

GCOM Guidelines

SAUDI ARABIA'S GREENHOUSE GAS CREDITING & OFFSETTING MECHANISM (GCOM)

Requirements and specifications for the quantification, monitoring, reporting, verification, and registration of project-based GHG emissions reductions and removals in the Kingdom of Saudi Arabia

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1 Executive Summary

Saudi Arabia's Greenhouse Gas Crediting and Offsetting Mechanism (GCOM) is an inclusive mechanism aiming to incentivize the deployment of emission reduction and removal activities at scale to support and enable climate-related national strategies, policies, and programs. It is meant to increase cooperation among national entities seeking to fulfil their climate ambitions by helping to mobilize finance in all sectors for a variety of projects and activities.

The ultimate objective of the GCOM is to drive progress towards a path to net zero emissions by allowing interested companies and entities to offset their greenhouse gas emissions by purchasing credits and/or certificates from project proponents that voluntarily reduce or remove greenhouse gas emissions. The Mechanism is also meant to promote high-quality credits and/or certificates by providing guidance, transparent infrastructure, and best practices, including for project-level accounting.

Key features of GCOM are:

- Voluntary project-based participation.
- Scope covers GHG and non-GHG metrics across all sectors.
- Eligible Participants include:
 - All entities from all sectors can participate.
 - Subsidiaries of international companies active in the Kingdom also are entitled to participate.
- Open to a variety of methodologies; DNA prepared and DNA approved.
- Robust additionality requirements.

The Mechanism is meant to adapt to future changes and developments at both the national and international level, including alignment with Article 6 of the Paris Agreement.

The Saudi Designated National Authority (DNA) will be acting as the regulator of GCOM.

2 Purpose of the Document

This document outlines the processes, requirements, and documentation required to participate in Saudi Arabia's Greenhouse Gas Crediting and Offsetting Mechanism. The purpose of this guideline is to support stakeholders in the implementation of GCOM projects.

This document will be updated regularly to reflect any developments.

3 Introduction to GCOM

Saudi Arabia's Greenhouse Gas Crediting and Offsetting Mechanism (GCOM) aims to support the achievement of Saudi Arabia's climate ambitions by advancing national efforts to reduce and remove greenhouse gas (GHG) emissions while maintaining economic growth and national diversification plans. It also aims to incentivize the deployment of emission reduction and removal activities at scale to support and enable climate-related national strategies, policies, and programs.

The Mechanism considers, in its core, the inclusivity and integration of clean hydrocarbon technologies to support the Circular Carbon Economy (CCE) approach, as well as to create the financial incentives to scale up such technologies. The Mechanism encourages sustainable development projects as defined by and measured against the United Nations Sustainable Development Goals (UNSDGs).

The Mechanism is meant to adapt to future changes and developments at both the national and international level, including alignment with Article 6 of the Paris Agreement.

3.1 Purpose and Objective of GCOM

The purpose of establishing the GCOM in the Kingdom is to increase cooperation among national entities seeking to fulfil their climate ambitions by helping to mobilize finance in all sectors for a variety of projects and activities. It aims to drive positive social, environmental and economic impacts beyond emission reductions or removals. The efforts undertaken in GCOM are meant to contribute to national emission reduction and/or removal levels, aligned with Saudi's ambitious climate goals, in the most cost-effective manner.

The ultimate objective of the GCOM is to drive progress towards a path to net zero emissions by allowing interested companies and entities to offset their greenhouse gas emissions by purchasing credits and/or certificates from project proponents that voluntarily reduce or remove greenhouse gas emissions. The Mechanism is also meant to promote high-quality credits and/or certificates by providing guidance, transparent infrastructure, and best practices, including for project-level accounting.

3.1.1 Vision 2030 and Saudi's Ambitious Climate Goals

Saudi Arabia's Vision 2030 is an ambitious roadmap that expresses the Kingdom's long-term goals and expectations, while harnessing the country's strengths and capabilities. With sustainability at its heart, Vision 2030 inspires creativity and responsibility when addressing today's energy and climate challenges.

The Kingdom of Saudi Arabia has ambitious climate goals and initiatives, including:

- **Nationally Determined Contribution (NDC)** - Saudi Arabia's most recent NDC embodies efforts to implement actions, projects, and plans that aim to reduce and avoid GHG emissions by 278 million tons of CO₂eq annually by 2030, with the year 2019 designated as the base year for this NDC. The achievement of this ambitious NDC relies on many tools, including dynamic baselines and the Circular Carbon Economy (CCE).
- **Global Methane Pledge** – Saudi Arabia joined the Global Methane Pledge as part of its commitment to reduce global methane emissions by 30% by 2030 relative to 2020 levels.
- **Saudi Net Zero 2060** - Saudi Arabia announced its intention to reach Net Zero emissions by 2060, in a manner that preserves the Kingdom's leading role in enhancing the security and stability of global energy markets. The Kingdom aims to progress towards Net Zero through;
 - **Circular Carbon Economy (CCE)** - KSA developed and adopted the Circular Carbon Economy (CCE) framework using the four Rs; Reduce, Reuse, Recycle, and Remove greenhouse gas emissions from atmosphere
 - **National Strategies and Initiatives** - Saudi Green Initiative (SGI), Middle East Green Initiative (MGI)

