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Agenda Item 11

LEARNING FROM CHALLENGES IN GEF PROJECTS

(Prepared by the Independent Evaluation Office of the GEF)

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ABBREVIATIONS

ADB	Asian Development Bank
APR	Annual Performance Report
GEF	Global Environment Facility
IEO	Independent Evaluation Office (GEF)
M&E	Monitoring and Evaluation
PIR	Project Implementation Report
STAP	Scientific and Technical Advisory Panel (GEF)
UNDP	United Nations Development Programme

EXECUTIVE SUMMARY

1. Organizations enhance their performance through purposeful and systematic learning from both successes and failures. Replicating success is straightforward—simply continue with what works and do more of the same. But learning from failures poses a greater challenge, as understanding what went wrong does not automatically provide insights on how to prevent similar issues in the future. Gaining insights from challenges is a crucial component of the Global Environment Facility (GEF) partnership's objectives for learning and knowledge sharing, particularly in the quest for innovation and transformational change.

2. This report addresses a critical gap in previous evaluations and research by focusing specifically on the analysis of less successful operational experiences. Although more than 80 percent of completed GEF projects achieve satisfactory outcomes by closure, evidence from projects and programs that are less effective—which constitute about a fifth of the GEF's total portfolio of closed projects—tends to be overlooked as highlighted in GEF IEO 2020g. This report analyzes these less successful GEF interventions to provide insights on risk mitigation and adaptive management measures for consideration in future operations.

3. The study recognizes that impact of interventions can unfold through diverse trajectories which are often non-linear and non-uniform and examines how certain unsatisfactory projects identify and address their challenges. By sharing these lessons with the GEF partnership, the study aspires to contribute to the development of a more resilient learning organization.

4. The report draws evidence from a review of 202 underperforming projects, including 141 closed projects, 38 ongoing projects, and 23 cancelled/dropped projects. Each group was analyzed separately, with particular emphasis on the closed projects. The closed projects were categorized into those with unsatisfactory outcome ratings at closure (unimproved projects), and those that had unsatisfactory development objective ratings during implementation but managed to improve their performance and received satisfactory outcome ratings at closure (improved projects). In addition, 12 projects across both categories were selected for in-depth case study analysis though document reviews and interviews. The evidence gathered through the literature review, portfolio analysis, case studies, and key informant interviews was triangulated to determine factors influencing underperformance, understand risk mitigation and adaptive management measures that contribute to improved performance, and gain insights into how the GEF can become an even stronger learning organization that intentionally and systematically seeks to improve its effectiveness in response to deep challenges posed by environmental degradation.

Risks, Challenges, and Adaptive Measures

5. The study highlighted the significance of both the level of risk to the achievement of project objectives and the implementation of a robust risk estimation strategy during the design phase as critical factors influencing project performance. The portfolio of underperforming projects exhibits elevated risk levels compared to all GEF-supported projects. In this context, limited comprehensive analytics during the design phase and risks that were

either overlooked or insufficiently addressed during the design phase can impede a project's performance or hinder its ability to improve performance before closure.

6. Several external risks which the projects had the ability to anticipate and manage were explicitly considered and incorporated into the project designs. These risks were associated with challenges such as limited government capacity, limited awareness among stakeholders regarding the issues the projects sought to resolve, as well as deficiencies in the legal and policy frameworks hindering the achievement of project objectives. Notably, approximately seventy percent of the projects within the portfolio acknowledged and addressed these risks during the design phase. However, the assessment of these risks was not always consistently comprehensive or thorough. As a result, nearly half of the reviewed projects still faced legal and policy barriers to achieving their outcomes by closure, over a third encountered challenges due to low capacity of government institutions, and two-fifths encountered barriers created by conflicting stakeholder interests.

7. The common challenges encountered by the reviewed closed projects during implementation were limited government ownership often associated with political changes or project complexity, complications arising from stakeholder interests affecting implementation, increased engagement requirements due to social and/or cultural specifics, and overambitious/unrealistic objectives.

