GREEN CLIMATE FUND

Integrated Results Management Framework (IRMF):

Results Handbook

About this document

This document presents a detailed overview of, and guidance on the application of the GCF's Integrated Results Management Framework (IRMF), the primary tool through which the GCF monitors, analyses and reports the aggregated, portfolio-wide results of the Fund's projects/programmes. The document outlines how GCF projects/programmes should be aligned with the IRMF and describes the monitoring and evaluation activities and processes that they are required to undertake. Indicators and underlying methodologies are defined, with tools and reporting formats provided where relevant.

The handbook is aimed at GCF Accredited Entities and their executing entities, in particular the teams and individuals that are involved in monitoring and evaluation activities associated with GCF-supported projects and programmes.

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Contents

Acronyms

AE	Accredited Entity
AF	Adaptation Fund
AFOLU	Agriculture, forestry and other land use
APR	Annual Performance Report
ARA	Adaptation Results Area
CDM	Clean Development Mechanism
CIF	Climate Investment Funds
CO2	Carbon dioxide
CTF	Clean Technology Fund
DAE	Direct access entities
EX-ACT	EX-Ante Carbon Balance Tool
FAA	Funded activity agreement
FIES	Food Insecurity Experience Scale
GCF	Green Climate Fund
GEF	Global Environmental Facility
GHG	Greenhouse gas
ha	Hectare
HFCs	Hydrofluorocarbons
HH	Household
IFI	International financial institution
IRMF	Integrated Results Management Framework
km	Kilometre
LDCF	Least Developed Countries Fund
LSU	Livestock Unit
Logframe	Logical framework
CH4	Methane
M&E	Monitoring and evaluation
MRA	Mitigation Results Area
MW	Megawatt
MWh	Megawatt hour
NAMAs	Nationally appropriate mitigation actions
NAPs	National adaptation plans
NDC	Nationally determined contributions
N2O	Nitrous oxide
PCR	Project completion report
PFCs	Perfluorocarbons
PMFs	Mitigation and adaptation performance measurement frameworks
RMF	Initial results management framework
PPCR	Pilot Program for Climate Resilience
PPMS	Portfolio performance management system
RTT	Results tracking tool
SCCF	Special Climate Change Fund
SDG	Sustainable Development Goal
SF6	Sulphur hexafluoride
SREP	Scaling Up Renewable Energy Program in Low Income Countries
tCO_2eq	Tonnes of carbon dioxide equivalent

TOC	Theory of change
TOR	Terms of reference
TWG	Technical working group
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States dollar
VCS	Verified Carbon Standard

1. Introduction

This document is intended to serve as a reference guide and as a tool which will support Accredited Entities (AEs), executing partners and evaluators to effectively deliver on the aspects of their roles with respect to results-based management for GCF projects and programmes. This introduction summarises the content of each chapter and provides links to the relevant points in the document:

2: Overview of monitoring, evaluation and results-based management in the GCF
A short primer for audiences that are new to monitoring, evaluation and results-based management in the GCF context.

3: Overview of the IRMF
A summary of the IRMF's logic, core components, and monitoring approaches. More detailed, step-by-step guidance is provided in the following 'Applying the IRMF' chapter.

4: Applying the IRMF
Outlines the detailed IRMF requirements for AEs and GCF projects/programmes and provides guidance on the results-based management processes that need to be applied throughout the project/programme lifecycle.

5: Monitoring, reporting, and communicating results
Outlines all IRMF-related reporting requirements, with additional guidance on identifying and sharing knowledge and lessons of relevance to broader audiences.

6: Planning and budgeting for monitoring, evaluation, and learning
Guidance on identifying and planning the human and financial resources required for IRMF-related activities.

7: Planning and managing an evaluation
Outlines IRMF-related evaluation requirements, including roles and responsibilities for AEs, the GCF Secretariat, and evaluators.

2. Overview of monitoring, evaluation, and results-based management in the GCF

About this chapter
A short primer for audiences that are new to monitoring, evaluation and results-based management in the GCF context.

As with other climate finance mechanisms, the GCF uses a **Results-based management (RBM)** approach to continuously monitor and evaluate the performance of its projects/programmes and portfolio. This approach supports the GCF's need to assess whether its projects/programmes are on or off track to deliver expected results and targets. RBM uses data generated from monitoring and evaluations to improve performance and the achievement of desired results and to help AEs and the GCF understand *why* results are (or are not) occurring and, in turn, how the design and performance of current and future projects/programmes can be strengthened.

RBM as well as monitoring and evaluation are distinct but interdependent approaches:

APPROACH	DEFINITION
Monitoring	The continuous, systematic collection of data against specified indicators / measures to provide the main stakeholders of a GCF project /programme with insight on progress and performance.
Evaluation	A systematic, objective assessment of an ongoing or completed intervention, its design, implementation, and results.
Results-based management	A management strategy that uses monitoring data and evaluations to assess and improve performance and the achievement of desired results.

These approaches provide a system that helps the GCF and its projects/programmes to:

- Identify the problem/s to be addressed
- Identify the objectives and results to be pursued to address the identified problem/s
- Identify the strategies through which those objectives and results will be delivered
- Identify how progress will be measured against those strategies and towards those objectives
- Measure and assess whether progress is being made
- Understand why progress is (or is not) being made
- Identify how performance can be improved

Individual approaches may vary from project-to-project, but the design of a GCF project/programme's monitoring approach will typically start with the development of a **theory of change** (TOC) which is required as part of all GCF funding proposals.

The TOC outlines the rationale for a project/programme, including the pathways and strategies through which the project/programme will tackle the problem. It should identify a long-term project/programme goal, then map them backwards to identify the necessary preconditions for meeting the goal, the project/programme outcomes and outputs, the activities required to deliver outputs and realize outcomes, and finally the assumptions under which the TOC was developed. In this way, the TOC should communicate how the project/programme's results chain links project/programme activities to the overarching outcomes and impact.

The TOC can also help to **determine how progress will be measured**. It can help to identify critical milestones along the intervention's pathways, including the **results** that the intervention ultimately aims to deliver or contribute to. In this context, results are **changes that the intervention has some influence over**. GCF projects/programmes should categorise their intended results across three levels as shown below. A case example provided in annex 5: Mass Transit System also illustrates how these results levels should be applied in a ToC.

RESULT LEVEL	GCF DEFINITION
Impacts	Positive and negative, primary and secondary long-term effects produced by an intervention, directly or indirectly, intended or unintended.
Outcomes	Changes in conditions such as behavioural or systemic change that occur between the completion of project/programme outputs and the achievement of impact.
Outputs	Changes delivered as a result of project/programme activities that contribute to the achievement of outcomes.

Once the intervention's intended results are identified, potential indicators or measures of progress and performance can be developed for each of those results. Often, an intervention will be able to make use of well-established indicators and measurement processes that have been applied in other interventions. However, in some instances it will be necessary to develop new indicators or measurement processes, particularly where an intervention is innovative, untested, or looking to deliver highly context-specific results.

Following the development of the TOC and the identification of intended results and their potential indicators/measures, the project/programme's **logical framework (**also known as a **logframe)** should be developed. As with the TOC, logframe are a requirement in all GCF funding proposals. The logframe defines precisely how the project/programme will be monitored and assessed over the course of its implementation. It should include:

1. An intervention's **intended results**
2. The **indicators / measures** that will be used to track those results
3. The **means of verification** (monitoring tools and processes) through which indicators / measures will be tracked, including the frequency of monitoring
4. **Baseline values** for each indicator / measure (i.e. the starting point for the intervention)
5. **Mid-term and final targets** for each indicator / measure (i.e. where the intervention aims to be at those points in time)

In addition to monitoring, GCF projects/programmes are required to undertake **evaluations** to obtain an objective assessment of performance, progress, and results. As opposed to the continuous function of monitoring, evaluations are discrete, time-limited exercises. They are used for accountability purposes (to identify whether interventions have delivered or are on (or off) track to deliver expected results) and for learning purposes (to understand why an intervention is or is not delivering results, and to identify how to improve intervention delivery). Evaluations of GCF projects/programmes are required partway through an intervention (interim evaluation), and at the conclusion of an intervention (final evaluation).

For the GCF and its partners, the Integrated Results Management Framework (IRMF) brings together into a cohesive whole, the processes of monitoring, evaluation, and results-based management. It provides a structure through which the performance, progress, and results of individual GCF projects/programmes – and indeed the whole GCF portfolio – can be assessed, understood, and strengthened.

3. Overview of the IRMF

About this chapter
A summary of the IRMF's logic, core components, and monitoring approaches. More detailed, step-by-step guidance is provided in the following 'Applying the IRMF' chapter.

3.1. Summary

The IRMF is designed to enable more consistent measurement and reporting of results from the project/programme level and supports the GCF's ability to monitor, analyse and report on the aggregated, portfolio-wide results of the Fund's investments. Approved in July of 2021, the IRMF replaces the GCF's initial Results Management Framework (RMF) and Mitigation and Adaptation Performance Measurement Frameworks (PMFs).

The IRMF fulfils both an accountability and a learning function. It is used to report results and progress towards targets (accountability), but also to understand why results have – or have not – been achieved, and consequently how current and future projects/programmes can be strengthened (learning). This approach also aligns with the GCF's Governing Instrument, which states that the GCF "*will be a continuously learning institution guided by processes for monitoring and evaluation*".

In line with the investment criteria established within the GCF's Investment Framework, the IRMF is ultimately used to monitor project/programme-level and Fund-level progress towards **impact** and **paradigm shift**. During the funding proposal development process, AEs are requested to demonstrate how the proposed intervention aligns with the GCF's Investment Framework, including the potential for impact and paradigm shift. Once GCF projects/programmes are under implementation, the IRMF is then used to monitor whether and how projects/programmes are progressing towards those initially envisaged results.

Through its clearer, more complete, and coherent architecture for GCF results management, the IRMF also aids the Fund and AEs to track how projects/programmes are contributing to climate change **mitigation and adaptation** outcomes, and as well as how projects/programmes are supporting **enabling conditions and environments** that can promote paradigm shift. This more granular monitoring approach allows the GCF to develop a deeper understanding of the processes and pathways through which the Fund most effectively contributes to deliver impacts and promote paradigm shift.

As per the diagram below, each results level is tracked using a series of indicators and monitoring processes. In brief, the potential for paradigm shift is assessed through the three impact-level dimensions of scale, replicability and sustainability. Contributions to mitigation and adaptation are tracked using four core quantitative indicators, supported by supplementary indicators. The extent to which projects/programmes support an enabling environment is tracked through another set of four core indicators, based on both quantitative and qualitative assessments. Crucially, all these measures will also allow the GCF to track the Fund's contributions to the goals put forward by the UNFCCC and the Paris Agreement.

The IRMF establishes clear definitions and methodologies for all these indicators (including indicator monitoring and assessment processes), thereby ensuring that projects/programmes apply the same approach and generate consistent, robust data that can be aggregated and compared

across the whole GCF portfolio. The IRMF applies to all projects/programmes submitted to the GCF Board for approval starting on and from the thirty-second meeting of the Board (B.32).

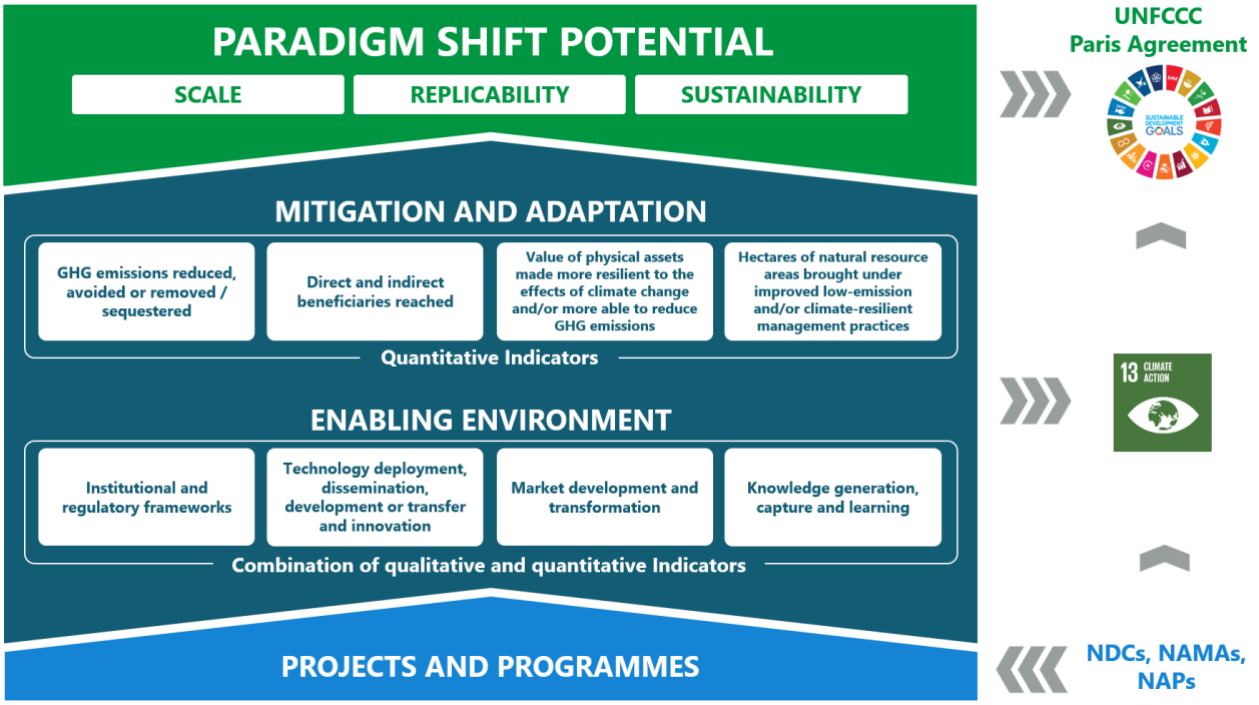


Figure 1 IRMF results architecture

3.2. Measuring paradigm shift

As established within the GCF's Governing Instrument, the Fund's long-term vision is that the GCF promote paradigm shift towards low-emission climate resilience in the context of sustainable development. The GCF's Investment Framework enshrines this vision through a set of investment criteria that are used to assess the paradigm shift potential of proposed GCF projects/programmes. Once projects/programmes are under implementation, the IRMF articulates a number of indicators which AEs and the GCF use to track whether and how projects/programmes are contributing to paradigm shift. This project/programme-level data is then compared across the portfolio to provide an overview of the extent and nature of GCF's overall contributions to paradigm shift.

Independent, qualitative assessments of progress towards paradigm shift are undertaken twice during the implementation of a GCF project/programme. The first assessment is undertaken during the project/programme's interim evaluation, the second during the final evaluation. Given that paradigm shift is typically realised over long timeframes – and often beyond the lifetime of any given intervention – the GCF may on occasion also commission ex-post evaluations of specific interventions. Note: the assessments apply to all GCF project/programmes including multi-country projects/programmes.

All these assessments consider paradigm shift across three dimensions:

SCALE
Degree to which there has been a significant increase in quantifiable results within and beyond the scope of the GCF project/programme

REPLICABILITY
Degree to which key structural elements of a GCF project/programme are exported elsewhere within the same sector and/or to other sectors, regions or countries

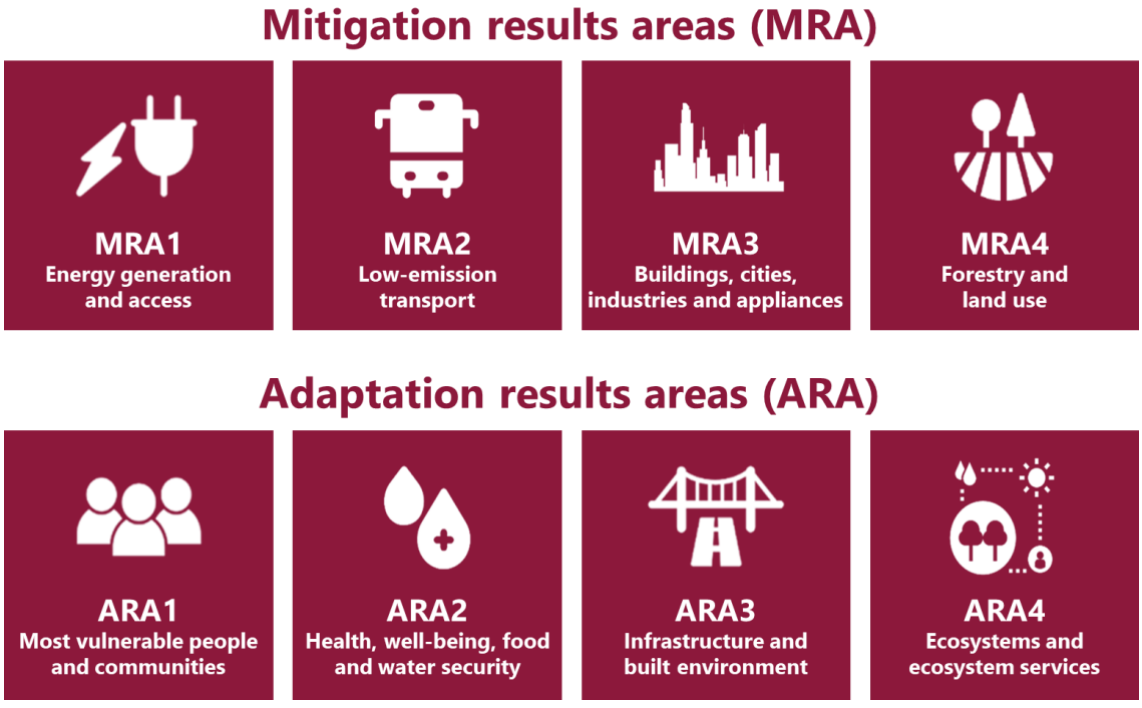
SUSTAINABILITY
Degree to which the results of a GCF project/programme are sustained beyond completion, through the creation of a structural and/or financial base, as well as through climate resilient practices

Assessments include completion of a scorecard template by a project/programme's independent evaluator, with each of the above dimensions measured against a three-point scale. Aside from helping each GCF project/programme to track their own progress, these scorecards provide the GCF with quantitative data that can be analysed at the portfolio level.

GO TO FULL GUIDANCE ON MEASURING PARADIGM SHIFT

3.3. Measuring mitigation and adaptation

The GCF promotes paradigm shift towards low-emission climate resilient development by investing across eight results areas.



GO TO FULL GUIDANCE ON GCF RESULTS AREAS

To build understanding around how GCF projects/programmes contribute to these results areas – and to the development of low-emission climate resilient pathways more broadly – the IRMF sets out four critical climate change mitigation and adaption outcome indicators. These four core indicators – Core 1, Core 2, Core3, Core 4 – are augmented by a series of supplementary indicators – 1.1 to 4.3 – which in turn enable GCF projects/programmes and the GCF to track progress at a more granular level, including specific contributions to each of the GCF's eight results areas**.**

IRMF indicators		**GCF suggested results areas**
Core 1	GHG emissions reduced, avoided or removed / sequestered	MRA1-4
1.1	Annual energy savings (MWh)	MRA3
1.2	Installed energy storage capacity (MWh)	MRA1
1.3	Installed renewable energy capacity (MW)	MRA1
1.4	Renewable energy generated (MWh)	MRA1
1.5	Improved low-emission vehicle fuel economy (net change in fuel /energy consumption per kilometre travelled)	MRA2
Core 2	Direct and indirect beneficiaries reached	ARA1-4
2.1	Beneficiaries (female/male) adopting improved and/or new climate-resilient livelihood options (number of individuals)	ARA1
2.2	Beneficiaries (female/male) with improved food security (number of individuals)	ARA2
2.3	Beneficiaries (female/male) with more climate-resilient water security (number of individuals)	ARA2
2.4	Beneficiaries (female/male) covered by new or improved early warning systems (number of individuals)	ARA1-4
2.5	Beneficiaries (female/male) adopting innovations that strengthen climate change resilience (number of individuals)	ARA1-4
2.6	Beneficiaries (female/male) living in buildings that have increased resilience against climate hazards (number of individuals)	ARA3
2.7	Change in expected losses of lives due to the impact of extreme climate-related disasters in the geographic area of the GCF intervention (number of individuals)	ARA1-3
Core 3	Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions	MRA1-4 ARA1-4
3.1	Change in expected losses of economic assets due to the impact of extreme climate-related disasters in the geographic area of the GCF intervention (value in USD)	ARA1-3
Core 4	Hectares of natural resource areas brought under improved low-emission and/or climate-resilient management practices	ARA1-2
4.1	Hectares of terrestrial forest, terrestrial non-forest, freshwater and coastal-marine areas brought under restoration and/or improved ecosystems	ARA4
4.2	Number of livestock brought under sustainable management practices	ARA1, 2, 4
4.3	Tonnes of fish stock brought under sustainable management practices	ARA1, 2, 4

During the funding proposal development, review, and approval process, projects/programmes will have identified which of the eight GCF results areas they are aligned with. Once under implementation, projects/programmes are then required to monitor the core and supplementary indicators associated with those results areas. Detailed monitoring requirements and processes for every indicator are provided in this handbook's indicator reference sheets. In addition to these IRMF indicators, projects/programme are required to develop and monitor project-specific indicators (see section 3.5 below).

GO TO FULL GUIDANCE ON MEASURING MITIGATION AND ADAPTATION RESULTS

GO TO INDICATOR REFERENCE SHEETS

3.4. Measuring contributions to enabling environments

The GCF's promotion of paradigm shift is also underpinned by support for the enabling conditions and environments that can facilitate moves towards low-emission, climate resilient pathways. The GCF's Investment Framework includes elements and sub-criteria that are used to assess funding proposals' plans to support enabling environments for paradigm shift. Building on those Investment Framework elements, the IRMF uses four additional core indicators to measure how projects/programmes contribute to the most critical aspects of enabling environments.

Core Indicator 5	Degree to which GCF projects/programmes contribute to strengthening institutional and regulatory frameworks for low-emission climate-resilient development pathways in a country-driven manner
Core Indicator 6	Degree to which GCF projects/programmes contribute to technology deployment, dissemination, development or transfer and innovation
Core Indicator 7	Degree to which GCF projects/programmes contribute to market development / transformation at the sectoral, local or national level
Core Indicator 8	Degree to which GCF projects/programmes contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards

All four of these indicators will be highly relevant to the work of many projects/programmes. Accordingly, GCF projects/programmes should monitor as many of these indicators as possible but – at a minimum – **at least two** of the above core indicators should be monitored by every project/programme.

As with the assessments of paradigm shift, contributions to enabling environments are measured through assessments undertaken twice during a project/programme's implementation. The first assessment is undertaken during the interim evaluation, the second during the final evaluation. These assessments are based on a scorecard template, with each indicator judged against a series of statements identifying the critical enabling conditions and milestones that projects/programmes will typically be supporting. Aside from helping each project/programme to track their own progress, these scorecards provide the GCF with data that can be used to analyse and report contributions to enabling environments at the portfolio level.

GO TO FULL GUIDANCE ON MEASURING ENABLING ENVIRONMENT INDICATORS

GO TO ENABLING ENVIRONMENT SCORECARDS

3.5. Project/programme-level theory of change and logical framework

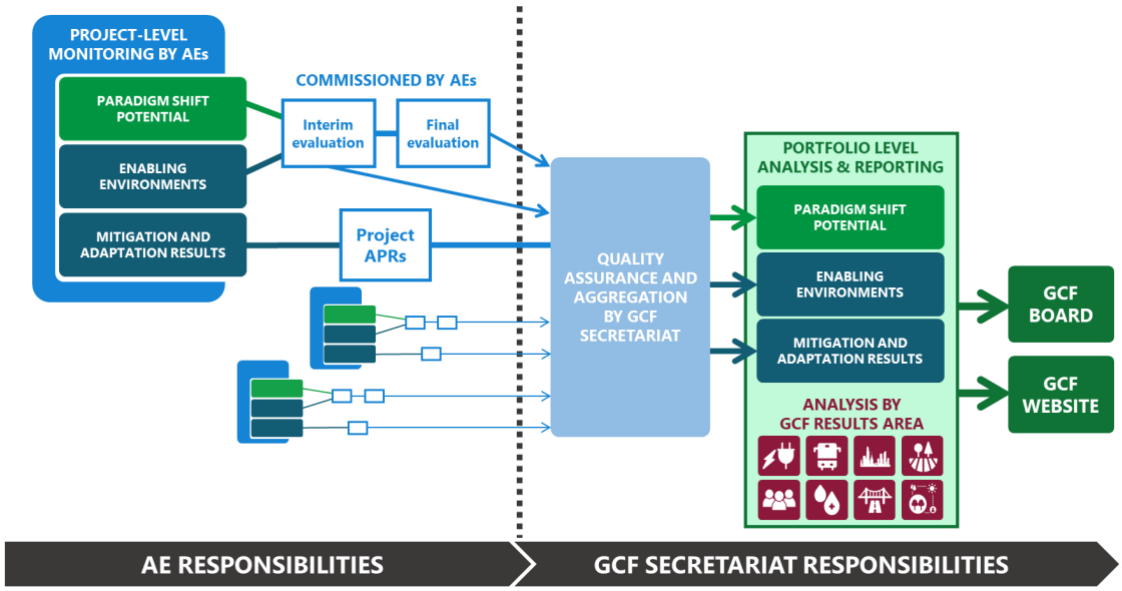
During the project design process, all proposals are required to develop a **theory of change** (TOC) that describes the intervention's overarching logic, including how it will help to develop low-emission and/or climate-resilient pathways. TOCs will typically then be used to inform the project's activities, outputs, and outcomes, and – in turn – will serve as the basis for the articulation of the intervention's **logframe** and indicators.

Both the TOC and the logframe should be fully aligned with the IRMF's results structure. In particular, the logframe should incorporate all the IRMF indicators that have been selected for the project/programme[1]. AEs are also required to develop and monitor project/programme-specific indicators in the logframe including those that will be used to measure **co-benefits**. The requirement applies to both multi-country and single-country projects/programmes.

GO TO GCF THEORY OF CHANGE TEMPLATE

3.6. Aggregation and reporting

Projects/programmes report their progress against IRMF indicators through a combination of Annual Performance Reports (APRs), Project Completion Report (PCR), and interim, and final evaluations. The GCF Secretariat uses the IRMF to organize and aggregate data from all projects/programmes to build a portfolio-level overview of progress. Portfolio-level data is also used to support analysis and reporting at geographical levels (by region, by country), and by GCF results area. Portfolio results will be continuously updated and reported via the GCF website, and formally reported to the GCF Board.

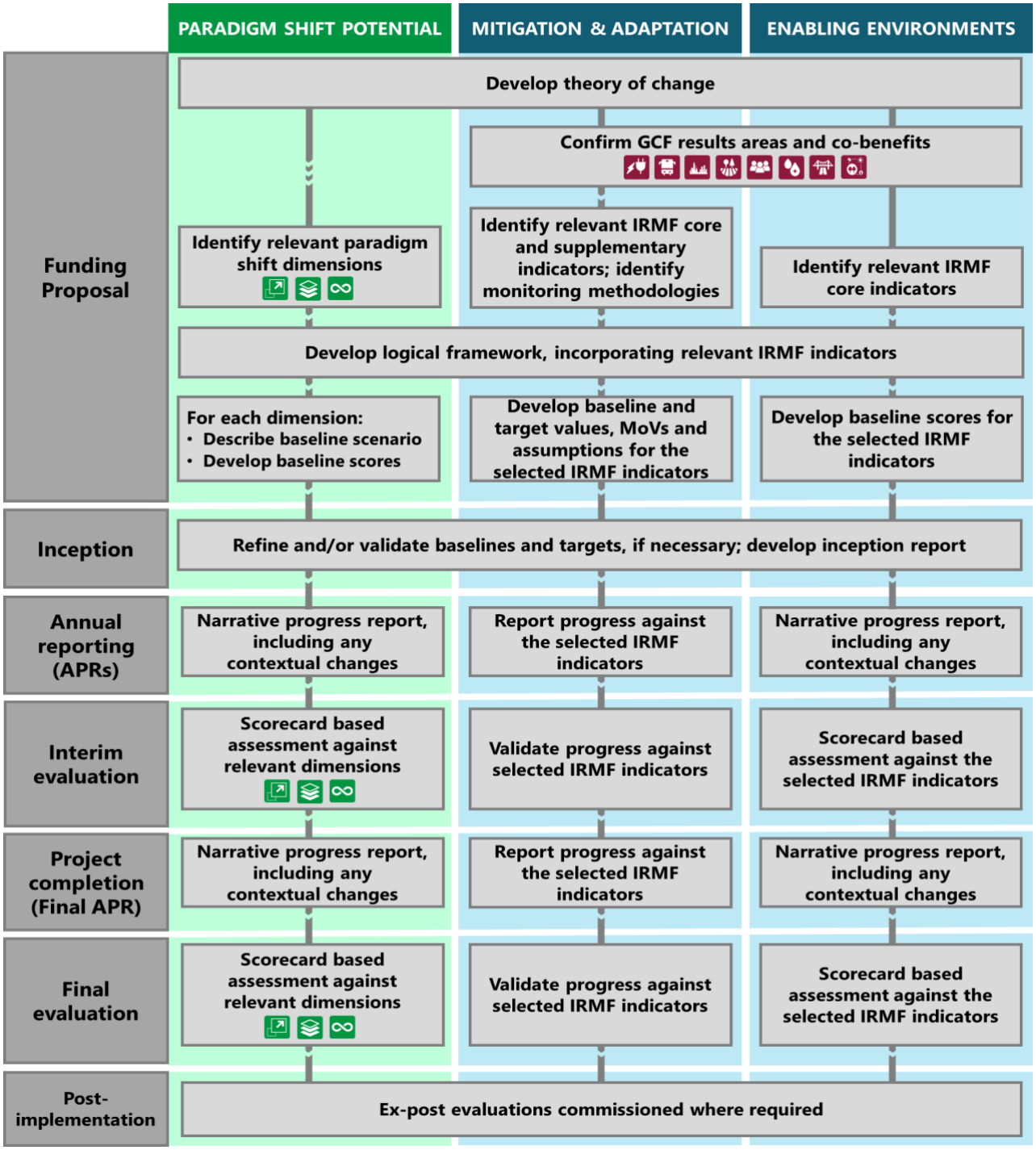


[1] Logframes should also adhere to terms specified in investment-level legal agreements known as funded activity agreements (FAA)

4. Applying the IRMF

About this chapter
This section outlines the detailed IRMF requirements for AEs and GCF projects/programmes and provides guidance on the results-based management processes that need to be applied throughout the project/programme lifecycle.

4.1. Summary of requirements



4.2. Roles and responsibilities

Oversight and implementation of the IRMF is dependent on inputs from several GCF stakeholders. Accredited Entities (AEs), and their Executing Entities play the lead roles, but the GCF Secretariat, beneficiaries, national governments, and evaluators are also key contributors. The following table summarises the primary responsibilities of the main stakeholders, with more detailed responsibilities defined throughout the rest of this chapter.