3.1.2 Article 6 of the Paris Agreement

The GCOM is aligned with Article 6 and the Kingdom strategically encourages implementing GCOM project activities in a manner that is in line with the principles of Article 6 of the Paris Agreement. Article 6 allows Parties to the Paris Agreement to enter into cooperative approaches that internationally transfer emission reductions and removals, known as Internationally Transferred Mitigation Outcomes “ITMOs”.

Credits generated from GCOM can be ITMOs subject to the authorization of KSA's Designated National Authority (DNA).

GCOM requirements are aligned with the reporting requirements and environmental integrity expectations of Article 6, noting that deliberations on the full implementation of Article 6 have yet to conclude. The Mechanism is meant to adapt to future changes and developments at both the national and international level, including alignment with Article 6 of the Paris Agreement.

For a project proponent developing a project outside the Kingdom of Saudi Arabia that results in emission reductions or removals;

- If the credits from the project must count towards Saudi Arabia's NDC, or
- If the proponents would like the credits to count towards Saudi's NDC,

please contact the DNA for further guidance on the procedures and requirements.

3.2 GCOM Guiding Principles

The GCOM builds upon international best practices and standards and is aligned with main principles and requirements which focus on GHG emission reduction projects or project-based activities that are specifically designed to reduce or remove GHG emissions. This alignment provides the principles and requirements for determining project baseline scenarios, as well as provide project-level guidance for quantification, monitoring, and reporting of projects and activities in relation to their baseline scenario.

3.2.1 Relevance

The project should define appropriate inventory boundaries that reflect the needs of the user. GHG activities, data collection, and methodology must be relevant and appropriate to the project proponent.

3.2.2 Completeness

All relevant information about emission sources and removals within the chosen inventory boundary of the project needs to be fully accounted for in order to achieve a comprehensive and meaningful emission reductions or removals.

3.2.3 Consistency

The project should apply consistent accounting approaches, inventory boundaries, and calculation methodologies in order to produce comparable GHG emissions data over time. Project data must be consistent and comparable over time. If the inventory boundary, methods, data, or any other factors affecting emission estimates change, they must be transparently documented and justified.

3.2.4 Accuracy

Project data of the credits generated should be precise in order to reduce bias. A high level of accuracy is needed to ensure that the reported information is credible. The quantification and reporting processes should be carried out in a way that reduces uncertainty while increasing transparency.

3.2.5 Transparency

Project information must be disclosed in a clear and factual manner. Stakeholders must be able to make decisions with reasonable confidence. Ensure information is recorded, compiled, and analyzed in such a way that it upholds credibility and reliability.

3.2.6 Conservativeness

Project Proponents should use conservative assumptions, values, and procedures so that net GHG emission reductions or removals are not overestimated.

3.2.7 Permanence

Permanence refers to the longevity of removal enhancements and the risk of reversal (i.e., the risk that atmospheric benefits will not be permanent). Reversals may be unintentional or intentional. For projects with a risk of reversal of GHG removal enhancements or avoided conversion projects, Project Proponents shall assess and mitigate risk, and monitor, report, and compensate for reversals.

3.2.8 Additionality

The project must demonstrate that it would not have occurred in the absence of the incentives provided by the mechanism, to prove that the project is additional. If a Project Proponent undertakes an activity even in the absence of a crediting mechanism, the activity is not additional. There are a range of options to test the additionality of a project, as described in section 7 of this document which pertains specifically to additionality.

4 GCOM Scope

4.1 Type of Metric

The GCOM allows the use of both GHG and non-GHG metrics, in accordance with the methodology used.

4.1.1 GHG Metric

Carbon offsets using GHG-metrics are measured in metric tons of carbon dioxide equivalent (CO₂e) and may represent primary categories of greenhouse gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and Nitrogen trifluoride (NF₃).

In the context of the economic structure in Saudi Arabia, CH₄ emissions related to oil production are addressed, PFCs are relevant in aluminum production, N₂O emissions in the chemical industry (e.g., nitric acid production), and SF₆ for operating electricity grids. Finally, HFCs are relevant in the cooling sector (HVAC systems and AC units), NF₃ are relevant in some high-tech industries, including in the manufacture of many electronics.