8. The analysis highlights the pivotal importance of implementing adaptive management measures to boost project performance. Among the 141 closed projects, 38 demonstrated success by learning from challenges and adapting during the implementation phase. Improved projects implemented more comprehensive restructuring through analyzing and addressing root causes of performance issues across all types of challenges they encountered. While adaptive management was used in unimproved projects too, it was usually employed too late; or focused on only specific challenges, rather than addressing the full range of issues faced; or was applied superficially.

9. The study shows that addressing risks during project design and adapting to challenges during implementation increases the likelihood of overcoming related barriers to achieving project objectives by 44 percentage points, compared to cases where risks and challenges were noted but left unaddressed. Improved projects mitigated more risks and applied more adaptive management measures compared with the unimproved ones and this contributed to resolving issues arising from stakeholder interests complicating the implementation, low levels of government ownership, and deficiencies in policy and legal frameworks. The main internal (or project level) barriers that were removed were: overly complex project designs, delays in implementation, and a lack of capacity within the project implementation unit.

10. The reviewed ongoing projects exhibit more risks during the design stage, and more challenges during implementation compared to the closed projects. This difference can be attributed, in part, to the impact of COVID-19 on nearly all projects in the ongoing portfolio (95 percent), whereas only 28 percent of projects in the closed portfolio were affected by pandemics/epidemics. The ongoing projects also used more adaptive management measures during implementation compared with unimproved closed projects. As in the closed projects,

the ongoing ones less frequently anticipated and addressed at the design stage risks outside of project's control than risks that are under project control.

11. Cancelled and dropped projects are a specific case of underperforming interventions. Since GEF-4, two projects were dropped, and 21 were cancelled. The cancelled projects are characterized by higher risks than the reviewed portfolio of underperforming closed and ongoing projects. The primary reasons for cancellation were conflict and instability, changes in national priorities or operating environment, and difficulties in meeting preliminary conditions for the start of activities.

Learning from Impact Trajectories in GEF Projects

12. Many projects funded by the GEF are complex interventions which follow non-linear, non-uniform impact trajectories shaped by factors, including (a) the complexity of the problem faced, (b) the project's particular design characteristics, (c) the diligence with which the project was implemented, (d) the significance of the known and unknown risks it encountered across its existence (design to completion), and (e) the extent to which effective adaptive management measures were taken in response to these risks. Systematic engagement with each of these factors would strengthen learning across the partnership.

13. The analysis of impact trajectories in unimproved and improved projects offers several lessons for the GEF. First, something can be learned, and substantively gained, from even the most disappointing project—providing intentional efforts are made to understand where, how, and why initial decisions and subsequent correctional efforts did not result in objectives being attained. Second, effective adaptive management measures can generate not just notable improvement but seriously big wins. By implementing corrective actions grounded in an extensive contextual analysis and in stakeholder consultations the projects can overcome both technical and complex adaptive problems.

14. Third, modest but thoughtful adaptive management measures can deliver small wins and do so quite consistently. This is especially the case when challenges are technical in nature, or can be solved by the application of expert knowledge. Learning about technical challenges can and should be approached in a systematic way, and the GEF partnership is well positioned to curate learning protocols that enable technical problems to be more systematically identified, shared, and addressed.

Lessons Learned: How the GEF can become a Stronger Learning Organization

15. The GEF partnership has increasingly acknowledged the importance of knowledge management and learning in fulfilling its mandate and in ensuring operational effectiveness. The GEF Secretariat is currently engaging with Agencies, STAP, countries, and other members of the partnership to facilitate the implementation of the recently approved Strategy for Knowledge Management and Learning.

16. This report, with its particular focus on GEF-funded projects that struggled to meet their objectives during implementation but sought to implement adaptive management measures, highlights the process through which the GEF can seek to become a more effective learning organization. Indeed, learning from challenges—systematically and intentionally—is a defining

feature of learning organizations, such as the GEF: they explicitly recognize that solutions to the most complex challenges will only emerge through the design and implementation process itself, and so invest the time, effort, and resources to generate the specific feedback they need to make necessary refinements or changes.

