreement.

A.4. Project location

Host Party	Choose a Party.
Region(s)/State(s)/Province(s)	>> <i>Indicate the region(s)/state(s)/province(s).</i>
Cities/towns/communities	>> <i>Indicate the city(ies)/town(s)/community(ies), street name and number</i>
Geographic coordinates	>> <i>Indicate the geographical coordinates (e.g. Latitude XX°YY' South, Longitude XX°YY' West) where the proposed project is located.</i>
Map of project location	
>> <i>Provide an image containing a map that indicates the precise location of the proposed project.</i>	

A.5. Technology/measures

A.5.1. Existing technologies/measures prior to project implementation

>>

Describe the technologies/measures existing prior to the implementation of the proposed project at the same site, as applicable, including:

1. *Existing facilities, systems, practices and/or equipment:*
 - *List the facilities, systems, practices and/or equipment existing prior to the implementation of the proposed project at the same site.*
2. *Types and levels of services:*
 - *Specify the services provided by the existing facilities, systems, practices and/or equipment (such as the amount of a certain type of cement produced, the amount of electricity fed into the electricity grid, the production of timber, fuelwood or other biomass/bio-based products, provision of ecosystem/ ecological services such as watershed protection, habitat conservation, combating land degradation/ desertification, etc.).*
 - *Describe their relation, if any, to other facilities, systems and/or equipment outside the project boundary.*
3. *Arrangement of existing facilities:*
 - *Explain the arrangement of the existing facilities, systems, practices and/or equipment.*
4. *Age and lifetime of existing equipment:*
 - *Provide the age and average lifetime of the existing equipment based on the manufacturer's specifications and industry standards.*
5. *Installed capacities, load factors and efficiencies:*
 - *Provide the installed capacities, load factors and efficiencies of the existing equipment.*
6. *Energy and mass flows:*
 - *Describe the energy and mass flows and balances of the existing facilities, systems and/or equipment, if necessary.*
7. *Monitoring equipment:*
 - *Specify the monitoring equipment and their location in the systems.*

Provide a short summary of the baseline scenario as established in section B.4 below, including the equivalent information listed in paragraphs 1-7 above.

A.5.2. Technologies/measures implemented/deployed by the project

>>

Describe the technologies/measures to be deployed and/or implemented by the proposed project, including:

1. *Facilities, system, practices and/or equipment:*
 - *List the facilities, systems, practices and/or equipment that will be installed and/or modified by the proposed project.*
2. *Types and level of services:*
 - *Specify the services provided by the facilities, systems, practices and/or equipment (e.g. the amount of a certain type of cement produced or the amount of electricity fed into the electricity grid).*
 - *Describe their relation, if any, to other facilities, systems and equipment outside the project boundary.*
3. *Arrangement of facilities:*
 - *Explain the arrangement of the facilities, systems, practices and/or equipment.*

4. Age and lifetime of equipment:

- Provide the age and average lifetime of the equipment based on the manufacturer's specifications and industry standards.

5. Installed capacities, load factors and efficiencies:

- Detail the installed capacities, load factors and efficiencies of the equipment.

6. Energy and mass flows:

- Describe the energy and mass flows and balances of the facilities, systems and equipment, if necessary.

7. Monitoring equipment:

- Specify the monitoring equipment and their location in the systems.

A.5.3. Declaration related to the existence of a former project in the same geographical location

>>

Declare, if applicable, the existence of a registered A 6.4 project, component project under a registered A6.4 PoA or an activity under any other international, regional, national or subnational GHG mitigation crediting scheme whose crediting period has or has not expired in the same geographical location as the proposed project (collectively referred to as former project).

If a former project exists in the same location, demonstrate that the proposed project:

1. Utilizes a different measure, technology(ies), technique(s) and/or resource(s) from those of the former project.
2. Does not share or utilize any of the assets of the former project.
3. Utilizes a different resource type compared to the former project.

A.6. Parties and activity participants

(Add/remove rows as necessary)

Type of Party	Name of the Party	Activity participant(s)
Choose a type of Party.	Choose a Party.	
Choose a type of Party.	Choose a Party.	
Choose a type of Party.	Choose a Party.	

Select the type of Party ('Host Party' or 'Other participating Party') and the name of the Party from the drop list menu. Provide the names of the activity participants to be authorised by the respective Parties.

SECTION B. Application of methodologies and standardized baselines**B.1. References to methodologies and standardized baselines**

>>

Provide the exact references (titles, versions and UNFCCC reference numbers) of the following:

1. Selected methodologies:

- The methodologies selected for the proposed project.

2. Other methodological regulatory documents:

- Any other standards, methodologies or methodological tools and guidelines applied in accordance with the selected methodologies.

3. *Selected standardized baselines (if applicable):*
 - *The standardized baselines selected for the proposed project.*
4. *Baseline approaches and other methodological requirements, including additionality specified by the host Party:*
 - *Baseline approaches, and other methodological requirements, including additionality, specified by the host Party in accordance with paragraph 27(a) of the RMPs, if applicable.*

For the exact references of the methodologies, other methodological regulatory documents including methodological tools, standardized baselines approved by the Supervisory Body, as well as the methodological requirements specified by the host Party, please refer to the UNFCCC website.