4.1.2 Non-GHG Metric

When the GHG reductions are measured in units other than CO₂ or CO₂eq, these are known as non-GHG metrics. GCOM accommodates the types of activities relevant in the Kingdom as listed:

Non-GHG Metric	Activity
MW installed capacity	Renewable electricity generation
MWh produced/saved	Renewable electricity generation, energy efficiency improvement

m2 floor area	Energy efficient buildings (new)
m3 saved/produced	Water efficiency improvement, renewable desalination
Person-km	Electric passenger vehicles, rail-based public transport
Tonne-km	Electric freight road and rail transport vehicles
Units replaced	Cooling equipment replacement
MW capacity replaced	Cooling equipment replacement
Tonne of RDF used	RDF use in cement industry
Tonne of H2 / ammonia produced	Replacement of grey H2 /ammonia with green or blue H2 /ammonia
Tonne of recycled material	Recycling of wastes
Tonne of waste incinerated	Waste incineration
ha of forest land; number of vegetation units	Afforestation and reforestation
Tonne of product	Localization of agriculture

Renewable Energy: The load factor of renewable electricity generation plants i.e., their share of operational hours in the total hours of a year, depends on the availability of the underlying resource. For solar power plants a natural limit of the load factor is given by the share of sunlight hours in the overall hours of the day; while site-specific influences are cloud cover (which is higher near the sea and in high mountains) and dust prevalence (which is higher in the desert).

A conservative approach would be to choose the highest cloud cover and dustiness that exists in a certain geographic area, for example differentiated by coastal lowlands at the Red Sea, mountains above 1000m altitude, the interior (>100 km from the coast) and the coast of the Arabian Gulf.

Desalination Plants, Buildings and Vehicles: The energy intensity of desalination plants, buildings and vehicles strongly depends on the characteristics of technology used, buildings and vehicles. A differentiation could be done as follows:

- Desalination plants: Reverse osmosis (RO), multistage flash (MSF) and multieffect distillation (MED).

- Building types: e.g. single family homes, multi-apartment / commercial accommodation buildings below 5 floors, accommodation buildings (apartments and commercial accommodation above 5 floors, office buildings above 5 floors, shopping malls.
- Passenger vehicle types: private cars and SUVs, commercial and administrative car fleets, buses. Differentiation as per SASO standards. Freight vehicle types: Differentiation as per SASO standards.

The operation hours of cooling equipment: as specified in academic study (Krarti and Howarth (2020)).

4.2 Sectoral Coverage

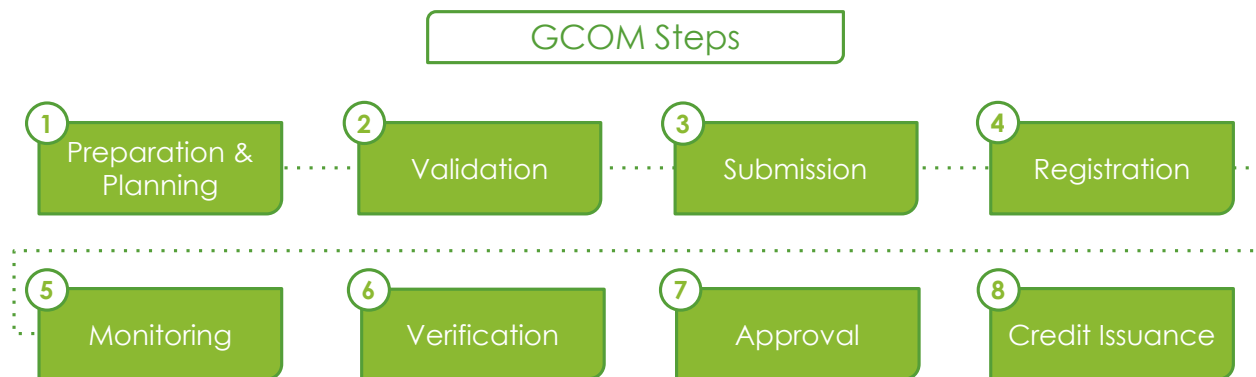
GCOM encourages the reduction or removal of greenhouse gas emissions across all sectors. As such, projects or activities in all sectors are accepted by GCOM, provided the projects comply with GCOM requirements. The sectors include, but are not limited to:

- Energy Efficiency and Renewable and lower GHG emissions Energy Generation
 - Renewable Energy Production: (hydropower, biomass energy, biomass fuels, geothermal power, solar power, wind energy, fuel cell)
 - Energy Efficiency Improvements: (conservation, efficiency, waste heat recovery, cogeneration, trigeneration, industrial process optimization)
- Industrial processes (non-combustion, chemical reaction, fugitive, other)
 - SF₆ replacement
 - SF₆ emission avoidance
 - HFC destruction/decomposition
 - PFC anode effect mitigation
 - Production of nitric acid and adipic acid
 - Reduced emissions from destruction of N₂O in manufacturing
- Transportation, Modal, and Fuel Shift
 - Lower emission vehicles (electric, hydrogen vehicles)
 - Route optimization
 - Metro, Bus Rapid Transport (shift from private to public transport)
 - Internal combustion engine
- Land Use, Land Use Change and Forestry (LULUCF)

