Green Climate Fund (GCF)
Concept Note Development Guidebook
for Asia-Pacific Region 2025

AP-PLAT
Asia-Pacific Climate Change Adaptation Information Platform

Produced by
Asia-Pacific Climate Change Adaptation Platform (AP-PLAT) and Institute for Global Environmental Strategies (IGES)

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Glossary

ADCOM	(Adaptation Communication)
AE	(Accredited Entity)
AI	(Artificial Intelligence)
AP-PLAT	(Asia-Pacific Climate Change Adaptation Information Platform)
CBA	(Cost-Benefit Analysis)
LF/LogFrame	(Logical Framework)
CN	(Concept Note)
COP	(Conference of the Parties)
DAE	(Direct Access Entity)
EE	(Executing Entity)
ESIA	(Environmental and Social Impact Assessment)
ESMP	(Environmental and Social Management Plan)
ESS	(Environmental and Social Safeguards)
FP	(Funding Proposal)
FFP	(Full Funding Proposal)
FPIC	(Free, Prior, and Informed Consent)
GAP	(Gender Action Plan)
GSI	(Gender and Social Inclusion)
GCF	(Green Climate Fund)
GPT	(Generative Pre-trained Transformer)
LDCs	(Least Developed Countries)
MRV	(Monitoring, Reporting, and Verification)
NAP	(National Adaptation Plans)
NDA	(National Designated Authority)
NDC	(Nationally Determined Contributions)
PPF	(Project Preparation Facility)
PSP	(Paradigm Shifting Pathways)
RFP/RfP	(Requests for Proposals)
RPSP	(Readiness and Preparatory Support Programme)
SIDS	(Small Island Developing States)
SAP	(Simplified Approval Process)
ToC	(Theory of Change)
UNFCCC	(United Nations Framework Convention on Climate Change)

Chapter 1 Introduction

1 Purpose of this Guide

1.1 Background

The climate crisis poses an unparalleled challenge to global sustainable development, with its impacts manifesting differently across regions. The Asia-Pacific region stands at the forefront of this vulnerability, experiencing a heightened intensity and frequency of climate change impacts. This vast and diverse region is grappling with complex, interlinked risks, including accelerating sea-level rise threatening densely populated coastal areas, an increased frequency and severity of extreme weather events like typhoons and droughts, growing water scarcity impacting agriculture and human health, and pervasive threats to food security. These adverse effects disproportionately impact vulnerable communities, exacerbating existing socio-economic inequalities.1 In response, there is a growing and critical recognition that effective adaptation measures must transcend traditional disaster risk reduction efforts. They must be mainstreamed and integrated into comprehensive national development plans to foster genuine climate-resilient growth.2 Consequently, many nations across the Asia-Pacific are actively formulating National Adaptation Plans (NAPs) and other strategic frameworks, signifying a crucial shift from theoretical planning to the tangible, concrete implementation of adaptation actions on the ground.

However, despite this encouraging progress in adaptation planning and the urgent need for action, the pace of project implementation through the Green Climate Fund (GCF), a central pillar of international climate finance, has not accelerated as rapidly as needed. This evident stagnation can be attributable to a combination of factors. Developing countries frequently encounter significant capacity gaps in navigating the intricate processes of preparing GCF proposals and adhering to its rigorous requirements. The complex and often protracted approval processes of the GCF can pose substantial hurdles, particularly for entities with limited experience in international climate finance. Furthermore, challenges in fund allocation mechanisms and the demanding fiduciary and safeguard standards can add layers of complexity, leading to delays and difficulties in moving projects from concept to reality. To effectively bridge this critical implementation gap and unlock climate finance, concerted efforts are urgently required to bolster the capacity of developing countries and streamline access procedures. This action will provide more ways to effectively access and deploy international climate finance, such as that provided by the GCF.

In direct response to this pressing situation, AP-PLAT has proactively launched a comprehensive web-based content series. This initiative is specifically designed to support the implementation of adaptation projects by leveraging the GCF, the largest dedicated source of climate finance globally. This digital resource caters to countries across the Asia-Pacific region, with a particular focus on assisting Small Island Developing States (SIDS) and Least Developed Countries (LDCs), given their acute vulnerability and often limited resources for project development. This guide serves as a crucial complement to that existing AP-PLAT web content, examining materials in greater depth, nuance, and practical detail, thereby providing aspiring project proponents with a more thorough understanding.

The primary audience for this guidebook is intentionally broad yet focused: it targets government officials, administrators, and project coordinators in the Asia-Pacific region who are at the crucial initial stages of exploring or preparing applications for GCF projects. These individuals are often at the forefront of national climate action, responsible for translating policy into tangible on-the-ground interventions. This targeted approach is driven by the stark reality that these nations are profoundly vulnerable

1 IPCC, AR6 WGII Chapter 10; UNDRR, Asia–Pacific Climate Report 2024.

2 UNESCAP, Asia Pacific Disaster Report 2022.

to the devastating impacts of climate change, often possessing limited adaptive capacities, and therefore face an exceptionally urgent need to formulate effective adaptation projects to protect their communities and ecosystems.

It is important to emphasize that while this guide is specifically tailored to the nuances of GCF project formulation, the knowledge and principles it presents can be broadly applied across various project preparation tasks. The fundamental insights into project design, stakeholder engagement, risk assessment, and impact measurement are highly transferable, ranging from the development of small-scale community-based grants to the structuring of large, multi-sectoral climate adaptation initiatives. Consequently, this guidebook proves invaluable not only for those directly engaged in GCF-specific endeavors but also for a wider spectrum of users involved in conceptualizing and designing broader climate change adaptation projects. Indeed, the majority of the content presented within this publication can serve as foundational knowledge for designing climate change adaptation projects, irrespective of the specific funding provider, empowering a larger cohort of climate practitioners across the region.

1.2 Positioning of this guide in relation to the AP-PLAT web content

The AP-PLAT web content titled "GCF Concept Note Development Guide for Asia-Pacific Region" adopts two main approaches to effectively support the formulation of GCF projects, particularly during the CN development stage, in the Asia-Pacific region. The first approach focuses on the AP-PLAT website and this guidebook, both of which organize essential information for CN development in a simplified and accessible manner. The goal of this first approach is to clearly and comprehensively explain the information needed to prepare a CN. As outlined below, the chapter structure of this guidebook and the page structure of the website are fundamentally aligned.

- Chapter 1 provides an overview of the purpose of the "GCF Concept Note Development Guide for Asia-Pacific Region" and basic information about the GCF.
- Chapter 2 explains the importance of linking national adaptation strategies and plans to the CN and how to refer to the latest relevant information from Asia-Pacific countries.
- Chapter 3 to Chapter 6 present information required for developing a CN in a clear and practical manner from the applicant's perspective. These include:
  - An explanation in Understanding GCF Investment Criteria defined by the GCF and how to effectively address them in the CN
  - Methods to access, process, and present climate data that can support proposal development and evidence-building at various stages (Climate Data & Evidence),
  - Key concepts used in project planning such as Problem Tree, Logical Framework (LF), Theory of Change (ToC), and Cost Benefit Analysis (CBA , Project Design & Planning), and
  - A description of GCF-specific policies on risk management and safeguards (Engagement & Safeguards, Risk Management).
- Chapter 7 introduces useful resources and tools beyond the CN development stage for those considering submitting a project to the GCF (Resources & Tools).

The second approach involves the *Concept Note Navigator Tool and the GCF Concept Note Tool*

Kit. The Concept Note Navigator Tool is an online support tool for CN development. By selecting a country and sector, users can access sample CNs that meet those criteria via the Results page. Users can also view tips for writing each section of the CN, as well as tools and case studies related to the displayed samples.

A key feature of this tool is its emphasis on aligning national adaptation strategies and plans with the GCF's strategies and investment criteria which are considered to be the most critical aspect of CN development. In developing this tool, AI-GPT technology was used to analyze actual national adaptation plans (such as ADCOMs, NAPs, NDCs, and GCF Country Programmes) along with GCF strategy documents (such as Sectoral Guide Summaries and SAP Technical Guidelines).

By using this tool to examine various CN samples and explanations for different Asia-Pacific countries, users can gain practical guidance for their own CN development. Detailed instructions for using the tool can be found in the GCF Concept Note Tool Kit, which is recommended to be used along with this guidebook.

1.3 GCF basics and access modalities

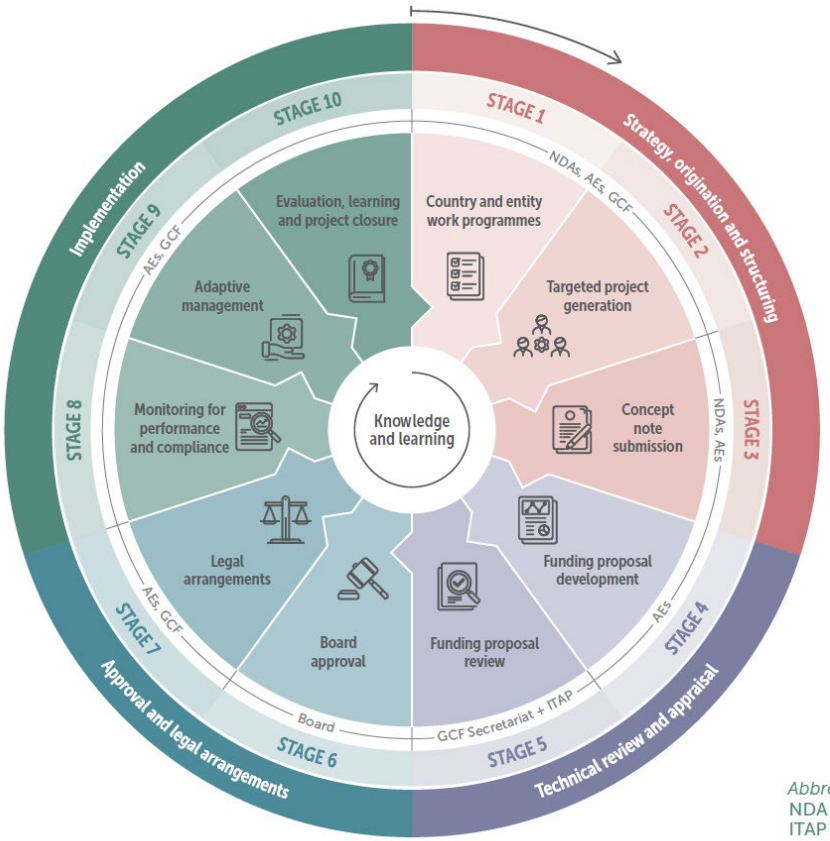
The GCF stands as the world's largest dedicated climate fund, established under the United Nations Framework Convention on Climate Change (UNFCCC). Its core mandate is to support developing countries in achieving their Nationally Determined Contributions (NDCs) towards low-emission, climate-resilient development in alignment with the Paris Agreement. Originating from discussions at COP-15 in Copenhagen (2009) and formally established at COP-16 in Cancun (2010), the GCF is a critical financial mechanism of the UNFCCC, headquartered in Songdo, Republic of Korea. Its role in global climate finance is pivotal, bridging significant funding gaps, particularly for adaptation efforts, and promoting innovative climate solutions through a country-driven approach that prioritizes national ownership and balanced resource allocation between mitigation and adaptation.

The GCF's mandate extends beyond simply providing funds; it aims to catalyze a paradigm shift. This involves promoting transformational change by investing in projects with the potential for systemic impacts, encouraging integrated planning, and mainstreaming climate considerations into development strategies. A key aspect of its operations is mobilizing finance, leveraging both public and private sector investments through a flexible combination of financial instruments, including grants, concessional loans, equity, and guarantees. The GCF also acts as a source of capital willing to embrace risk for long-term impact, supporting early-stage projects and innovative solutions where commercial finance might be hesitant, thereby fostering an environment conducive to climate innovation and best practices globally.

The GCF offers various funding modalities, primarily channeled through Project/Programme Funding. This core modality supports large-scale climate initiatives, with specific approaches such as the Simplified Approval Process (SAP) for smaller, readily scalable projects, and Requests for Proposals (RfPs) for targeted investments in specific thematic areas. Project ideas typically progress through Concept Notes and Full Funding Proposals. The Concept Note, though optional, is highly recommended as a preliminary summary to receive early feedback from the GCF Secretariat, ensuring alignment with the GCF's mandate and investment criteria before extensive proposal development. It outlines the climate challenge, proposed solution, expected impacts, and initial financial estimates.

Following a successful Concept Note, the Full Funding Proposal is the comprehensive document submitted for GCF Board approval. This detailed proposal must meticulously demonstrate how the project meets the GCF's investment criteria, fiduciary standards, and environmental and social safeguards. It requires a "no-objection letter" from the National Designated Authority (NDA), signifying national ownership and alignment. The Full Funding Proposal elaborates on detailed project descriptions, comprehensive budgets, financing plans (including co-financing), robust impact assessments, risk management strategies, and detailed environmental, social, and gender action plans, setting a solid foundation for implementation.

Crucially, the GCF provides vital support during the Concept Note's pre-development stage through its Readiness and Preparatory Support Programme and the Project Preparation Facility. The Readiness Programme builds institutional capacities in developing countries, assisting them in developing national climate strategies, strengthening institutions, and creating project pipelines, thereby enabling the formulation of strong Concept Notes. The Project Preparation Facility offers direct financial and technical assistance specifically for preparing high-quality Funding Proposals, covering activities such as feasibility studies and detailed impact assessments. Together, these modalities bridge the gap between initial project ideas and fully developed, fundable proposals, allowing countries to effectively access GCF resources and advance their climate adaptation ambitions.



Abbreviations: AE = accredited entity, NDA = national designated authority, ITAP = independent Technical Advisory Panel.

Figure 1.1 GCF Project/Programme Activity Cycle
* This guidebook covers the project development process up to Stage 3 (Concept Note submission), providing comprehensive support for developing high-quality Concept Notes that meet GCF standards and requirements.
(Source: GCF Programming Manual, 2020)

1.4 Purpose of preparing a Concept Note for GCF project

The Concept Note (CN) is a critical initial step in the Green Climate Fund's project application process, functioning as a concise summary and strategic filter for proposed projects. It clearly outlines the project's objectives, rationale, and alignment with national adaptation strategies as well as GCF's investment criteria, establishing the foundation for further development. Preparing the CN early is strategically important as it allows countries and Accredited Entities (AEs) to test the feasibility and alignment of their ideas before investing significant time and resources into a Full Funding Proposal (FFP). Early submission also enables timely feedback from the GCF Secretariat, which helps identify potential gaps or issues that could impede approval. This proactive approach reduces the risk of costly revisions or rejection later, streamlining project development and increasing the chances of successful financing and implementation.

Within the complex GCF financing framework, AP-PLAT focuses on supporting CN preparation for practical and strategic reasons. Our experience shows that, especially for developing countries, producing high-quality CNs is often the main bottleneck in the project formulation process. Countries frequently face challenges in clearly articulating the "paradigm shift" concept required by the GCF, meeting its investment criteria early on, gathering initial project data and evidence, ensuring alignment with national priorities (such as NDCs and NAPs), and presenting complex ideas concisely and persuasively.

Successfully overcoming this barrier by developing a high-quality CN that will gain GCF approval facilitates the smooth progression to the FFP stage and eventual project implementation. An approved CN signals the GCF's initial endorsement of the project idea, giving confidence to the proposing country and AE to allocate further resources for FFP development. Feedback during the CN review provides crucial guidance and minimizes major revisions at a later date. Moreover, a clear CN supports the development of a detailed project design, smooth implementation, and even applications for the Project Preparation Facility (PPF).

While submitting a CN before preparing an FFP is voluntary, the GCF strongly recommends that project proponents develop a CN to improve proposal quality and reduce risks for both the fund and proposing countries. Early submission helps confirm alignment with GCF's strategic objectives and investment criteria, allowing proponents to adjust their approach before investing heavily in the development of a full proposal.

A high-quality CN also fosters effective communication among stakeholders by clearly articulating the project's vision, objectives, key activities, and expected outcomes. This shared understanding among the AE, Executing Entities (EEs), and the National Designated Authority (NDA) opens up dialogue with the GCF Secretariat at an early stage and lays the groundwork for more advanced discussions.

From the GCF's perspective, receiving a greater number of well-prepared CNs enhances organizational efficiency. By minimizing time spent reviewing misaligned or low-quality notes, the GCF can allocate resources to assessing more promising projects, accelerating pipeline development and advancing its mandate to promote climate action more effectively.

Table 1.1 Comparison of project development outcomes with and without a high-quality CN

Aspect	With High-Quality CN	Without High-Quality CN
Clarify Project Idea	Clear articulation of objectives, rationale, and alignment with national adaptation strategies and GCF criteria	Vague or incomplete project ideas, alignment unclear
Feasibility Check	Early testing of project feasibility and alignment with GCF priorities	Feasibility and alignment issues may surface late, causing delays
Feedback from GCF	Timely, constructive feedback guides the smooth development of an FFP	Limited or late feedback, resulting in major revisions during FFP
Resource Efficiency	Saves time and resources by preventing time spent engaged in the development or major rework of a full proposal	Resources wasted on developing proposals unlikely to be approved
Stakeholder Communication	Facilitates shared understanding among country, AE, EEs, NDA, and GCF Secretariat	Poor communication, misunderstandings, and inefficient coordination
Progression to FFP and Implementation	Smoother transition with greater confidence and clearer guidance	Delays or difficulties progressing due to unclear project concept
Alignment with National Priorities	Ensures early alignment with NDCs, NAPs, and other requirements	Misalignment discovered late, requiring project redesign
Risk of Rejection	Lower risk of rejection due to early correction of potential issues	Higher risk of rejection due to fundamental issues unnoticed at a late stage

2 How to Use this Guide

The fundamental logic flow for developing adaptation projects starts with identifying climate indices that show changes over time. The next step is to determine the climate hazards that arise from these changing indices. These hazards are then analyzed in the context of exposure and vulnerabilities to define specific climate risks. It is also important to understand the barriers that these risks create in different sectors, such as water and agriculture, while ensuring that the barriers are truly climate-related. Based on this understanding, appropriate climate-related activities can be proposed to address the barriers and drive a paradigm shift toward greater resilience.[3] The GCF content provided by AP-PLAT breaks down and explains these two aspects in a structured manner, offering clear guidance on how to effectively present them in each section of the CN. Figure 1.2 and Table 1.2 illustrate the relationship between the chapters of this guide and how they correspond to the elements of these two aspects, showing how each should be reflected in the respective sections of the CN application form.

3 Based on an interview with a GCF officer in April 2025.

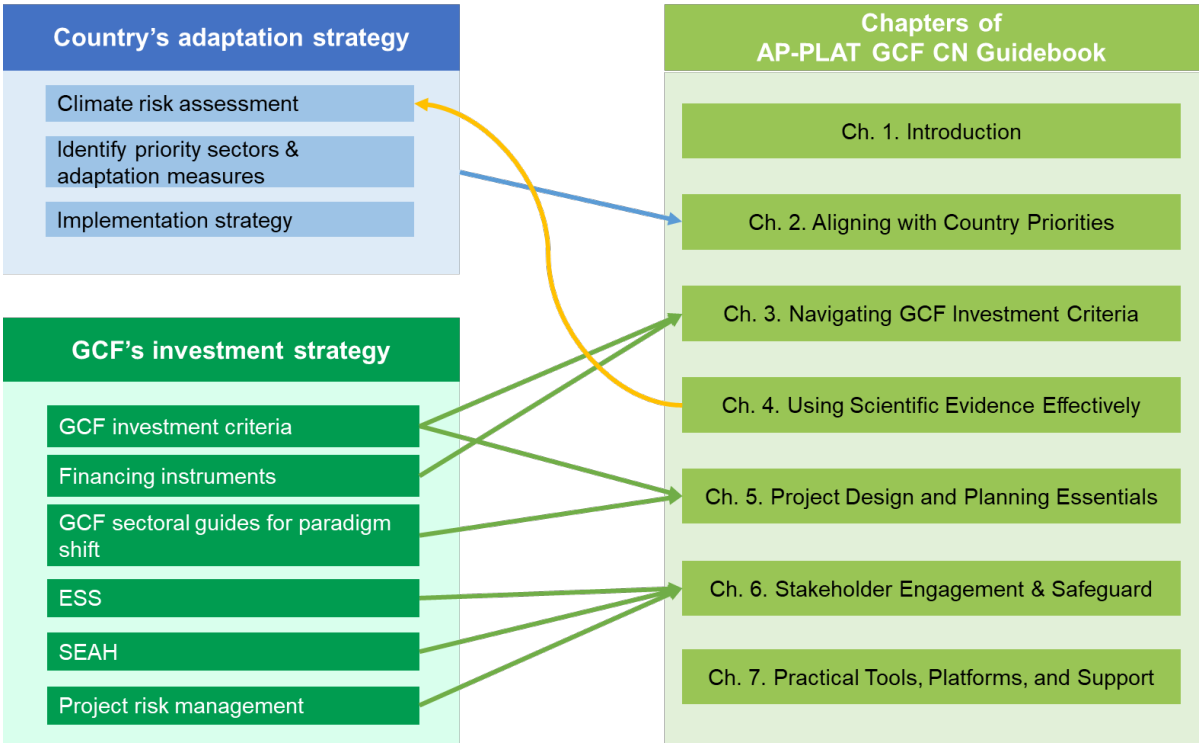


Figure 1.2 Illustration of the relationship between chapters of this guide and elements of GCF Concept Note template

This illustration represents a general design flow for adaptation projects. These elements are typically defined in each country's adaptation planning documents, which are submitted to the UNFCCC as National Adaptation Plans (NAPs), Adaptation Communications (ADCOMs), and Nationally Determined Contributions (NDCs), and function as a way of communicating national adaptation commitments to the international community. At the same time, the GCF sets out a range of investment criteria and key considerations for project implementation. Therefore, a strong CN must accomplish two key objectives: first, to clearly articulate project activities that are well aligned with the country's adaptation plans; and second, to demonstrate how the project aligns with the GCF's investment strategy.[4] When these two fundamental aspects are thoroughly addressed, the likelihood of a successful CN increases significantly.

4 Based on an interview with a GCF officer in April 2025.

Table 1.2 Mapping of the Chapters of this guidebook and corresponding GCF CN sections

Chapter in AP-PLAT GCF CN Guidebook	Corresponding GCF CN Section
Ch.1: Introduction	Executive Summary
Ch.2: Aligning with Country Priorities	A.16, C.1, C.2, C.3, C.4, E
Ch.3: Navigating GCF Investment Criteria	A.8-11, A.17, D.1, D.2, D.4, C.5
Ch.4: Using Scientific Evidence Effectively	C.1, C.2
Ch.5: Project Design and Planning Essentials	A.5, B, C.1, C.2, C.3, D.4, G.1-6
Ch.6: Stakeholder Engagement & Safeguard	A.14, C.3, C.4, C.5, D.4, F, G.1-6
Ch.7: Practical Tools, Platforms, and Support	G.1–G.6

As a first step, users are recommended to read through this guide in the order of the chapters, referring to the corresponding sections of the CN template along the way. This will help you grasp the overall process leading to the completion of the CN. Once you begin drafting the CN, it is advisable to move on to Chapter 5 using it as a reference while co-designing the project with relevant stakeholders. After a general project design is established, you can proceed with completing each section of the application in whichever order is easiest. At this stage, the CN Navigator Tool can be especially useful. When you navigate to a particular section you want to work on, the tool will provide access to links to relevant resources within and outside of AP-PLAT, along with helpful writing tips.

3 Limitations of this Guide

Although this guide provides detailed information necessary for preparing a GCF Concept Note (CN), it is important to note that the GCF operates through an iterative process, and many decisions are still pending approval and review by the GCF Board. This guide has been developed based on the policies and procedures in effect as of June 2025 (following the 42nd GCF Board Meeting). As of June 2025, the GCF was in the process of updating several guidelines under its Strategic Plan 2024-2027. Therefore, the content of this guide and the associated AP-PLAT web resources have been prepared with reference to the pre-revised versions of various GCF official guidelines.[5]

This guide and the related AP-PLAT web content focus specifically on the development of CNs for climate change adaptation, particularly within the Proposal Approval Process (PAP) and the Simplified Approval Process (SAP). They may not be fully applicable to other funding modalities. However, as mentioned earlier, once a high-quality CN is developed, it can serve as a solid foundation for submitting a FFP or pursuing other funding modalities. In addition, most of the content presented in this guide can be applied as foundational knowledge for designing climate adaptation projects, regardless of the funding source.

While the development of this guide included multiple rounds of informal consultation with the GCF

5 GCF Programming Manual, 2020; GCF Sectoral Guides' summaries, 2022; GCF Appraisal Guidance, 2022.

Secretariat, not all content has undergone official review by the GCF. Therefore, in cases where the content of this guide differs from the latest official guidance issued by the GCF, guidance from the GCF shall take precedence.

Chapter 2 Aligning with Country Priorities

1 Understanding GCF Country Programmes and NDCs

GCF Country Programmes are strategic planning documents developed by countries to guide their engagement with the GCF. These programmes serve as the foundation for building a country's project and programme pipeline with the GCF and represent the first stage of the GCF's project and programme cycle. They enable countries to identify and prioritize Funding Proposals that align with their national climate strategies, such as Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), Adaptation Communications (ACs), and other long-term climate-resilient development plans.

The process of developing a Country Programme is led by the country's National Designated Authority (NDA) or focal point through a consultative multi-stakeholder process. Countries are encouraged to request support from the GCF's Readiness and Preparatory Support Programme (RPSP) to facilitate the development or update of these programmes. The Country Programme not only outlines the most impactful projects for GCF financing but also helps ensure that such projects are consistent with national priorities, enhance country ownership, and contribute to transformational climate action.

1.1 GCF Country Programme as a tool to communicate climate finance priorities

Country Programmes serve as the primary tool for communicating a country's climate finance priorities to the GCF. They outline national climate change strategies, financing needs, and priority projects aligned with documents like NDCs, NAPs, and long-term strategies. Typically developed through multi-stakeholder consultations led by the NDA or focal point, these programmes identify up to five priority projects based on mitigation and adaptation needs, helping ensure that proposed interventions reflect national development goals and meet GCF investment criteria. As such, Country Programmes are central to demonstrating country ownership and guiding the effective use of readiness and project preparation resources.

Alignment with Country Programmes and NDCs is a critical requirement for GCF Concept Notes and Funding Proposals. This ensures that projects are country-driven, strategically relevant, and supported by domestic institutions and policies. Submitting a proposal that lacks alignment may result in delays, failure to obtain NDA endorsement, or rejection during review. Conversely, alignment confirms the project is nationally endorsed, rooted in local priorities, and more likely to be implemented successfully with political and institutional backing. This coherence strengthens the strategic fit, legitimacy, and long-term sustainability of GCF investments.

1.2 Referring to the GCF Country Programme when writing a GCF Concept Note

A GCF Country Programme outlines a country's climate context, strategic priorities, and planned engagement with the Green Climate Fund. It highlights priority sectors such as agriculture, water, energy, or health based on national frameworks like NDCs, NAPs, or sectoral plans. The document also includes a pipeline of proposed projects, often categorized by readiness, preparation, or implementation stages, and grouped by thematic focus (mitigation, adaptation, or cross-cutting). These projects are selected through national consultations and prioritized based on alignment with national strategies, transformative potential, and implementation readiness.

To demonstrate strong alignment with GCF investment criteria, references to the Country Programme and NDCs should be integrated throughout the Concept Note. Table 2.1 below summarizes the sections and guides applicants in referencing national policy documents to enhance the Concept Note's credibility and alignment. Section A.16 in the Concept Note template directly addresses alignment with national strategies, while Sections C.1 and C.2 cites sectoral priorities and investment gaps outlined in the Country Programme. Section C.3 must show how the project reflects stakeholder consultations and NDA-led planning processes.

Table 2.1 Summary of content as reference for relevant Concept Note sections

CN Section	Reference Content	Relevance
Executive Summary	Country priorities, transformational goals	High-level strategic alignment
A.16	Date, links, specific alignment with Country Programme, NDCs details	Section A.16 asks for a mandatory citation of NDC/NAP
C.1	Climate policy context	National goals, sector targets
C.2	Investment pipeline, barriers, sector strategies	Rationales and design
C.3	NDA involvement, consultation process	Country ownership
C.4	Barriers identified in Country Programme	Financial justification

Optionally, Section D.4 on the justification for GCF funding may also cite the Country Programme to explain why GCF support is needed (for example, by referencing barriers identified in national documents, such as high investment risks, lack of concessional finance, or limited access to technology). The proposal's Executive Summary should also refer to alignment with the Country Programme and NDCs by clearly stating how the project addresses nationally defined priorities and fits within a broader strategy for transformational change. Including this information in the Executive Summary helps to quickly establish strategic relevance for reviewers. Referring to national documents across these sections not only strengthens the strategic coherence of the proposal but also increases the likelihood of approval by clearly demonstrating that the project is demand-driven, nationally owned, and aligned with established climate goals.

To clearly demonstrate alignment with the Country Programme, Nationally Determined Contributions (NDCs), and other national strategies, project developers should use direct, specific, and policy-relevant language throughout the Concept Note. This includes referencing the exact name, date, and priority areas of relevant national documents. Table 2.2 provides several examples of explicit references to national documents to be used when writing the Concept Note. For example, phrases such as "This project directly responds to Priority Area 2 of [Country]'s Country Programme" or "The proposed intervention supports the implementation of the 2020 NDC, particularly its energy sector mitigation target" clearly show how the project fits within existing priorities.

Table 2.2 Examples of explicit reference to national documents when writing the Concept Note

Purpose	CN Section	Examples
Directly citing NDCs	Executive Summary, A.16, C.1, C.2	"This project directly responds to Priority Area 2 of [Country]'s Country Programme."
	Executive Summary, A.16	"The proposed intervention supports the implementation of the 2020 NDC, particularly its energy sector mitigation target."
Demonstrating contribution to targets	C.2, D.4	"By targeting [X sector], the project contributes to achieving 15% of the adaptation objective outlined in the NDC."
	C.1, C.2	"The activities are aligned with the Country Programme's investment pipeline, addressing the need for decentralized renewable energy solutions."
Referencing national planning processes	Executive Summary, C.3	"The project was identified through a multi-stakeholder consultative process led by the NDA."
	C.1, C.2	"It builds on recommendations from the National Adaptation Plan and complements ongoing initiatives described in the Country Programme."
Positioning in strategic vision	Executive Summary, C.1	"The intervention supports the country's long-term, low-emission development strategy."
	C.2	"The proposal operationalizes priority actions identified in both the NDC and the Climate Investment Plan."
Signaling alignment or coherence	C.1, C.2, C.3	"In line with national priorities…"
	Executive Summary, C.1, D.4	"As set in the country's climate strategy…"
	C.3	"Reflecting priorities identified by national stakeholders…"
Justifying the need for GCF support	Executive Summary, D.4	"The Country Programme highlights limited access to risk finance in this sector, which this project seeks to address."
	D.4	"The NDC and Country Programme identify concessional financing as critical to scaling up investment in this area—an issue this proposal directly tackles."

Where applicable, the proposal should quantify the contribution, such as noting the percentage of a national target the project helps achieve. It is also effective to highlight how the project emerged through national planning or coordination processes, using language such as "identified through the consultative process led by the NDA" or "aligned with investment priorities outlined in the Country Programme's project pipeline." Additionally, the proposal should be positioned within a broader strategic vision, noting that it supports long-term national goals or builds on complementary national initiatives. Phrasing such as "in line with national priorities," "as set in the NDC," or "consistent with the strategic direction of the Country Programme" signals policy coherence. Finally, when justifying the need for GCF support, the proposal should link identified financing or capacity gaps to those noted in national documents. For instance, "The Country Programme highlights limited access to

risk finance in this sector, which the proposed GCF intervention aims to address." Using this type of precise and contextualized language strengthens the case for project approval by demonstrating that the intervention is country-driven, strategically aligned, and contributes meaningfully to national climate objectives.

Aligning the Concept Note with the GCF Country Programme to identify project opportunities

Pipeline projects listed in a Country Programme provide a strategic foundation for developing GCF Concept Notes, as they are typically identified through nationally led consultations and reflect priority sectors, geographic focus, and readiness for implementation. Selecting a project from the pipeline ensures alignment with national climate strategies and endorsement by the NDA, enhancing credibility and coherence with GCF investment priorities. Developers are strongly encouraged to engage early with the NDA to confirm alignment with the Country Programme, NDCs, and other national plans, ensuring the proposal reflects national priorities and avoids duplication. This not only supports the "no-objection" process but also reinforces country ownership. The following sub-chapter presents country-specific summaries of climate vulnerabilities, development contexts, and key priorities drawn from national documents to guide alignment.

2 Asia-Pacific Country Profiles

Many Asia-Pacific countries face common gaps in effectively linking their national strategies with project proposals submitted to the GCF. One frequently observed challenge is the difficulty in translating high-level national climate priorities into well-structured, investment-ready project concepts that align with GCF funding modalities. This gap is often compounded by limited institutional capacity within NDAs and sectoral agencies to coordinate across ministries and stakeholders during the project identification and design stage. Additionally, countries may struggle to align the financial instruments offered by the GCF (e.g., grants, loans, guarantees) with the financing needs and delivery models of priority projects.[6] Technical barriers such as insufficient climate risk data, limited access to project appraisal tools, and underdeveloped monitoring and evaluation systems also hinder the ability to generate strong, evidence-based proposals. Addressing these gaps through targeted readiness support and capacity building is essential to ensure that national strategies effectively inform the development of high-quality, country-owned GCF proposals.

In the Annex, a summary of each country's key climate priorities are listed based on the most recent national documents, including GCF Country Programmes, NDCs, and NAPs. Considering that not all countries have the same combination of available documents, the following list only contains documents available at the time of writing. Where relevant, publication years are indicated. Please note that these documents are periodically updated. For the latest versions and more detailed information on each country's climate vulnerability, geography, and development context, we recommend consulting the official UNFCCC repositories for NDCs, NAP, Adaptation Communication (AdCom), and GCF Country Programmes. Additionally, the Status of Adaptation in the Asia-Pacific page on AP-PLAT provides an accessible overview of NAPs and related planning documents across 39 countries in the region.

6 Owens, K., Carter, G., Park, S., & Viney, G. (2025). Bridging the adaptation-finance gap: Pathways for the green climate fund in the Pacific. Earth System Governance, 24, 100247. https://doi.org/10.1016/j.esg.2025.100247

Chapter 3 Navigating GCF Investment Criteria

1 Understanding GCF Investment Criteria

To be recognized as a GCF project, it is essential to secure appropriate funding modalities. This determination is made through a review process guided by the GCF Investment Framework, which outlines the rationale and methodology for evaluating project proposals. The GCF investment framework consists of the following components: (1) Investment policies; (2) Investment strategy and portfolio targets; and (3) Investment guidelines. This section will particularly focus on (3) Investment guidelines, which comprise six GCF investment criteria that serve as the specific benchmarks used to assess the quality and effectiveness of each proposal. These 6 criteria are: Impact Potential, Paradigm Shift Potential, Sustainable Development, Needs of the Recipient, Country Ownership, Efficiency & Effectiveness. GCF investment criteria serve as a guide to assess funding decisions for climate-related projects and programmes. There are six criteria covering 24 areas shown in the table below.

Table 3.1 Six GCF Investment Criteria and their 24 coverage areas

Criterion	Description	Coverage
Impact potential	Potential of the project to contribute to climate mitigation or adaptation	• Mitigation impact • Adaptation impact
Paradigm shift potential	Degree to which the proposed activity can catalyze impact beyond a one-off investment	• Potential for scaling-up and replication, and its overall contribution to global low-carbon development pathways, consistent with a temperature increase of less than 2˚C • Potential for knowledge and learning • Contribution to the creation of an enabling environment • Contribution to regulatory frameworks and policies • Overall contribution to climate-resilient development pathways consistent with a country's climate change adaptation strategies and plans
Sustainable development potential	Co-benefits such as improved health, education, gender equality, or biodiversity	• Environmental co-benefits • Social co-benefits • Economic co-benefits • Gender-sensitive development impact
Needs of the recipient	Vulnerability of the country and financing needs of the targeted population	• Vulnerability of the country • Vulnerable groups and gender aspects • Economic and social development level of the country and the affected population • Absence of alternative sources of financing • Need for strengthening institution

Criterion	Description	Coverage
Country ownership	Alignment with national climate strategies and stakeholder engagement	• Existence of a national climate strategy • Coherence with existing policies • Capacity of implementing entities, intermediaries or executing entities to deliver • Engagement with civil society organizations and other relevant stakeholders
Efficiency and effectiveness	Financial viability and how well the cost relates to the expected climate benefits	• Cost-effectiveness and efficiency of financial and non-financial aspects • Amount of co-financing • Programme/project financial viability and other financial indicators • Industry best practices

Source: Based on Investment framework for GCF-2

Each of the six GCF investment criteria include indicators to measure and evaluate whether the project is suitable for selection. Concept Note developers can use these indicators to show the impacts and effectiveness of the project.

1. Impact potential criteria

Separate indicators are proposed to measure the impact potential of mitigation and adaptation projects.

Mitigation impact indicators:

- Total emissions reductions over the project's lifetime (in tonnes of CO_2 equivalent).
- Expected emission reductions resulting from the GCF-supported intervention.

Adaptation impact indicators:

- Expected reduction in losses caused by extreme climate events and climate change, including lives saved, physical assets protected, livelihoods preserved, and reduced environmental or social damages in the targeted area.
- Number of direct and indirect beneficiaries, with special attention to vulnerable developing countries.

2. Paradigm shift potential

Project proposals should identify a vision for a paradigm shift as it relates to the subject of the project. The vision for a paradigm shift should outline how the proposed project can catalyze impact beyond a one-off investment. This vision for longer-term change should be accompanied by a robust and convincing theory of change for replication and/or scaling up of the project results, including the long-

term sustainability of the results, or by a description of the most binding constraint(s) to change and how it/they will be addressed through the project.

Necessary conditions indicators:

- Generation of impact that extends beyond a single investment. It must be supported by a strong and credible theory of change that outlines how the project's results can be replicated or scaled up, ensuring their long-term sustainability.
- Key barriers to achieving systemic change and descriptions of how the project will address these constraints.

3. Sustainable development potential

The sustainable development potential criteria focus on a wider range of benefits and priorities. These may include indications of whether the project has such benefits and priorities, or if environmental and social safeguards and gender equality are integral parts of the project.

Co-benefits indicators: In addition to the core impacts of the project, proposals must identify at least two of the following four areas:

- Economic co-benefits, e.g., job creation, poverty reduction, increased income, and financial inclusion, particularly for women.
- Social co-benefits, e.g., improved health and safety, better access to education, cultural preservation, enhanced energy access, social inclusion, improved sanitation, and access to essential public utilities like water.
- Environmental co-benefits, e.g., improved air, water, and soil quality, as well as conservation and biodiversity protection.
- Gender empowerment co-benefits, e.g. demonstrating how the project contributes to reducing gender inequalities.

4. Needs of the recipient

Needs of the recipient cover the vulnerability and financing needs of the beneficiary country and population. This criteria answers questions related to the financing needs of the beneficiary country and population, and if alternative sources of financing are available.

Mitigation and adaptation indicators – Barriers to climate-related finance:

- Information on the country's financial, economic, social, and institutional needs, as well as the challenges it faces in accessing climate-related finance from domestic public sources, the private sector, and international funding.
- Explains how the planned intervention will help overcome these barriers and response to the identified needs.