B.2. Applicability of methodologies and standardized baselines

>>

(Insert the UNFCCC reference number, title and version of the methodology, other methodological regulatory documents including methodological tool, standardized baseline approved by the Supervisory Body, or the methodological requirements specified by the host Party)

Applicability condition of methodological regulatory document or methodological requirement specified by the host Party	Compliance of the project with the applicability condition of methodological regulatory document or methodological requirement specified by the host Party
>>	>>
>>	>>
>>	>>
>>	>>

Justify the choice of the selected methodologies and, where applicable, the selected standardized baselines and the other methodological regulatory documents approved by the Supervisory Body, as well as the methodological requirements specified by host Party, by demonstrating that the proposed project meets all applicability conditions of these regulatory documents and the methodological requirements of the host Party, if applicable.

1. *Applicability conditions of the methodology, standardized baseline, other methodological regulatory document approved by the Supervisory Body, or the methodological requirements specified by the host Party:*
 - *Copy the exact text from the methodology, standardized baseline and other methodological regulatory document including methodological tool, and paste in the column 'Applicability condition of methodological regulatory document or methodological requirement specified by the host Party'.*
 - *Reproduce the exact text of the methodological requirements specified by the host Party in accordance with paragraph 27(a) of the RMPs, if applicable, in the column 'Applicability condition of methodological regulatory document or methodological requirement specified by the host Party'.*
 - *Describe the compliance of the proposed project with each applicability condition of the methodology, standardized baseline and other methodological regulatory document, as well as the respective methodological requirement and other conditions specified by the host Party, if applicable.*
2. *Tables:*
 - *Create one table for each methodology, methodological tool or standardized baseline.*
 - *Create a separate table for the methodological requirements specified by the host Party, if applicable.*

- Add as many rows as necessary to cover all applicability conditions of the methodology, standardized baseline and other methodological regulatory document, as well as the methodological requirements by the host Party.

B.3. Project boundary, sources, sinks and greenhouse gases

>>

Describe the project boundary of the proposed project, including the physical delineation, using GPS coordinates as appropriate.

B.3.1. Baseline emissions/removals

Source/reservoir/pool	GHG		Justification/Explanation
Source/reservoir/pool 01	CO ₂	☐ Included ☐ Not included	>>
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☐ Included ☐ Not included	>>
	-----	☐ Included ☐ Not included	>>
Source/reservoir/pool 02	CO ₂	☐ Included ☐ Not included	>>
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☐ Included ☐ Not included	>>
	-----	☐ Included ☐ Not included	>>
-----	CO ₂	☐ Included ☐ Not included	>>
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☐ Included ☐ Not included	>>
	-----	☐ Included ☐ Not included	>>

B.3.2. Project emissions/removals

Source/reservoir/pool	GHG		Justification/Explanation
Source/reservoir/pool 01	CO ₂	☐ Included ☐ Not included	>>
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☐ Included ☐ Not included	>>
	-----	☐ Included ☐ Not included	>>

Source/reservoir/pool 02	CO ₂	☐ Included ☐ Not included	>>
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☐ Included ☐ Not included	>>
	-----	☐ Included ☐ Not included	>>
-----	CO ₂	☐ Included ☐ Not included	>>
	CH ₄	☐ Included ☐ Not included	>>
	N ₂ O	☐ Included ☐ Not included	>>
	-----	☐ Included ☐ Not included	>>

Follow these instructions to fill out the tables in sections B.3.1 and B.3.2 above and provide additional documentation, when possible:

1. Tables for sources, sinks and GHGs:

- Indicate which sources, sinks and GHGs are included in the project boundary. This includes GHGs and sources under the control of the activity participants and that are significant and reasonably attributable to the project, in accordance with the applied methodologies and standardized baselines.
- Add rows as needed.

2. Explanation and justification:

- If the applied methodologies or standardized baselines allow choices regarding the inclusion of a source, sink or GHG in the project boundary, explain and justify the choice.

3. Flow diagram:

- In addition to the table, where possible, present a flow diagram of the project boundary based on the description provided in section A.5 above.
- The flow diagram should include all the facilities, systems and equipment, and flows of mass and energy described in section A.5 above.
- Specifically, indicate in the diagram the emission sources and GHGs included in the project boundary and the data and parameters to be monitored.

B.4. Establishment and description of the baseline scenario

B.4.1. Identification of the baseline scenario

>>

Follow these instructions to describe the baseline scenario for the proposed project:

1. Baseline scenario description:

- Describe the baseline scenario for the proposed project as per the requirements of the activity standard.
- Explain how the baseline is established in accordance with applicable provisions for the establishment and description of baseline scenarios in the applied methodologies, standardized baseline and the other applied methodological regulatory documents.
- Include the baseline approaches specified by the host Party in accordance with paragraph 27(a) of the RMPs, if applicable.