STAKEHOLDER	PRIMARY IRMF RESPONSIBILITIES
Accredited Entities (AEs)	• Design of IRMF-aligned TOCs and logframes, as part of funding proposal • Establishment of baseline data • Oversight of project/programme monitoring and evaluation • Submission of annual performance reports (APRs) to GCF Secretariat • Commissioning and management of evaluators for interim and final evaluations
Executing Entities	• Leading and/or supporting specific monitoring and reporting activities, as determined by project/programme monitoring approach
GCF Secretariat	• Provision of IRMF-related advice and support to AEs during funding proposal review process • Review of TOC and logframe, as part of funding proposal • Review and initial clearance of baseline and target data • Review and clearance of progress reports and evaluations • Portfolio-level aggregation and analysis of data against IRMF indicators • Reporting of portfolio-level data and analysis via GCF website and to GCF Board • Commissioning and management of ex-post evaluations
GCF Board	• Final approval of funding proposals (including IRMF-aligned logframes) • Consideration of portfolio-level data, analysis and reporting
Independent evaluators	• Design and delivery of AE-led interim evaluations • Design and delivery of AE-led final evaluations
Beneficiaries / Project stakeholders	• Participation in monitoring activities, as determined by project/programme monitoring approach
National governments and agencies	• Participation in monitoring activities, as determined by project/programme monitoring approach

4.3. Developing the theory of change

One of the earliest exercises in the funding proposal process is the development of a theory of change (TOC). The TOC outlines the rationale for a project/programme, including the pathways and strategies through which the project/programme will tackle the problem. It should identify the long-term project/programme goal statement and outcomes, then map them backwards to identify the necessary preconditions for meeting the goal, the project/programme outcomes and outputs, the activities required to deliver outcomes and outputs, and finally the assumptions under which the TOC was developed. In this way, the TOC should communicate how the project/programme's results chain links project/programme activities to the overarching outcomes and goal statement.

The key change brought about by the IRMF is **that the goal statement within a ToC is now considered a context-specific paradigm shift** which a project/programme will aim to support and contribute to. The concept of viewing a project/programme's goal statement as equivalent to contribution to paradigm shift is based on the IRMF's architecture where the paradigm shift is placed at the highest of the results levels, (the impact level), followed by the outcome level and lastly, the project/programme outputs and activities level (see figure 1: IRMF architecture). In applying this concept, the proposed project/programme should develop a ToC that has a goal statement which:

1. Summarizes a project/programme specific paradigm shift and,
2. Describes how the shift will be contributed to by using results chain links from activities, outputs, to outcomes.

Therefore, the ToC is essentially an illustration of how and why a desired paradigm shift is expected to happen in the context of a particular project or programme.

Furthermore, the IRMF encourages AEs to identify and monitor co-benefits which are defined as additional or ancillary benefits that occur as a result of mitigation or adaptation activities. While GCF is mandated to finance climate-related projects/programmes, the IRMF recognizes the importance of attaining a wider range of environmental, social (including health), economic and gender co-benefits. In addition, mitigation co-benefits which can be derived from adaptation

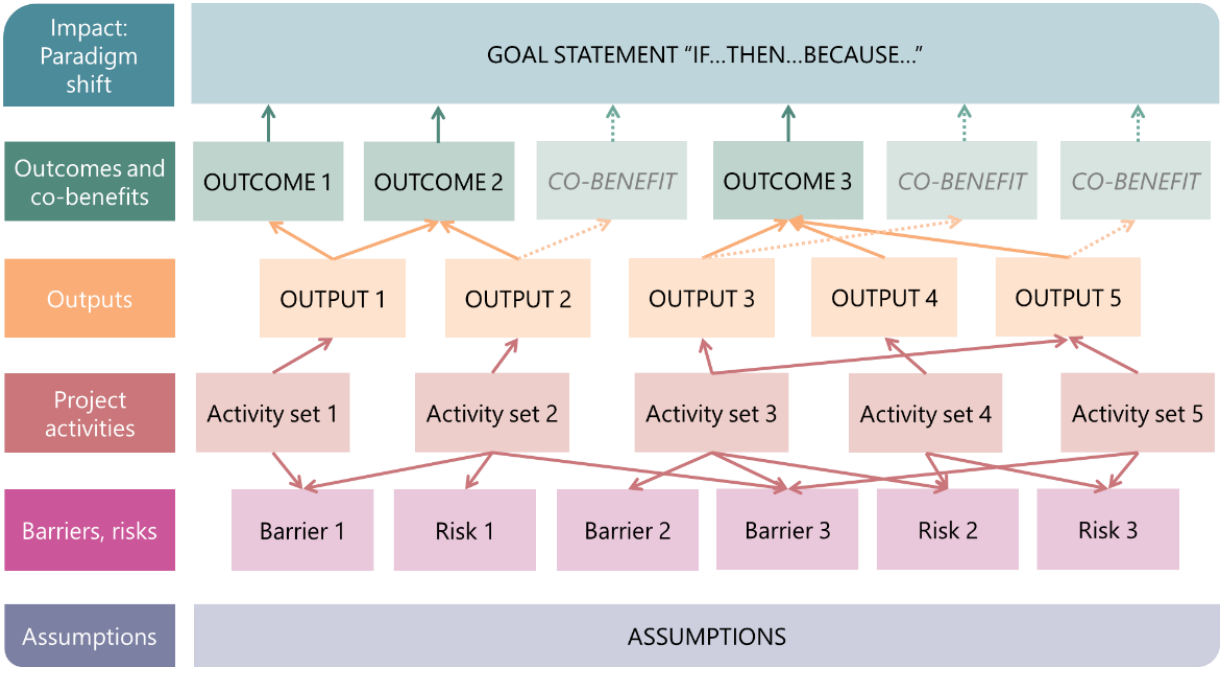


Figure Updated sample ToC diagram

projects, as well as adaptation co-benefits derived from mitigation projects can also be captured in the ToC.

STAKEHOLDER	IRMF RESPONSIBILITIES: THEORY OF CHANGE DEVELOPMENT
Accredited Entities (AEs)	• Leading the problem analysis and development of TOC, including coordination of inputs from other stakeholders • Ensuring alignment between TOC and IRMF • Submission of TOC to GCF Secretariat, as part of funding proposal • Coordination of any subsequent reviews and amendments to TOC
Executing Entities	• Participation in problem analysis and development of TOC
GCF Secretariat	• Undertake initial review and provide feedback to AEs on draft TOC • Confirmation of alignment between TOC and IRMF • Initial clearance of TOC, as part of funding proposal • Review and clearance of any subsequent amendments to TOC
Beneficiaries / Project stakeholders	• Participation in problem analysis and development of TOC
National governments and agencies	• Participation in problem analysis and development of TOC

GO TO GCF PROGRAMMING MANUAL GUIDANCE ON THEORY OF CHANGE

GO TO GCF THEORY OF CHANGE TEMPLATE

4.4. Confirming the GCF results area/s

Projects/programmes should be clearly aligned to at least one of the GCF's eight results areas. Indeed, the IRMF requires that each project/programme outcome in a TOC be linked to one or more of the GCF results areas. In most instances this alignment will be immediately apparent from the outset, with the project/programme's TOC providing further insight into exactly how the proposed intervention will support the results area. However, AEs should confirm this alignment with the GCF Secretariat at an early stage, as the targeted results area/s will have a direct influence on the design of the project/programme's monitoring approach, including its alignment with the IRMF. The GCF's results areas are briefly described below:

	**MRA1: Energy generation and access** Supporting energy generation from renewable sources; efficient and reliable energy transmission, distribution, and storage; and promoting access to clean energy in a way that promotes sustainable development and climate resilience while reducing emissions.
	**MRA2: Low-emission transport** Supporting mitigation through the transport sector, including through new technologies and approaches, as well as from modal shifts and more sustainable approaches to transport and infrastructure planning.
	**MRA3: Buildings, cities, industries and appliances** Supporting energy efficiency and green building construction, including through developing and piloting innovative instruments that scale up financing, potentially in tandem with efforts to strengthen policy, pricing, standards and other incentives for efficiency.
	**MRA4: Forestry and land use** Contributing to paradigm shift in the forest and land use sector through forest protection, forest restoration and sustainable forest management.
	**ARA1: Most vulnerable people and communities** Includes support for livelihood enhancement through increasing resilience, mainstreaming climate risk into development policy, strengthening links between adaptation and disaster risk reduction programming, expanding access to insurance, and social protection programmes.
	**ARA2: Health, well-being, food and water security** Includes support for climate-smart agriculture, which can reduce food security risks as well as pressures on water supply; and efforts to improve the resilience of cities by improving water, sanitation, management systems and infrastructure within urban areas.
	**ARA3: Infrastructure and built environment** Supporting climate-resilient infrastructure that withstands changing climate conditions and avoids contributing to further emissions, including green infrastructure and ecosystem-based approaches.
	**ARA4: Ecosystems and ecosystem services** Supporting large-scale measures that protect, restore and manage ecosystems to enhance adaptation and reduce emissions, focusing on: ecosystem-based management of terrestrial and freshwater ecosystems; and ecosystem-based coastal and marine zone management.

The table below outlines briefly the various roles and responsibilities of stakeholders with respect to the confirmation of GCF results area/s for a project or programme.

STAKEHOLDER	IRMF RESPONSIBILITIES: CONFIRMING GCF RESULTS AREA/S
Accredited Entities (AEs)	• Identify alignment between proposal and GCF results area/s
GCF Secretariat	• Confirm alignment between proposal and GCF results area/s

4.5. Paradigm shift: developing descriptions, setting baselines and targets

The GCF's investment criteria require AEs to provide a description of paradigm shift potential in the funding proposal. This description should be based on the analysis and logic behind the proposal's TOC. To ensure alignment with the IRMF, AEs are encouraged to develop a deeper, more granular description of paradigm shift that, in turn, provides a basis for measuring progress towards paradigm shift and – crucially – the nature of the project/programme's contribution to any progress.

The IRMF's measurement of paradigm shift is based on three key principles:

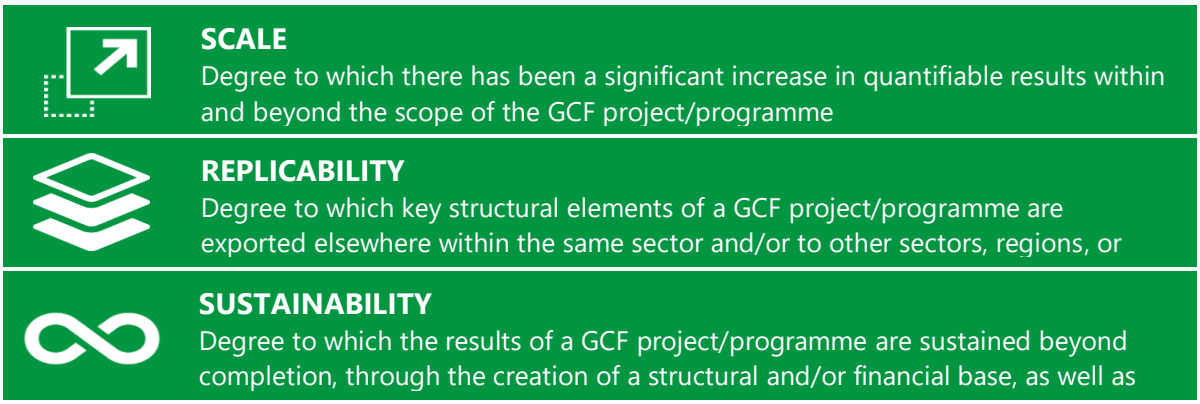
i. **Contribution, not attribution:** The GCF's Governing Instrument states that "*the purpose of the Fund is to make a significant and ambitious contribution to the global efforts towards attaining the goals set by the international community to combat climate change.*" Accordingly, the IRMF is designed to identify contribution to paradigm shift, not attribution[2].

ii. **Learning, not accountability:** The primary purpose of assessing project/programme's contribution to paradigm shift is for learning rather than accountability. Paradigm shift will take place over and above GCF projects/programmes, is most likely to occur over a long timeframe (typically beyond a GCF project's implementation period) and will depend on multiple actors and externalities. Consequently, GCF projects/programmes alone cannot be held accountable for whether paradigm shift takes place. At the same time, the focus on learning should identify positive and negative lessons and should not just report on successes.

iii. **Paradigm shift is context-specific:** Paradigm shift is context-specific, so it will not always be possible to directly compare metrics across different projects/programmes. For example, the absolute number of beneficiaries cannot be used to compare the scale of paradigm shift across countries of different sizes. Measurement of paradigm shift therefore needs to be firmly based on the context in which the project/programme operates.

Building on these principles – and in particular the need for context-specificity – the IRMF's approach to the measurement of contribution to paradigm shift is based on the description and assessment of paradigm shift across three dimensions:

[2] Attribution is the idea that a change is solely due to interventions which a project/programme is undertaking while contribution is the idea that the influence of an intervention is just one of many factors which contribute to a change.



Paradigm shift will be assessed using a **scorecard-based approach**, whereby progress is reviewed towards each paradigm shift dimension against a series of pre-defined statements (see annex 1 for the full scorecards). While paradigm shift will always be context-specific, these scorecard statements can potentially serve as a starting point for AEs / GCF projects/programmes that are developing their own baselines and targets for paradigm shift.

To establish baselines for each paradigm shift dimension, the funding proposal should first summarise the **current (baseline) context** within which the project/programme will be working. Still using the three dimensions – and drawing on the TOC – the proposal should then describe the **potential paradigm shift** that the project/programme aims to support, including how the project/programme will contribute to that shift. These descriptions provide the project/programme with a **qualitative baseline** (current context) and a **qualitative target** (potential paradigm shift) against which progress can be assessed. The scorecard should then be used by AEs to develop **quantitative baselines** for each paradigm shift dimension. AEs should complete the scorecard, self-assessing the current (baseline) 'scores' for each dimension as part of the funding proposal.

During the interim and final evaluations, independent evaluators will assess the extent of paradigm shift and the project/programme's contribution to any shift. These assessments will be undertaken using the scorecards, with evaluators reviewing progress towards each paradigm shift dimension against the pre-defined statements.

STAKEHOLDER	IRMF RESPONSIBILITIES: DESCRIBING PARADIGM SHIFT, SETTING BASELINES & TARGETS
Accredited Entities (AEs)	• Describe 'headline' paradigm shift potential *(section D2 of Funding Proposal)* • Describe the baseline context against the three dimensions of paradigm shift *(section E2 of the Funding Proposal)* • Describe the potential paradigm shift (target) against the three dimensions, including the project/programme's intended contribution *(section E2 of the Funding Proposal)* • Score the baseline context against the three dimensions
GCF Secretariat	• Undertake initial review and provide feedback to AEs on draft descriptions, if necessary • Initial clearance of descriptions, as part of funding proposal • Clearance of any subsequent amendments to paradigm shift descriptions

Executing Entities	• Participation in baseline development and target setting
Beneficiaries / Project stakeholders	• Participation in baseline development and target setting
National governments and agencies	• Participation in baseline development and target setting

GO TO GUIDANCE ON MEASURING PARADIGM SHIFT L

GO TO PARADIGM SHIFT SCORECARDS

4.6. Mitigation and adaptation: selecting indicators, setting baselines and targets, and confirming monitoring methodologies

Four core indicators, as noted in the table below, are used to track the GCF's quantitative contributions to mitigation and adaptation outcomes.

Core Indicator 1	GHG emissions reduced, avoided or removed / sequestered *(tCO_2eq)*
Core Indicator 2	Direct and indirect beneficiaries reached *(number of individuals)*
Core Indicator 3	Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions *(USD)*
Core Indicator 4	Hectares of natural resource areas brought under improved low-emission and/or climate-resilient management practices *(ha)*

Projects/programmes should monitor **all core indicators that are relevant to their specific interventions** and should **at least** monitor Core Indicator 1 (emission reductions) **or** Core Indicator 2 (beneficiaries). Core Indicator 1 is mandatory for mitigation-focused projects/programmes, Core Indicator 2 is mandatory for adaptation-focused projects/programmes, and both indicators are mandatory for cross-cutting projects/programmes. If relevant to the project/programme, Core Indicator 3 and/or Core Indicator 4 should also be monitored.

In addition to these four core indicators, and as listed in the table below, a series of supplementary indicators, which are linked to specific results areas, enable progress monitoring at a more granular level, including tracking contributions to each of the GCF's results areas. Projects/programmes are recommended to monitor **all supplementary indicators that are relevant to their intended results.** As far as possible, projects/programmes should monitor any supplementary indicators that are linked to the GCF results area/s that the project/programme is aligned with.

IRMF indicators		**GCF suggested results areas**
Core 1	GHG emissions reduced, avoided or removed / sequestered	MRA1-4

1.1	Annual energy savings (MWh)	MRA3
1.2	Installed energy storage capacity (MWh)	MRA1
1.3	Installed renewable energy capacity (MW)	MRA1
1.4	Renewable energy generated (MWh)	MRA1
1.5	Improved low-emission vehicle fuel economy (net change in fuel/energy consumption per kilometre travelled)	MRA2

Core 2	Direct and indirect beneficiaries reached	ARA1-4
2.1	Beneficiaries (female/male) adopting improved and/or new climate-resilient livelihood options (number of individuals)	ARA1
2.2	Beneficiaries (female/male) with improved food security (number of individuals)	ARA2
2.3	Beneficiaries (female/male) with more climate-resilient water security (number of individuals)	ARA2
2.4	Beneficiaries (female/male) covered by new or improved early warning systems (number of individuals)	ARA1-4
2.5	Beneficiaries (female/male) adopting innovations that strengthen climate change resilience (number of individuals)	ARA1-4
2.6	Beneficiaries (female/male) living in buildings that have increased resilience against climate hazards (number of individuals)	ARA3
2.7	Change in expected losses of lives due to the impact of extreme climate-related disasters in the geographic area of the GCF intervention (number of individuals)	ARA1-3

Core 3	Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions	MRA1-4 ARA1-4
3.1	Change in expected losses of economic assets due to the impact of extreme climate-related disasters in the geographic area of the GCF intervention (value in USD)	ARA1-3

Core 4	Hectares of natural resource areas brought under improved low-emission and/or climate-resilient management practices	ARA1-2
4.1	Hectares of terrestrial forest, terrestrial non-forest, freshwater and coastal-marine areas brought under restoration and/or improved ecosystems	ARA4
4.2	Number of livestock brought under sustainable management practices	ARA1, 2, 4
4.3	Tonnes of fish stock brought under sustainable management practices	ARA1, 2, 4

Annex 2 presents the IRMF's indicator reference sheets. These sheets define the methodologies that AEs are recommended to apply to measure progress against all the above indicators. However, for some indicators – particularly Core Indicator 1 and its supplementary indicators – there is a multitude of well-established, rigorous methodologies that can be applied to measure (e.g.) emissions reductions within different sectors. In these instances, AEs should identify the methodology that they deem most appropriate to their context. However, these methodologies should first be confirmed in close consultation with the GCF Secretariat.

It is important to note that the value of the Core Indicator is <u>not</u> the sum of supplementary indicators. Supplementary indicators cannot be 'aggregated up' to automatically 'add up to' a particular Core Indicator. This is because supplementary indicators usually track metrics and/or have units of analysis that – while related – are different to that of the Core Indicator. This rule also applies to Core Indicator 2, even though its supplementary indicators use the same unit of analysis (number of individuals). This is because Core Indicator 2 tracks both direct and indirect beneficiaries for a project/programme disaggregated by results area, while its supplementary indicators count individual beneficiaries targeted for a particular intervention under a results area. Consequently, adding up the supplementary indicators will not result in the total number of beneficiaries reported under Core Indicator 2.

Baselines should be developed according to the guidance found in this handbook's indicator reference sheets (Annex 2), and – where relevant – in line with the specific indicator methodology that has been agreed to between the AE and the GCF Secretariat. Similarly, mid-term and end of implementation targets for these indicators should be derived using the agreed upon indicator methodology and its underlying assumptions and calculations. Project/programmes with a mitigation focus are also required to develop total lifespan projections for Core Indicator 1 (*GHG emissions reduced, avoided or removed/sequestered*) and, if relevant, supplementary indicator 1.4 (renewable energy generated). The total lifespan of the project/programme is defined as the maximum number of years over which the mitigation impacts of the project/programme are expected to be effective.

STAKEHOLDER	IRMF RESPONSIBILITIES: SELECTING MITIGATION AND ADAPTATION INDICATORS, SETTING BASELINES & TARGETS
Accredited Entities (AEs)	• Select **all relevant core indicators**; this should include at least Core 1 (emission reductions) **or** Core 2 (beneficiaries) • Select **all relevant supplementary indicators**, based on the project/programme's GCF results area/s • Lead the baseline development and target setting process
GCF Secretariat	• Ensure all relevant indicators have been selected • Clear indicator-specific methodologies, where relevant • Initial clearance of baselines and targets, as part of funding proposal • Clear any subsequent amendments
Executing Entities	• Participate in baseline development and target setting
Beneficiaries / Project stakeholders	
National governments and agencies	

GO TO INDICATOR REFERENCE SHEETS

4.7. Enabling environment: selecting indicators, setting baselines and targets

In line with the GCF Investment Framework and criteria, AEs are encouraged to use the TOC and relevant sections of the funding proposal to detail how a project/programme will support and/or strengthen the enabling environment which it seeks to affect. Based on that proposed approach, projects/programmes should monitor any of the IRMF's four enabling environment indicators, listed in the table below, that are relevant to their intended results. As many indicators as possible should be selected but – at a minimum – **at least two** indicators should be selected to monitor and report against.

Core Indicator 5	Degree to which GCF projects/programmes contribute to strengthening institutional and regulatory frameworks for low-emission climate-resilient development pathways in a country-driven manner
Core Indicator 6	Degree to which GCF projects/programmes contribute to technology deployment, dissemination, development or transfer and innovation
Core Indicator 7	Degree to which GCF projects/programmes contribute to market development / transformation at the sectoral, local or national level
Core Indicator 8	Degree to which GCF projects/programmes contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards

Enabling environment indicators require both qualitative baselines and targets, **and** a quantitative, scorecard-derived baseline. Quantitative targets are not required.

As with the approach for paradigm shift, AEs should develop a qualitative baseline for each of their selected enabling environment indicators. This narrative baseline should describe the current context within which the project/programme will be working. **Qualitative targets should also be developed**, hypothesising the change to the enabling environment that the project/programme will support, including how the project/programme will specifically contribute to that change. Given the importance of context to enabling environments, these baseline and target statements should clearly identify the unit of analysis being used. For example, for a project/programme operating in a small country, the unit of analysis could be country-wide enabling environments, but for large countries it may be more appropriate to use a city- or state-wide enabling environment as the unit of analysis.

Quantitative baselines should then be developed for each selected indicator. Each indicator has a corresponding scorecard (see annex 3) based on a series of statements that break down the indicator, allowing for a more granular definition of the enabling environment being measured. AEs should complete the scorecard and provide a self-assessment of the current (baseline) 'scores' for each of their selected indicators.

While this exercise can be conducted by the AE alone, it is recommended that other stakeholders, as described below, be involved (particularly beneficiaries, and national government and agencies) to ensure baseline 'scores' are informed by multiple perspectives.

STAKEHOLDER	IRMF RESPONSIBILITIES: SELECTING ENABLING ENVIRONMENT INDICATORS,

	SETTING BASELINES & TARGETS
Accredited Entities (AEs)	• Select **all relevant** enabling environment indicators to monitor and report against (**at least two** should be selected) • Lead the baseline development and target setting process
GCF Secretariat	• Ensure all relevant indicators have been selected • Initial clearance of baselines and targets, as part of funding proposal • Clearance of any subsequent amendments
Executing Entities	• Participation in baseline development and target setting
Beneficiaries / Project stakeholders	• Participation in baseline development and target setting
National governments and agencies	• Participation in baseline development and target setting

GO TO GUIDANCE ON MEASURING ENABLING ENVIRONMENT INDICATORS

GO TO ENABLING ENVIRONMENT SCORECARDS

4.8. Developing the logical framework (logframe)

Funding proposals are required to include logframe that incorporate all the IRMF indicators selected for the project/programme.

However, AEs are also encouraged to include and report against their own project/programme level indicators not covered by the IRMF, including any indicators that will track co-benefits, particularly those relating to economic, environmental, and social and gender co-benefits. Co-benefits are defined by the GCF as "*Additional or secondary benefits that occur as a result of mitigation or adaptation activities. They appear as auxiliary or ancillary effects while the central objective is either a mitigation or adaptation intervention*". Climate change interventions understandably focus on mitigation and adaptation benefits. However, most climate change interventions will *also* have broader socio-economic, environmental and/or developmental 'co-benefits'.

Logframes should address all monitoring and reporting requirements of the IRMF as well as provide a basis against which AEs and the GCF Secretariat can monitor project/programme progress. All logframes should incorporate the following aspects:

- The logframe should **reflect the logic of the funding proposal's TOC**. This should include reference to paradigm shift, whether through results statements or indicators. The logframe should **explicitly incorporate the selected IRMF indicators** (mitigation and adaptation, enabling environments). These indicators should be clearly linked to – and provide the basis for measuring – appropriate, relevant results statements.

- The logframe should confirm the **monitoring methodologies** (**means of verification)** for each of the selected IRMF indicators. Methodologies should be in line with IRMF guidance and should be agreed to with the GCF Secretariat prior to finalising the logframe.
- **Baseline values, mid-term targets and end-of-implementation targets** should be incorporated for each IRMF indicator. Baseline and target values should be developed according to the indicator methodology agreed to with the GCF Secretariat (see next section for full guidance on developing baselines and targets).
- For each indicator, **assumptions** should be identified, describing the external factors beyond the project/programme's control that could influence progress against the indicator as well as relevant data sources and methodologies applied for estimating baseline and target values.
- AEs are required to develop and include **additional project/programme-specific (non-IRMF) indicators**, including indicators that can be used to measure project/programme specific **co-benefits** such as those related to biodiversity, social and gender inclusion, poverty alleviation, air quality etc. Wherever possible, the logframe and its constituent indicators should be **aligned with – and feed into – existing national monitoring processes**. To ensure this, relevant national governments and agencies should be involved in the development of the logframe.

The table below, describes the roles and responsibilities of different actors with respect to the development of the logframe:

STAKEHOLDER	IRMF RESPONSIBILITIES: DEVELOPING THE PROJECT'S LOGFRAMEWORK
Accredited Entities (AEs)	• Lead the development of the logframe • Ensure alignment between logframe and IRMF • Submission of logframe to GCF Secretariat, as part of funding proposal • Coordination of any subsequent reviews and amendments to logframe
Executing Entities	• Participation in development of logframe, including methodology selection and allocation of responsibilities
GCF Secretariat	• Undertake initial review and provide feedback to AEs on draft logframe, if necessary • Confirmation of alignment between logframe and IRMF • Initial clearance of proposed indicator methodologies • Initial clearance of logframe, as part of funding proposal • Clearance of any subsequent amendments to logframe
Beneficiaries / Project stakeholders	• Participation in development of logframe, including methodology selection and allocation of responsibilities
National governments and agencies	• Advise on potential alignment with existing national monitoring strategies, processes and indicators • Participation in development of logframe, including methodology selection and allocation of responsibilities

GO TO INDICATOR REFERENCE SHEETS

5. Monitoring, reporting, and communicating results

About this chapter
Outlines all IRMF-related reporting requirements, with additional guidance on identifying and sharing knowledge and lessons of relevance to broader audiences.

5.1. Annual Performance Reports

Annual Performance Reports (APRs) are the primary channel through which AEs formally report on the progress of GCF projects/programmes. They are used to track and report progress on a project/programme's finances, management, workplans, activities, environmental and social safeguards, gender action plans, and – of course – all IRMF-related data and requirements. GCF projects/programmes are required to complete and submit APRs online via the Portfolio Performance Management System (PPMS) every year during the project implementation period. Unless otherwise specified in the AE's legal agreements with the GCF (i.e. funded activity agreement (FAA)), APRs should be submitted by 1st March every year. An APR template is provided by the GCF Secretariat, supported by detailed step-by-step guidance notes.

For IRMF-related reporting within the APR, AEs must at least provide:

- A **narrative progress report** that provides a self-assessment of the project/programme's performance during the previous year. The narrative should discuss the project/programme's overall progress against the intended objectives, and should highlight any challenges, good practices and/or lessons learnt. The analysis should draw on quantitative and qualitative data gathered through monitoring of the agreed to IRMF **mitigation and adaptation indicators as well as project/programme-specific indicators**. Additionally, in this section, AEs should articulate whether – and if so, how – progress has been made towards **paradigm shift** and/or the selected IRMF **enabling environment indicators**. Lastly, any discussion around paradigm shift and enabling environments does *not* need to be supported by scorecard-based assessments, rather AEs should provide a narrative-based overview of progress here.
- **Quantitative data** against all the selected **IRMF mitigation and adaptation indicators (core and supplementary)**. Actual (not projected) data should be provided against each indicator, including the date on which data was collected. The APR template will be pre-populated with the agreed baseline data and end-of-project target data, and – if previous APRs have been completed – data from each preceding year. AEs should confirm that baselines, targets and previously reported data are still correct.
- Where **project/programme-specific indicators** (including **co-benefit indicators**) have been included in the logframe, AEs should report progress against these within the APR.
- Depending on how the operating context evolves, AEs may need to amend targets or change the originally agreed to IRMF indicators. While APRs may be used to indicate these changes, any modifications or revisions to the project/programme logframe require a formal notification from AEs and clearance by the Secretariat which would require an amendment to the FAA to accommodate the proposed changes.

As noted above, scorecard-based assessments of paradigm shift and enabling environments are not mandatory within APRs and are only *required* during interim and final evaluations. However, AEs may choose to **self-assess progress against paradigm shift and/or enabling environment scorecards** on a more regular basis. If more regular self-assessments of paradigm shift and

enabling environments are undertaken, they should be included within the APR narrative report, or as an addendum to the APR.

GO TO APR TEMPLATE on PPMS 

5.2. Monitoring and reporting: paradigm shift

AEs will provide a brief qualitative report of the project's/programme's contribution to paradigm shift in every APR. However, the most substantive assessments will be undertaken **twice during implementation**: as part of the interim evaluation and as part of the final evaluation. In both instances, the assessment of paradigm shift is carried out by the independent evaluator/s, although – depending on the evaluation methodology – this may be a participative assessment process that closely involves the project/programme's key stakeholders.

Taking into account the paradigm shift baselines established within the funding proposal, evaluators will assess progress across each of the three paradigm shift dimensions (scale, replicability, sustainability). Assessments will be scorecard-based, and – using a three-point scale – will identify the extent of change that is evident. All 'scores' should be supported by a qualitative, narrative assessment. Evaluators should draw on a range of evidentiary sources when making their assessment, including project documentation (such as APRs), stakeholder interviews, and secondary data that can illustrate broader changes, such as national statistics, media reports and reports from other organisations.

While the baselines and anticipated contributions identified in the original funding proposal will provide the basis for the assessment, evaluators will also need to review evidence of unanticipated changes and unanticipated contributions across all dimensions. Given the complex, dynamic nature of paradigm shift, it is highly possible that unexpected progress may occur due to unforeseen circumstances or new opportunities arising.

As noted previously, the goal of assessing paradigm shift is to support **learning**, therefore assessments should not only record evidence of paradigm shift but should also explain *why* any shift has been achieved and *how* the GCF project/programme specifically contributed to that change.

Although the assessment of paradigm shift is only *required* twice during the implementation period, AEs can of course choose to self-assess progress on a more regular basis. If an AE / investment monitoring framework requires more regular self-assessments of paradigm shift, these self-assessments can be reported to the GCF Secretariat as part of the annual APR process.

The GCF Secretariat will review paradigm shift assessments on an ongoing basis. This will include qualitative analyses of the narrative assessments, and collation of each GCF project/programme's paradigm shift 'scores'. Given the highly context-specific nature of paradigm shift, most emphasis will be placed on qualitative (as opposed to quantitative) analysis at the portfolio level.

STAKEHOLDER	IRMF RESPONSIBILITIES: MONITORING & REPORTING PARADIGM SHIFT
Accredited Entities (AEs)	• Provide qualitative (narrative) progress within every APR

	• Ensure TORs for interim and final evaluations include requirement to undertake paradigm shift scorecard assessment • Commission and oversee interim and final evaluations, in line with GCF evaluation policy • Participation in interim and final evaluation processes
Executing Entities	• Participation in interim and final evaluation processes
GCF Secretariat	• Review and clearance of interim and final evaluations, including paradigm shift scorecard assessments • Portfolio-wide analysis of paradigm shift scorecard data • Reporting of paradigm shift scorecard data to GCF Board where relevant
Evaluators	• Undertake paradigm shift scorecard assessment, as part of broader evaluation process (interim and final evaluations)
Beneficiaries / Project stakeholders	• Participation in interim and final evaluation processes
National governments and agencies	• Participation in interim and final evaluation processes

GO TO PARADIGM SHIFT SCORECARDS

5.3. Monitoring and reporting: mitigation and adaptation

For any GCF project/programme, all selected mitigation and adaption indicators (core and supplementary) should be monitored according to the guidance provided within this handbook's indicator reference sheets, and – where relevant – in line with the specific indicator methodologies that have been agreed to between the AE and the GCF Secretariat. Progress against all indicators should be reported annually as part of the APR process. While the AE may choose to lead the day-to-day monitoring of all indicators, monitoring responsibilities can be delegated to other executing entities, if appropriate.