5. Country ownership

The country ownership criterion covers the beneficiary country's ownership of, and capacity to implement, a funded project or programme (policies, climate strategies and institutions).

Alignment with nationally determined contributions (NDCs), relevant national plan indicators, and/or enabling policy and institutional frameworks:

- Explains how the proposed activities contribute to achieving specific targets outlined in national policies, such as Nationally Appropriate Mitigation Actions (NAMAs) or National Adaptation Plans (NAPs).
- Highlights how the project supports broader national development goals and is backed by, or contributes to strengthening, existing policy and institutional frameworks.

Explanation of engagement with relevant stakeholders, including national designated authorities indicators:

- Proposals must also describe the stakeholder engagement process, including how relevant actors were consulted during project development. Engagement with the National Designated Authority (NDA) is mandatory.

6. Efficiency and effectiveness

The efficiency and effectiveness criterion covers the economic and, if appropriate, financial soundness of the programme/project. This criterion answers questions related to the potential of the project to improve cost-effectiveness and mobilize private sector funding.

Mitigation efficiency and effectiveness indicators:

- Cost per tonne of carbon dioxide equivalent (tCO_2e) reduced as a result of the GCF intervention.
- Ratio of co-financing leveraged in relation to the GCF's contribution to the overall project cost.

Mitigation and adaptation indicators:

- Estimates of the economic internal rate of return (EIRR) and/or financial internal rate of return (FIRR), based on project needs.
- Demonstrates how the project incorporates and builds on established best practices within the sector to enhance effectiveness and sustainability.

The establishment of clear criteria plays a vital role in guiding both the development and implementation of project proposals. There are five key reasons why setting such criteria is important. First, using a common set of criteria allows for a consistent and transparent explanation of a project's validity to the various stakeholders engaged in the GCF review process. Second, investment criteria serve as a guide in articulating how well a Funding Proposal aligns with the criteria, while also offering a means to explain variations in performance—whether higher or lower than expected. Third, establishing clear criteria helps clarify what is expected in a project proposal, thereby making the proposal development process more focused and efficient. Fourth, by clarifying alignment with GCF investment criteria, use of these criteria allows the project developer to improve the quality of Funding Proposals over time by providing greater clarity on how proposals align with GCF investment criteria and by identifying areas where further explanation or justification may be required. Lastly, thoroughly comparing a proposal's content with the established criteria enables the identification of gaps or weaknesses, thereby providing a clear basis for improving and strengthening the proposal's overall quality.

However, the GCF investment criteria do not specify the relative importance or weighting of each criterion. Instead, applicants are expected to address all criteria to some degree in their Concept Notes or proposals. This requires a clear understanding of the information needed from the outset and careful consideration to ensure the content is complete and meets the expectations of the assessment process.

The self-check table of investment criteria indicators below provides guiding questions for each criterion, helping Concept Note developers assess whether the necessary information has been included. If only a few items are checked, additional content may need to be incorporated. If many items are checked, the table can serve as a helpful reference for maintaining or enhancing the level of detail and coverage. The questions in the checklist are based on GCF's explanations and indicators for each criterion, but they are not exhaustive and are intended to be user-friendly. As such, alternative approaches to addressing the criteria are possible and encouraged, depending on the context of the proposal. The self-check table is available in the Annex.

2 Readiness Support and Project Preparation Facility (PPF) Opportunities

To enhance access to climate finance and strengthen institutional capacity, the GCF provides two key forms of early-stage support: the PPF and the Readiness and Preparatory Support Programme. These instruments are designed to help developing countries overcome capacity and information gaps that hinder the development of high-quality, fundable project proposals. While the PPF focuses on supporting accredited entities in preparing specific Funding Proposals, the Readiness Programme targets broader systemic needs such as policy development, stakeholder coordination, and institutional strengthening. Both forms of support can also be accessed through a country platform approach, which aligns national priorities with coordinated investments and multi-stakeholder engagement. The sections below outline the scope, procedures, and examples of PPF and Readiness support, particularly in the Asia-Pacific context.

2.1 Project Preparation Facility

The Project Preparation Facility (PPF) is a programme that provides financial and technical assistance to developing countries facing various challenges in securing climate finance due to capacity constraints, to support the preparation of project and programme Funding Proposals. It aims to help accredited entities (AEs) build capacity for preparing full proposals for the GCF. The application process usually starts with the submission of a PPF concept note or application form and proceeds through a GCF review and approval process. Once approved for further processing, the AE must submit a full PPF Application Package. Critically, this package must include a mandatory no-objection letter from the host country's National Designated Authority (NDA), as this is required for all GCF proposals to ensure alignment with national priorities.

The PPF can support one or more of the activities listed in Figure 3.1. If using this form of support, proponents must aim to submit one project proposal to the GCF.

Pre-feasibility and feasibility studies Scenarios are evaluated both with and without the project, incorporating climate change projections and using a defined baseline for comparison. This process should include data collection, research, site-specific technical assessments, cost-benefit analysis, market research, and estimated calculations of greenhouse gas (GHG) emission reduction.
Environmental, social and gender studies The GCF requires that due diligence be applied to all projects and programmes to ensure the identification, assessment, and management of environmental and social risks and impacts. This due diligence must adhere to good international industry practices (GIIP) and be guided by established, relevant standards and frameworks.
Risk assessments Examples: Analysis on site-specific risks as part of the pre-feasibility and detailed feasibility studies; development of sensitivities and case scenarios as part of financial analysis; identification and assessment of potential executing entities.
Identification of programme/ project-level indicators Examples: Logical frameworks, including GCF relevant indicators and project indicators; assessment based on the GCF investment criteria; market assessment and recommendations; economic analysis and recommendations; financial analysis and recommendations.
Pre-contract services Examples: Terms of Reference (TOR); bidding documents: Procurement Packages: Request for Proposals; expression of interest; prequalification criteria.
Advisory services Examples: Advice on costing and budgeting according to GCF standards; advice on legal, financial, tax, regulatory and governance matters to help structure investments.
Other project preparation activities Where justified and deemed necessary, additional activities such as workshops, stakeholder consultations, or document translation may also be supported under the PPF.

Figure 3.1 Activities supported by PPF
Source: Based on Project Preparation Facility

AEs play an important role in the application and implementation of PPF. The figure below shows the process from PPF application to the submission of the proposal. Prior to this process, the AE typically begins by either submitting a PPF Concept Note or submitting the PPF application form. If approved by the GCF review, the Concept Note (if not already submitted and endorsed), PPF application, and "no objection" letter for the PPF from the NDA or focal point are submitted as the PPF Application Package, marking the official start of the process. All the relevant forms can be downloaded at the GCF website.

Table 3.2 Two types of PPF: PPF funding and PPF support.

Project Preparation Facility (PPF)	
PPF Funding - Support through funding-	**PPF Support**
AEs receive grants, repayable grants, or equity to carry out project preparation activities directly, managing procurement, implementation, and reporting. Those requesting up to USD 300,000 are eligible for Simplified PPF Funding.	Offers project preparation support through a roster of consultancy firms for AEs that prefer not to manage procurement and implementation themselves, ensuring timely and high-quality delivery.

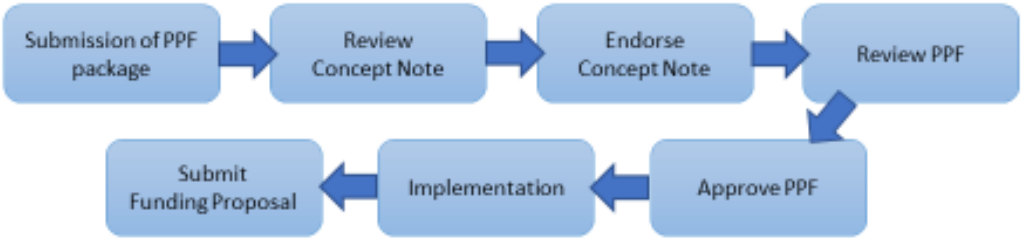


Figure 3.2 Illustration of the process of PPF submission, review, and implementation
Source: Based on GCF Project Preparation Facility Process Diagram

In the review process, it is important to cover all the criteria indicated by GCF (https://www.greenclimate.fund/projects/ppf/process). In particular, the following checklist can serve as guiding questions to help users complete the application Concept Note. This checklist is mainly developed for PPF funding applications, whereas PPF service applications must meet only the first, second and seventh criteria of this checklist.

Table 3.3 Checklist for submitting PPF

Criterion	✔
How will the proposed PPF activities directly contribute to the preparation of each of the required documents for a full GCF funding proposal?	
What specific technical, financial, or institutional gaps justify the AE's request for PPF support, and why are these not covered through existing AE resources or other funding sources?	
What are the proposed implementation arrangements for executing the PPF activities, including roles and responsibilities of the AE, executing entities, consultants, and any other stakeholders?	
How is the PPF budget structured to ensure cost-effectiveness and efficient use of GCF resources, and how were the cost estimates derived?	
What is the proposed timeline for disbursement of PPF funds and submission of progress and financial reports to the GCF?	
Is there any counterpart financial support (in-kind or cash) committed for the project preparation phase, and if so, from which sources and for what activities?	
Do the provided terms of reference (TORs) for each proposed study or output clearly define the scope, objectives, methodology, deliverables, and required qualifications of consultants?	

Source: Based on GCF PPF website with modifications and additional elements by the author

2.2 Examples of PPF funded activities in Asia-Pacific

Below are some examples of PPF funded activities in Asia-Pacific. These PPF funded activities identified gaps and limitations for developing GCF proposals and request support for specific areas.

Case 1: Climate Finance Facility to Support Energy Transition in Indonesia	
Date of submission: 2024-01-13	Date of approval: 2025-01-15
Amount requested from GCF PPF: US$ 1,028,755	
Gaps and limitation for developing GCF proposals: 1) Lack of comprehensive data and information critical for conducting accurate baseline analysis, feasibility studies, and vulnerability assessments. 2) Need for expertise in developing and implementing environmental and social safeguards and gender analyses.	
Areas to be supported: • Pre-feasibility and feasibility studies • Environmental, social and gender studies	

Case 2: Advancing Climate Resilience & Sustainable Development in Central and West Asia	
Date of submission: 2024-09-13	Date of approval: 2024-11-14
Amount requested from GCF PPF: No data	
Gaps and limitation for developing GCF proposals: 1) Lack of assessment of potential adaptation options for glacial preservation. 2) Lack of climate risk assessments in priority watersheds, which link to impacts on key sectors.	
Areas to be supported: • Risk assessments	

Case 3: Toward Risk-Aware and Climate-resilienT communities (TRACT) - Strengthening climate services and impact-based multi- hazard early warning in Maldives	
Date of submission: No data	Date of approval: 2024-3-19
Amount requested from GCF PPF: US$ 293,246	
Gaps and limitation for developing GCF proposals: 1) Lacks the financial resources needed to conduct critical technical studies and consultations required for GCF proposal preparation. 2) Gap in meaningful, in-person consultations with remote atoll/island communities, especially women and marginalized groups. 3) Capacity and resource gaps in project design to meet GCF's investment criteria.	
Areas to be supported: • Pre-feasibility and feasibility studies • Environmental, social and gender studies • Risk assessment • Identification of programme and project-level indicators • Advisory services	

3 Readiness and Preparatory Support Programme

The Readiness and Preparatory Support Programme (Readiness Programme) supports country-led efforts to build institutional capacity, improve governance structures, and enhance planning and programming frameworks. All developing countries party to the UNFCCC are eligible for this support, with the aim of advancing a long-term, transformational climate action agenda. Support under the Readiness Programme is delivered through National Designated Authorities (NDAs) and/or focal points (FPs). As of February 24, 2025, 812 Readiness Programme requests have been approved for a total of 142 countries and USD 656.7 million. Details on the Readiness Programme can be found in the "Readiness Strategy 2024-2027" published by GCF in October 2023.

The Readiness Programme has five objectives:

1. Capacity Building: Establish human, technical, and institutional systems that enable developing countries to effectively engage with the GCF and pursue their climate goals.
2. Strategic Frameworks: Develop and strengthen policy frameworks, sectoral expertise, and enabling environments to support effective GCF programming.
3. Adaptation Planning: Support the development and implementation of National Adaptation Plans (NAPs) and related adaptation planning processes.
4. Pipeline Development: Build a robust pipeline of high-quality Concept Notes and Funding Proposals, particularly from least developed countries (LDCs), small island developing States (SIDS), African States, and direct access accredited entities, aligned with strategic frameworks and entity work programmes.
5. Knowledge Sharing and Learning: Promote the exchange of knowledge and lessons learned to support the design and implementation of low-carbon, climate-resilient development projects.

The amount of support for each objective and the percentage of the total amount approved by April 30, 2023 are shown in the table below.

Table 3.4 Readiness spending per objective for completed grants

Readiness Programme objectives approved as part of the 2019-2021 readiness strategy	Actual amount spent 2014-2023, for completed grants	
Objective 1: Capacity-building [target: 10%]	USD 25.9 million	38%
Objective 2: Strategic frameworks [target: 20%]	USD 22.7 million	34%
Objective 3: NAP and the NAP process [target: 50%]	USD 11.9 million	18%
Objective 4: Pipeline development [target: 50%]	USD 5.7 million	8%
Objective 5: Knowledge-sharing and learning [target: 5%]	USD 1.4 million	2%
Total	**USD 67.6 million**	**100%**

Source: GCF, Readiness Strategy 2024-2027

The tables reveal the weighting assigned by the GCF to each objective under the 2019–2021 Readiness Strategy and how the approved projects actually aligned with those priorities. While support for NAP and NAP processes was initially given the highest weighting at 50%, followed by strategic framework support, the largest share of approved funding was allocated to capacity-building

initiatives—which originally had the fourth-highest weighting. NAP support, in practice, ranked third in terms of funding allocation. This suggests that the weightings served more as guidelines rather than strict targets, and that project approvals were ultimately influenced by a balance across countries and regions, with a strong emphasis on the quality of proposals. The table below presents the funding amounts and percentages allocated to each objective.

GCF Readiness Programme: Theory of Change Statement
IF the GCF provides support to countries and direct access to entities that (1) is based on strategic planning and deployment of readiness resources that reflects progressively strengthened capacities, (2) clearly focuses on enhancing capacities to successfully develop programmes and implement climate investments, and (3) increases speed, ease of access and predictability of readiness resources through streamlined modalities, objectives and processes.
THEN developing countries will be better equipped to translate their nationally determined contributions, national adaptation plans and long-term strategies into low-emission, climate-resilient, catalytic investments to advance the implementation of the United Nations Framework Convention on Climate Change and the Paris Agreement.
BECAUSE developing countries will have predictable resources for longer-term planning, readiness support should be simplified and responsive, addressing multiple challenges in a structured and coherent manner. Support should also focus on the development of necessary programming capacities and enabling environments that increase the flow of impactful, country-owned mitigation and adaptation investments ready for funding from a variety of sources, including GCF.

Figure 3.3 Theory of Change Statement of Readiness Programme

Source: Based on the GCF Readiness Strategy 2024–2027

For the Readiness Programme, it is important to show the Theory Of Change (ToC) Statement as indicated in the Strategy 2024-2027. The Theory of Change statement in the figure envisions that by 2027, developing countries will have strengthened their programming capacities and enabling environments to support the implementation of NDCs, NAPs and LTS. This includes improved investment planning and greater access to GCF resources, which also contribute to advancing the implementation of the UNFCCC and the Paris Agreement. Details on how to construct a ToC statement will be discussed in a separate chapter.

4 Country Platform

In addition to the availability of readiness support and PPF through their respective channels, the GCF also provides support for readiness and PPF through country platforms. These platforms are strategic, country-led frameworks designed to mobilize climate and development finance by turning national priorities into coordinated programmatic investments. They aim to align financial flows and key stakeholders, such as government ministries and the private sector, toward systemic climate and socio-economic transitions. Country platforms adopt an inclusive, country-led approach that ensures

national ownership and broad stakeholder engagement. This includes participation from the private sector, subnational governments, investment agencies, and line ministries in shaping and executing investment strategies. Recognizing that each country has unique needs and priorities, there is no one-size-fits-all model. Country platforms are designed to be flexible and adaptable to changing circumstances. Table 3.5 summarizes the support available through the country platforms.

Table 3.5 Summary of available support through GCF Country Platforms

GCF support	Description	Example/suggested supported activities
Readiness and Preparatory Support Programme	Offers grant-based support for the set-up and/or strengthening of country platforms, which can be leveraged to build capacity, improve coordination and stakeholder engagement, and establish governance mechanisms such as platform secretariats	• *Support needs assessments and macro-economic, climate, and sectoral studies* (e.g., CCDRs, NDC gap analysis). • *Establish communication channels* for continuous stakeholder dialogue and knowledge sharing. • *Provide technical assistance* to enhance the capacity of platform secretariats, including in inter-sectoral coordination and investment mobilisation. • *Deploy standardised templates, guidelines, and digital tools* for project prioritisation, stakeholder engagement, and financial tracking. • *Pilot enhanced platform functionalities* in select regions or sectors and scale based on lessons learnt.
Project Preparation Facility (PPF)	Offers financing and technical support to accredited entities to develop high-quality, investment-ready projects, by financing the preparation of feasibility studies, project design, and environmental and social assessments.	• *Support feasibility studies and technical assessments* to evaluate project viability, including climate impact, financial sustainability, and implementation risks. • *Provide standardised project preparation guidelines* to support proposal writing in line with GCF investment criteria and funding requirements. • *Provide access to technical assistance* resources for strong proposal writing and robust project management by accredited entities.
Catalytic concessional financing	Provides concessional financing to overcome barriers in implementing projects and mobilise co-financing from public and private sources.	• *Mobilise the full suite of financial instruments* (grants, concessional loans, equity, guarantees) to support climate project implementation and scale-up. • *Facilitate co-financing arrangements* with public and private sector partners to mobilise investment.

Source: GCF: Country Platform for Climate Finance - Overview of GCF's Approach, Available Support and Impact

Country platforms offer multiple benefits that support effective, inclusive, and country-driven climate action. They enhance country ownership and leadership by aligning investments and policies with national ambitions such as NDCs and NAPs, enabling governments to lead their climate transitions. Platforms also improve coordination and efficiency by streamlining diverse funding sources and fostering collaboration among government entities, the private sector, and international partners like MDBs and climate funds, thereby reducing administrative burdens. Additionally, they expand access to finance by aggregating resources and catalyzing private sector participation through blended

finance approaches that leverage concessional capital.

Moreover, country platforms send strong market signals by reducing investment risks, improving investor confidence, and encouraging long-term financing through clear policy frameworks and project de-risking. They also promote a systemic approach by integrating economic, environmental, social, technological, and workforce development objectives, while addressing country-specific vulnerabilities such as climate adaptation needs, fiscal challenges, and support for vulnerable populations. These platforms accelerate climate action by directing financing toward priority projects, building technical and institutional capacity, and overcoming implementation barriers. Finally, they strengthen transparency and accountability through robust systems for monitoring, reporting, and evaluating climate finance flows, ensuring alignment with national climate and development goals.

5 Sectoral Guides for GCF Programming

The GCF created separate guidelines for multiple sectors and provides information on its website. This section summarizes the key points of each sector-specific guideline and explains what types of projects are eligible for GCF funding. The information is mainly based on simplified approval process (SAP) Technical Guidelines for each sector found on the GCF website (water, agriculture, health, cities, energy, forests, ecosystems, infrastructure, etc.)

Sector: **Water**
Source: SAP Technical Guidelines: Water security
Definition: The GCF defines the water sector as "encompassing surface freshwater resources and groundwater, but not oceans".
Links to climate change: • **Higher temperatures** affect the availability and distribution of rainfall, snowmelt, river flows and groundwater, and accelerate the deterioration of water quality. • **Shifting precipitation patterns** alter rainfall, snowmelt, river flows, and groundwater levels, leading to both floods and droughts. • **Climate-induced glacier retreat, sea level rise, and extreme weather events** further strain water security.

Approach:
As the water sector is interlinked with other sectors, the scope includes the following four sub-sectors:

- Integrated water resources management (IWRM)
- Climate resilient water, sanitation, and hygiene (CR-WASH)
- Integrated drought management (IDM)
- Integrated flood management (IFM)

Paradigm shift pathways:

- Enhance access to water, sanitation and hygiene (WASH) infrastructure and services that are resilient to climate change risks, coupled with building up capacity of the local water sector to scale up such access;
- Ensure climate-resilient water security by enabling countries to be better able to withstand drought and flood events under climate variability and changing conditions;
- Create a culture of climate and disaster resilience – moving towards proactive rather than reactive water management.

Sector: Ecosystems and ecosystem services

Source: SAP Technical Guidelines: Ecosystems and ecosystem services

Definition:

The GCF defines "Ecosystem" as "a dynamic complex of plant, animal and microorganism communities and their non-living environment interacting as a functional unit".
"Ecosystem services" are defined as "the benefits to humans that arise from the interactions between components of an ecosystem, which include provisioning (e.g., food), regulating (e.g., flood control), cultural (e.g., recreation) and supporting services (e.g., nutrient cycling)."

Links to climate change:

- **Temperature rise and changes** in precipitation patterns may increase the frequency and intensity of natural weather-related events.
- **Sea level rise** may cause the coastal areas to become flooded, which can also negatively affect mangroves and wetlands.
- **Exposure to natural hazards** have negative effects on ecosystems and ecosystem services.

Approach:

The following nine categories identified within ecosystems and ecosystem services for GCF projects:

- Marine (Sea deeper than 50 metres)
- Coastal (Areas between 50 metres below mean sea level and 50 metres above the high tide level or extending landward to a distance 100 kilometres from shore)
- Inland water (Rivers, lakes, floodplains, reservoirs and wetlands)
- Forest (*There is a separate SAP guideline for forest and land use)
- Dryland (Lands where annual precipitation is less than two thirds of potential evaporation)
- Island
- Mountain
- Polar
- Cultivated (*There is a separate SAP guideline for forest and land use)

Paradigm shift pathways:

- One of the barriers for paradigm shift pathways in ecosystems and ecosystem services is the lack of sustainability of the investments, which are often deprioritized in favor of mainstream sectors of economic development. Therefore, a paradigm shift for the sector would be indicated by the support for and development of a natural capital accounting (NCA) system. NCA plays an integral role in policy development and implementation for natural resources management
- From the perspective of developing a SAP project, a paradigm shift would include:
  - Explicit quantification, valuation and attribution of ecosystem services in the project;
  - Capacity-building to incorporate NCA into national planning.

Chapter 4 Using Scientific Evidence Effectively

Effective engagement with the GCF relies on strategically applying scientific evidence in project proposals and effectively including the essence in the Concept Note. This chapter explores why scientific evidence is crucial for GCF funding, the required data types, and the tools and resources available to facilitate successful applications.

1 Why Scientific Evidence Matters for the GCF

The GCF aims at the implementation of evidence-based, high-impact, and cost-effective climate solutions. The GCF is mandated to facilitate a "paradigm shift" towards low-carbon, climate-resilient development pathways in developing countries.[7,8] This core objective dictates that CNs and Funding Proposals must demonstrate a clear and compelling "climate rationale" and the potential for transformative impact beyond a one-off investment.[8,9,10] In the GCF project review process, the clarity and scientific validity of the climate rationale greatly influence whether or not funding is provided. The GCF requirements and application increasingly demand scientifically robust justifications such as baseline data, modeled projections, and spatial mapping. Specific mechanisms, such as geospatial data, climate projection tools, and structured vulnerability indicators, are now standard in successful GCF CNs.[11,11,12] For example, an evaluability review assesses the use of evidence in GCF Concept Notes and proposals, demonstrating that these increasingly integrate quantitative data from academic papers, international agency data portals, or national repositories and/or databases to meet GCF investment criteria and support transformative logic.[13] If the scientific evidence is insufficient, it is difficult to determine whether the issue is caused by climate change, and the concept of climate additionality becomes weak.

How data is presented is also important. Figure 4.1 and 4.2 illustrate both good and poor examples of presenting data in a clear and concise manner.

7 J. Puri et al. (2022) Assessing the likelihood for transformational change at the Green Climate Fund: An analysis using self-reported project data, Climate Risk Management, 35.

8 Schulz, K. et al. (2021) Leveraging blockchain technology for innovative climate finance under the Green Climate Fund, Earth System Governance, 7.

9 Barnes, J. (2025) The Expert Epistemology of Climate Finance: Re-Visiting the Depoliticisation Critique, Antipode. https://doi.org/10.1111/anti.70002

10 Jonas Bertilsson (2023) Managing vulnerability in the Green Climate Fund, Climate and Development, 15:4, 304-311, DOI: 10.1080/17565529.2022.2081118

11 Torterat, Laurene, and Galyna Uvarova (2022). Introducing geospatial footprint of the GCF's portfolio: Project location geocoding methodology. Working paper No. 6 (September). Songdo, South Korea: Independent Evaluation Unit, Green Climate Fund.

12 Rosenstock, T.S.; Joshi, N.; Steward, P.R.; Kristal, J. (2024) Data utilized in African Green Climate Fund Agricultural Adaptation Projects and its availability in selected Decision Support Tools (DSTs). https://doi.org/10.7910/DVN/PY3YOZ

13 Fiala, Nathan, and others (2022). Evaluability assessment of the Green Climate Fund Funding Proposals. IEU learning paper (December). Songdo, South Korea: Independent Evaluation Unit, Green Climate Fund.

GOOD EXAMPLES:
Persuasive use of scientific data

Project Title: Enhancing Drought Resilience in Smallholder Farming Communities in Northern Kenya

Recent climate model projections (CMIP6, RCP8.5) indicate that the frequency of severe droughts in Northern Kenya is expected to increase by 40% by 2050 (IPCC, 2021).

Baseline data from the Kenya Meteorological Department (1985-2020) show a 17% decline in average annual rainfall and a doubling of dry spells lasting more than 20 days.

Spatial vulnerability mapping (see Annex 2) using NDVI and soil moisture indices identifies Turkana and Marsabit counties as high-risk zones.

Without adaptation measures, crop failure rates in these counties are projected to increase by 22-43% by 2040, arising even 600,800 people (FAO, 2024).

- Uses authoritative sources (IPCC, FAO, WRI, etc.)
- Includes historical baseline and future projection data

POOR EXAMPLES:
Not persuasive use of scientific data

Project Title: Improving Farming Practices in the Nyanza Region of Kenya

Due to climate change, farmers are experiencing more droughts. The weather has become more unpredictable, and yields have gone down.

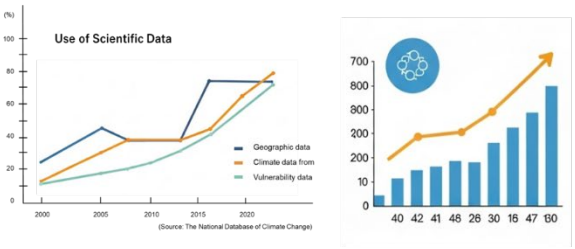
Many communities have said the rain lesses than it use used to be, and traditional knowledge suggests droughts are worse now.

This project will help communities cope by introducing improved agricultural techniques.

- No use of authoritative data or projections
- No references or scientific sources cited
- No mention of spatial analysis or baseline conditions
- Interventions are not clearly linked to any scientific evidence

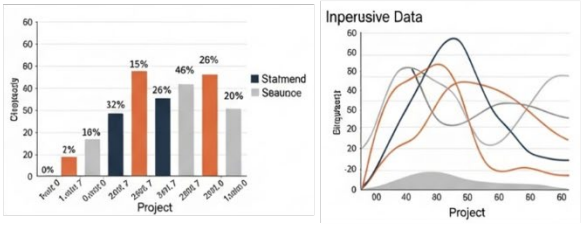
Figure 4.1 Good and poor examples of the persuasive use of scientific data

GOOD EXAMPLES



- Line graphs (emphasizing changes in proportions) and bar graphs (emphasizing quantities) are selected according to the purpose.
- Color scheme that makes essential points easy to understand.
- Easy to understand the meaning and target items at a glance.

POOR EXAMPLES



- The legend and the graph do not match.
- The lines, shapes, and colors in the figures and tables are ambiguous.
- Difficult to understand what the important points are.

Figure 4.2 Good and poor examples of presenting data in figures

1.1 Common use of climate rationale and climate impact in Concept Notes and Funding Proposals

Below are the six points that are considered when deciding if a proposed project will receive financial support. The six evaluation criteria and scientific evidence are also illustrated in Figure 4.3.

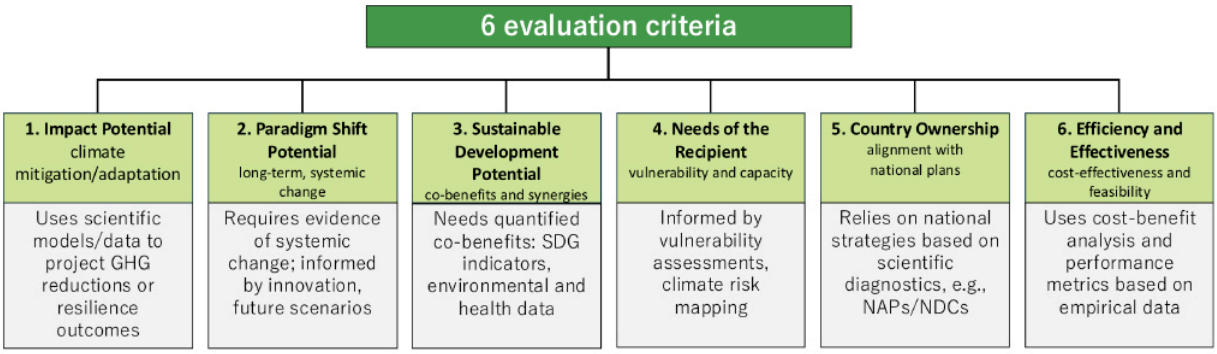


Figure 4.3 Six evaluation criteria and scientific evidence

(1) Impact potential: Determines whether the proposed project has the potential to contribute to achieving the GCF's objectives and result areas.

(2) Paradigm shift potential: Determines whether the activity will have an impact beyond the specific project or investment.

(3) Sustainable development potential: Determines whether there are broader benefits and priorities.

(4) Needs of the recipient: Determines whether the recipient country and its beneficiaries have vulnerabilities and financial needs.

(5) Country ownership: Determines whether the beneficiary country has ownership and the capacity to implement the project.

(6) Efficiency and effectiveness: Determines whether the target project is economically and financially sound.

1.2 Building evidence-based climate legitimacy

Utilizing scientific data helps to clearly demonstrate the necessity and effectiveness of projects focused on climate change. It is possible to quantitatively grasp the climatic impacts on the target area using observational data such as the frequency of past disasters induced by extreme weather, rising temperature trends, and changes in precipitation patterns. This makes it possible to objectively demonstrate vulnerability to climate change. A strong climate rationale quantifies the project's impact in terms of climate hazards, risks, and vulnerabilities, justifying resource allocation and links to anticipated results. Using scientific knowledge, such as analyses based on future climate projection models such as Representative Concentration Pathways (RCPs) and Shared Socioeconomic Pathways (SSPs) as reference helps demonstrate the scale and scope of impacts from potential future risks, and

provides evidence supporting the appropriateness and urgency of required interventions.

In addition, by setting a baseline based on scientific data, it is possible to clearly define the indicators (e.g., KPIs, tracking indicators) that will be used to measure project outcomes. This makes it easier to visualize and evaluate the results during and after the project is implemented, enabling a convincing presentation of its effects. Adaptation projects also require the provision of comprehensive information, including the identification of climate change issues, proposals for countermeasures, consistency with national policies, and monitoring and evaluation.

1.3 Ensuring international consistency

Project proposals submitted to the GCF are expected to be consistent with internationally recognized scientific knowledge and policy documents. For this reason, it is crucial to refer to documents such as IPCC assessment reports, national greenhouse gas inventories, and NAPs. If the proposal is consistent with these documents, the project's recognition of the issues and climate justification, as well as the validity and reliability of the proposal, can be demonstrated to the international scientific community and funders. It also makes it easier to present the key elements of the proposal concisely in the Concept Note.

In particular, the GCF is a fund established in the context of the UNFCCC, and the review process evaluates consistency within the international context, such as IPCC scientific knowledge and national reports by the UNFCCC member states. Therefore, the use of scientific evidence and inclusion of international contexts from the early stages of project design will increase the probability of adoption.

1.4 Successful examples from GCF Funding Proposals:

This section examines successful Funding Proposals and how scientific evidence was included effectively. The Philippines' case is presented in Box 1 and Tuvalu's case is presented in Box 2.

Box 1. Successful examples of using scientific evidence in a GCF Funding Proposal from the Philippines

Philippines (FP201): The project "Adapting Philippine Agriculture to Climate Change (APA)" inEngine, Landsat, MODIS, Sentinel) are used for data collection and planning. All chosen technologies undergo rigorous cost/benefit analysis, with economic analyses consistently showing positive incremental Economic Net Present Values. FAO's RIMA and TAPE tools for M&E, alongside baseline, mid-term, and end-line surveys, are used to track socio-economic and sustainable development benefits.

<u>Climate legitimacy based on scientific evidence</u>
The project aims to bolster agricultural resilience against increasing temperatures and altered rainfall, and leverages the Department of Agriculture's AMIA programme, which established "AMIA villages" to scale climate action. The project integrates agrometeorological data networks, enhancing PAGASA's weather stations for localized advisories. The project incorporates viable climate-resilient agriculture (CRA) options, including Indigenous food systems, which have been identified through stakeholder consultations. Advanced FAO tools such as big data analysis, CRVA,

PyAEZ, and remote sensing (EarthMap, Google Earth Engine, Landsat, MODIS, Sentinel) are used for data collection and planning. All chosen technologies undergo rigorous cost/benefit analysis, with economic analyses consistently showing positive incremental Economic Net Present Values. FAO's RIMA and TAPE tools for M&E, alongside baseline, mid-term, and end-line surveys, are used to track socio-economic and sustainable development benefits.

International consistency

This project is strategically designed to align with the Philippines' national policies and strategies, including the NDC 2021, the National Climate Change Action Plan (NCCAP), and the National Agriculture and Fisheries Modernization and Industrialization Plan (NAFMIP). It fosters synergy with other GCF initiatives in the Philippines while harmonizing M&E systems for comprehensive impact measurement. The project reinforces PAGASA's Modernization Programme and promotes Anticipatory Action (AA) principles, a regional FAO-led approach using early warnings to reduce disaster losses. It also embraces a robust gender-responsive framework and an Environmental and Social Management Framework (ESMF), upholding GCF and FAO standards, with a commitment to zero tolerance for Sexual Exploitation, Abuse, and Harassment (SEAH) and Gender-Based Violence (GBV)[14] development. It also includes support for early response and recovery efforts after natural disasters, enhancing overall vulnerability reduction[15].

14 Philippines, Funding Proposal, FP201: Adapting Philippine Agriculture to Climate Change (APA).

15 Tuvalu, UNDP, Funding Proposal, FP015: Tuvalu Coastal Adaptation Project.

1.5 Using climate data effectively throughout concept note sections

To effectively embed scientific evidence, GCF Concept Notes and Funding Proposals require detailed information on climate vulnerabilities, GHG emissions profiles, and mitigation or adaptation needs.[16] This means explicitly demonstrating how a proposed intervention addresses specific climate-induced challenges, differentiating it from general development efforts. Figure 4.4 shows the general flow of creating a Concept Note/proposal.

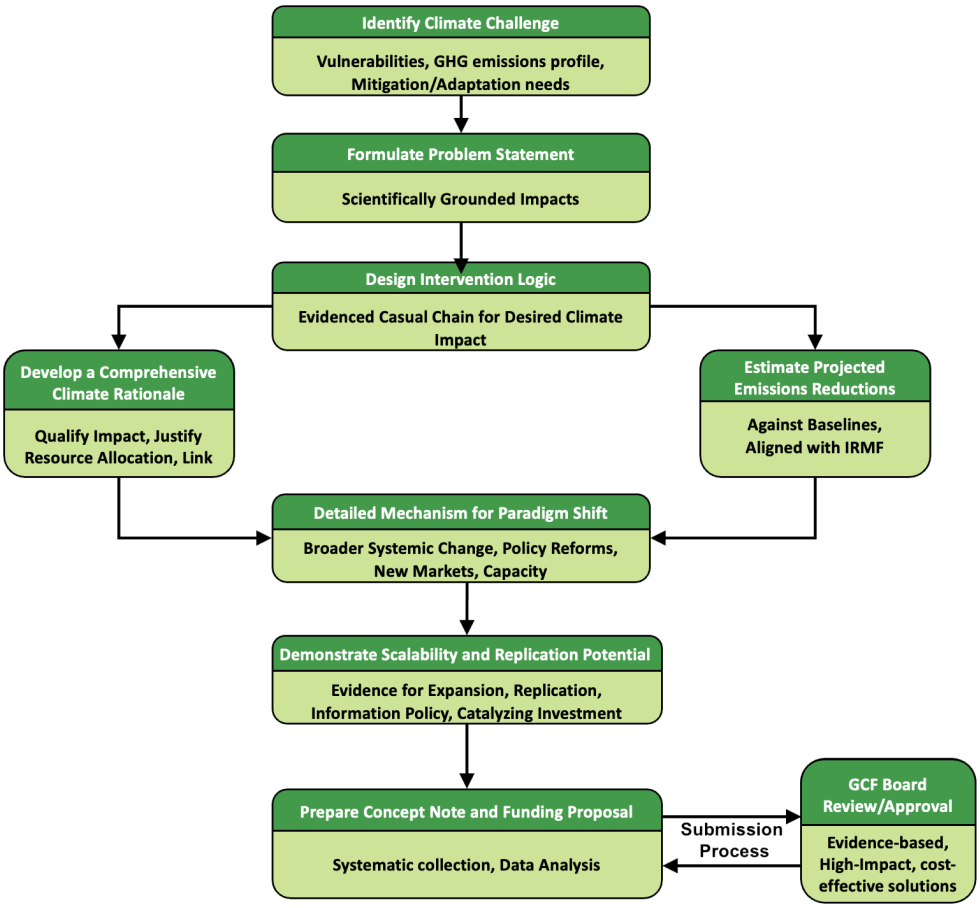


Figure 4.4 General flow of use of scientific evidence in creating a Concept Note/Funding Proposal

For Section C.1 (Project/Programme Description – or similar introductory sections):

- Contextualize with observed and projected climate impacts. Provide concrete, geographically specific data. For instance, cite historical temperature trends, changes in rainfall patterns, or increases in extreme events like droughts, floods, or sea-level rise in the target region, as well as other potential hazards. Referencing national climate risk profiles or assessments can add weight to your proposal.