- *If an approved standardized baseline that standardizes the baseline scenario is used, describe the baseline scenario as per the applied standardized baseline.*
2. *Information on facilities, system and equipment:*
 - *Provide information on the facilities, systems and equipment to be operated under both the project and the baseline scenarios.*
 - *If the project involves the replacement of existing equipment, follow the guidance on determining the remaining lifetime of equipment in the applied methodology, if applicable, to estimate the point in time when the existing equipment would be replaced in the absence of the proposed project.*
 3. *Step-by-step procedure:*
 - *Describe how each step of the procedures in the applied methodologies, standardized baselines, and other applied methodological regulatory documents approved by the Supervisory Body as well as the baseline approaches specified by the host Party is applied.*
 - *Transparently document the outcome of each step.*
 - *Explain and justify key assumptions and rationales.*
 - *Provide and explain all data used to establish the baseline scenario, including variables, parameters, data sources, etc.*
 - *Provide all relevant documentation and/or references.*
 4. *Future emissions and suppressed demand:*
 - *If future anthropogenic emissions by sources are projected to rise above the current levels due to the specific circumstances of the host Party, the guidance on suppressed demand in the applied methodology may be followed.*

Note that this section and section B.5 below are complementary. Some of the steps undertaken in one section may overlap with the steps undertaken in the other section depending on the procedures used to establish the baseline scenario and demonstrate additionality. In such cases, replicate the same information in both sections and make a reference to the other section where the description is contained.

B.4.2. Identification of the BAU scenario or reference benchmark

>>

Follow these instructions for the identification of the BAU scenario or reference benchmark:

1. *BAU Scenario or reference benchmark description:*
 - *Describe the BAU scenario or reference benchmark for the proposed project and explain how it is established in accordance with the applied methodologies.*
2. *Step-by-step procedure:*
 - *Describe how each step of the procedures in the applied methodologies is applied for estimating the BAU/reference benchmark.*
 - *Transparently document the outcome of each step.*
 - *Explain and justify key assumptions and rationales.*
 - *Provide and explain all data used to estimate BAU/reference benchmark emissions, including variables, parameters, data sources, etc.*
 - *Provide all relevant documentation and/or references.*

B.5. Demonstration of additionality

Note that this section and section B.4 above are complementary. Some of the steps undertaken in one section may overlap with the steps undertaken in the other section depending on the procedures used to establish the baseline scenario and demonstrate additionality. In this case, replicate the same information in both sections and make a reference to the other section where the description is contained.

B.5.1. Regulatory analysis

>>

Demonstrate that the proposed project represents mitigation that exceeds any mitigation that is required by law or regulation unless the law or regulation refers to or formally integrates the mechanism as an instrument for implementation, taking into account a law or regulation applicable to the proposed project that may require a certain technological, performance or management action.

B.5.2. Avoidance of lock-in

>>

Demonstrate that proposed project avoids locking in levels of emissions, technologies or carbon-intensive practices incompatible with paragraph 33 of the RMPs, including through assessment of the scale, lifetime, and emissions intensity of the project.

B.5.3. Financial additionality or performance-based approach☐ Financial additionality☐ Performance-based approach

(Select one option)

>>

The additionality shall be demonstrated following the requirements of the activity standard, the applied methodology(ies) and/or standardized baseline and the provisions of the standard 'Application of the requirements of Chapter V.B (Methodologies) for the development and assessment of Article 6.4 mechanism methodologies' and other applied methodological regulatory documents approved by the Supervisory Body, as well as the additionality approaches specified by the host Party in accordance with paragraph 27(a) of the RMPs, if applicable.

1. *Financial additionality can be provided either by:*

- *Demonstration that the proposed project would not have occurred in the absence of the incentives from the Article 6.4 mechanism through an investment analysis (default approach); or*
- *Assessment of barriers to the implementation of the project, such as financial and institutional barriers, first of its kind, taking into account all relevant national policies, including legislation and current practices within the activity sector and geographic area including Indigenous Traditional Knowledge and customary laws. To demonstrate additionality for the proposed project, thorough barrier analysis describe the barriers, including the reasons why investment analysis is not sufficient and include evidence of the barriers and how the mechanism will help overcome the barriers.*
- *Complement the investment or barrier analysis with a common practice analysis as per section B5.4 below by demonstrating that the measure or technology is not already widespread through an analysis of the extent to which the proposed project type (e.g. technology or practice) has already diffused in the relevant sector and region.*
- *Ensure that the financial additionality is provided in accordance with the applied methodologies, standardized baseline, the standard 'Application of the requirements of Chapter V.B (Methodologies) for the development and assessment of Article 6.4 mechanism methodologies' and other applied methodological regulatory documents approved by the Supervisory Body, as well as the additionality approaches specified by the host Party in accordance with paragraph 27(a) of the RMPs, if applicable.*

2. *Performance-based approach may be used as an alternative to the financial additionality subject to applicability conditions:*