- Sequestration of carbon due to afforestation, avoided deforestation, sustainable forest management, forest products)
- Soil carbon sequestration (no-till, grass cover)
- Carbon Capture and Storage
 - Emissions sources that are injected into underground geological formations (e.g., abandoned oil and gas reservoirs, saline aquifers, or un-minable coal seams)
- Livestock
 - Methane Collection and Destruction
 - Livestock and other anaerobic digester operations
 - Agricultural methane emission reduction
 - Agricultural carbon emission reduction
- Waste Handling and Disposal
 - Capture and destruction of Landfill gas
 - Capture and use of Landfill gas (bio digestion, aerobic treatment)
 - Methane recovery in wastewater treatment
 - Avoidance of methane production in wastewater treatment
 - Coal mine methane
 - Waste to Energy

5 GCOM Project Development Process

For a Project Activity to be eligible under the GCOM, The Project Proponent shall refer to the GCOM Project Development Process outlined below, and proceed according to the outlined steps for registration and issuance of credits:



5.1 PROJECT PREPARATION AND PLANNING

→ Plan and prepare all the required documents for project registration

When developing and preparing a project, the Project Proponent shall:

- Establish project ownership.
- Ensure the Project Activity is not registered under any other crediting mechanism, including the CDM, to avoid double counting.
- Comply with the GCOM requirements applicable to the corresponding project type and sector.
- Demonstrate that the Project Activity delivers real, measurable, and additional emission reductions or removals compared to its baseline by applying a relevant GCOM methodology.
- Demonstrate that the Project Activity contributes to sustainable development by progressing at least one of the United Nations Sustainable Development Goals and avoids negative environmental and social impacts.
- Ensure that all data and documentation is stored safely and easily accessible for at least two years after the final Crediting Period has ended for any given Project Activity.

Project Proponent (PP) shall prepare all required documents with sufficient data for consideration by GCOM, specifying project type as GHG Metric or Non-GHG Metric. The PP details the Project Activity using the GCOM Project Design Document (PDD) template, which can be found on the GCOM website.

Project Proponent must ensure the PDD's completeness, and compatibility with the GCOM standards and relevant methodology that are applicable to the Project Activity.

The Project Proponent can seek clarifications from the DNA through the GCOM contact email/website, on:

- Requirements of the PDD and any other forms applicable to a Project Activity type.
- A list of DNA-Accredited Validators for the Project Activity type.
- Other questions regarding the GCOM process.

5.1.1 Project Ownership

The Project Proponent must have the legal right to control and operate emission reduction or removal projects or activities in Saudi Arabia. Project Proponents shall provide documentary evidence demonstrating the uncontested legal right to the emission reductions or removals arising from the project. Project

ownership arising from the legal right to control and operate the project can be established through one or more of the following:

- Project ownership arising by law or regulation.
- Project ownership arising by proprietary or contractual right in the land, plants, equipment, or process that generate the GHG emission reductions or removals resulting from the project.
- Project ownership arising from a contractual agreement with the project owner regarding the right to the emission reductions or removals arising from the project.

5.1.2 Project Location/ Boundary

The Project Proponent must provide information about the physical/geographic location of the Project Activity, including information that allows it to be uniquely identified.

Moreover, the Project Proponent must define the proposed project's boundary, including the physical delineation of the project as well as the emission sources and metrics as required by the applicable methodology.

5.1.3 Project Scale

Project Proponents shall estimate the annual expected emission reductions or removals over the project Crediting Period using a relevant GCOM methodology and include the estimations in the Project Design Document (PDD) forms, which can be found on the GCOM website.

5.1.4 Project Start Date

A project start date for all project types (other than LULUCF) is considered as the date the project begins to reduce or remove GHG emissions against its baseline.

The Project Proponent may submit a project which has already started operations for registration in GCOM, provided the project start date does not precede 1 January 2019¹. The project proponent shall follow the GCOM Project Development Process and may request retroactive issuance of credits from the project start date until the latest period for which the Project Proponent can provide a monitoring report.

¹ Projects that have begun before this date will not be eligible to participate in the GCOM.

5.1.5 Project Crediting Period

A Crediting Period is the finite length of time during which a GCOM Project Activity is valid, and can generate credits against its baseline scenario.

Crediting periods are limited in order to require Project Proponents to re-confirm, at intervals appropriate to the project type, that the baseline scenario remains realistic and credible, the Project Activity remains additional, and that best practices for GHG accounting continue to be used.