Interim and final evaluations should be used to validate the data being generated through a GCF project/programme's monitoring approach. As a minimum, the evaluations should provide assurance / validation that the agreed monitoring methodologies and processes are being applied correctly and are generating robust data.

STAKEHOLDER	IRMF RESPONSIBILITIES: MONITORING & REPORTING MITIGATION AND ADAPTATION
Accredited Entities (AEs)	• Oversight of monitoring implementation, including delegation of specific monitoring responsibilities to executing entities, if required • Lead the preparation and submission of APRs to GCF Secretariat • Ensure TORs for interim and final evaluations include a requirement to validate monitoring processes
Executing Entities	• Lead the monitoring of specific indicators, as required by AE • Participation in other monitoring processes and annual reporting
GCF Secretariat	• Review and clearance of APRs, including indicator-level reporting • Portfolio-wide aggregation and analysis of indicator-level data • Reporting of aggregated data on GCF website, and to GCF Board
Evaluators	• Provide assurance / validation that agreed monitoring methodologies and processes are being applied, and are generating robust data (interim and final evaluations)
Beneficiaries / Project stakeholders	• Participation in ongoing monitoring processes and annual reporting, as required
National governments and agencies	• Participation in ongoing monitoring processes and annual reporting, as required

GO TO INDICATOR REFERENCE SHEETS

GO TO APR TEMPLATE ON PPMS

5.4. Monitoring and reporting: enabling environment

AEs will provide a brief qualitative report of their progress against their selected enabling environment indicators in every APR. However, the most substantive assessments will be undertaken **twice during implementation**: first, as part of the interim evaluation and lastly, as part of the final evaluation. In both instances, the assessment is carried out by the evaluator/s, although – depending on the evaluation methodology – this may be a participative assessment process that closely involves the project/programme's key stakeholders.

Taking into account the baselines established within the funding proposal, evaluators will assess progress against each of the project/programme's selected enabling environment indicators. Each indicator has a corresponding scorecard (see annex 3) based on a series of elements that break down the indicator, allowing for a more granular definition of the enabling environment being measured.

Evaluators will assess progress against each of these scorecard elements against a three-point scale, with all 'scores' to be supported by a qualitative, narrative assessment. Once all elements have been assessed and scored, an overall indicator score is calculated.

Evaluators should draw on a range of evidence sources when making their assessment including project/programme documentation (such as APRs), stakeholder interviews, and secondary data that can illustrate broader changes, such as national statistics, media reports and reports from other organisations. While the baselines and anticipated contributions identified in a project/programme's funding proposal will provide the basis for the assessment, evaluators will also need to review evidence of unanticipated changes and unanticipated contributions. It is possible that unexpected changes to the enabling environment may have arisen due to unforeseen circumstances or new opportunities arising.

Although the measurement of enabling environment indicators is only *required* twice during the project/programme period, AEs can of course choose to self-assess progress on a more regular basis. If an AE / investment monitoring framework requires more regular self-assessments of enabling environment indicators, these self-assessments can be reported to the GCF Secretariat as part of the annual APR process.

The GCF Secretariat will review enabling environment assessments on an ongoing basis. This will include qualitative analyses of the narrative assessments, and collation of each project/programme's indicator-level 'scores'. Given the context-specificity of enabling environments, more emphasis will be placed on qualitative (as opposed to quantitative) analysis at the portfolio level.

STAKEHOLDER	IRMF RESPONSIBILITIES: MONITORING & REPORTING ENABLING ENVIRONMENT
Accredited Entities (AEs)	• Provide qualitative self-assessment within every APR • Ensure TORs for interim and final evaluations include requirement to undertake scorecard assessments for all selected enabling environment indicators • Commission and oversee interim and final evaluations, in line with GCF evaluation policy • Participation in interim and final evaluation processes
Executing Entities	• Participation in interim and final evaluation processes
GCF Secretariat	• Review and clearance of interim and final evaluations, including enabling environment scorecard assessments • Portfolio-wide aggregation and analysis of enabling environment scorecard data • Reporting of aggregated enabling environment scorecard data on GCF website, and to GCF Board
Evaluators	• Undertake enabling environment scorecard assessments, as part of broader evaluation process (interim and final evaluations)
Beneficiaries / Project stakeholders	• Participation in interim and final evaluation processes
National governments and agencies	• Participation in interim and final evaluation processes

GO TO ENABLING ENVIRONMENT SCORECARDS

5.5. Completion Report

The completion report uses a near-identical template and review process as of APRs. The main difference is that project/programmes with a mitigation focus are required to provide data projections against Core Indicator 1 (*GHG emissions reduced, avoided or removed/sequestered*) and, if relevant, supplementary indicator 1.4 (renewable energy generated).

As with APRs, any project/programme that monitors Core Indicator 1 should confirm in the completion report the actual GHG emissions reduced, avoided or removed/sequestered during the project implementation period. However, within the completion report these projects/programmes should also confirm or revise the **projected emissions reductions over the lifespan[3] of the intervention**, as was originally defined in the Funding Proposal. For example, if the project/programme supported a solar farm with a projected lifespan of 30 years, the completion report should confirm the projected emission reductions over that 30-year period. All assumptions used to derive this estimate should be clearly stated within the completion report and a supporting document with calculations should be shared with GCF Secretariat.

5.6. Portfolio-level reporting

The APRs serve as the means through which the GCF Secretariat monitors the progress of projects/programmes under implementation. Where there are issues and/or challenges, AEs are engaged in order to obtain additional information and clarifications as required, as well as to launch adaptive management measures as needed. The Secretariat also ensures that APR data is quality assured. Once this step is completed, all (IRMF-related) data is aggregated by the Secretariat, with this aggregated data providing the foundation for the GCF Secretariat's portfolio-level analysis and reporting through the results tracking tool (RTT). All portfolio-level data, analysis and performance reporting are continuously updated on the GCF website and reported to the GCF Board at every Board meeting. The GCF Secretariat uses IRMF data to analyse and report on whole-of-portfolio performance, but analysis can also be undertaken by GCF results area, geographical region, technology, theme, and so on.

5.7. Adaptive management

The IRMF has been expressly developed to support both accountability and learning. Consequently, IRMF-related data can and should be used to support adaptive management. The combination of quantitative and context-specific qualitative data generated through the application of the IRMF helps to build understanding of whether, how and why results are (or are not) being achieved. Particularly important here are the context-specific appraisals afforded by the enabling environment and paradigm shift assessments, which support a deeper analysis than would be possible with quantitative indicators alone.

A project/programme's approach to adaptive management will be defined by the AEs' own institutional procedures. However, it is recommended that processes be established to ensure that IRMF-related data and analysis[4] is systematically included in – for example – an AE's quarterly project reviews, annual planning workshops, and other decision-making channels. Aside from helping to inform day-to-day project/programme management, this will also help to identify and justify any project/programme change requests that an AE needs to make to the GCF Secretariat.

[3] The total lifespan is defined as the maximum number of years of over which the impacts of the investment are expected to be effective.
[4] And any project/programme-specific terms that form part of the AE's legal agreements with the GCF

5.8. Communicating results, knowledge and lessons learned to broader audiences

The GCF aspires to be a knowledge hub that can support the scaling-up of paradigm shifting, climate-resilient investments globally. To support that ambition, the GCF Secretariat is continuously scanning its portfolio for relevant knowledge, lessons learned, and case studies generated by individual GCF-funded projects and programmes.

AEs are encouraged to contribute to this process by sharing learnings in the APRs, and through other means that could be of value beyond their immediate project/programme, and beyond the closest stakeholders that they work with. By virtue of applying the IRMF and generating the required monitoring and evaluations data, AEs will invariably be identifying valuable lessons and knowledge that is of broader interest. The GCF encourages AEs to share – with the GCF Secretariat but also publicly – lessons, case studies and other knowledge products that are generated by AEs during the course of the implementation of their project/programme.

STAKEHOLDER	IRMF RESPONSIBILITIES: REPORTING AND COMMUNICATING RESULTS
Accredited Entities (AEs)	• Submit APRs to the GCF Secretariat on an annual basis, to include at least: • Narrative progress report drawing on all elements of IRMF-related data • Up-to-date quantitative data against all selected IRMF mitigation and adaptation indicators • Up-to-date quantitative data against all project/programme-specific indicators including co-benefits indicators. • Submit completion reports that – if relevant – include projections against IRMF Core Indicator 1 • Use IRMF-generated data to support any project/programme change requests
GCF Secretariat	• Review and quality assure all APRs, requesting additional information and clarifications from AEs as necessary • Aggregation and analysis of all IRMF-generated data • Reporting IRMF-related data and analysis via GCF website • Reporting IRMF-related data and analysis to GCF Board and the UNFCCC

GO TO APR /COMPLETION REPORT TEMPLATE ON PPMS

6. Planning and budgeting for monitoring, evaluation and learning

About this chapter
Guidance on identifying and planning the human and financial resources required for IRMF-related activities.

6.1. Resource considerations

As part of the funding proposal development process, the AE will already have aligned the project/programme with the IRMF. Indicators will have been identified, baselines developed or in the process of being developed, and a logframe will be in place that establishes the methodologies, roles and responsibilities required to deliver the monitoring. All these details provide the foundation for developing a workplan and budget for monitoring, evaluation and learning.

Each GCF project/programme will have its own specific monitoring, evaluation and learning requirements. In turn, the required human and financial resources will vary from project to project. Several factors will help to determine the nature and level of resources that should be allocated:

- **Size of project/programme**

The budget allocated to monitoring, evaluation and learning will tend to be proportional to the size of the project/programme. According to the GCF's Evaluation Policy, the overall evaluation budget can range from 2-5 percent of the total project budget without including the cost of interim and final evaluation (as covered in AE fees). Similarly, based on best international practice, monitoring cost may range from 2-5 percent of the total project budget.

- **Location of project/programme activities**

A project/programme's geography will influence financial and time costs, with harder-to-access and geographically dispersed activities inevitably requiring more inputs to monitor. Remote and/or decentralised monitoring may help to reduce costs.

- **Institutional capacity of AEs and executing entities**

Some AEs will have significant existing institutional capacity for monitoring, evaluation and learning, including dedicated departments, specialised teams and well-embedded ICT systems that will already be capable of addressing most IRMF-related requirements. However, other AEs and executing entities such as direct access entities (DAEs) may need to develop new capabilities to meet those monitoring, evaluation and learning requirements. This may necessitate – for example – recruiting personnel, developing new systems, and institution-wide sensitisation to build awareness of the underlying concepts and processes. To help develop these capacities, the GCF has established a new dedicated funding window for DAEs under the existing Readiness and Preparatory Support Programme. (More information on this new funding window can be found in Projects & Programmes > Readiness support > Resources page of the GCF website).

- **Novelty of indicators and monitoring methodologies**

Many of the IRMF's core and supplementary indicators (and their underlying methodologies) are commonly applied by other climate finance mechanisms or are used to monitor climate

change-focused programming more broadly. Consequently, many AEs and executing entities will already have the necessary experience, systems, and processes in place to monitor some IRMF indicators. However, some IRMF indicators and methodologies will be completely new to AEs and executing entities. At least during the initial stages of a project/programme, any 'new' indicators will tend to require more resource inputs: AEs will need to familiarise themselves with the processes and may need to establish new capacities and/or systems to support monitoring. To support such capacity strengthening efforts and as guided by its Board through decision B.29/01, the GCF has launched a new funding window dedicated to Direct Access Entities (DAEs) for their implementation of the IRMF. More information on this funding window is available on the GCF website.

- **Extent of participation envisaged**

IRMF-related processes will invariably benefit from the close participation of a project/programme's core stakeholder groups. This can go well beyond one-off surveys and interviews, with – for example – beneficiaries contributing to the design of logframes, being part of evaluation reference groups, and supporting the actual day-to-day monitoring processes. This closer involvement will help project/programmes to develop a deeper understanding of project/programme performance (based on multiple perspectives) and can support the generation of learning and knowledge that is of value to – and actionable by – all audiences and stakeholders.

Participative approaches will be particularly valuable for the assessments of project/programme's contribution to paradigm shift and the enabling environment indicators. As a minimum, these assessments will take place as part of the interim and final evaluations. Consequently, interim and final evaluation budgets should include allowances for participative processes such as assessment workshops and focus group discussions. However – and although not mandatory – AEs may choose to monitor paradigm shift and enabling environment indicators more frequently, as this could support project/programme decision-making and adaptive management. Where this is the case, resources may need to be allocated to support participative processes (workshops, focus groups, facilitation, travel), according to the AE's monitoring approach.

6.2. Validating the logframe and monitoring approach

Once a project/programme is approved by the Board, the initial workplan should be reviewed and validated by the AE. The proposal development process may have resulted in many changes to the project/programme's original strategy, including the fact that some co-financiers may have requested changes, the anticipated funding profile may be different, and some baseline data may still be missing. After the negotiation, execution and the effectiveness of an FAA, which marks the beginning of implementation, the project/programme's inception phase should be used to review whether the logframe needs to be amended so as to accommodate any changes to the broader project/programme. The GCF Secretariat, through the review of inception reports, should be engaged for discussions, particularly if substantive changes are required to the monitoring approach (e.g. changes to IRMF indicators, budget alterations, etc.). In such cases that significant changes are made, FAA amendment may be required.

Where participative monitoring, evaluation and learning processes are envisaged, the project/programme's inception phase should also be used to re-engage key stakeholders and agree on the nature and extent of their ongoing participation in IRMF-related processes.

STAKEHOLDER	IRMF RESPONSIBILITIES: VALIDATING THE LOGFRAME AND MONITORING APPROACH
Accredited Entities (AEs)	• Review and validate the initially proposed logframe, workplan and budget (amending where necessary)
Executing entities	• Participation in inception or validation processes
GCF Secretariat	• Review and clearance of any amendments to the initially proposed logframe, workplan, implementation arrangements, and budget
Beneficiaries / Project stakeholders	• Participation in inception or validation processes
National governments and agencies	• Participation in inception or validation processes

7. Planning and managing an evaluation[5]

About this chapter
Outlines IRMF-related evaluation requirements, including roles and responsibilities for AEs, the GCF Secretariat, and evaluators.

7.1. Evaluation requirements

AEs are required to budget for and commission **interim and final evaluations** for each of their GCF-supported project/programmes. These evaluations should be planned, resourced and managed according to the requirements of the GCF evaluation policy, the GCF monitoring and accountability framework, and according to the specific evaluative and learning needs of the projects/programmes. AEs should also ensure that all interim and final evaluations of GCF-supported project/programmes incorporate the following requirements:

- **Scorecard assessment of progress towards paradigm shift**
- **Scorecard assessment of progress against enabling environment indicators**
- **Assurance / validation that agreed IRMF-related monitoring methodologies and processes are being applied, and are generating robust data**

7.2. Evaluation oversight

Evaluation oversight should be in line with the GCF evaluation policy, but it is recommended that evaluations should be supported by an Evaluation Reference Group or similar. These groups should be used to ensure that evaluations address the information and decision-making needs of project/programme stakeholders, and to advise on evaluation design and delivery. Groups should include evaluation expertise, but also representatives from the main project/programme stakeholder groups, for example beneficiaries, national government, private and public sector institutions, and the AE itself. Consideration should also be given to inviting the GCF Secretariat and/or other project/programme funders.

Reference groups will typically meet to review and advise on key evaluation milestones such as draft and final terms of reference (TOR), inception reports, preliminary findings, draft reports and final reports. Again though, the AEs' own evaluation policy will define whether and how reference groups should be engaged during each evaluation process.

7.3. Developing the evaluation TOR

Terms of reference (TOR) should be developed for every interim and final evaluation. As a minimum, the TOR should describe the operating **context**, provide **background** on the project/programme (including its TOC), and should define evaluation **objectives**, **scope**, **deliverables** and **timeframe**. In line with the GCF's evaluation policy, all evaluations should apply the following evaluation **criteria**:

- Relevance, effectiveness, efficiency, impact and sustainability of projects and programmes

[5] Please note that this section provides preliminary guidance and further guidance will be developed as part of the Evaluation Standards and Evaluation Guidance.

- Coherence in climate finance delivery with other multilateral entities
- Gender equity
- Country ownership of projects and programmes
- Innovativeness in result areas
- Replication and scalability as covered in the scorecard assessment of progress towards paradigm shift
- Unexpected results, both positive and negative

TORs can also set key evaluations **questions** to be addressed, but evaluators should have flexibility to refine these during the evaluation's inception phase.

The TOR can also be used to define and prescribe the **methodology** to be applied during the evaluation, although an equally valid approach is for the TOR to request that the evaluator propose their own methodology. In either case, AEs and/or evaluators have some freedom to define evaluation methodologies that they deem most appropriate to the design and context of each project/programme. As a minimum though, the GCF requires any methodology to involve triangulation of data. To ensure alignment with the IRMF the TOR should also require the evaluation to undertake the following processes:

- **Scorecard assessment of progress towards paradigm shift**
- **Scorecard assessment of progress against enabling environment indicators**
- **Assurance / validation that agreed IRMF-related monitoring methodologies and processes are being applied, and are generating robust data**

The GCF evaluation policy also encourages the participation of relevant stakeholders in evaluative processes. Consequently, the TOR should identify which stakeholders will be involved, and the nature of their involvement in the evaluation.

The GCF Secretariat should be included in any TOR consultation process and should be invited to provide inputs, whether as part of an Evaluation Reference Group, or through direct communications with the AE.

7.4. Evaluation management

Evaluations should be managed according to the GCF evaluation policy. However, to ensure clear lines of communication it is recommended that a single point-of-contact be established within the AE to line manage the evaluators, and to ensure evaluators have full access to the necessary documentation, data and stakeholders. The AE's point-of-contact can be advised and supported by an Evaluation Reference Group (or similar), and/or by the AE's own evaluation department, if relevant.

7.5. GCF Secretariat-led evaluations

From time-to-time the GCF Secretariat and/or the GCF Independent Evaluation Unit will commission additional evaluations. Rather than focus exclusively on individual project/programmes, these will tend to be portfolio-level evaluations that explore specific themes, programmatic approaches or geographical regions. These portfolio-level evaluations will

sometimes require individual project/programmes to participate in evaluative processes that are entirely separate from the 'standard', project/programme-level interim and final evaluations. For example, a project/programme may be selected to be part of an evaluation sample, which may in turn involve a relatively rigorous process that is similar in scope and effort to the standard interim and final evaluations. In other instances, the involvement may be far lighter, perhaps just requiring a project/programme's management team to participate in one-off interviews or surveys.

When planning and delivering these evaluations, the GCF Secretariat will aim to minimise any additional burden on individual project/programmes. Where the substantive involvement of an individual project/programme is anticipated – for example through a detailed case study involving multiple interviews and focus groups – the GCF Secretariat will ensure that the relevant AE is closely involved in the TOR development process. This will help to establish expectations and roles, and will help to define whether the AE will require any additional resources to support the evaluation.

STAKEHOLDER	IRMF RESPONSIBILITIES: PLANNING AND MANAGING EVALUATIONS
Accredited Entities (AEs)	• Lead the development of TOR for interim and final evaluations, ensuring that all IRMF-related requirements (and those within legal agreements between the AE and the GCF) are incorporated • Consult and invite inputs on TOR from GCF Secretariat • Commission and manage interim and final evaluations, including line management of evaluators • Submit evaluation reports to GCF Secretariat
Executing entities	• Participation in evaluation process, according to agreed evaluation methodology and/or AE's evaluation policy
GCF Secretariat	• Provide inputs to draft TOR for interim and final evaluations • Inform AEs of upcoming GCF portfolio-level evaluations that may require participation of specific project/programmes • Where the substantive involvement of a project/programme is anticipated in a GCF portfolio-level evaluation, ensure that the relevant AEs are involved in the TOR consultation process

Evaluators	• Undertake evaluations according to TOR, including (but not limited to):
	  • Scorecard assessment of paradigm shift
	  • Scorecard assessment of progress against enabling environment indicators
	  • Assurance / validation that agreed IRMF-related monitoring methodologies and processes are being applied, and are generating robust data
	• Submit evaluation reports to AE

Beneficiaries / Project stakeholders	• Participation in evaluation process, according to agreed evaluation methodology
National governments and agencies	• Participation in evaluation process, according to agreed evaluation methodology

GO TO PARADIGM SHIFT SCORECARDS

GO TO ENABLING ENVIRONMENT SCORECARDS

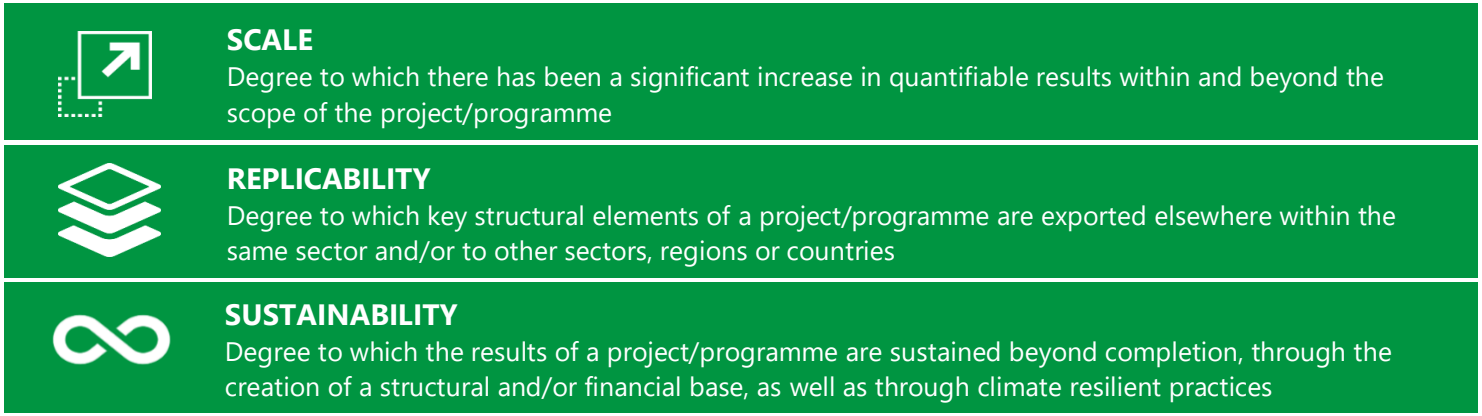
Annex 1: Paradigm shift scorecards

The GCF's investment criteria require AEs to provide a short description of a project/programme's paradigm shift potential within the funding proposal. This headline description should be based on the analysis and logic behind the project/programme's TOC. However, to ensure alignment with the IRMF AEs are encouraged to develop a deeper, more granular description of paradigm shift potential that, in turn, provides a basis for measuring progress towards paradigm shift and – crucially – the nature of the project/programme's contribution to any progress.

The IRMF's measurement of paradigm shift is based on three key principles:

- **Contribution, not attribution[6]:** The GCF's Governing Instrument states that "*the purpose of the Fund is to make a significant and ambitious contribution to the global efforts towards attaining the goals set by the international community to combat climate change.*" Accordingly, the IRMF is designed to identify contribution to paradigm shift, not attribution.
- **Learning, not accountability:** The primary purpose of assessing project/programme's contribution to paradigm shift is for learning rather than accountability. Paradigm shift will take place over and above GCF-supported activities, is most likely to occur over a long timeframe (typically beyond a GCF project/programme period) and will depend on multiple actors and externalities. Consequently, GCF project/programmes alone cannot be held accountable for whether paradigm shift takes place. At the same time, the focus on learning should identify positive and negative lessons, and should not just report on success.
- **Paradigm shift is context-specific:** Paradigm shift is context-specific, so it will not always be possible to directly compare metrics across different project/programmes. For example, the absolute number of beneficiaries cannot be used to compare the scale of paradigm shift across countries of different sizes. Measurement of paradigm shift therefore needs to be firmly based on the context in which the project/programme operates.

Building on these principles – and in particular the need for context-specificity – the IRMF's measurement of paradigm shift is based on the description and assessment of paradigm shift across three dimensions:



[6] Attribution is the idea that a change is solely due to interventions which a project/programme is undertaking while contribution is the idea that the influence of an intervention is just one of many factors which contribute to a change.

Paradigm shift will be assessed using a **scorecard-based approach**, whereby progress is reviewed towards each paradigm shift dimension against a series of pre-defined statements.

Baseline setting

To establish baselines for each paradigm shift dimension, the funding proposal should first summarise the **current (baseline) context** within which the project/programme will be working. Still using the three dimensions – and drawing on the TOC – the proposal should then describe the **potential paradigm shift** that the project/programme aims to support, including how the project/programme will contribute to that shift. These descriptions provide the project/programme with a **qualitative baseline** (current context) and a **qualitative target** (potential paradigm shift) against which progress can be assessed. The scorecard should then be used by AEs to develop **quantitative baselines** for each paradigm shift dimension. AEs should complete the scorecard, self-assessing the current (baseline) 'scores' for each dimension as part of the funding proposal. The baseline setting applies to all GCF project/programmes including multi-country projects/programmes.

Monitoring, evaluation and reporting

AEs will provide a brief qualitative report of their contribution to paradigm shift within every APR. However, the most substantive assessments will be undertaken **twice during implementation**: as part of the interim evaluation and as part of the final evaluation. In both instances, the assessment of paradigm shift is carried out by the evaluator/s, although – depending on the evaluation methodology – this may be a participative assessment process that closely involves the project/programme's key stakeholders.

Taking into account the paradigm shift baselines established within the funding proposal, evaluators will assess progress across each of the three paradigm shift dimensions (scale, replicability, sustainability). Assessments will be scorecard-based, and – against a three-point scale – will identify the extent of change that is evident. All 'scores' should be supported by a qualitative, narrative assessment. Evaluators should draw on a range of evidence sources when making their assessment including project/programme documentation (such as APRs), stakeholder interviews, and secondary data that can illustrate broader changes, such as national statistics, media reports and reports from other organisations.

While the baselines and anticipated contributions identified in a project/programme's funding proposal will provide the basis for the assessment, evaluators will also need to review evidence of unanticipated changes and unanticipated contributions across all dimensions. Given the complex, dynamic nature of paradigm change, it is highly possible that unexpected progress may occur due to unforeseen circumstances or new opportunities arising.

The focus on assessing paradigm shift is learning, so assessments should not only record evidence of paradigm shift, but should also explain *why* any shift has or has not yet occurred and *how* the project/programme is contributing or has contributed to the shift.

The GCF Secretariat will review paradigm shift assessments on an ongoing basis. This will include qualitative analysis of the narrative assessments, and collation of each project/programme's paradigm shift 'scores'. Given the highly context-specific nature of paradigm shift, most emphasis will be placed on qualitative (as opposed to quantitative) analysis at the portfolio level.

Scorecards and scoring

The following scorecards should be used by AEs to develop quantitative baselines for each paradigm shift dimension. The scorecards will also be used by evaluators during the interim and final evaluations. During all assessments (baselines, interim, final) a single score per dimension should be allocated. .

DIMENSION	Low	Medium	High
SCALE	Limited or no evidence of a pathway towards quantifiable impact in mitigation and adaptation measures beyond existing GCF intervention targets.	Clear evidence of a pathway towards increased quantifiable impact in mitigation and adaptation measures is emerging beyond project or programme targets. Evidence might include increased commitment /interest from existing project holders, or new interested parties; the development of strategies covering larger target areas/populations; the signs of better-than-expected results from GCF funded or influenced interventions.	Clear evidence of a pathway to a significant increase in quantifiable results. This evidence might include as in 'medium' score plus significant expansion of GCF funded or influenced programmes based on increased resources allocated from new or existing sources;; and or actual significant increase in measurable quantifiable results within and beyond the scope of the project/programme by a range of similar interventions/actors
REPLICABILITY	Limited or no evidence of examples of intervention models funded /supported by GCF that reduce emissions and/or increase resilience are being considered in different geographical or sectoral settings or by new organisations	Examples of intervention models which are similar or influenced by GCF funded/supported interventions are being planned and or piloted in different contexts by a one or more different organisations	Clear evidence as in 'medium' score plus the evidence that there are multiple examples of models similar to, or drawing from GCF funded interventions being extensively funded and implemented, including appropriate adaptation to meet local context
SUSTAINABILITY	No or limited evidence that the institutional structures and behavioural norms required to sustain the climate mitigation and adaptation benefits are sufficiently robust to exist without external funding and support.	Clear examples of where good practice norms and institutional structures have become embedded across a range of stakeholders and where intended outcomes are maintained without being reliant on external funding and support	Clear evidence as in 'medium' score plus the evidence that institutional structures and a range of stakeholder groups are able to lead, facilitate and support interventions that expand and further improve climate mitigation and adaptation benefits and the associated good practice norms

Annex 2: Indicator reference sheets – mitigation and adaptation

Core Indicator 1	GHG emissions reduced, avoided or removed/sequestered
Unit	Tonnes of carbon dioxide equivalent (tCO_2eq)
Definition	This indicator measures the estimated quantity of greenhouse gas (GHG) emissions in metric tonnes of carbon dioxide equivalent avoided, reduced, or sequestered through GCF-funded interventions as compared to a baseline level of GHG emissions. GHG emissions under this indicator include six greenhouse gases identified by the UNFCCC: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and sulphur hexafluoride (SF_6)[7]. GHG emissions reduced or avoided means the process of reducing or avoiding the sources of GHG emissions through GCF-funded interventions (see the non-exhaustive list of GCF-funded interventions below). GHG emissions sequestered refers to the process of increasing the carbon content of a reservoir other than the atmosphere through GCF-funded interventions. GHG emissions reduced, avoided or sequestered should be calculated as emissions from the baseline scenario less project/programme emissions and leakage emissions (where applicable). The baseline scenario under this indicator refers to the emissions trajectory that would have occurred if there had been no GCF-funded intervention. Note this should be a forward-looking counterfactual baseline scenario over a certain time period rather than a single baseline year scenario. The baseline scenario should be defined within Annex 22 (assessment of GHG emission reductions and their monitoring and reporting for mitigation and cross cutting-projects) of the funding proposal of each project/programme and be also summarized within the funding proposal. Leakage emissions refer to a change (an increase or decrease) in emissions outside of the intervention emission boundary that occurs as a result of the GCF-funded intervention. For example, an intervention to avoid deforestation in one area may shift forest harvesting and the resultant emissions to another area. A GCF-funded intervention refers to an intervention funded by GCF resources (GCF-financing) and co-financed by other organizations (co-financing), as applicable, to make up a GCF funded activity. In case where a GCF-funded intervention (as defined above) alone does not achieve GHG emission reductions but by its design is expected to attract and bring

[7] Annex A Kyoto Protocol to the UNFCCC: https://unfccc.int/sites/default/files/resource/docs/cop3/l07a01.pdf

	in an external investment or parallel financing[8] to achieve GHG emission reductions as a whole, and provided that the GCF-funded activity in question decides to monitor and report against this indicator, then the results data to be reported should be labelled explicitly as 'GHG emission reduction as a result of parallel financing'. For example, when a GCF-funded intervention focuses on strengthening the absorption capacity of an existing grid infrastructure to be able to safely accommodate the installation of additional renewable energy capacity (i.e. solar or wind) in the future, the GCF-funded intervention by its design expects to attract and bring in an external investment or parallel financing by private or public investors to build renewable energy power plants. In this case, the GCF-funded intervention alone does not lead to GHG emission reductions by itself but is attracting additional investments or parallel financing for the establishment of renewable energy power plants to achieve the GHG emission reductions as a whole. In such cases, and if the GCF-funded activity in question decides to monitor and report against this indicator, then the reported data should be clearly labelled as 'GHG emission reduction as a result of parallel financing.' Regardless of GHG emission reductions from standalone GCF funded interventions or as a result of parallel financing, the GHG emission reduction amount to be reported against this indicator should be disaggregated by type of technologies and or interventions/activities. These include but are not limited to: **MRA1: Energy access and power generation** - Renewable energy interventions including solar, wind, ocean (wave and tidal), hydropower, geothermal and bioenergy generation and access; **MRA2: Low-emission transport** - Transport interventions including fuel switch, transport mode switch, and improving transportation (e.g. vehicle) efficiency through technology; **MRA3: Buildings, cities, industries and appliances** - Energy efficiency interventions in industries and or buildings such as the increasing energy transmission and distribution efficiency, improving waste management including decommissioning process, reducing process emissions from industries (e.g. cement, steel and limestone etc.), and energy savings in buildings and appliances including via green infrastructure (instead of concrete and steel and other highly emitting hard infrastructure solutions and related value-chains of transport, installation and maintenance)[9]; **MRA4: Forestry and land use** - Agriculture, forestry and other land use (AFOLU) interventions including reducing emissions from deforestation and forest degradation, conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks, agroforestry, cropland management, grazing land management, livestock management, land use change and land use planning. - Marine and coastal ecosystem conservation, restoration or management (e.g. interventions to conserve, restore or manage seagrass / coral reefs

[8] Parallel financing according to the GCF policy on co-financing refers to the financial resources that flow alongside GCF funds to a project, but which are not required for the implementation of the GCF-funded activity, and which are earmarked for other outcomes and may be consistent with general mitigation and adaptation measures.