- *Demonstrate that:*
 - *The baseline approach(es) used are from paragraphs 36(i) or (ii) from the RMPs;*

- *The technologies or practices applied in the project outperform an ambitious threshold for emissions or emissions reductions, market penetration, or other unique characteristics, set at least at the level referred to in paragraph 36 (ii) of the RMPs.*
- *Ensure compliance with the requirements of the selected methodology and/or standardized baseline and the provisions of the standard 'Application of the requirements of Chapter V.B (Methodologies) for the development and assessment of Article 6.4 mechanism methodologies' and other applied methodological regulatory documents approved by the Supervisory Body, as well as the additionality approaches specified by the host Party in accordance with paragraph 27(a) of the RMPs, if applicable.*

Note that this section and section B.4 above are complementary. *Some of the steps undertaken in one section may overlap with the steps undertaken in the other section depending on the procedures used to establish the baseline scenario and demonstrate additionality. In this case, replicate the same information in both sections and make a reference to the other section where the description is contained.*

B.5.4. Common practice analysis

(This section is to be filled if the financial additionality or barrier analysis in the previous sub-section is followed for demonstrating additionality)

>>

Demonstrate that the measure or technology implemented/deployed by the project is not already widespread through an analysis of the extent to which the proposed project type (e.g. technology or practice) has already diffused in the relevant sector and region.

B.6. Addressing non-permanence and risk of reversals

B.6.1. Identification of risk of reversal

>>

Identify and justify the risks of reversals that may be attributed to the project as per the requirements of the selected methodology and/or standardized baseline, the provisions of the standard 'Requirements for activities involving removals under the Article 6.4 mechanism' and other applied methodological regulatory documents approved by the Supervisory Body.

The risks of reversals may be related to, inter alia:

1. *Activity finance and management, asset ownership, rising opportunity costs.*
2. *Regulatory uncertainty and social instability, political, governance and legal risks, acts of terrorism, crime, and war.*
3. *Natural disturbances and extreme events such as fires, pests, and droughts, hurricanes, floods, and landslides, earthquakes, volcanic eruptions, geological faults, and fractures.*
4. *Climate change impacts exacerbating any of the above risks.*

B.6.2. Reversals risk assessment

>>

Assess the risk of non-permanence of GHG emission reductions or net GHG removals, if applicable, that will be achieved by the proposed project over multiple NDC implementation period and comply with the requirements for reversal risk assessment of the selected methodology and/or standardized baseline, the provisions of the standard 'Requirements for activities involving removals under the Article 6.4 mechanism' and other applied methodological regulatory documents approved by the Supervisory Body.

Include in the reversal risk assessment a risk mitigation plan as per the section B.6.3 below, for a project involving removals, using the reversal risk assessment tool to identify, assess and mitigate reversal risks, and calculate an overall percentage-based risk rating.

B.6.3. Reversals risk mitigation plan

>>

If a risk of non-permanence is identified, develop and implement risk mitigation plan to address any risks identified through the reversal risk assessment following the relevant provisions of the standard 'Requirements for activities involving removals under the Article 6.4 mechanism' and other applied methodological regulatory documents approved by the Supervisory Body.

B.6.4. Remediation of reversals

>>

Describe the measures to be implemented to remediate reversals, including proactively mitigating reversal risks and avoiding reversals as per the requirements of the standard 'Requirements for activities involving removals under the Article 6.4 mechanism' and other applied methodological regulatory documents approved by the Supervisory Body.

B.7. Calculation of emission reductions or net removals**B.7.1. Calculation of BAU emissions/removals and baseline emissions/removals****B.7.1.1. Calculation of BAU emissions/removals**

>>

Follow these instructions to provide the calculation of annual and total BAU emissions/removals:

- *Provide the equations as per the applied methodology.*
- *Describe and justify the methodological choices, the options/scenarios selected and all steps to be undertaken for the calculations.*
- *Ensure that the assumptions and choices result in conservative estimates.*
- *If sampling will be conducted, develop a sampling plan and describe it in accordance with the standard for sampling and surveys for Article 6.4 mechanism activities to be developed by the Supervisory Body.*

If the proposed project contains more than one component, apply the equations and explanation of methodological choices for each component separately.

B.7.1.2. Calculation of baseline emissions/removals

>>

Follow these instructions to provide the ex post calculation of baseline emissions/removals for each year of the crediting period and the total amount for the entire crediting period:

1. Equations:

- *Provide the equations as per the applied methodology, methodological tool, standardized baseline, other applied methodological regulatory documents approved by the Supervisory Body as well as the baseline approaches specified by the host Party in accordance with paragraph 27(a) of the RMPs.*
- *Indicate which parameters will be fixed ex ante and which will be monitored ex post.*
- *If the equations to determine the ex ante and ex post baseline emissions/removals are different, indicate the equation for each approach.*

2. Methodological choices:

- *Describe and justify the methodological choices, the options/scenarios selected and all steps to be undertaken for the calculations.*

- *If the methodological choices to determine the ex ante and ex post baseline emissions/removals are different, indicate the methodological choice for each approach.*
3. *Conservative estimates:*
 - *Ensure that the assumptions and choices result in conservative estimates.*
 4. *Sampling plan (if applicable):*
 - *If sampling will be conducted, develop a sampling plan and describe it in accordance with the standard for sampling and surveys for Article 6.4 mechanism activities to be developed by the Supervisory Body.*

If the proposed project contains more than one component, apply the equations and explanation of methodological choices for each component separately.