16 Kamenova, M. (2019). Climate finance for the most vulnerable: The role of vulnerability in Green Climate Fund (GCF) financing for adaptation. *Environmental Policy and Governance*, 29(2), 123–137. https://doi.org/10.1002/eet.1845

For Section C.2 (Theory of Change/Intervention Logic – or similar sections on project design):

- Problem Statement (Scientifically Grounded). Frame the problem directly in terms of scientific climate change impacts. For example, instead of "low agricultural productivity," state that increased temperatures and rainfall variability lead to climate-induced disasters, greater ecosystem degradation, and reduced agricultural production.
- Intervention Logic (Evidenced Causal Chain). Explain the causal links between proposed activities, outputs, outcomes, and the desired climate impact. Use scientific understanding to justify why specific interventions (e.g., climate-resilient agriculture, early warning systems) will effectively reduce vulnerability or emissions.
- Mechanism for Paradigm Shift: Detail how the project will lead to broader, systemic change, not just isolated benefits. This could involve supporting policy reforms, fostering new markets for climate-smart technologies, or strengthening institutional capacities based on best practices.
- Scalability and Replication Potential: Present evidence for how the project's scientific basis and innovative approaches can be expanded or replicated. This might include demonstrating how lessons learned can inform national policies, catalyze private sector investment, or be adapted to other vulnerable regions.
- Knowledge Management and Learning: Describe plans for systematically collecting, analyzing, and disseminating data and lessons learned from the project to contribute to broader climate action and inform future policy and practice.

Box 2. Successful examples of using scientific evidence in GCF Funding Proposal from Tuvalu

Tuvalu (FP015): The project in Tuvalu effectively uses scientific data to justify its coastal adaptation interventions and ensures international consistency through established practices and partnerships.

Climate legitimacy based on scientific evidence: The project builds on studies by JICA, UNDP, and the World Bank, and uses pre-feasibility assessments to evaluate coastal protection options for Tuvalu, a nation highly vulnerable to cyclones and sea-level rise. Drawing on a JICA pilot project in Fongafale (2012–2017), the project incorporates lessons on beach nourishment for erosion control. National capacity is strengthened through training in real-time monitoring techniques, involving land clerks, youth, and women to collect data on erosion and inundation. The project uses island-level assessments and hydrodynamic modeling to guide design and ensure environmental safety. A technical review was conducted to assess the effectiveness of the coastal protection measures in the final year.

International consistency: The project builds on UNDP-supported initiatives like the NAPA project, enhancing evidence-based planning and natural resource management in Tuvalu's outer islands. It integrates climate adaptation and coastal resource concerns into Island Strategic Plans (ISPs), promoting participatory, gender-responsive, and pro-poor local development. Aligned with national strategies such as Te Kakeega II, Te Kaniva, and the NSAP, the project follows UNDP's Direct Implementation Modality (DIM) and IPSAS

standards. It incorporates global best practices for coastal protection and ensures gender inclusion by involving women in consultations and ISP monitoring via participatory video tools. M&E follows UNDP's established standards.[17]

- Link impacts to socio-economic vulnerabilities. Describe how these climate changes directly affect human systems. For example, explain how erratic rainfall impacts agricultural productivity and food security, or how sea-level rise threatens coastal livelihoods and infrastructure. For Small Island Developing States (SIDS), it is critical to articulate how climate impacts are inextricably linked to all economic, social, and environmental systems.
- Quantify Baseline Conditions. For adaptation projects, detail the existing state of vulnerability, including data on affected populations, degraded ecosystems, or vulnerable infrastructure. This will provide a clear starting point for measuring impact. For the mitigation project, clearly state current GHG emission levels or baselines.
- Demonstrate Additionality. Articulate how the proposed project goes beyond typical development interventions. Use evidence to show the additional costs or measures required to address climate change, often by distinguishing climate-related impacts from pre-existing development challenges using incremental cost methodologies.

17 Tuvalu, UNDP, Funding Proposal, FP015: Tuvalu Coastal Adaptation Project.

2 Types of Scientific Data Required

A practical GCF Concept Note necessitates diverse scientific data to substantiate its claims and demonstrate impact. Below are the various types of scientific data required in the GCF Concept Notes and proposals.

Climate Vulnerability and Risk Assessments:

- Historical Climate Data: This includes localized data on temperature trends, precipitation patterns (e.g., standardized precipitation index, dry spell trends), and the frequency and intensity of extreme weather events like droughts, floods, tropical cyclones, and storms.[18]
- Climate Projections: Future climate scenarios, such as projected temperature increases, rainfall changes, or sea-level rise, are crucial for demonstrating future risks.[19]
- Vulnerability Components: Data broken down into exposure (geographic location, direct climate impact), sensitivity (population density, ecosystem degradation, poverty, food insecurity), and adaptive capacity (literacy rates, access to markets, institutional strength, and technological access).
- Sector-Specific Data: For agriculture, this might include data on crop yields, soil conditions, water availability, and agro-ecological parameters.
- Qualitative Data: While quantitative data is prioritized, qualitative descriptions of vulnerability are accepted, especially when direct quantitative data is scarce. The GCF encourages considering alternative systems of knowledge, including traditional knowledge.

Socio-economic Data:

- Population Data: Demographic information, including breakdowns by gender, age (youth), and Indigenous status, highlighting vulnerable groups.
- Economic Indicators: Data on income levels, poverty rates, and broader economic metrics like GDP, which can inform «ability to pay» considerations for funding.
- Livelihood Information: Details on existing livelihoods and how they are impacted by climate change.

Cost-Benefit Analysis Data:

- Financial and Economic Viability: Data supporting the financial sustainability and economic returns of proposed interventions, including a cost-benefit analysis (CBA, discussed in a separate chapter).
- Carbon Co-benefits: Monetized values of associated carbon benefits.
- Cost-effectiveness: Metrics such as marginal abatement cost for mitigation projects or cost per beneficiary for adaptation projects, demonstrating efficient use of funds.
- Concessionality Justification: Data that clearly justifies the need for GCF grants or concessional loans, particularly for public goods, technical assistance, or de-risking private investments.

18 See the successful cases of Malawi, the Philippines, Multiple, and Tuvalu.

19 E.g., the successful case of the Philippines.

Table 4.1 Climate data types for GCF Concept Notes/proposals

Data Type	Description & Usage	Recommended Sources
Climate Impact Data	Quantified impacts of climate hazards, risks, and vulnerabilities; includes observed and projected climate change trends.	IPCC reports, national reports, satellite data, ND-GAIN Index, Climate Impact Lab, Aqueduct (WRI), Climate Central, GWIS (primary portal)(ArcGIS dataset)
Vulnerability Data	Components of vulnerability: exposure, sensitivity, and adaptive capacity, as defined by IPCC, are required to assess the "climate rationale" and target assistance.	IPCC reports, national assessments, and traditional knowledge systems (where appropriate)
Socio-economic Data	Information on population, GDP indicators, access to goods and services, income levels, and other relevant demographic and economic characteristics of target populations.	National statistics, World Bank Open Data, project-specific surveys
Financial Data	Project costs, co-financing, leveraged funds, and financial viability assessments. Includes cost-effectiveness metrics (e.g., marginal abatement cost for mitigation, cost per beneficiary for adaptation) and justification for concessionality.	Project financial models, economic/financial analyses, and co-financing commitment letters
Policy & Planning Data	Alignment with national priorities, Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), and other relevant sectoral policies and strategies.	National policy documents, UNFCCC NDC Registry, GCF Country Programmes
Lessons Learned & Best Practices	Documented insights from previous projects, pilot initiatives, and regional/international experiences to inform design, scalability, and replication.	GCF project evaluations, IEU learning papers, other climate funds' reports
Technology Data	Information on climate-smart technologies, energy efficiency, renewable energy, early warning systems, and other innovative solutions relevant to adaptation and mitigation.	Technology Needs Assessments (TNAs), relevant research institutions, project feasibility studies
GHG Emissions Data (Mitigation)	Projected emissions reductions (tCO_2e) against credible baselines (Scope 1, 2, and if applicable, Scope 3); adherence to recognized measurement methodologies.	GHG Protocol, Verified Carbon Standard, Gold Standard, IPCC Guidelines (2006, 2019 Refinement).

Table 4.2 Data type and usage scenarios in GCF projects

Data Type	Scenario Usage	Adaptation Scenario Usage	Shared/Cross-cutting Usage
Vulnerability Data	N/A	· Identifying problems based on climate exposure, sensitivity, and adaptive capacity · Assessing risks and prioritizing interventions (e.g., for coastal protection, climate-resilient agriculture, settlements) · Targeting beneficiaries, especially the most vulnerable people/ communities (e.g., LDCs, SIDS, rural populations)	· Overall project rationale and country context · Informing the "climate rationale" for project proposals · Justifying the need for GCF grants/concessional loans · Evaluating project performance against investment criteria
Socio-economic Data	Assessing economic viability and potential for job creation from low-carbon investments	· Estimating direct and indirect beneficiaries (e.g., people, households, hectares impacted), with gender disaggregation · Analyzing livelihood impacts and food security · Determining cost per beneficiary for adaptation projects	· Assessing overall project impacts and development co-benefits · Informing country-level socio-economic context for project design
Cost/Financial Data	· Analyzing marginal abatement costs · Assessing financial viability for mitigation investments (e.g., energy projects) · Evaluating co-financing and leveraging private sector funds for low-emission projects.	· Analyzing cost per beneficiary for adaptation measures · Justifying concessionality of GCF grants or loans for public goods, technical assistance, or de-risking · Assessing financial viability for adaptation investments	· Determining the overall project budget and capital structure · Demonstrating project efficiency and effectiveness · Informing resource allocation decisions (e.g., 50:50 balance between mitigation and adaptation

Data Type	Scenario Usage	Adaptation Scenario Usage	Shared/Cross-cutting Usage
Policy & Planning Data	· Aligning with NDCs and national strategies for low-carbon development · Informing policy changes to support mitigation efforts (e.g., green banking frameworks, carbon taxes)	· Aligning with National Adaptation Plans (NAPs) and Disaster Risk Reduction and Management (DRRM) systems · Mainstreaming adaptation into local government plans and budgets · Supporting policy reforms that foster climate-resilient development6.	· Ensuring country ownership of projects · Contributing to an "enabling environment" for transformational change · Guiding resource allocation and strategic planning processes for the GCF
Technology Data	· Introducing and scaling low-emission technologies (e.g., energy efficiency, renewable energy) · Supporting carbon capture and storage	· Implementing climate-resilient agricultural practices (e.g., agroforestry, EbA) · Establishing early warning systems · Using biodiversity and ecosystem services for adaptation · Coastal protection infrastructure	· Fostering innovation, technology transfer, or development · Strengthening institutional capacities for technology adoption · Leveraging existing technical competencies and developing new ones

Data Type	Scenario Usage	Adaptation Scenario Usage	Shared/Cross-cutting Usage
Impact Measurement	• Quantifying tCO_2e reduced/avoided (e.g., -2,750,323 tCO_2eq over 20 years in Malawi; 30.5 M tCO_2e over 30 years for GAIA)	• Identifying the number of people directly and indirectly impacted (e.g., 574,855 people in Malawi; 6.49 million direct beneficiaries for GAIA) • Identifying hectares under climate-resilient management (e.g., 267,500 ha in Malawi) • Understanding improvements in health, well-being, food, and water security	• Assessing overall "paradigm shift potential" through scale, replicability, and sustainability dimensions • Monitoring GCF Impact Level and Outcome Level indicators (IRMF) • Enabling ex-post evaluations and learning for future projects
GHG Emissions Data	• Estimating projected emissions reductions (tCO_2e) against credible baselines (Scopes 1, 2, 3) for the duration and lifecycle of the project • Adhering to GHG accounting standards (GHG Protocol, VCS, Gold Standard, IPCC Guidelines) • Informing financing technical changes in renewable energy or energy efficiency scenarios (e.g., GCF-EE, GCF-RW, GCF-MIX)	• Assessing carbon co-benefits	• Monitoring IRMF core indicators for "GHG emissions reduced, avoided or removed/ sequestered" • Assessing and reporting on the overall project impact • Informing national policy (e.g., REDD+ mechanisms for CO_2 emissions reduction from land use)

3 Tools and Resources for Scientific Data

This section introduces leading platforms and tools for analysis. Obtaining high-quality data sources and leveraging available tools and resources are essential for developing a scientifically robust and compelling GCF Concept Note.

ClimoKiT: Scientific data & tools database from AP-PLAT (Asia-Pacific Climate Change Adaptation Information Platform)

AP-PLAT is a platform developed by the National Institute for Environmental Studies (NIES) in Japan, designed to support climate change adaptation across the Asia-Pacific region. It provides various resources, including risk assessment tools, adaptation planning guidance, scientific data, and capacity-building materials. The platform facilitates evidence-based policymaking and regional cooperation by offering accessible information to governments, researchers, and practitioners. A complete list of useful tools and resources for scientific data from ClimoKit and other sources is available in the Annex of this guide. Two tools included in ClimoKit (ClimoCast and Climate Impact Viewer) enable the quantitative and visual assessment of future temperature increases and the impacts of climate change on industries. The general flow from the AP-PLAT tool to data and the CN for GCF is shown in Figure 4.5. Useful tools and resources for scientific data (by sector and hazard) are listed in Table 4.3.

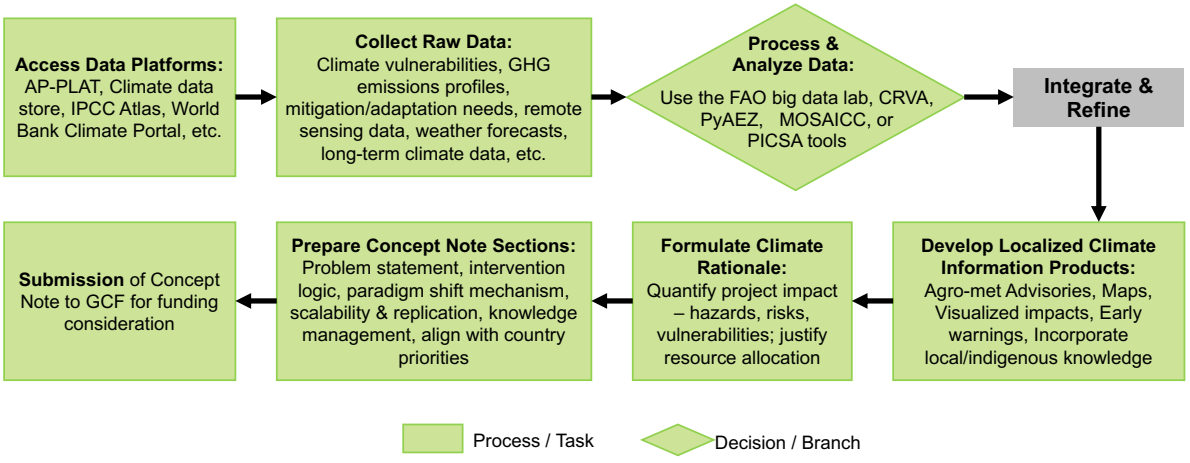


Figure 4.5 Flow from the AP-PLAT tool and data to the development of the GCF Concept Note

Table 4.3 List of useful tools and resources for scientific data (by sector, hazard)

Tool name	Sector	Hazard	Description
ClimoCast	Climate information and early warning systems	Higher temperatures; changes in precipitation; floods; droughts	ClimoCast is a climate projection tool displaying future climate scenarios up to 2100, using various models and emission pathways. It covers all countries, allows scenario and model comparison, and offers sub-national data downloads.

Tool name	Sector	Hazard	Description
Climate Impact Viewer	All	All	The Climate Impact Viewer displays climate change impact assessments derived from the Integrated Climate Assessment - Risks, Uncertainties, and Society (ICA-RUS) and Comprehensive Research on the Development of Global Climate Change Risk Management Strategies (S-10 Strategic Research Project). Future impacts are projected using process-based models across multiple sectors.
Asia-Pacific Risk and Resilience Portal 2.0	Health and wellbeing; cities, buildings and urban systems	Floods, droughts, higher temperatures, storms	The Asia-Pacific Risk and Resilience Portal 2.0 helps policymakers understand and mitigate cascading risks from disasters, climate change, and health. The portal provides analytics and tools to strengthen regional cooperation and achieve the SDGs.
Data Platform for the Small Island Developing States (UNDP)	All	Climate vulnerability and development impacts	This UNDP Data Platform supports the development of Small Island Developing States (SIDS) through climate action, blue economy, and digital transformation. The platform includes country profiles, development indicators, a Multidimensional Vulnerability Index (MVI), and geospatial data.
Climate Impact Explorer	Agriculture and food security, health and well-being, forests and land use, water security	Floods, droughts, storms, higher temperatures, changing precipitation	The Climate Impact Explorer maps and graphs projected future climate impacts, such as floods and wildfires, at different warming levels and for various emission scenarios. The platform provides country-level projections for over 30 climate impact indicators.
EMDAT - The International Disaster Database	Agriculture and food security; Cities, buildings and urban systems; Ecosystems and ecosystem services; Forests and land use; Health and wellbeing; Water security	Floods, droughts, higher temperatures, storms	EMDAT is a global database containing core data on over 22,000 mass disasters since 1900. It supports humanitarian action, disaster preparedness, and vulnerability assessment.

Tool name	Sector	Hazard	Description
Aqueduct Water Risk Atlas	Water security; Health and wellbeing	Floods; Droughts; Changing precipitation (decreased and changing timing)	Developed by the World Resources Institute, the Aqueduct Water Risk Atlas is a global water-risk mapping framework that uses baseline indicators and future projections to help governments, investors, and businesses assess and plan for water-related risks
Adaptwell	Health and wellbeing	Vector/Water-borne diseases	Adaptwell is a country-based simulation tool focused on climate change-derived waterborne diseases. It provides results to inform decisions on adaptations related to safe water, sanitation, hygiene, and nutrition.
FloodS	Cities, buildings and urban systems; Forests and land use; Water security	Floods	FloodS is a service providing flood maps and simulation capabilities ("VIEW" and "SIMULATE" functions). The service utilizes high-resolution terrain data and the "DioVISTA Flood" simulator, sponsored by the Ministry of the Environment of Japan.
IPCC AR6 Sea Level Projection Tool	Water security	Sea level rise; Coastal erosion	The IPCC AR6 Sea Level Projection Tool visualizes and allows users to download sea level rise data from the IPCC 6th Assessment Report. The tool provides global and regional median projections under various emission scenarios.
DisasterAWARE Pro	Climate information and early warning systems	Multiple hazards (floods, droughts, storms, etc.)	DisasterAWARE Pro is a mapping and disaster monitoring application that offers comprehensive tools for situational awareness. It features map controls, display options, and categories for hazards, layers, notifications, legends, and more, aiding in disaster management. User registration is required to use the data.
H08 Water Risk Tool / Water Security Compass	Water security	Floods; Droughts	The H08 Water Risk Tool / Water Security Compass is a global hydrological model calculating soil moisture and displaying water risk maps. It helps users understand water sustainability under climate change by showing water indicator fluctuations for specific locations.

Chapter 5 Project Design and Planning

1 Using Problem Trees and Objective Trees to Analyze the Cause of a Problem

1.1 Introduction

Problem Tree analysis and Objective Tree analysis are essential tools in the development of Green Climate Fund concept notes because they provide a structured way to understand, define, and articulate the project's context, logic and rationale. These tools are a part of the Logical Framework Approach (LFA) and are particularly valuable in climate finance and development projects where clarity and alignment with funding criteria are crucial.

The use of the Problem Tree and Objective Tree for analysis clarifies complex issues by showing interconnections between problems, helps prioritize interventions by targeting root causes, builds consensus among stakeholders on the nature of the problem, and lays the groundwork for the Theory of Change (ToC). The use of the Problem Tree and Objective Tree creates a solid foundation for drafting a high-quality GCF Concept Note that meets GCF's rigorous requirements for clarity, impact and strategic fit.

Table 5.1 Summary of Problem Tree and Objective Tree tools

Tool	Main Role	Relevance to GCF Concept Note
Problem Tree	Diagnoses the core problem and its causes/ effects.	Ensures the project is grounded in a real climate relevant issue linked to sectoral pathways[20] that contribute to NDCs and the GCF Strategic Plan 2024 – 2027.[21]
Objective Tree	Converts problems into objectives and solutions.	Helps define the Theory of Change (ToC) and build a logical fundable climate project that contributes to NDCs and the GCF Strategic Plan 2024 – 2027.

20 GCF. (2022). Sectoral Guides Summaries. *Sectoral Guide Series*. Yeonsu: Green Climate Fund.

21 GCF. (2023). Strategic Plan for the Green Climate Fund 2024 – 2027. *Decisions of the Board – thirty sixth meeting of the board, 10 – 13 July 2023*. Yeonsu: Green Climate Fund.

1.2 Problem Tree Analysis

The Problem Tree is a visual tool that helps identify and analyze the core problem the project aims to address along with its causes and effects. Problem Tree Analysis contributes to project planning by:

- Clarifying the root problem: The tool helps stakeholders and project developers understand the central climate related issue that the project will address.
- Identifying cause-effect relationships: The tool helps break down the problem into direct and indirect causes and their effects, enabling more targeted and effective interventions.
- Informing the project logic: The tool helps to provide a foundation for defining the Theory of Change and ensuring the project has a clear logical structure linked to the GCF's sectoral paradigm shifting pathways (PSP), which will contribute to Nationally Determined Contributions (NDCs).
- Aligning with GCF investment criteria: GCF prioritizes projects that clearly address climate vulnerabilities and emission reduction. A well-developed Problem Tree supports the alignment of ground based realities with the GCF Strategic Plan 2024 – 2027.

Getting Started and Project Idea Validation

As a project proponent, you are faced with multiple problems. In urban areas, for example, the local population might complain about (i) drainage and flash floods; (ii) traffic congestion; (iii) water supplies; (iv) air pollution; (v) noise; (vi) solid waste disposal; (vii) education facilities, and other problems. How do you identify which problem(s) may be suitable for GCF funding?

When validating the project idea, source and eligibility are important factors. A project idea selected by some project proponents may not even be suitable for GCF funding nor sourced from an official government climate plan.

Therefore, it is of paramount importance to align the Problem Tree early with the GCF sectoral paradigm shifting pathways (PSP) and identify the contributions that the project can make towards the submitted Nationally Determined Contributions (NDCs) and the GCF Strategic Plan 2024 – 2027.

Problem Tree Analysis

Problem Tree Analysis involves creating a diagram that looks like a tree. The trunk represents the core problem (the main issue to be addressed). The roots represent the causes (factors contributing to the problem). The branches represent the effects (consequences or results of the problem). After a project idea has been validated, it is important to start by defining what problems need to be solved using a Problem Tree Analysis. Figure 5.1 illustrates how to start analyzing an issue using the Problem Tree. One way to start is to identify which aspects of the problem may be related to climate change, an area that would be suitable for climate finance to address under the GCF funding categories.

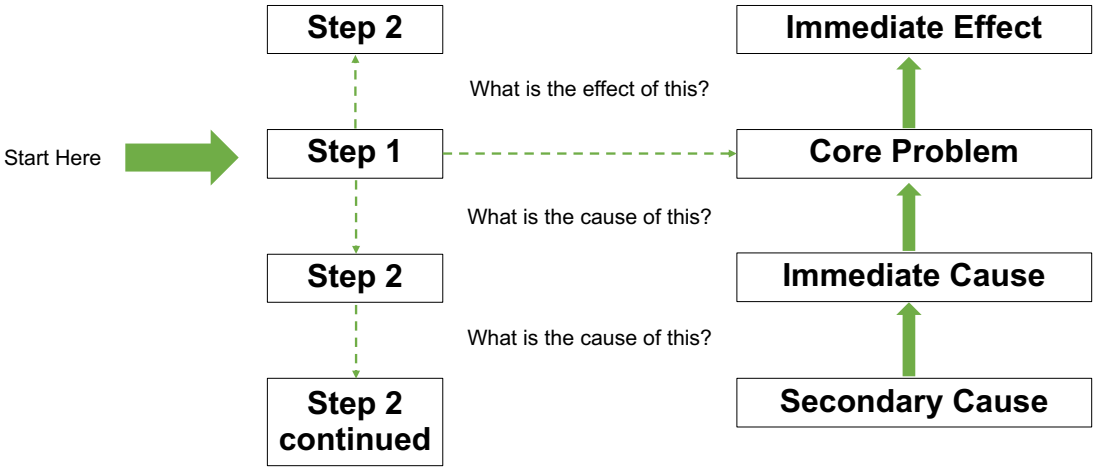


Figure 5.1 Problem Tree Analysis

Project preparation is always best done as a team effort. Brainstorm the main problems facing your project area (a city, district, province or a watershed). No problem should be rejected. List them all on a sheet. Then discuss the following key elements:

- Which of these problems are directly caused by climate change?
- Which of the problems have the greatest impact on the area's population, livelihood and economy?
- How do the identified problems and the GCF's sectoral paradigm shift pathways align?[22]
- How can these problems and solutions contribute to Nationally Determined Contributions (NDCs)?
- How can these problems and solutions contribute to the GCF Strategic Plan 2024 – 2027.[23]

Problem Tree Analysis Format

The core problem can be further refined by analyzing the identified issues in more detail, while debating the key elements connected to the problem. To identify the core problem, clearly define the main issue affecting the target group or environment. List the causes and brainstorm what is causing the core problem and to arrange them hierarchically (direct and indirect causes). Then proceed with listing the effects to identify the impacts resulting from the core problem. With all core problems, effects, and causes identified, structure the tree by placing the core problem in the center, causes below it, and effects above it. It is better to do this in a discussion format so that the problems, causes, and effects can be validated with stakeholders to ensure that the problem and its relationships are accurate and agreed upon.

22 GCF. (2022). Sectoral Guides Summaries. *Sectoral Guide Series*. Yeonsu: Green Climate Fund.

23 GCF. (2023). Strategic Plan for the Green Climate Fund 2024 – 2027. *Decisions of the Board – thirty sixth meeting of the board, 10 – 13 July 2023*. Yeonsu: Green Climate Fund.

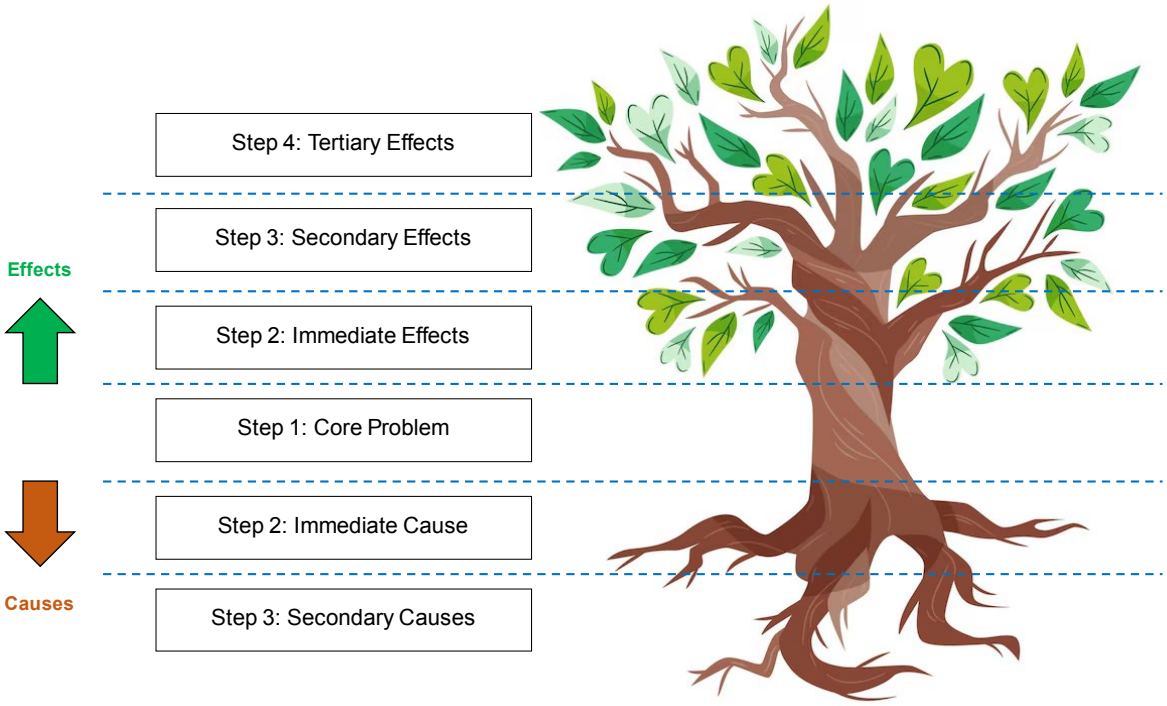


Figure 5.2 Problem Tree Analysis Format

Figure 5.2 provides an illustration of the analysis described above. In short, elements of the Problem Tree Analysis can be described as follows:

Core problem

- Central issue you want to address.
- Issue should be specific, relevant, and within the scope of the project.

Causes (roots)

- Direct and indirect reasons why the core problem exists.
- These can include institutional, social, environmental, or economic factors.

Effects (branches)

- Results or consequences that arise from the core problem.
- Results or consequences show how the problem affects people, the environment, or the economy.

1.3 Objective Tree Analysis

Linking the Problem Tree with the Objective Tree is a key step in project planning, especially when demonstrating clear logic and rationale is essential such as in frameworks like the GCF Concept Note. The Objective Tree directly derives from the Problem Tree (Figure 5.2) and represents a positive mirror image of it. The Objective Tree is built by reversing the problems in the Problem Tree into

positive, achievable objectives (solutions or desired outcomes). It shows how desired outcomes can be achieved through specific outputs and activities.

Briefly, the transformation process from Problem Tree to Objective Tree can be simplified as below:

Problem Tree (Negative)	→	**Objective Tree** (Positive)
Core Problem	→	Overall Project Objective (Impact)
Causes (Roots)	→	Project Inputs/Activities/Outputs
Effects (Branches)	→	Project Outcomes/Impacts

Employing the Objective Tree Analysis can contribute to project planning by:

- Establishing a clear Theory of Change: The tool demonstrates how project interventions (activities and outputs) lead to outcomes and impact which is crucial in the GCF Concept Note.
- Supporting logical framework development: The tool helps in forming the basis of the LogFrame including assumptions about indicators and means of verification.
- Facilitating strategic planning: The tool ensures that each component of the project contributes to solving the root problem.
- Enhancing stakeholder engagement: The tool provides a clear visual roadmap that can be easily communicated to partners, beneficiaries, and funders.
- Strengthening funding justification: The tool shows how the project contributes to GCF's sectoral paradigm shifting pathways[24] and contributes to Nationally Determined Contributions (NDCs) whilst also aligning with the GCF Strategic Plan 2024 – 2027[25].

Objective Tree Analysis

An Objective Tree Analysis starts with the Problem Tree. This is used to confirm and agree on the core problem, its causes, and effects. Next, flip the Statements. Turn each problem statement into a goal-oriented objective. For example:

– "Poor water availability" becomes "Improved water availability".
– "Lack of climate-resilient seeds" becomes "Improved access to climate-resilient seeds".

Use the goal-oriented objective to reconstruct the tree structure. Keep the structure (causes at the bottom, effects at the top), but now state how the objectives logically lead from one to the next.

Define the Project Logic. The root causes become inputs and activities. The core problem becomes the main objective or outcome, and the effects become longer-term impacts. Use these combinations to develop the Theory of Change. The Objective Tree should support the development of the Theory of Change. The result of an Objective Tree Analysis can show how the inputs lead to outputs,

24 GCF. (2022). Sectoral Guides Summaries. *Sectoral Guide Series*. Yeonsu: Green Climate Fund.

25 GCF. (2023). Strategic Plan for the Green Climate Fund 2024 – 2027. *Decisions of the Board – thirty sixth meeting of the board, 10 – 13 July 2023*. Yeonsu: Green Climate Fund.

outcomes, and impacts over time.

1.4 Templates

The following simple and example-based templates, tailored to climate-related project planning for a GCF Concept Note, will help users conceptualize the Problem Tree and Objective Tree.

Project Title: Increased resilience in smallholder farming in semi-arid regions.

Problem Tree Template

Central Problem (trunk): Increased crop failure in semi-arid regions

Causes (roots)

Direct Causes	*Indirect Causes*
Irregular rainfall	Climate change impact patterns
Poor irrigation infrastructure	Lack of investment in water technology
Low access to resilient seeds	Weak extension services

Effects (branches)

Direct Effects	*Indirect Effects*
Lower agricultural yields	Food insecurity
Loss of farmer income	Migration to urban areas
Increased reliance on aid	Rural poverty and instability

Objective Tree Template

Main Objective/Outcome (trunk): Increased resilience of smallholder farming in semi-arid regions.

Means/Solutions (roots → action and outputs)

Activities/Outputs	*Enabling Conditions*
Install climate-smart irrigation	Leverage climate finance
Train farmers on how to grow resilient crops	Partner with extension programmes
Expand access to climate data services	Upgrade local weather systems

Expected Results (branches → outcomes & impacts)

Immediate Outcomes	*Long-Term Impacts*
Improved crop yields	Enhanced food security
Higher household income	Poverty reduction
Better climate risk management	Improved climate resilience

1.5 Case study

The following case study in
Box 3 illustrates how to develop both a Problem Tree and Objective Tree, essential tools for identifying root causes, effects, and solutions for developing a GCF Concept Note. These tools are typically used in Section C.2. Proposed project / programme of the Concept Note to clarify the climate rationale and intervention logic. The climate relevance and the sectoral paradigm shifting pathways[26] that contribute to the NDCs can be incorporated here.

Box 3. Case study illustrating how to develop a Problem Tree and Objective Tree in Southern Madagascar

Project Overview
Project Title: **Building climate-resilient water access for drought-prone communities in southern Madagascar**
Country: Madagascar
Project Type: Climate Change Adaptation – Water Resources
Accredited Entity: African Development Bank (AfDB)

Problem Tree Development

Core Problem: Inadequate and climate-vulnerable water access in drought-prone rural communities.

Problem Tree Breakdown:
A. Effects (Top tier):
- High levels of food insecurity.
- Increased school dropout rates due to time needed to fetch water.
- Migration of households to urban areas.
- Heightened conflicts over water sources.

B. Core Problem (Middle tier):
- Inadequate and climate-vulnerable water access in drought-prone rural communities.

C. Root Causes (Bottom tier):
- Recurrent droughts and erratic rainfall due to climate change.
- Poor water storage and distribution infrastructure.
- Limited capacity for climate-resilient water planning.
- Insufficient investment in sustainable water governance.
- Lack of community awareness on water conservation practices.

Objective Tree Development

The Objective Tree reverses the problem tree logic, turning problems into desired outcomes and interventions.

26 GCF. (2022). Sectoral Guides Summaries. *Sectoral Guide Series*. Yeonsu: Green Climate Fund.

2 Logical Framework Development

2.1 Introduction

The Logical Framework (also called LogFrame) is a central planning, implementation, and monitoring tool used to develop a GCF Concept Note. It provides a structured, results-oriented approach to project design, ensuring clear alignment between the proposed activities and the intended climate change outcomes. The LogFrame serves as a bridge between the problem analysis and the formulation of project strategies, translating objectives into measurable outputs, outcomes, and impacts. In the context of the GCF, the LogFrame is essential for demonstrating how the project or programme contributes to GCF investment criteria, particularly in terms of impact potential, paradigm shift, and sustainable development co-benefits. It helps define the project's Theory of Change, clarify assumptions, and outline indicators for tracking progress and evaluating success.

By systematically laying out the causal relationships between project inputs, outputs, outcomes, and the overall impact, the LogFrame ensures coherence, transparency, and accountability. It also facilitates stakeholder engagement and supports adaptive project management by providing a basis for monitoring and evaluation throughout the project lifecycle. The LogFrame is not a requirement for the GCF Concept Note Stage, but it is still recommended for all projects. The LogFrame is the heart of the project and will help convince GCF that the project will focus on a climate change challenge, rather than a general development challenge.

The Theory of Change (ToC) and the Logical Framework (LogFrame) are both essential tools in project design and evaluation, especially in results-based financing mechanisms like the GCF. While they are related and often used together, they serve different purposes and offer different levels of detail and flexibility. A helpful way to distinguish between the project's core planning documents is to view the Logframe as a structured management tool and the ToC as a strategic map of change. The following Table 5.2 summarizes the key differences between Theory of Change and Logical Framework.

Table 5.2 Key differences between the Theory of Change (ToC) and Logical Framework

Aspect	Theory of Change (ToC)	Logical Framework (LogFrame)
Purpose	Explains the why and how of change; a narrative and visual roadmap of impact	Details the what of a project; a structured matrix for planning and M&E
Structure	Flexible, often visual diagram and narrative	Rigid matrix with rows (Impact → Outputs) and columns (Indicators, etc.)
Level of Detail	High-level causal reasoning; shows assumptions, pathways, and context	Operational and implementation-focused, with measurable targets
Focus	Understanding of change processes, assumptions, and pathways	Monitoring and evaluation of specific results and activities
Usefulness	Good for stakeholder alignment and strategic thinking	Good for donor reporting, accountability, and performance tracking
Assumptions	Central to the model; explicitly mapped in pathways of change	Included in a separate column, often less detailed
Time Horizon	Long-term change over time	Project-specific timeframe

2.2 Development of a Logical Framework

Developing a Logical Framework from The Objective Tree

The Objective Tree and Logical Framework are two closely interrelated tools supporting a structured, result-based project design process that are used in the development of the GCF Concept Note. Together they help ensure that the proposed intervention is strategically sound, logically coherent, and aligned with GCF investment criteria. The Objective Tree is a conceptual tool that helps articulate what the project aims to achieve, while the Logical Framework is a planning and results tool that translates those aims into a clear, measurable action plan. Their integration is essential for the development of a coherent and compelling GCF Concept Note.

As detailed in the previous sub-chapter about Problem Tree, the process begins with a Problem Tree, which identifies the core climate-related problem, its causes, and effects. These are then rephrased as a positive goal or desired change and converted into an Objective Tree. The Objective Tree illustrates the hierarchy of objectives, showing how specific actions lead to broader development goals. The Objective Tree then becomes the foundation of the Logical Framework by translating its structure to a formalized results chain. Each level of the Objective Tree maps onto a component of the Logical Framework. The process of converting an Objective Tree into a Logical Framework is illustrated below:

Objective Tree Level	→	Logical Framework Component
Overall goal (top of the tree)	→	Impact
Intermediate objectives	→	Outcomes

Immediate objectives	→	Outputs
Activities (bottom-up)	→	Inputs and Activities

This structured relationship ensures that the project's logic is consistent, making it easier to define measurable indicators, verify assumptions, and identify risks.

Logical Framework Format

The Logical Framework is also called "Project Framework", "LogFrame", "Project Decision Matrix", "Results Framework", or "Design and Monitoring Framework". The overall goal, objectives, and activities identified in the Objective Tree should be used to populate the Logical Framework. Figure 5.3 provide a standard diagram for the Logical Framework and includes four columns (Design Summary, Performance Targets, Monitoring Mechanisms, and Assumptions and Risks) and five rows (Goal, Purpose, Outputs, Activities, Inputs). Note that hierarchical "logical" relationships appear vertically and horizontally, linking all 20 frames which gives this matrix its name. Figure 5.4 offers a more detailed overview of a Logical Framework when filled in with hypothetical indicators. In the illustrated framework, the inputs allow activities to be carried out (how?) that will deliver project outputs (what?), which in turn will meet the immediate purpose/outcomes of the project (how do we know?) and contribute to the longer-term goal/objective (why?).

Integration of Paradigm Shift

The overall objective of the GCF is to achieve a paradigm shift towards low carbon and climate resilient development pathways. To achieve this, the design of funded activities must be ambitious and strategically prioritize long-term, systemic change. Project proponents should ensure that their Funding Proposal describes a long-term vision through its Theory of Change and details how this can be achieved through short-, medium- and long-term changes in the LogFrame, including by supporting systemic shifts through strategic investments in regulatory and policy actions that have the potential to change behavior in markets and economies beyond one-off investments.