For LULUCF projects, a crediting period shall be 7 years, renewable for a maximum of two subsequent times (in total 21 years) or as specified in the relevant GCOM sector requirements or methodology.

For Non-LULUCF projects, a crediting period shall be 5 years renewable for a maximum of two subsequent times (in total 15 years) or 10 years of fixed crediting period or a conservative estimate of the technical lifetime of the installed technologies or implemented measures, whichever is shorter.

For activities involving removals, a crediting period shall be a maximum of 15 years renewable a maximum of twice, as appropriate to the activity and the methodology used.

The Project Proponent shall ensure that all data and documentation is stored safely and easily accessible for at least two years after the final Crediting Period has ended for any given Project Activity.

5.1.6 Project Methodologies

A mechanism methodology is a technical document that defines a standard set of parameters, criteria and operations required to calculate and quantify the expected emission reductions or removals to be generated by a Project Activity. The main purpose of the methodology is to estimate the expected credits to be issued as accurately as possible, subject to monitoring results. GCOM Project Methodologies set out detailed procedures describing various aspects of the proposed project. These aspects include project boundaries, setting baselines, assessing additionality, and ultimately quantifying the GHG emissions to be reduced or removed.

The methodologies using GHG-metrics quantify GHG emission reductions and removals in metric tons of CO₂eq using the 100-year global warming potential. non-GHG metrics are also considered under the mechanism and would quantify emission reductions and removals in a metric other than CO₂eq.

The acceptable types of methodologies are organized into two categories:

- DNA Prepared Methodologies
 - DNA has prepared methodologies for projects that are strategically important for the Kingdom to achieve its ambitious climate goals. These methodologies are available to project proponents by request from the GCOM website:
 - Methodology for determining emission reductions resulting from fuel switching from oil to natural gas in existing power plants for electricity generation.
 - Methodology for determining emission reductions from electricity generation from renewable sources.
 - Methodology for determining emission reductions resulting from CCS/CCUS activities.
 - Methodology for determining emission reductions resulting from projects supporting for the dissemination of electric vehicles (EV).
 - Methodology for determining emission reductions resulting from the application of hydrogen in iron and steel production.
- DNA Approved Methodologies
 - Internationally recognized methodologies approved by DNA such as methodologies under IREC, Verra and Gold Standards.

5.1.7 Additionality

The Project Proponent must assess additionality of the Project Activity in accordance with GCOM's additionality requirements, as elaborated in Chapter 6 of this document.

5.1.8 Project contribution to Sustainable Development

The Project Proponent must attest that the project is in material compliance with all applicable laws, including environmental regulations, when preparing and planning the project, and must have acquired all required permits, and completed the required environmental impact assessment.

The Project Proponent must demonstrate that the Project Activity contributes to sustainable development by progressing at least one of the United Nations Sustainable Development Goals (UNSDGs). The Project Proponent must also demonstrate that the GHG reduction or removal project avoids negative

environmental and social impacts to determine that the Project Activity does not jeopardize progress on any environmental issues such as air and water quality, protection of endangered species, conservation of natural resources, and environmental justice. This assessment must be completed with every crediting period renewal for all project types.

5.1.9 Bundling of Projects

Generally, each GHG project as defined by the project definition and/ or project boundary must register separately with the GCOM. However, protocols for certain project types (as defined in the methodologies) may allow project boundaries to span multiple activities or locations. Only certain types of GCOM-recognized GHG projects may be bundled for registration and reporting purposes.

5.2 VALIDATION

→ To determine whether a project meets all GCOM rules and requirements

The validation process guarantees the reliability and credibility of the project and its associated emission reductions and removals. The purpose is to objectively assess the Project Activity for compliance with GCOM requirements and confirm the corresponding methodology has been applied correctly to quantify the emission reductions or removals achieved by the Project Activity.

The Project Proponent shall choose a DNA-accredited VVB to validate the PDD and other relevant documents. The selected VVB must attest that no conflict of interest exists between it and any of the Project Activity stakeholders. Any fees associated with the validation function shall be agreed by the Project Proponent and the selected VVB, independent of the GCOM. The VVB that performs validation for a project cannot also perform verification for the same project. Upon completion of the validation function, the VVB is expected to issue a validation report that is consistent with the relevant GCOM forms.

Selected Committees comprised of DNA Members (based on sector) shall accredit a list of independent third-party national/ regional/ international VVBs to conduct the validation function of the projects or activities undertaken by Project Proponents. VVBs shall be accredited for project validation and verification in the sector of the applicable methodology according to the competency requirements and standards set out by the DNA.

The VVB must keep all documents and records in a secure and retrievable manner for at least 2 years after the end of the relevant project crediting period, even if it does not carry out verification throughout the project crediting period.