17. This report has identified eight guiding principles or lessons to offer insights on how the GEF partnership can enhance its role as a learning organization as it embarks on the implementation of the new Strategy.

18. Specifically, these guiding principles/lessons include active engagement with high priority but deeply complex environmental projects over time and through experimentation; establishing the clear scoping conditions under which the outcomes can and cannot be expected; setting realistic expectations and time frames aligned with problem complexity, contextual characteristics and capability to deliver; ensuring that design, scaling, and replication decisions are informed by comprehensive contextual analysis; regarding monitoring more as a learning tool and less as a compliance instrument; the judicious and strategic pursuit of ambition and innovation; ensuring that the necessary legal structures, administrative procedures, and direct political support are in place to support a project, especially as the intervention evolves over time; and developing credible measures of the extent to which the emergent problems were solved during implementation—learning how to address everyday problems consistently well is the foundation on which more complex problems can be more confidently addressed. These guiding principles/ lessons may be further refined, replaced, or added to as the GEF partnership operationalizes and implements its Knowledge Management and Learning Strategy.

Recommendation

19. The challenge for the GEF is to go beyond demonstrating that, for the most part, it can successfully deliver projects that meet their stated objectives: the higher order challenge is how it will continue to design and deliver effective responses to the deep challenges posed by environmental degradation. Learning to do so—consistently, reliably, at scale—should be the particular form of ambition it continues to embrace and realize. Learning from challenges—systematically and intentionally—should be further embraced by the GEF partnership at all levels. Solutions to the most complex challenges will only emerge through well-developed design and implementation processes.

20. This report recommends that while the GEF Secretariat operationalizes the recently approved GEF Knowledge Management and Learning Strategy in consultation with members of the GEF partnership, it would be beneficial to reflect and apply the lessons/guiding principles relevant to the GEF, in the detailed action plans for knowledge and learning.

SECTION I. INTRODUCTION

1. Organizations enhance their performance through purposeful and systematic learning from both successes and failures. Replicating success is straightforward—simply continue with what works and do more of the same. But learning from failures poses a greater challenge, as understanding what went wrong does not automatically provide insights on how to prevent similar issues in the future. This study establishes a connection between identifying failure factors and developing solutions, aiming to mitigate the risk of failure and adapt to challenges.

2. Gaining insights from challenges is a crucial component of the Global Environment Facility (GEF) partnership's objectives for learning and knowledge sharing, particularly in the quest for innovation and transformational change. As underscored by the GEF Scientific and Technical Advisory Panel (STAP), the ability to adapt to unexpected changes or seize emerging opportunities requires organizational preparedness to continuously test assumptions and promptly learn from mistakes (GEF STAP 2021a). The GEF partnership has increasingly recognized the importance of knowledge management systems that facilitate learning toward innovation, transformative change, scaling up, and adaptive management (GEF IEO 2020c). In comparison to well-established alternatives, the "pursuit of and testing of novel ideas and solutions" often carry higher inherent risks, leading to a greater likelihood of interventions' falling short of their expected outcomes (GEF STAP 2022b). Consequently, the effective management of risk and the maintenance of high standards of performance in project selection and design are deemed critical (GEF 2022d).[1]

3. As evident in the literature addressing challenges in the delivery of development interventions (Bridges and Woolcock 2022; Gonzalez de Asis 2012; Woolcock 2009, 2022), projects and programs may follow different trajectories in achieving their objectives. Recent GEF projects and programs—characterized by increased complexity and a stronger focus on systems thinking, transformative change, innovation, and scaling up—often follow nonlinear and non-uniform trajectories. While some of these interventions might not achieve their objectives at the time of closure, they may later exceed their targets. Some of these projects are focused on incentivizing scaling up, which might not materialize within the intervention time frame. Meanwhile, some complex and transformative projects that demonstrate impressive results at closure may have low sustainability of outcomes post closure. The analysis in this study delves into different trajectories to achieve project outcomes.