[9] GCF is currently preparing the methodological guidance for measuring effectiveness of ecosystem-based approaches such as green infrastructure and for analysing cost and benefits of ecosystem-based approaches with a view to mobilizing climate finance at scale for projects' pipelines of this new assets class. The guidance will be made available in due course.

	etc.). For the avoidance of attribution issues, GHG emission reductions or avoidance or carbon sequestration from policy, legal, regulatory and or capacity building interventions (e.g. the regulations in energy price incentives etc.) shall not be included under this indicator. In case where a GCF-funded project/programme involves several types of mitigation interventions (for example, a project/programme involving reforestation and renewable energy generation), a relevant methodology has to be selected or developed for each mitigation intervention and elaborated in Annex 22 of the funding proposal. The estimated target for the implementation period refers to the estimated quantity of greenhouse gas emission to be reduced, avoided or sequestered from activities implemented during the project/programme implementation period. The estimated target for the total lifespan refers to the estimated quantity of greenhouse gas emission to be reduced, avoided or sequestered during the total lifespan determined for that intervention where the total lifespan is defined as the maximum number of years of over which the impacts of the investment are expected to be effective. The total lifespan should be defined for each type of mitigation intervention and elaborated in Annex 22 of the funding proposal. During the implementation period of a project/programme, one (ex-post) value will be reported against this indicator on an annual basis based on the actual emission reduction, avoidance or sequestration achieved. The value to be reported annually will include both emission reduction from activities implemented during the reporting period as well as activities which were implemented during the previous annual reporting periods but are still achieving ongoing effects (emission reduction, avoidance and or sequestration).
Suggested result areas	MRA 1: Energy generation and access MRA 2: Low-emission transport MRA 3: Buildings, cities, industries and appliances MRA 4: Forests and land use
Disaggregation	• By result area • By greenhouse gas: (CO_2, CH_4, N_2O, PFCs, HFCs, and SF_6). • By category of activities or technologies: hydropower, solar, ocean, geothermal, wind, and bioenergy; land use types or results of changes from one type to another By country in case of multi-country projects/programmes • By GCF-funded investments vs. GHG emission reductions as a result of parallel financing
Methodology	Annex 22 of the GCF funding proposal requires any GCF investment that targets emission reductions to clearly describe the methodology(-ies) applied for developing the emissions baseline scenario, additionality and emission reductions and for monitoring the investment's ongoing emissions reductions. Consequently, progress against Core Indicator 1 should be monitored using the methodology (-

	ies) that was defined and agreed within Annex 22 of the investment's funding proposal. The methodology should either be an established methodology or – only where necessary – a project-specific methodology. In both instances, all methodological approaches, assumptions and calculations (including baseline scenarios and emissions factors) should be clearly documented. Essentially, the methodology and monitoring approach should be sufficiently transparent and provides details to allow independent replication of the project/programme's emissions reductions calculations. The Secretariat may provide additional guidance on the selection and application of methodologies while taking into consideration project and country-specific conditions. While projects/programmes may develop a project-specific methodology, most of them will be able to adopt an existing, peer-reviewed methodology. Examples of existing methodologies and tools that may be applied include, but are not limited to the Clean Development Mechanism (CDM) Methodologies, new methodologies to be developed under Article 6.4of the Paris Agreement, bilateral approaches such as the Joint Crediting Mechanism (JCM), the Gold Standard, the IFI TWG methodologies, the Verified Carbon Standard (VCS) and – of particular relevance to GCF Mitigation Results Area 4 (Forests and Land Use) – the Food and Agriculture Organisation's EX-Ante Carbon Balance Tool (EX-ACT) and Forest Carbon Partnership Facility (FCPF) - Carbon Fund Methodological Framework. Care must be taken, when using EX-ACT, to use locally-appropriate, technically-appropriate and conservative assumptions, and to ensure that the activities selected in the tool match those described in the funding proposal.
Data Sources	Dependent on agreed upon GHG accounting methodology(ies).
Baseline and targets	The baseline scenario is a reference case for the intervention in question and is a hypothetical description of what would have occurred without the GCF-funded intervention. It should usually be based on one of the established GHG accounting methodologies. The baseline value (i.e. emission reduction value at the start of the implementation period) against this indicator should be zero for all projects/programmes as this indicator measures the difference in GHG emissions or removal between the baseline (counterfactual) scenario and the actual GCF-funded intervention scenario. As part of the funding proposal, three target (ex-ante) values will be reported against this indicator; 1) an estimated target at the mid-point of the project/programme implementation period; 2) an estimated target at the end of the implementation period; and 3) an estimated target for the total project/programme lifespan.
Frequency	A project/programme selecting this indicator will be required to report annually during the implementation period through annual performance reports (APRs) and project completion report (PCR). Depending on the type and scale of interventions, the actual emissions reduced may not be measured / reportable on an annual basis. The frequency of the data collection or estimation exercises for the ex-post value therefore should be

	elaborated as part of Annex 22 of the funding proposal in case where the annual data collection/reporting cannot be performed. In such instances, annual reporting value for the year when no data collection takes place would be zero, and a multi-year actual (ex-post) result value should be reported on the APR after the data collection/estimation exercise.	
Alignment	**GCF Investment Framework**	
	Impact potential (mitigation impact): - Expected tonnes of carbon dioxide equivalent (tCO_2eq) to be reduced or avoided	
	SDGs	**Other climate finance mechanisms**
	SDG13	Standard indicator used by majority of climate finance mechanisms

Supplementary indicator 1.1	**Annual energy savings**
Unit	Megawatt-hours (MWh)
Definition	The amount of energy use (MWh) avoided per year from the established baseline. The baseline scenario refers to the existing system of energy consumption as opposed to the new system or practices introduced with the support of GCF-funded intervention.
Suggested result areas	MRA 3: Buildings, cities, industries and appliances
Disaggregation	By building, cities, industries, and residential (household) appliances
Methodology	For interventions focused on energy savings, the calculation of MWh saved is a prerequisite for the calculation and monitoring of GCF Core Indicator 1 (GHG emissions reduced, avoided or removed/ sequestered). Consequently, by monitoring GCF Core Indicator 1, energy savings interventions will already have gathered the necessary data for reporting against supplementary indicator 1.1.
Data Sources	Project/programme-level monitoring data, dependent on energy efficiency technology / process.
Baseline and targets	The baseline scenario is a reference case for the intervention in question and is a hypothetical description of what would have occurred without the GCF-funded intervention. It should be based on the investment's agreed methodology for calculation of energy savings (to be aligned the GHG accounting methodology). The baseline scenario should take into consideration the remaining lifetime of the baseline asset and the asset the user would have used in the absence of the GCF project. This indicator measures the difference in energy use between the baseline (counterfactual) scenario and the actual GCF-funded intervention scenario. Two target values should be provided in the funding proposal: 1) an estimated target at the mid-point of the project/programme implementation period; and 2) an estimated target at the end of the implementation period.
Frequency	A project/programme selecting this indicator will be required to report actual and realized energy savings annually via annual performance reports (APRs) and project completion report (PCR). Annual energy savings will be aggregated to produce cumulative energy savings during the project/programme implementation period.

Alignment	**GCF Investment Framework**	
	Impact potential (mitigation impact): - Expected decrease in energy intensity of buildings, cities, industries and appliances - Degree to which activity avoids lock-in of long-lived, high-emission infrastructure	
	SDGs	**Other climate finance mechanisms**
	SDG13 SDG7 SDG9	• GEF indicator 6.3 (Energy saved) • CTF indicator B5 (Annual energy savings)

Supplementary indicator 1.2	**Installed energy storage capacity**
Unit	Megawatt-hours (MWh)
Definition	The amount of energy (MWh) that can be discharged by a storage facility before the storage facility must be recharged.
Result areas	MRA 1: Energy generation and access
Disaggregation	By batteries vs. non-batteries (e.g. thermal energy storage, mechanical storage, pumped hydro, and hydrogen etc.)
Methodology	Projects/programmes should confirm the nominal energy storage capacity, as per manufacturer's specifications. This data should only be reported once installations are operational.
Data Sources	Project/programme-level monitoring data, dependent on storage technology; technology specifications
Baseline and targets	If the project/programme is installing storage capacity at a completely new site, the baseline will be zero. Where a project/programme is adding additional capacity to an existing site, the baseline will be the existing, pre-investment storage capacity. Two cumulative target values should be provided in the funding proposal: 1) an estimated target at the mid-point of the project/programme implementation period; and 2) an estimated target at the end of the implementation period.
Frequency	The amount of nominal capacity installed or added should be reported annually.
Alignment	**GCF Investment Framework**
	Impact potential (mitigation impact): - Degree to which the programme/project supports the scaling up of low-emission energy in the affected region by addressing key barriers - Degree to which activity avoids lock-in of long-lived, high-emission infrastructure
	SDGs / **Other climate finance mechanisms**
	SDG13 SDG7 SDG9 — • GEF indicator 6.4 (Increase in installed renewable energy capacity per technology)

Supplementary indicator 1.3	**Installed renewable energy capacity**
Unit	Megawatts (MW)

<table>
<tr><td>Definition</td><td>The gross capacity of renewable energy generation infrastructure newly installed or rehabilitated with the support of GCF-funded projects/programmes.

Renewable energy under this indicator is defined as renewable energy technologies such as solar, wind, geothermal, hydropower, bioenergy and ocean and does not include the energy generation capacity from nuclear power, gas, coal and oil sources.

Note the refinancing of existing renewable energy assets should not be counted under this indicator.</td></tr>
<tr><td>Suggested result areas</td><td>MRA 1: Energy generation and access</td></tr>
<tr><td>Disaggregation</td><td>• By technology: hydropower, solar, ocean, geothermal, wind, and bioenergy.
• On-grid vs off-grid
• Newly installed vs rehabilitated</td></tr>
<tr><td>Methodology</td><td>Projects/programmes should confirm the installed (gross) capacity of renewable energy infrastructure, as per manufacturer's specifications. This data should only be reported once installations/rehabilitations are completed.

Supplementary indicator 1.4 (renewable energy generated) should then be used to report the amount of energy generated (MWh) by these installations/rehabilitations.</td></tr>
<tr><td>Data Sources</td><td>Project/programme-level monitoring data, dependent on renewable energy technology; technology specifications</td></tr>
<tr><td>Baseline and targets</td><td>If the project/programme is installing generation capacity at a completely new site, the baseline will be zero.

If a project/programme is adding additional capacity to an existing site, the baseline will be the existing generation capacity prior to GCF investments.

If a project/programme is rehabilitating existing infrastructure, the baseline will be the existing, pre-rehabilitation generation capacity.

Two target values should be provided in the funding proposal: 1) an estimated target at the mid-point of the project/programme implementation; and 2) an estimated target at the end of the implementation period.</td></tr>
<tr><td>Frequency</td><td>Updated annually throughout project/programme implementation period.</td></tr>
<tr><td rowspan="3">Alignment</td><td colspan="2">GCF Investment Framework</td></tr>
<tr><td colspan="2">Impact potential (mitigation impact):
- Expected number of MW of low-emission energy capacity installed, and/or rehabilitated
- Degree to which the programme/project supports the scaling up of low-emission energy in the affected region by addressing key barriers
- Expected increase in the number of households with access to low-emission energy</td></tr>
<tr><td>SDGs</td><td>Other climate finance mechanisms</td></tr>
<tr><td>SDG13
SDG7
SDG9</td><td>• SREP indicator 4 (Capacity from renewable energy)
• CTF indicator B3 (Installed capacity)
• GEF indicator 6.4 (Increase in installed renewable energy capacity per technology)</td></tr>
</table>

Supplementary indicator 1.4	Renewable energy generated
Unit	Megawatt-hours (MWh)
Definition	The amount of renewable energy generated by facilities that were newly installed or rehabilitated with the support of GCF-funded projects/programmes. Note the renewable energy capacity installed or rehabilitated via the support of GCF-funded projects/programme should be reported against supplementary indicator 1.3. Renewable energy under this indicator refers to renewable energy technologies such as solar, wind, geothermal, hydropower, bioenergy and ocean technologies and does not include the energy generation from nuclear power, gas, coal and oil sources
Suggested result areas	MRA 1: Energy generation and access
Disaggregation	• By technology: hydropower, solar, ocean, geothermal, wind, and bioenergy • On-grid vs off-grid
Methodology	Projects/programmes should report the actual energy generated during each 12-month period, and cumulative energy generated since infrastructure became operational (installed or rehabilitated) via the support of GCF projects/programmes. All assumptions and conversion factors should be clearly documented.
Data Sources	Project/programme-level monitoring data, dependent on renewable energy technology; technology specification
Baseline and targets	If a project/programme installed generation capacity at a completely new site, the baseline will be zero. If a project/programme added additional capacity to an existing site, the baseline will be the estimated cumulative energy generated at the existing site prior to the first GCF-supported infrastructure becoming operational. If a projects/programme rehabilitated existing infrastructure, the baseline will be the estimated cumulative energy generated by the existing infrastructure prior to the rehabilitation supported by the GCF-project/programme. For this indicator, three cumulative target values should be provided in the funding proposal: 1) an estimated cumulative target at the mid-point of the project/programme implementation; 2) an estimated cumulative target at the end of the implementation period; and 3) an estimated cumulative target for the total project/programme lifespan.
Frequency	Updated annually throughout project/programme implementation period.
Alignment	**GCF Investment Framework** Impact potential (mitigation impact): - Expected number of MW of low-emission energy capacity installed and/or rehabilitated - Degree to which the programme/project supports the scaling up of low-emission energy in the affected region by addressing key barriers - Expected increase in the number of households with access to low-emission energy

	SDGs	Other climate finance mechanisms
	SDG13 SDG7 SDG9	• SREP indicator 1 (Annual electricity output from renewable energy)

Supplementary indicator 1.5	**Improved low-emission vehicle fuel economy (Net change in fuel (energy) consumption per km travelled)**
Unit	• Volume of fuel per kilometre travelled by fuel type • Energy unit (*megajoule*) Note: volume unit (cubic metres) should be used for liquid and gaseous fuels. Mass unit (metric tons) should be used for solid fuels. In addition to reporting in a fuel unit, a project/programme selecting this indicator should convert the fuel unit into a common energy unit and report in *joule*.
Definition	Under this indicator, the improved low-emission fuel economy is defined as the *net change (reduction)* in fuel /energy consumption per kilometre travelled. The net change refers to the difference between the baseline fuel or energy consumption scenario (without the GCF-project/programme intervention) and the target /actual fuel or energy consumption to be achieved (with the support of GCF projects/programme) as defined within Annex 22 (assessment of GHG emission reductions and their monitoring and reporting for mitigation and cross cutting-projects) of the funding proposal. The low-emission transport interventions that should be reporting against this indicator include but are not limited to the followings: 1) Transportation-related processes and technologies: i) Fuel-switch from high carbon intensity to low carbon intensity (clean energy) transport mode; and ii) Use of or replacement by fuel efficient technology transports 2) System infrastructure supported through GCF interventions such as: i) Passenger modal shift (e.g. by public transport, cycling, walking, and or urban planning to displace private motor vehicle); and ii) Freight modal shift via rail and or waterborne transport alternatives to displace light duty vehicles and heavy duty vehicles (e.g. trucks).
Suggested result areas	MRA 2: Low-emission transport
Disaggregation	1. By (baseline) fossil fuels (diesel, gasoline, compressed natural gas / liquefied Petroleum Gas)[10] replaced with clean energy sources like biomethane, biofuels, electricity, hydrogen, or changing the clean energy sources to more efficient new generation clean energy sources 2. Passenger vs freight transportation
Methodology	For investments focused on low-emission transport (MRA2), fuel economy or net change in fuel / energy consumption between the baseline scenario (without the GCF-project/programme intervention) and the target /actual fuel consumption to be achieved (with the support of GCF projects/programme) is a prerequisite for the calculation and monitoring of GCF Core Indicator 1 (GHG emissions reduced,

[10] Carbon-intensive fuels such as diesel, gasoline, CNG/LPG, are included here for the calculation of a baseline value in case of fuel-switch interventions. Note GCF does not support high carbon intensity projects/programmes.

	avoided or removed/ sequestered). Consequently, by monitoring GCF Core Indicator 1, transportation-related interventions will already have gathered the necessary data to report against this indicator. See below the methodology for each type of interventions. The results data to be reported against this indicator should be calculated as follows: 1) Calculate the total fuel consumptions and divide by total distance travelled for both the baseline scenario and the target/actual scenario. If the total fuel consumptions and total distance travelled are not readily available, use the average fuel consumed /average distance travelled for respective transport modes/fuel types for the calculation. 2) Take the difference in fuel consumption per kilometre travelled between the target/actual scenario and the baseline scenario. Convert into the common energy unit (megajoule) in case of different fuel types between the baseline and target/actual scenarios. 1) Report both in the original fuel type and in megajoule – common energy unit. To report in megajoule, the energy conversion calculator can be applied. For example, refer to **US Energy Unit Information Administration (eia)**. For reporting against intervention 1.i) fuel-switch from high carbon intensity to low carbon intensity (clean energy) transport mode, the fuel type changes from the baseline scenario to the target scenario. Hence the figures should be reported in both 1) the original / replaced fuel types (see the fuel types from the disaggregation section) and 2) in the common unit of measurement (energy unit: mega*joule*). For reporting target/actual results against intervention 1.ii) use of or replacement by fuel efficient technology transports, the calculation should be straight-forward as the fuel type remains the same between the baseline scenario and the target/actual scenario. Please report the fuel consumption difference per kilometre travelled between the baseline and target/actual scenarios in the original fuel type as well as energy unit - megajoule. For reporting target/actual results against intervention 2.i), passenger modal shift, the difference in fuel /energy consumption per kilometre travelled between the baseline scenario and the target/actual scenario can be derived by referring to the CDM methodology for the modal shift: in passenger transport. The calculation should be done separately for each passenger transport category/mode and its fuel type. For reporting target/actual results against intervention 2.ii) freight modal shift via rail and or waterborne transport alternatives to displace light duty vehicles and heavy duty vehicles (e.g. trucks), the difference in fuel /energy consumption per kilometre travelled can be calculated following the CDM methodology for the modal shift in transportation of cargo from road transportation to water or rail transportation. The calculation and reporting should be done separately for each freight transportation category and its fuel type. Leakage emissions should be considered in transport projects where leakage emissions refer to a change (an increase or decrease) in emissions outside of the intervention emission boundary that occurs as a result of the GCF-funded intervention.

Data Sources	Project/programme-level monitoring data, dependent on transportation fuel / technology.
Baseline and targets	The baseline scenario is a reference case for the intervention in question and is a hypothetical description of what would have occurred without the GCF-funded intervention. The baseline scenario will be dependent on the project/programme's agreed GHG accounting methodology. The baseline value (i.e. net reduction in fuel consumption per kilometre travelled at the start of the implementation period) against this indicator should be zero for all projects/programmes as this indicator measures the difference in fuel consumption between the baseline scenario and the actual GCF-funded intervention scenario. Two target values should be provided in the funding proposal: 1) an estimated average target a project /programme aims to achieve at the mid-point of the implementation; and 2) an estimated average target the project/programme aims to achieve at the end of implementation period.
Frequency	Updated annually throughout the project/programme implementation period.
Alignment	**GCF Investment Framework** Impact potential (mitigation impact): - Expected increase in the use of low-carbon transport

SDGs	**Other climate finance mechanisms**
SDG13 SDG9 SDG11	

Core indicator 2	**Direct and indirect beneficiaries reached**
Unit	Number of individuals (female/male) Note: if data on individuals is not available, household unit could be used to convert into approximate number of individuals reached based on the statistical data available in the target geographical areas of GCF support.
Definition	This indicator counts the number of direct and indirect beneficiaries (further disaggregated by female and male) reached via adaptation interventions. **Direct beneficiaries** of an adaptation intervention are defined as individuals who receive i) targeted support from a GCF-funded intervention and ii) a measurable *adaptation benefit* from a GCF-funded intervention. The targeted support refers to the support provided or delivered by a GCF-funded intervention and can be tracked in the actual project/programme records as part of the regular project/programme monitoring processes. **Indirect beneficiaries** refer to individuals who do not receive targeted support from a GCF-funded intervention but are likely to receive a measurable adaptation benefit from the GCF-funded intervention. The number of indirect beneficiaries is usually an estimation calculated based on a formula with conservative assumptions.

	An *adaptation benefit* is an outcome derived from a GCF-funded intervention which aims to increase resilience or reduce vulnerability[11] of a specific target system (e.g. communities, ecosystems, local economy) against the adverse effects of climate change when compared to a baseline scenario An intervention can be considered an adaptation intervention only if it can be reasonably expected to generate an *adaptation benefit* within a climate change vulnerability context, aims to increase resilience or reduce vulnerability of a specific system, and displays a clear linkage between the intervention and the said vulnerability context. For target setting, an individual can only be counted as beneficiary if the adaptation benefit is expected to persist at least for the duration of the funded-activity implementation period and preferably during the lifespan of an adaptation technology, asset, or measure that is introduced as part of a GCF-funded intervention, based on the vulnerability context of the target system. For example, assume that a community (a specific target system) is affected by the adverse effects of climate change such as reduced rainfalls (a vulnerability context), and the affected farmers in the community receive financial and capacity building support to learn climate resilient agriculture methods/practices (targeted support) as a GCF-funded intervention. Then provided that those targeted farmers adopted the climate resilient agriculture methods/practices immediately following the GCF-funded intervention, the increase or no deterioration in agricultural productivity and income of the farmers when compared to the baseline scenario will be considered the expected outcomes derived from the GCF-funded intervention, hence the adaptation benefits, as long as the benefits persist for the duration of the funded activity implementation. As the affected farmers have received both the targeted support (financial and capacity building support) and as a result measurable adaptation benefits (i.e. an increase or no deterioration in agricultural productivity and income), these farmers are considered the direct beneficiaries. In this example, indirect beneficiaries are those farmers who did not receive the financial and capacity building support on the climate resilient agriculture methods /practices from the GCF-funded intervention but will have experienced an increase or no deterioration in the agricultural productivity and income with the (conservative) assumption that they have benefited from the information and knowledge shared by the direct beneficiaries. As another example, if one geographical area (a specific target system) is affected by an increased number of tropical storms as a result of climate change (a vulnerability context), and a GCF-funded intervention is to establish and operationalize an early warning system for tropical storms in this geographical area, the action to send warnings regarding approaching tropical storms to citizens in the geographic area via SMS messages using the mobile phone network is considered the targeted support to the citizens in the geographical area. If those citizens receiving the SMS warnings can utilize that information to take precautionary measures, the reactions of the citizens to take the precautionary measures are considered adaptation benefits. As the citizens have received both the targeted support (SMS warnings) and measurable adaptation benefits (taking

[11] For definitions of vulnerability and resilience, please see: https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_FinalDraft_TechnicalSummary.pdf (page 6 - 7).

	precautionary measures), these citizens are considered direct beneficiaries. In this example, indirect beneficiaries may be those who are not covered under the mobile phone network of the early warning system due to not having mobile phones or residing in hospitals and residential institutions etc. but are taking precautionary measures (as they may be receiving the information indirectly within the target geographical area). As another example, assume that a specific geographical area consisting of multiple communities (a target system) is affected by climate change induced water shortages (a vulnerability context), and one of the communities located in the upstream of the geographical area will receive the targeted support from a GCF-funded intervention to rehabilitate an existing irrigation system in the community. Then the increased water availability will be the adaptation benefits to be derived from the GCF-funded intervention. In this example, direct beneficiaries are those farmers who received the targeted support of the irrigation rehabilitation work within the upstream community, while indirect beneficiaries will be those farmers who are residing in the downstream communities of the same geographical area and are benefiting from the trickle-down effects of the increased irrigation water availability derived from the upstream community.
Suggested result areas	ARA 1: Most vulnerable people and communities ARA 2: Health, well-being, food, and water security ARA 3: Infrastructure and built environment ARA 4: Ecosystems and ecosystem services
Disaggregation	• By type of beneficiary – direct or indirect • By sex • By result area • By country in case of multi-country projects/programmes
Methodology	The indicator is expressed in absolute numbers of beneficiaries firstly disaggregated by results area and further by direct/indirect beneficiaries and sex (male/female). The count of direct beneficiaries and disaggregation of the direct beneficiaries by sex should be based on the actual record of project/programme activities (e.g. project record with the indication of sex etc.). If the support is targeted and provided at the household level, the available statistical information from the subject geographical area under the support of the GCF-funded project/programme should be applied to derive the approximate number of direct beneficiaries reached and the disaggregation by sex. The count of indirect beneficiaries should usually be an estimation calculated based on a formula with conservative assumptions when a target value is set as part of the GCF funding proposal. The methodology should be specific to a project/programme, but whichever method the project/programme chooses, it should be done in a consistent manner each time the required information is collected and calculated. In case a beneficiary benefits from GCF-funded interventions across multiple results areas, AEs should count one beneficiary under each result area but report only one unique beneficiary at the aggregated total level to avoid double-counting the same beneficiary at the aggregated level.

	For example, assume that one beneficiary benefitted from a GCF-funded intervention in ARA 3 (resilient infrastructure) in the implementation year 2 as well as another GCF-funded intervention in ARA 4 (ecosystems and ecosystem services) in year 4. Then AEs should count and report one under ARA3 and at the total aggregated level respectively during the annual reporting cycle for year 2. Then during the reporting cycle for year 4,AEs should count and report one under ARA4, but should not report any number at the aggregated level as the same beneficiary was already reported at the aggregated level in year 2. Note that this means that the sum of beneficiaries from each of the four adaptation results area may not equal the total number of beneficiaries reported at the aggregated level since the AEs are expected to report non-double counted total beneficiary figures at the aggregated level. For reporting during the project implementation period, a beneficiary should be counted and reported only once when a measurable adaptation benefit has been observed on the ground as an outcome (rather than when the GCF-funded intervention or an output is delivered).
Data Sources	Project/programme surveys. National or sub-national statistics.
Baseline and targets	The baseline value should be zero for all projects/programmes as this indicator counts the number of individuals supported via GCF-funded projects/programmes. Three target values should be provided in the funding proposal: 1) an estimated target a project /programme aims to achieve at the mid-point of the project/programme implementation; 2) an estimated target the project/programme aims to achieve at the end of the implementation period; and, if relevant, 3) an estimated target at the end of the lifespan of adaptation technology/asset or measure, based on the context of the project/program
Frequency	Updated annually throughout implementation period
Alignment	**GCF Investment Framework** Impact potential (adaptation impact): • Expected total number of direct and indirect beneficiaries, (reduced vulnerability or increased resilience); number of beneficiaries relative to total population (PMF-A Core 1), particularly the most vulnerable groups. • Expected reduction in vulnerability by enhancing adaptive capacity and resilience for populations affected by the proposed activity, focusing particularly on the most vulnerable population groups and applying a gender-sensitive approach. Sustainable development potential (Social co-benefits): • Potential for externalities in the form of expected improvements, for women and men as relevant, in areas such as health and safety, access to education, improved regulation and/or cultural preservation. Sustainable development potential (Economic co-benefits): • Potential for externalities in the form of expected improvements in areas such as expanded and enhanced job markets, job creation and poverty alleviation for women and men, etc. Sustainable development potential (Gender-sensitive development impact): • Explanation of how the project activities will address the needs of women

	and men in order to correct prevailing inequalities in climate change vulnerability and risks.	
	SDGs	**Other climate finance mechanisms**
	SDG13 SDG5	• Adaptation Fund – Number of beneficiaries • LCDF / SCCF core indicator 1 – Number of direct beneficiaries • GEF indicator 11 – Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment • CIF PPCR – core indicator 5 – Number of people supported to cope with effects of climate change

Supplementary indicator 2.1	**Beneficiaries (female/male) adopting improved and/or new climate-resilient livelihood options**
Unit	Number of individuals (female/male) Note: if data on individuals is not available, households could be reported and converted into individuals based on average number of people per household.
Definition	This indicator counts all individuals (female and male) that have adopted improved and or new climate resilient livelihood options. Adopting improved or new livelihoods option refers to the successful transfer and resulting practices of the improved or new livelihoods options by beneficiaries following GCF-funded activities. Examples of improved and/or new climate -resilient livelihood options include but are not limited to adopting climate smart agriculture practices, setting up savings & loans groups, adding value to raw agricultural or fisheries products through processing and alternative climate resilient income generating options, etc.
Suggested result areas	ARA 1: Most vulnerable people and communities
Disaggregation	By sex By country in case of multi-country projects/programmes
Methodology	The exact methodology to measure this indicator will be project-specific given the wide variety in livelihood options, but it should comply with the principle that only beneficiaries who have received GCF-funded support and are applying improved or new livelihood options should be counted. Each beneficiary should be counted only once unless a same individual adopted more than one improved or new climate-resilient livelihoods options.
Data Sources	Project/programme records, surveys. National statistics.
Baseline and targets	The baseline value should be zero for all projects/programmes as this indicator counts the number of individuals adopting improved or new climate-resilient livelihoods options via GCF-funded projects/programmes. Two target values should be provided in the funding proposal: 1) an estimated target a project /programme aims to achieve at the mid-point of the project/programme implementation; and 2) an estimated target the project/programme aims to achieve at the end of the implementation period.

<table>
<tr><td>Frequency</td><td>Updated annually throughout implementation period</td></tr>
<tr><td rowspan="4">Alignment</td><td colspan="2">GCF Investment Framework</td></tr>
<tr><td colspan="2">Impact potential (adaptation impact):
• Expected reduction in vulnerability by enhancing adaptive capacity and resilience for populations affected by the proposed activity, focusing particularly on the most vulnerable population groups and applying a gender-sensitive approach.

Sustainable development potential (Economic co-benefits):
• Potential for externalities in the form of expected improvements in areas such as expanded and enhanced job markets, job creation and poverty alleviation for women and men, etc.