5.3 SUBMISSION

→ To submit all project documentation & validation report through the GCOM website for review

The Project Proponent (PP) shall submit all required documents with sufficient data for consideration by DNA, specifying project type as GHG Metric or Non-GHG Metric. Submission must include the complete PDD forms that were previously prepared as well as the associated Validation Report.

Upon submission, the project shall be assigned a unique tracking number that will not change through the lifetime of the project.

Once all required documents are submitted, the DNA shall begin its review processes, which include reaching out to the project proponent if any missing/insufficient data and/or information is identified.

5.4 PROJECT REGISTRATION

→ To officially register accepted projects in GCOM registry

The DNA conducts its review of the project documentation and the associated validation report. Finalization of the review processes includes a secondary stakeholder engagement that is held for 15 days on the GCOM website. Individuals, entities, and interested organizations or group that might have interaction or interest in the Project Activity are considered stakeholders in this case. The stakeholder engagement is meant to allow stakeholders to express their views, comments and concerns regarding a specific Project Activity and its potential environmental, social and economic impacts.

Upon completion of the review processes, the DNA shall communicate the results of its review, as:

- a. Acceptance
- b. Acceptance contingent on requested corrections or clarifications
- c. Rejection

Accepted Project Activities shall be issued an official registration letter and be listed in the corresponding GHG Metric or Non-GHG Metric section of the

GCOM Registry. All non-confidential information included in the final validated PDD, the validation report and any other relevant documents and/or data shall be made publicly available through the registry.

5.4.1 GCOM Registry

The GCOM Registry acts as the central repository for all information and documentation relating to registered projects or activities. It records and tracks GCOM projects and activities as well as the associated issuance, transfer, cancellation and retirement of credits and certificates (both in GHG and non-GHG metrics).

The registry shall be implemented within a comprehensive and transparent national registry system and shall be operated by the DNA.

The registry is also responsible to keep record of the ownership of credits, to ensure integrity of credits issued under the registry by safeguarding against double counting or double selling of the serialized credits. A serial number is assigned to each verified credit, so when a credit is sold, the serial number for the reduction is transferred from the account of the seller to the account of the buyer. When buyers use or cancel credits the registry retires the serial number of that credit, such that the same credit cannot be re-sold.

The registry shall also:

- Uniquely identify each mitigation Project Activity and allow for viewing of any non-confidential information associated with the project.
- Assign serial numbers for credits or certificates generated by each Project Activity.
- Transparently track ownership of credits in order to make it possible to trace each credit back to the project from which it was originated.
- Allow to check the status of a credit (i.e., whether a credit has been retired, transferred or cancelled).

5.5 MONITORING

→ To measure, record, compile, and analyze data & information to calculate GHG emission reductions and/or removals

The Project Proponent shall implement the monitoring plan as set out by the applied baseline and monitoring methodology in the validated PDD. This includes installation of necessary monitoring equipment and/or techniques to monitor the emission reductions/removals achieved from the Project Activity.

The Project Proponent shall prepare a Monitoring Report that contains actual measurements of emission reductions or removals achieved by the Project Activity and appoint an accredited VVB to audit the monitoring report and issue a Verification Report.

By the end of the first monitoring period, and each subsequent monitoring period, the Project Proponent must demonstrate that the project has contributed to national progress of UNSDGs.

5.6 VERIFICATION

→ To check the results of the monitoring report and verify that the project is delivering the emission reductions and/or removals

The verification process guarantees the reliability and credibility of the project and its associated emission reductions and removals. The purpose is to objectively assess the Project Activity for compliance with the monitoring plan as set out in the validated PDD and confirm the actual measurements to quantify the emission reductions or removals achieved by the Project Activity. The project proponent can decide the interval of verification of its monitoring reports and may subsequently submit the reports to the DNA a maximum of once per year.

In the case of sequestration projects, the scope of the verification should include an updated assessment of the risk of reversal and an updated buffer determination, as applicable.

The Project Proponent shall choose a DNA-accredited VVB to verify the monitoring report and other relevant documents. The selected VVB must attest that no conflict of interest exists between it and any of the Project Activity stakeholders. Any fees associated with the verification function shall be agreed by the Project Proponent and the selected VVB, independent of the GCOM.

The VVB that performs verification for a project cannot be the same VVB that performed the validation for the same project. Upon completion of the verification function, the VVB is expected to issue a verification report that is consistent with the relevant GCOM forms.

Selected Committees comprised of DNA Members (based on sector) shall accredit a list of independent third-party national/ regional/ international VVBs to conduct the verification function of the projects or activities undertaken by Project Proponents. VVBs shall be accredited for project validation and

verification in the sector of the applicable methodology according to the competency requirements and standards set out by the DNA.

The VVB must keep all documents and records in a secure and retrievable manner for at least 2 years after the end of the relevant project crediting period, even if it does not carry out verification throughout the entire project crediting period.

The Monitoring report and Verification report are submitted to DNA.