4. Following the recommendations from the GEF Independent Evaluation Office (IEO) Evaluation of Knowledge Management in the GEF (GEF IEO 2020c), the GEF Secretariat has prepared a GEF-wide Strategy for Knowledge Management and Learning (GEF 2023). This strategy outlines a roadmap of knowledge management and learning actions to enhance the impact of GEF programming on the global environment. One of the strategy's action areas is the promotion of open exchange and reflection on challenges and failures, alongside the sharing of good practices and success stories. This study contributes to the GEF partnership's learning objectives by drawing lessons from prior complex and transformative interventions

[1] The GEF Secretariat committed to seek guidance from the STAP and the GEF Council to establish a baseline for risk acceptance in GEF-8. The relevant document is expected for the Council meeting in February 2024.

that faced challenges in achieving their outcomes. Its objective is to share the knowledge accumulated through these instances with the GEF partnership, providing actionable insights on risk mitigation and adaptive management measures that can be applied to future interventions.

5. The study also addresses a critical gap in previous evaluations and research by focusing specifically on the analysis of less successful operational experiences. Although more than 80 percent of completed GEF projects achieve satisfactory outcomes by closure (GEF IEO 2023), evidence from projects and programs that are less effective—which constitute about a fifth of the GEF's total portfolio—tends to be overlooked; this was recently highlighted by the GEF IEO (2020g). The primary focus in overall evaluation and development research is on identifying factors contributing to the success of interventions and drawing lessons from good practice examples for future operations. This represents a missed opportunity as such perspectives can offer valuable insights into mitigating the risk of failure and adapting to challenging circumstances.

6. The primary goal of this study is thus to extract valuable insights from projects that failed to achieve their objectives by closure and those that were failing but managed to recover. Its aim is to uncover the factors that contributed to the difficulties in their performance, examine how the associated risks could have been (or were) mitigated, and assess the adaptive management measures that were employed or missed. By sharing these lessons with the GEF partnership, the study aspires to contribute to the development of a more resilient learning organization. Differing from the conventional method of drawing lessons from successful cases or comparing failed projects with successful ones, this methodology centers on (1) identifying factors that contribute to failure rather than success and (2) exploring the means of recovery throughout the project's life. The study classifies the risks of failure (challenges) into three types,[2] each requiring different forms of adaptive management and varying levels of support from the GEF: (1) external factors beyond GEF/ Agency control, (2) external factors within the GEF/Agency control, and (3) internal issues in project design.

1. Previous evaluative evidence

7. While the GEF IEO has not previously undertaken a specific evaluation focusing on underperforming projects and their challenges, several evaluations have examined factors influencing the outcomes of GEF projects and programs. These evaluations include, among others, the GEF IEO's comprehensive evaluations (formerly known as overall performance studies) and its annual performance reports (APRs). These evaluations have identified two broad categories of factors associated with lower outcome achievements. The first category includes weaknesses in project design and implementation. For instance, GEF IEO reports from 2005 to 2008 highlighted issues such as shortcomings in problem analysis, choice of activities, and theory of change as significant contributors to low outcome achievement. The implication is that when these aspects of a project are not properly addressed or planned, it can lead to poor results. The second category includes exogenous changes in a project's operational environment that affect its ability to achieve intended outcomes. External factors beyond the

[2] These terms are defined in section 3.

project's control, such as shifts in government policies, economic conditions, or social dynamics, can influence the project's ability to achieve its goals.

8. APR 2008 included a study that examined lessons from 40 underperforming projects. In 30 of these projects, weaknesses in project design were identified as a key driver of low outcome achievement. This means that the projects were not well-planned or did not adequately address the problems they were meant to solve. The study highlighted issues such as inadequate problem analysis, poor choice of activities, and flawed theories of change.