To effectively include a paradigm shift in the development of a Logical Framework (LogFrame) for a Green Climate Fund (GCF) Concept Note, you will need to embed transformational change across the project design, outputs, outcomes, and impact levels. GCF emphasizes funding initiatives that catalyze low-emission and climate-resilient development pathways, so your LogFrame must clearly demonstrate how your intervention contributes to that broader transformation. Below is a step-by-step guide on how to incorporate paradigm shift considerations into your Logical Framework.

Understand GCF's Definition of a Paradigm Shift
GCF defines a paradigm shift as a fundamental transformation of economies toward low-emission and climate-resilient development. Key characteristics include:

- Scale: large-scale impact and replication potential
- Sustainability: lasting results beyond the project's duration
- Innovation: new approaches, models, or technologies
- Systemic Change: influence on policies, markets, or behaviors

Reflect the Paradigm Shift in the Impact and Outcome Levels
Impact Level (Long-term)
Write your impact in terms of a transformative climate goal aligned with GCF's Results Management Framework (RMF).

Example:
Enhanced climate-resilient livelihoods for vulnerable rural populations
Accelerated transition to renewable energy systems in [country/region]
Ensure this impact aligns with GCF core indicators (e.g., increased resilience, reduced emissions).

Outcome Level (Medium-term)
Demonstrate institutional, behavioral, or systemic changes.

Example:
Strengthened climate governance through inclusive policy reform
Increased private sector investment in low-carbon technologies
Include changes in capacity, practices, and systems that enable long-term shifts.

Design Outputs that Enable a Paradigm Shift
Outputs should be stepping stones toward a paradigm shift. They must enable scale-up or replication.

Examples:
Capacity-building programmes institutionalized in government agencies
Scalable climate-smart agriculture models piloted in multiple regions
Climate financing mechanisms introduced and adopted by local banks

Include Paradigm Shift Elements in Activities and Assumptions
Activities: Ensure they reflect transformative actions (e.g., policy development, technology transfer, financial instruments).
Assumptions: Consider enabling factors for a paradigm shift (e.g., government commitment, private sector engagement).

Integrate Indicators that Reflect Transformational Change
Include both GCF core indicators and project-specific indicators that measure systemic impact.

Examples:

- Number of households adopting resilient practices (with potential for scale)
- Institutional changes enacted as a result of the project
- Volume of private/public finance mobilized

Explain the Theory of Change in Support of a Paradigm Shift
Accompany your LogFrame with a Theory of Change that:

- Shows causal pathways from activities to paradigm shift outcomes
- Highlights leverage points (e.g., policies, market incentives)
- Discusses sustainability and replicability

Support with Environment Measures
Document actions in the LogFrame that:

- Remove policy or financial barriers
- Engage stakeholders (especially vulnerable groups)
- Build national ownership

Review GCF Paradigm Shift Potential Criteria
Ensure alignment with the GCF's Investment Criteria Indicators on "2.2 Paradigm Shift Potentia"l, including:

- Potential for scaling up and replication
- Contribution to the creation of enabling environments
- Innovation

Table 5.3 Summary table example for aligning the LogFrame with a paradigm shift

Level	Example of Statement	Paradigm Shift Relevance
Impact	"National economy transitions to low-carbon agriculture"	Systemic transformation
Outcome	"Widespread adoption of climate-smart practices"	Behavior change and scalability
Output	"Innovative extension services developed and scaled"	Innovation and enabling environment
Activities	"Develop and pilot climate-smart extension curricula"	Builds institutional capacity

When developing a GCF Concept Note, it is also essential to prioritize GCF sectoral paradigm shifting pathways[27] and identify the contributions that the project can make at the ground level towards the Nationally Determined Contributions (NDCs) (of a respective country or countries) and to the GCF

27 GCF. (2022). Sectoral Guides Summaries. *Sectoral Guide Series*. Yeonsu: Green Climate Fund.

Strategic Plan 2024 – 2027.[28] To effectively include a paradigm shift in the development of a LogFrame for a GCF Concept Note, the developer needs to embed transformational change across the project design, outputs, outcomes, and impact levels. GCF emphasizes funding initiatives that catalyze low-emission and climate-resilient development pathways, so the LogFrame must clearly demonstrate how your intervention contributes to that broader transformation.

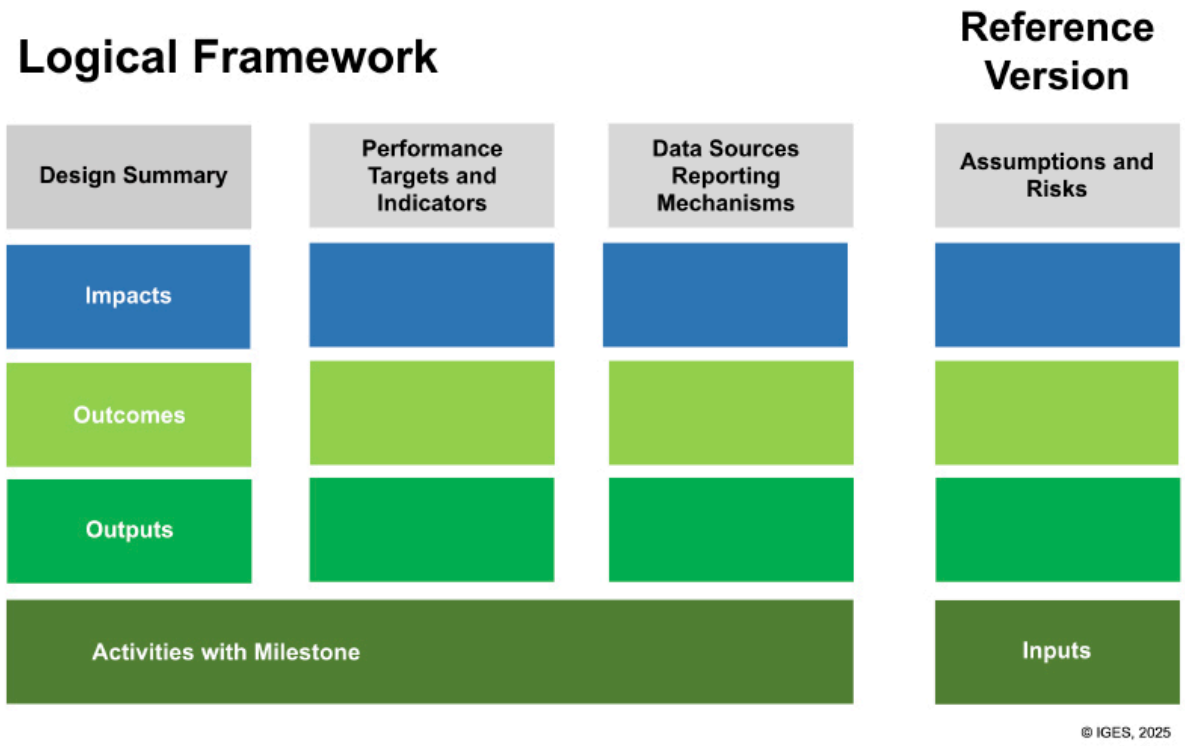


Figure 5.3 Logical Framework format

Below are key points in integrating a paradigm shift into the LogFrame.

Table 5.4 also provides an example of a brief statement and illustrates the relevance of the statement to the paradigm shift.

GCF defines a paradigm shift as a fundamental transformation of economies toward low-emission and climate-resilient development. According to the GCF, paradigm shifts feature several key characteristics:

- Scale: large-scale impact and replication potential.
- Sustainability: lasting results beyond the project's duration.
- Innovation: new approaches, models, or technologies.
- Systemic Change: influence on policies, markets, or behaviors.

28 GCF. (2023). Strategic Plan for the Green Climate Fund 2024 – 2027. *Decisions of the Board – thirty sixth meeting of the board, 10 – 13 July 2023*. Yeonsu: Green Climate Fund.

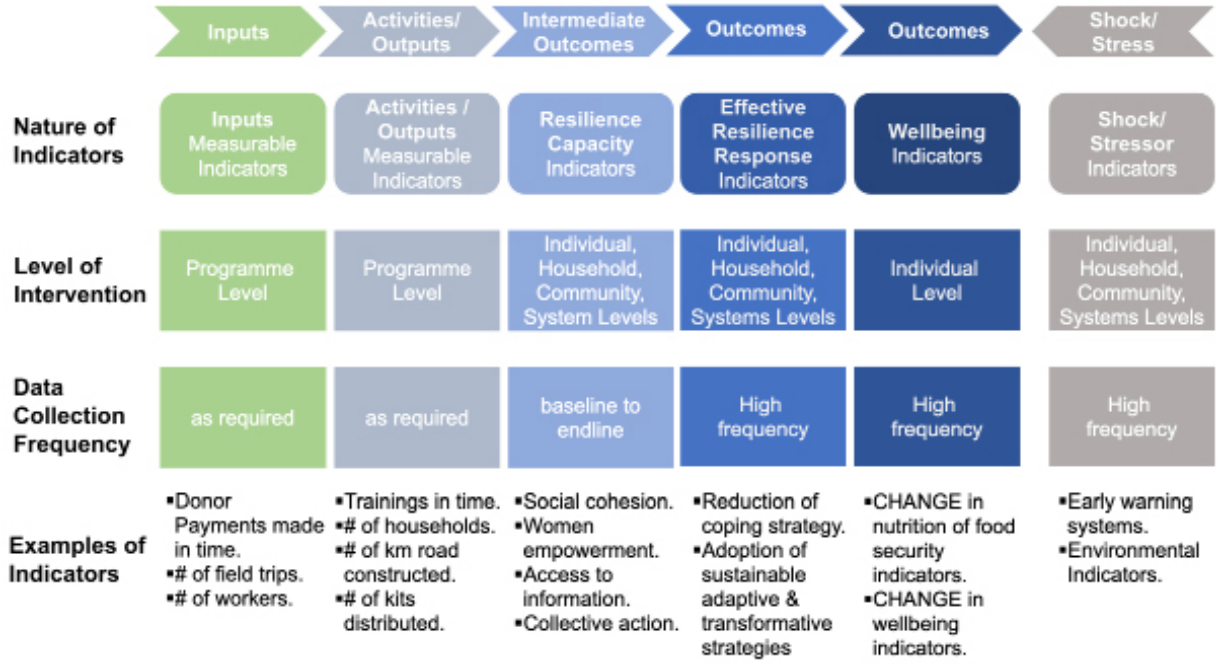


Figure 5.4 Detailed design of indicators in a Logical Framework
Source: IGES (based on Figure 5.3)

To reflect the paradigm shift in the impact and outcome levels of the LogFrame, write the impact level (long term) in terms of transformative climate goals aligned with GCF Sectoral Guides' Summaries (GCF Sectoral Guides' Summaries, 2022). In addition, write the outcome level (medium term) as demonstrative institutional, behavioral, or systematic change. Include changes in capacity, practices, and systems that enable long term shifts. To help guide the project developer, GCF provides a few examples of impact level and outcome level statements as follows:

- Impact level (long term) statements
  - Enhanced climate-resilient livelihoods for vulnerable rural populations.
  - Accelerated transition to renewable energy systems in a specific country or region.
- Outcome level (medium term):
  - Strengthened climate governance through inclusive policy reform.
  - Increased private sector investment in low-carbon technologies.

To design outputs that enable the paradigm shift, outputs should be written as stepping stones toward the paradigm shift. They must enable scale-up or replication. To help guide the project developer, GCF offers a few examples as follows:

- Capacity-building programmes institutionalized in government agencies.
- Scalable climate-smart agriculture models piloted in multiple regions.
- Climate financing mechanisms introduced and adopted by local banks.

When including paradigm shift elements in activities and assumptions, ensure that activities and assumptions reflect transformative actions. These actions can be, but are not limited to, policy development, technology transfer, or financial instruments. For assumptions, consider enabling factors for a paradigm shift. The enabling factors can be, but may not be limited to government commitment or private sector engagement.

When integrating indicators that reflect transformational change, it is recommended that both GCF core indicators and project-specific indicators be included to measure systemic impact. To help guide the project developer, GCF offers a few examples as follows:

- Number of households adopting resilient practices (with potential for scale).
- Institutional changes enacted as a result of the project.
- Volume of private/public finance mobilized.

When explaining the Theory of Change to support a paradigm shift, it is recommended that the LogFrame be accompanied with a Theory of Change (ToC). The relationship between the LogFrame and ToC should cover the following aspects:

- Shows causal pathways from activities to paradigm shift outcomes.
- Highlights leverage points (e.g., policies, market incentives).
- Discusses sustainability and replicability.

In addition, provide support by adding environment measures. These measures can be documented or explicitly included in the LogFrame, and can:

- Remove policy or financial barriers.
- Engage stakeholders (especially vulnerable groups).
- Build national ownership.

Lastly, it is beneficial for the project developer to review GCF paradigm shift potential criteria to ensure alignment with the GCF Sectoral Guides' Summaries (GCF Sectoral Guides' Summaries, 2022). Reviewing the paradigm shift allows the project developer to include several of the following points in the project Concept Note/proposals, including:

- Potential for scaling up and replication.
- Contribution to the creation of enabling environments.
- Innovation.

Table 5.4 Example of LogFrame alignment with paradigm shift

Level	Example of Statement	Paradigm Shift Relevance
Impact	National economy transitions to low-carbon agriculture	Systemic transformation
Outcome	Widespread adoption of climate-smart practices	Behaviour change and scalability
Output	Innovative extension services developed and scaled	Innovation and enabling environment
Activities	Develop and pilot climate-smart extension curricula	Builds institutional capacity

2.3 Template

This section provides a simple and example-based template for an Objective Tree evolving into a Logical Framework, tailored to climate-related project planning for a GCF Concept Note.

Project Title: Enhancing Climate Resilience of Smallholder Farmers through Sustainable Water Management.

Objective Tree Template
Overall goal (Impact): Increased climate resilience and food security for smallholder farmers in semi-arid regions.

Intermediate Objectives (Outcomes):

Improved water availability and efficiency for climate-resilient agriculture.
Strengthened capacity of local institutions and farmers to manage water resources in a variable climate.

Immediate Objectives (Outputs):

Development or rehabilitation of water harvesting and irrigation infrastructure.
Climate-resilient farming techniques and water use practices adopted by farmers.
Local institutions trained in climate-resilient water governance.

Activities:

Construct or rehabilitate small-scale irrigation and water harvesting systems.
Conduct farmer field schools on climate-smart agriculture and efficient water use.
Deliver training workshops for local water user associations and extension officers.
Develop and disseminate climate risk information for agricultural planning.

Logical Framework Template
Below is the illustration of a template that can be used for constructing a LogFrame based on the identified objectives, indicators, means of verification and assumptions.

Hierarchy of Objectives	Indicators	Means of Verification	Assumptions/Risks
Impact: Increased resilience and food security for smallholder farmers	- % reduction in climate-related crop losses - % increase in household food security index	- National agricultural reports - Household surveys	Government remains committed to supporting adaptation programmes
Outcomes:			
1. Improved water availability for agriculture	- Volume of water stored/infiltrated per year. - % increase in irrigated land area	- Project M&E reports - Remote sensing/ GIS	Adequate rainfall for recharge; infrastructure is maintained
2. Enhanced capacity of local institutions and farmers	- Number of trained farmers using climate-resilient practices - Number of institutions implementing adaptive water plans	- Training reports - Institutional records	Stakeholder engagement remains high; no major institutional turnover
Outputs:			
1. Construction or rehabilitation of water infrastructure	- Number of irrigation systems built or upgraded - Number of households served by improved systems	- Engineering reports - Beneficiary feedback	Procurement delays are minimized
2. Farmers trained in climate-smart agriculture	- Number of training sessions held - % of trained farmers demonstrating knowledge uptake	- Training attendance logs - Pre/post training assessments	Farmers are willing and available to participate
3. Local institutions trained	- Number of workshops conducted - Number of institutional plans revised to include climate adaptation	- Workshop reports - Reviewed policy documents	Local institutions commit to using new knowledge
Activities:			
e.g., conduct needs assessments; build irrigation canals; organize training sessions	Activity-level process indicators (e.g., number of trainings, length of canal built)	Activity completion reports, photos, attendance sheets	Timely availability of contractors and experts

2.4 Case study

The following case study in Box 4 illustrates how to develop a Logical Framework (LogFrame) for a GCF Concept Note. This helps define a project's Theory of Change (ToC) in Section C.2. (Proposed project / programme), clarify results, and meet GCF's expectations in Section D.4. (Justification of GCF funding request) alongside annexes of the LogFrame and ToC diagram.

Box 4. Case study on developing a LogFrame for a GCF Concept Note in Nepal

Project Overview
Project Title: **Strengthening Climate-Resilient Agro-Ecosystems in the Mid-Hills of Nepal**
Country: Nepal
Accredited Entity: International Fund for Agricultural Development (IFAD)
Project Size: Medium-scale project (Adaptation)
Duration: 5 years
To improve the climate resilience of smallholder farmers and ecosystems in the mid-hill districts of Nepal through climate-smart agricultural practices and ecosystem restoration.

Logical Framework (LogFrame)

Project Level	Narrative Summary	Indicators	Means of Verification	Assumptions/Risks
Impact	Improved climate resilience and food security of vulnerable rural populations.	– % decrease in climate-related crop losses. – Household food security index improvement.	National climate reports, household surveys.	Government remains supportive of climate action.
Outcome(s)	1. Increased adoption of climate-resilient agricultural practices. 2. Improved soil and water conservation in agro-ecosystems.	– Number of farmers adopting CSA practices. – % increase in vegetation cover in targeted catchments.	Project M&E system, GIS satellite data.	Community participation remains strong; climate shocks are manageable.

Project Level	Narrative Summary	Indicators	Means of Verification	Assumptions/Risks
Outputs	1. Agriculture 1.1 Farmer field schools established. 1.2 Drought-resistant crop varieties distributed. 2. Soil and Water 2.1 Watershed areas restored. 2.2 Local capacity built for soil and water management.	– Number of farmer field schools operational. – Number of hectares under improved watershed management.	Training reports, seed distribution logs, field surveys.	Timely procurement and effective coordination among stakeholders.
Activities	– Conduct baseline and climate risk assessments. – Establish and equip farmer field schools. – Distribute seeds and inputs. – Conduct training on soil and water management. – Develop community watershed plans.	– Number of assessments completed. – Number of trainings held. – Number of input kits distributed.	Consultant reports, training attendance sheets, distribution records.	No major delays in funding or procurement processes.

Key Features of this LogFrame

Feature	Explanation
Vertical logic	Ensures consistency from activities to outputs, outputs to outcomes, and outcomes to impact.
Indicators (SMART)	Specific, measurable, achievable, relevant, and time-bound.
Means of Verification	Clearly defines how evidence will be collected or measured.
Assumptions/Risks	Highlights external conditions critical to success but beyond direct control.

How It Aligns with GCF Requirements

GCF Section	LogFrame Support
Section C.2: Proposed project / programme in Theory of Change (ToC).	Provides a structured logic chain of activities → outputs → outcomes → impact
Section D.4. Justification of GCF funding request.	Clarifies what will be measured and reported using GCF's core indicators
Section F: Key risks and mitigation measures.	LogFrame assumptions inform risk analysis and mitigation planning

3 Theory of Change

3.1 Introduction

The Theory of Change, also known as ToC, is a vital element in the development of a GCF Concept Note, serving as the strategic foundation for how a proposed project or programme is expected to deliver its intended climate impact, particularly low-emission and climate-resilient development. It provides a clear, logical, evidence-based pathway from inputs and activities to outputs, outcomes, and long-term impacts, ensuring the project is designed with strategic clarity and purpose. A well-crafted ToC helps align the proposal with GCF's investment criteria, such as climate impact potential, paradigm shift, sustainable development, and country ownership. It also demonstrates how the project contributes to national climate strategies like Nationally Determined Contributions (NDCs) or National Adaptation Plans (NAPs), strengthening its relevance and coherence within the broader climate policy context. ToC also presents how the project links

realities with GCF Sectoral Guides' Summaries[29] and the GCF Strategic Plan 2024 – 2027,[30] which have been prioritized in the new GCF Concept Note format.

Moreover, the ToC plays a key role in identifying critical assumptions and risks along the results chain, supporting a more robust risk assessment and the design of effective mitigation strategies. It forms the basis for monitoring and evaluation by outlining measurable indicators, which are essential for tracking progress and demonstrating results in line with GCF's results-based financing approach. Additionally, the ToC enhances the overall credibility of the Concept Note by showing a deep understanding of the problem context, stakeholder dynamics, and system-level changes the project aims to influence. It also serves as a tool for inclusive project design, facilitating stakeholder engagement and ensuring their perspectives are reflected in the intervention logic. Overall, the Theory of Change is not just a planning framework, but a strategic requirement that significantly improves the quality, coherence, and fundability of a GCF Concept Note. In practice, the Theory of Change in a GCF Concept Note typically includes:

- A description of the climate problem or challenge being addressed.
- The long-term goal or impact the project aims to achieve.
- The pathway of change, outlining activities, outputs, and outcomes.
- Assumptions and risks associated with each step of the results chain.
- A narrative or diagram that visually summarizes the logic of the intervention.

29 GCF. (2022). Sectoral Guides Summaries. *Sectoral Guide Series*. Yeonsu: Green Climate Fund.

30 GCF. (2023). Strategic Plan for the Green Climate Fund 2024 – 2027. *Decisions of the Board – thirty sixth meeting of the board, 10 – 13 July 2023*. Yeonsu: Green Climate Fund.

3.2 Development of Theory of Change

Developing a Theory of Change from a Logical Framework

Evolving from a logical framework (LogFrame) to a Theory of Change (ToC) in the context of developing a GCF Concept Note involves a shift from a linear, output-focused planning tool (static result matrix) to a dynamic, systems-oriented approach that captures the complexity of climate change interventions (comprehensive roadmap of climate change). While both tools serve to clarify project objectives and results, the ToC offers a more flexible and comprehensive narrative and visual representation of how change will happen and why.

Table 5.5 can guide project developers in adapting traditional planning tools like the LogFrame into a more strategic, dynamic, and climate focused ToC required by GCF.

Table 5.5 Comparison table of Logical Framework and Theory of Change

Aspect	Logical Framework (LogFrame)	Theory of Change (ToC)	Evolution from a LogFrame to a ToC for GCF Concept Note
Structure	Linear and fixed (inputs → activities → outputs → outcomes → impact)	Non-linear and flexible, includes feedback loops and multiple pathways	Expand beyond linear logic to capture complex, systemic change pathways
Focus	Deliverables and outputs	Change processes and causal pathways	Shift focus from what will be done to **how and why change will happen**
Assumptions	Often implicit or limited to a separate column	Explicit and central to the model	Clearly identify **key assumptions and external factors** at each stage
Stakeholder Involvement	Usually developed internally by project designers	Developed collaboratively with stakeholders	Involve **national partners, communities, and beneficiaries** to align with GCF's country ownership principle
Narrative	Minimal or absent; focuses on indicators	Includes a detailed change narrative	Add a **descriptive explanation** of how change is expected to occur and the rationale behind it
Results Orientation	Focus on outputs and immediate outcomes	Emphasizes long-term outcomes and impacts	Align outcomes with **GCF's climate results areas and strategic objectives**
Systemic Change	Rarely addressed	Central to the design (e.g., paradigm shift, scalability)	Highlight **transformational potential**, scalability, and policy/institutional influence
Use of Diagrams	Not always included or limited to the LogFrame table	Visual representation is a key component	Develop a **visual ToC diagram** to communicate the logic of the project

Aspect	Logical Framework (LogFrame)	Theory of Change (ToC)	Evolution from a LogFrame to a ToC for GCF Concept Note
Risk Management	Basic risk identification	Integrated with assumptions and context analysis	Build in **risk and context analysis** to demonstrate project robustness
Monitoring & Evaluation (M&E)	Based on fixed indicators tied to outputs/outcomes	Driven by outcomes, with indicators derived from the ToC	Use ToC to **guide M&E strategy** and link to GCF's results framework

Guide to Designing a Theory of Change

A clear Theory of Change and risks and barriers to implementation are undeniably the most important elements in a GCF Concept Note. These provide a clear explanation of the long-term vision for the project, with outputs and outcomes for the proposed activities. Risks and barriers to achieving the outputs and outcomes are identified from the Theory of Change, which requires detailed feasibility, technical, and economic analyses. At a glance, the Theory of Change of the proposed Concept Note can address all six GCF investment criteria.

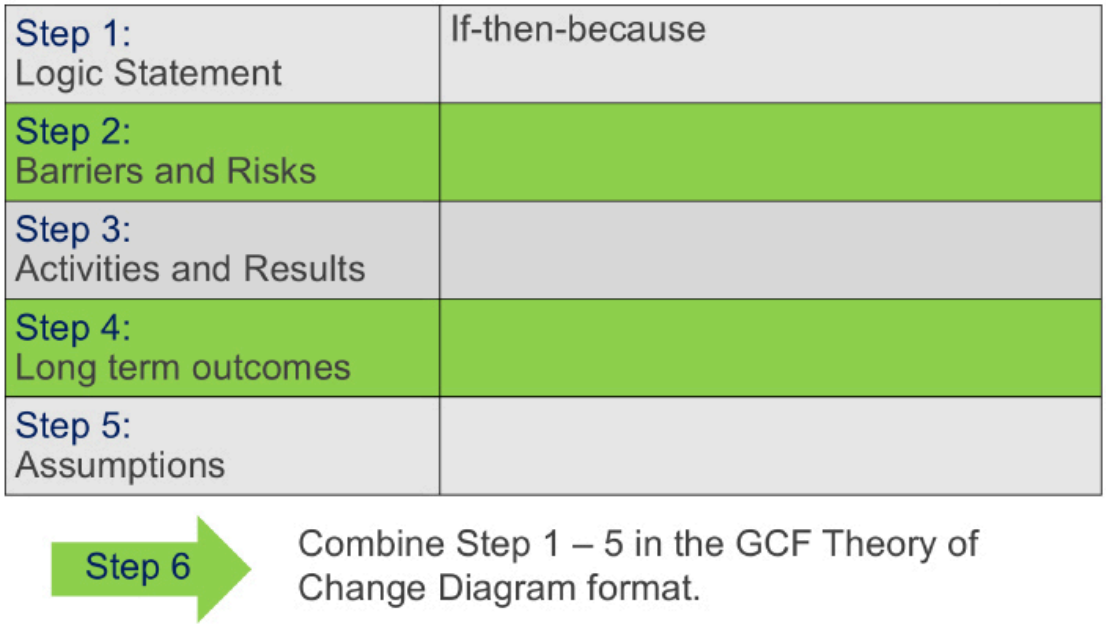


Figure 5.5 Steps to design the Theory of Change

The following steps can be conducted as an exercise to design a Theory of Change:

- Step 1 – Introduce the overarching logical framework (if we do "x", then our desired "y" will happen, because "z".) Brainstorm until you are quite clear on the logic.
- Step 2 – Identify the barriers and risks that you would expect to overcome to achieve the desired outcomes.
- Step 3 – Identify activities that would be carried out to overcome these barriers and risks. Also identify the results that would indicate successful conditions in overcoming these barriers and risks and expected tangible results at the end of the project implementation period.

- Step 4 – Consider the longer-term outcomes of these results and the sustainability of the outcome. Consider whether these outcomes ensure that the project has the level of impact expected in your overarching logic statement.
- Step 5 – Identify the assumptions made in relation to any of the previous steps. Are any of those assumptions so risky that they could be potential "project killers"? Ensure that specific activities are in place to validate these assumptions and provide sound evidence for the assumptions.
- Step 6 – Combine steps 1-5 in the GCF Theory of Change diagram format in Figure 5.5, abbreviating the text as needed. Note that additional details will be needed in the detailed Concept Note and Full Funding Proposal.

3.3 Template

Problem Statement

The problem statement should describe the climate-related problem the project will address. Answering these questions may help in developing the problem statement:

- What are the climate vulnerabilities, emissions issues, or adaptation/resilience gaps?
- Who is affected and how?
- What barriers exist to solving the problem?

For example: "Smallholder farmers in Region X are increasingly exposed to drought due to climate change, reducing agricultural productivity and increasing food insecurity. A lack of access to climate-resilient infrastructure and knowledge exacerbates vulnerability."

Long Term Goal/Impact

The desired long-term goal/impact should be defined and aligned with GCF's result areas. Answering these questions may help in determining the long term goal/impact:

- What transformational change is expected?
- What long-term climate resilience or mitigation outcome is targeted?

For example: "Enhanced climate resilience and food security of vulnerable farming communities in Region X."

Outcomes and Outputs

Map the causal pathway from activities → outputs → outcomes → impact. Consider the questions below when mapping the causal pathway towards the outcomes and outputs.

a. Outcomes (short, medium, long-term): What are the key behavioral or systemic changes that need to occur?
   - Short-term: Improved capacity of local institutions.
   - Medium-term: Adoption of climate-resilient agricultural practices.

- Long-term: Increased agricultural productivity and reduced vulnerability.

b. Outputs: What are the tangible deliverables produced by the project?
   - Training programmes delivered to local extension officers.
   - Climate-resilient seeds and inputs distributed.
   - Irrigation infrastructure built.

Activities

List the core interventions required to achieve the outputs that are linked in the causal pathway developed above. For example:

- Conduct climate vulnerability assessments.
- Train farmers and extension workers.
- Rehabilitate/construct irrigation systems.
- Provide climate information services.

Assumptions and Precautions

To help with determining the causal pathway, identify key assumptions for each step in the pathway. For example:

- Farmers will use training knowledge.
- Inputs are appropriate for local contexts.
- Political will and institutional support are ongoing.

Risks and Mitigation Measures

To help with assumptions and outputs, highlight potential risks to change and how they will be addressed. For example:

Risk: Resistance to adopting new practices	→	Mitigation: Use participatory approaches and local champions
Risk: Climate variability undermines infrastructure	→	Mitigation: Design using worst-case climate scenarios

Link to GCF Results Area

To link the output with the GFC core result areas, it is important to map the desired outcomes and impact on GCF's core result areas. For example:

Mitigation: Low-emission transport, energy efficiency
Adaptation: Increased resilience of communities, ecosystems, and infrastructure

In addition, it is important to ensure that the project links realities on the ground with GCF Sectoral

Guides' Summaries[31] and the GCF Strategic Plan 2024 – 2027[32], which has been prioritized in the new GCF Concept Note format.

Summary of Theory of Change

Finally, summarize the ToC by explaining how and why your proposed activities will lead to the desired impact, referencing assumptions, stakeholders, and context. For example:

> "By providing smallholder farmers with access to climate-resilient inputs and training, and strengthening local agricultural extension services, the project aims to reduce vulnerability to drought. Combined with improved irrigation infrastructure and climate information systems, farmers will be better equipped to plan and adapt, leading to sustained productivity and food security."

Visual Diagram

Having a visual diagram is optional but highly recommended to illustrate how the elements interact when constructing the ToC. The flowchart in Figure 5.6 shows the causality between Inputs/Activities, Outputs, Outcomes, Impact; how each element provides feedback loops; and how the assumptions and external factors influence the pathway.

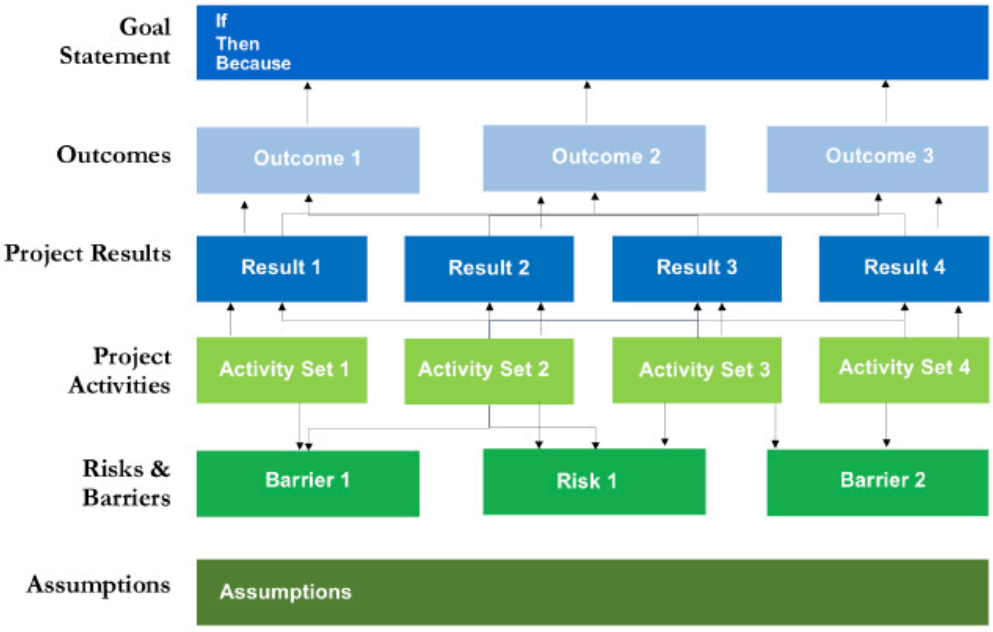


Figure 5.6 Template for the Theory of Change (ToC)

31 GCF. (2022). Sectoral Guides Summaries. *Sectoral Guide Series*. Yeonsu: Green Climate Fund.

32 GCF. (2023). Strategic Plan for the Green Climate Fund 2024 – 2027. *Decisions of the Board – thirty sixth meeting of the board, 10 – 13 July 2023*. Yeonsu: Green Climate Fund.

3.4 Case study

The following case study in Box 5 illustrates how to execute the steps to construct a ToC in a coastal adaptation project in Bangladesh. The project aims to restore mangrove ecosystems while enhancing livelihoods and improving disaster preparedness. This Theory of Change clarified the climate rationale, structured the project logically, and aligned it with GCF criteria in preparation for the Funding Proposal stage.

Box 5. Case study on developing ToC for a GCF Concept Note in Bangladesh

Project Overview
Project Title: Restoring Coastal Ecosystems for Livelihoods and Climate Resilience
Country: Bangladesh
GCF Focus: Climate Change Adaptation
Accredited Entity: United Nations Environment Programme (UNEP)
To strengthen the adaptive capacity of vulnerable coastal communities through mangrove ecosystem restoration, sustainable livelihoods, and early warning systems.

Step 1: Define the Climate Problem (Root Cause)
Problem Statement: Due to rising sea levels, increased cyclones, and salinization, coastal communities in Bangladesh are highly vulnerable, resulting in the loss of land and reduced livelihood opportunities. Mangroves (natural coastal buffers) have been severely degraded due to overexploitation and poor coastal planning.

Step 2: Identify Long-Term Impact
Impact Goal: Vulnerable coastal communities in Bangladesh are more resilient to climate change-induced risks, with restored ecosystems, enhanced livelihoods, and fewer losses from disasters.

Step 3: Define Project Outcome(s)
Outcome 1: Increased coverage and health of coastal mangrove ecosystems.
Outcome 2: Improved climate-resilient livelihoods for target communities.
Outcome 3: Strengthened institutional capacity for climate-resilient coastal planning and disaster preparedness.

Step 4: Define Outputs
Output 1.1: 2,000 hectares of degraded mangroves restored and protected.
Output 1.2: Community nurseries established for native species.
Output 2.1: Training delivered on climate-resilient aquaculture and ecotourism.
Output 3.1: Coastal planning guidelines developed and integrated into local development plans.
Output 3.2: Community-based early warning systems installed and maintained.

Step 5: Map Activities to Outputs
Activity 1.1.1: Conduct baseline ecological assessments.
Activity 1.1.2: Mobilize local cooperatives for replanting.
Activity 2.1.1: Develop training modules with NGOs.
Activity 3.2.1: Install early warning towers and train local response teams.

Step 6: Identify Assumptions and External Factors
Communities are willing to participate in reforestation.
National government continues to provide support for coastal adaptation.
Climate conditions remain within project risk parameters.
No major political or security disruptions.

Monitoring of Indicators

Level	Indicator Example
Impact	% reduction in cyclone-related livelihood losses
Outcome	Hectares of mangroves restored; % increase in resilient income
Output	Number of nurseries, households trained, early warning systems
Activity	Number of workshops and seedlings planted

4 Cost Benefit Analysis and Economic Justification

4.1 Introduction

Cost-Benefit Analysis (CBA) in the development of a GCF Concept Note is a systematic approach used to evaluate and compare the economic costs and benefits of a proposed climate project. It helps determine whether the project is economically viable, efficient, and deserving of investment from the GCF. In developing the GCF Concept Note, CBA refers to the process of quantifying and comparing the financial, environmental, and social costs of the proposed project with its expected benefits, such as:

- Reduced greenhouse gas (GHG) emissions (for mitigation projects).
- Increased resilience to climate impacts (for adaptation projects).
- Socio-economic co-benefits (e.g., jobs, health, food security).

Integrating CBA into a GCF Concept Note is a critical component that strengthens the proposal's credibility, transparency, and strategic alignment with GCF's investment criteria. CBA helps prove that the proposed project provides good value for the financial resources requested. The tool should show that the benefits of the project outweigh its costs, which is essential for justifying GCF funding. GCF has to make decisions across many competing proposals. A clear CBA supports decision-makers in evaluating the efficiency of the intervention, its economic feasibility, and the potential return on investment (including social, environmental, and climate benefits).

CBA supports multiple GCF investment criteria, including Impact potential (e.g., emission reductions), Paradigm shift potential (e.g., sustainable systemic changes), Sustainable development potential (e.g., co-benefits for health and livelihoods), Needs of the recipient, and Efficiency and effectiveness. CBA strengthens the climate rationale by comparing the climate-related costs (adaptation/mitigation) to the benefits. It helps quantify avoided damages from climate impacts, cost savings from low-emission technologies, and increased resilience benefits for vulnerable populations. CBA pushes project developers to use data and modeling tools to estimate costs (capital, operational, maintenance), quantify direct and indirect benefits, and identify trade-offs and risks, which in turn leads to more robust and justifiable project design.

An integrated CBA promotes transparency for stakeholders (including GCF, national authorities, and civil society), as it lays out the assumptions and methods used, the distribution of costs and benefits across different groups, potential externalities or unintended effects. CBA also supports GCF Sectoral Guides' Summaries[33] and the GCF Strategic Plan 2024 – 2027[34], which has been prioritized in the new GCF Concept Note format. GCF does not mandate a full, detailed CBA at the Concept Note stage. However, it is strongly encouraged. A summary of the expected cost-effectiveness and impact potential is typically sufficient at this early phase. However, a detailed CBA will be required in the Full Funding Proposal stage.

33 GCF. (2022). Sectoral Guides Summaries. *Sectoral Guide Series*. Yeonsu: Green Climate Fund.

34 GCF. (2023). Strategic Plan for the Green Climate Fund 2024 – 2027. *Decisions of the Board – thirty sixth meeting of the board, 10 – 13 July 2023*. Yeonsu: Green Climate Fund.

4.2 Development of Cost Benefit Analysis

CBA for a GCF Concept Note is a key input for Section D.4: Justification of GCF funding request of the Concept Note, which becomes even more important in the Funding Proposal stage.

Main Components of a Cost Benefit Analysis

The main components of a Cost Benefit Analysis are elaborated in Table 5.6, which includes project costs and project benefits.