B.7.1.3. Calculation of the annual difference between baseline and BAU emissions/removals

>>

Calculate the difference between annual and total BAU emissions/removals and baseline emissions/removals.

Confirm whether baseline emissions/removals are below BAU. This calculation shall remain fixed for the entire crediting period.

B.7.1.4. Factors or qualitative methods for downward adjustment of baseline

>>

Include factors or qualitative methods for downwards adjustment of baseline in accordance with the Standard: Application of the requirements of Chapter V.B(methodologies) for the development and assessment of Article 6.4 mechanism methodologies.

B.7.2. Calculation of project emissions/removals

>>

Follow these instructions to provide the ex post calculation of projects emissions/removals for each year of the crediting period:

1. *Equations:*
 - *Provide the equations as per the applied methodology, methodological tool, standardized baseline and other applied methodological regulatory documents.*
 - *Indicate which parameters will be fixed ex ante and which will be monitored ex post.*
 - *If the equations to determine the ex ante and ex post project emissions/removals are different, indicate the equation for each approach.*
2. *Methodological choices:*
 - *Describe and justify the methodological choices, the options/scenarios selected and all steps to be undertaken for the calculations.*
 - *If the methodological choices to determine the ex ante and ex post project emissions/removals are different, indicate the methodological choice for each approach.*
3. *Performance of project equipment (if applicable):*
 - *Describe approaches to determine the performance of project equipment as per the activity standard.*
4. *Norms, specifications, standards and procedures:*
 - *Identify and justify the use of norms, specifications, standards and test procedures.*
5. *Conservative estimates:*

- *Ensure that the assumptions and choices result in conservative estimates.*
6. *Sampling plan (if applicable):*
- *If sampling will be conducted, develop a sampling plan and describe it in accordance with the standard for sampling and surveys for Article 6.4 mechanism activities to be developed by the Supervisory Body.*

If the proposed project contains more than one component, apply the equations and explanation of methodological choices for each component separately.

B.7.3. Addressing of leakage

B.7.3.1. Sources of leakage

>>

Follow the instructions below:

- *List all potential sources of leakage that may reasonably be attributable to the project as per the requirements of the selected methodology and/or standardized baseline and the provisions of the standard 'Application of the requirements of Chapter V.B (Methodologies) for the development and assessment of Article 6.4 mechanism methodologies' and other applied methodological regulatory documents approved by the Supervisory Body, and describe how each source is being addressed.*
- *Take into account the relevant information from the DNA of the host Party on leakage, where applicable and as per the application of the tool developed by the Supervisory Body.*
- *If any source of leakage is excluded from the consideration, justify its exclusion.*

B.7.3.2. Description of how leakages is avoided, minimized or addressed

>>

Follow the instructions below:

- *Provide detailed information on how leakages are avoided and, where not possible, minimized, or addressed, using approaches 85 (a) to (e) of the standard 'Application of the requirements of Chapter V.B (Methodologies) for the development and assessment of Article 6.4 mechanism methodologies'.*

B.7.3.3. Calculation of leakage emissions

>>

Follow these instructions to provide the calculation of the ex post leakage emissions for each year of the crediting period:

1. *Equations:*
 - *Provide the equations as per the applied methodology, methodological tool, standardized baseline and other applied methodological regulatory documents.*
 - *Indicate which parameters will be fixed ex ante and which will be monitored ex post.*
 - *If the equations to determine the ex ante and ex post leakage emissions are different, indicate the equation for each approach.*
2. *Methodological choices:*
 - *Describe and justify the methodological choices, the options/scenarios selected and all steps to be undertaken for the calculations, including by indicating which parameters will be fixed ex ante and which will be monitored ex post.*
 - *If the methodological choices to determine the ex ante and ex post leakage emissions are different, indicate the methodological choice for each approach.*

3. *Conservative estimates:*

- *Ensure that the assumptions and choices result in conservative estimates.*

If the proposed project contains more than one component, apply the equations and explanation of methodological choices for each component separately.

