**Project Design**

**Document**

**Template**

Version 1.1
August 2025



**Project Design Document Template**

**Published September 2024 – Version 1.0**

**Revised August 2025 – Version 1.1**

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## Introduction

The Project Design Document (PDD) Template guides Project Proponents through the types of information needed to: 1) assess the eligibility of the project for the Global Heat Reduction (GHR) Registry (the “Registry”), 2) support initial project validation, and 3) support initial and ongoing project verification.

The completed Template is submitted by the Project Proponent, ideally in conjunction with a GHR-approved validation and verification body (VVB), to the Registry for approval. This Template is intended for use at the time of initial engagement with the Registry, and for use when updated to reflect actual conditions after the Project is validated and implemented.

If aspects of the Project Proponent’s PDD developed from this Template are found during the validation process to need modification, the document must be updated accordingly before the Project is approved for registration in the Registry.

As described in the Registry Standard (Section 5.3.3), the PDD will be made available for public review. Please identify any commercially sensitive information provided herein that you would prefer to redact from the document prior to publishing for public comment, pending review by the Registry. At a minimum, information related to the determination of the project and baseline scenario, demonstration of additionality, anticipated outcomes, estimation of reductions/removals, identification of risks, description of potential co-benefits and trade-offs, and input from stakeholders shall not be considered commercially sensitive and shall be provided in the public versions of the project description.

## Project Proponent and Other Significant Parties

A Project Proponent is an individual or entity who develops and has responsibility for implementation of a project, from initial planning through execution. The Project Proponent is often, but not always, the Project Owner. In addition, a particular project may involve engagement of other significant parties.

*Please provide the following information:*

**Project Proponent**

* Project Proponent Entity Name;
* Project Proponent Address (Street number, City, State/Province, Country, Postal Code);
* Project Proponent Primary Contact Name and Title;
* Project Proponent Primary Contact Email;
* Project Proponent Primary Contact Phone;
* Project Proponent Roles/Responsibilities; and
* Project Proponent Short Description: Type of Entity, Relevant Qualifications, Compliance History, Size
* Project Proponent GHR Registry Account Number:

**Project Implementation Partner(s) (as applicable for each partner)**

* Project Implementation Partner Name;
* Project Implementation Partner Address (Street number, City, State/Province, Country, Postal Code);
* Project Implementation Partner Contact Name and Title;
* Project Implementation Partner Contact Email;
* Project Implementation Partner Contact Phone; and
* Project Implementation Partner Roles/Responsibilities.

**Other Significant Parties Involved (e.g., Regulator, Agency, Funder, Technical Consultant, Stakeholder groups)**

* Additional Party Name (if applicable);
* Additional Party Address (Street number, City, State/Province, Country, Postal Code);
* Additional Party Contact Name and Title;
* Additional Party Contact Email;
* Additional Party Contact Phone; and
* Additional Party Roles/Responsibilities.

## Project Identification

The Project Proponent supplies information that makes it possible to uniquely identify the Project or Projects to be included.

*Please provide the following Project Identification information.* If there are multiple projects being proposed by one Project Proponent for a single credit issuance, complete this information for each project in the group.

* Project title;
* Project site location (Street number, City, State/Province, Country, Postal Code);
* Project site latitude/longitude coordinates and maps;
* Project site identifier (if different than location);
* Geographical and physical information supporting the unique identification and delineation of the project boundaries (if different than above);
* Applicable project type and Methodology; and
* Project boundaries – e.g., site of activity, facility, processes, equipment, supply chains – for calculation of climate benefit, co-benefits and trade-offs, consistent with the applicable Methodology.

## Project Description

*Please provide the following information*:

**A. Project Summary**

* Provide a short project overview, including key technologies, products, services, and expected level of activity (up to 200 words).
* Describe the project’s goals and objectives.

**B. Baseline and Project Scenario Descriptions**

* Describe the Baseline Scenario (i.e., the reference case that best represents the current or original conditions that exist in the absence of a Project).
* Describe the Project Scenario, including key aspects that differentiate it from the Baseline Scenario.

Project and baseline scenario descriptions should include a technical description of how the project is implemented, including diagrams and tables, and project implementation steps, timeline, and duration.