Sustainable development potential (Gender-sensitive development impact):
• Explanation of how the project activities will address the needs of women and men in order to correct prevailing inequalities in climate change vulnerability and risks.</td></tr>
<tr><td>SDGs</td><td>Other climate finance mechanisms</td></tr>
<tr><td>SDG13
SDG5
SDG8</td><td>• Adaptation Fund – Core Indicator 6.1.2: Increased income, or avoided decrease in income
• LDCF / SCCF 1.1.2 - Livelihoods and sources of income of vulnerable populations diversified and strengthened
• CIF PPCR – indicator A.1.1 – Change in percentage of households (in areas at risk) whose livelihoods have improved</td></tr>
</table>

Supplementary indicator 2.2	**Beneficiaries (female/male) with improved food security**
Unit	Number of individuals (female and male). This includes all members of households that benefit from improved food security targeted at household level. Note: if data on individuals is not available, households could be reported and converted into individuals based on average number of people per household.
Definition	This indicator counts all individuals (female and male) who have improved food security following GCF-funded activities. It is measured as a reduction in food insecurity. All household members should be counted into the indicator if a targeted support was provided at the household level. Food security is defined as "having physical, social and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (2009 Declaration of the World Summit on Food Security). "Food insecurity" at household (HH) / individual level is defined as the absence of food security and can have different levels of severity (see Methodology). Beneficiaries with improved food security are defined as those who have no food insecurity or mild food insecurity post GCF-funded interventions and according to the suggested methodology of Food Insecurity Experience Scale (FIES) .
Suggested result areas	ARA 2: Health, well-being, food and water security

Disaggregation	By sex By number of households who fall in the categories of no food insecurity or mild food insecurity vs. the total target population. By country in case of multi-country projects/programmes
Methodology	This indicator is recommended to be measured through the Food Insecurity Experience Scale (FIES) methodology by undertaking a (representative sample) household survey while AEs may use other established methodologies where relevant. FIES is the method also used for the SDG indicator 2.1.2 on food (in-) security. The methodology is based on a standard set of survey questions: *During the last 12 months, was there a time when, because of lack of money or other resources:* *1. You were worried you would not have enough food to eat?* *2. You were unable to eat healthy and nutritious food?* *3. You ate only a few kinds of foods?* *4. You had to skip a meal?* *5. You ate less than you thought you should?* *6. Your household ran out of food?* *7. You were hungry but did not eat?* *8. You went without eating for a whole day?* One question should be added to this list to account for people with no food insecurity at all: *0. You were not worried at all about not having enough food to eat?* Answers are then categorised as follows: 1. Answer 0 – No food insecurity 2. Answers 1 to 3 – Mild food insecurity 3. Answers 4 to 6 – Moderate food insecurity 4. Answers 7 and 8 – Severe food security. If the percentage of households who fall in the categories of no food insecurity or mild food insecurity is 20% of sample group, then the number of beneficiaries with improved food security can be calculated by applying 20% to total target beneficiary population group. For example, in case of project whose food security related beneficiary is expected to be 100,000 household (HH), and if its baseline study shows that the households with no food insecurity or mild food insecurity category take 10% of the sample group, then the baseline figure of supplementary indicator 2.2 of project A will be 10% * 100,000 HH = 10,000 HH. Finally, households can be converted into individuals based on average number of people per household as guided. The threshold of improved food security in this indicator is based on two global standard thresholds which are set at the severity of two specific FIES categories: moderate food insecurity and severe food security. In case AEs decide to use other established methodologies, it is recommended that their thresholds of food security correspond to the international thresholds proposed by the FIES. Alternative methodologies may include nutrition and gender specific methodologies.
Data Sources	FIES surveys.

	The questions may be integrated in other planned project surveys or national surveys (countries are required to report on the similar SDG indicator 2.1.2).
Baseline and targets	The baseline value should be generated based on FIES survey results at the start of the project. Two target values should be provided in the funding proposal: 1) an estimated target a project /programme aims to achieve at the mid-point of the project/programme implementation; and 2) an estimated target the project/programme aims to achieve at the end of the implementation period.
Frequency	Annual estimates on changes in numbers of beneficiaries based on internal monitoring routines. End of project accurate measurement of beneficiaries through endline FIES survey.
Alignment	**GCF Investment Framework** Impact potential (adaptation impact): • Expected reduction in vulnerability by enhancing adaptive capacity and resilience for populations affected by the proposed activity, focusing particularly on the most vulnerable population groups and applying a gender-sensitive approach. Sustainable development potential (Economic co-benefits): • Potential for externalities in the form of expected improvements in areas such as expanded and enhanced job markets, job creation and poverty alleviation for women and men, etc. Sustainable development potential (Gender-sensitive development impact): • Explanation of how the project activities will address the needs of women and men in order to correct prevailing inequalities in climate change vulnerability and risks.

SDGs	Other climate finance mechanisms
SDG13 SDG5 SDG2	• Adaptation Fund (AF) – Core Indicator 6.1.2: Increased income, or avoided decrease in income • CIF PPCR – indicator A.1.1 – Change in percentage of households (in areas at risk) whose livelihoods have improved

Supplementary indicator 2.3	**Beneficiaries (female/male) with more climate-resilient water security**
Unit	Number of individuals (female/male) Note: if data on individuals is not available, households could be reported and converted into individuals based on average number of people per household.
Definition	This indicator counts all individuals (female and male) who have more climate resilient water security for household/residential use following GCF-funded activities. (note: improvements in water supply for economic and or agricultural use by HHs/individuals contributes to food security and should therefore be included in the sub-indicator 2.2 on food security). "Water for household/residential use" is defined as water for drinking and human well-being. "Water security" for household/residential use is defined as "access to safe, sufficient and affordable water to meet basic needs for drinking, sanitation and

	hygiene, to safeguard health and well-being, and to fulfil basic human rights" (UN Water). Climate resilient means the water source provides reliable year-round and year-to-year access to water in the face of climate change. Beneficiaries with more climate-resilient water security are defined as those who are categorized as safely manged or basic by the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP)
Suggested result areas	ARA 2: Health, well-being, food and water security
Disaggregation	• By sex • By number of households who fall in the categories of safely manged or basic vs. the total target population. • By country in case of multi-country projects/programmes
Methodology	The methodology is based on the definitions for water sources developed by the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP). 5 main categories are distinguished: 1. Safely managed 2. Basic 3. Limited 4. Unimproved source 5. Surface water The methodology can be applied through a (representative sample) household survey. Similar to the supplementary indicator 2.2 of beneficiaries (female/male) with improved food security, percentage of households who fall in the categories of safely manged or basic can be calculated as the beneficiaries of this indicator.
Data Sources	Project surveys or secondary data sources, like national surveys and water company records, in particular for projects at scale that cover a large number of beneficiaries
Baseline and targets	Baseline: water security situation of the beneficiaries at the start of the project, JMP survey results at the start of the project. Two target values should be provided in the funding proposal: 1) an estimated target a project /programme aims to achieve at the mid-point of the project/programme implementation; and 2) an estimated target the project/programme aims to achieve at the end of the implementation period
Frequency	Annual estimates on changes in numbers of beneficiaries based on internal monitoring routines. End of project accurate measurement of beneficiaries through endline survey.
Alignment	**GCF Investment Framework** Impact potential (adaptation impact): • Expected reduction in vulnerability by enhancing adaptive capacity and resilience for populations affected by the proposed activity, focusing particularly on the most vulnerable population groups and applying a gender-sensitive approach. • Degree to which the activity avoids lock-in of long-lived, climate-vulnerable

	infrastructure. Sustainable development potential (Social co-benefits): • Potential for externalities in the form of expected improvements, for women and men as relevant, in areas such as health and safety, [..] Sustainable development potential (Gender-sensitive development impact): • Explanation of how the project activities will address the needs of women and men in order to correct prevailing inequalities in climate change vulnerability and risks.

SDGs	Other climate finance mechanisms
SDG13 SDG5 SDG6	• CIF PPCR – indicator A.41. – Percentage of people with year round access to reliable and safe water supply.

Supplementary indicator 2.4	Beneficiaries (female/male) covered by new or improved early warning systems
Unit	Number of individuals (female/male) Note: if data on individuals is not available, households could be reported and converted into individuals based on average number of people per household.
Definition	This indicator counts all individuals (male and female) that have been covered by new or improved early warning systems for climate change related risks and hazards following GCF-funded support. Early warning system, as defined by the Sendai Framework: an integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events. Beneficiaries "covered" means those individuals residing within an area covered by the early warning system supported by GCF-funded interventions and can receive or have received early warning information. A fully functional early warning system comprises 4 key elements (as per Sendai Framework): 1. Disaster risk knowledge based on the systematic collection of data and disaster risk assessments; 2. Detection, monitoring, analysis and forecasting of the hazards and possible consequences; 3. Dissemination and communication, by an official source, of authoritative, timely, accurate and actionable warnings and associated information on likelihood and impact 4. Preparedness at all levels to respond to the warnings received.
Suggested result areas	ARA 1: Most vulnerable people and communities ARA 2: Health, well-being, food, and water security ARA 3: Infrastructure and built environment ARA 4: Ecosystems and ecosystem services

<table>
<tr><td>Disaggregation</td><td>• By sex
• By whether it is a new or improved system</td></tr>
<tr><td>Methodology</td><td>A list of the existing or new early warning systems that will be improved or developed should be created first. Then statistical information available on the population within the area to be covered by each early warning system should be collected and reported. The information may be already available within the government offices especially for interventions related to existing early warning systems. Where one early warning system caters to more than one hazard, the beneficiary population should be counted only once.
In case where the GCF support is to expand the target coverage of an existing early warning system, the number of beneficiaries covered/reported should be the additional population to be covered in the GCF-supported system.</td></tr>
<tr><td>Data Sources</td><td>Project monitoring data
National population statistics</td></tr>
<tr><td>Baseline and targets</td><td>Baseline: For both new and improved systems, the baseline should be zero as this indicator counts the number of beneficiaries covered by either new or improved systems following GCF-funded activities/support.

Targets: Two target values should be provided in the funding proposal: 1) an estimated target a project /programme aims to achieve at the mid-point of the project/programme implementation; and 2) an estimated target the project/programme aims to achieve at the end of the implementation period.</td></tr>
<tr><td>Frequency</td><td>Updated annually throughout the implementation period.</td></tr>
<tr><td>Alignment</td><td>GCF Investment Framework</td></tr>
<tr><td></td><td>Impact potential (adaptation impact):
• Expected increase in generation and use of climate information in decision-making
• Expected strengthening of adaptive capacity and reduced exposure to climate risks
• Expected strengthening of awareness of climate threats and risk-reduction processes</td></tr>
<tr><td></td><td><table><tr><th>SDGs</th><th>Other climate finance mechanisms</th></tr><tr><td>SDG13
SDG5
SDG9</td><td>• Adaptation Fund – Early warning systems
• LDCF / SCCF 1.1.3 - Vulnerability to climatic hazards/variability is reduced through new or improved early warning systems /climate information systems
• CIF PPCR indicator B.3 - Evidence showing that climate information products/services are used in decision making in climate sensitive sectors</td></tr></table></td></tr>
</table>

Supplementary indicator 2.5	**Beneficiaries (female/male) adopting innovations that strengthen climate change resilience**
Unit	Number of individuals (female/male) Note: if data on individuals is not available, households could be reported and converted into individuals based on average number of people per household.
Definition	This indicator counts number of individuals (female and male) who have adopted innovations promoted/introduced by GCF-supported interventions, that strengthen climate change resilience.

	Innovations refer to a resilience-building model, technology, tool, practice, service or product that was demonstrated (i.e. successfully tested) for the first time *in a country* by the project. Innovations that had already been demonstrated elsewhere but never in the country or countries where the project is implemented can be counted under this indicator. Examples: an irrigation technology already successfully tested in another country but applied for the first time in the target country, an innovative roofing technology that helps keep houses cool during heatwaves and is piloted for the first time, a new model of fuel efficient stoves, a new climate change related risk insurance. Adopting innovations refers to the successful transfer and resulting practices of the innovations by beneficiaries following GCF-funded interventions.
Suggested result areas	ARA 1: Most vulnerable people and communities ARA 2: Health, well-being, food and water security ARA 3: Infrastructure and built environment ARA 4: Ecosystems and ecosystem services
Disaggregation	• By sex • By main result area • By country in case of multi-country projects/programmes
Methodology	This indicator may be measured through a project/programme level survey or available statistical information within the target project/programme area. In case of undertaking a project/programme level survey, a set of simple questions assessing whether the innovation introduced by the GCF funded interventions is being practiced by target beneficiaries should be developed and applied. In case where a same individual benefited from and adopted multiple innovations introduced by GCF-interventions, the beneficiary can be counted for each new innovation.
Data Sources	Project monitoring data, survey data National or subnational population statistics
Baseline and targets	The baseline should be zero. Targets: Two target values should be provided in the funding proposal: 1) an estimated target a project /programme aims to achieve at the mid-point of the project/programme implementation; and 2) an estimated target the project/programme aims to achieve at the end of the implementation period.
Frequency	Updated annually throughout the implementation period.
Alignment	**GCF Investment Framework**
	Impact potential (adaptation impact): - Expected reduction in vulnerability by enhancing adaptive capacity and resilience for populations affected by the proposed activity, focusing particularly on the most vulnerable population groups and applying a gender-sensitive approach. Sustainable development potential (environmental co-benefits): • Degree to which the project or programme promotes positive environmental externalities such as air quality, soil quality, conservation, biodiversity, etc. Sustainable development potential (Social co-benefits) • Potential for externalities in the form of expected improvements, for

	women and men as relevant, in areas such as health and safety, access to education, improved regulation and/or cultural preservation	
	SDGs	**Other climate finance mechanisms**
	SDG13 SDG5	• LDCF / SCCF 1.2.2 - Investment models developed and tested • CIF PPCR core indicator 3 - Quality and extent to which climate responsive instruments/investment models are developed and tested • CIF PPCR core indicator 4 - Extent to which vulnerable households, communities, businesses, and public-sector services use improved [PPCR-supported] tools, instruments, strategies, and activities to respond to climate variability or climate change

Supplementary indicator 2.6	**Beneficiaries (female/male) living in buildings that have increased resilience against climate hazards**
Unit	Number of individuals (female/male) Note: if data on individuals is not available, households could be reported and converted into individuals based on average number of people per household.
Definition	This indicator counts the number of individuals (male and female) who are living in buildings that have increased resilience against climate change related hazards. Note: beneficiaries in areas that are covered by a GCF supported early warning system are covered under supplementary indicator 2.4, while beneficiaries living in buildings covered by a GCF supported new climate risk insurance are covered under 2.5.
Suggested result areas	ARA 3: Infrastructure and built environment
Disaggregation	By sex By country in case of multi-country projects/programmes
Methodology	Where the increased protection is achieved by making changes to existing buildings (localised drainage works, heat reduction technologies, etc.), the number of beneficiaries is the actual number of individuals living in those buildings at the time the protection works are completed. Similarly, for resettlement of people from a highly vulnerable area to a less vulnerable area the number of beneficiaries is all individuals that have been successfully resettled.
Data Sources	Project monitoring data National population statistics. Modelling, such as coastal flood modelling caused by sea-level rise or cyclones.
Baseline and targets	Baseline should be zero since this indicator counts the number of individuals residing in buildings supported via GCF-funded interventions. Targets: Two target values should be provided in the funding proposal: 1) an estimated target a project /programme aims to achieve at the mid-point of the project/programme implementation; and 2) an estimated target the project/programme aims to achieve at the end of the implementation period
Frequency	Updated annually throughout the implementation period.
Alignment	**GCF Investment Framework**

	Impact potential (adaptation impact): - Expected reduction in vulnerability by enhancing adaptive capacity and resilience for populations affected by the proposed activity, focusing particularly on the most vulnerable population groups and applying a gender-sensitive approach. - Degree to which the activity avoids lock-in of long-lived, climate-vulnerable infrastructure. - Expected strengthening of adaptive capacity and reduced exposure to climate risks. - Expected strengthening of awareness of climate threats and risk-reduction processes.

SDGs	Other climate finance mechanisms
SDG13 SDG5 SDG9	• Adaptation Fund - Assets Produced, Developed, Improved, or Strengthened • LCDF / SCCF 1.1.1 - Physical assets made more resilient to climate variability and change • CIF PPCR core indicator 3 - Quality and extent to which climate responsive instruments/investment models are developed and tested

Supplementary indicator 2.7	**Change in expected losses of lives due to the impact of extreme climate-related disasters in the geographic area of the GCF intervention**
Unit	Number of individuals
Definition	Climate-related disasters are all disasters of which the frequency, intensity, spatial extent and/or duration are negatively influenced by climate change. They can be caused by extreme events (like droughts, heatwave, storm surge, floods and tropical cyclones according to the IPCC[12]). A disaster is defined as "a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts." (UNDRR). A supplementary indicator 2.7 applies to the sudden, fast onset climate impacts like hurricanes or storm surge where losses of live can be directly attributed to disaster. Losses of lives can be defined as the "number of people who died during the disaster, or directly after, as a direct result of the hazardous event" (Sendai framework). This indicator should quantify the reduction in expected losses of lives during a disaster and as a direct result of a disaster (e.g. death caused by injuries caused by disaster, death caused by limited access to health services post disaster, death caused directly be infections/ epidemic resulting from disaster like cut in water

[12] See the definition of "climate extreme" and "extreme weather event" in IPCC, 2018. Annex I: Glossary [Matthews, J.B.R. (ed.)]. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty.

	supply from climate related disasters thanks to GCF supported interventions in a defined geographical area. Geographical area under this indicator is defined as the area estimated to be covered by the sequenced failure of infrastructure e.g. water system failure due to electricity blackout; negative impacts resulting from functional interaction of infrastructure and natural environment e.g. hard infrastructure blocking water surge that releases in neighbouring unprotected area; negative impacts caused by characteristics of the eco-systems e.g. interlinks of the water catchment area. Geographic area of GCF intervention refers to only the geographical area (as defined above) where the climate-change related disaster reduction interventions are implemented by the GCF project/programme in question.
Suggested result areas	ARA 1: Most vulnerable people and communities ARA 2: Health, well-being, food and water security ARA 3: Infrastructure and built environment
Disaggregation	• By type of disaster • By main result area
Methodology	Because of the broad scope of this indicator in terms of type of disasters and type of interventions that are covered under it, it is not possible to define one standard methodology for this indicator. To report on this indicator, projects need to provide a *plausible* narrative and methodology on which they have based their estimates on expected reduction in losses of lives that can be linked to the intervention. Timescale: A timescale cannot be specified since disasters can happen anytime. Under this indicator, the expected change in losses of lives should therefore be reported for <u>one</u> future occurrence of the hazard only for which the intervention is reducing the disaster risk. Since it is unknown when this occurrence will be, it is assumed that the conditions in the geographical area in terms of population density and living conditions are the same as at the time of the intervention. Geographic scope: includes only the geographical area where the climate-change related disaster reduction interventions are implemented by the GCF project/programme in question should be considered.
Data Sources	Some of the possible data sources that can be used to construct a plausible narrative on estimated change in losses of lives include: • Historical data on losses of lives during previous disasters of the same type as is being addressed by the project. • Cost-benefit analysis undertaken for the intervention, or for similar interventions elsewhere. • Actual measured impact on changes in losses of lives of similar interventions undertaken elsewhere. • Modelling, such as coastal flood modelling caused by cyclones, or models on groundwater depletion. • Population statistics, including historical population data, current population size and population growth forecasts.
Baseline and Targets	If the intervention relates to reducing risks of disasters that have previously occurred in the area, then average historical data on losses of lives of those disasters should be used as the baseline, where possible corrected for changes in population size exposed to the hazard.

	In other cases, the baseline will have to be constructed from alternative data sources, different from those listed above. For this indicator, one target value should be provided in the funding proposal and or inception report.
Frequency	Since the figure (number of lives) to be reported against this indicator is an estimate, the project/programme selecting this indicator does not require annual reporting via APRs unless the modelling /simulation used at the time of setting a target/estimate has been revised based on the actual climate-related risk reduction measures/interventions implemented by the project/programme. In such cases, the project will be required to report the re-estimated figure via annual reporting.
Alignment	**GCF Investment Framework** Impact potential (adaptation impact): **i.** Expected reduction in vulnerability by enhancing adaptive capacity and resilience for populations affected by the proposed activity, focusing particularly on the most vulnerable population groups and applying a gender-sensitive approach **ii.** Expected strengthening of adaptive capacity and reduced exposure to climate risks

SDGs	Other climate finance mechanisms
SDG13 SDG1	• None

Core indicator 3	**Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions**
Unit	USD
Definition	This indicator measures the United States Dollar (USD) equivalent value of physical assets supported (built, installed, distributed, rehabilitated, and or improved/strengthened) by GCF-funded projects/programmes to make them more resilient to climate change and/or more able to reduce GHG emissions. The USD equivalent value reported against this indicator is the cost required for construction, installation, purchase /procurement, and or rehabilitation/ improvement of a physical asset and does not include the subsequent operation and or maintenance cost, nor the existing value of the physical assets in case where existing physical assets are rehabilitated, improved, or strengthened. In case of multi-year interventions such as the construction of a power plant, no discounting for future value is required. Physical assets under this indicator refer to fixed and or movable infrastructure, machinery, equipment and or tools and include both existing (rehabilitated, improved, or strengthened) physical assets and or new physical assets (newly built, installed, and or distributed). Fixed infrastructure for example includes large, medium and or community-based infrastructure such as buildings, bridges, ports, roads, railway systems, seawalls,

	industrial plants, pipelines, electricity grid, dikes, irrigation systems, barns, storage facilities, and local market infrastructure etc. Movable infrastructure for example includes but is not limited to energy efficient vehicles, buses and trains. Machinery, equipment and tools include but are not limited to agricultural machinery (e.g. rice husker and harvester etc.), cooking stoves, cooling solutions, and other small agricultural or livelihood tools. Land, natural resources (e.g. forests and forest products), live assets (livestock), crops, food produce are not considered as physical assets under this indicator. Physical assets made more resilient to the effects of climate change mean those physical assets supported (built, installed, distributed, rehabilitated, and or improved/strengthened) through GCF-funded adaptation interventions. Physical assets made more able to reduce GHG emissions refer to those physical assets supported (built, installed, distributed, rehabilitated, and or improved/strengthened) through GCF funded mitigation interventions.
Suggested result areas	MRA 1: Energy generation and access MRA 2: Low-emission transport MRA 3: Buildings, cities, industries and appliances MRA 4: Forests and land use ARA 1: Most vulnerable people and communities ARA 2: Health, well-being, food, and water security ARA 3: Infrastructure and built environment ARA 4: Ecosystems and ecosystem services
Disaggregation	• By 1) existing (rehabilitated, improved, or strengthened) vs. 2) newly built, installed and or distributed physical assets • Number of units By type of physical asset: 1) fixed infrastructure, 2) movable infrastructure, and or 3) unmovable machinery, equipment and tools. • By main results area: **Mitigation** (more able to reduce GHG emissions): MRA1: Energy access and power generation (e.g. hydropower plants, solar farms, wind farms, substations, transmission and distribution lines etc.) MRA2: Low-emission transport (e.g. railway road or port systems, bridges, energy efficient vehicles, buses and or trains, etc.) MRA3: Buildings, cities, industries and appliances (e.g. energy efficient or green buildings that substitute or replace highly emitting infrastructure solutions, and appliances, including cooking stoves and cooling solutions etc.): MRA4: Forestry and land use: (e.g. energy efficient irrigation facility; boat /vehicles for patrolling illegal logging etc.)) **Adaptation** (made more resilient)**:** ARA1: Most vulnerable people, communities and regions (e.g.; livelihood tools and equipment etc.) ARA2: Health and well-being, and food and water security Health and well-being (e.g. enhanced hospital and or health care facility for risk management), Agriculture and food security (e.g. agriculture machinery and or tools, irrigation facility, food storage facilities etc.),

	Water security: (e.g. reservoirs, water treatment plants, irrigation systems, boreholes that replace shallow wells to address lowering groundwater levels, and or rainwater harvesting systems etc.) ARA3: Infrastructure and built environment (e.g. coastal/flood protection works that protect a city as much as feasible green infrastructure to be introduced in ecosystem-based approach projects; hydromet facilities to improve monitoring of meteorological and hydrological hazards, etc.) ARA4: Ecosystem and ecosystem services (e.g. aquaculture farms and related equipment etc.)
Methodology	For this indicator, a project/programme will be required to set a total estimated cost for supporting physical assets (USD) as a target value in the funding proposal. Then during the implementation period, the project/programme will be required to report a total actual cost (USD) incurred from supporting physical assets. To report the total estimated/actual cost (USD), the project /programme will provide the number of units supported (by type of physical assets) as well as the unit cost (USD) per support provided. For example, in case where 500 energy efficient cooking stoves will be installed for households in a target community and each stove costs USD 100, USD50,000 (500 times USD 100) will be the value to be reported against this indicator. In case of a large infrastructure project such as the construction of a power plant or a railway system in a country, the number of unit should be the count of each power plant or each railway system being built such as one (1) power plant or one (1) railway system (rather than a breakdown by type of materials required for constructing a power plant or a railway system). The unit cost should be the total estimated /actual project cost per power plant or railway system. For target (ex-ante) estimate values, project financial data from pre-feasibility studies, feasibility studies, economic /financial analysis, technical needs assessment should be used. In case of multi-year interventions, no discounting for future value is required for this indicator. For actual (ex-post) results, actual cost incurred during the reporting period should be reported via annual performance reports (APRs). In case where the cost to support one unit of physical asset was incurred across multiple reporting periods, the total cost should be reported when the support to a physical asset is completed to avoid double-counting of units supported.
Data Sources	• For target (ex-ante) estimate values, project financial data from pre-feasibility studies, feasibility studies, economic /financial analysis, technical needs assessment should be used. • For actual (ex-post) results, actual cost incurred during the reporting period should be reported.
Baseline and targets	Baseline for this indicator should be zero for all types of physical assets as this indicator aggregates the USD value of the support cost incurred via GCF-funded projects/programmes during the implementation period and does not measure the existing value or market value of the physical assets in question. Two target values should be provided in the Funding Proposal: 1) an estimated target at the time of interim evaluation; 2) an estimated target at the end of the

	implementation period.
Frequency	Projects/programmes selecting this indicator will be required to report annually during the implementation period through APRs and project completion report (PCR).
Alignment	**GCF Investment Framework**
	• Impact potential (mitigation impact): • Degree to which activity avoids lock-in of long-lived, high emission infrastructure. • Expected decrease in energy intensity of buildings, cities, industries and appliances. • Impact potential (adaptation impact): • Degree to which the activity avoids lock-in of long-lived, climate-vulnerable infrastructure. • Expected strengthening of institutional and regulatory systems for climate-responsive planning and development. • Expected strengthening of adaptive capacity and reduced exposure to climate risks.

SDGs	**Other climate finance mechanisms**
SDG13 SDG1 SDG9	• Adaptation Fund - Assets Produced, Developed, Improved, or Strengthened • LCDF / SCCF 1.1.1 - Physical assets made more resilient to climate variability and change • CIF PPCR - Extent to which vulnerable households, communities, businesses, and public-sector services use improved PPCR-supported tools, instruments, strategies, and activities to respond to climate variability or climate change

Supplementary indicator 3.1	**Change in expected losses of economic assets due to the impact of extreme climate-related disasters in the geographic area of the GCF intervention**
Unit	United States Dollar (USD)
Definition	Climate-related disasters for this indicator refer to disasters of all scales, frequencies, and onset rates, which are considered to have adverse impacts on economic assets due to the climatic impact-drivers.[13] Losses shall be estimated in relation to the functional geographical area related to a GCF-funded project/programme. Geographical area is defined as the area to be impacted by the sequenced failure of infrastructure e.g. water system failure due to electricity blackout,; negative impacts resulting from functional interaction of infrastructure and natural environment e.g. hard infrastructure costal solution that blocks water surge resulting in water releases in neighbouring unprotected area; negative impacts resulting from hydrological and geological characteristics of the eco-systems e.g. interlinks of the water catchment area.

[13] Climatic impact-drivers are physical climate system conditions that affect an element of society or ecosystems. Refer to 35 climatic impact-drivers in the IPCC AR6 WGI paper (2021). Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press.

	Geographic area of GCF intervention refers to only the geographical area (as defined above) where the climate-change related disaster reduction interventions are implemented by the GCF project/programme in question. Under this indicator, expected losses of economic assets refer to two instances: • Direct, immediate economic damages or destruction to the physical assets, interlinked systems of assets (sequenced failures) and losses attributable to ecosystems losses (i.e., *stocks* of resources, e.g., infrastructure and property); • Secondary economic losses (e.g., disrupted service outages, forgone outputs from the economic activities enabled by the physical assets) that incur due to the climate-related disasters. This category of economic losses is more project-specific and method-dependent. GCF is currently working on methodology that would allow to quantify secondary economic losses caused by climate-related disasters. Results of the analyses will be published to guide the calculations in this respect. Examples of physical assets include but are not limited to homes, schools, hospitals, commercial and governmental buildings; transport, energy water and telecommunications infrastructure combined in systems, industrial plants; agricultural infrastructure and other infrastructure systems and interlinks among such systems and assets. Green infrastructure and their protective value should also be part of the calculation in case losses are incurred[14].
Suggested result areas	ARA 1: Most vulnerable people and communities ARA 2: Health, well-being, food and water security ARA 3: Infrastructure and built environment
Disaggregation	• By type of disaster[15]: disasters caused by the climatic impact-drivers, e.g., extreme temperatures, floods, droughts, cyclone, forest fire, and other extreme weather events The most relevant climate hazard(s) that may have adverse consequences for the economic assets located in the project site, should be chosen for the reporting. If more than one type of disasters affect different types of assets in the project site, the association between the disaster and the affected asset should be clearly mentioned. • By type of intervention: structural and/or non-structural risk reduction measures. Examples of structural measures include, but are not limited to, engineering improvement, flood wall, roof-wall, retaining wall, retrofitting, pile addition (foundation retrofit), reinforcement (increasing capacities or threshold of components), elevation of installations, coastal revetment; non-structural measures are those not involving physical construction, which use knowledge, data, practice or agreement to reduce climate disaster risks and impacts, e.g., early warning systems, building codes, land-use planning laws. • By main result area

[14] A separate methodology under preparation by GCF will enable calculation of the value of ecosystem services introduced as infrastructure asset in ecosystem-based approach projects.

[15] IPCC AR6 WGI (2021), Summary for Policymakers, p. 26. Extreme climate-related disasters can be caused by events and extreme physical climate system conditions that affect an element of society or ecosystems. Disaggregation of disasters for this indicator can cover a total of 35 climatic impact-drivers, grouped into seven types (i.e.. heat and cold; wet and dry; wind; snow and ice; coastal; open ocean; and other).