B.7.4. Calculation of emission reductions or net removals

>>

Follow these instructions to provide the calculation of emission reductions/net removals:

Equations:

- *Provide the equations as per the applied methodology, methodological tool, standardized baseline and other applied methodological regulatory documents.*

Calculations:

- *Provide sample calculations for all formulae used to calculate emission reductions/net removals.*
- *Apply values, based on the equations provided in the methodologies, methodological tools or standardized baseline.*
- *Attach spreadsheets to the PDD to present full calculations for emission reductions/net removals (if applicable).*

B.7.5. Data and parameters fixed ex ante

(Copy this table for each piece of data or parameter)

Data/parameter	>> <i>Ensure that the name of the parameter matches with the information provided in the equations in sections B.7.1, B.7.2 or B.7.3 above.</i>
Description	>> <i>Ensure that the description of the parameter matches with the information provided in the equations in sections B.7.1, B.7.2 or B.7.3 above.</i>
Data unit	>> <i>Ensure that the unit of the parameter matches with the information provided in the equations in sections B.7.1, B.7.2 or B.7.3 above.</i>
Equations referred	>> <i>Indicate in which equation(s) the parameter is used.</i>
Purpose of data	☐ Baseline emissions / removals ☐ Project emissions / removals ☐ Leakage emissions <i>Tick the applicable box(es).</i>
Value(s) applied	>> • <i>Provide the values of the parameter that will be applied for the entire crediting period.</i> • <i>Where a time series of data is used, where several measurements are undertaken or where surveys have been conducted, provide detailed information in Appendix 5 below.</i> • <i>Use one table to report multiple values referring to the same data or parameter.</i> • <i>If necessary, include references to spreadsheets for additional data.</i>
Source of data	☐ Measured ☐ Other sources <i>Tick the applicable box. 'Other sources' include official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature, etc.</i>
Choice of data or measurement methods and procedures	>> <i>If the parameter is 'Measured', explain the measurement methods and procedures (e.g. which standards have been used), indicate the responsible</i>

	<i>person/entity that undertook the measurement, the date of the measurement and the measurement results.</i> <i>If the parameter is from 'Other sources', indicate the source of the parameter and justify the choice of the data.</i>
Additional comments	>>

To compile information on the data and parameters that are not monitored during the crediting period but are determined before the registration of the project and remain fixed throughout the crediting period, use the instructions below to fill the table:

- Include data and parameters that are determined before the registration of the project and remain fixed throughout the crediting period.*
- Do not include parameters that are calculated with equations provided in the applied methodologies, methodological tools or standardized baselines.*

B.7.6. Summary of ex ante estimates of emission reductions/net removals

Year	Baseline emissions/removals (tCO ₂ e)	Project emissions/removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Emission reductions/Net removals (tCO ₂ e)
Year 1				
Year 2				
Year 3				
Year ...				
Total				
Total number of years in the crediting period				
Annual average over the crediting period				

Use the estimates determined in sections B.7.1, B.7.2 and B.7.3 above to fill the table. Add rows as needed to reflect the number of years of the crediting period to which the PDD is applicable.

B.8. Monitoring Plan

B.8.1. Data and parameters to be monitored

(Copy this table for each piece of data or parameter)

Include a compilation of information on the data and parameters that are not monitored during the crediting period of the project but are determined before its registration and remain fixed throughout the crediting period. Use the instructions below to fill the table.

Data/parameter	>> <i>Ensure that the name of the parameter matches with the information provided in the equations in sections B.7.1, B.7.2 or B.7.3 above.</i>
Description	>> <i>Ensure that the description of the parameter matches with the information provided in the equations in sections B.7.1, B.7.2 or B.7.3 above.</i>
Data unit	>> <i>Ensure that the unit of the parameter matches with the information provided in the equations in sections B.7.1, B.7.2 or B.7.3 above.</i>
Equations referred	>> <i>Indicate in which equation(s) the parameter is used.</i>

Purpose of data	☐ Baseline emissions / removals ☐ Project emissions / removals ☐ Leakage emissions <i>Tick the applicable box(es).</i>				
Measurement methods and procedures	>> <i>Explain whether the approach to measuring the parameter, e.g. directly, via sampling, indirectly, interview with users, manual counting.</i> <i>Indicate which accepted industry standards, or national or international standards, were applied, if relevant.</i>				
Entity/person responsible for the measurement	>> <i>Explain who has the responsibility to ensure the monitoring of the parameter, e.g. the plant operator, the electric utility, an external laboratory, etc.</i>				
Measuring instrument(s)	Type of instrument	>> <i>Indicate which type of instrument will be used for the monitoring (e.g. electricity-meter, weight-scale, gas analyser, etc) and whether it is certified to national or IEC standards.</i>			
	Accuracy class	>> <i>Indicate the exact or the minimum accuracy class of the measuring instrument.</i>			
	Calibration requirements	>> 1. Calibration procedures: • <i>Indicate the calibration procedures to be applied.</i> • <i>Specify the responsible person/entity who/that will perform the calibration and whether the person/entity is accredited.</i> 2. Calibration frequency: • <i>If the applied methodologies, applied standardized baselines, other applied methodological regulatory documents or the Supervisory Body's guidance do not specify any requirements for calibration frequency for measuring equipment, follow these steps:</i> ○ <i>Ensure that the equipment is calibrated in accordance with the local/national standards or the manufacturer's specifications.</i> ○ <i>If local/national standards or the manufacturer's specifications are not available, international standards may be used.</i>			
	Location	>> <i>Indicate the location of the measuring instrument, e.g. substation, main gas line, entrance of the anaerobic digester, etc.</i>			
Measurement intervals	>> • <i>Specify the measurement interval of the parameter.</i> • <i>If the methodology or methodological tool does not specify the measurement interval, and if the parameter continuously impacts the GHG emission reductions or net GHG removals (e.g. quantity of fuel inputs, amount of heat or electricity produced, gas captured), measure continuously and record at appropriate intervals.</i>				
QA/QC procedures	>> • <i>Explain the QA/QC procedures employed, e.g. any cross-checking with data from other sources if the measured data has high levels of uncertainty.</i> • <i>Review the data collected, measures to prevent loss of data (backups), measures employed in case of erroneous reading, etc.</i>				
Additional comment	>> <i>Provide any additional comment to the monitoring of the parameter that is not covered above.</i>				