Examples of information to be provided include:

* + the intended or demonstrated outputs of the production processes, if applicable, including quantity, dimensions, price, and quality;
	+ the feedstock (inputs) of the production processes, if applicable, including quantity**,** dimensions, price, and quality;
	+ electricity, thermal energy, and fuels required for production, if applicable; and

inputs and outputs related to upstream and downstream operations identified in the relevant Methodology

**C. Project Timeframe**

* Expected date of project initiation;
* Expected date of project termination, if known;
* Expected crediting period, and related assumptions; and
* The time required to scale up the project.

## Anticipated Project Outcomes

*Please provide the following information*:

**A. Anticipated Climate Benefit**

* Activities during each step of the project cycle that are expected to lead to climate benefits (e.g., reduced tonnes of GHG or SLCF emissions);
* Key assumptions and variables that could affect the expected performance of the Project;
* Projected levels of reduction or removal of emissions and other positive “climate forcers” (see Annex A) that could benefit the climate;
* Justification for any RF sources referenced in the relevant Methodology that are not likely to be included or that will be specifically excluded from regular monitoring; and
* Key assumptions and variables that could affect the expected performance of the Project.

**B.**  **Social and Environmental Impact and Anticipated Co-Benefits and Trade-offs**

* Expected co-benefits and trade-offs from project activities compared to Baseline Scenario, methods to minimize negative social and environmental impact (see further discussion, Registry Standard, Section 5.9 and applicable project Methodology), inclusive of safeguards for labor, gender, human rights, and indigenous people;
* Confirmation that the project will not force physical or economic displacement;
* Information on how the mitigation activity is consistent with the SDG objectives of the host country, where the SDG objectives are relevant, and such is feasible; and
* Any third-party certification already completed or planned under an internationally recognized scheme that provides documentation of conformance to specific UN SDG targets.

**C. Benefit Sharing (Optional)**

Where applicable, provide information on how benefit-sharing arrangements that are appropriate to the context and consistent with applicable national rules and regulations will be designed and implemented through a benefit-sharing plan. Confirm that the draft and final benefit-sharing plan have been shared with the affected stakeholders in a form, manner, and language understandable to them as well as the public, subject to applicable legal restrictions.

## Application of Principles

The Project Proponent applies the following principles during the project design phase:

1. *Relevance:* RF-related information, data, and methodologies are applicable to the Project Proponent and the project scope of assessment. All relevant information that may affect the accounting and quantification of climate forcers and RF reductions are included.
2. *Completeness:* Known information and data pertaining to RF sources and reduction and relevant information to demonstrate conformance to criteria and procedures are included and shall be available at validation and verification.
3. *Consistency:* Information supports meaningful comparisons, and consistent methods are used. Project information present is consistent throughout project documents.
4. *Accuracy:* Bias and uncertainties are considered and minimized to the degree practical. Methodologies include methods for estimating uncertainty relevant to the baseline and project scenario. Project documents accurately reflect information about the project.
5. *Transparency:* Sufficient information is disclosed to support decisions by intended users with reasonable confidence. Information is provided for any relevant assumptions, and appropriate references are provided for accounting and calculation methods and data sources used. Any changes to the data, boundary, methods, or any other relevant factors are documented.
6. *Conservativeness:* Conservative assumptions, values and procedures are applied to avoid overstating a reduction, removal or co-benefit from the project. Methodology quantification methods are designed to ensure that RF reductions are not overestimated, particularly when estimation methods are relied upon in lieu of direct measurement. In terms of credit issuance, RF reduction claims shall be rounded down to the nearest whole number; and calculated buffer pool contributions shall be rounded up to the nearest whole number.
7. *Significance****.*** The inclusion of climate forcers in the quantification is justified based on their relative contribution to the total footprint.

*Please describe any limitations in the application of these principles during the project design phase.*

## Additionality, Risk of Secondary Effects, Risk of Non-Permanence

Ensuring that projects meet the criteria for additionality and adequately assessing the risks of secondary effects and non-permanence are fundamental to the Registry and the credits it issues. Please provide the following information to demonstrate that a project is additional, and describe how the associated risks of secondary effects and non-permanence are assessed, consistent with the applicable GHR Methodology, and Section 5.6.1 of the Registry Standard.