	Adaptation: ARA1: Most vulnerable people, communities and regions (e.g. accommodation to allow continued occupation of coastal areas by making changes to infrastructure, spatial planning to enhance climate resilience, livelihood tools and equipment, etc.) ARA2: Health and well-being, and food and water security Health and well-being (e.g. enhanced hospital and or health care facility for emergency responses), Agriculture and food and nutrition security (e.g. agriculture machinery and or tools, irrigation facility, food storage facilities, etc.), Water security: (e.g. access to safe and sustainable water supply from reservoirs, groundwater, water treatment plants, water supply network infrastructure with increased capacities, irrigation systems, etc.) ARA3: Infrastructure and built environment (e.g. coastal/flood protection works that protect residential and productive areas; development of strategies to decrease the vulnerability of structures and operations of shipping and infrastructure, etc.) •
Methodology	• **Caveats**: the estimated losses and damages to the economic assets due to the climate-related disasters are regarded as rough approximation due to the uncertainties and challenges in data collection and lack of data availability and systemic disaster data reporting. Despite difficulties and challenges known, probabilistic risk analysis is a suggested methodology to make reasonable and clear assumptions referring to the empirical evidence, if available for this indicator. • **Assumptions**: o *Probabilistic nature of climate disaster*: the baseline losses of economic assets due to the climate extreme disasters assumes that direct damages are done to the existing assets, whereas the expected losses of economic assets with the project require the probabilistic analysis to measure the disaster risks (that may or may not incur direct damages). It will be ideal to refer to the loss-exceedance curve, as a standard statistical concept for the probabilistic representation of natural disaster risk. o *Spatial and temporal scale*: the measurements for this indicator should be confined to the project context (e.g., the geographical area of GCF interventions and estimated losses against one time disaster event). o *Expected loss from selected type(s) of climate disasters*: this indicator can be better measured when the type of climate-related disasters from which the project aims to improve the resilience of economic assets is clarified. Because different climate hazards have different probabilities, vulnerabilities, exposures, selection of the pertinent disaster risks will affect the adequacy of the estimates for this indicator (e.g., over- or under-estimation of climate hazard risks and the associated economic losses). In relation to the assumption ii: spatial scale, the historical records of disasters in the project site should be considered in the selection of pertinent one time extreme climate-related disaster. o *Double counting to be avoided in assessing losses of stocks and flows*: expected losses of economic assets at a climate disaster can be by twofold, i.e., damages to stocks (e.g., destruction of built structures) and losses of flows (e.g., outputs, income flows and social benefits discontinue to incur from the damaged

	building). Estimation of secondary economic losses should avoid double counting as much as possible with linkages for attribution of climatic impact-drivers, distinguished from other human or market induced factors (e.g., economic downturn, pandemic, population decrease, changes in market demands). • **Methodological references:** the hazard risk of an economic asset is commonly measured using the exceedance probability (EP) curve. Risk models involving hazard, exposure, vulnerability and financial loss modules can be considered for this indicator.[16]
Data Sources	Some of the possible data sources that can be used to construct a plausible narrative on estimated change in direct economic losses include: • Historical data on economic losses and on replacement / reconstruction costs during previous disasters of the same type as is being addressed by the project, where it is disaggregated as needed. • Cost-benefit analysis undertaken for the intervention, or for similar interventions elsewhere. • Actual measured impact on changes in economic losses of similar interventions undertaken elsewhere. • Modelling, such as coastal flood modelling caused by sea-level rise or cyclones, or models on groundwater depletion. • (Existing) inventories of physical assets in the geographical area of the intervention.
Baseline and target	If the intervention relates to reducing risks of disasters that have previously occurred in the area then historical data on direct economic losses from those disasters should be used as the baseline, i.e. to estimate the direct economic losses without the intervention. The historical data should be corrected for any major changes in physical assets values in the geographical area since that disaster. In other cases the baseline will have to be constructed from alternative data sources, and in discussion with the GCF Secretariat. For this indicator, one target value should be provided in the funding proposal and or inception report.
Frequency	Since the figure (USD) to be reported against this indicator is an estimate, the project/programme selecting the indicator does not require annual reporting via APRs unless the modelling /simulation used at the time of setting a target/estimate has been revised based on the actual climate-related risk reduction measures/interventions implemented by the project/programme. In such cases, the project will be required to report the re-estimated figure via annual reporting.
Alignment	**GCF Investment Framework** Impact potential (adaptation impact): • Degree to which the activity avoids lock-in of long-lived, climate-vulnerable infrastructure • Expected strengthening of adaptive capacity and reduced exposure to

[16] Exemplary methodological guidance can be found in several literature, including: IIASA/RMS/Wharton 2009. In World Bank, 2010: 73. Natural hazards, unnatural disasters: the economics of effective prevention; Vermeiren et al. 2009. Costs and benefits of hazard mitigation for building and infrastructure development: a case study in Small Island Developing States.

	climate risks	
	SDGs	**Other climate finance mechanisms**
	SDG13 SDG1 SDG9 SDG11	• None

Core Indicator 4	**Hectares of natural resource areas brought under improved low emission and/or climate resilient management practices**
Unit	Hectares (ha)
Definition	This indicator measures the total natural resource areas (in hectares) brought under improved low GHG emission and or climate resilient management practices. The natural resource areas in this indicator refer to those under productive use including agricultural/crop land; cultivated pasture, rangelands; aquaculture in freshwater or coastal marine areas; agroforestry areas including silvopastoral areas; forest and forestry enterprise areas; and shrublands and woodlands for collection of wood and non-wood forest products. Note natural resource areas that are under restoration and or improved ecosystems and biodiversity in protected or non-protected areas of terrestrial-forests, terrestrial non-forests, coastal-marine areas and freshwater should be reported against supplementary indicator 4.1. Improved low emission and or climate resilient management practices refer to management practices newly or additionally implemented with the support of GCF-funded projects/programmes with the explicit aim of reducing GHG emissions, enhancing carbon sinks, and or improving climate change adaptation measures. These for example include but are not limited to implementing climate smart agriculture, improving irrigation systems, establishment or improved management of plantation forests or tree crops for sustainable production of timber, fruit or other products, improved silvicultural practice in natural forests, improving silvopastoral practices or pastureland management, regulating collection of wood and non-wood, forest products, sustainable aquaculture and fisheries management etc.
Suggested result areas	Adaptation Area 1: Most vulnerable people and communities Adaptation Area 2: Health, well-being, food and water security Adaptation Area 4: Ecosystems and Ecosystem Services
Disaggregation	• By results areas • By type of natural resource areas under productive use: agricultural/crop land; cultivated pasture, rangelands; aquaculture in freshwater areas; aquaculture in coastal marine areas; agroforestry areas including silvopastoral areas; forest land, shrubland and forestry production for commercial purposes.
Methodology	For this indicator, projects/programmes will be required to set a total estimated natural resource area in hectares that will be supported by the GCF-funded project/programme as a target value in the funding proposal. The natural resource areas that will be supported by the project/programme mean those areas where

<table>
<tr><td></td><td>improved low emission and or climate resilient management practices will be implemented with the support of GCF-funded projects/programmes.

For reporting actual (ex-post) results, projects/programmes should only report the actual area (i.e. not projected area) that has been brought under improved management practices at the time of reporting. The same hectares reported during the previous reporting period should only be reported again in the following reporting period if additional improved management practices are introduced/ implemented.

Reporting against this indicator should not include areas brought under conservation or restoration, and or improved ecosystems and biodiversity, which should be reported against supplementary indicator 4.1 (terrestrial-forest, terrestrial-non-forest, freshwater and coastal-marine areas brought under restoration and or improved ecosystems).

However, where a project /programme involves both the introduction of improved management practices and bringing the same area under conservation, restoration, and or improved ecosystems and biodiversity, the project/programme should report that area under both this indicator and indicator 4.1 (i.e. it is acceptable to report the same area twice).</td></tr>
<tr><td>Data Sources</td><td>Project/programme-level monitoring data; national / regional GIS data</td></tr>
<tr><td>Baseline and targets</td><td>Baseline for this indicator should be zero for all types of natural resource areas as this indicator aggregates the natural resource areas supported via GCF-funded projects/programmes during the implementation period and does not measure the existing natural resource areas that are under improved management practices.

Two target values should be provided in the funding proposal: 1) an estimated target at the time of interim evaluation; 2) an estimated target at the end of the implementation period.</td></tr>
<tr><td>Frequency</td><td>Projects/programmes selecting this indicator will be required to report annually during the implementation period through APRs and project completion report (PCR).</td></tr>
<tr><td rowspan="3">Alignment</td><td>GCF Investment Framework</td></tr>
<tr><td>Impact potential (adaptation impact):
- Expected improvement in the management of land, freshwater and marine ecosystems leading to enhanced resilience to climate risks
- Expected reduction in vulnerability by enhancing adaptive capacity and resilience for populations affected by the proposed activity, focusing particularly on the most vulnerable population groups and applying a gender-sensitive approach
- Expected strengthening of institutional and regulatory systems for climate-responsive planning and development
- Expected strengthening of adaptive capacity and reduced exposure to climate risks</td></tr>
<tr><td><table><tr><th>SDGs</th><th>Other climate finance mechanisms</th></tr><tr><td>SDG14
SDG15</td><td>• GEF indicator 4 (Area of landscapes under improved practices, excluding protected areas)
• GEF indicator 5 (Area of marine habitat under improved practices to benefit biodiversity, excluding protected areas)
• Aichi target 7 (areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity)</td></tr></table></td></tr>
</table>

Supplementary indicator 4.1	Hectares of terrestrial-forest, terrestrial-non-forest, freshwater and coastal-marine areas brought under restoration and or improved ecosystems
Unit	Hectares (ha)
Definition	This indicator measures the area of natural resources that have been conserved, restored, or brought under improved ecosystem and biodiversity management practices with the explicit aim of reducing emissions and/or improving resilience to climate change. Terrestrial-forest refers to all types of forests including tundra, taigas, temperate deciduous forests, and tropical rainforests. Terrestrial-non-forest refers to natural resources areas other than forests such as natural grass, shrublands and dry lands including deserts. Freshwater areas refer to any naturally occurring liquid or frozen water areas containing low concentrations of dissolved salts and other total dissolved solids. These include for example lakes, ponds, rivers, streams, springs, wetlands such as bogs and peatlands, and glaciers. . Coastal-marine areas refers to those areas with high to medium concentration of dissolved salts including the areas under national jurisdiction or so-called territorial waters and open sea areas as applicable. Conservation refers to the process of placing ecosystems and natural resources under protection including via legal protection such that natural resources and ecosystems become self-sustaining.. Restoration and or improved ecosystems are defined as the process of repairing and/or assisting the recovery of ecosystems that have been degraded, damaged, destroyed, or modified to an extent that the ecosystem cannot fulfil its ecological functions and/or fully deliver environmental services. Ecosystem restoration reduces the causes of decline and improves basic functions, enhances native habitats, and promotes climate resilience. Examples of restoration include: planting native trees in degraded forested areas; peatland restoration; and rehabilitating mangroves or watersheds for improved ecosystem services.
Suggested result areas	ARA 4: Ecosystems and ecosystem services
Disaggregation	• By natural resource category: - Terrestrial-forest including tundra, taigas, temperate deciduous forests, tropical rainforests; - Terrestrial-non-forest including natural grass, shrublands and dry lands including deserts; and - Coastal-marine areas[17] including estuaries and mangroves,.

[17] The indicator will not adequately apply to the open oceans/areas beyond national jurisdiction and should follow territorial waters (up to 12 nautical miles from the coast) as per the definition provided by United Nations Statistical Division related to marine areas in territorial waters.

<table>
<tr><td></td><td>- Freshwater areas including lakes, ponds, rivers, streams, springs, wetlands such as bogs and peatlands.</td></tr>
<tr><td>Methodology</td><td>For this indicator, projects/programmes will be required to set a total estimated area in hectares that will be protected, restored or brought under improved ecosystem management with the support of GCF-funded projects/programmes as a target value in the funding proposal.

For reporting actual (ex-post) results, projects/programmes should only report the actual area (i.e. not projected area) that has been protected, restored or brought under improved ecosystem management with the support of the GCF-funded projects/programmes at the time of reporting. The same hectares reported during the previous reporting period should be reported again in the following reporting period only if additional restoration, protection and or ecosystem improvement activities are implemented under the projects/programmes.

Reporting against this indicator should not include areas used for productive purposes that have been brought under improved management practices, which should be reported through Core Indicator 4 (natural resource areas brought under improved low emission and/or climate resilient management practices).

However, where a project/programme involves both the introduction of improved management practices and bringing the same area under protection, restoration or improved ecosystems, the project should report that area under both this indicator and Core Indicator 4 (i.e. it is acceptable to report the same area twice).</td></tr>
<tr><td>Data Sources</td><td>Project/programme-level monitoring data; national / regional GIS data</td></tr>
<tr><td>Baseline and targets</td><td>The baseline for this indicator should be zero for all types of areas as this indicator aggregates the areas supported via GCF-funded projects/programmes during the implementation period and does not measure the existing natural resource areas that are already under protection, restoration or improved ecosystem practices.

Two target values should be provided in the funding proposal: 1) an estimated target at the time of interim evaluation; 2) an estimated target at the end of the implementation period.</td></tr>
<tr><td>Frequency</td><td>Projects/programmes selecting this indicator will be required to report annually during the implementation period through APRs and project completion report (PCR).</td></tr>
<tr><td>Alignment</td><td>GCF Investment Framework

Impact potential (adaptation impact):
- Expected improvement in the management of land, freshwater and marine ecosystems leading to enhanced resilience to climate risks
- Expected reduction in vulnerability by enhancing adaptive capacity and resilience for populations affected by the proposed activity, focusing particularly on the most vulnerable population groups and applying a gender-sensitive approach
- Expected strengthening of institutional and regulatory systems for climate-responsive planning and development
- Expected strengthening of adaptive capacity and reduced exposure to climate risks

SDGs | Other climate finance mechanisms

SDG14
SDG15 | • GEF indicator 1 (Terrestrial protected areas created or under improved management for conservation and sustainable use)</td></tr>
</table>

		• GEF indicator 2 (Marine protected areas created or under improved management for conservation and sustainable use) • GEF indicator 3 (Area of land restored) • Adaptation Fund indicator 5 (Natural assets protected or rehabilitated) • Aichi target 11 (terrestrial and inland water, and coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved)

Supplementary indicator 4.2	**Number of livestock brought under sustainable management practices**
Unit	Livestock unit (LSU)
Definition	This indicator measures the estimated number of livestock that have been brought under sustainable management practices with the support of GCF-funded projects/programmes by using a common unit of measurement – livestock unit (LSU). Livestock under this indicator refers to domesticated animals raised in an agricultural ecosystem for the purpose of providing a variety of goods and services. These include commodities such as meat, milk, eggs, and hides as well as traction[18]. Primary livestock include cattle, buffalo, sheep, goats, pigs, asses, horses, mules, camels, and chickens. Sustainable management practices under this indicator refers to climate-friendly methods of livestock farming with the explicit aim of reducing GHG emissions reduction and or increasing climate change adaptation measures. Examples include maintaining an adequate density of livestock per hectare of pasture, harnessing grazing skills such as adaptive grazing, restoring degraded lands, improving the cultivation of fodder and dual-purpose crops, improved manure management systems to reduce GHG emissions (possibly along with bioenergy production facilities), and the use of infrastructure such as fencing. The number of livestock should be reported in LSU, a common unit of measurement used to aggregate various livestock species by considering the relative nutritional and/or feed requirements. Conversion ratios are based on metabolisable energy requirements, with one unit being considered as the needs for maintenance and production of a typical dairy cow and calf[19]. With 1 LSU being equivalent to one adult dairy cow that produces 3,000 kg of milk per year[20], this exchange ratio can be used to calculate different livestock species with regional comparisons.
Suggested result areas	ARA 1: Most vulnerable people and communities ARA 2: Health, well-being, food and water security ARA 4: Ecosystems and ecosystem services

[18] https://www.fao.org/livestock-systems/en/
[19] Ibid
[20] https://www.business-biodiversity.eu/bausteine.net/f/9102/LIFEFoodBiodiversity_GuidelineLivestock.pdf?fd=3 p.9

Disaggregation[21]

1) By species (based on the LSU category): cattle, buffalo, sheep, goats, pigs, asses, horses, mules, camels, chickens[22]
2)

Methodology

The following table provides the livestock unit (LSU) coefficients that should be applied depending on the location of livestock related interventions supported by GCF-funded projects/programmes. For example, if a project/programme is located in East and South Asia and has brought 500 goats and 200 cattle into sustainable management practices for a reporting period, the total number to be reported for the period will be coefficient 0.1 x 500 goats + coefficient 0.65 x 200 cattle = 180 LSU.

LSU Coefficients for International Comparisons

Region	Cattle	Buffalo	Sheep	Goats	Pigs	Asses	Horses	Mules	Camels	Chickens
Near East North Africa	0.70	0.70	0.10	0.10	0.20	0.50	0.40	0.60	0.75	0.01
North America	**1.0**		0.15	0.10	0.25	0.50	0.80	0.60		
Africa South of Sahara	0.50		0.10	0.10	0.20	0.30	0.50	0.60	0.70	0.01
Central America	0.70		0.10	0.10	0.25	0.50	0.50	0.60		0.01
South America	0.70		0.10	0.10	0.25	0.50	0.65	0.60		0.01
South Africa	0.70		0.10	0.10	0.20	0.50	0.65	0.60		0.01
OECD	0.90	0.70	0.10	0.10	0.25	0.50	0.65	0.60	0.90	0.01
East and South Asia	0.65	0.70	0.10	0.10	0.25	0.50	0.65	0.60	0.80	0.01
South Asia	0.50	0.50	0.10	0.10	0.20	0.50	0.65	0.60		0.01
Transition Markets	0.60	0.70	0.10	0.10	0.25	0.50	0.65	0.60		0.01
Caribbean	0.60	0.60	0.10	0.10	0.20	0.50	0.65	0.60		0.01
Near East		0.60	0.10	0.10	0.25	0.50	0.65	0.60	0.70	0.01
Other	0.60	0.60	0.10	0.10	0.20	0.50	0.65	0.60		0.01

The targeted pastoral area will already have been identified during the calculation and monitoring of GCF core indicator 4 (natural resource areas brought under improved low emission and/or climate resilient management practices).

For this indicator, projects/programmes will be required to set a total estimated LSU that will be brought under sustainable management practices with the support of GCF-funded projects/programmes as a target value in the funding proposal.

For reporting actual (ex-post) results, projects/programmes should only report the LSU value calculated based on the actual number of livestock per species brought under sustainable management practices with the support of the GCF-funded projects/programmes at the time of reporting. The number of livestock reported during the previous reporting period should be reported again in the following reporting period only if additional sustainable management practices are introduced.

Data Sources

Project/programme monitoring; data, national / regional GIS data
Secondary sources including sample census and surveys, national and international data

[21] https://www.fao.org/3/i2294e/i2294e.pdf
[22] LSU coefficients categories vary by different geography.

Baseline and targets	The baseline for this indicator should be zero for all types of livestock species as this indicator aggregates the number of livestock in LSU supported via GCF-funded projects/programmes during the implementation period and does not measure the existing number of livestock that is already under sustainable management practices. Two target values should be provided in the funding proposal: 1) an estimated target at the time of interim evaluation; 2) an estimated target at the end of the implementation period.
Frequency	Projects/programmes selecting this indicator will be required to report annually during the implementation period through APRs and project completion report (PCR).
Alignment	**GCF Investment Framework** Impact potential (mitigation impact): - Expected reduction in deforestation and desertification as well as increase in land restoration Impact potential (adaptation impact): - Expected reduction in vulnerability by enhancing adaptive capacity and resilience for populations affected by the proposed activity, focusing particularly on the most vulnerable population groups and applying a gender-sensitive approach - Expected strengthening of institutional and regulatory systems for climate-responsive planning and development - Expected strengthening of adaptive capacity and reduced exposure to climate risks

SDGs	Other climate finance mechanisms
SDG15 SDG2 SDG12 SDG3	• GEF indicator 4.3 (Area of landscapes under sustainable land management in production systems) • Aichi target 7 (areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity)

Supplementary indicator 4.3	**Tonnes of fish stock brought under sustainable management practices**
Unit	Metric tonnes
Definition	This indicator measures the estimated fish stock in metric tonnes within (i) areas of open fishing water and or (ii) aquaculture farms that have been brought under sustainable management practices. Aquaculture refers to cultivation of freshwater and or saltwater populations of fish and or other aquatic organisms (e.g. molluscs, crustaceans and aquatic plants) under controlled or semi-natural conditions. Open fishing water refers to marine and or coastal and freshwater areas other than aquaculture. Sustainable management practices refer to the practices that do not create significant disruption to the existing ecosystems or cause the loss of biodiversity and or considerable pollution impacts.

Suggested result areas	ARA 1: Most vulnerable people and communities ARA 2: Health, well-being, food and water security ARA 4: Ecosystems and ecosystem services
Disaggregation	• Results areas • Fisheries vs aquaculture • Marine and coastal areas vs freshwater
Methodology	**Fisheries:** The targeted open fishing area (whether marine and coastal areas or freshwater) will already have been identified during the calculation and monitoring of GCF Core Indicator 4 (natural resource areas brought under improved low emission and/or climate resilient management practices). During the funding proposal or inception process, projects/programmes will have identified and agreed with the GCF the methodology for estimating fish stock, and for the subsequent monitoring of fish stock. Consequently, the agreed methodology should be applied to the open fishing area that – at the time of reporting – has been brought under sustainable management practices. The methodology and assumptions should be sufficiently transparent and detailed to allow independent replication of the investment's calculations. Fish stock estimates can be obtained by various means depending on types of sustainable management practices of the project. For instance, if a fishing quota regime is introduced by the project, available fish stock will need to be estimated to determine allowable catches. In case of catch and discard electronic monitoring systems, estimation of total catches in the fishing areas of the project can be provided by the monitoring devices. **Aquaculture:** The projects/programmes should report the estimated harvest (in tonnes) of fish stock within farms that have been brought under sustainable management practices. The methodology and assumptions behind estimated harvests should be sufficiently transparent and detailed to allow independent replication of the investment's calculations.
Data Sources	Project/programme -level monitoring data; national / international fisheries data, dependent on agreed methodology
Baseline and targets	**Fisheries:** If the GCF-funded projects/programmes represent the first time that sustainable management practices have been introduced to the targeted region, the baseline will be zero tonnes. Where parts of the targeted region are already under sustainable management, the baseline will be the estimated fish stock within those areas (during the Funding Proposal process, investments will have identified and agreed with the GCF the methodology for estimating fish stock). **Aquaculture:** If the GCF-funded projects/programmes represent the first time that sustainable management practices have been introduced to the target farms, the baseline will be zero tonnes. Where parts of the target farms are already under sustainable management, the baseline will be the estimate of fish stock (in tonnes) that are already under sustainable management practices. Two target values will be provided in the funding proposal:1) an estimated target at the mid-point of the project/programme implementation period; and 2) an estimated target at the end of the implementation.
Frequency	Projects/programmes selecting this indicator will be required to report annually during the implementation period through APRs and project completion report (PCR).

<table>
<tr><td></td><td colspan="2">Depending on the type and scale of interventions, the stock assessment may not be reportable on an annual basis. The frequency of the data collection for the ex-post value therefore should be elaborated in the funding proposal in case where the annual data collection/reporting cannot be performed.</td></tr>
<tr><td rowspan="4">Alignment</td><td colspan="2">GCF Investment Framework</td></tr>
<tr><td colspan="2">Impact potential (adaptation impact):
- Expected reduction in vulnerability by enhancing adaptive capacity and resilience for populations affected by the proposed activity, focusing particularly on the most vulnerable population groups and applying a gender-sensitive approach
- Expected strengthening of institutional and regulatory systems for climate-responsive planning and development
- Expected strengthening of adaptive capacity and reduced exposure to climate risks</td></tr>
<tr><td>SDGs</td><td>Other climate finance mechanisms</td></tr>
<tr><td>SDG14
SDG2
SDG12</td><td>• GEF indicator 5 (Area of marine habitat under improved practices to benefit biodiversity, excluding protected areas)
• GEF indicator 5.1 (Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations)
• Aichi target 6 (All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably)</td></tr>
</table>

Annex 3: Enabling environment scorecards

In line with the GCF Investment Framework and criteria, AEs are encouraged to use the TOC and broader funding proposal to detail how a project/programme will support and/or strengthen the enabling environment within which it will be working. Based on that proposed approach, project/programmes should monitor any of the IRMF's four enabling environment indicators that are relevant to its work. As many indicators as possible should be selected but – as a minimum – **at least two** indicators should be selected to monitor and report against.

Core Indicator 5	Degree to which GCF projects/programmes contribute to strengthening institutional and regulatory frameworks for low-emission climate-resilient development pathways in a country-driven manner
Core Indicator 6	Degree to which GCF projects/programmes contribute to technology deployment, dissemination, development or transfer and innovation
Core Indicator 7	Degree to which GCF projects/programmes contribute to market development / transformation at the sectoral, local or national level
Core Indicator 8	Degree to which GCF projects/programmes contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards

Enabling environment indicators require qualitative baselines and targets, and a quantitative, scorecard-derived baseline. Quantitative targets are not required.

Baseline setting

As for paradigm shift, AEs should develop a qualitative baseline for each of their selected enabling environment indicators. This narrative baseline should describe the current context within which the project/programme will be working. Qualitative targets should also be developed, hypothesising the change to the enabling environment that the project/programme will support, including how the project/programme will specifically contribute to that change. Given the importance of context to enabling environments, these baseline and target statements should clearly identify the unit of analysis being used. For example, for a project/programme operating in a small country the unit of analysis could be country-wide enabling environments, but for large countries it may be more appropriate to use a city- or state-wide enabling environment as the unit of analysis.

Quantitative baselines should then be developed for each selected indicator. Each indicator has a corresponding scorecard (see below) based on a series of elements that break down the indicator, allowing for a more granular definition of the enabling environment being measured. AEs should complete the scorecard, self-assessing the current (baseline) 'scores' for each of their selected indicators.

While this exercise can be conducted by the AE alone, it is recommended that other stakeholders be involved (particularly beneficiaries, and national government and agencies) to ensure baseline 'scores' are informed by multiple perspectives.

Monitoring, evaluation and reporting

AEs are encouraged to provide a brief qualitative report of their progress against their selected enabling environment indicators within every APR. However, the most substantive assessments will be undertaken **twice during implementation**: as part of the interim evaluation and as part of the final evaluation. In both instances, the assessment is carried out by the evaluator/s, although – depending on the evaluation methodology – this may be a participative assessment process that closely involves the project/programme's key stakeholders.

Taking into account the baselines established within the funding proposal, evaluators will assess progress against each of the project/programme's selected enabling environment indicators. Each indicator has a corresponding scorecard (see below) based on a series of statements that break down the indicator, allowing for a more granular definition of the enabling environment being measured. Evaluators will assess and 'score' progress against each of these scorecard elements, with all 'scores' to be supported by a qualitative, narrative assessment.

Evaluators should draw on a range of evidence sources when making their assessment including project/programme documentation (such as APRs), stakeholder interviews, and secondary data that can illustrate broader changes, such as national statistics, media reports and reports from other organisations. While the baselines and anticipated contributions identified in a project/programme's funding proposal will provide the basis for the assessment, evaluators will also need to review evidence of unanticipated changes and unanticipated contributions. It is possible that unexpected changes to the enabling environment may have arisen due to unforeseen circumstances or new opportunities arising.

The GCF Secretariat will review enabling environment assessments on an ongoing basis. This will include qualitative analysis of the narrative assessments, and collation of each project/programme's indicator-level 'scores'. Given the context-specificity of enabling environments, most emphasis will be placed on qualitative (as opposed to quantitative) analysis at the portfolio level.

Scorecards and scoring

The scorecards below should be used by AEs to develop quantitative baselines for each of their selected enabling environment indicators. The scorecards will also be used by evaluators during the interim and final evaluations. All assessments – baseline development, interim evaluation, final evaluation – first require the **scoring of all the individual elements** that underpin an indicator. The scorecard statements represent an illustrative description of what each numerical score means. For example, in core indicator 5 the first element focuses on the degree to which there is an effective and socially inclusive regulatory/policy framework developed for low emission climate resilient pathways. The statements for scores 1-3 show a progression towards meeting that outcome. It is important to note that the statements are *indicative* and there will always need to be some judgment involved in making an assessment.

Once each element has been scored, **final indicator-level scores** can be calculated (**low, medium or high**). To calculate these indicator-level scores, all the element-level scores should be totalled up. The final indicator-level scores are then allocated according to the total of the element scores, as follows:

	Low	Medium	High
Core 5 (Institutions)	Total element score: <=10	11-14	=>15
Core 6 (Technology)	<=8	9-11	=>12
Core 7 (Markets)	<=5	6-9	=>10
Core 8 (Knowledge)	<=8	9-11	=>12

Core Indicator 5: Degree to which GCF projects/programmes contribute to strengthening institutional and regulatory frameworks for low-emission climate-resilient development pathways in a country-driven manner			
Element	**Score 1**	**Score 2**	**Score 3**
1	Lack of or limited legal/regulatory/policy frameworks in place for low emission climate resilient pathways	Clear evidence and examples of improved legal/regulatory/policy frameworks being developed and put into place which show an appreciation of low emission climate resilient pathways	Effective socially inclusive legal/regulatory/policy frameworks developed and implemented at local and/or national level and clear evidence of enforcement of a regulation
2	Limited or no financial and/or human resources allocated to support the development and implementation of institutional and regulatory frameworks	Clear budgets and resources allocated to supporting the development of institutional and regulatory frameworks with some evidence of progress being made	Significant and regular financial resources and organisational units focused on the development, implementation and enhancement of institutional and regulatory frameworks
3	Public sector actors do not have an organizational structure/system or trained staff to respond to climate change challenges	Clear efforts being made to identify skills and capacity gaps to addressing the climate change crisis at both organisational and individual level, with evidence of training and learning being underway.	Public sector actors have an organizational structure/system or are fully staffed with trained and knowledgeable individuals to address climate change challenges
4	No horizontal or vertical cross government coordination in the response to climate change	Evidence that government departments/ministries and/or national and local governments are aware of the need for coordination and have initiated the development of coordination mechanisms to respond to climate change challenges	Clear functioning coordination mechanisms at both horizontal and vertical levels effectively coordinating climate change response
5	Private sector players unaware of their contribution to climate change and do not have structures or skills to respond in a timely manner	Clear examples of private sector companies developing and funding initiatives and strategies that directly identify and respond to climate change challenges.	Private sector players fully understand their role in addressing climate change and possess business models/strategies/ expertise to proactively address appropriate climate change challenges
6	Civil society organizations have insufficient knowledge and skills to address relevant climate change challenges or to hold the public and private sector to account	Clear evidence and examples that some civil society organisations understand climate change challenges and are developing strategies, interventions and capabilities to ensure they are addressing those that are relevant to them	Civil society organizations understand the contribution they can make and are collectively focused on ensuring their interventions address climate change challenges and that they hold other stakeholders/duty bearers to account

Core Indicator 6: Degree to which GCF projects/programmes contribute to technology deployment, dissemination, development or transfer and innovation			
Element	**Score 1**	**Score 2**	**Score 3**
1	Limited evidence that new technologies are being considered to address climate change challenges	Clear examples of organisations assessing the possible use of new technologies to address climate change challenges including initial trialling or piloting	Evidence of successful deployment and uptake of new technologies as part of regular/routine ways of working
2	Limited financial resources being made available to fund innovation or to try new technologies or processes	Clear evidence/ examples of financial commitment and fund flows to improving innovation and/or utilising new or transferring existing technologies to address climate change challenges	Regular and routine allocation of funds made available for innovation, technology development and transfer
3	Key organisations (public, private or civil society have limited numbers or no staff with either the skills or time allocated to work on innovation or knowledge transfer	There are some examples of organisations where they have staff with the skills to innovate, develop new or apply existing technologies in new ways and a structure which provides them with the opportunity.	There are a large number of organisations with models in place where skilled staff can be deployed in a timely way to develop and transfer new technologies and innovations
4	No incentivization – such as tax relief, access to funding, grants or tax breaks - provided at sectoral, local or national level to support innovations	Some evidence of incentivization processes/products - such as access to funding, grants or tax breaks – being developed at local or national level and being taken up by firms or private sector bodies	Clear evidence of incentives for developing and testing innovations, including acknowledgement and acceptance of possible failure leading to increased levels of innovation and technological deployment at sectoral, local or national level.
5	No sectoral, local or national level capacity within government or amongst business associations, civil society groupings to promote, disseminate or transfer innovations	Some evidence of mechanisms and structures to support and facilitate the dissemination of new innovations and technology transfer are being developed and appropriately resourced.	Mechanisms and platforms available and widely used to promote and transfer innovations to a range of audiences at sectoral, local, national and possibly international level

Core Indicator 7: Degree to which GCF projects/programmes contribute to market development / transformation at the sectoral, local or national level			
Element	**Score 1**	**Score 2**	**Score 3**
1	Limited or no market assessments being undertaken to analyse future market opportunities for low emission, climate resilient solutions	Examples of progress towards effective market development and transformation are emerging based on assessments and analysis of potential opportunities	A culture of looking for low emission, climate resilient market transformation opportunities has been created in a sector or region
2	No evidence of projects/programmes contributing towards market development and transformation	Clear examples of projects and programmes that are contributing to market development – for example through new sources of finance, market consolidation, improved value chains job creation, (particularly for women and other excluded groups), economies of scale.	Strong evidence that there has been a systematic shift in market dynamics and a transformation in a climate change affected sector due to projects/programmes
3	No evidence of projects/programmes incentivizing market participants by reducing costs or risks, or through eliminating barriers to the deployment of low-emission, climate resilient solutions	Clear examples of where projects and programmes are on a positive trajectory towards improving market conditions through cost or risk reduction or by addressing clear market barriers.	Strong evidence that projects/programmes have effectively and sustainably reduced the costs and risks of deploying effective low emission and climate resilient market solutions
4	Little or no demand exists for targeted market	Clear evidence of increased demand and higher levels of interest from possible new market players.	Extensive consumer/institutional demand has been created supporting a vibrant competitive market and attracting new entrants

Core Indicator 8: Degree to which GCF projects/programmes contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards			
Element	**Score 1**	**Score 2**	**Score 3**
1	No routine capturing or sharing of lessons learnt by projects/programmes	Examples of rigorous and credible lesson learning exercises being undertaken and shared at regional or national level which highlight good practice examples and provide evidence for future action	Routine and systemized, rigorous documented reflection of what has and has not worked at the project/programme level being shared at a national level and influencing future intervention design
2	No effective project/programme level monitoring, evaluation, action and learning systems	Evidence that monitoring and evaluation is understood by a significant number of project/programme stakeholders within a region/sector including the development of plans and the allocation of a realistic level of resource to develop and implement a MEL system	Effective and resourced monitoring, evaluation, action and learning system in place at a sectoral or national level which able to report on project and programme progress and can influence future project/ programme design
3	No mechanism for sharing relevant knowledge of good practice and methodologies between and among projects/programmes	Clear understanding of the need and commitment to the need to develop some form of shared learning platform, including allocated resources, a critical mass of stakeholders and clear leadership at local or regional level.	Credible learning hub/mechanism in place which facilitates effective peer -to peer knowledge exchange between and among projects/programmes at sectoral, regional or national level
4	No evidence that learning and knowledge generated at a project/programme level is being used to inform the development of improved methodologies or new standards	Clear example/s of how learning or knowledge has informed standards and/or improved methodologies at a sectoral, regional or national level	Evidence that the use of knowledge to inform good practice and to revise expected standards has become routine and the norm at a sectoral, regional or national level.
5	No evidence of changes in direction, based on learning and knowledge generated at project/programme level	Examples of organisations showing they are able to take on board lessons learnt and have the flexibility and capability to change what they are doing based on those lessons.	Clear evidence of routine adaptive management across organisations in a region or sector based on learning generated through good practice M&E or structured reflective practices.