Table 5.6 Main components of a typical CBA

Component	Description
Project Costs	Capital costs, operating and maintenance costs, administrative costs.
Project Benefits	Quantifiable outcomes like emissions reductions, avoided losses and damages from climate events, increased productivity, improved health, etc.
Time Horizon	Usually includes a long-term view (e.g., 20–30 years) to capture all lifecycle impacts
Discount Rate	Future costs and benefits are adjusted to present values to compare accurately
Sensitivity Analysis	Evaluates how results change under different assumptions

A simple example of a proposed renewable energy project in a developing country can show:

- Costs: USD 20 million (including installation, operation, and maintenance)
- Benefits: USD 35 million (in saved fossil fuel imports, GHG reduction value, and improved air quality)
- Result: Net benefit of USD 15 million → demonstrating strong cost-effectiveness.

Guide to Developing a Cost Benefit Analysis

The CBA section in a GCF Concept Note is usually summarized rather than fully detailed, as a full economic and financial analysis is typically required at the Funding Proposal stage. However, including a concise and structured summary of the expected costs and benefits significantly strengthens your Concept Note. The following suggested format can be used for presenting CBA in the development of a GCF Concept Note. It is important to pay attention to the length of the CBA. Keep it concise, ideally one page or less. Use conservative assumptions and cite sources or models, when applicable. If the full CBA is not yet complete, indicate that detailed economic and financial analysis will be presented in the Funding Proposal stage.

Project Overview

Title: [Project Name]
Country: [Country Name]
Sector(s): [Mitigation / Adaptation / Cross-cutting]
Objective: [Brief description of the climate-related goal]

Summary of Costs

The cost summary of the proposed project is presented in Table 5.7 below.

Table 5.7 Cost summary of a proposed project

Cost Category	Estimated Value (USD)	Description
Capital (CAPEX)	X,XXX,XXX	Infrastructure, equipment, installation
Operational (OPEX)	X,XXX,XXX	Annual maintenance and operations
Capacity Building & Training	XXX,XXX	Training, workshops, technical assistance
Monitoring & Evaluation	XXX,XXX	Tools, reporting, impact tracking
Total Estimated Cost	XX,XXX,XXX	

Summary of Benefits

The benefit summary of the proposed project is presented in Table 5.8 below.

Table 5.8 Benefit summary of a proposed project

Benefit Category	Quantified Benefit (USD or Units)	Description
GHG Emissions Reduction	X,XXX,XXX tCO_2e	Over 20 years, based on renewable energy or efficiency gains
Avoided Climate-related Losses	$X million	E.g., flood damages, crop loss avoided due to adaptation
Improved Livelihoods / Income	$X million	E.g., through job creation or increased productivity
Health / Social Co-benefits	Qualitative and/or $ estimate	E.g., reduced air pollution, improved water access
Total Estimated Benefit	XX,XXX,XXX	Summary if possible

Economic Viability

Economic viability is demonstrated using several CBA metrics below:

- Net Present Value (NPV): $[If estimated]
- Benefit-Cost Ratio (BCR): [e.g., 2.1:1]
- Internal Rate of Return (IRR): [% optional]
- Discount Rate Used: [e.g., 6%]
- Time Horizon: [e.g., 20 years]
-

Sensitivity Analysis

When available and possible, include a discussion on how the CBA outcomes change with variations in key assumptions (e.g., energy prices, discount rates, project lifespan) through a sensitivity analysis. Details on how to present sensitivity analysis is provided in the case study in the next section.

Narrative Summary

It is important to summarize the expected delivery with a cost benefit ratio in the form of a statement. For example:

"The project is expected to deliver a total of approximately $45 million in quantifiable benefits over 20 years, compared to total estimated costs of $20 million, yielding a cost-benefit ratio of 2.25. This demonstrates strong value for money, particularly in reducing GHG emissions, increasing climate resilience in rural communities, and improving socio-economic outcomes. The analysis confirms that the intervention is economically sound and aligns with GCF's efficiency and effectiveness investment criteria."

4.3 Template

Cost Breakdown Template

Table 5.9 Cost breakdown template

Cost Component	Amount (USD)	Time Period	Description
Capital Expenditure (CAPEX)		Y1–Y2	Infrastructure, equipment, initial setup.
Operating Expenditure (OPEX)		Y3–Y20	Maintenance, staff, recurring costs.
Capacity Building & Training		Y1–Y5	Training, community engagement, technical support.
Monitoring & Evaluation (M&E)		Y1–Y20	Baseline, data systems, impact tracking.
Project Management & Admin		Y1–Y20	Coordination, logistics, salaries.
Contingency / Risk Buffer		Y1–Y20	For inflation, shocks, unexpected needs.
Total Project Cost	$		

Benefit Breakdown Template

Table 5.10 Benefit breakdown template

Benefit Category	Estimated Benefit	Unit / Value	Time Horizon	Valuation Method	Description/ Assumptions
GHG Emissions Reduction	XX,XXX tCO_2e	$X/$tCO_2e$	20 years	Social Cost of Carbon or carbon market value	Based on renewable energy or energy efficiency projections
Avoided Climate Losses	$X million	Monetary	20 years	Historical data, modeling	Flood protection, reduced crop loss, fewer disasters
Health Benefits	$X or Qualitative	DALYs or $	20 years	WHO or national health data	Reduced respiratory illnesses, waterborne disease
Increased Income / Productivity	$X	$/household/ year	15–20 years	Surveys or benchmarks	From new jobs, better yields, value chains
Time Savings	$X (optional)	Hours/year	20 years	Valued via wage proxies	E.g., improved access to water or markets
Ecosystem Services (if any)	$X or qualitative	-	20 years	Proxy values or avoided cost	Forest preservation, biodiversity, erosion control
Total Estimated Benefit	$				

4.4 Case study

The case study in Box 6 illustrates how climate finance can drive transformative change in the agriculture sector by replacing fossil fuel-dependent irrigation with solar-powered systems through a CBA. The CBA helps demonstrate strong economic viability and multiple co-benefits for smallholder farmers, including reduced emissions, increased productivity, and improved livelihoods, while delivering non-monetized benefits such as greater gender equality, time savings for education or income activities, and enhanced ecosystem health through zero-emission technology.

Box 6. Case study on developing CBA for a Concept Note in Senegal

Project Overview

Project Title: Scaling Up Solar-Powered Irrigation for Smallholder Farmers in the Senegal River Valley

Country: Senegal

Accredited Entity: West African Development Bank (BOAD)

GCF Focus: Climate Change Adaptation & Mitigation

Project Type: Medium-scale project

Duration: 6 years

To enhance climate resilience and reduce greenhouse gas emissions in the agricultural sector by replacing diesel-based irrigation systems with solar-powered alternatives for smallholder farmers.

Define Baseline and Project Scenario

Baseline: Farmers use diesel pumps for irrigation. High fuel cost, high emissions

With Project: Farmers shift to solar-powered irrigation. Higher upfront cost, lower operating cost, zero emissions.

Identification of Key Cost Items

Cost Item	Amount (USD)	Notes
Initial investment in solar systems	$12 million	Procurement, installation, training
Operation and maintenance (O&M) (6 years)	$1.2 million	Annual maintenance for all units
Project management and capacity building	$2 million	Institutional support, training, extension
Total Project Cost	$15.2 million	

Identification of Key Benefits

Benefit	Annual Value (USD)	Source / Justification
Fuel savings (diesel not used)	USD 2 million/ year	Estimated 2,000 farmers save USD 1,000/ year on diesel
Increased agricultural productivity	USD 1.5 million/ year	20% yield increase from improved irrigation
Carbon emission reduction (10,000 tCO_2/year)	USD 0.5 million/ year	Valued at USD 50 per tCO_2 (social cost of carbon)
Reduced maintenance/downtime costs	USD 0.3 million/ year	Solar pumps require less servicing
Total Annual Benefit	USD 4.3 million/ year	

Calculate Net Present Value (NPV) and Benefit-Cost Ratio (BCR)

- Discount rate: 6% (standard for climate projects)
- Time horizon: 10 years
- Net Present Value (NPV) ≈ USD 17.4 million
- Total Present Value of Costs (PVC) ≈ USD 15.2 million
- Benefit-Cost Ratio (BCR) = PV(Benefits) / PV(Costs) = 1.14
- Since BCR > 1, the project is economically viable.

Sensitivity Analysis

Variable Tested	Assumption Change	Impact on BCR
Carbon price drops to USD 25/tCO_2	Lower climate benefit	BCR reduces to 1.08
Yield increase only 10%	Lower productivity gain	BCR reduces to 1.01
Solar pump cost rises by 20%	Higher capex	BCR reduces to 0.95

Chapter 6 Stakeholder Considerations, Safeguards, and Risk Management

1 Participatory and Inclusive Design Approaches

1.1 Introduction

Participatory and Inclusive Design Approaches in the context of Green Climate Fund (GCF) Concept Note development refer to the intentional involvement of all relevant stakeholders, especially vulnerable, marginalized, and underrepresented groups, in the planning and design of climate projects from the earliest stages. Participatory and inclusive design is not just a procedural step as it is a foundational principle of climate justice and effective climate finance. It ensures that GCF-funded projects are more impactful, equitable, and resilient in the face of climate challenges.

Participatory and inclusive design ensures that the project is developed "with" and "for" the people it intends to serve, rather than being imposed top-down. This is aligned with the GCF's core values of country ownership, gender responsiveness, inclusivity, and stakeholder engagement. These approaches bring legitimacy where projects are more accepted and supported when communities are co-creators. They are effective where tailored interventions are more likely to succeed and address real climate challenges. They are sustainable where projects are more likely to be maintained post-funding. They are GCF-compliant where projects must meet GCF investment criteria.

In GCF Concept Notes, participatory and inclusive design is not just good practice, it is required. The GCF expects Concept Notes to demonstrate early and meaningful stakeholder engagement, indicate how the project addresses the needs of vulnerable groups, and include strategies for ensuring ongoing participation and inclusion throughout the project lifecycle.

Participatory and inclusive design also contributes to project realities connected to GCF Sectoral Guides' Summaries[35] and the GCF Strategic Plan 2024 – 2027,[36] which has been prioritized in the new GCF Concept Note format.

1.2 Development of Participatory and Inclusive Design Approaches

Developing Participatory and Inclusive Design Approaches in a GCF Concept Note involves a structured, transparent, and inclusive process that actively involves stakeholders (especially vulnerable groups) throughout the project planning stage. The following step-by-step guide can assist in developing Participatory and Inclusive Design Approaches in a GCF Concept Note.

Stakeholder Mapping and Analysis

First, it is important to start with identifying all relevant stakeholders. Listed below are stakeholders that are commonly involved, but not limited to, in designing a Concept Note and Funding Proposal :

- Government institutions (national, sub-national)
- Local communities

35 GCF. (2022). Sectoral Guides Summaries. *Sectoral Guide Series*. Yeonsu: Green Climate Fund.

36 GCF. (2023). Strategic Plan for the Green Climate Fund 2024 – 2027. *Decisions of the Board – thirty sixth meeting of the board, 10 – 13 July 2023*. Yeonsu: Green Climate Fund.

- Indigenous Peoples
- Women's groups and gender experts
- Youth, elderly, and persons with disabilities
- NGOs, CSOs, and private sector entities

These stakeholders have their own interests, influence, vulnerabilities, and capacities. It is important to identify and analyze these factors to help with stakeholder mapping. To analyze these factors, tools like stakeholder matrices can be used to identify stakeholders, analyze their interests, influence and impact, and prioritize engagement strategies based on that analysis. Tools to analyze and map stakeholder interactions are commonly used in project management and organizational planning. Figure 6.1 illustrates the steps in mapping and analyzing a stakeholder matrix. There are two main types of stakeholder matrices:

- Power/Interest Grid

Despite being one of the most commonly used stakeholder analysis matrices, power/interest grids prove successful in many cases. It plots stakeholders on two axes: 1) Power: Stakeholders' ability to influence the project, and 2) Interest: Stakeholders' level of concern about the project's outcomes

- Influence/Impact Matrix

The influence/impact matrix is useful when the analysis is aiming to focus on 1) Influence: The extent to which stakeholders can affect project implementation, and 2) Impact: How much the project affects stakeholders

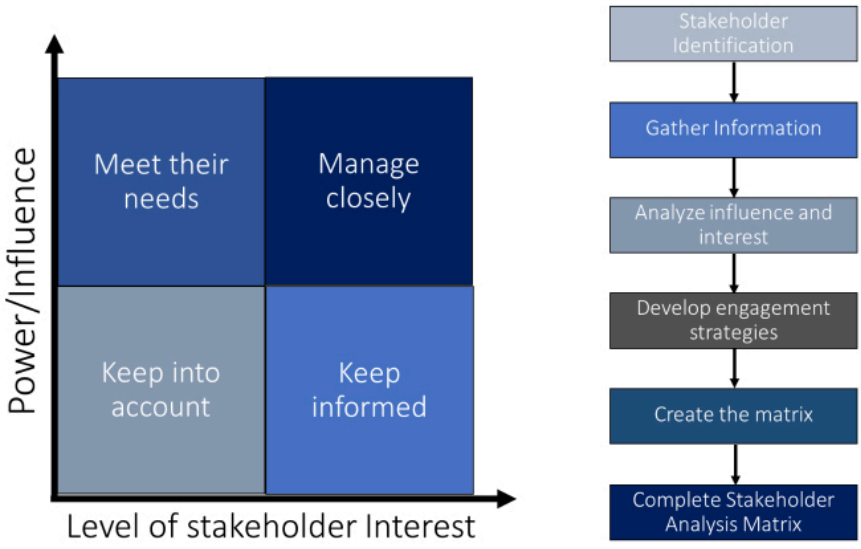


Figure 6.1 Creating the Stakeholder Analysis Matrix and Power/Interest Grid

Consult with Stakeholders

After stakeholders are identified, the project developer needs to organize inclusive consultations, preferably at the concept stage. These consultations can be conducted:

- In the form of community meetings, focus groups, interviews, and surveys.
- Ensuring gender balance and inclusion of marginalized voices.
- Using culturally appropriate methods (local languages, visual tools).

In addition, it is important to apply Free, Prior, and Informed Consent (FPIC) principles when there are potential activities where Indigenous Peoples are affected. FPIC is a key principle in international human rights law, particularly related to the rights of Indigenous Peoples. It ensures that communities have the right to give or withhold consent to projects that may affect them or their territories. In projects that require an FPIC, it is critical to document concerns, suggestions, and priorities raised during the process.

Integrate Social and Gender Analysis

Conducting a gender and social inclusion analysis is a critical step in designing equitable climate projects. This involves two key steps:

- Identify differentiated impacts of climate change.
- Assess barriers to participation and access to project benefits.

The insights gained from this analysis should inform the development of gender-responsive and socially inclusive project interventions. To ensure these considerations are embedded from the outset, a Gender Action Plan (GAP) should be included in the Concept Note. While the GCF formally requires the GAP at the Full Proposal stage, early integration during the Concept Note phase is strongly encouraged.

Co-Design Project Activities and Outputs

Incorporating stakeholder feedback is essential to ensure that climate projects are responsive to local needs and contexts. Engaging stakeholders helps to:

- Define objectives and outcomes that meet local needs.
- Ensure that adaptation/mitigation activities are culturally and socially relevant.
- Prioritize locally-led solutions and nature-based approaches.

In addition, to strengthen project effectiveness and adaptability, feedback loops and iterative design methods should be embedded throughout the project cycle.

Develop an Inclusive Implementation and Governance Plan

Establishing transparent governance structures is crucial for the credibility and effectiveness of climate projects. These structures should include representation from all stakeholders to ensure inclusive decision-making and accountability. Clearly defining the roles and responsibilities of all

actors, particularly communities and local organizations, helps build trust and clarity throughout the project lifecycle. In addition, plans should be in place for ongoing stakeholder engagement, the establishment of accessible grievance redress mechanisms, and sustained capacity-building efforts to support long-term project success and local ownership.

Document the Approach in the Concept Note

In Section C.3 of the GCF Concept Note template (Country Ownership and Engagement with Stakeholders), the proponent should include the information below:

- Description of the consultation process and participants.
- Overview of how feedback was incorporated.
- Social/gender risks and mitigation measures.

To strengthen the credibility and integrity of this section, annexes should include supporting documentation such as stakeholder analysis, gender analysis, consultation reports, and engagement or participation plans, where available.

Align with GCF Policies

To ensure coherence and eligibility, project proposals should align with key GCF policies and national climate strategies. This includes adherence to the GCF Gender Policy and Action Plan,[37] the GCF Indigenous Peoples Policy,[38] and the GCF Environmental and Social Policy,[39] all of which promote equity, inclusion, and sustainability in project implementation. Additionally, proposals should be aligned with the country's Nationally Determined Contributions (NDCs) and National Adaptation Plan (NAP) to ensure that the project supports national climate priorities and contributes to long-term resilience and low-emission development goals.

37 GCF. (2019). Gender Policy. Retrieved from the website: https://www.greenclimate.fund/document/gender-policy

38 GCF. (2018). Indigenous Peoples Policy. Retrieved from the website: https://www.greenclimate.fund/document/indigenous-peoples-policy.

39 GCF (2018). Environmental and Social Policy. Retrieved from the website: https://www.greenclimate.fund/document/environmental-and-social-policy.

1.3 Template

The following template format can be used in tailoring Participatory and Inclusive Design Approaches for the GCF Concept Note as a required good practice.

Introduction and Rationale

The introduction should briefly explain why participatory and inclusive design is essential for the specific project. For example, participatory and inclusive design:

- Promotes sustainability and ownership.
- Aligns with GCF Environmental and Social Safeguards (ESS).
- Enhances gender equality, Indigenous rights, and vulnerable group inclusion.

Stakeholder Identification and Mapping

Stakeholder identification and mapping is a foundational step in ensuring inclusive and effective project design. Explicitly state the objective, tools, and output from the analysis. For example:

- Objective: Identify all relevant stakeholders, especially affected or marginalized groups.
- Tools: Stakeholder matrix (Power/Interest or Influence/Impact grid), social mapping or community mapping tools.
- Output: List/table of stakeholders, including name/group, role/interest, influence level, vulnerability level, preferred engagement methods.

Engagement Strategy and FPIC

An effective engagement strategy aims to ensure meaningful and inclusive participation of all stakeholders throughout the project lifecycle. It is important to explicitly state the objective, key elements, and activities engaging stakeholders. For example:

- Objective: Ensure meaningful and inclusive participation throughout the project lifecycle.
- Key Elements: Free, Prior, and Informed Consent (FPIC) which is required for Indigenous Peoples and other affected groups. Gender-Responsive Planning: Apply gender analysis and ensure that women are active participants. Include youth, the elderly, persons with disabilities, and other vulnerable groups.

Engagement Activities:

Phase	Activity	Target Group	Method	Frequency
Concept Development	Focus groups	Indigenous women	In-person workshops	Once
Design	Validation meetings	Local government and CSOs	Town halls, online surveys	Bi-monthly
Implementation	Monitoring committee	Community members	Participatory monitoring	Quarterly

Capacity Building

Capacity building is essential to enable informed participation and promote equitable power-sharing among stakeholders. It is important to explicitly state the objective and actions planned to build capacity to support the implementation of the project. For example:

- Objective: Enable informed participation and equitable power-sharing.
- Actions: Pre-engagement orientation sessions. Training for community representatives on climate finance, safeguards, and project scope. Language and translation support.

Documentation and Feedback Mechanisms

Documentation and feedback mechanisms are critical for ensuring transparency, accountability, and adaptive learning throughout the project. It is important to explicitly state objectives and mechanisms to ensure that documentation and feedback mechanisms are executed. For example:

- Objective: Ensure transparency and adaptive learning.
- Mechanisms: Meeting minutes and attendance records. Feedback logbooks. Grievance redress mechanism (GRM) accessible to all stakeholders. Iterative consultations and mid-term reviews.

Integration into Project Design

The integration of stakeholder input into project design is essential to ensure relevance, ownership, and effectiveness. It is important to explicitly state the objective and methods to ensure the integration of feedback from stakeholders into projects. For example:

- Objective: Ensure transparency and adaptive learning. Reflect stakeholder input into project design and activities.
- Method: Integrate recommendations into project LogFrame, budget, and risk assessments. Highlight changes made in response to consultations.

Monitoring and Evaluation (M&E)

Monitoring and Evaluation (M&E) of stakeholder engagement ensures that participation remains effective, inclusive, and aligned with project goals. It is important to explicitly state the objectives and indicators applied to track the M&E process. For example:

- Objective: Track effectiveness and inclusivity of participation.
- Indicators (examples): Percentage of stakeholders reporting satisfaction with engagement process. Number of women/Indigenous Peoples involved in decision-making bodies. FPIC obtained and documented.

Annexes

Some key supporting documents that demonstrate the project's commitment to inclusive and transparent stakeholder engagement can also be included in the annex. For example:

- Stakeholder engagement plan.
- FPIC documentation.
- Gender action plan.
- M&E framework with inclusive indicators.

1.4 Case study

This case study in

Box 7 below illustrates how to use the participatory and inclusive approaches template above in a GCF-funded climate resilience project in coastal Bangladesh. The case study highlights strategies used to ensure meaningful engagement of marginalized groups, including Indigenous Peoples and women, from early consultation stages to final project design.

Box 7. Case study on developing a participatory and inclusive statement for a GCF Concept Note

Case study: Designing a Participatory and Inclusive Approach for a GCF Climate Resilience Project in Coastal Bangladesh

Project Overview
Title: Enhancing Climate Resilience in Coastal Livelihoods of Bangladesh
Accredited Entity: United Nations Development Programme (UNDP)
Country: Bangladesh
Funding Type: GCF Grant
Sector: Climate-resilient agriculture and infrastructure
Target Communities: Smallholder farmers, fishers, households where women are the head of the family, and Indigenous Chakma communities.

Context and Need for Participation
Coastal Bangladesh is highly vulnerable to climate-induced flooding and cyclones. The livelihoods of rural and Indigenous communities are at risk, especially women and marginalized groups with limited access to decision-making.
A participatory approach is necessary to:

- Ensure community ownership of adaptive infrastructure.
- Design gender-responsive livelihood strategies.
- Secure Free, Prior, and Informed Consent (FPIC) from Indigenous communities.

Stakeholder Mapping and Analysis
A stakeholder matrix was developed through local consultations, identifying:

Stakeholder Group	Influence	Interest	Role/Engagement Level
Indigenous Chakma leaders	Medium	High	FPIC required; cultural insights
Local women's cooperatives	Low	High	Livelihood programme co-design
Municipal authorities	High	Medium	Implementation partners
NGOs and CSOs	Medium	High	Facilitation and monitoring

Community Consultations and FPIC Process

Engagement Process:

- 12 community meetings across 4 districts (gender-segregated sessions included).
- Materials translated into Bangla and Chakma dialect.
- Childcare, meals, and transportation provided to reduce barriers to participation.

FPIC Documentation:

- Meeting minutes and audio records kept.
- Community resolutions signed by Indigenous councils after a 30-day deliberation period.
- Consent granted with specific conditions (e.g., buffer zones around sacred lands).

Inclusion of Vulnerable Groups

Gender Integration:

- A rapid gender assessment identified key constraints.
- Financial savings groups led by women were consulted to shape the design of microfinance and capacity-building components.
- Gender Action Plan (GAP) included targets for female leadership and income diversification.

Inclusion of Persons with Disabilities:

- Site visits ensured climate shelters would be wheelchair-accessible.
- Local disability rights organizations reviewed infrastructure designs.

Capacity Building

Community workshops on climate risk and adaptation options.
Indigenous youth trained as local data collectors and monitors.
Government and CSO partners trained in participatory M&E and inclusive facilitation.

Feedback and Grievance Mechanism

SMS-based feedback system established (low literacy-friendly).
Grievance committees formed with diverse representation (50% women).
Issues resolved at the community level or escalated to project management board.

Monitoring and Learning

Indicators Tracked:

Percentage of gender-balanced consultations.
Number of design changes made based on community feedback.
Number of participants reporting satisfaction with participation process.

Learning Integration:

Annual review meetings with stakeholder representatives.
Mid-term evaluation recommended increased Indigenous involvement in procurement decisions.

Results and Outcomes

Final project design reflected input from 87% of identified stakeholder groups.
Livelihood models were co-designed with women, resulting in 30% increase in income diversification.
FPIC strengthened trust, avoiding delays and opposition.

Key Lessons Learned

Early and repeated engagement is crucial for meaningful participation.
Translation, time allowances, and cultural sensitivity are essential for FPIC.
Inclusion is not just about attendance—decision-making power must be shared.
Feedback loops help communities see that their voices shape the project.

2 Gender and Social Inclusion

2.1 Introduction

Gender and Social Inclusion (GSI) in the development of GCF Concept Notes refers to the deliberate and systematic integration of gender equality and the inclusion of marginalized or vulnerable groups in the design, planning, implementation, and monitoring of climate projects submitted to the GCF. Marginalized or vulnerable groups usually consist of, but are not limited to, women, Indigenous Peoples, youth, persons with disabilities, and the poor. GSI is a vital component in the development of GCF Concept Notes, as it ensures that climate actions are equitable, effective, and sustainable. Climate change impacts are not experienced equally with women, Indigenous Peoples, youth, persons with disabilities, and other marginalized groups often face greater vulnerability and fewer opportunities to adapt or respond.

Integrating GSI into the development of Concept Notes helps guarantee that these groups are not only protected but also actively benefit from climate finance through improved access to resources, technology, decision-making, and capacity-building opportunities. Incorporating gender and social perspectives also enhances the effectiveness of climate interventions. Projects that are inclusive of diverse voices and experiences tend to result in more innovative, contextually relevant, and sustainable solutions. Furthermore, the GCF requires adherence to its Gender Policy and Indigenous Peoples Policy, which call for robust gender and social analysis, meaningful stakeholder engagement, and the integration of gender-responsive indicators and actions. Ignoring these requirements can lead to significant delays or rejection of the Concept Note.

Beyond compliance, addressing GSI supports transformational change by challenging existing power imbalances and embedding equity into climate actions. It ensures that the benefits of climate finance do not reinforce or exacerbate social inequalities but instead contribute to more just and resilient communities. Moreover, incorporating GSI allows for better monitoring and accountability through the use of disaggregated data and inclusive indicators that help track the differentiated impacts of interventions. In essence, GSI is not just a procedural obligation but a strategic and moral imperative that strengthens the overall quality and impact of GCF-financed projects.

Gender and Social Inclusion and Participatory and Inclusive Approaches

Gender and Social Inclusion defines who should be prioritized and why, while participatory and inclusive design provides the how. Together, they promote climate justice, empower underrepresented voices, and improve the effectiveness and sustainability of climate actions.

They are not separate frameworks but mutually reinforcing lenses for the development of inclusive, transformative projects.

2.2 ntegrating Gender and Social Inclusion into the GCF Concept Note

Below is a detailed guide to integrating Gender and Social Inclusion (GSI) into a GCF Concept Note, aligned with GCF requirements and best practices.

Step 1: Conduct a Preliminary Gender and Social Inclusion Analysis

A strong foundation for an inclusive and equitable climate project begins with a thorough understanding of the social and gender context in which it will be implemented. This step focuses on conducting a preliminary gender and social inclusion analysis to identify differentiated vulnerabilities, barriers, and capacities across diverse groups.

- Objective: Understand the context-specific gender and social dynamics in the project area.
- Actions:
  - Collect sex, age, disability, and ethnicity disaggregated data.
  - Identify vulnerable groups (e.g., women, Indigenous Peoples, persons with disabilities, youth, elderly).
  - Examine existing power relations, access to resources, decision-making roles, and climate vulnerabilities.
  - Review national gender and inclusion policies, climate strategies, and legal frameworks.
- Output: A concise summary on the analysis of gender and social inclusion for inclusion in "B.: Proposal Executive Summary" in the Concept Note template.

Step 2: Identify Gender and Social Inclusion Issues Relevant to the Climate Problem

This step focuses on linking gender and social dimensions directly to the climate problem. This helps ensure that the Concept Note clearly reflects who is most affected, what barriers exist, and how inclusive solutions can enhance resilience.

- Objective: Link gender and social dimensions directly to the climate challenge your project addresses.
- Actions:
  - Identify how climate change disproportionately affects specific social groups.
  - Analyze barriers that hinder participation in climate solutions (e.g., limited land rights for women, cultural constraints, lack of access to finance).
  - Highlight traditional knowledge or roles that can enhance resilience.
- Output: Justification in the "C.1: Climate Change Context" and "Baseline" sections of the Concept Note.

Step 3: Design Inclusive Project Interventions

This step helps to ensure that project interventions actively address identified gender and social inequalities. By designing targeted and inclusive activities, the project can deliver equitable benefits and enable meaningful participation across all stakeholder groups.

- Objective: Ensure that the proposed activities address identified inequalities and promote inclusive benefits.
- Actions:
  - Design targeted interventions (e.g., women-led climate-smart agriculture, training for youth and persons with disabilities).
  - Include measures to reduce social and gender-specific barriers (e.g., inclusive finance, childcare support, FPIC for Indigenous Peoples).
  - Ensure access to climate technologies, jobs, and decision-making.

- Output: Clearly describe inclusive project activities in the "C.2: Proposed Project/Programme" section.

Step 4: Engage Stakeholders Inclusively

This step emphasizes inclusive stakeholder engagement to ensure all social groups have a voice in the project. Mapping and consultations must be designed to be accessible, culturally appropriate, and representative of diverse perspectives throughout the project lifecycle.

- Objective: Ensure meaningful participation of all social groups throughout the project lifecycle.
- Actions:
  - Map stakeholders using a gender and social lens.
  - Ensure engagement processes are inclusive, accessible, and culturally appropriate.
  - Conduct consultations with women's groups, Indigenous organizations, and local leaders.
- Output: Describe this process in the "C.3: Country Ownership and Engagement with Stakeholders" section of the Concept Note.

Step 5: Incorporate Gender-Responsive Indicators

This step focuses on incorporating gender-responsive indicators to track progress on inclusion and equity. Disaggregated data and tailored indicators help measure how effectively the project benefits diverse groups and informs adaptive management.

- Objective: Measure and track gender and social inclusion outcomes.
- Actions:
  - Develop outcome and output indicators disaggregated by sex, age, and other relevant social categories.
- Examples:
  - Percentage of women with improved access to climate-resilient livelihoods.
  - Number of persons with disabilities participating in project activities.
  - Number of gender-responsive policies.
- Output: Include in "Expected Results" in the broader Logical Framework and Theory of Change alongside "Monitoring and Evaluation" sections.

Step 6: Address Environmental and Social Safeguards

This step ensures that environmental and social safeguards are in place to protect vulnerable groups from potential project risks. This includes early risk screening, alignment with GCF policies, and establishing inclusive grievance mechanisms.

- Objective: Minimize potential negative impacts on vulnerable groups.
- Actions:
  - Conduct a preliminary social risk screening.
  - Ensure alignment with GCF's Environmental and Social Policy and Indigenous Peoples Policy.
  - Describe grievance mechanisms that are gender-sensitive and culturally appropriate.
- Output: Address in the "C.4: Indicative safeguards profile" section of the Concept Note.

Step 7: Develop a Gender and Social Inclusion Action Plan

This step involves developing a Gender and Social Inclusion (GSI) Action Plan to guide the implementation of inclusion measures. While optional at the Concept Note stage, it is recommended as a roadmap outlining key activities, responsibilities, timelines, and indicators to support inclusive project delivery.

- Objective: Lay out a roadmap for implementing GSI measures.
- Actions:
  - List key activities, responsibilities, timelines, and indicators for gender and inclusion actions.
  - Align with the full proposal development process later on.
- Output: Attach as a supplementary annex or refer to it during planning and implementation stages.

In Table 6.1 below, we illustrate the outline of a basic GSI action plan containing list of key activities, responsibilities, timelines, and indicators for gender and inclusion actions.

Table 6.1 Overview of a basic Gender and Social Inclusion (GSI) Action Plan

Key Activity	PIC (Responsibilities)	Timeline	Indicator
Conduct gender and social inclusion assessment, including analysis of climate vulnerability and access to resources	Accredited Entity (AE) with Gender Specialist	Project Preparation (Months 1–2)	GSI assessment report completed and submitted
Ensure inclusive stakeholder consultation, including women, youth, Indigenous Peoples, and vulnerable groups	NDA / AE / Local Partner	Project Design Phase	Number of consultations held; % of participants disaggregated by sex and group
Integrate GSI findings into project design and Theory of Change	AE technical team	Concept Note Finalization	GSI considerations reflected in LogFrame and activities
Develop and approve project-level GSI Action Plan	AE + Gender Specialist + National Partners	By submission of Funding Proposal	Action Plan attached; roles and budgets clearly allocated
Provide gender and inclusion training to project staff and implementing partners	AE / Local Executing Entities	Pre-implementation phase	Number of staff trained; pre/post-training feedback collected
Establish feedback and grievance redress mechanisms accessible to all groups	Executing Entity	Early implementation	GSI-sensitive mechanism operational; records of usage disaggregated
Monitor implementation of GSI activities and update action plan as needed	AE M&E Team	Throughout implementation	Progress reports submitted; indicators tracked (sex- and group-disaggregated)

Source: Adapted from GCF Gender Policy and Action Plan 2020–2023.

Step 8: Align with GCF Policies and Strategic Plans

This step ensures the Concept Note is fully aligned with GCF's mandatory policies and strategic guidance.

- Objective: Ensure compliance with mandatory GCF policies.
- Actions:
  Demonstrate how the Concept Note aligns with:

  – GCF Gender Policy[40]
  – GCF Indigenous Peoples Policy[41]
  – GCF Environment and Social Policy[42]
  – GCF Strategic Plan 2024 – 2027[43], where GSI principles valued as both a strategic value and operational principle and are featured throughout such as commitment on inclusive climate action; equity and gender responsiveness in programming; stakeholder engagement and inclusive innovation; institutional priorities in gender and safeguards; operationally embedded access measures;
  – GCF Sectoral Guides[44], where GSI is integrated in key ways such as sector-wide commitment to equity and gender; inclusive innovation and knowledge; adaptation sector locally led and inclusive approaches; private sector engagement with inclusive lens;
- Output: Reference these in the "Policy Alignment" section or where applicable.

40 GCF. (2019). Gender Policy. Retrieved from the website: https://www.greenclimate.fund/document/gender-policy.

41 GCF. (2018). Indigenous Peoples Policy. Retrieved from the website: https://www.greenclimate.fund/document/indigenous-peoples-policy.

42 GCF (2018). Environmental and Social Policy. Retrieved from the website: https://www.greenclimate.fund/document/environmental-and-social-policy.

43 GCF. (2023). Strategic Plan for the Green Climate Fund 2024 – 2027. *Decisions of the Board – thirty sixth meeting of the board, 10 – 13 July 2023*. Yeonsu: Green Climate Fund.

44 GCF. (2022). Sectoral Guides Summaries. *Sectoral Guide Series*. Yeonsu: Green Climate Fund.

2.3 Template

The following Table 6.2 provides a comprehensive and simple template for Gender and Social Inclusion (GSI) in the context of GCF Concept Note.

Table 6.2 Gender and Social Inclusion Template

Section	Content
Context and Analysis	Briefly describe gender and social context in the project area. *Example*: Women have limited land rights and access to finance; Indigenous Peoples face exclusion from planning processes; youth lack climate-related employment opportunities.
Key Barriers	List key gender and inclusion-related challenges. *Example*: Low representation in decision-making; cultural norms restricting participation; lack of inclusive climate data.
Inclusive Project Activities	Summarize how the project will address these issues. *Example*: Establish women-led climate adaptation groups; conduct accessible training for persons with disabilities; ensure FPIC with Indigenous Peoples.
Stakeholder Engagement Strategy	Describe how the project will engage underrepresented groups. *Example*: Conduct separate consultations for women and Indigenous groups using local languages and inclusive formats.
Indicators (Disaggregated)	Include 2–4 key indicators with disaggregation. *Example*: • Percentage of project beneficiaries who are women • Number of Indigenous participants in planning • Percentage of trained youth applying new climate skills
Policy Alignment	State alignment with GCF policies. *Example*: The project aligns with the GCF Gender Policy and Indigenous Peoples Policy through inclusive design, equitable benefit sharing, and safeguards. For further reading, visit the GCF Gender Policy and UN IANWGE: GCF Gender Policy: https://www.greenclimate.fund/document/gender-policy UN IANWGE Gender Analysis Toolkit https://www.unwomen.org/en/digital-library/publications/2025/07/ianwge-intersectionality-informed-gender-analysis-toolkit

2.4 Case study

The following case study in Box 8 illustrates how to operationalize the template above to showcase facets of gender and social inclusion that are systematically integrated into a climate-smart agriculture project in Nepal's Terai region. It highlights participatory design strategies that addressed the specific needs of women, Indigenous Tharu communities, and landless Dalits to ensure equitable and resilient outcomes.

Box 8. Case study on developing a participatory and inclusive statement for a GCF Concept Note

Project Overview
Title: **Building Resilient Livelihoods through Climate-Smart Agriculture and Inclusive Ecosystem Management in the Terai Region of Nepal**
Accredited Entity: International Fund for Agricultural Development (IFAD) – in partnership with a Nepalese Direct Access Entity (DAE)
Context & Rationale: The Terai region in southern Nepal is highly vulnerable to climate variability, particularly to droughts, floods, and monsoons. The region is home to smallholder farmers, many of whom are women, members of the Indigenous Tharu communities, and landless Dalits who lack access to resources and decision-making.

Gender and Social Analysis Findings:
- Women are responsible for over 70% of agricultural labor but own less than 10% of land.
- Indigenous Tharu communities rely on forests and wetland ecosystems and are often excluded from policy processes.
- Dalits and landless workers face systemic discrimination and limited mobility.
- Access to climate information is not tailored to the needs of non-literate or marginalized communities.

GSI Actions Integrated in the Concept Note
Stakeholder Engagement:
- Separate consultations held with women's farmer groups, Tharu community leaders, and Dalit youth cooperatives.
- Translation into local dialects and use of visual materials ensured accessibility.
- Free, Prior, and Informed Consent (FPIC) obtained from Indigenous stakeholders.

Inclusive Project Design:
- Creation of women-led agro-cooperatives trained in climate-smart techniques and market access.
- Introduction of community seed banks managed jointly by women and Indigenous leaders.
- Customized early warning systems with voice messaging in local languages for non-literate users.

Capacity Building:
- Training 3,000 women, Indigenous farmers, and persons with disabilities on climate-resilient agricultural practices and financial literacy.

– Gender awareness and anti-discrimination training for extension workers.

Safeguards and Risk Management:

– Screening of social risks identified potential exclusion and gender-based violence.
– GCF-aligned grievance redress mechanism established with safe, anonymous reporting for women and marginalized individuals.

GSI Results Framework (Examples)

Indicator	Target
% of direct beneficiaries who are women	60%
# of Indigenous and Dalit community members trained in CSA	1,500
% of leadership roles in project committees held by women	50%
% of households with access to gender-sensitive early warning info	80%

Alignment with GCF Policies

Gender Policy: Promotes women's empowerment and gender-responsive design.
Indigenous Peoples Policy: Ensures FPIC and culturally appropriate engagement.
Environmental and Social Policy: Addresses vulnerability, inclusion, and equitable outcomes.