B.8.2. Sampling plan

>>

Develop and provide a description of the sampling plan in accordance with the standard for sampling and surveys for Article 6.4 mechanism activities to be developed by the Supervisory Body.

B.8.3. Monitoring management system

>>

Provide a description of:

- The operational and management structure to be put in place to implement the monitoring plan.*
- Provisions to ensure that data monitored and required for verification of GHG emission reductions or net GHG removals and issuance of A6.4ERs are kept and archived for at least two years after the end of the final crediting period or the last issuance of A6.4ERs, whichever occurs later.*

B.8.4. Post-crediting period monitoring plan

>>

For projects involving removals, describe the monitoring after the end of the last active crediting period of the project to assess whether any reversals have occurred as per the requirements of the selected methodology and/or standardized baseline, the provisions of the standard 'Requirements for activities involving removals under the Article 6.4 mechanism' and other applied methodological regulatory documents approved by the Supervisory Body.

SECTION C. Start date, crediting period type and duration**C.1. Project start date**

>>

Provide the start date of the project, in the format DD/MM/YYYY, based on the definition of 'start date of the proposed A6.4 project' in the activity standard and indicate the evidence.

C.2. Expected operational lifetime of the project

>>

Indicate and justify the expected operational lifetime of the project.

C.3. Project crediting period**C.3.1. Type of crediting period approved by the host Party**
☐ Renewable

☐ Fixed

Tick the applicable box.

C.3.2. Start date of the crediting period

>>

Indicate the start date of the crediting period in the format DD/MM/YYYY as approved by the host Party.

C.3.3. Duration of the crediting period

>>

*Indicate the duration of the crediting period as approved by the host Party.***SECTION D. Environmental impacts, social impacts and sustainable development impacts****D.1. Environmental and social impacts and sustainable development impacts as per the Article 6.4 sustainable development tool****D.1.1. Summary of the environmental and social risk assessment and applicable mitigation measures**

>>

- *Provide a summary of the assessment of the environmental and social impacts in accordance with the Article 6.4 sustainable development tool. Provide the respective Article 6.4 sustainable development tool forms in Appendixes 6 and 7.*
- *Reflect the results of the assessment of the environmental and social safeguards and outcomes of the risk assessment including identification, evaluation, and avoidance of environmental and/or social risks in the A6.4 Environmental and Social Safeguards Risk Assessment Form and the relevant mitigation and minimization measures in the A6.4 Environmental and social management plan form. Attach the completed forms as Appendixes 6 and 7.*

D.1.2. Summary of the sustainable development impacts assessment

>>

- *Provide a summary of the sustainable development impacts in accordance with the Article 6.4 sustainable development tool. Provide the respective Article 6.4 sustainable development tool form in Appendix 8.*
- *Reflect the evaluation of sustainable development impacts in the A6.4 Sustainable Development Impact Form. Attach the completed form as Appendix 8.*

D.1.3. Monitoring plan of activity-level environmental and social indicators and activity-level SD indicators

>>

Provide the description of the monitoring plan of the social and environmental impacts and sustainable development impacts, and planned mitigation measures of negative impacts, if any, in accordance with the Article 6.4 sustainable development tool. Provide the respective Article 6.4 sustainable development tool forms in Appendixes 6, 7 and 8:

- *Reflect the set of minimization and mitigation measures and monitoring of the environmental social impacts to be implemented in the A6.4 Environmental and Social Management Plan Form. Attach the completed form as Appendix 7.*
- *Reflect the measuring, monitoring and reporting methodology of the sustainable development impacts in the A6.4 Sustainable Development Impact Form. Attach the completed form as Appendix 8.*

D.2. Environmental and social impacts as per the host Party regulations**D.2.1. Summary of host Party requirements**

>>

Describe the host Party requirements for environmental impact assessment and/or social impact assessment, if any.

D.2.2. Summary and conclusion of the assessment

>>

Provide a summary and conclusions of the environmental impact assessment and/or social impact assessment required by the host Party, if any.

SECTION E. Local stakeholder consultation**E.1. Scope of the consultation**

>>

Explain the scope of the consultation, as a minimum, the potential direct positive and negative impacts that the proposed project may have.