Annex 4: Applying the IRMF - Case Example – Mass Transit System

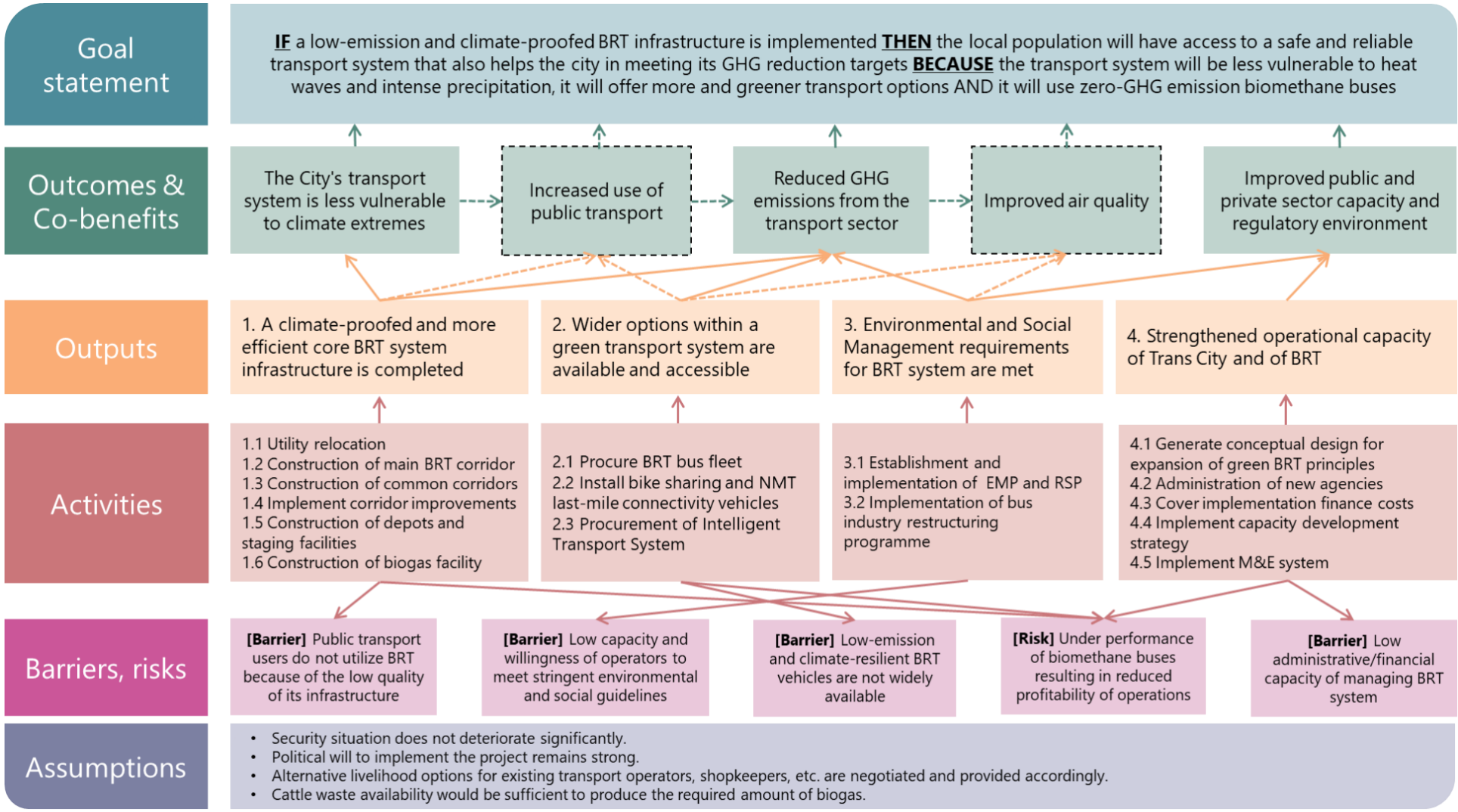
1. Project background

The project will deliver 30kms of fully segregated low-emission and climate resilient bus rapid transit (BRT) infrastructure including cycle lanes, a bike sharing system, last-mile connectivity with e-pedicabs, and improved pedestrian facilities benefitting 1.5 million residents within a city. Biogas for the project's zero-GHG emission biomethane buses will be produced from cattle waste. The project includes restructuring of the public transport network, and a fleet scrapping program, and includes a compensation mechanism. It shifts passengers towards public and Non-Motorized Transport (NMT) and implements a BRT system powered completely by biomethane. The BRT detailed design caters for a projected increase in the city temperature and intense heatwaves and events of intense precipitation along the BRT route and makes the public transport system less vulnerable to climate risks. It will benefit the city's population through increasing access to climate-resilient, low-carbon, reliable and safe public transport. Other benefits for the population include improved air quality, time savings, reduced vehicle operating costs, and universal access for women, children, and the disabled at all stations and in buses, including segregated areas for women.

2. Develop the theory of change

Based on the GCF's guidance on TOCs, a diagram that summarises the project's overarching logic has been developed below. Particular attention is paid to defining what paradigm shift could look like and identifying the pathways though which the project could contribute to that shift.

In this example, three mitigation and adaptation related outcomes are considered necessary for achieving paradigm shift. In addition to these, two co-benefits are identified, as shown with dotted lines and arrows. The diagram illustrates how changes are expected to materialize at different stages from the construction and procurement of BRT system to the achievement of GHG emission reduction and climate resilience.


Goal statement
IF a low-emission and climate-proofed BRT infrastructure is implemented THEN the local population will have access to a safe and reliable transport system that also helps the city in meeting its GHG reduction targets BECAUSE the transport system will be less vulnerable to heat waves and intense precipitation, it will offer more and greener transport options AND it will use zero-GHG emission biomethane buses
Outcomes & Co-benefits
The City's transport system is less vulnerable to climate extremes
Increased use of public transport
Reduced GHG emissions from the transport sector
Improved air quality
Improved public and private sector capacity and regulatory environment
Outputs
1. A climate-proofed and more efficient core BRT system infrastructure is completed
2. Wider options within a green transport system are available and accessible
3. Environmental and Social Management requirements for BRT system are met
4. Strengthened operational capacity of Trans City and of BRT
Activities
1.1 Utility relocation
1.2 Construction of main BRT corridor
1.3 Construction of common corridors
1.4 Implement corridor improvements
1.5 Construction of depots and staging facilities
1.6 Construction of biogas facility
2.1 Procure BRT bus fleet
2.2 Install bike sharing and NMT last-mile connectivity vehicles
2.3 Procurement of Intelligent Transport System
3.1 Establishment and implementation of EMP and RSP
3.2 Implementation of bus industry restructuring programme
4.1 Generate conceptual design for expansion of green BRT principles
4.2 Administration of new agencies
4.3 Cover implementation finance costs
4.4 Implement capacity development strategy
4.5 Implement M&E system
Barriers, risks
[Barrier] Public transport users do not utilize BRT because of the low quality of its infrastructure
[Barrier] Low capacity and willingness of operators to meet stringent environmental and social guidelines
[Barrier] Low-emission and climate-resilient BRT vehicles are not widely available
[Risk] Under performance of biomethane buses resulting in reduced profitability of operations
[Barrier] Low administrative/financial capacity of managing BRT system
Assumptions
• Security situation does not deteriorate significantly.
• Political will to implement the project remains strong.
• Alternative livelihood options for existing transport operators, shopkeepers, etc. are negotiated and provided accordingly.
• Cattle waste availability would be sufficient to produce the required amount of biogas.

3. Confirm results areas

The project's alignment with GCF results areas will directly influence the AE's selection of IRMF mitigation and adaptation indicators. The project is clearly and strongly aligned with GCF mitigation results area 2 (low emission transport). Given the project's work to improve transport infrastructure (climate resilient roads, cycle lanes, pedestrian infrastructure) a case can also be made for aligning the project with adaptation results area 3 (infrastructure and built environment).

4. Identifying potential contributions to paradigm shift

Building on the TOC – and other sections of the funding proposal, an overview of the relationship between the project and the IRMF's **three paradigm shift dimensions** is provided. Against each of the three dimensions, the **current (baseline) context**, as well as the **potential paradigm shift**, including **how the project will contribute** to that paradigm shift are provided. The narrative is developed based on the paradigm shift **scorecards**, and to **baseline scores** for each dimension are assigned accordingly.

DIMENSION	BASELINE CONTEXT	BASELINE SCORE	POTENTIAL PARADIGM SHIFT	HOW THE PROJECT WILL CONTRIBUTE
SCALE	The city's mass transit system is almost entirely fossil-fuel dependent. Moreover, the poor quality of mass transit in the city means that private transport is increasingly favoured by the population. This shift away from public transport is resulting in even more GHG emissions from transport.	Low	Paradigm shift would involve a move away from the current reliance on fossil-fuel based mass transit. This may be accompanied by behaviour change on two fronts: higher quality, cleaner public transit could slow or reverse the current shift towards private transportation; and gender-sensitive transportation could greatly increase women's use of public transport.	The intervention is projected to deliver 2.6 $MtCO_2e$ over 30 years, even before any replication effects: this would represent a significant step towards paradigm shift on emissions. The project's focus on developing gender-sensitive transportation also has the potential to support a large-scale shift in women's' use of mass transit in the city.
	No green alternatives for mass transit have yet been demonstrated within the city, so replication is not yet possible.	Low	If a profitable, sustainable alternative to fossil fuel-based mass transit can be demonstrated, the solution could be replicated across the city,	The project's intervention has never been tested before, so lessons learned through this

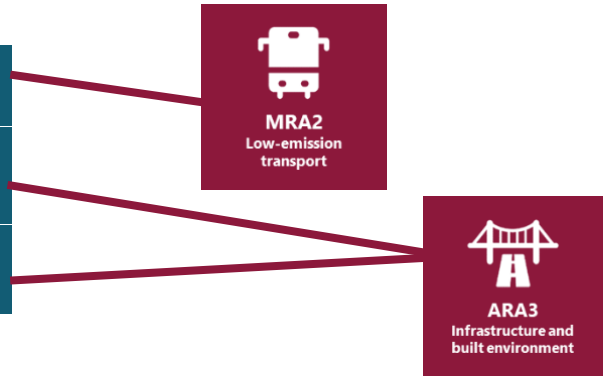
REPLICABILITY			to other cities in the country, and even internationally.	work will directly inform any efforts to replicate the work in other cities or countries.
SUSTAINABILITY	The government's ambition and commitment to exploring and realising improved, greener transportation options is evidenced by the recent establishment and funding of two new institutions. These new institutions provide strong foundations for the ongoing management and development of greener transport and infrastructure. While the institutional baseline is promising, unfortunately there is little uptake or even awareness of green transit solutions amongst public and private transport operators.	Medium	Paradigm shift would see sustainable governmental support for green mass transit accompanied by a profitable, vibrant commercial market where incentives clearly favour the operation of green transport. Behaviour change across the city's population would support this, where customers demonstrate preference for cleaner, safer alternatives.	The project will work closely with the new government institutions to build their capacity for green transport planning, management and maintenance. The project will also work closely with private operators to demonstrate and subsidise the switch towards green alternatives.

5. Select mitigation and adaptation indicators

AE is requested to review the IRMF core and supplementary indicators and to identify which indicators should be monitored based on the project's goals, and considering the GCF results areas that the project is aligned with.

The project focuses both into the **mitigation** domain (reducing transport emissions) and the **adaptation** domain (improving transport for the city's population, increasing climate resilience of infrastructure), so it is required to monitor **both** Core Indicator 1 **and** Core Indicator 2. Given the project's work on developing climate resilient infrastructure, a case can also be made for monitoring Core Indicator 3. The project's focus on low-emission transport also means that the AE should monitor supplementary indicator 1.5.

Core 1	GHG emissions reduced, avoided or removed / sequestered
Core 2	Direct and indirect beneficiaries reached
Core 3	Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions



The table below describes the monitoring methodology applied for each selected indicator. In this instance the GCF-prescribed methodologies can be applied for Core Indicators 2 and 3. However, methodologies for Core Indicator 1 and supplementary indicator 1.5 are context dependent, the most appropriate approach can be selected at the AE discretion (in close consultation with the GCF Secretariat). In this instance, the well-established and peer-reviewed Clean Development Mechanism (CDM) methodologies.

INDICATOR	METHODOLOGY
Core 1: GHG emissions reduced, avoided or removed / sequestered	Clean Development Mechanism (CDM) methodologies AM0031 and ACM0016 for bus rapid transit systems. These methodologies have been used for baseline and target setting and will be used for ongoing monitoring and – at the end of the project – for lifespan projections.
Core 2: Direct and indirect beneficiaries reached	We will apply the GCF-prescribed methodology, as defined within the GCF indicator reference sheet. According to the GCF's definitions, the project anticipates only **indirect** beneficiaries.
Core 3: Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions	We will apply the GCF-prescribed methodology, as defined within the GCF indicator reference sheet.

Using these methodologies, baselines and targets are developed for each selected indicator. This also requires the AE to 'show their workings' within relevant annexes of the Funding Proposal, particularly for complex calculations such as emissions reductions estimates. For any given baseline or target, sufficient information (data, factors, assumptions) that would enable a third-party to replicate their calculations needs to be provided accordingly.

RESULT AREA	IRMF INDICATOR	MOV	BASELINE	MID-TERM TARGET	FINAL TARGET	ASSUMPTIONS
MRA2: Low-emission transport	**Core 1:** GHG emissions reduced, avoided or removed / sequestered	Ex-ante and ex-post analyses (conducted by a third-party contractor)	0 tCO_2eq	58,000 tCO_2eq	150,000 tCO_2eq	No delays in implementation which result in lower GHG abatement Lifespan: 30 years

									Lifespan target of GHG emission: 2.6 million tCO2eq Annual emission reduction: 86,666.67 tCO2eq (average over lifespan) Source: Annex 22a of the funding proposal (based on CDM methodologies AM0031 and ACM0016)
ARA3:	**Core 2:** Direct and indirect beneficiaries reached	BRT's passenger data system City's annual report on the public transport user	Direct	F: 0 M: 0	Direct	F: 0 M: 0	Direct	F: 0 M: 0	Only indirect beneficiaries anticipated, according to GCF definitions The fare of BRT system remain affordable for the majority of citizen.
			Indirect	F: 0 M: 0	Indirect	F: 200,000 M: 200,000	Indirect	F: 750,000 M: 750,000	
ARA3: Infrastructure and built environment	**Core 3:** Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions	Project financial data Asset value information from asset owners	0 USD		12,000,000 USD		25,000,000 USD		Exchange rates stay stable Continuous maintenance will be made on the infrastructure of BRT system

6. Select enabling environment indicators

With the principle of selecting a minimum of two indicators from four IRMF core enabling environment indicators, all four enabling environment indicators have been selected for the BRT project.

ENABLING ENVIRONMENT INDICATORS		RATIONALE FOR SELECTING
Core Indicator 5	Degree to which GCF projects/programmes contribute to strengthening institutional and regulatory frameworks for low-emission climate-resilient development pathways in a country-driven manner	A core strategy of the project is to support the strengthening institutional capacity across recently established government agencies.
Core Indicator 6	Degree to which GCF projects/programmes contribute to technology deployment, dissemination, development or transfer and innovation	The project's main focus is the introduction of new technology (green transport), using new fuel sources (biogas from cattle), into a new context.
Core Indicator 7	Degree to which GCF projects/programmes contribute to market development / transformation at the sectoral, local or national level	Central to the project's sustainability strategy is the building of demand for greener technology from transport operators and customers (transit users) alike. The project will also build new markets for private sector operators (including contracts for public transport).
Core Indicator 8	Degree to which GCF projects/programmes contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards	The proposal notes that the project is untested but – if found to be viable – could be replicated across the country and beyond. In order to support this replication the project will be generating learning and knowledge products to raise awareness of the solution being tested.

The table below summarizes the **current (baseline) context**, **target scenario**, including **how the project will contribute** to any developments. The enabling environment **scorecards** are used to build their narrative, and assign **baseline scores** for each indicator.

INDICATOR	BASELINE CONTEXT	BASELINE SCORE	TARGET SCENARIO	HOW THE PROJECT WILL CONTRIBUTE
Core 5 (Institutions)	The government has recently established and funded two new institutions, with a core responsibility of these new institutions being to oversee the rollout of	Medium	A regulatory framework is in place that incentivises the shifting of public transport fleets to greener alternatives. Two new institutions have permanent institutional	One of the four project components is dedicated to supporting institutional development for the two new bodies. Project outputs will include development and implementation of a capacity

	the BRT system and infrastructure. While that institutional foundation is in place, the BRT represents a completely new approach, requiring new regulatory powers and institutional capacities.		capacity in place for the effective development, procurement, oversight and management of green public mass transit in the city.	development strategy, and the development and implementation of a comprehensive performance and monitoring system.
Core 6 (Technology)	Public transit is dominated by an ageing fleet of diesel-based vehicles with virtually no green alternatives and – due partly to safety issues – very low levels of NMT use.	Low	A biogas-based BRT fleet is operating sustainably, supported by an equally sustainable biogas supply chain. Consumers have adopted and routinely use NMT options such as cycles and e-pedicabs.	The project will finance the procurement of the first biogas-based BRT fleet, a fleet of NMT vehicles (bikes, e-pedicabs), and the necessary climate resilient infrastructure (segregated bus and bike lanes, transit stops, pedestrianisation).
Core 7 (Markets)	Weakly regulated private sector operating almost exclusively fossil fuel-based transport fleets. Declining demand for public transport as population shifts to private (personal) transport. Very low usage of public transport by women due to poor safety.	Low	A vibrant commercial market sees multiple private sector operators shifting to greener, cleaner and safer transport fleets, increasing demand for public transport from consumers (particularly women), and reversing the trend towards private transport.	The project will support government efforts to incentivise uptake of greener alternatives through subsidising private sector operators' purchase of biogas-based vehicles. The project's work to build gender-sensitive infrastructure will also support market development. More broadly, the project will promote the benefits of greener alternatives (including NMT) to the general public.
Core 8 (Knowledge)	Limited awareness of green transport alternatives within the city. Limited global awareness of biogas-based BRT as a potential solution, as it has not yet been tested.	Low	Biogas-based BRT is deployed within other areas of the city, within other cities in the country, and potentially within other countries. Where new regions are adopting the approach, they directly apply knowledge and lessons (positive and negative) that have been codified and shared by the project.	The project's knowledge management strategy will ensure that all generalisable lessons are catalogued and shared with target audiences, including (e.g.) other municipalities that are considering biogas-based BRT, and donors that finance low-emission transport.

7. Annual monitoring

The GCF's Annual Performance Report (APR) is used by AEs to track and report progress against the IRMF, but also on their project's finances, management, workplan, activities and safeguards. The following sections focus *only* on those parts of the APR relevant to the IRMF, providing examples of how the AE might complete the form.

APR PARADIGM SHIFT SECTION

The funding proposal provided analysis of the baseline context, potential paradigm shift, and the expected project's to paradigm shift as described in the section 4 [Identifying potential contributions to paradigm shift].

Building on the analysis, what – if anything – has changed since the original funding proposal? Has there been any progress towards paradigm shift? If so, how has the project contributed to this shift?

DIMENSION	CHANGES SINCE ORIGINAL FUNDING PROPOSAL
SCALE	The project has directly delivered 52,000 tCO_2eq in emissions reductions so far, achieved through the procurement of a BRT fleet, an NMT fleet, and the construction of supporting infrastructure. This work has also displaced the previous diesel-powered BRT fleet. Initial evidence suggests that there has been a slight increase in public transport use by women, but more effort is required to demonstrate – and provide reassurance around – the inherent safety of the BRT system.
REPLICABILITY	While no other green BRT projects have been initiated, the project has been approached to advise on the design of two near-identical initiatives in another city. These new initiatives are scheduled to launch next year. The project also participated in a concept workshop for a near-identical initiative in another country. Although these three initiatives have still not launched, the project is at least closely involved and influencing the potential replication of the concept in the country and beyond. On the other hand, there has been no traction for additional initiatives within the city itself. Despite the project's efforts to engage other districts, there has been little interest in the work from other city authorities.
SUSTAINABILITY	The two new institutions continue to be supported by the government, although funding levels are static rather than increasing. The new institutions' management continue to develop and deliver strategies that aim to increase the extent of green transit systems, but institutional capacities are limited for the active promotion and advocacy for the shift to green transport: more effort is required from these agencies to "win hearts and minds" across current transit operators and indeed the general public. This will be particularly important for building interest, support and usage of the BRT by women.

APR MITIGATION AND ADAPTATION SECTION

The following targets for selected IRMF mitigation and adaptation indicators are set in the funding proposal. Within the final two columns, report can be made on the actual (not projected) values for this reporting year, and the actual cumulative values since the project's start date:

INDICATOR	BASELINE	MID-TERM TARGET	END-OF-PROJECT TARGET	ACTUAL THIS YEAR (2022)	ACTUAL CUMULATIVE (SINCE PROJECT START)
Core 1: GHG emissions reduced, avoided or removed / sequestered	0 tCO_2eq	58,000 tCO_2eq	150,000 tCO_2eq (Lifespan target of GHG emission: 2.6	26,000 tCO_2eq	52,000 tCO_2eq

					million tCO2eq for 30 years)							
Core 2: Direct and indirect beneficiaries reached	Direct	F: 0	Direct	F: 0	Direct	F: 0	Direct	F: 0	Direct	F: 0		
		M: 0		M: 0		M: 0		M: 0		M: 0		
	Indirect	F: 0	Indirect	F: 200,000	Indirect	F: 750,000	Indirect	F: 125,000	Indirect	F: 250,000		
		M: 0		M: 200,000		M: 750,000		M: 125,000		M: 250,000		
Core 3: Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions	0 USD		12million USD		25million USD		5million USD		15million USD			

APR ENABLING ENVIRONMENTS SECTION

Against the selected enabling environment indicators, the funding proposal provided analysis on the context in which the project is operating, and the project's potential contribution to a strengthening of the enabling environment as described in the section 6 [Select enabling environment indicators].

Building on the analysis, what – if anything – has changed against each of the selected enabling environment indicators? How has the context changed? Is the enabling environment stronger? If so, how has the project contributed to this strengthening?

INDICATOR	CHANGES SINCE ORIGINAL FUNDING PROPOSAL
Core 5 (Institutions)	Good quality, clear 3-year strategies have been developed by the two new institutions, with a major focus on increased investment in green transit. These strategies include identification of regulatory amendments that will be required to incentivise private operators to switch from diesel to green vehicles. The project's initial work with the two new institutions has been the undertaking of a capacity needs and gap analysis. That work is now complete, and the project has developed a comprehensive institutional strengthening support programme for the two agencies. The programme has just commenced implementation, with an early focus on improving the agencies' capacity for public promotion and advocacy. This was identified as a critical capacity back that is potentially constraining behaviour change and support for green BRT amongst the general public.
Core 6 (Technology)	The full BRT and NMT fleets have been procured, with 60% of buses fully operational, and 40% of NMT vehicles fully operational. The biogas supply chain is also operational and capable of meeting current needs. However, biogas production will need to be stepped up as more buses become operational.

	While there has been interest in the scheme from other cities and countries, the project has been unable to generate interest across other authorities within the project city itself. This may be a function of the two new institution's limited capacity for promotion and advocacy.
Core 7 (Markets)	The project has subsidised 12 private operators to switch their fleets, but this support was 'pushed' by the project. There is still no significant 'pull' from private operators: no operator has independently approached the two new institutions with a request for support to switch their fleet. Again, the limited demand here may be a function of the two new institution's limited promotional capacity, but another factor is also the early stage of the project and the fact that the biogas-based buses have only recently been introduced to the city.
Core 8 (Knowledge)	The project's knowledge management systems are still under development, with no tangible knowledge products generated at this stage. However, word-of-mouth and personal connections did result in the project's invitation to advise and support the development of three near-identical initiatives (two in another city, one in another country). One of the new institutions is undertaking an exercise to explore exactly how these connections were made, so as to better understand how these external partners became aware of the project's work.

8. Interim and final evaluations

The AE's own evaluation policy requires interim and final evaluations for any project with a budget over $50m. Moreover, these evaluations are to be commissioned and managed by the AE's evaluation office, rather than the project team itself. These internal requirements are all fully in line with GCF evaluation requirements.

The AE's evaluation office first establishes an Evaluation Reference Group (ERG), tasked with overseeing evaluation design and delivery, and with ensuring that the evaluation addresses the needs of the project's stakeholders. To meet these requirements, the group is comprised of:

- The Evaluation Manager (from the AE's evaluation office)
- The Project Manager
- The project's point of contact within the GCF Secretariat
- A representative from the country's Transport Department
- Representative from the two new institutions established to support mass transit in the city
- An external expert on transport evaluation
- A representative from a women's' group based in the city

The Group will meet (virtually if necessary) to provide the following inputs:

- Review and advise on draft terms of reference
- Review and advise on evaluation inception report
- Review and advise on draft evaluation report
- Approval of final evaluation report

In addition to the GCF evaluation policy and the AE's own evaluative requirements, the Evaluation Manager also ensures that the terms of reference (TOR) incorporates all the IRMF requirements, namely:

- Scorecard assessment of progress towards paradigm shift
- Scorecard assessment of progress against enabling environment indicators
- Assurance / validation that agreed IRMF-related monitoring methodologies and processes are being applied, and are generating robust data

Once independent evaluators have been commissioned, their first task is to develop an inception report, which primarily focuses on detailing the evaluation methodology to be applied. While the AE has given the evaluators considerable freedom to develop their own methodology, the approach should take into account – and ensure delivery of – the GCF evaluation policy and the IRMF requirements.

With the evaluation underway, the evaluators may opt to address the IRMF requirements through two exercises:

1. A **half-day participatory workshop** to assess progress against the GCF paradigm shift and enabling environment scorecards. The evaluators convene key stakeholders with knowledge of the project and its operating context. Facilitated group discussions are used to develop a consensus as to the project's performance against enabling environment indicators, and to assess the progress towards paradigm shift within the city.
2. A **monitoring system stocktake**, whereby the evaluators review monitoring data and processes implemented by the AE and its partners. This comprises a desk review of data and any monitoring manuals, combined with targeted interviews with personnel responsible for overseeing or undertaking monitoring.

The evaluators summarise each of these exercises within annexes to the evaluation report, but also use the findings from these exercises to support their broader analysis of the project.

After the draft evaluation report has been submitted to the AE and comments from key stakeholders (including the ERG) have been addressed, the AE's evaluation office undertakes quality assurance of the report before seeking final approval of the report from the ERG. This final, quality-assured and ERG-approved report is then submitted to the GCF Secretariat.

Internally, the AE develops a management response to the evaluation, identifying whether and how the project will respond to any evaluation recommendations. The AE also has an internal process for knowledge and learning extraction, whereby the evaluation report is reviewed for lessons that could be generalised and applied to other projects.