Outcome

The Concept Note was positively received by the GCF Secretariat due to its:

– Strong GSI analysis and community participation,
– Concrete and measurable gender/social indicators,
– Alignment with national NAP and gender strategies.

It advanced to the Full Funding Proposal development stage with technical support from the GCF Readiness Programme.

3 Environmental and Social Safeguards

3.1 Introduction

Environmental and Social Safeguards (ESS) in the GCF Concept Note development process refers to the policies, standards, and procedures designed to ensure that GCF-financed projects do not cause harm to people or the environment, and ideally, contribute positively to environmental sustainability and social equity. ESS in GCF are a set of principles and risk management tools used to prevent and mitigate environmental and social harm during project planning and implementation, promote sustainable development outcomes and ensure that activities are inclusive, participatory, equitable, and respect the rights of affected people.

When developing a GCF Concept Note, Environmental and Social Safeguards are considered at an early stage to identify environmental and social risks which is used to assess the proposed project's potential impacts on the environment and society.

Role of ESS in the Development of the GCF Concept Note

When developing the GCF Concept Note, the Environmental and Social Safeguards (ESS) play a crucial role in identifying and managing potential risks associated with project activities. Projects are classified into three risk categories:

- Category A for high-risk projects with potentially significant adverse environmental and social impacts;
- Category B for medium-risk projects with limited, site-specific impacts that are largely reversible; and
- Category C for low or no-risk projects with minimal or no adverse impacts.

Proper ESS categorization helps determine the level of assessment and mitigation required, ensuring that risks are addressed early in project design.

Determine ESS Requirements:

Once the project's ESS risk category is identified, the next step is to determine the specific safeguard requirements for the Full Funding Proposal. Depending on the risk level, this may include conducting an Environmental and Social Impact Assessment (ESIA), preparing an Environmental and Social Management Plan (ESMP), or applying other appropriate safeguard tools. These measures ensure that environmental and social risks are effectively assessed, managed, and monitored throughout the project lifecycle.

Ensure Stakeholder Engagement and Disclosure:

To meet GCF requirements, project developers must ensure meaningful stakeholder engagement throughout the project design process, particularly with affected communities, women, Indigenous Peoples, and other vulnerable groups. ESS must also align with the host country's national and local environmental and social regulations. In the GCF Concept Note template, developers will use Section C.4 "Indicative Safeguards Profile" to outline potential environmental and social risks, specify the anticipated risk category based on the criteria explained in the previous section (A, B, or C), and describe the assessments or management plans to be prepared for the full proposal.

This section should also explain how ESS will be integrated into project design and implementation. ESS is closely linked with Gender and Social Inclusion (GSI), Free, Prior and Informed Consent (FPIC), participatory design approaches, climate resilience, and alignment with the Sustainable Development Goals (SDGs). Table 6.3 below contains the summary of ESS that need to be included in a GCF Concept Note.

Table 6.3 Summary of Environmental and Social Safeguards in GCF Projects

Component	Description
Purpose	Avoid, minimize, and manage harm to people and the environment
Framework Used	IFC Performance Standards (interim)
Risk Categories	A (high), B (medium), C (low)
Linked to	GSI, stakeholder engagement, safeguards plans, national laws
Required in CN	Risk identification, categorization, and safeguards approach
Tools	ESIA, ESMP, stakeholder consultation plan, FPIC process

Environmental and Social Safeguards (ESS) and Gender and Social Inclusion (GSI) in GCF Concept Note (CN) development

The link between Environmental and Social Safeguards (ESS) and Gender and Social Inclusion (GSI) in the development of the GCF Concept Note (CN) is both complementary and reinforcing. Together, they ensure that projects do no harm to people or ecosystems, are inclusive and equitable, and deliver climate benefits while respecting human rights and reducing inequalities. Table 6.4 below illustrates how ESS and GSI linked in developing a GCF Concept Note.

Table 6.4: How ESS and GSI are linked in GCF CN development

Aspect	Environmental and Social Safeguards (ESS)	Gender and Social Inclusion (GSI)	How They Link
Objective	Prevent, minimize, or mitigate harm to people and the environment.	Ensure equitable access, participation, and benefit-sharing, especially for women and vulnerable groups.	Both seek to protect rights and promote fair outcomes.
Approach	Risk-based (assess impacts and manage risks).	Equity-based (identify inequalities and address them).	Together they guide safeguard planning and inclusive design.
Tools Used	Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), Stakeholder Engagement Plan.	Gender Analysis, Gender Action Plan, Social Inclusion Analysis.	GSI tools inform ESS tools, especially in identifying social risks and exclusion.

Aspect	Environmental and Social Safeguards (ESS)	Gender and Social Inclusion (GSI)	How They Link
Stakeholder Engagement	Focuses on affected communities, Indigenous Peoples, labor rights.	Focuses on inclusive engagement of women, youth, elderly, persons with disabilities, poor, marginalized groups.	Shared process of meaningful, inclusive, and participatory engagement.
Risk and Opportunity	Identifies risks to vulnerable ecosystems and people.	Highlights social vulnerability and risks of exclusion.	GSI is integral to identifying and mitigating social risks under ESS.
Policy Mandate	GCF Interim ESS Standards (IFC-based)[45].	GCF Gender Policy and Action Plan[46].	Both are required components of CNs and Full Funding Proposals.

For example, a GCF project focused on renewable energy infrastructure might raise ESS concerns related to the resettlement of local communities. From a GSI perspective, women in the affected area could lose access to informal livelihoods like small-scale farming and may face unequal compensation unless gender considerations are explicitly addressed. An integrated response would involve embedding gender analysis within the ESS process, actively involving women in consultations, and designing compensation and livelihood restoration measures that are gender-responsive and socially inclusive.

3.2 Integrating Environmental and Social Safeguards into the GCF Concept Note

The following steps function as a guide for developing Environmental and Social Safeguards (ESS) for a GCF Concept Note.

Step 1: Understand the GCF's ESS Framework

Review the GCF's interim ESS standards, which are based on the IFC Performance Standards. The project developer also needs to be familiar with GCF Environmental and Social Policy,[47] GCF Gender Policy,[48] and project risk categories (A, B, C).

45 IFC. (2012). Performance Standards on Environmental and Social Sustainability. Retrieved from the website: https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards

46 GCF. (2019). Gender Policy. Retrieved from the website: https://www.greenclimate.fund/document/gender-policy

47 GCF (2018). Environmental and Social Policy. Retrieved from the website: https://www.greenclimate.fund/document/environmental-and-social-policy

48 GCF. (2019). Gender Policy. Retrieved from the website: https://www.greenclimate.fund/document/gender-policy

Step 2: Identify Environmental and Social Risks and Impacts

Screen the proposed activities for potential environmental and social impacts (positive and negative).

Consider the factors below in screening proposed activities:

- Land use and natural resource impacts.
- Resettlement or displacement.
- Impacts on Indigenous Peoples.
- Labor and working conditions.
- Pollution and waste.
- Cultural heritage.

Step 3: Assign Risk Category

Based on the understanding of the GCF ESS framework and ESS risk and impacts, classify the project according to GCF risk categories below.

Table 6.5 GCF project risk categories

Category	Description
A	High risk: Likely significant adverse environmental and social impacts
B	Medium risk: Limited adverse impacts, site-specific
C	Low or no risk: Minimal/no adverse impacts

It is important to note that assigning ESS category is required in the Concept Note Template, Section C.4. Indicative safeguards profile.

Step 4: Engage Stakeholders

To ensure that the project reflects diverse perspectives and addresses potential concerns, it is critical to engage stakeholders early and meaningfully. The factors that project developers need to pay attention to in engaging stakeholders are:

- Identify key stakeholders, especially vulnerable groups.
- Conduct early consultations to gather input and identify potential concerns.
- Ensure free, prior, and informed consent (FPIC) where Indigenous Peoples may be affected.
- Evidence of engagement should be noted in the GCF CN and built upon in the full proposal with the help of Participatory and Inclusive Approaches.

Step 5: Integrate Gender and Social Inclusion

To integrate GSI into the ESS process, the project developer needs to pay attention to elements such as:

- Conducting a preliminary gender and social inclusion analysis alongside the ESS.
- Identifying how environmental and social risks may disproportionately affect women, Indigenous Peoples, youth, persons with disabilities, etc.

- Planning for gender-responsive and inclusive safeguards.
- Linking the above with ESS with the Gender Action Plan.

Step 6: Propose Mitigation Measures

Proposing mitigation measures in the early design phase can help with project planning. In proposing initial mitigation measures to address identified environmental and social risks, the project developer needs to:

- Outline initial measures or strategies to mitigate identified risks, including: commitment to developing an Environmental and Social Management Plan (ESMP) or Environmental and Social Impact Assessment (ESIA) during the full proposal stage, indications of grievance redress mechanisms, institutional arrangements for monitoring safeguards.
- Keep these as a high-level summary, since the Concept Note is an early-stage document.

Step 7: Fill in the Concept Note ESS Section (Section C.4)

Use the identified information in the steps above to complete Section C.4 of the Concept Note template. The information required for Section C.4 of the Concept Note template include:

- Risk Category (A/B/C).
- Summary of key environmental and social risks.
- Planned measures to manage risks.
- Description of past and present stakeholder engagement.
- Link to ESS tools that will be developed (such as ESMP, ESIA).

Step 8: Align with National Policies

It is important to align ESS considerations with the host country's environmental and social laws and policies. This includes explicitly referencing any existing national safeguards systems that the project will utilize or strengthen.

Step 9: Ensure Adequate Capacity and Resources

During the preparation of the ESS framework, it is critical to ensure that adequate capacity and resources are in place to manage environmental and social safeguards. The Concept Note should briefly indicate whether the Accredited Entity or Executing Entity has the necessary expertise. If capacity gaps exist, the Concept Note should outline plans to overcome gaps, such as by:

- Hiring safeguards experts.
- Building capacity.
- Partnering with institutions or consultants.

Step 10: Prepare for the Full Proposal Stage

The next step after preparing the ESS for the Concept Note is the Funding Proposal. The GCF Concept Note should flag the need for detailed assessments (ESIA/ESMP, gender and social studies) and reflect this in the proposed budget and timeline, ensuring that adequate resources are allocated. This stage also provides an opportunity to seek early feedback from the GCF on the safeguards approach, allowing for alignment and refinement ahead of the submission of the full proposal.

3.3 Template

The ten key actions described above can be used to incorporate Environmental and Social Safeguards into a GCF Concept Note. Table 6.6 provides a simple and comprehensive checklist or a template for the initial screening of the Environmental Social Impact Assessment (ESIA) screening template suitable for GCF Concept Note.

Table 6.6 Initial GCF ESIA screening summary template

Category	Key Information / Screening Criteria	Response/Notes
Project Details	Title, AE, Country, Sector, Duration, Budget	Insert Summary
Project Description	Brief overview of objectives and activities	Insert Summary
Potential Environmental and Social Risks	Significant impacts? Land acquisition? Indigenous peoples? Biodiversity/habitats? Vulnerable groups? Sensitive areas? Hazardous materials? Cumulative impacts?	Yes/No with brief notes
GCF Risk Category	☐ A / I-1 (High) ☐ B / I-2 (Medium) ☐ C / I-3 (Low)	Select and justify
Mitigation Measures (if risks present)	Key risks (e.g., resettlement, biodiversity) and corresponding mitigation actions	Summarize each risk
Required Documents	ESIA, ESMP, SEP, RAP, IPP, GAP, etc.	List applicable documents
Stakeholder Engagement	Engagement activities, target groups, key issues raised	Summarize activities and feedback
Prepared by	Name, Organization, Date	Insert

3.4 Case study

This real world case study in Box 9 illustrates how environmental and social safeguards (ESS) were effectively integrated into a GCF Concept Note from the early design stage.

Box 9. Case study on developing ESS statement for a GCF Concept Note

Project Overview
Project Title: **Enhancing adaptive capacities of coastal communities, especially women, to cope with climate change-induced salinity**
Country: Bangladesh
Accredited Entity: United Nations Development Programme (UNDP)
GCF ESS Category: Category B (Medium Risk)

Initial ESS Screening and Risk Categorization
UNDP used its standard Social and Environmental Standards Procedure and screened the Concept Note to identify key risks:

- Salinity intrusion increasing environmental degradation.
- Impacts on freshwater sources and ecosystems.

- Vulnerability of coastal communities, including gender-related vulnerabilities.
- Potential disruption to livelihoods.

Outcome: Project was assigned as Category B, triggering the development of an Environmental and Social Management Framework (ESMF)—instead of a full ESIA—due to the nature of the intervention and national regulations.

Mainstreaming Gender and Social Inclusion
The Concept Note explicitly targeted women and girls as primary beneficiaries:
- Women positioned as "change agents" in planning, implementation, and operation.
- Emphasis on improving gender norms and empowerment.
- Interventions designed to free up women's time to pursue education and economic livelihoods, reducing routine workloads and supporting income generation, which is estimated to yield significant co-benefits (Environmental: USD15 million; Social/economic: USD 4 million).

Safeguards Framework via ESMF
The ESMF outlines:
Environmental impacts: salinity, water resource management, coastal ecosystem protection.
Social impacts: gender-sensitive access to water and land, food security, female agency.
Mitigation measures:
- Climate-resilient water infrastructure.
- Sustainable livelihood alternatives.
- Empowerment training and capacity building.

Institutional tools: Grievance Redress Mechanism (GRM), gender-responsive project teams, stakeholder consultation plans.

Stakeholder Engagement
Consultations primarily targeted coastal villages, with specific efforts to engage women and local leaders.
Participants helped define intervention priorities:
- Protecting water supplies.
- Diversifying income sources.
- Enhancing community ownership and resilience.

This inclusive approach shaped project design and safeguard outputs.

Policy and Institutional Alignment
The ESMF was aligned with:
- Bangladesh Environment Policy
- UNDP's safeguards standards
- GCF's interim ESS Standards (IFC-based)

Gender Strategy & Empowerment Tools
Gender mainstreaming was central:

- Women held leadership roles in water user committees.
- Training focused on gender equity and management.
- Monitoring mechanisms embedded gender metrics in performance indicators.

The Bangladesh GCF project on enhancing coastal resilience demonstrates best practices in integrating Environmental and Social Safeguards (ESS) from the Concept Note stage. Early risk screening categorized the project as medium-risk (Category B), based on potential environmental impacts and social vulnerabilities. A dedicated Environmental and Social Management Framework (ESMF) was developed to guide risk mitigation, including provisions for a grievance redress mechanism, stakeholder engagement, and gender-responsive planning. Gender integration was a central focus, with women actively engaged in leadership roles and targeted for livelihood support and capacity building. The safeguards approach was closely aligned with Bangladesh's environmental policies, UNDP's standards, and the GCF's interim ESS standards. Institutional readiness was ensured through the deployment of UNDP's safeguards team and collaboration with local coordination structures. Inclusive consultations, especially with women and Indigenous communities, helped shape project design and fostered ownership. This holistic safeguard strategy enhanced the project's effectiveness and ensured social and environmental co-benefits from the outset.

4 Risk Assessment and Management

4.1 Introduction

Risk assessment and risk management are essential components of effective project design, particularly in sectors such as climate finance, infrastructure, and sustainable development. Risk assessment involves identifying, analyzing, and evaluating potential risks that could hinder the achievement of a project's objectives. This assessment process begins with risk identification, where possible threats are listed, such as financial constraints, environmental hazards, political instability, technical failures, social tensions, or climate-related impacts. Once identified, these risks are analyzed in terms of their likelihood of occurrence and potential consequences. Tools such as risk matrices or SWOT analyses are commonly used at this stage. After analysis, the risks are evaluated to determine which are acceptable and which require mitigation or further planning.

On the other hand, risk management is the process of developing and implementing strategies to address the risks identified during the assessment. These strategies may include risk avoidance (modifying the project to eliminate the risk), mitigation (reducing the risk's impact or likelihood), transfer (shifting the risk to another party through insurance or partnerships), or acceptance (acknowledging low-impact or unavoidable risks while monitoring them closely).

A comprehensive risk management approach typically includes a risk management plan, contingency planning, and monitoring and evaluation mechanisms which are not requested for GCF Concept Note stage but would follow in the Full Funding Proposal stage. Incorporating risk assessment and management into project design ensures that the project is resilient and adaptable. These processes are integrated from the early conceptual stages to test the project's feasibility and are then refined during detailed planning and implementation. For instance, in a climate adaptation project, a risk assessment might identify drought as a significant threat to agricultural productivity. In response, the project could incorporate drought-resistant crops, water harvesting technologies, and training for farmers as risk management strategies. In this way, risk assessment and management not only safeguard the project but also enhance its sustainability and long-term impact.

In the context of the GCF Concept Note development process, risk assessment and management play a critical role in ensuring that proposed climate projects are robust, feasible, and sustainable, both environmentally and socially. The GCF, as a major international climate finance institution, requires clear evidence that a project has considered potential risks and has a credible plan to address them. In GCF projects, the significance of risk assessment and management demonstrates project feasibility and credibility, aligns with GCF investment criteria (especially in terms of "effectiveness and efficiency"), supports environmental and social safeguards, improves adaptive capacity, builds stakeholder confidence and enables better planning and budgeting.

In practice, the GCF Concept Note template includes a specific section (Section F. Key risks / Mitigation measures), where external and project related risk identification and mitigation measures are expected to be described. Projects must explain key risks (climate, environmental, technical, social, financial) and how these will be managed, either through design features or targeted mitigation actions.

Difference between Risk Assessment and Management and Environmental and Social Safeguards (ESS)

In developing a GCF Concept Note, it is important to distinguish between two complementary but distinct processes: Risk Assessment and Management, and Environmental and Social Safeguards (ESS). While both aim to enhance project sustainability, Risk Assessment covers a broad spectrum of uncertainties that may affect project success (outlined in Section D.2). In contrast, ESS (covered in Section C.3) specifically focuses on identifying and mitigating potential adverse impacts on people and the environment, including issues such as resettlement, biodiversity loss, and Indigenous Peoples' rights. Each process uses its own tools and frameworks, but both are essential to building a well-rounded, responsible, and resilient proposal. Table 6.7 below illustrates the difference between ESS and risk assessment and management.

Table 6.7 Summary of differences between ESS and risk assessment and management

Aspect	Risk Assessment and Management	Environmental and Social Safeguards (ESS)
Primary Focus	All types of risks (climate, technical, financial, institutional)	Identifying and mitigating adverse environmental and social impacts
Purpose	To assess uncertainties that may affect project success and sustainability	To prevent, minimize, or manage harm to people and the environment
Scope	Broad – includes internal and external project risks	Narrower – focuses on social, environmental, and human rights issues
Aspect	Risk Assessment and Management	Environmental and Social Safeguards (ESS)
Location in Concept Note	Section D.2 (Risk and Mitigation Measures)	Section C.3 (Environmental and Social Risks and Impacts)
Examples of Concerns	- Droughts affecting project outcomes - Political instability - Budget overrun	- Resettlement - Biodiversity loss - Impacts on Indigenous Peoples
Tools Used	- Risk inventory - Risk matrix - Mitigation plan	- ESS screening - Environmental and Social Impact Assessment (ESIA)
Framework Reference	Project Risk Management frameworks. Example: ISO 31000	GCF's Environmental and Social Safeguards Standards (based on IFC Performance Standards).

4.2 Developing Risk Assessment and Management Plan for the GCF Concept Note

The following steps serve as a guide in developing a risk assessment and management plan for a GCF Concept Note.

Step 1: Identify Project-Specific Risks

The development of a risk assessment and management plan starts with identifying all project-specific risks that could hinder the success or sustainability of the proposed intervention.

- Objective: List all potential risks that could affect the project's success.
- Key Risk Categories:
  - Climate-related risks: Extreme weather (drought, floods, heat waves, heavy precipitation, cold waves, tornados, tropical cyclones), climate variability.
  - Environmental risks: Deforestation, water scarcity.
  - Social risks: Displacement, community resistance, gender inequality.
  - Technical risks: Lack of capacity, technology failure.
  - Institutional/Operational risks: Weak governance, delays.
  - Financial risks: Cost overruns, currency fluctuations.
  - Political/legal risks: Policy changes, political instability.
- Output: Draft a comprehensive risk inventory.

Step 2: Analyze Risks

Each identified risk is analyzed to understand its potential impact on project outcomes.

- Objective: Understand the nature, likelihood, and consequences of each risk.
- Criteria to assess:
  - Likelihood (Low / Medium / High)
  - Impact (Low / Medium / High)
  - Risk Level = Likelihood × Impact
- Tools:
  - Risk Matrix (2X2 or 3X3 grid)
  - Narrative explanation
- Output: Preliminary risk analysis table or matrix.

Step 3: Prioritize Risks

The results of the risks analysis are ranked to determine which require immediate attention.

- Objective: Identify which risks are most significant and need urgent attention.
- Focus on:
  - High likelihood and high impact risks.
  - Risks with potential to disrupt climate outcomes or safeguards.
  - Risks that could affect vulnerable groups, especially women, Indigenous Peoples, or youth.
- Output: Ranked list of priority risks.

Step 4: Define Risk Mitigation Measures

Based on the assessed and prioritized risks, concrete strategies are developed.

- Objective: Propose realistic strategies to manage the priority risks.
- Mitigation options:
  - Avoid (change design to eliminate the risk)
  - Mitigate (reduce likelihood or impact)
  - Transfer (Example: through insurance, partnerships)
  - Accept (monitor if risk is minimal or unavoidable)
- Also consider:
  - Environmental and Social Management Plans (ESMPs)
  - Gender Action Plans
  - Stakeholder engagement strategies
- Output: Risk Mitigation Plan for each major risk.

Step 5: Integrate Risks and Responses into the Concept Note

Identified risks and corresponding mitigation strategies are included in the Concept Note.

- Objective: Embed risk-related information in relevant Concept Note sections.
- Key Sections:
  - Section C.2. Proposed Project / Programme: Show how risks are considered in the design.
  - Section F. Key Risks / Mitigation measures includes a risk mitigant table/summary.
  - Annexes: Attach a detailed Risk Register, ESMP, or Gender Action Plan, if available.
- Output: Updated Concept Note draft with clear, integrated risk analysis and mitigation narrative.

Step 6: Develop Risk Monitoring and Adaptive Management Plan

It is critical to establish and include a robust monitoring and adaptive management system for identified risks and corresponding mitigation strategies.

- Objective: Ensure risk management continues throughout the project lifecycle.
- Develop indicators for tracking risks:
  - Assign roles/responsibilities (e.g., executing entity, local partners).
  - Establish reporting frequency (e.g., quarterly).
  - Integrate risks into Monitoring, Evaluation, and Learning (MEL) systems.
- Output: Risk Monitoring Framework included in the Concept Note or proposal stage.

4.3 Template

Risk Inventory Template

The results obtained in the steps above can be written in a simple and practical risk inventory template presented in Table 6.8 below

Table 6.8: Risk inventory template

Inventory No.	Risk Description	Risk Category	Cause/ Source	Potential Impact	Affected Stakeholders	Remarks/ Notes
1						
2						
3						
4						

Risk Description – A brief statement of the risk (e.g., increased frequency of floods in project area).

Risk Category – e.g., climate, environmental, technical, financial, social, institutional, political.

Cause/Source – What is causing the risk? (e.g., climate change, lack of capacity, policy uncertainty).

Potential Impact – Describe what might happen if the risk materializes (e.g., project delays, harm to communities).

Affected Stakeholders – Who will be impacted? (e.g., local farmers, government agencies, project partners).

Remarks/Notes – Any additional notes (e.g., if mitigation is already planned, or if the risk needs urgent attention).

Risk Analysis Matrix Template

A simple risk analysis table (Table 6.9) follows the initial risk inventory and helps analyze each risk by likelihood, impact, and overall risk level. This format is easy to use in the GCF Concept Note design.

Table 6.9: Risk analysis matrix

No.	Risk Description	Risk Category	Likelihood (Low / Medium / High)	Impact (Low / Medium / High)	Overall Risk Level (Low / Medium / High)	Remarks / Justification
1	Drought reduces crop productivity	Climate	High	High	High	Project located in a drought-prone area
2	Limited community buy-in delays activities	Social	Medium	High	Medium	Initial consultations show mixed support
3	Delays in fund disbursement	Financial	Medium	Medium	Medium	Past delays noted in similar projects
4	Technology failure (solar irrigation)	Technical	Low	High	Medium	Technology is new to region

Likelihood: How probable is the risk? (Low / Medium / High).

Impact: What is the consequence if the risk occurs? (Low / Medium / High).

Overall Risk Level: Combine likelihood and impact (can be guided by a basic risk matrix).

Remarks/Justification: Provide reasoning or evidence supporting your rating.

Rank and Prioritize Risk Template

Following on from the risk analysis matrix, assign numerical scores to Likelihood and Impact.

Rating	Likelihood	Impact
Low (1)	Rare/Unlikely	Minor
Medium (2)	Possible	Moderate
High (3)	Likely/Certain	Major

Calculate overall risk score. Use the formula: Risk Score = Likelihood × Impact.

Likelihood	×	Impact	=	Risk Score
High (3)	×	High (3)	=	9
Medium (2)	×	High (3)	=	6
Low (1)	×	Medium (2)	=	2

Use the risk matrix to visualize priorities. You can use a 3X3 matrix similar to the one below:

- Low (1–3): Acceptable, monitor.
- Medium (4–6): Needs mitigation.
- High (7–9): Critical, prioritize immediately.

	Impact: Low (1)	Medium (2)	High (3)
Likelihood: High (3)	3	6	9
Medium (2)	2	4	6
Low (1)	1	2	3

Rank risks based on scores. After assigning scores, list the risks in descending order:

Rank	Risk Description	Score	Priority Level
1	Drought reduces crop yield	9	High
2	Low community participation	6	Medium
3	Delays in fund disbursement	4	Medium
4	Technology failure	2	Low

Decide on action based on risk priority.

- High-risk (Score 7–9): Immediate mitigation, integrate into project design.
- Medium-risk (Score 4–6): Plan for mitigation or monitoring.
- Low-risk (Score 1–3): Monitor; mitigation may not be needed.

Risk Mitigation Plan Template

Table 6.10 shows how each key risk will be addressed, as required in the GCF template, particularly in Section F. Key risk / Mitigation measures.

Table 6.10: Risk mitigation plan template

No.	Risk Description	Risk Category	Risk Level (Low / Medium / High)	Mitigation Strategy	Responsible Party	Monitoring Method / Indicator
1						
2						
3						
4						

Risk Description: Brief explanation of the risk (e.g., drought reduces crop yields).
Risk Category: e.g., climate, social, technical, environmental, financial.
Risk Level: Based on earlier risk analysis (Low / Medium / High)
Mitigation Strategy: Specific action(s) to reduce likelihood or impact (e.g., use of drought-resistant crops, community engagement).
Responsible Party: Who is accountable? (e.g., Implementing Agency, NDA, partner organizations).
Monitoring Method / Indicator: How will risk and mitigation be tracked? (e.g., crop survival rates, stakeholder meeting records).

Risk Monitoring Framework Template

The framework illustrated in Table 6.11 helps track identified risks, assess their evolution over time, and evaluate the effectiveness of mitigation strategies, aligning with the Monitoring and Evaluation (M&E) and Environmental and Social Safeguards (ESS) expectations of GCF.

Table 6.11: Risk monitoring framework template for GCF Concept Note

No.	Risk Description	Risk Level (Low / Medium / High)	Mitigation Action	Monitoring Indicator	Frequency	Responsible Entity	Means of Verification
1							
2							
3							
4							

Risk Description: Brief summary of the identified risk (e.g., delays in stakeholder engagement).
Risk Level: As per prior risk analysis (Low / Medium / High).
Mitigation Action: Key intervention(s) proposed to manage the risk.
Monitoring Indicator: What will be measured to track the status of the risk or the effectiveness of mitigation? (e.g., percentage of stakeholders engaged on time).
Frequency: How often will the risk and indicator be reviewed? (e.g., monthly, quarterly).
Responsible Entity: Who will monitor and report? (e.g., Implementing Agency, Project Management Unit (PMU), local NGO).

Means of Verification: Data source or document used to verify results (e.g., meeting reports, field logs, financial records).

4.4 Case study

The following case study in Box 10 demonstrates how a risk mitigation plan can be systematically developed and integrated into a GCF Concept Note. Using a project scenario from Northern Uganda, the case study outlines practical steps for identifying, analyzing, and managing key risks to ensure project viability and alignment with GCF policies.

Box 10. Case study on developing risk assessment and management for a GCF Concept Note

Project Overview
Project Title: **Building Climate-Resilient Livelihoods through Agroforestry in Northern Uganda**
Accredited Entity: United Nations Development Programme (UNDP)
Country: Uganda
Project Type: Climate Change Adaptation (Livelihoods, Ecosystems, Agriculture)
The proposed GCF project aims to strengthen climate resilience among smallholder farmers in Northern Uganda by introducing agroforestry systems, providing drought-resilient crops, and promoting community-based natural resource management.

Risk Identification
The project team conducted stakeholder consultations, reviewed historical project failures in the region, and performed an ESS screening to identify key risks. The following were identified:

No.	Risk Description	Category
1	Community resistance to land-use change	Social
2	Drought and erratic rainfall affecting crop survival	Climate
3	Limited institutional capacity for agroforestry	Institutional
4	Delays in disbursement of GCF funds	Financial

Risk Analysis

No.	Risk Description	Likelihood	Impact	Risk Level
1	Community resistance to land-use change	Medium	High	High
2	Drought impacts survival of new tree species	High	High	High
3	Institutional capacity constraints	Medium	Medium	Medium
4	GCF fund disbursement delays	Low	High	Medium

Risk Mitigation Strategy

No.	Risk Description	Mitigation Strategy	Responsible Entity
1	Community resistance	Conduct early and ongoing Free, Prior, and Informed Consent (FPIC); integrate GESI	Implementing Agency & NDA
2	Drought effects	Promote drought-resilient agroforestry species; provide training on water harvesting	Local NGOs & Technical Team

No.	Risk Description	Mitigation Strategy	Responsible Entity
3	Capacity gaps	Partner with agricultural extension services and build local capacity	Government & UNDP
4	Fund disbursement delays	Create a phased implementation plan with local co-financing for Year 1	Accredited Entity

Risk Monitoring Framework

No.	Risk Description	Monitoring Indicator	Frequency	Means of Verification
1	Community resistance	% of communities consulted and participating	Quarterly	Meeting reports, FPIC logs
2	Drought effects	% survival rate of agroforestry species	Biannual	Field monitoring reports
3	Capacity gaps	Number of trainings delivered; staff capacity	Annual	Training attendance, feedback
4	Fund delays	Time between disbursement request and receipt	Annual	Fund disbursement records

Chapter 7 Practical Tools, Platforms, and Support

1 Specific Tips and Considerations for Asia-Pacific

The GCF Concept Note must be consistent with the Country Priorities (see Chapter 2) determined by each country, which should be aligned with the NDCs and NAPs submitted by each country to the UNFCCC. Furthermore, project proposals must be consistent with the strategic objectives and investment criteria of the GCF (see Chapter 3). These are fundamental considerations in preparing Concept Notes. Beyond that, understanding the issues common to the Asia-Pacific region may work as supplemental information, helping each country to perform accurate risk assessments that incorporate regional-wide risks, such as transboundary climate risks. The following sources of information can be used to understand the risks specific to the Asia-Pacific region, and transboundary climate risks in particular. Users must note that these are still emerging areas of study.

- The IPCC assessments include chapters on specific regions. These are useful for understanding the major trends in climate change impacts and vulnerabilities in the Asia-Pacific region.
  - Chapter 10: Asia: https://www.ipcc.ch/report/ar6/wg2/chapter/chapter-10/
  - Chapter 11: Australasia: https://www.ipcc.ch/report/ar6/wg2/chapter/chapter-11/
  - Chapter 15: Small Islands: https://www.ipcc.ch/report/ar6/wg2/chapter/chapter-15/
- The AP-PLAT website, where this Navigator Tool is located, provides various other tools to support each country's efforts.
  - Representative tools: https://ap-plat.nies.go.jp/data_tools/index.html
  - For best practices, see the Adaptation Database: https://ap-plat-ccca.nies.go.jp/adaptation-database/list/
  - For the adaptation policy cycle, see the Adaptation Planning page: https://ap-plat.nies.go.jp/adaptation_plan/index.html
- Furthermore, AP-PLAT's supporting organizations are addressing climate risk issues in the region in their own unique ways. The following page provides an overview of each organization. These organizations may have the potential to serve as knowledge partners in the development of the GCF Concept Notes. In particular, AIT.RRCAP has provided support in this area.
  - The Regional Resource Centre for Asia and the Pacific at the Asian Institute of Technology (AIT RRC.AP): https://ap-plat-ccca.nies.go.jp/adaptation-database/list/organization?id=1318&
- In addition, the following is a list of resources that may be useful in understanding climate risk situations in the region.
  - UNESCAP's Asia-Pacific Risk & Resilience Portal 2.0: https://rrp.unescap.org/
  - Asian Development Bank's Asia-Pacific Climate Report 2024: https://www.adb.org/publications/asia-pacific-climate-report-2024
  - The World Bank's Climate Risk Country Profiles (not limited to Asia-Pacific): https://climateknowledgeportal.worldbank.org/country-profiles
- Regarding transboundary climate risks in general, users may refer to The Global Transboundary Climate Risk Report in 2023: https://www.sei.org/publications/transboundary-climate-risk-report-2023/

2 Troubleshooting the Navigator Tool

When drafting a Concept Note, it is important to adhere to the template provided by the GCF. The new Concept Note template is designed to provide a clearer format, which tend to be lengthy, and therefore adhering to the format is also in line with GCF expectations. You can refer to the GCF's various resources as listed below or contact GCF staff if you have specific questions. If you encounter

difficulties during the writing process, this Navigator Tool is intended to assist users in efficiently developing Concept Notes. It is designed to extract key points from the wealth of information provided by the GCF. Please refer to it at each stage of Concept Note development.

If lost, it is important to return to the original project objectives and fundamentals of GCF financing. GCF financing must align with each country's priorities and also comply with GCF's investment criteria. If the original project objectives are clear, developing the contents of the concept based on such objectives aligned with these requirements can provide basic direction.

3 Collaboration and Team-Based Writing

The development of a GCF Concept Note is typically a process carried out by a team composed of diverse stakeholders. The following are general tips that can be useful in collaborating with team members in the Concept Note development process.

- Project developers should be inclusive and work with relevant stakeholders who are related to or impacted by the plans included in the Concept Note as much as possible.
- When forming the team, it is important to include those who can represent people affected by the plans in the Concept Note and/or those who can represent the views of particularly vulnerable people and communities.
- Gender equality and social inclusion (GESI) perspectives should also be emphasized.
- Teamwork often takes time. It is necessary to decide on a member or organization to oversee and lead the entire process and ensure that progress is managed appropriately. In addition, it is important to make sure all members are informed when making important policy decisions. Generally, there must be a balance between efficiency and inclusiveness.

Various digital tools are available to help stakeholders collaborate effectively. These are particularly useful for effectively including team members and stakeholders who live in remote areas. Consider using the following tools.

Tools useful for organizing information, collaborative writing, and version control

- Google Workspace
- Microsoft SharePoint

Tools that can assist with brainstorming and discussions

- Miro

4 Additional GCF-Related Tools and Guidance Documents

Materials related to the GCF process in general:

- GCF's Project Activity Cycle interactive webpage illustrates the entire GCF process, with links to relevant resources): https://www.greenclimate.fund/project-cycle
- GCF's Investment Framework page contains resources on relevant investment guidelines and investment criteria: https://www.greenclimate.fund/projects/investment-framework

Materials related to the Concept Note development process in particular:

- The latest Concept Note template is available to those registered with AE/NDA via the Partner Portal.
- GCF Concept Note Screening Page (with a link to Partner Portal): https://www.greenclimate.fund/projects/access-funding/concept-note-screening
- GCF's Webinar Recording "Launch of the Revised GCF Concept Note Submission Process": https://www.greenclimate.fund/event/launch-revised-gcf-concept-note-submission-process
- GCF Partner Portal User Guide: https://www.greenclimate.fund/document/gcf-partner-portal-user-guide

Annex

Asia-Pacific Country Profiles

East Asia

China

As the world's largest developing country and greenhouse gas emitter, China faces the dual challenge of sustaining economic growth while transitioning toward a low-carbon, climate-resilient development pathway.

Category	Details
Climate Context	Key Hazards: Floods, droughts, extreme heatwaves, typhoons, and sea-level rise. Main Vulnerabilities: Highly populated and economically critical coastal cities; national water and food security; critical infrastructure. Development Challenges: Managing massive energy transition (decarbonization); adapting infrastructure to climate impacts; ensuring water-energy-food security.
National Strategies and Priorities	NDC (2021) Adaptation: Climate risk management, water resource resilience, ecosystem protection, early warning systems Mitigation: Carbon intensity reduction, non-fossil energy, renewable energy expansion, forest carbon sinks, green urbanization, low-carbon transport, carbon market development
GCF Portfolio	Approved Projects: 1 Total GCF Funding: USD 100m

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Energy & Industry: Strong focus on decarbonizing the energy sector and heavy industry. Nature-Based Solutions: High priority on increasing carbon sinks by expanding forests and restoring ecosystems. Funding Gaps: Advanced Technology: A gap exists in deploying large-scale, cost-effective technologies like Carbon Capture, Utilization, and Storage (CCUS). Climate Finance: Need to scale up financial mechanisms, as a national low-carbon transition fund is still under study. Potential Partnerships: South-South Cooperation: Actively promoting partnerships with developing nations through the "Belt and Road" initiative and other aid programmes. Technology Collaboration: Open call for international R&D partnerships to accelerate breakthroughs in renewables, hydrogen, and other clean technologies.

Mongolia

Mongolia's economy is largely dependent on pastoral livestock, agriculture, and extractive industries. Mongolia is increasingly exposed to climate-related shocks, threatening livelihoods, water security, and urban development.

Category	Details
Climate Context	Key Hazards: Dzuds (harsh winters with heavy snow), droughts, desertification, and permafrost degradation. Main Vulnerabilities: High dependence on pastoral livestock and agriculture; significant water security risks; livelihoods threatened by climate-related shocks. Development Challenges: Protecting climate-sensitive economic sectors (herding, farming); combating widespread land degradation and desertification; ensuring sustainable development with resilient infrastructure.

Category	Details
National Strategies and Priorities	NAP (2025) Pastureland protection, livestock risk management, water resource adaptation, climate-resilient agriculture, urban heat planning, health sector resilience, disaster risk reduction, ecosystem-based adaptation, climate services & data NDC (2021) Adaptation: Climate risk management, water resource resilience, ecosystem protection, early warning systems Mitigation: Carbon intensity reduction, non-fossil energy, renewable energy expansion, forest carbon sinks, green urbanization, low-carbon transport, carbon market development GCF Country Programme (2019) Adaptation: Livestock resilience, sustainable rangeland management, water resource security, climate-smart agriculture, forest and land restoration, early warning systems, urban climate resilience Mitigation: Renewable energy scale-up, energy efficiency, low-carbon transport, sustainable buildings, waste-to-energy systems, carbon market development
GCF Portfolio	Approved Projects: 13 Readiness activities: 10 Total GCF Funding: USD 485.1m (Approved); USD 8.3m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Sustainable land and water resource management, especially for the livestock and agriculture sectors; ecosystem and biodiversity conservation; and enhancing disaster risk reduction for events like dzud and drought. Funding Gaps: Annual financing gap primarily in water and forestry, including fragmented institutional coordination, limited integration of climate policy into national budgets, and insufficient capacity for developing bankable proposals. Potential Partnerships: Implementation relies on collaboration with government ministries (Environment, Agriculture), international organizations (UNEP, UNDP, FAO, GIZ, JICA), and financial institutions to mobilize resources and expertise. Technology Collaboration: High need for advanced technologies in early warning systems, climate-resilient crop and livestock management, water-saving irrigation, and advanced climate monitoring to inform planning.