5.7 APPROVAL

→ To review and approve the verification report and the corresponding monitoring report before issuing the verified credits

Upon submission of the Verification Report and the Monitoring Report to the DNA, the DNA shall undertake a thorough review of the aforementioned reports. The approval or rejection of these reports will be determined by various factors, including but not limited to, the completeness and accuracy of the information submitted.

5.8 CREDIT ISSUANCE

→ To issue emission reduction and/or removal credits that correspond with the approved monitoring and verification reports

Serialized credits are issued by the DNA for the reporting period specified in the monitoring and verification reports to the Project Proponent's GCOM Registry account upon approval. For projects with an assessed permanence risk, per the project type and relevant methodology, GCOM shall elaborate on necessary measures.

6 GCOM Program Project Additionality

GCOM's additionality requirements are meant to ensure that the credits and certificates issued by the mechanism go beyond the GHG reductions and removals that would have happened due to present laws and regulations, or industry standards. A Project Activity must also be subject to at least one of three implementation barriers. A Project Activity passes the additionality test if it results in "additional" emissions reductions that wouldn't have happened in the absence of the Mechanism. The emission reductions or removals from a GCOM

Project Activity must lower emissions beyond those that would have occurred in a "below business as usual" scenario.

To qualify as additional, the GCOM requires every Project Activity to pass a three-level additionality test:

- A legal or regulatory additionality test
- A common practice test
- An implementation barrier test

6.1 Baseline Scenarios

The baseline scenario represents the GHG emissions that would have occurred in the absence of the mitigation project. The baseline scenario shall be determined so that an accurate comparison can be made between the GHG emissions that would have occurred under the baseline scenario and the GHG emission reductions and/or removals that were achieved by the Project Activity.

In developing the baseline scenario; assumptions, values, and procedures shall be selected that help ensure that net GHG emission reductions and removals are not overestimated.

The Project Proponent is required to set a baseline at a level "below business as usual" and provide a demonstration in the Project Design Document (PDD) Form. Setting a below business as usual baseline is required when quantifying the credits in GHG and non-GHG metrics. The emission reductions or removals credited utilizing a "below business as usual" baseline should result in a lesser quantity of credits than the amount that would have been credited utilizing a business as usual baseline. This is meant to promote environmental integrity, quality mitigation outcomes, and ensure the Project Activity contributes to a global net emission reduction by safeguarding against possibility of over-crediting.

6.2 Three-level Additionality Test

In order to pass the three-levels test, projects must illustrate that they are more stringent than currently enforced laws and regulations, are more stringent than the standard in the relevant industry sector and geographic area and are subject to at least one of three implementation barriers (financial, technological, or institutional). The GHG Project Plan must include a convincing justification for the GCOM and The Validator/Verification Body (VVB), that the project passes these tests.

Some DNA-approved methodologies require a specific demonstration of additionality within the application of the methodology. Where the utilized methodology requires a demonstration of additionality, unless otherwise stated by the GCOM conditions, the project proponent shall comply with that requirement and the compliance shall be checked within the validation process.

6.3 Legal or Regulatory test

The Project Proponent must assess any current laws and regulations that explicitly mandate the Project Activity and that call for specific technical, performance, or management activities in order to pass the regulatory surplus test. These legal requirements may call for the adoption of a particular technology, compliance with a particular performance standard (such as clean source performance standards), or management of operations in accordance with a particular set of rules or procedures.

6.4 Common Practice Test

The common practice test calls for the Project Proponent to assess the dominant technologies or practices being used in a specific industry, sector, and/or geographic region, determined by the extent to which those technologies or practices have permeated the market, and show that the proposed Project Activity is not common practice and will reduce GHG emissions below levels produced by common technologies or practices in a comparable environment (e.g., geographic area, regulatory framework, investment climate, access to technology/financing).

Depending on the variation of the baseline technologies, different industries and geographical regions may have different levels of penetration that constitute standard practice. If there are numerous alternative technologies and methods, the market share or penetration rate for the typical practice may be extremely low. In contrast, if there are few competing technologies or practices, the market share or penetration rate of the prevalent practice may be relatively high. Projects that are the “first of its kind” are not common practice.

For the duration of their Crediting Period, projects that are thought to go beyond standard procedure are treated as such. The project may become non-additional and ineligible for renewal if common practice adoption rates of a certain technology or practice change throughout the Crediting Period, but this does not influence its additionality during an active Crediting Period.

Noting that a performance standard is different from the common practice test. For some activities, the information used to define common practice in a given industry, sector, or location may be functionally similar to the information needed to create a performance standard based on accepted practice. In these circumstances, Project Proponents may choose the option to show additionality by creating a performance benchmark based on practices and proving that the Project Activity both meets and surpasses this standard.