E.2. Stakeholders invited

>>

Follow the instructions below:

- 1. Indicate which stakeholders were invited to participate in the stakeholder consultation.*
- 2. Describe their relationship with the proposed project.*
- 3. Explain how the invitations were communicated.*
- 4. Ensure that, at a minimum, the following are invited:*
 - Representatives of local stakeholders directly impacted by the proposed project, including local communities and indigenous peoples as applicable; and*
 - Representatives of local authorities relevant to the project.*

E.3. Modalities for the consultation

>>

Describe the steps/actions taken to invite comments, taking into account local and national circumstances. Indicate how the consultation was conducted, including the date of the consultation and taking into account means that are appropriate for the local and national circumstances, and how comments were received (e.g. in writing, orally, etc).

E.4. Summary of comments received

>>

Provide a summary report of the comments received.

E.5. Consideration of comments received

>>

Describe how comments received were taken into account. If comments were not incorporated, provide a proper justification.

SECTION F. Confirmation of avoidance of double or revived registration

A 6.4 mechanism	☐ The proposed A6.4 project has not been already registered as an A6.4 project. ☐ The proposed A6.4 project has not been already included as a component project (CP) in a registered Article 6.4 mechanism programme of activities (A6.4 PoA). ☐ The proposed A6.4 project has not been previously deregistered from the Article 6.4 mechanism.
	<i>Tick all the three boxes above as a confirmation of compliance with mandatory requirements.</i> ☐ The proposed A6.4 project was a CP in a registered A6.4 PoA but has been previously excluded. <i>Tick the box if applicable.</i> <i>If this box is ticked, describe:</i> <i>Whether the project was excluded from the A6.4 PoA voluntarily or due to erroneous inclusion.</i> <i>The UNFCCC registration number of the A6.4 PoA.</i> <i>The CP number and the inclusion date; and</i> <i>The crediting period type (i.e. renewable or fixed) and the end date of the crediting period valid for the CP at the time of the exclusion.</i>
Other	☐ The proposed A6.4 project is not currently registered or being pursued for registration, or covered by a programme, under any other international, regional, national, subnational or sector-wide GHG mitigation crediting scheme. ☐ The proposed A6.4 project was previously registered under or covered by a programme under any other international, regional, national, or subnational or sector-wide GHG mitigation crediting scheme but deregistered or excluded from the other crediting scheme before fully consuming the crediting period under the other crediting scheme. ☐ The proposed A6.4 project is currently registered or covered by other international, regional, national, subnational or sector-wide GHG mitigation crediting scheme. <i>Tick only one applicable box.</i> <i>If the second box is ticked, obtain a confirmation of the other crediting scheme of the effective date of deregistration or exclusion from the other crediting scheme and remaining crediting period under the other crediting scheme at the time of deregistration or exclusion.</i> <i>If the third box is ticked, obtain a confirmation of the other crediting scheme of the effective date of the registration or coverage, the start and end dates of the crediting period, and the monitoring periods for which credits have been issued under the other crediting scheme.</i>

Appendix 1. Contact information of activity participants

(Copy this table for each activity participant)

Organization name	>>
Country	Choose an item.
Address	>>
Telephone	>>
Mobile	>>
E-mail	>>
Website	>>
Contact person	>>

Appendix 2. Applicability of methodologies and standardized baselines

>>

Provide any further background information on the applicability of the selected methodologies and, where applicable, the selected standardized baselines and the other methodological regulatory documents, and the methodological requirements specified by the host Party in accordance with paragraph 27(a) of the RMPs, if applicable.

Appendix 3. Further background information on ex ante calculation of emission reductions or net removals

>>

Provide any further background information on the ex ante calculation of emission reductions or net removals. This may include data, measurement results, data sources, etc.

Appendix 4. Summary of post-registration changes

>>

Describe the post-registration changes being proposed in this version of the PDD.

If applicable, provide a history of all post-registration changes to the project that have been approved by the Supervisory Body after its registration.

For all post-registration changes, include the following:

- Reasons for the changes.*
- Impacts of the changes on the relevant requirements in accordance with the activity standard, and*
- Any additional information relating to the changes.*

Appendix 5. Further background information on monitoring plan

>>

Provide any further background information used in the development of the monitoring plan. This may include tables with time series data, additional documentation of measurement equipment, procedures, etc.

Appendix 6. A6.4 Environmental and Social Safeguards Risk Assessment Form (A6.4-FORM-AC-015)

>>

Include the 'A6.4 Environmental and Social Safeguards Risk Assessment Form' as per the Article 6.4 sustainable development tool.

Appendix 7. A6.4 Environmental and Social Management Plan Form (A6.4-FORM-AC-016)

>>

Include the 'A6.4 Environmental and Social Management Plan Form' as per the Article 6.4 sustainable development tool.

Appendix 8. A6.4 Sustainable Development Impact Form (A6.4-FORM-AC-017)

>>

Include the 'A6.4 Sustainable Development Impact Form' as per the Article 6.4 sustainable development tool.

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Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
02.0	10 November 2025	Final version for submission to the A6.4 mechanism Secretariat.
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