Democratic People's Republic of Korea (DPRK)

As an agrarian developing country with limited access to international finance and technology, DPRK faces significant institutional and infrastructural challenges in building climate resilience and low-emission development pathways. Due to United Nations Security Council Resolution 1718 (2006), all GCF-related financial and technical activities in DPRK are subject to international sanctions, requiring prior approval from the Sanctions Committee and potentially limiting the scope, timing, or delivery of support. For further details, please refer to the DPRK GCF page.

Category	Details
Climate Context	Key Hazards: Recurring droughts, severe floods, and typhoons. Main Vulnerabilities: High risk to national food security and water resources; dependence on agriculture; vulnerable rural livelihoods. Development Challenges: Significant institutional and infrastructural deficits; limited access to international finance and technology due to the international sanctions regime.

Category	Details
National Strategies and Priorities	NDC (2019) Adaptation: Not available explicitly Mitigation: Carbon intensity reduction, forest carbon sinks, renewable energy, sustainable agricultural practices
GCF Portfolio	Readiness activities: 1 Total GCF Funding: USD 0.7m (Readiness support) All GCF-related financial and technical activities are severely restricted by United Nations Security Council Resolution 1718 (2006). Any support requires prior approval from the UN Sanctions Committee, creating significant barriers to implementation.
Strategic Opportunities & Gaps	Strategic Alignment: As a party to the UNFCCC and the Paris Agreement. DPRK has the potential to connect their National Disaster Risk Reduction Strategy (2019-2030) and National Environment Protection Strategy (2019-2030) to international climate action. In addition, Pyongyang plans a unilateral 16.4% greenhouse gas (GHG) emission reduction by 2030. Funding Gaps: An additional 36% reduction is conditional upon international support, with an estimated cost of US$30 billion. Key adaptation activities include a large-scale forest restoration campaign Potential Partnerships: The DPRK explicitly seeks “positive collaboration with the international community”. This presents an opportunity for Green Climate Fund (GCF) engagement. Technology Collaboration: DPRK is looking for collaboration in renewable energy (tidal, wind), nuclear power, energy-saving production processes, and sustainable agriculture

Southeast Asia

Brunei Darussalam

Brunei Darussalam is heavily dependent on fossil fuels. The country faces the dual challenge of reducing emissions while strengthening resilience in sectors such as infrastructure, water resources, and public health. Unfortunately, Brunei Darussalam is not currently listed on the GCF country profiles page as of this writing.

Category	Details
Climate Context	Key Hazards: Sea-level rise, coastal flooding, and extreme weather events. Main Vulnerabilities: Low-lying coastal geography; critical infrastructure, water resources, and public health are at high risk. Development Challenges: Managing the dual task of economic diversification away from fossil fuels while simultaneously building national resilience to climate impacts.
National Strategies and Priorities	NDC (2020) Adaptation: Climate-resilient infrastructure, flood and drainage systems, water resource security, biodiversity conservation, coastal protection, public health preparedness Mitigation: Renewable energy deployment, green building standards, sustainable transport, industrial emissions reduction, waste sector management
GCF Portfolio	Brunei Darussalam is not currently engaged with the Green Climate Fund. There is no country profile or listed activities on the GCF website.

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Brunei commits to reducing GHG emissions by 20% by 2030 from business-as-usual levels and aims to build climate resilience. The country's plans prioritize safeguarding the environment and adapting to climate impacts. Funding Gaps: Brunei will explore "bilateral, regional and international mechanisms" to meet its NDC targets. Key funding gaps for adaptation exist in enhancing climate resilience against floods and rising sea levels, protecting health from climate-sensitive diseases, and ensuring food security for its agriculture and fishing sectors. Potential Partnerships: The government's "Whole-of-Nation" approach involves public and private sectors, NGOs, and academia, creating a strong foundation for partnerships. Brunei's explicit intent to explore international mechanisms presents a clear opportunity for Green Climate Fund (GCF) engagement. Technology Collaboration: Brunei seeks to strengthen adaptation by integrating climate science into policy, conducting impact assessments, and considering nature-based solutions. There is an opportunity for collaboration on innovative technologies for flood mitigation and waste management.

Cambodia

Cambodia is highly vulnerable to floods, droughts, and tropical storms, with key risks amplified by its tropical monsoon climate and dependence on agriculture and water resources. Cambodia requires substantial international support to address climate impacts that threaten its steady economic development.

Category	Details
Climate Context	Key Hazards: Frequent and severe floods, droughts, and tropical storms. Main Vulnerabilities: High dependence on climate-sensitive sectors like agriculture and water resources; significant risks to economic development and rural livelihoods. Development Challenges: Protecting economic gains from climate shocks; mobilizing the substantial international support needed for adaptation and resilience.
National Strategies and Priorities	NAP (2021) Water resource resilience, climate-smart agriculture, flood risk management, drought preparedness, coastal area protection, health systems strengthening, biodiversity conservation, ecosystem-based adaptation, community-based adaptation, early warning systems, disaster risk governance, gender-responsive adaptation, urban climate resilience NDC (2020) Adaptation: Climate-smart agriculture, irrigation and water, flood protection, fisheries resilience, public health systems, ecosystem restoration, infrastructure resilience Mitigation: Renewable energy expansion, energy efficiency, sustainable transport, industrial emissions control, waste sector management, forest carbon sinks GCF Country Programme (2021) Adaptation: Climate-resilient agriculture, water resource management, flood risk reduction, drought preparedness, ecosystem-based adaptation, community resilience building, early warning systems Mitigation: Renewable energy scale-up, energy efficiency promotion, sustainable transport systems, waste-to-energy solutions, low-carbon buildings, Industrial emissions reduction

Category	Details
GCF Portfolio	Approved Projects: 11 Readiness activities: 14 Total GCF Funding: USD 347.7m (Approved); USD 5.6m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: Cambodia is prioritizing adaptation in agriculture, water, infrastructure, and forestry to reduce vulnerability for its people. Funding Gaps: At the time of writing, there is a USD 2+ billion funding gap for adaptation. However, Cambodia has a clear pipeline of prioritized projects and a financing framework, creating an opportunity for GCF investment. Key gaps include institutional capacity and science-based decision-making. Potential Partnerships: The government's multi-stakeholder approach involves ministries, a Direct Access Entity for local action, development partners, and the private sector, offering a strong foundation for GCF collaboration. Technology Collaboration: Cambodia seeks technology for climate-smart agriculture, early warning systems, and climate-proofing infrastructure. Collaboration is needed to update its Technology Needs Assessment and implement resilient solutions.

Indonesia

Indonesia faces acute vulnerability to sea-level rise, climate-induced disasters, and ecosystem degradation. While pursuing its vision for equitable and sustainable development, the country is working to balance economic growth, poverty alleviation, and climate resilience across key sectors such as food, water, and energy.

Category	Details
Climate Context	Key Hazards: Sea-level rise, coastal flooding, and climate-induced disasters. Main Vulnerabilities: low-lying coastal areas, small islands, and marine ecosystems are highly vulnerable. Key sectors like food, water, and energy security are at risk. Development Challenges: Balancing national priorities of economic growth and poverty alleviation with the urgent need for climate resilience and mitigation across a vast and diverse geography.
National Strategies and Priorities	NDC (2022) Adaptation: Climate-resilient agriculture, water security, coastal protection, public health systems, disaster risk reduction, ecosystem-based adaptation, urban climate resilience Mitigation: Renewable energy transition, low-emission transport, sustainable forestry, peatland restoration, waste management, industrial decarbonization, urban emissions control GCF Country Programme (2023) Adaptation: Climate-smart agriculture, water resource management, coastal and marine resilience, disaster risk reduction, urban climate resilience, public health systems, early warning systems, ecosystem-based adaptation Mitigation: Renewable energy transition, low-carbon transport, industrial decarbonization, peatland restoration, sustainable forestry, waste-to-energy solutions, emissions monitoring systems
GCF Portfolio	Approved Projects: 19 Readiness activities: 5 Total GCF Funding: USD 578.2m (Approved); USD 7.6m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Indonesia prioritizes adaptation in marine/coastal areas, water, agriculture, and health to build economic, social, and ecosystem resilience, directly aligning with GCF result areas. Funding Gaps: At the time of writing, Indonesia faces a USD 77.81 billion adaptation finance gap for 2021-2030. This creates a clear opportunity for GCF to fund projects in identified priority vulnerable locations, where project concepts are already being developed. Potential Partnerships: A strong collaborative framework exists between government ministries (Bappenas, MoEF), Direct Access Entities (Kemitraan), CSOs, and local communities, which is ideal for implementing GCF-funded, community-focused adaptation projects. Technology Collaboration: Indonesia seeks to apply adaptive technology for agriculture, water management, coastal protection, and early warning systems. Collaboration is needed to implement and scale up these solutions.

Lao PDR

Lao PDR is highly vulnerable to climate impacts such as floods and droughts due to its geography, reliance on natural resources, and limited adaptive capacity. Climate risks threaten key development sectors including agriculture, forestry, hydropower, and public health, with extreme weather events increasingly affecting livelihoods and economic stability.

Category	Details
Climate Context	Key Hazards: Floods, droughts, and extreme weather events. Main Vulnerabilities: High dependence on climate-sensitive sectors including agriculture, forestry, and hydropower; limited institutional and financial capacity to adapt to climate shocks. Development Challenges: Safeguarding a natural resource-based economy from climate impacts; protecting critical infrastructure (especially hydropower) from climate risks; and enhancing national adaptive capacity.

Category	Details
National Strategies and Priorities	NDC (2021) Adaptation: Climate-resilient agriculture, forest ecosystem protection, water resource management, disaster risk reduction, climate-resilient infrastructure, public health preparedness, early warning systems Mitigation: Renewable energy expansion, sustainable transport, forest carbon enhancement, low-emission agriculture, waste-to-energy systems GCF Country Programme (2021) Adaptation: Climate-resilient agriculture, water security, disaster risk reduction, forest ecosystem services, health systems strengthening, community-based adaptation Mitigation: Renewable energy deployment, hydropower expansion, forest cover restoration, low-emission transport, green building standards, sustainable agriculture
GCF Portfolio	Approved Projects: 9 Readiness activities: 17 Total GCF Funding: USD 206.2m (Approved); USD 9.1m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Lao PDR's strategies prioritize building climate resilience in its most vulnerable sectors: agriculture, forestry, water resources, health, and transport/urban development. This focus aligns directly with the GCF's adaptation result areas, including health, food, and water security, and enhancing the livelihoods of vulnerable communities. Funding Gaps: Key gaps include weak institutional capacity to mainstream climate action, limited technical knowledge for local planning, and a lack of long-term financing for adaptation. This creates an opportunity for GCF to fund capacity building, technical support for vulnerability assessments, and projects that mainstream adaptation into sectoral strategies. Potential Partnerships: A collaborative framework exists between the National Designated Authority (housed in the Ministry of Natural Resources and Environment), line ministries (Agriculture, Health, etc.), development partners (UN, World Bank), and the Environment Protection Fund (EPF), which is seeking accreditation as a Direct Access Entity. Technology Collaboration: Lao PDR seeks technological collaboration to implement nature-based solutions, develop climate-resilient infrastructure, and improve systems for climate forecasting, early warning, and water information management to better address flood and drought risks.

Malaysia

Malaysia faces significant climate vulnerabilities due to rising temperatures, increased rainfall variability, and sea-level rise. As a resource-dependent economy balancing economic growth with environmental protection, Malaysia's development trajectory is shaped by its need to ensure water security, protect coastal areas, and sustain agriculture under a changing climate.

Category	Details
Climate Context	Key Hazards: Sea-level rise, increased rainfall variability (leading to floods and droughts), and rising temperatures. Main Vulnerabilities: Extensive coastal zones, national water security, and agricultural productivity are at high risk. Development Challenges: Balancing economic growth with environmental protection; managing a resource-dependent economy under increasing climate stress and ensuring a sustainable development trajectory.

Category	Details
National Strategies and Priorities	NDC (2021) Adaptation: Water resource management, coastal protection, agricultural resilience, urban infrastructure resilience, public health preparedness, biodiversity conservation, disaster risk reduction, adaptation M&E systems Mitigation: Carbon intensity reduction, renewable energy, transport decarbonization, industrial emissions control, LULUCF emissions accounting
GCF Portfolio	Approved Projects: 2 Readiness activities: 5 Total GCF Funding: USD 69.6m (Approved); USD 4.8m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: Malaysia is mainstreaming climate adaptation into its national development through the 12th Malaysia Plan and the development of a National Adaptation Plan (NAP), as well as policies like the Water Sector Transformation 2040 and the National Agrofood Policy to guide sectoral resilience. Funding Gaps: At the time of writing, a preliminary USD 63.6 million is required for adaptation initiatives. Key gaps present funding opportunities, including the need to establish a national monitoring and evaluation (M&E) mechanism for adaptation, develop high-resolution coastal inundation models, and create a comprehensive national assets database for risk assessment. Potential Partnerships: There are several potential partnership that can leverage Malaysia's institutional frameworks, such as the Technical Working Group on Vulnerability and Adaptation and its sectoral sub-groups led by agencies like NAHRIM (climate modeling) and MARDI (agriculture). Technology Collaboration: Malaysia seeks technology for advanced climate modeling (hydrodynamic, city-scale) and sectoral assessment tools. There is potential to expand on smart farming technologies and GIS-based risk mapping for health and agriculture.

Myanmar

Myanmar is highly vulnerable to cyclones, floods, droughts, and sea-level rise. As an LDC with a predominantly rural and agriculture-based economy, Myanmar faces significant development challenges compounded by limited adaptive capacity and ongoing political and socio-economic constraints. Myanmar has two GCF approved projects and seven readiness activities listed in the GCF website. For further details on Myanmar's climate vulnerability, geography, and development context, refer to their national documents in the table below.

Category	Details
Climate Context	Key Hazards: Cyclones, floods, droughts, and sea-level rise. Main Vulnerabilities: Rural, agriculture-based economy exacerbated by limited institutional and financial adaptive capacity. Development Challenges: Addressing urgent climate impacts while navigating significant and ongoing political and socio-economic constraints that affect development and capacity building.
National Strategies and Priorities	NDC (2021) Adaptation: Climate-resilient agriculture, water resource management, early warning systems, disaster risk reduction, health systems strengthening, coastal protection, ecosystem restoration Mitigation: Renewable energy expansion, sustainable transportation, forest conservation, community forestry, emissions data systems
GCF Portfolio	Approved Projects: 2 Readiness activities: 7 Total GCF Funding: USD 4.0m (Approved); USD 5.7m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Myanmar is mainstreaming adaptation through its Climate Change Policy, Strategy, and Master Plan (2018-2030) and will initiate a National Adaptation Plan (NAP) process. Adaptation is the nation's top priority, focusing on agriculture, natural resources, health, disaster risk, and urban planning. Funding Gaps: Myanmar can use support to develop strategies for Natural Resources Management and Urban Low-Emissions Development. Key funding gaps for GCF include developing the NAP, financing agroforestry targets, and implementing climate-resilient infrastructure. Potential Partnerships: Partnerships for adaptation will involve local government, CSOs, INGOs, and the private sector. The Environmental Conservation Department is leveraging grants to develop a pipeline of resilient projects in secondary cities. Technology Collaboration: Myanmar seeks technology for climate-smart agriculture (solar drip irrigation), enhanced early warning and forecasting systems, and climate-resilient building design. It will also promote nature-based solutions for adaptation.

Philippines

The Philippines is highly vulnerable to a range of climate and geological hazards including typhoons, floods, droughts, and earthquakes. As a lower-middle-income developing country with a large coastal population and significant poverty incidence, it faces compounding challenges in achieving sustainable development while coping with frequent climate-related losses and damages.

Category	Details
Climate Context	Key Hazards: Typhoons, floods, droughts, and sea-level rise. Main Vulnerabilities: Large and dense coastal populations; high incidence of poverty, which limits adaptive capacity; and significant exposure to frequent and intense weather events. Development Challenges: Managing frequent and severe losses and damages from climate-related disasters, which consistently impedes long-term sustainable development and poverty reduction efforts.
National Strategies and Priorities	NAP (2024) Climate-resilient health, food and nutrition security, water resource security, ecosystem resilience, human settlement resilience, climate-resilient infrastructure, risk-informed systems, climate information services NDC (2021) Adaptation: Food security, water resource management, forest protection, health resilience, coastal protection, human security Mitigation: Energy transition, transport emissions reduction, industrial decarbonization, agricultural GHG reduction, waste management and circular economy GCF Country Programme (2022) Adaptation: Climate-resilient agriculture, water resource management, urban climate resilience, coastal zone protection, disaster risk reduction, health sector adaptation, ecosystem-based adaptation, local early warning system Mitigation: Renewable energy scale-up, sustainable transport, forest carbon enhancement, waste management systems, emissions tracking tools

Category	Details
GCF Portfolio	Approved Projects: 10 Readiness activities: 6 Total GCF Funding: USD 172.6m (Approved); USD 2.7m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: The Philippines prioritizes adaptation through its National Adaptation Plan (2023-2050) and Nationally Determined Contributions (NDC). The GCF Country Programme aligns with these national strategies, focusing on climate-resilient agriculture, ecosystems, water, health, and social protection programs. Funding Gaps: Support is needed to overcome barriers like limited capacity to prepare high-quality project proposals and the absence of policies to unlock private investment. The NAP highlights a massive financing need to counter projected economic losses from severe climate impacts. Potential Partnerships: A "whole-of-government-and-society" approach involves national agencies, LGUs, the private sector, CSOs, and academia. The National Steering Committee for the NAP (NAP-NSC) serves as a key multi-stakeholder coordination mechanism. Technology Collaboration: The country seeks technology transfer for multi-hazard early warning systems, climate information services, and climate-resilient agriculture. The NAP also aims to scale up nature-based solutions and enhance data infrastructure for decision-making.

Singapore

Singapore integrates advanced technology and policy innovation to address climate risks while balancing economic growth and sustainability goals. As a high-income country with strong domestic financing capacity, it does not seek GCF funding assistance and is not prioritized for climate finance support under GCF's mandate for developing countries.[49]

Category	Details
Climate Context	Key Hazards: Sea-level rise, extreme heat, and water scarcity. Main Vulnerabilities: A low-lying island geography; high population and critical infrastructure density; and limited natural resources, particularly for water. Development Challenges: Pioneering and financing advanced, technology-driven solutions for national survival (e.g., coastal protection, water recycling); maintaining economic competitiveness while executing a comprehensive green transition.
National Strategies and Priorities	NDC (2025) Adaptation: Coastal protection, urban heat resilience, water security, biodiversity conservation, public health adaptation, climate data systems, nature-based solutions Mitigation: Net-zero transition, carbon pricing, green energy imports, sustainable buildings, transport electrification, waste reduction
GCF Portfolio	As a high-income country with strong domestic financing capacity, Singapore is not eligible or prioritized for GCF funding support. It is a contributor to international climate finance rather than a recipient.

49 https://www.straitstimes.com/singapore/s-pore-won-t-claim-from-climate-loss-damage-fund-will-help-other-countries-access-money-from-it-grace-fu

Category	Details
Strategic Opportunities & Gaps	Potential Partnerships: Singapore acts as a strategic partner and leader in regional climate finance. It voluntarily mobilizes capital for developing countries through initiatives like Financing Asia's Transition Partnership (FAST-P), a blended finance programme to support Asia's green transition needs. Technology Collaboration: Singapore leverages its position as a hub for innovation by providing technical assistance and capacity building to other nations. Through the Singapore Cooperation Programme (SCP), it has trained officials from over 180 countries in areas including adaptation and resilience-building strategies, green project management, and carbon markets.

Timor Leste

Timor-Leste is highly vulnerable to climate change impacts such as erratic rainfall, prolonged droughts, sea-level rise, and extreme weather events, which threaten agriculture, water supply, and coastal infrastructure. Timor-Leste faces significant challenges in managing climate risks and relies on external support for finance, technology, and capacity-building to pursue sustainable development.

Category	Details
Climate Context	Key Hazards: Erratic rainfall, prolonged droughts, sea-level rise, and extreme weather events. Main Vulnerabilities: As a Least Developed Country (LDC), its predominantly agrarian economy, limited institutional capacity, and critical infrastructure (water supply, coastal) are highly vulnerable. Development Challenges: Heavy reliance on external support for finance, technology, and capacity-building; integrating climate resilience into national development amidst significant institutional and resource constraints.

Category	Details
National Strategies and Priorities	NAP (2021) Food security, water resilience, ecosystem-based adaptation, climate-resilient health, disaster risk reduction, infrastructure resilience, climate data systems NDC (2022) Adaptation: Water security, food systems resilience, ecosystem-based adaptation, health sector adaptation, coastal zone protection, disaster risk management, climate information services Mitigation: Renewable energy development, energy efficient cookstoves, forest carbon enhancement, climate-smart agriculture, low-emission transport GCF Country Programme (2019) Adaptation: Climate-resilient agriculture, water resource security, coastal protection, disaster risk reduction, health system resilience, early warning systems, ecosystem-based adaptation Mitigation: Renewable energy access, energy-efficient buildings, sustainable transport, forest conservation, low-carbon planning
GCF Portfolio	Approved Projects: 4 Readiness activities: 6 Total GCF Funding: USD 65.3m (Approved); USD 2.8m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Timor-Leste prioritizes water security, food security (agriculture), disaster risk reduction, resilient infrastructure, and ecosystem-based adaptation. Funding Gaps: There is a significant opportunity to fund a clear project pipeline based on these national priorities. A key gap, and a foundational investment opportunity, is the need for improved climate data, information services, and early warning systems to support all adaptation efforts. Potential Partnerships: Strong potential exists for partnerships with UN agencies (UNDP, FAO, WMO) for technical expertise, development partners like JICA and the EU for implementation, and national universities (UNTL) for research. Technology Collaboration: There is an urgent need for technology transfer to establish robust climate information and early warning systems, and to support climate-smart agriculture and water resource management.

Vietnam

Vietnam is highly vulnerable to climate-related hazards such as sea-level rise, typhoons, saltwater intrusion, and flooding, especially in the Mekong and Red River Deltas. As a lower middle-income country with a rapidly growing economy, Vietnam faces the dual challenge of sustaining development while reducing emissions and enhancing resilience across its key sectors. Vietnam has six GCF approved projects and five readiness activities listed in the GCF website. For further details on Timor Leste's climate vulnerability, geography, and development context, refer to their national documents in the table below.

Category	Details
Climate Context	Key Hazards: Sea-level rise, typhoons, extensive flooding, and saltwater intrusion, with acute impacts in the Mekong and Red River Deltas. Main Vulnerabilities: Densely populated and economically critical river deltas, which are central to national food security; rapidly growing economic assets and infrastructure exposed to climate risks. Development Challenges: Managing the dual challenge of sustaining rapid economic growth while simultaneously reducing emissions and building resilience, particularly in its vulnerable delta regions.
National Strategies and Priorities	NDC (2022) Adaptation: Water security, food systems resilience, ecosystem-based adaptation, health sector adaptation, coastal zone protection, disaster risk management, climate information services Mitigation: Renewable energy development, energy efficient cookstoves, forest carbon enhancement, climate-smart agriculture, low-emission transport
GCF Portfolio	Approved Projects: 6 Readiness activities: 5 Total GCF Funding: USD 210.6m (Approved); USD 4.7m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Vietnam focuses on reducing vulnerabilities in key sectors like agriculture, water resources, and deltaic regions, which are severely impacted by climate change. The NDC prioritizes enhancing the resilience of natural, economic, and social systems, which resonates with the GCF's investment criteria. Funding Gaps: A major gap is the financial shortfall for adaptation, with state resources meeting only 30% of needs at the time of writing. This presents an opportunity for GCF to fund the scaling up of successful adaptation models, such as climate-resilient agriculture and nature-based solutions, and to support the development of climate risk insurance markets. Potential Partnerships: Vietnam seeks partnerships with international organizations and the private sector for financing adaptation projects. There is strong potential for GCF to co-finance projects with MDBs and private entities, particularly in infrastructure resilience and water security. Technology Collaboration: Vietnam seeks international support for technology transfer in climate-smart agriculture, early warning systems, and technologies for preventing coastal erosion and managing water resources efficiently. This opens avenues for GCF to support technology and capacity-building projects.

South Asia

Bangladesh

Bangladesh is facing threats from frequent floods, cyclones, sea-level rise, salinity intrusion, and drought. Bangladesh's high population density, reliance on agriculture, and limited adaptive capacity make it critically dependent on international support for building climate resilience and achieving its climate goals.

Category	Details
Climate Context	Key Hazards: Frequent and severe floods, cyclones, sea-level rise, salinity intrusion, and drought. Main Vulnerabilities: High population density, particularly in low-lying deltaic regions; a climate-sensitive agricultural sector that underpins livelihoods and food security; and limited national adaptive capacity. Development Challenges: Protecting significant and hard-won social and economic development gains from being reversed by climate impacts; heavy reliance on international support to finance the large-scale adaptation and resilience measures required.
National Strategies and Priorities	NAP (2023) Agriculture resilience, coastal zone management, flood risk reduction, urban climate resilience, water resource security, ecosystem-based adaptation, public health resilience, early warning systems, infrastructure adaptation NDC (2021) Adaptation: Disaster risk reduction, flood management, coastal protection, agricultural resilience, urban adaptation, water resource security, health sector adaptation Mitigation: Renewable energy expansion, afforestation, waste-to-energy solutions, sustainable transport, climate-smart agriculture GCF Country Programme (2018) Adaptation: Flood control infrastructure, coastal zone protection, climate-resilient agriculture, water security, urban climate resilience, early warning systems, public health adaptation, ecosystem restoration Mitigation: Renewable energy expansion, low-carbon transport, climate-smart agriculture, industrial emissions reduction

Category	Details
GCF Portfolio	Approved Projects: 10 Readiness activities: 8 Total GCF Funding: USD 464.5m (Approved); USD 6.1m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: Bangladesh consistently prioritizes flood management, coastal protection, and agricultural resilience throughout their national strategies. Funding Gaps: At the time of writing, Bangladesh has identified a USD 230 billion funding gap, creating clear investment opportunities in its 113 prioritized interventions. Major opportunities exist in scaling up urban resilience, climate-smart infrastructure, and nature-based solutions. Potential Partnerships: Strong potential exists with Multilateral Development Banks (e.g., World Bank, ADB) for large infrastructure projects. Collaboration with technical partners like UNDP, NGOs, and the private sector is key for community-led adaptation and innovative financing. Technology Collaboration: Key needs include advanced early warning systems, development of stress-tolerant crop varieties, and innovative eco-engineering for infrastructure.

Bhutan

Bhutan is highly vulnerable to climate change due to its fragile ecosystems, dependence on climate-sensitive sectors like hydropower and agriculture, and its status as a least developed country with limited financial and technical capacity. However, Bhutan maintained carbon neutrality, integrating climate resilience and low-emission development into its national plans while calling for enhanced international support to implement its climate priorities.

Category	Details
Climate Context	Key Hazards: Glacial Lake Outburst Floods (GLOFs), flash floods, landslides, and erratic rainfall patterns. Main Vulnerabilities: Fragile mountain ecosystems; high dependence on climate-sensitive sectors like hydropower and agriculture; and limited financial and technical capacity as a Least Developed Country (LDC). Development Challenges: Maintaining its unique carbon-neutral status and development philosophy while adapting to significant climate risks; securing the enhanced international support needed to protect its vulnerable population and ecosystems.
National Strategies and Priorities	NAP (2023) Water security, food self-sufficiency, disaster risk reduction, health sector resilience, forest and biodiversity, climate-resilient livelihoods, early warning systems, infrastructure adaptation NDC (2021) Adaptation: Watershed management, climate-smart farming, glacier lake risk, urban resilience, health sector adaptation, biodiversity protection Mitigation: Forest conservation, renewable energy, green transport, low-emission agriculture

Category	Details
GCF Portfolio	Approved Projects: 3 Readiness activities: 8 Total GCF Funding: USD 61.9m (Approved); USD 7.3m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: Bhutan's priorities align with water, agriculture, forests/biodiversity, health, and disaster risk reduction sectors, providing a robust basis for projects. Funding Gaps: Key opportunities include scaling up ecosystem-based adaptation (e.g., watershed management), climate-proofing critical infrastructure (water, transport), and enhancing climate services and early warning systems for GLOFs and flash floods. Potential Partnerships: Partnerships for project development with Bhutan are through CSOs, the private sector (via GCF direct access), and academia (Royal University of Bhutan) as key partners for implementation and research. Technology Collaboration: A clear need exists for technology in advanced climate modeling, GIS for risk mapping, climate-resilient infrastructure design, and improved early warning technologies to address vulnerabilities.

India

India is highly vulnerable to the impacts of climate change due to its vast and diverse geography, ranging from the Himalayas to coastal lowlands, and its dependence on climate-sensitive sectors such as agriculture and water. Rapid economic development, a large population, and exposure to extreme weather events such as droughts, floods, and cyclones compound its vulnerability, requiring robust adaptation and mitigation strategies.

Category	Details
Climate Context	Key Hazards: Droughts, floods, cyclones, extreme heatwaves, and sea-level rise. Main Vulnerabilities: A large population dependent on climate-sensitive agriculture and water resources; extensive and densely populated coastal areas; and fragile Himalayan ecosystems. Development Challenges: Integrating large-scale climate action with rapid economic development to protect a vast population and diverse ecosystems from compounded climate risks.
National Strategies and Priorities	Adaptation Communication (2023) Water resources, agriculture resilience, coastal protection, forest management, health systems, climate-smart cities NDC (2022) Adaptation: Climate-resilient agriculture, water and disaster resilience, coastal and Himalayan protection, health sector adaptation Mitigation: Emissions intensity reduction, non-fossil power capacity, carbon sink enhancement, green finance mobilization
GCF Portfolio	Approved Projects: 13 Readiness activities: 5 Total GCF Funding: USD 1000.0m (Approved); USD 5.6m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: India prioritizes adaptation in agriculture, water, coastal zones, and the Himalayan ecosystem, guided by national and state action plans. Funding Gaps: Funding opportunities in funding large-scale programmes especially in enhancing resilience and reducing climate impact exposure are key investment areas. Potential Partnerships: Key partnerships involve central ministries, state governments for SAPCC implementation, and National Implementing Entities. International platforms like the Coalition for Disaster Resilient Infrastructure (CDRI) serve as a model. Technology Collaboration: India calls for technology transfer. Critical needs include climate-resilient agriculture, advanced water management, and early warning systems.

Maldives

Maldives faces acute climate vulnerability due to its unique geography as a low-lying, small island developing state with dispersed islands, limited freshwater resources, and high exposure to coastal hazards like storm surges, erosion, and sea-level rise. Its narrow, tourism-dependent economy and high import reliance further heighten development risks, making external support essential for achieving climate-resilient and low-carbon development.

Category	Details
Climate Context	Key Hazards: Sea-level rise, coastal erosion, storm surges, and acute water scarcity. Main Vulnerabilities: A low-lying archipelago geography where most land is just meters above sea level; a narrow, tourism-dependent economy; and limited freshwater resources coupled with a high reliance on imports. Development Challenges: Addressing existential threats from sea-level rise; protecting the vital tourism sector which underpins the national economy; and securing essential external finance and technical support for large-scale adaptation.
National Strategies and Priorities	NDC (2020) Adaptation Priorities: Coastal protection, water resources, public health, agriculture resilience, disaster preparedness Mitigation Priorities: Renewable energy, sustainable transport GCF Country Programme (2020) Adaptation Priorities: Coastal protection, water security, waste management, climate-resilient infrastructure, ecosystem resilience Mitigation Priorities: Renewable energy, low-carbon transport
GCF Portfolio	Approved Projects: 4 Readiness activities: 5 Total GCF Funding: USD 77.4m (Approved); USD 7.1m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Maldives prioritizes critical adaptation measures such as coastal protection, water security, and infrastructure resilience. Funding Gaps: Significant funding is required to meet adaptation needs. This presents an opportunity to scale up investments from site-specific projects to integrated, atoll-level management and to leverage private sector finance, particularly from the tourism industry. There is also a need to close data gaps and enhance local capacity for quantifying adaptation needs. Potential Partnerships: Potential exists for public-private partnerships with the tourism sector to co-finance adaptation measures that protect shared economic assets. The government also seeks to forge partnerships with individuals, civil society, and local governments to mobilize climate finance. Technology Collaboration: The Maldives aims to collaborate internationally to develop and promote appropriate technologies for addressing climate change impacts. This includes a focus on innovative solutions like wave energy generation combined with coastal protection and climate-smart agriculture.

Nepal

Nepal faces high climate vulnerability due to its fragile ecosystems, glacial risks, and dependence on climate-sensitive sectors such as agriculture and water. Despite recent development gains, limited adaptive capacity, widespread poverty, and increasing climate hazards such as floods, landslides, and droughts pose serious threats to its sustainable development pathways. At the time of writing, Nepal has four GCF approved projects and five readiness activities listed in the GCF website.

Category	Details
Climate Context	Key Hazards: Floods, landslides, droughts, and Glacial Lake Outburst Floods (GLOFs). Main Vulnerabilities: Fragile mountain ecosystems; a large population dependent on climate-sensitive agriculture and water resources; and widespread poverty which limits adaptive capacity. Development Challenges: Protecting recent development gains from being reversed by increasing climate impacts; building resilience for a large, vulnerable population with limited financial and technical resources.

Category	Details
National Strategies and Priorities	NAP (2021) Climate-resilient livelihoods, disaster risk reduction, ecosystem-based adaptation, health system resilience, water security planning, infrastructure resilience, early warning systems NDC (2020) Adaptation: Climate-resilient agriculture, integrated water management, ecosystem-based adaptation, disaster risk reduction, urban resilience, health system strengthening Mitigation Renewable energy, clean transport, energy efficiency, waste management GCF Country Programme (2023) Adaptation Climate-resilient agriculture, water resource resilience, disaster risk reduction, climate-resilient infrastructure, health system resilience Mitigation Clean energy transition, sustainable transport, waste management, low-carbon agriculture, forest carbon sinks
GCF Portfolio	Approved Projects: 5 Readiness activities: 5 Total GCF Funding: USD 148.3m (Approved); USD 5.5m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Nepal prioritizes disaster risk reduction (especially GLOFs and floods), agricultural resilience, and water security. Funding Gaps: Key opportunities lie in funding the GCF pipeline for projects on GLOF risk reduction, scaling up Local Adaptation Plans for all 753 local governments, and resilient agriculture. Potential Partnerships: Strong potential exists with established International Accredited Entities (UNDP, FAO, IUCN) and national Direct Access Entities. Collaboration with ICIMOD for mountain expertise is a key opportunity for GLOF and watershed management. Technology Collaboration: High priority for technology in multi-hazard Early Warning Systems, climate-resilient agriculture (e.g., solar irrigation, stress-tolerant crops), and establishing a national Climate Information System.

Pakistan

Pakistan faces acute climate vulnerability due to its diverse geography spanning glaciers, river basins, arid plains, and coastal zones, which expose it to recurring floods, droughts, and glacial lake outburst floods (GLOFs). Despite being a minor emitter, Pakistan grapples with severe development challenges, including poverty, water insecurity, and rapid urbanization, increasing its sensitivity to climate shocks and constraining adaptive capacity. At the time of writing, Pakistan has ten GCF approved projects and nine readiness activities listed in the GCF website.

Category	Details
Climate Context	Key Hazards: Floods, landslides, droughts, and Glacial Lake Outburst Floods (GLOFs). Main Vulnerabilities: Fragile mountain ecosystems; a large population dependent on climate-sensitive agriculture and water resources; and widespread poverty which limits adaptive capacity. Development Challenges: Protecting recent development gains from being reversed by increasing climate impacts; building resilience for a large, vulnerable population with limited financial and technical resources.

Category	Details
National Strategies and Priorities	NAP (2023) Water security, agriculture resilience, livestock adaptation, urban resilience, coastal protection, disaster preparedness, health systems, early warning systems NDC (2021) Adaptation Priorities: Water resources, agriculture resilience, coastal zone protection, ecosystem-based adaptation, disaster risk reduction, health adaptation Mitigation Priorities: Renewable energy, low-emission transport, waste management. industrial decarbonization, forestry carbon sinks GCF Country Programme (2017) Adaptation Climate-resilient water, drought-resistant crops, flood management systems, climate-smart agriculture, early warning systems Mitigation Renewable energy expansion, urban transport upgrade, low-emission agriculture, industrial GHG reduction
GCF Portfolio	Approved Projects: 10 Readiness activities: 9 Total GCF Funding: USD 304.2m (Approved); USD 6.1m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Pakistan prioritizes the agriculture-water nexus, disaster risk management (floods/GLOFs), and natural capital restoration as core adaptation strategies. Funding Gaps: Opportunities lie in scaling up climate-smart agriculture, urban resilience, and water management ("Recharge Pakistan"). At the time of writing, There is a USD 152 billion adaptation need. In addition there is a gap in the capacity to develop bankable projects. Potential Partnerships: Strong potential with existing partners (UNDP, FAO, World Bank) can be leveraged. The NAP stresses collaboration with provincial governments for local action, the private sector for PPPs, and technical agencies like PMD and GCISC for data. Technology Collaboration: High demand for tech in efficient irrigation, rainwater harvesting, and drought-tolerant crops. A critical need across all documents is for advanced, integrated early warning systems and enhanced hydro-meteorological forecasting services.

Sri Lanka

Sri Lanka's economy and population are concentrated along the southwestern coastline and are dependent on climate-sensitive sectors such as agriculture, fisheries, and tourism. These characteristics make them highly vulnerable to climate change. Despite relatively low per capita emissions, the country faces severe impacts from disrupted monsoon patterns, droughts, and floods, threatening livelihoods, food security, and its upward development trajectory. At the time of writing, Sri Lanka has five GCF approved projects and six readiness activities listed in the GCF website.

Category	Details
Climate Context	Key Hazards: Disrupted monsoon patterns, droughts, floods, and sea-level rise. Main Vulnerabilities: A high concentration of population and economic activity in coastal zones; strong dependence on climate-sensitive sectors such as agriculture, fisheries, and tourism. Development Challenges: Protecting its upward development trajectory, food security, and key economic sectors from being undermined by increasing climate impacts, particularly water-related disasters.
National Strategies and Priorities	NAP (2016) Water resource management, agriculture and food security, coastal zone management, health sector resilience, biodiversity and ecosystem protection, infrastructure and human settlements, tourism sector adaptation NDC (2021) Adaptation Priorities: Water resources, agriculture resilience, coastal zone protection, ecosystem-based adaptation, disaster risk reduction, health adaptation Mitigation Priorities: Renewable energy, low-emission transport, waste management. industrial decarbonization, forestry carbon sinks

Category	Details
GCF Portfolio	Approved Projects: 5 Readiness activities: 6 Total GCF Funding: USD 106.1 m (Approved); USD 7.5m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: Sri Lanka is focusing on water management, agricultural resilience, biodiversity, and coastal zone protection. Funding Gaps: The primary opportunity is addressing well-defined national priorities such as tourism sector adaptation and scaling up ecosystem-based adaptation. Potential Partnerships: A multi-stakeholder approach involving government, the private sector, and civil society organizations is planned. There is strong potential for public-private partnerships within the tourism industry to protect shared coastal assets and build resilience. Technology Collaboration: Urgent needs include technology transfer for enhanced climate forecasting and early warning systems, climate-smart agriculture, climate-resilient building designs, and efficient water management technologies.