1. **Proving Additionality**
* **Regulatory Analysis** - Confirm that the project activities are not legally mandated under existing regulations.
* **Common Practice Assessment** – Describe common practice for similar activities in this region that is occurring without carbon credit incentives, including technologies, materials, and processes used, and describe how that this project does not represent common practice, with supporting evidence.
* **Financial Analysis** - Provide a financial analysis showing that the project is not economically viable without the expected revenues from carbon credits. (Financial analyses must be made available to the VVB, but may be redacted in public documentation to protect business confidentiality.)

Please include supporting documentation to substantiate the additionality claim.

1. **Risk of Secondary Effects**
* **Identify Potential Sources of Secondary Effects** – Consider the project’s supply chain, upstream and downstream activities, and potential shifts in market demand or behavior that could lead to increased emissions (i.e., leakage) outside of the Project boundaries. Where possible, use quantitative methods to estimate the potential magnitude of such secondary effects and the impact on the overall climate benefit of the project.
* **Mitigation Strategies** – Describe strategies to be implemented, or already implemented, to minimize secondary effects, such as improving efficiency, sourcing alternative materials, or influencing market behavior.
1. **Risk of Non-Permanence**
* **Project Longevity** –Describe the expected lifespan of the project and its ability to deliver sustained climate benefits, considering factors such as technological durability, market conditions, and potential regulatory changes.
* **Physical Reversal Risks** – Describe the potential risks of physical reversals, such as natural disasters (e.g., wildfires, floods, storms), technical failures, or other events that could reverse the project’s carbon sequestration or emission reduction gains.
* **Buffer Pool Contributions** – Estimate the appropriate contribution to a buffer pool, as required by the Registry, to account for the risk of non-permanence. This contribution should be calculated conservatively and over a 100-year timespan, to ensure that the project’s climate benefits are not overstated.
* **Risk Mitigation** – Describe strategies for mitigating non-permanence risks, such as regular maintenance, contingency funding, adaptive management strategies, emergency response strategies, and insurance or financial reserves to cover potential losses.

## Project Rejection and Credit Invalidation History

**A. Prior project rejection**

*Please provide the following information, if applicable:*

* List any other programs to which the Project Proponent has applied for registration, was rejected, and the reason(s) for the rejection. Such information shall not be considered commercially sensitive information.
* Provide the formal rejection document(s), including any additional explanation, to the Registry and the VVB conducting the validation.

Failure to fully disclose past incidents of project rejection will result in automatic rejection of the project from the Registry.

**B. Credit invalidation history**

*Please provide the following information, if applicable:*

* List any incidents of credit invalidation associated with the Project Proponent, project implementation partners, or any other significant parties involved in the current project. Provide the name, location, and registry details of the project(s) where credit invalidation occurred, the nature of the invalidation, involved parties, and corrective actions.
* List any incidents of credit invalidation associated with the proposed project activities within the proposed project boundaries. Include a historical overview of any previous projects within the same geographical boundaries involving similar activities that have experienced credit invalidation.

Failure to fully disclose past incidents of credit invalidation will result in automatic rejection of the project from the Registry.

## Stakeholder Consultation

Projects may have a substantial impact on local stakeholders that are not party to the Project. Please reference Registry Standard section 5.10.

*Please describe:*

* Key local stakeholder groups;
* Potential impacts of a substantive nature that could affect local stakeholders;
* The approach to obtaining stakeholder comments, including interview methods, sampling techniques, languages, communication tools and statistical approaches;
* Relevant outcomes from stakeholder consultations and where they are shared publicly; and
* Mechanisms and frequency for meaningful on-going two-way communication.

## Regulatory Compliance

Projects are required to meet the local and national regulations to conduct operations.