Annex 5: Applying the IRMF - Case Example – Private Sector Project

1. Project Background

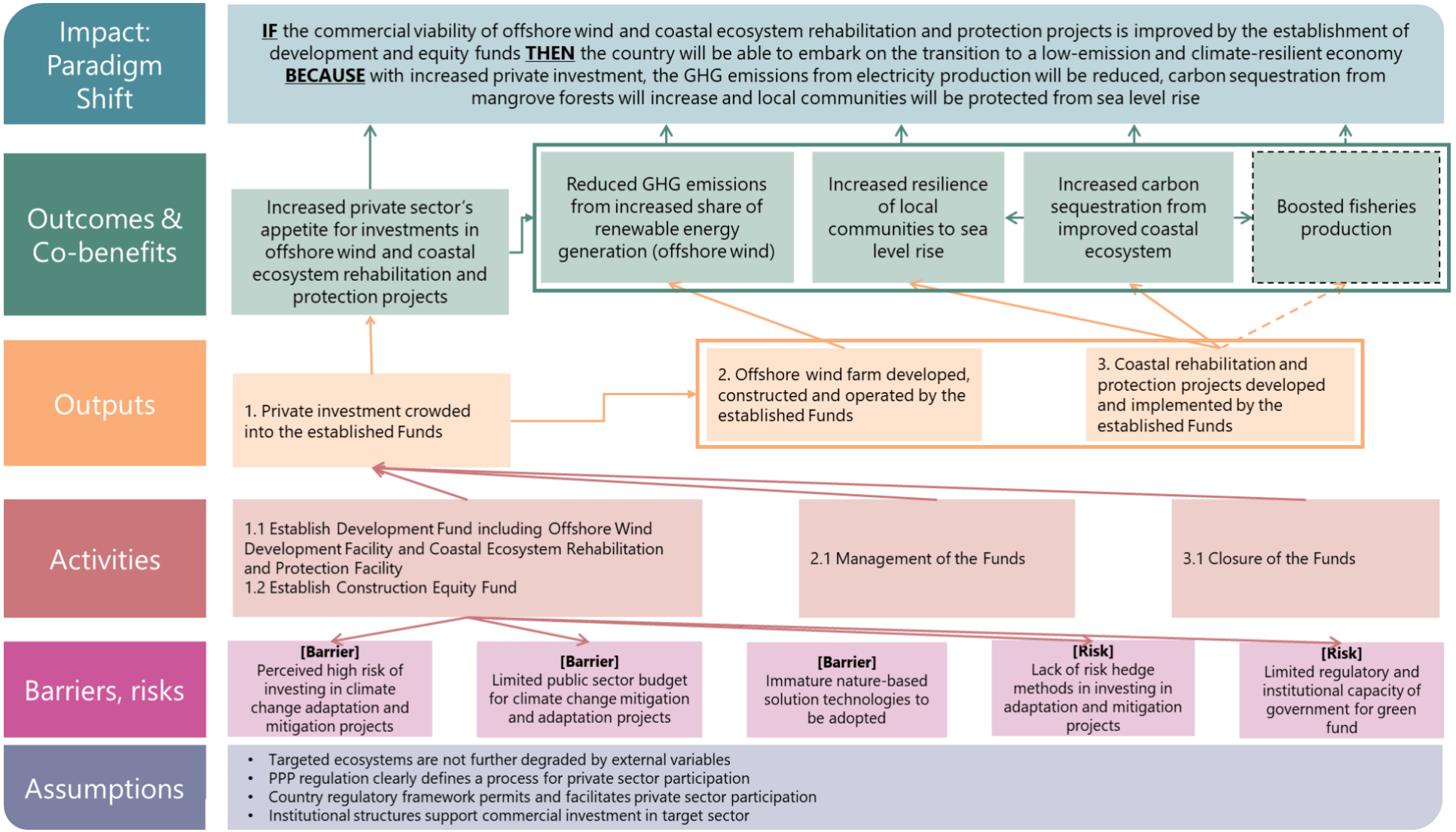
The project aims to achieve climate mitigation and adaptation outcomes through the establishment of a Development Fund and a Construction Equity Fund investing in offshore wind farm and coastal ecosystem rehabilitation and protection solutions in country "Y". The 'Development Fund' ("DF") will provide reimbursable grants to project companies in order to fast-track qualifying development projects to financial close, while the 'Construction Equity Fund ("CEF"), will provide up to 80% of the construction and implementation finance required on an all-equity basis. These funds will be structured with a 10-year investment period with a mechanism to recycle capital.

Through the establishment of the two funds, the project will be able to (i) develop, construct, and operate one large offshore wind farm and to (ii) develop and implement coastal rehabilitation and protection solutions helping to reduce the country's GHG emissions while making local communities less vulnerable to sea level rise.

2. Develop the theory of change (TOC)

Based on the GCF's guidance on the development of TOC a diagram that summarises the project's overarching logic has been developed. The project will first establish the DF and the CEF [TOC activity level]. The two funds are expected to attract additional private capital and invest in the development and implementation of offshore wind farm and coastal rehabilitation and protection projects [TOC output level]. At the outcome level, the established funds and their projects are expected to serve as catalysers in the climate finance market to attract more private sector investments, and eventually contribute to GCF mitigation and adaption outcomes [TOC outcome level].

The full TOC is detailed below. In this example, four mitigation and adaptation related outcomes are considered necessary for achieving paradigm shift. In addition to these, one economic co-benefit is identified, as shown with dotted lines and arrows. The diagram illustrates how changes are expected to materialize at different stages from the establishments of the two funds to the development and implementation of climate projects and the achievement of GCF mitigation and adaptation outcomes.


Impact: Paradigm Shift
IF the commercial viability of offshore wind and coastal ecosystem rehabilitation and protection projects is improved by the establishment of development and equity funds THEN the country will be able to embark on the transition to a low-emission and climate-resilient economy BECAUSE with increased private investment, the GHG emissions from electricity production will be reduced, carbon sequestration from mangrove forests will increase and local communities will be protected from sea level rise
Outcomes & Co-benefits
Increased private sector's appetite for investments in offshore wind and coastal ecosystem rehabilitation and protection projects
Reduced GHG emissions from increased share of renewable energy generation (offshore wind)
Increased resilience of local communities to sea level rise
Increased carbon sequestration from improved coastal ecosystem
Boosted fisheries production
Outputs
1. Private investment crowded into the established Funds
2. Offshore wind farm developed, constructed and operated by the established Funds
3. Coastal rehabilitation and protection projects developed and implemented by the established Funds
Activities
1.1 Establish Development Fund including Offshore Wind Development Facility and Coastal Ecosystem Rehabilitation and Protection Facility
1.2 Establish Construction Equity Fund
2.1 Management of the Funds
3.1 Closure of the Funds
Barriers, risks
[Barrier] Perceived high risk of investing in climate change adaptation and mitigation projects
[Barrier] Limited public sector budget for climate change mitigation and adaptation projects
[Barrier] Immature nature-based solution technologies to be adopted
[Risk] Lack of risk hedge methods in investing in adaptation and mitigation projects
[Risk] Limited regulatory and institutional capacity of government for green fund
Assumptions
• Targeted ecosystems are not further degraded by external variables
• PPP regulation clearly defines a process for private sector participation
• Country regulatory framework permits and facilitates private sector participation
• Institutional structures support commercial investment in target sector

3. Confirm results areas

The project's alignment with GCF results areas will directly influence the AE's selection of IRMF mitigation and adaptation indicators. The project is clearly aligned with GCF mitigation results area 1 (energy generation and access) because it is expected to reduce GHG emissions by increasing the share of renewable energy generation in the country. Activities related to coastal ecosystems rehabilitation and protection are cross-cutting in nature as they are expected to deliver results both in terms of carbon sequestration under mitigation result area 4 (Forestry and land use), and in terms of increased resilience of local communities to sea level rise (adaptation result area 4, Ecosystems and ecosystem services).

4. Identifying potential contributions to paradigm shift

Building on the TOC and other sections of the funding proposal, an overview of the relationship between the project and the IRMF's **three paradigm shift dimensions** is provided. Against each of the three dimensions, the **current (baseline) context**, as well as the **potential paradigm shift**, including **how the project will contribute** to that paradigm shift are provided. The narrative is developed based on the paradigm shift **scorecards**, and to **baseline scores** for each dimension are assigned accordingly.

DIMENSION	BASELINE CONTEXT	BASELINE SCORE	POTENTIAL PARADIGM SHIFT	HOW THE PROJECT WILL CONTRIBUTE
SCALE	Currently, offshore wind energy and ecosystem restoration and rehabilitation projects are characterized by high up-front costs. The market is not mature to allow for high, or in some cases any returns on investments, thus discouraging any work in this field beyond donor supported projects.	Low	Paradigm shift would involve the increased attractiveness and actual volume of private sector's investment in climate projects, which heavily depend on public funding in the baseline. With the launch and operation of the DF and the CEF, private sector's appetite for investments in offshore wind and coastal	Ecosystem & oceans assets, as well as offshore wind energy are typically publicly financed and/or operated. Introducing catalytic private resources to these sectors will scale up commercial efficiencies and transformational impact.

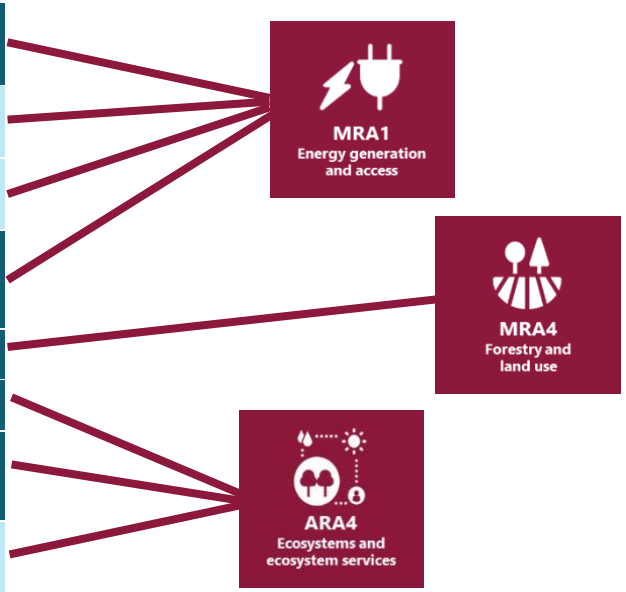
			ecosystem rehabilitation and protection projects will increase.	
REPLICABILITY	Currently there is no well-operationalized financing platform in country 'Y' where blended financing can be utilized.	Low	With successful showcase of operation of the DF and the CEF, paradigm shift can be achieved in terms of perception change of private investors. Eventually the financing structure can be replicated in other sectors – e.g. water infrastructure, ocean preservation, energy efficiency, etc. - and/or in other countries facing similar climate change challenges	The project will have a high demonstration effect. Technical and financial success factors will be identified with the project team and stakeholders so that the project's financing structure can be scaled and/or replicated across other sectors and regions. International awareness will also be fostered by dissemination of the project's impact at national, regional and international events.
SUSTAINABILITY	The government of country 'Y' has an ambitious target for becoming carbon neutral in the next 20 years as well as for increasing adaptive capacity to sea level rise, but national budget allocated to these targets is limited and no consideration is given to private investments.	Low	Paradigm shift can be achieved by eliminating a range of barriers to low carbon and resilient development by ensuring that projects are able to progress smoothly and expeditiously from a concept stage to a sustainable investment beyond the end of the GCF implementation period.	By demonstrating a replicable and adaptable approach to catalysing private sector financing to climate projects, local project developers and international equity funds may adopt a similar approach building on the DF and the CEF's experience.

5. Select mitigation and adaptation indicators

The AE is requested to review the IRMF core and supplementary indicators and to identify which indicators should be monitored based on the project's goals and considering the GCF results areas that the project is targeting.

The project focuses both into the **mitigation** domain (reducing GHG emissions in energy generation and increasing carbon sequestration from ecosystem restoration) and the **adaptation** domain (increasing climate resilience by improving coastal ecosystem and its services). Therefore, the AE is requested to monitor both **Core indicator 1** and **Core indicator 2**. In addition, **Core indicator 3** "Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emission", and **Core indicator 4** "Hectares of natural resources brought under improved low-emission and /or climate-resilient management practice", are also relevant: Core 3 will enable the measurement of the value of the installed offshore wind farm and Core 4 will support the measurement of the hectares of mangrove forests brought under rehabilitation and protection. **Supplementary indicators such as 1.3, 1.4, and 4.1** are also selected to monitor the specific results associated with each corresponding Core indicator.

Core 1	GHG emissions reduced, avoided or removed / sequestered
1.3	Installed renewable energy capacity
1.4	Renewable energy generated
Core 3	Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions
Core 1	GHG emissions reduced, avoided or removed / sequestered
Core 2	Direct and indirect beneficiaries reached
Core 4	Hectares of natural resources brought under improved low-emission and/or climate-resilient management practice
4.1	Hectares of terrestrial forest, terrestrial non-forest, freshwater and coastal marine areas brought under restoration and/or improved ecosystems



The table below describes the monitoring methodology applied for each selected indicator. In this instance the CDM methodologies are applied to calculate Core indicator 1 for both MRA1 and MRA4. For other indicators such as Core 2, Core 3, Core 4, and relevant supplementary indicators, as they are context dependent, the most appropriate approach/methodology can be selected at the AE discretion in close consultation with the GCF Secretariat).

INDICATOR	METHODOLOGY
Core 1: GHG emissions reduced, avoided, or removed / sequestered	Clean Development Mechanism (CDM) methodologies. These methodologies have been used for baseline and target setting and will be used for ongoing monitoring and – at the end of the project – for lifespan projections.
1.3 Installed renewable energy capacity	Installed capacity of offshore wind power plant as per manufacturer's specifications
1.4 Renewable energy generated	Actual energy generated during each 12-month period, and cumulative energy generated since the power plant starts operations

Core 2: Direct and indirect beneficiaries reached	Local population surveys will be conducted to measure the improved adaptive capacity of the population in the project area to coastal erosion. The methodology and calculations applied to estimate direct and indirect beneficiaries will be provided in annex 22b of the FP
Core 3: Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions	The target (ex-ante) estimate value of the offshore wind farm is assumed to be equal to the total construction cost of the plant as per the analysis conducted in the feasibility study. Global average cost per installing a MW of offshore wind power (1.3 million USD/MW) is applied for estimating the target value.
Core 4: Hectares of natural resources brought under improved low-emission and/or climate-resilient management practice	The project will report on both Core indicator 4 and supplementary indicator 4.1 for the same targeted area because it will introduce both improved low emission and climate-resilient management practices while bringing the same areas under protection and restoration. National/regional GIS data and data from coastal mapping and reports from the Department for Environment, Food & Rural Affairs will be used to measure these indicators.
4.1: Hectares of terrestrial forest, terrestrial non-forest, freshwater and coastal marine areas brought under restoration and/or improved ecosystems	

Based on the above methodologies, baselines and targets are developed for each selected indicator. This also requires the AE to 'show their workings' within relevant annexes of the Funding Proposal, particularly for complex calculations such as GHG emissions reductions estimates. For any given baseline or target, sufficient information (data, factors, assumptions) that would enable a third-party to replicate the calculations needs to be provided accordingly.

RESULT AREA	IRMF INDICATOR	MOV	BASELINE	MID-TERM TARGET	FINAL TARGET	ASSUMPTIONS
MRA1 Energy generation and access	*Core 1: GHG emissions reduced, avoided or removed/sequestered*	GHG Ex-ante and ex-post analyses (conducted by a third-party independent verifier)	0 tCO2eq	1.05 million tCO2eq (Reduction from wind power)	2.46 million tCO2eq (Reduction from wind power)	Grid Emission Factor: 0.4087 tCO2/MWh from Minister of Energy statistics Lifespan: 25 years Lifespan target of GHG emission: 8.95 million tCO2eq Annual emission reduction: 350,800 tCO2eq (average over lifespan)

						Source: Annex 22a of the FP (based on CDM methodology ACM0002) Installation and grid connection is finalized by midterm
MRA1 Energy generation and access	*Supplementary 1.3: Installed renewable energy capacity*	Country Energy Statistics, Ministry of Energy	0 MW offshore wind capacity installed in country "Y"	600 MW (Offshore wind capacity)	600 MW (Offshore wind capacity)	Extreme climate events do not cause logistical challenges during installations of foundations, blades and transmission cables Installation and grid connection is finalized by midterm
MRA1 Energy generation and access	*Supplementary 1.4: Renewable energy generated*	Country Energy Statistics, Ministry of Energy Electricity generation data for individual power plants	0 GWh of renewable energy generation in country "Y"	876 GWh/year offshore wind power generation	2,628 GWh offshore wind power generation	Assuming offshore wind load factor of 40% as per IEA country statistics Lifespan: 25 years Lifespan target: 21,900 GWh Harsh weather conditions do not significantly disrupt power generation
MRA1 Energy generation and access	*Core 3: Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions*	Feasibility study (ex-ante), EPC (Engineering, Procurement and Construction) contracts	0 million USD	780 million USD	780 million USD	Assumed cost per installed MW of offshore wind facility in the country= 1.3 million USD/MW

MRA4 Forestry and land use	*Core 1: GHG emissions reduced, avoided or removed/sequestered*	GHG Ex-ante and ex-post analyses (conducted by a third-party independent contractor)	0 tCO2eq	282,590 tCO2eq (Reduction from mangrove rehabilitation and protection)	565,180 tCO2eq (Reduction from mangrove rehabilitation and protection)	Lifespan: 30years Lifespan target of GHG emission: 2 million tCO2eq Annual emission reduction: 70ktCO2eq (average over lifespan) Source: Annex 22a of the FP (based on CDM methodology AR – AM0014) Extreme weather event does not destroy fragile seedlings. (Measures will be taken to protect mangroves in early growth stages, e.g. bamboo fencing to protect from storm surges)
ARA4 Ecosystems and ecosystem services	*Core 2: Direct and indirect beneficiaries reached*	Local population surveys; Flood and costal erosion reports from the Department for Environment, Food & Rural Affairs	Direct: 0 Indirect: 0	Direct: 80,000 M: 40,000 F: 40,000 Indirect: 100,000 M: 50,000 F: 50,000	Direct: 150,000 M: 75,000 F:75,000 Indirect: 300,000 M: 150,000 F: 150,000	Source: Annex 22b beneficiaries calculation
ARA4 Ecosystems and ecosystem services	*Core 4: Hectares of natural resources brought under improved low-emission and/or climate-resilient management practice*	Coastal mapping and reports from the Department for Environment, Food & Rural Affairs	0 ha	2,000 ha costal marine areas rehabilitated and protected	4,000 ha costal marine areas rehabilitated and protected	Extreme weather event does not destroy fragile seedlings. (Measures will be taken to protect mangroves in early growth stages, e.g. bamboo fencing

						to protect from storm surges)
ARA4 Ecosystems and ecosystem services	*Supplementary 4.1: Hectares of terrestrial forest, terrestrial non-forest, freshwater and coastal marine areas brought under resoration and/or improved ecosystems*	Coastal mapping and reports from the Department for Environment, Food & Rural Affairs	0 ha	2,000 ha costal marine areas rehabilitated and protected	4,000 ha costal marine areas rehabilitated and protected	Extreme weather event does not destroy fragile seedlings. (Measures will be taken to protect mangroves in early growth stages, e.g. bamboo fencing to protect from storm surges)

6. Select enabling environment indicators

With the principle of selecting a minimum of two indicators from four IRMF core enabling environment indicators, three enabling environment indicators have been selected to this project.

ENABLING ENVIRONMENT INDICATORS		RATIONALE FOR SELECTING
Core Indicator 6	Degree to which GCF projects/programmes contribute to technology deployment, dissemination, development or transfer and innovation	One of the project's main foci is the introduction of offshore wind power in the country and the broad application of innovative approaches to coastal ecosystem restoration.
Core Indicator 7	Degree to which GCF projects/programmes contribute to market development / transformation at the sectoral, local or national level	The project will support private sector investment into a space dominated by public funding and lacking sufficient funding; ecosystem & oceans assets as well as offshore wind energy are typically publicly financed and/or operated. Introducing catalytic private resources to these sectors will scale up commercial efficiencies and transformational impact.
Core Indicator 8	Degree to which GCF projects/programmes contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards	The project will support knowledge transfer and learning, contributing to the creation or strengthening of knowledge on blended finance,

		impact investment, infrastructure development and financial innovation.

The table below summarizes the **current (baseline) context**, **target scenario**, including **how the project will contribute** to any developments. The enabling environment **scorecards** are used to build the narrative, and assign **baseline scores** for each indicator.

INDICATOR	BASELINE CONTEXT	BASELINE SCORE	TARGET SCENARIO	HOW THE PROJECT WILL CONTRIBUTE
Core 6 (Technology)	In country 'Y', renewable energy technologies and ecosystem restoration practices have been introduced but are not broadly applied in projects due to the lack of sufficient knowledge and de-risking tools.	Low	The DF and the CEF support offshore wind technology and innovative approaches to coastal ecosystem restoration. Industry will recognize the technologies and start to widely apply them.	The grants and equity funds incubated in the project will support the development of new technologies involving generating long-term stable cash flows and creating long-term societal, climate and environmental impact.
Core 7 (Markets)	The market is not mature to allow for high or in some cases any returns on investments, thus discouraging any work in this field beyond donor supported projects.	Low	The DP and the CEF established by the project prove that investing in renewable energy and ecosystem restoration projects can be an attractive option for private investors by reducing investment risks and increasing returns, impact, and speed of the projects.	Project's cradle-to-grave financing approach reduces asymmetric information in multi-stakeholder deals (between developers and investors) and reduces development and fundraising risk which often delay project milestones and draw out negotiation processes. With catalysing commercial capital underneath one facility, it will bring finance at scale - delivering greater speed compared to more limited stand-alone grant capital, overseas development aid or conventional project finance.
Core 8 (Knowledge)	Limited awareness and knowledge of financing opportunities in renewable energy infrastructure and ecosystem restoration.	Low	The project will foster discussion and debate on topics in blended finance, impact investing, developing country infrastructure and financial innovation, thus generating, and extracting lessons learned of best practices.	The project will be actively engaged with various national stakeholders and be represented in the development finance and renewable energy infrastructure development communities through various international forums, conferences, and summits.

7. Annual monitoring and reporting

The GCF's Annual Performance Report (APR) is used by AEs to track and report progress against the IRMF indicator, but also on their project's finances, management, workplan, activities and safeguards. The following sections focus *only* on those parts of the APR relevant to the IRMF, providing examples of how the AE might complete the form.

APR PARADIGM SHIFT SECTION

The funding proposal provided the analysis of the baseline context, potential paradigm shift, and the expected project's contribution to paradigm shift as described in the section 4 [Identifying potential contributions to paradigm shift].

Building on the analysis, what – if anything – has changed since the original funding proposal? Has there been any progress towards paradigm shift? If so, how has the project contributed to this shift?

DIMENSION	CHANGES SINCE ORIGINAL FUNDING PROPOSAL
 SCALE	The project has directly delivered 1.05 milliontCO2eq from wind power and another 300,000 tCO2eq from carbon sequestration of mangrove forest. In terms of attracting private investment into the renewable energy infrastructure development and ecosystem restoration, 600 million USD has been invested from the private sector. Compared to the year when the project started, this represents a six-time increase which prove rapid paradigm shift of private sector's attitude toward climate change mitigation and adaptation projects.
 REPLICABILITY	Witnessing the success of the established DF and CEF, there is willingness to establish a similar financial platform in the e-mobility sector. The new equity fund aims to mobilize private investment to procure electric vehicles and to expand charging stations and infrastructure national wide.
 SUSTAINABILITY	The established DF and CEF are implementing best in class governance, institutional and fiduciary frameworks to provide financing solutions to multiple stakeholders. Additionally, projects incubated in the established funds represent an attractive acquisition target for potential buyers because they use proven technologies and involve de-risked assets.

APR MITIGATION AND ADAPTATION SECTION

The following targets for selected IRMF mitigation and adaptation indicators are set in the funding proposal. Within the final two columns, report can be made on the actual (not projected) values for this reporting year and the actual cumulative values since the project's start date. In the table below, the reporting year is assumed as the mid-term reporting point of the project.

INDICATOR	BASELINE	MID-TERM TARGET	END-OF-PROJECT TARGET	ACTUAL THIS YEAR (2022)	ACTUAL CUMULATIVE (SINCE PROJECT START)
Core 1: GHG emissions reduced, avoided or removed / sequestered	0 tCO_2eq	1.05 million tCO2eq Direct impact from wind power	2.46 million tCO2eq Direct impact from wind power	350,000 tCO_2eq	1.05 million tCO_2eq
Supplementary 1.3: Installed renewable energy capacity	0 MW offshore wind capacity installed in country "y"	600 MW offshore wind capacity	600 MW offshore wind capacity	600 MW offshore	600 MW offshore
Supplementary 1.4: Renewable energy generated	0 GWh offshore wind capacity generated in country "y"	Annual: 876GWh/year offshore wind generation Cumulative: equals annual as the mid-term coincides with 1st year of operation	Annual: 876GWh/year offshore wind generation Cumulative: 2,628 GWh offshore wind generation	880GWh	880GWh
Core 3: Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions	0 USD	780 million USD	780 million USD	780 million USD	780 million USD
Core 2: Direct and indirect beneficiaries reached	Direct F: 0 Direct M: 0 Indirect F: 0 Indirect M: 0	Direct F: 40,000 Direct M: 40,000 Indirect F: 50,000 Indirect M: 50,000	Direct F: 75,000 Direct M: 75,000 Indirect F: 150,000 Indirect M: 150,000	Direct F: 10,000 Direct M: 12,000 Indirect F: 12,000 Indirect M: 15,000	Direct F: 40,000 Direct M: 50,000 Indirect F: 65,000 Indirect M: 70,000

Core 4: Hectares of natural resources brought under improved low-emission and/or climate-resilient management practice	0 ha	2,000ha costal marine areas rehabilitated and protected	4,000ha costal marine areas rehabilitated and protected	400ha	2,000ha
Supplementary 4.1: Hectares of terrestrial forest, terrestrial non-forest, freshwater and coastal marine areas brought under restoration and/or improved ecosystems	0 ha	2,000ha costal marine areas rehabilitated and protected	4,000ha costal marine areas rehabilitated and protected	400ha	2,000ha
Core 1: GHG emissions reduced, avoided or removed/sequestered	0 tCO2eq	282,590 tCO2eq direct impact from mangrove rehabilitation and protection	565,180 tCO2eq direct impact from mangrove rehabilitation and protection	55,000 tCO2eq	300,000 tCO2eq

APR ENABLING ENVIRONMENTS SECTION

Against the selected enabling environment indicators, the analysis was provided in the section 6 [Select enabling environment indicators] on the context in which the project is operating, and the project's potential contribution to a strengthening of the enabling environment.

Building on the analysis, what – if anything – has changed against each of the selected enabling environment indicators? How has the context changed? Is the enabling environment stronger? If so, how has the project contributed to this strengthening?

INDICATOR	CHANGES SINCE ORIGINAL FUNDING PROPOSAL
Core 6 (Technology)	So far approximately 2,000 ha of mangrove forest have been restored as part of nature-based solution technologies to reduce GHG emission and as well as to increase resilience of local communities against the sea level rise. It was proved to be not only environment friendly but also economically efficient way of restoring ecosystem and reduce losses from climate hazards in the country. As a result, the government launched a new climate adaptation project in another

	coastal region of the country to scale mangrove forests restoration and protection, where rapid erosion due to sea level rise is expected in the near term. The best practices of the project will be shared with the government partners with some suggestions of regulatory and institutional arrangements.
Core 7 (Markets)	The DF and the CEF established by the project prove that investing in renewable energy and ecosystem restoration projects can be an attractive option for private investors by reducing investment risks and increasing returns, impact and speed of the projects. The private investment mobilized into the funds reached nearly 600 million USD up to now, clearly showing that that appetite of private investors is changing. The government data and financial analysis reports of investment banks also shows that total amount of private capital invested in climate projects in the country is growing.
Core 8 (Knowledge)	Unfortunately, no tangible knowledge products or best practices have been generated at this stage. However, some private investment banks reached out to the project team to learn about the financial innovations which are applied by the project. It is planned to collect and analyse good practices from supported climate projects under the established funds in the next year.

8. Interim and final evaluations

The AE's own evaluation policy requires interim and final evaluations for any project with a budget over $50m. Moreover, these evaluations are to be commissioned and managed by the AE's evaluation office, rather than the project team itself. These internal requirements are all fully in line with GCF evaluation requirements.

The AE's evaluation office first establishes an Evaluation Reference Group (ERG), tasked with overseeing evaluation design and delivery, and with ensuring that the evaluation addresses the needs of the project's stakeholders. To meet these requirements, the group is comprised of:

- The Evaluation Manager (from the AE's evaluation office)
- The Project Manager
- The project's point of contact within the GCF Secretariat
- A representative from the country's Ministry of Energy and Ministry of Environment
- Representative from the two funds established
- Two external experts of offshore wind technologies and costal ecosystems

The Group will meet (virtually if necessary) to provide the following inputs:

- Review and advise on draft terms of reference
- Review and advise on evaluation inception report
- Review and advise on draft evaluation report
- Approval of final evaluation report

In addition to the GCF evaluation policy and the AE's own evaluative requirements, the Evaluation Manager also ensures that the terms of reference (TOR) incorporates all the IRMF requirements, namely:

- Scorecard assessment of progress towards paradigm shift
- Scorecard assessment of progress against enabling environment indicators
- Assurance / validation that agreed IRMF-related monitoring methodologies and processes are being applied, and are generating robust data

Once independent evaluators have been commissioned, their first task is to develop an inception report, which primarily focuses on detailing the evaluation methodology to be applied. While the AE has given the evaluators considerable freedom to develop their own methodology, the approach should take into account – and ensure delivery of – the GCF evaluation policy and the IRMF requirements.

With the evaluation underway, the evaluators may opt to address the IRMF requirements through two exercises:

1. A **half-day participatory workshop** to assess progress against the GCF paradigm shift and enabling environment scorecards. The evaluators convene key stakeholders with knowledge of the project and its operating context. Facilitated group discussions are used to develop a consensus as to the project's performance against enabling environment indicators, and to assess the progress towards paradigm shift within the city.
2. A **monitoring system stocktake**, whereby the evaluators review monitoring data and processes implemented by the AE and its partners. This comprises a desk review of data and any monitoring manuals, combined with targeted interviews with personnel responsible for overseeing or undertaking monitoring.

The evaluators summarise each of these exercises within annexes to the evaluation report, but also use the findings from these exercises to support their broader analysis of the project.

After the draft evaluation report has been submitted to the AE and comments from key stakeholders (including the ERG) have been addressed, the AE's evaluation office undertakes quality assurance of the report before seeking final approval of the report from the ERG. This final, quality-assured and ERG-approved report is then submitted to the GCF Secretariat.

Internally, the AE develops a management response to the evaluation, identifying whether and how the project will respond to any evaluation recommendations. The AE also has an internal process for knowledge and learning extraction, whereby the evaluation report is reviewed for lessons that could be generalised and applied to other projects

TERMS	DEFINITION
Activities	The actions taken or the work performed as part of an intervention
Baseline scenario	The baseline scenario is a reference case for the intervention in question and is a hypothetical description of what would have occurred without GCF-funded interventions.
Co-benefits	Additional or secondary benefits that occur as a result of mitigation or adaptation activities. They appear as auxiliary or ancillary effects while the central objective is either a mitigation or adaptation intervention.
Evaluation	A systematic, objective assessment of an ongoing or completed intervention, its design, implementation and results.
Goal statement	The highest expected results within the theory of change of a project/programme. In the context of a GCF-funded project/programme, the goal statement is considered a context-specific paradigm shift which a project/programme will aim to support and contribute towards.
Inputs	GCF funding, human effort, expertise, technology, materials and information
Impacts	Positive and negative, primary and secondary long-term effects produced by an intervention, directly or indirectly, intended or unintended.
Indicator	An indicator helps measure at different points in time progress towards achieving results or provide evidence that a result has been achieved using a particular unit of measurement.
Innovation	A technology, practice, service, process, business model or product that is demonstrated for the first time in a new country or context. If an approach has previously been demonstrated in another country or context, it is still considered 'innovative' if it is being introduced to a new country or context.
Institutional Frameworks	The governing mechanisms, organizations and inter-organizational relationships that undertake or influence the regulation and/or oversight of a given sector, market, process or product. These include public, private and civil society organizations.
Market development	The process of introducing new markets or strengthening and/or diversifying existing markets within a given country or context.
Market transformation	Where a new, strengthened and/or diversified market essentially supplants the 'baseline' market (e.g. demand for an 'old' product/s disappears, completely replaced by demand for a 'new' product/s)
Monitoring	The continuous, systematic collection of data against specified indicators / measures to provide the main stakeholders of an ongoing intervention with insight on progress and performance.
Outcomes	Changes in conditions such as behavioural or systemic change that occur between the completion of project/programme outputs and the achievement of impact
Outputs	Changes delivered as a result of project/programme activities to contribute to the achievement of outcomes.
Regulatory frameworks	The international, regional national and/or sub-national agreements, policies, legislation and/or governing mechanisms that are applied to regulate specific sectors, markets, processes and products.
Results	Changes that an intervention has some influence over. GCF classifies results into three levels: impacts, outcomes, and outputs.
Results-based management	A management strategy that uses monitoring data and evaluations to assess and improve performance and the achievement of desired results.
Technology transfer	The process of transferring technology – including associated capacities – from one entity to another. In the context of GCF supported activities, the transfer is ordinarily (though not exclusively) from developed countries to developing countries.

Technology Development	The process of improving existing – or developing new – products and/or processes to address a given task or problem. This can include the introduction or tailoring of existing technologies into new contexts.
Total lifespan	The total lifespan of the project/programme is defined as the maximum number of years over which the impacts of the investment are expected to be effective. This is different from the project/programme implementation period and is typically the expected lifespan of the asset.