6.5 Barrier Test

An implementation barrier represents a factor that would prevent the execution of the Project Activity proposed by the Project Proponent. Under the implementation barriers test, Project Proponents shall choose at least one of three barrier assessments (financial, technological, or institutional). Project Proponents may demonstrate that the Project Activity faces more than one implementation barrier but are not required to address more than one barrier.

6.5.1 Financial barrier

A financial barrier is any obstacle that may prohibit the Project Activity. The project may encounter difficulties, such as high expenses, restricted access to financing, or an internal rate of return that is lower than the Project Proponent's specified and proven minimum acceptable rate in the absence of carbon revenue.

High risks include unproven technology or business models, unfavorable credit ratings of project partners, and project failure risk. Project Proponents must provide strong quantitative proof, such as net present value and internal rate of return calculations, if they choose the financial implementation barrier test.

6.5.2 Technological barrier

Technological barriers include R&D deployment risk and subsequently risk of technological failure, non-availability of skilled and/or properly trained personnel to operate and maintain the technology, lack of infrastructure for implementation and logistics for maintenance of the technology, and technology used in the proposed Project Activity is not available in the relevant region.

6.5.3 Institutional barrier

Institutional barriers include institutional challenges to technology implementation due to procedures or situations for adopting technologies, new

policies (e.g., power market restructuring policies), aversion to upfront costs, and lack of awareness of benefits.

6.6 Positive List

Positive lists identify a broad set of abatement activities that are deemed additional on a global, regional, or domestic level. If the GCOM Project Activity applies a technology, fuel or feedstock listed under a positive list, the Project Activity is deemed automatically additional. The GCOM Positive List is determined based on research and analysis that applies credible sources of information and considers national, regional and global additionality. The list is currently under development and pending review by DNA Committee.

7 Feedback and Grievance Process

Any stakeholders may want to contact the DNA to provide feedback related to the GCOM process. This can be done through the dedicated web portal using the feedback email.

A Project Proponent or GCOM stakeholder may object to the application of the GCOM requirements or a DNA decision by sending a detailed email that contains any supporting documents to the aforementioned feedback email.

8 Glossary, Definitions, and References

Glossary of abbreviations used in this document

Abbreviation	Term
GCOM	Greenhouse Gas Crediting & Offsetting Mechanism
CCE	Circular Carbon Economy
CCUS	Carbon Capture and Use/Storage
CDM	Clean Development Mechanism
CO₂eq	Carbon Dioxide Equivalent
GCOM	Greenhouse Gas Crediting & Offsetting Mechanism
GHG	Greenhouse Gas
ITMO	Internationally Transferred Mitigation Outcomes
LULUCF	Land Use, Land Use Change and Forestry

NDC	Nationally Determined Contributions
PDD	Project Design Document
SDGs	Sustainable Development Goals
VVB	Validator Verification Body

Definitions of terms commonly used in this document.

Term	Definition
Additional	projects or activities which deliver emissions reductions and/or removals beyond those that would take place in the absence of the Mechanism.
Article 6	Article 6 of the Paris Agreement describes how countries can “pursue voluntary cooperation,” including through international transfer of mitigation outcomes “ITMOs”, for parties to reach their climate targets.
Carbon Capture	The process of capturing GHGs at source, before it enters the atmosphere.
Credit	An emissions unit that is issued by a carbon crediting program and represents an emission reduction or removal of greenhouse gases. Credits are uniquely serialized, issued, tracked, and retired or canceled by means of an electronic registry.
Double-counting	A situation in which a single greenhouse gas emission reduction or removal is counted by more than one party or entity toward achieving its goals.
Nationally Determined Contributions	Nationally Determined Contributions are domestic adaptation and mitigation measures that are nationally determined, and that Parties to the Paris Agreement pursue, with the aim of achieving the objectives such contributions.
Offset	A reduction or removal of GHG emissions that is used to compensate for an equivalent amount of emissions from another GHG emitting activity occurring elsewhere.
Project Proponent	An organization or individual that develops and manages emission reduction or removal projects.
Reduction	Verified decrease in GHG emissions measured against baseline emissions.
Removal	An activity that reduces emissions from that atmosphere, either by a nature-based solution or a technology such as tree planting or direct air capture.

Registered

A project is “registered” when the project has been verified by a VVB, submitted by the Project Proponent to the DNA for approval, and accepted.

Reporting Period

The period of time in which the Project Proponent has monitored, quantified, and reported the GHG reductions to the DNA.

Submitted

A project is considered “submitted” when all of the appropriate forms have been completed, uploaded, and submitted to the GCOM platform.

Verified

A project is considered “verified” when the VVB has submitted the project’s Verification Statement and the Verification Report in the Reserve System.

**Validator
Verification Body**

An independent third-party organization or company that has been accredited under GCOM to perform GHG validation/ verification activities.