Pacific

Cook Islands

The Cook Islands are highly vulnerable to climate impacts such as sea-level rise and extreme weather due to its low-lying geography, limited natural resources, and reliance on coastal ecosystems. The country faces significant development challenges and prioritizes low-carbon pathways and resilient infrastructure to safeguard its economy and communities.

Category	Details
Climate Context	Key Hazards: Sea-level rise, extreme weather events (e.g., cyclones, storm surges), and water scarcity. Main Vulnerabilities: High reliance on fragile coastal ecosystems for livelihoods and economic activity (including tourism); and limited natural and financial resources. Development Challenges: Protecting communities and economic assets from existential threats posed by climate change; building climate-resilient infrastructure with limited domestic capacity; and achieving a full transition to a low-carbon economy.
National Strategies and Priorities	NDC (2016) Adaptation: Coastal protection, water security, marine park conservation, resilient agriculture systems, climate-smart land management Mitigation: Renewable electricity transition, low-carbon transport GCF Country Programme (2019) Adaptation: Water security, coastal resilience, and disaster preparedness Mitigation: Renewable energy expansion, energy efficiency improvement, and low-carbon development

Category	Details
GCF Portfolio	Approved Projects: 4 Readiness activities: 8 Total GCF Funding: USD 31.9m (Approved); USD 8.6m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: The Cook Islands are focusing on urgent adaptation priorities like coastal protection, water security, and disaster risk management. Funding Gaps: The primary opportunity lies in 11 programmatic areas, including water security and coastal restoration. A key gap is the need for updated vulnerability assessments, as the baseline dates to 2009, alongside the need for international support for technology and capacity building. Potential Partnerships: Strong collaboration potential exists with regional entities like SPREP and international partners such as the ADB, FAO, and UNDP. Domestically, partnerships with the Ministry of Finance and Economic Management (MFEM) and the Bank of the Cook Islands are central to project implementation. Technology Collaboration: There is a critical need for technology transfer in climate-smart agriculture (e.g., hydroponics), advanced water management including desalination, proven coastal protection solutions, and strengthening meteorological services.

Fiji

Fiji faces ongoing development challenges from extreme weather events, which threaten its key sectors including tourism, agriculture, and infrastructure, while striving to build a climate-resilient, low-emission economy by 2050. Fiji is highly vulnerable to climate change impacts such as sea level rise, tropical cyclones, and coastal flooding.

Category	Details
Climate Context	Key Hazards: Tropical cyclones, coastal flooding, and sea-level rise. Main Vulnerabilities: Key economic sectors (tourism, agriculture) and critical infrastructure are highly exposed to extreme weather events and coastal hazards. Development Challenges: Protecting its status as a regional economic hub from climate disruptions; financing the long-term, capital-intensive transition to a fully climate-resilient and low-emission economy by its 2050 target.
National Strategies and Priorities	NAP (2018) Coastal protection planning, agriculture resilience, health system preparedness, urban development planning, community-based adaptation, water security, disaster risk management, ecosystem-based adaptation, climate-resilient infrastructure, early warning systems NDC (2020) Adaptation: Community-based adaptation, climate-resilient infrastructure, disaster risk reduction, coastal protection, water resource management, agriculture and food security, health system resilience Mitigation: Renewable energy expansion, emissions data systems, sustainable transport GCF Country Programme (2021) Adaptation: Coastal resilience planning, climate-smart agriculture, water security, health systems strengthening, disaster risk management Mitigation: Renewable energy expansion, low-carbon transport

Category	Details
GCF Portfolio	Approved Projects: 7 Readiness activities: 3 Total GCF Funding: USD 73.0m (Approved); USD 3.5m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: Fiji is prioritizing coastal resilience, disaster risk management, and food/water security. Funding Gaps: The primary opportunity is to scale investments in climate-resilient infrastructure. A significant funding gap for these capital-intensive projects remains a major barrier, alongside a need for more granular, localized climate data to guide planning. Potential Partnerships: Collaboration potential exists to partnerships with Pacific regional organizations (e.g., SPREP, SPC), multilateral development banks for infrastructure financing, and civil society for implementing community-based adaptation. Technology Collaboration: There is a critical need to upgrade climate information and early warning systems, alongside deploying resilient agricultural techniques and construction standards.

Kiribati

Kiribati is highly vulnerable to the impacts of climate change such as sea-level rise, coastal erosion, saltwater intrusion, and extreme weather events. Its dispersed geography and limited freshwater resources, combined with its status as an LDC, pose significant challenges to sustainable development and resilience-building. At the time of writing, Kiribati has two GCF approved projects and two readiness activities listed in the GCF website.

Category	Details
Climate Context	Key Hazards: Sea-level rise, coastal erosion, saltwater intrusion into freshwater lenses, and extreme weather events. Main Vulnerabilities: Extreme scarcity of freshwater resources, high exposure of population and infrastructure to coastal hazards, and limited institutional and financial capacity as a Least Developed Country (LDC). Development Challenges: Addressing existential threats to national sovereignty and territory from sea-level rise; ensuring basic needs like water and food security for a dispersed population; and financing large-scale adaptation with very limited domestic resources.
National Strategies and Priorities	NAP (2020) Coastal zone management, freshwater resource security, health sector resilience, agricultural system resilience, disaster risk preparedness, ecosystems-based adaptation, urban settlement planning NDC (2023) Adaptation: Coastal protection infrastructure, freshwater resource security, health system resilience, agricultural climate resilience, disaster risk reduction Mitigation: Solar energy expansion, energy efficiency improvement, transport emissions reduction GCF Country Programme (2023) Adaptation: Coastal protection systems, freshwater security, climate-resilient infrastructure, food and health systems Mitigation: Solar energy expansion, energy access improvement, energy efficiency policy

Category	Details
GCF Portfolio	Approved Projects: 2 Readiness activities: 2 Total GCF Funding: USD 36.2m (Approved); USD 1.6m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: Kiribati prioritizes coastal protection, water and food security, health, and resilient infrastructure to address extreme vulnerability to sea-level rise. Funding Gaps: A key opportunity is developing large-scale, integrated projects for coastal adaptation and freshwater security, building on existing vulnerability assessments. A major gap is the limited national capacity and technology to implement ambitious engineering solutions and manage climate data effectively. Potential Partnerships: Collaboration potential extends to partnerships with regional entities like SPREP and SPC for technical support and project implementation, alongside multilateral banks (ADB, World Bank) for co-financing large infrastructure projects. Technology Collaboration: Collaboration is needed for innovative coastal engineering, freshwater lens monitoring technology, and enhanced climate information and early warning systems to support key sectors like agriculture, health, and disaster management.

Marshall Islands

The Republic of the Marshall Islands is highly vulnerable to climate change due to its low-lying geography, with most land only one to two meters above sea level, placing it at extreme risk from sea-level rise and storm surges. As a small island developing state with a dispersed population and limited economic diversification, it faces significant development challenges in building climate resilience and ensuring sustainable livelihoods.

Category	Details
Climate Context	Key Hazards: Sea-level rise, storm surges, coastal erosion, and water scarcity (drought). Main Vulnerabilities: An extremely low-lying atoll geography with most land just one to two meters above sea level; a dispersed population with high exposure to coastal hazards; and limited economic diversification and freshwater resources. Development Challenges: Addressing existential threats to national territory from sea-level rise; ensuring basic needs like water and food security for the population; and financing large-scale, long-term adaptation measures with limited domestic resources.
National Strategies and Priorities	NAP (2023) Coastal zone management, urban infrastructure resilience, health system resilience, community-based adaptation, ecosystems-based adaptation, freshwater resource security, agricultural and food security, fisheries and marine source resilience, disaster risk reduction NDC (2020) Adaptation: Coastal protection, disaster risk reduction, water security Mitigation: Renewable energy, transport decarbonization GCF Country Programme (2023) Adaptation: Coastal protection, water security, early warning systems, health resilience, disaster preparedness Mitigation: Renewable energy, transport decarbonization

Category	Details
GCF Portfolio	Approved Projects: 7 Readiness activities: 4 Total GCF Funding: USD 66.5m (Approved); USD 2.4m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: The Marshall Islands prioritize coastal adaptation against sea-level rise. Priorities include protecting infrastructure, ensuring water and food security, and managed relocation. Funding Gaps: Develop transformative projects based on the NAP, focusing on coastal defenses (seawalls, land elevation), climate-proofing critical urban infrastructure, and ensuring long-term water and food security. Potential Partnerships: Collaboration potential exists to partner with Pacific regional bodies (SPREP, SPC), Multilateral Development Banks (World Bank), and UN agencies for technical and financial support. Technology Collaboration: Collaboration is needed with engineering experts in coastal resilience, atoll geomorphology, and land reclamation for effective, durable adaptation solutions.

Micronesia

Micronesia has a dispersed geography, and heavy dependence on marine and coastal resources pose unique development challenges, with climate impacts exacerbating water insecurity, food system fragility, and constraints in service delivery across its islands. Micronesia is highly vulnerable to sea-level rise, saltwater intrusion, and intensifying typhoons that threaten both its ecosystems and infrastructure.

Category	Details
Climate Context	Key Hazards: Sea-level rise, saltwater intrusion, and intensifying typhoons. Main Vulnerabilities: Widely dispersed multi-island geography; heavy dependence on marine and coastal resources for livelihoods and food security; and fragile freshwater and food systems. Development Challenges: Overcoming significant logistical constraints to build resilience and deliver essential services across a vast oceanic state; protecting livelihoods that are dependent on climate-sensitive marine and coastal ecosystems; and securing finance for adaptation.
National Strategies and Priorities	NDC (2022) Adaptation: Coastal protection planning, water resource security, ecosystem-based adaptation Mitigation: Renewable energy, transportation decarbonization GCF Country Programme (2023) Adaptation: Coastal protection infrastructure, water security, disaster risk management, health system resilience, food security, ecosystem-based adaptation Mitigation: Renewable energy, transport sector decarbonization
GCF Portfolio	Approved Projects: 6 Readiness activities: 9 Total GCF Funding: USD 56.0m (Approved); USD 6.8m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Micronesia prioritizes adaptation, focusing on energy and water security, resilient food systems, ecosystem management, and climate-proofing infrastructure, especially in coastal zones. Funding Gaps: Significant opportunities exist in converting the project pipeline, supported by readiness grants, into funded projects, particularly in coastal resilience, water security, and health. Gaps remain in institutional capacity, project development expertise, private sector engagement, and centralized climate data. Potential Partnerships: Collaboration potential exists for partnerships with regional entities like SPC and SPREP for technical aid, the Micronesia Conservation Trust (MCT) as a direct access entity, and development banks (ADB, World Bank) for large-scale infrastructure projects. Technology Collaboration: Collaboration is needed for GIS mapping for disaster management, electronic monitoring for fishery transparency, renewable energy tech for electricity and transport, and systems for detecting climate-related diseases.

Nauru

Nauru has a highly urbanized population concentrated on a narrow coastal fringe, making it acutely vulnerable to sea-level rise, coastal erosion, and drought. Its development is constrained by limited freshwater resources, a fragile environment, and economic reliance on imports and external assistance, heightening its exposure to climate change impacts.

Category	Details
Climate Context	Key Hazards: Sea-level rise, coastal erosion, and severe drought/ water scarcity. Main Vulnerabilities: Highly concentrated population and critical infrastructure located on a narrow coastal fringe; extremely limited natural freshwater resources; and a high economic reliance on imports and external assistance. Development Challenges: Protecting the entire nation's population and infrastructure from coastal inundation and erosion; ensuring long-term water security for the population; and financing large-scale, essential adaptation measures with limited domestic economic activity.
National Strategies and Priorities	NDC (2022) Adaptation: Coastal protection, water security, agriculture resilience, health sector resilience, early warning systems Mitigation: Renewable energy transition, transport energy transition
GCF Portfolio	Approved Projects: 3 Readiness activities: 4 Total GCF Funding: USD 36.9m (Approved); USD 3.1m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Nauru's priorities focus on the "Higher Ground Initiative" to relocate homes and infrastructure away from vulnerable coastal areas, alongside enhancing water security, food security, and creating a healthy environment. Funding Gaps: Key opportunities include the multi-faceted Higher Ground Initiative, water infrastructure such as desalination and storage, and enhancing the resilience of the public health system. Potential Partnerships: Collaboration potential exists in partnerships with Multilateral Development Banks (GCF, ADB), regional Pacific organizations (SPC), UN agencies (WHO, UNDP), and key bilateral donors like Germany (GIZ), Japan, and the Republic of China (Taiwan) for technical and financial support. Technology Collaboration: Critical technology needs for adaptation include reverse-osmosis units for water desalination, hard and nature-based solutions for coastal protection, advanced waste management for resource recovery and composting, and solar PV with battery storage to improve energy resilience.

Niue

Niue is a raised coral atoll in the South Pacific with a population of around 1,500 with no surface freshwater sources. Its development is highly dependent on external aid. Niue's vulnerability stems from rising sea levels, cyclones, and droughts that threaten its fragile groundwater, infrastructure, and limited agricultural base.

Category	Details
Climate Context	Key Hazards: Sea-level rise, coastal erosion, and severe drought/ water scarcity. Main Vulnerabilities: Highly concentrated population and critical infrastructure located on a narrow coastal fringe; extremely limited natural freshwater resources; and high economic reliance on imports and external assistance. Development Challenges: Protecting the entire nation's population and infrastructure from coastal inundation and erosion; ensuring long-term water security for the population; and financing large-scale, essential adaptation measures with limited domestic economic activity.
National Strategies and Priorities	NDC (2025) Adaptation: Water resource management, agriculture, forestry, fisheries, tourism, ecosystem and biodiversity, marine and coastal ecosystem, loss and damage, invasive species, health, waste management, disaster risk management Mitigation: Renewable energy transition, transport energy transition, agriculture, forest and land use (AFOLU)
GCF Portfolio	Approved Projects: 2 Readiness activities: 4 Total GCF Funding: USD 17.0m (Approved); USD 1.3m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Niue focuses on water security, agriculture, fisheries, disaster risk management, and the crucial link between ocean/marine ecosystem health and its blue economy. Funding Gaps: Key opportunities include large-scale, integrated programmes, particularly in water infrastructure and ocean conservation. Potential Partnerships: Collaboration potential exists in partnerships with key regional bodies (SPC, SPREP), UNDP, and bilateral donors (NZ, Australia, EU). The Niue and Ocean Wide (NOW) Trust is a critical internal partner for innovative ocean financing. Technology Collaboration: Specific needs include SCADA systems for water and energy management, and energy efficiency standards for buildings.

Palau

Palau is highly vulnerable to sea-level rise and increasingly frequent extreme weather events. Palau has a small economy that is reliant on development partnerships, Palau's critical infrastructure, freshwater resources, agriculture, and marine-based livelihoods are at severe risk from climate impacts.

Category	Details
Climate Context	Key Hazards: Sea-level rise, increasingly frequent and intense typhoons, droughts, and flooding. Main Vulnerabilities: As a Small Island Developing State (SIDS), its small economy, critical infrastructure, freshwater resources, and climate-sensitive marine-based livelihoods (fisheries, tourism) are at severe risk. Development Challenges: Protecting critical infrastructure and essential livelihoods from severe climate shocks; financing necessary adaptation measures in an economy that is reliant on development partnerships for large-scale projects.

Category	Details
National Strategies and Priorities	NDC (2016) Coastal protection, water resource management, agriculture climate resilience, ecosystem-based adaptation Mitigation: Renewable energy scale-up, transport emissions reduction, waste management
GCF Portfolio	Approved Projects: 3 Readiness activities: 7 Total GCF Funding: USD 19.9m (Approved); USD 5.3m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: Palau prioritizes protecting its vital infrastructure, water resources, agriculture, and marine-based economy from the severe impacts of climate change, including sea-level rise and extreme weather events. Funding Gaps: Palau is dependent on external financing and technology to implement its climate goals, including an unfunded National Solid Waste Framework. An opportunity exists in pursuing energy efficiency measures, which have the potential for substantial, though not fully calculated, financial savings. Potential Partnerships: Implementation of Palau's climate initiatives is highly dependent on securing support from development partners for financing, technology transfer, and capacity development. Technology Collaboration: Key areas for technology collaboration include solar power, energy-efficient building codes and retrofits, appliance standards, improved wastewater infrastructure, and analysis of landfill gas capture.

Papua New Guinea

People living in Papua New Guinea (PNG) are largely dependent on subsistence agriculture and customary land tenure. The country is highly vulnerable to climate risks such as sea level rise, extreme rainfall, landslides, and tropical cyclones, which pose severe threats to its rural infrastructure, water systems, and livelihoods across its mountainous, coastal, and low-lying atoll regions.

Category	Details
Climate Context	Key Hazards: Extreme rainfall, landslides, tropical cyclones, and sea-level rise. Main Vulnerabilities: Large rural population that is heavily dependent on subsistence agriculture and customary land tenure; diverse and challenging terrain (mountainous, coastal, atolls); and at-risk rural infrastructure, water systems, and livelihoods. Development Challenges: Building climate resilience for a large, dispersed rural population that relies directly on natural resources for survival; overcoming significant logistical challenges to protect remote communities across varied and difficult terrain.
National Strategies and Priorities	NAP (2023) Climate-resilient agriculture, water resource management, health system strengthening, disaster risk management, ecosystem-based adaptation NDC (2020) Adaptation: Climate resilience agriculture, water resource protection, early warning systems Mitigation: Forest emission reduction, renewable energy expansion GCF Country Programme (2020) Adaptation: Climate-resilient agriculture, water resource management, coastal risk reduction Mitigation: Renewable energy development, forest carbon management

Category	Details
GCF Portfolio	Approved Projects: 5 Readiness activities: 5 Total GCF Funding: USD 89.9m (Approved); USD 4.3m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: PNG prioritizes adaptation in climate-resilient agriculture, health, transport, and infrastructure. Funding Gaps: Major opportunities exist in scaling up climate-smart agriculture for smallholders, enhancing early warning systems, and building resilient infrastructure to link farmers to markets. Significant gaps remain in data for comprehensive risk assessments and translating policies into budgeted actions at the sub-national level. Potential Partnerships: Collaborations are possible with FAO and DAL for agriculture projects, and with development partners for infrastructure. Collaborating with provincial governments and CSOs is crucial for community-level implementation and reaching vulnerable populations. Technology Collaboration: Key needs include technology for enhanced climate information and early warning systems, GIS mapping for hazard identification, climate-resilient construction materials, and developing drought/flood-resistant crop varieties

Samoa

Samoa faces high exposure to climate risks such as tropical cyclones, sea level rise, and coastal erosion due to its geographic location and limited land area. Its development context is shaped by a high dependence on natural resources, vulnerability of coastal infrastructure, and challenges in health, agriculture, and water security exacerbated by climate change.

Category	Details
Climate Context	Key Hazards: Tropical cyclones, sea-level rise, and coastal erosion. Main Vulnerabilities: High exposure of critical coastal infrastructure and communities; a strong dependence on climate-sensitive natural resources; and stressed health, agriculture, and water security systems. Development Challenges: Protecting critical infrastructure and key economic sectors from frequent climate shocks; ensuring basic needs like water, food, and health security are met under increasing climate stress; and financing adaptation with limited domestic resources.
National Strategies and Priorities	NDC (2021) Adaptation: Coastal risk protection, agriculture and food security, water security Mitigation: Renewable energy expansion, transport energy transition
GCF Portfolio	Approved Projects: 3 Readiness activities: 2 Total GCF Funding: USD 67.7m (Approved); USD 1.0m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Samoa focuses on expanding mangrove forests for coastal protection, increasing agroforestry to protect crops and diversify incomes, and sustainable forest management to reduce flood risk. Funding Gaps: Samoa's targets are conditional on receiving external financial support and technical assistance. This presents a direct opportunity for funding large-scale, tangible projects such as mangrove restoration programmes and the development of incentive programmes for reforestation and sustainable forest management. Potential Partnerships: Collaborations are open for development partners and multilateral climate funds to achieve its adaptation and mitigation goals. Potential partnerships include regional organization such as GGGI, SPREP, and UNDP. Technology Collaboration: The country requires technology transfer and capacity building for implementing its goals. This includes technical expertise for large-scale mangrove planting, promoting agroforestry, developing reforestation programmes, and improving data collection to monitor land use and forest cover.

Solomon Islands

The Solomon Islands have high exposure to climate risks. Its development is shaped by a predominantly rural, subsistence-based economy reliant on agriculture, forestry, and fisheries, with many communities living on vulnerable coastal areas and facing limited access to basic infrastructure and services.

Category	Details
Climate Context	Key Hazards: Sea-level rise, tropical cyclones, earthquakes, and tsunamis. Main Vulnerabilities: Large rural population dependent on a subsistence economy (agriculture, forestry, fisheries); high concentration of communities in vulnerable coastal areas; and limited access to basic infrastructure and services. Development Challenges: Building resilience for a dispersed, rural population that relies heavily on natural resources; overcoming logistical and financial barriers to improve infrastructure and deliver essential services in a complex multi-hazard environment.
National Strategies and Priorities	NDC (2021) Adaptation: Community-based planning, coastal zone protection, water and food security Mitigation: Renewable energy expansion, forest carbon enhancement, low-carbon transport GCF Country Programme (2023) Adaptation: Water resource protection, coastal resilience, food system security Mitigation: Renewable energy transition, forest carbon management, energy access improvement
GCF Portfolio	Approved Projects: 3 Readiness activities: 3 Total GCF Funding: USD 118.5m (Approved); USD 3.1m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: The Solomon Islands prioritizes adaptation in agriculture and food security, water resources, coastal resilience, human settlements, and health. Funding Gaps: A primary opportunity is to finalize the National Adaptation Plan (NAP) to structure long-term investment. Key gaps include limited institutional and technical capacity, inadequate data for risk assessment, and insufficient coordination among stakeholders. Potential Partnerships: Crucial partnerships exist with regional organizations like SPREP and SPC for technical support and project delivery. Effective implementation relies on collaboration with CSOs, provincial governments, and faith-based organizations for community-level action. Technology Collaboration: Focus is needed on acquiring technology for early warning systems, developing geo-referenced national information systems for vulnerability mapping, and integrating traditional knowledge with modern climate science.

Tonga

Tonga is highly vulnerable to climate change due to its low-lying geography, heavy dependence on agriculture and fisheries, and high exposure to cyclones, sea level rise, coastal erosion, and ocean acidification.

Category	Details
Climate Context	Key Hazards: Tropical cyclones, sea-level rise, coastal erosion, and ocean acidification. Main Vulnerabilities: Heavy dependence on climate-sensitive sectors (agriculture, fisheries), and high exposure of coastal communities and infrastructure are key vulnerabilities. Development Challenges: Protecting a resource-dependent economy from frequent and intense climate and ocean-related shocks; ensuring food and water security for a vulnerable population; and financing large-scale adaptation with limited domestic resources.

Category	Details
National Strategies and Priorities	NAP (2021) Coastal zone management, water security, climate-resilient agriculture, disaster risk reduction, health system resilience, ecosystem-based adaptation NDC (2020) Adaptation: Coastal protection, climate-resilient agriculture, disaster risk reduction Mitigation: Renewable energy development, transport emission reduction GCF Country Programme (2018) Adaptation: Coastal zone resilience, water security, agriculture and food security Mitigation: Renewable energy development, transport emission reduction
GCF Portfolio	Approved Projects: 6 Readiness activities: 12 Total GCF Funding: USD 78.1m (Approved); USD 6.1m (Readiness support)

Category	Details
Strategic Opportunities & Gaps	Strategic Alignment: Tonga prioritizes coastal resilience, water security, food security through climate-smart agriculture and fisheries, and climate-proofing infrastructure. Funding Gaps: Opportunities include integrated coastal protection, resilient urban development, and integrated water resource management. A key gap identified is the need for enhanced data systems to support project planning and monitoring. Potential Partnerships: Critical partnerships are possible with Accredited Entities like the Asian Development Bank (ADB) for infrastructure, the United Nations Development Programme (UNDP) for coastal resilience, and the Food and Agriculture Organization (FAO) for food security. Regional agencies like SPREP and SPC are key for technical support. Technology Collaboration: The focus is on deploying modern mapping and monitoring technologies, specifically using LIDAR and GIS for precise coastal vulnerability assessments and strengthening climate early warning systems.

Tuvalu

Tuvalu has extreme exposures to sea level rise, coastal erosion, saltwater intrusion, and limited freshwater resources. Tuvalu is also highly dependent on external aid and subsistence livelihoods.

Category	Details
Climate Context	Key Hazards: Sea-level rise, coastal erosion, saltwater intrusion into freshwater lenses, and storm surges. Main Vulnerabilities: Severe scarcity of freshwater, high dependency on external aid, and reliance on subsistence livelihoods. Development Challenges: Addressing existential threats to national territory and sovereignty from sea-level rise; ensuring basic needs like water and food security for the population; and financing large-scale, nation-saving adaptation almost entirely through external support.

Category	Details
National Strategies and Priorities	NDC (2022) Adaptation: Coastal protection infrastructure, water security, food system resilience Mitigation: Renewable energy transition, low-carbon transport
GCF Portfolio	Approved Projects: 3 Readiness activities: 4 Total GCF Funding: USD 53.0m (Approved); USD 6.1m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: Tuvalu focuses on immediate adaptation needs due to its extreme vulnerability such as coastal resilience. Funding Gaps: A significant opportunity lies in developing a comprehensive National Adaptation Plan (NAP) to guide medium and long-term adaptation efforts. There is also a need to secure more financing for large-scale projects to ensure the nation's survival against sea-level rise. Potential Partnerships: Key partnerships include the GCF, the Government of Tuvalu, and various international donors. Regional organizations and bilateral donors are crucial for implementing adaptation projects. Technology Collaboration: There is a need for technology in coastal protection, such as sea walls, and in water security to combat salinization. Collaboration is also needed for climate-resilient agriculture and managing climate-sensitive diseases.

Vanuatu

Vanuatu's development is constrained by geographic dispersion, limited infrastructure, and a high dependence on climate-sensitive sectors like agriculture, fisheries, and tourism, making it vulnerable to climate change impacts. Vanuatu is highly exposed to climate-related hazards such as tropical cyclones, sea level rise, drought, and ocean acidification.

Category	Details
Climate Context	Key Hazards: Tropical cyclones, sea-level rise, drought, and ocean acidification. Main Vulnerabilities: Limited and exposed infrastructure, and high dependence on climate-sensitive sectors (agriculture, fisheries, tourism) are key vulnerabilities. Development Challenges: Building a resilient economy and protecting livelihoods across a scattered archipelago with significant infrastructure deficits; managing the frequent and severe economic and social impacts of intense natural disasters.
National Strategies and Priorities	NDC (2022) Adaptation: Coastal resilience planning, agriculture and food security, disaster risk management Mitigation: Renewable energy scale-up, transport emission reduction GCF Country Programme (2021) Adaptation: Climate-resilient agriculture, water resource management, coastal zone protection . Mitigation: Renewable energy transition, transport sector reform

Category	Details
GCF Portfolio	Approved Projects: 6 Readiness activities: 10 Total GCF Funding: USD 106.0m (Approved); USD 6.7m (Readiness support)
Strategic Opportunities & Gaps	Strategic Alignment: Vanuatu prioritizes adaptation in agriculture and food security, water resources, resilient infrastructure, forestry, and coastal/marine ecosystem management. Funding Gaps: A major gap exists between planned activities and available resources, with adaptation targets requiring an estimated USD 721 million in conditional funding at the time of writing. A key opportunity is the development of a National Adaptation Plan (NAP) to structure and attract long-term investment for a pipeline of identified projects. Potential Partnerships: Crucial partnerships involve regional organizations like SPREP and SPC for technical support, international accredited entities such as UNDP and FAO for project implementation, and strengthening engagement with the local private sector and civil society organizations (CSOs). Technology Collaboration: There is a high demand for collaboration on Climate Information Services (CIS) and early warning systems, climate-resilient building codes and infrastructure, water security technology like rainwater harvesting, and tools for climate-smart agriculture.

Checklist GCF investment criteria

Criterion	Coverage	Indicator	✔
Impact potential	Mitigation impact	Does the project include information on total emissions reductions over the project's lifetime (in tonnes of CO_2 equivalent)?	
		Does the project include information expected emission reductions specifically resulting from the GCF-supported intervention?	
	Adaptation impact	Does the project include information expected reduction in losses caused by extreme climate events and climate change in the targeted area?	
		Does the project include number of direct and indirect beneficiaries, with special attention to vulnerable developing countries?	
Paradigm shift potential	General	Does the project demonstrate impact beyond a single investment?	
	Potential for scaling-up and replication and its overall contribution to global low-carbon development pathways, consistent with a temperature increase of less than 2℃	Is the project aligned with global low-carbon development goals (e.g., <2°C scenarios)?	
	Potential for knowledge and learning	Does the project generate lessons learned with a system for dissemination?	
		Is there a clear feedback loop for integrating lessons into future activities or policies?	
	Contribution to the creation of an enabling environment	Does the project identify key barriers to systemic change and propose strategies to overcome them?	
		Are partnerships, institutional arrangements, or capacity-building efforts in place to sustain outcomes?	
	Contribution to the regulatory framework and policies	Does the project support the formulation, revision, or implementation of relevant policies or regulations?	
	Overall contribution to climate-resilient development pathways consistent with a country's climate change adaptation strategies and plans	Are co-benefits of climate-resilient development explicitly incorporated into project goals?	
Sustainable development potential	Environmental co-benefits	Does the project contribute to ecosystem preservation or restoration (e.g. forests, wetlands, biodiversity)?	
		Are nature-based solutions integrated into the project design?	
	Social co-benefits	Does the project improve the well-being or livelihoods of vulnerable or marginalized communities?	
		Is social inclusion integrated into the project?	
	Economic co-benefits	Does the project create decent jobs or new economic opportunities, particularly in low-income areas or for women?	
		Does the project promote long-term economic resilience?	
	Gender-sensitive development impact	Does the project address specific gender-related vulnerabilities or barriers?	
Needs of the recipient	Vulnerability of the country	Does the project directly address the climate-related vulnerabilities for the country (e.g., drought, flooding, sea-level rise)?	
	Vulnerable groups and gender aspects	Does the project ensure that the needs and perspectives of vulnerable groups, including women and marginalized populations?	
	Economic and social development level of the country and the affected population	Is the project targeted at low-income populations or regions with limited access to basic services and development opportunities?	
	Absence of alternative sources of financing	Is the project filling a critical financial gap where other funding sources are unavailable or insufficient?	
	Need for strengthening institutions and implmentation capacity	Does the project include measures to build the capacity of institutions and stakeholders to effectively implement and sustain climate actions?	
Country ownership	Existence of a national climate strategy	Does the proposed activities contribute to achieving specific targets outlined in national policies, such as NAMAs or NAP?	
	Coherence with existing policies	Does the project complement and reinforce existing national and sectoral policies, regulations, and development priorities?	
	Capacity of implementing entities, intermediaries or executing entities to deliver	Does the country have the technical, financial, and managerial capacity to successfully deliver the project outcomes?	
	Engagement with civil society organizations and other relevant stakeholders	Are civil society organizations and other key stakeholders meaningfully engaged in the project's design, implementation, and monitoring processes?	
Efficiency and effectiveness	Cost-effectiveness and efficiency regarding financial and non-financial aspects	Does the project include information on cost per tonne of carbon dioxide equivalent (tCO_2e) reduced as a result of the GCF intervention?	
	Amount of co-financing	Does the project include information on ratio of co-financing leveraged in relation to the GCF's contribution to the overall project cost?	
	Programme/project financial viability and other financial indicators	Does the project include information on estimates of the economic internal rate of return (EIRR) and/or financial internal rate of return (FIRR), based on project needs.	
	Industry best practices	Does the project demonstrate how the project incorporates and builds upon established best practices within the sector to enhance effectiveness and sustainability?	

Source: IGES

List of Useful Tools and Resources for Scientific Data

Name	Developers	Description
CLIMOCAST	National Institute for Environmental Studies (NIES), Japan	ClimoCast is a climate projection tool that shows climate projections up to the year 2100 in four representative greenhouse gas emissions scenarios (SSP126 - 585) and ten major climate simulation models. The tool covers all countries and allows users to compare different scenarios and models and downscale the results to the sub-national level. Climate data can be downloaded in CSV format.
CLIMATE IMPACT VIEWER	National Institute for Environmental Studies (NIES), Japan	Climate Impact Viewer shows the results of a climate change impact assessment based on the Integrated Climate Assessment - Risks, Uncertainties and Society (ICA-RUS) and Comprehensive Research on the Development of Global Climate Change Risk Management Strategies (S-10 Strategic Research Project) supported by the Environment Research and Technology Development Fund of the Ministry of the Environment of Japan. Process-based impact models for multiple sectors were used for future influence projections.
H08 WATER RISK TOOL	National Institute for Environmental Studies (NIES), Japan	The H08 Water Risk Tool uses a global hydrological model to assess climate change impacts on water resources. It provides easy-to-understand results to help users evaluate water risks and plan adaptation. By simulating global water flows and incorporating human use, it identifies causes of water risk—such as reduced rainfall or rising demand—to support informed decision-making.
A-PLAT PRO	National Institute for Environmental Studies (NIES), Japan	A-PLAT Pro offers climate scenario datasets (e.g., CMIP3, CMIP5, ISIMIP, d4PDF) at global and Japan-specific scales. Managed by CCCA at NIES, it provides downloadable, viewable, and analyzable data for technical users. Access requires a user ID and password from CCCA.
INTEGRATING CLIMATE ADAPTATION: A toolkit for urban planners and adaptation practitioners	C40 Cities / GPSC	This toolkit supports urban planners and climate adaptation specialists in integrating adaptation into city planning. Available in four languages (English, French, Portuguese, Spanish), it covers responses to flooding, heat, drought, sea level rise, storms, and wildfires, and outlines relevant urban policies and workshop approaches.
ACIS CLIMATE MAPS	High Plains Regional Climate Center (HPRCC)	ACIS Climate Maps provide U.S. temperature and precipitation data, including SPI, degree days, and deviations from normal. Users can select regions and timescales and download maps or data for custom use via the HPRCC GIS Portal.

Name	Developers	Description
ADAPTING STORMWATER MANAGEMENT FOR COASTAL FLOODS	National Oceanic and Atmospheric Administration (NOAA)	This tool allows users in the United States to learn more about coastal flooding and sea level rise, calculate current and future coastal flood frequency and impacts, determine if, when, and how the stormwater system in the user's community will be impacted, and learn different ways to mitigate flooding issues.
ADAPTWELL	University of Tokyo, Pacific-Consultants Co., LTD., Ministry of the Environment, Japan	Adaptwell is a simulation platform and data-driven tool for evaluating and making decisions on implementing adaptations to waterborne diseases, offering country-based simulations and highlighting key adaptation measures such as safe drinking water, handwashing, sanitation, nutrition, oral rehydration, and vaccination to mitigate risks associated with climate change

Other Tools

Name	Developer	Description
GCF Programming Manual	GCF	A comprehensive guide outlining the GCF project cycle, proposal development, and investment criteria. Essential for Accredited Entities and stakeholders designing projects.
GCF Open Data Library	GCF	Public portal providing access to GCF project data, country profiles, funding flows, and Concept Notes for transparency and analysis.
IPCC WGI Interactive Atlas	IPCC (Intergovernmental Panel on Climate Change)	The IPCC Interactive Atlas is a data visualization tool developed for the IPCC Sixth Assessment Report (AR6) Working Group I. It allows users to explore climate change projections and observe data globally and regionally. Users can interact with maps, graphs, and time series for various climate variables (e.g., temperature, precipitation) under different emissions scenarios. It is a valuable resource for policymakers, researchers, and educators to understand regional climate impacts.
World Bank Climate Change Knowledge Portal (CCKP)	World Bank	The World Bank's Climate Change Knowledge Portal (CCKP) offers comprehensive climate data and tools for understanding climate-related risks and adaptation strategies. It provides access to current and projected climate data, historical trends, and sector-specific impact assessments for over 200 countries. The portal is designed to support national planning, climate finance access, and climate-resilient development by making climate information accessible and usable for decision-makers.

Name	Developer	Description
Climate Data Store (CDS) – Copernicus Climate Change Service (C3S)	Copernicus C3S / ECMWF	The Climate Data Store (CDS), operated by the Copernicus Climate Change Service (C3S), is a comprehensive online platform providing free and open access to a wide range of climate data. It includes observations, reanalysis, and climate projections at global and regional scales. The CDS also offers data visualization and processing tools, making it an essential resource for climate researchers, policymakers, and practitioners involved in climate impact assessments and adaptation planning.
ND-GAIN Country Index	Notre Dame Global Adaptation Initiative Index	is a free online tool that measures a country's current vulnerability to climate disruptions and its readiness to adapt to these challenges. It uses data from dozens of indicators across multiple years to assess a country's vulnerability (considering factors like food, water, health, and infrastructure) and its capacity to leverage investments (economic, governance, and social readiness) for climate action.
Climate Impact Lab	Climate Impact Lab Consortium	The Climate Impact Lab measures the real-world costs of climate change, leveraging a first-of-its-kind, evidence-based, data-driven approach. The Climate Impact Lab is a collaboration of economists, climate scientists, and data engineers from various universities and research institutions who produce data-driven research to quantify the real-world costs and impacts of climate change around the globe.
Aqueduct	WRI	Developed by the World Resources Institute, Aqueduct is a global water-risk mapping framework. Version 4.0 offers 13 baseline indicators (covering water quantity, quality, and reputational concerns) plus future projections of water supply, demand, stress, depletion, and variability for 2030, 2050, and 2080, based on CMIP6 climate models. It is designed to help governments, investors, and businesses assess and plan for water-related risks
Climate Central	Climate Central	A non-profit climate science and journalism organization focused on translating climate data into practical and public-facing insights. One example is their wildfire toolkit, which analyzes long-term trends (e.g., 1973–2024 in the U.S.) to highlight increases in wildfire season length and severity, and the role of climate change and human factors in exacerbating fire risk.
Global Wildfire Information System (GWIS)	GEO (Group on Earth Observations) and Copernicus Programme	A global initiative under GEO and Copernicus that aggregates and harmonizes wildfire information from regional and national sources. GWIS supplies near-real-time and historical data—like active fire alerts, burned-areas, fire-danger forecasts up to 10 days, lightning predictions, emissions estimates, and country-level statistics—to support everything from operational response to global policy and research.

Name	Developer	Description
FAO Data Lab	FAO (Food and Agriculture Organization of the UN)	Big data, statistical innovation for agriculture.
PyAEZ, PyAEZ (github)	FAO (Food and Agriculture Organization of the UN)	Python tool for crop-yield estimates (Agro-Ecological Zoning).