Please provide documentation of the following, as applicable:

* Site authority (e.g., evidence of deed of ownership, lease or rent);
* Proof of registration of the company to operate in the sector of the project activities;
* Conformance with worker and site safety regulations and a description of the safety precautions;
* Conformance with regulations pertaining to labor engaged in the Project, including applicable legal requirements for working conditions, wages, benefits, and worker safety;
* Conformance with pollutant emission regulations;
* Conformance with water quality regulations;
* Conformance with waste management regulations;
* Conformance with permits to undertake construction or modifications to site structures and activities, as well as any land alterations; and
* Documentation and main conclusions related to an environmental impact assessment, if required by local regulations.

Projects are required to meet the local and national regulations to conduct operations.

##  Project Monitoring Plan

Please provide a detailed Project Monitoring Plan that describes the system for compiling data and information needed to monitor, quantify, and report reductions/removals relevant for the project and baseline scenario, and including any secondary effects observed.

The Project Monitoring Plan must be consistent with the requirements Registry Standard, and the relevant Methodology monitoring requirements, which include:

* The intended frequency of monitoring and reporting;
* A description of protocols for measurement, monitoring, reporting, and verification of the project's outcomes;
* Key indicators that will be monitored, including what is measured, the frequency of measurement, and the methods used;
* The roles and responsibilities of personnel involved in monitoring, including information on the roles of VVBs and any third-party auditors;
* A plan for managing data, including data collection, storage, analysis, and reporting;
* The process for periodic review and improvement of the monitoring plan; and
* Details that confirm that best practices are being utilized. In cases where such methods and procedures are not known or accessible, the project will establish, document, and apply standard operating procedures (SOPs) and quality control/quality assurance (QA/QC) processes for inventory tasks, including field data gathering and data management. It is advisable to use or modify SOPs obtained from published manuals.

The monitoring plan must facilitate the gathering of all pertinent data needed to:

* Confirm the fulfillment of the eligibility requirements;
* Confirm the emissions associated with the project; and
* Confirm emissions from secondary effects.

Where relevant, include diagrams to illustrate the GHG data collection and management system.

## Quality Assurance and Quality Control Procedures

Quality assurance and quality control (QA/QC) procedures are required to identify, prevent, and correct errors or inconsistencies throughout the life-cycle of the project.

*Please provide the following information:*

* **QA/QC Objectives** - Describe the overarching objectives of the QA/QC procedures, including ensuring data integrity, minimizing errors, and maintaining compliance with the Registry standard and methodologies.
* **Roles and Responsibilities** - List the key personnel responsible for implementing QA/QC procedures, including their roles, qualifications, and specific responsibilities.
* **Data Management and Validation** - Explain the methods used to validate data accuracy at each stage of the project, from initial data collection to final reporting. This should include procedures for data verification, cross-referencing data sources, and resolving discrepancies.
* **Documentation and Record Keeping** - Provide a description of the documentation processes used to ensure that all relevant data, reports, and QA/QC activities are recorded and archived appropriately. Include details on how records will be maintained and made available for auditing and verification purposes.
* **Error Detection and Correction** - Describe the processes in place for identifying and correcting errors or inconsistencies in project data or activities. (e.g., routine audits, data reconciliation techniques, and protocols for updating project documentation).
* **QA/QC Review and Continuous Improvement** - Outline the process for periodic review of QA/QC procedures. Detail the frequency of these reviews and the criteria for making updates.
* **Compliance with GHR Standards** - Confirm that the QA/QC procedures align with the GHR Registry Standard, and the applicable Methodology.

## Annex A: Climate Forcers

Climate forcers are any external driver of climate change that causes a positive or negative change in RF (e.g., an emission, substance, process, activity or change in state).

**Positive Climate forcers**

* Carbon dioxide (CO2)
* Nitrous Oxide (N2O)
* Chlorofluorocarbons (CFCs)
* Hydrofluorocarbons (HFCs)
* Hydrochlorofluorocarbons (HCFCs)
* Perfluorocarbons (PFCs)
* Methane (CH4)
* NOx – tropospheric ozone
* Black Carbon
* Brown Carbon
* Mineral Dust Aerosols
* Decrease in albedo

**Negative Climate Forcers**

* Mineral dust aerosols
* Nitrate aerosols
* Organic carbon
* Sulfate aerosols
* Sea salt aerosols
* Increase in albedo
* NOx – methane
* NOx – sulfates
* NOx – nitrate