9. Expanding on previous efforts, APR 2014 consolidated key insights from 293 terminal evaluations categorizing factors influencing the performance of interventions into two main groups: project design and implementation management/oversight. When examining negative factors, the most commonly cited weaknesses in project design included shortcomings in monitoring and evaluation (M&E) design, intervention strategies, and overly ambitious objectives. In terms of management or oversight, the frequently identified negative factors included inadequate training or oversight provided for effective M&E, failure to restructure or cancel the project in a timely manner, and a lack of technical support (GEF IEO 2015). Other evaluations conducted by the GEF IEO have similarly underscored the importance of the quality of project design and implementation, as well as the country context and the timely realization of cofinancing in supporting project outcomes (GEF IEO 2010 and 2017).

10. In a recent analysis undertaken by the GEF IEO, the performance of interventions was influenced by multiple factors and their interactions (GEF IEO 2021a, 2022b). The analysis highlighted that adaptive management plays a crucial role in enabling outcomes. Several factors were identified as having a negative impact on project performance and sustainability including implementation delays, procedural constraints, and procurement-related challenges. On the other hand, positive factors contributing to project success included the appropriate selection of partners—particularly key stakeholders—during project preparation, along with their active participation in project design. Moreover, aligning the project design with the country needs and capacities, actively engaging stakeholders and communities during project implementation, and incorporating lessons learned from previous projects were identified as positive factors (GEF IEO 2021a).

11. The GEF partnership's growing interest in learning from underperforming projects is evident in the GEF-8 Results Measurement Framework which, under Tier 2 (Operational Performance), includes metrics to monitor the effectiveness in managing projects and programs (GEF 2022c). Among other metrics, the results measurement framework incorporates a proactivity index which measures the proportion of projects that demonstrate proactive actions one year after being rated as unsatisfactory in terms of implementation progress and/or development outcome. The recent GEF Monitoring Report 2022 presented findings on the effectiveness and efficiency of GEF-financed projects, including the proactivity index, and emphasized the importance of strengthening the evidence base and analysis on the trade-offs between risk and results (GEF 2022e).

12. GEF Agencies also recognize the importance of learning from challenges. In this regard, the evaluations conducted by the United Nations Development Programme (UNDP) emphasize the need to understand the capacities of governments and the readiness of countries to

embrace the necessary changes. They also highlight the importance of considering local knowledge; involving stakeholders, including communities and the private sector; and promoting regional and cross-sectoral collaboration (UNDP IEO 2021b). The Asian Development Bank (ADB) stresses the significance of adequate project design and supervision, including sufficient financing for the project scope. ADB evaluations emphasize the importance of strong monitoring, a robust country, sector and project risk assessments, government commitment, and good implementation capacity within the country (ADB Independent Evaluation 2022). Similarly, evaluations by the Inter-American Development Bank identify flawed project design, poor quality of M&E, insufficient country implementation capacity, and weak stakeholder participation as reasons for low project performance (IDB OVE 2021). The International Fund for Agricultural Development evaluations highlight the importance of project design, including the specificity of context and social targeting. They also emphasize stakeholder ownership and the ability to adapt to changes in the social, political, and development landscape (IFAD IOE 2020). The Independent Evaluation Group of the World Bank notes the relevance of early warning flags raised when a project receives unsatisfactory outcome or implementation ratings in annual implementation reports (World Bank IEG 2018).

13. Expanding on previous work, this study represents the first extensive assessment of GEF interventions that did not fully achieve their stated objectives or faced implementation challenges but successfully recovered by project closure. Its objective is to offer insights for future operations by drawing lessons from interventions that performed unsatisfactorily due to implementation challenges. The study looks at projects that were canceled or dropped, along with a sample of ongoing operations that have received below-satisfactory implementation ratings.

2. Objective, scope, and key questions

14. The objectives of this study are to (1) analyze the factors that contribute to the underperformance of interventions, specifically in terms of unsatisfactory achievement of objectives; (2) examine the measures taken for risk mitigation and adaptive management that contribute to improved performance; and (3) provide insights into risk mitigation and adaptive management measures that can be applied to future operations. The overarching aim is to offer perspectives on how the GEF partnership can strengthen its position as a learning organization, intentionally and systematically working to enhance its effectiveness.

15. The study focuses on a sample of the most recent closed interventions of the GEF, specifically from GEF-4, GEF-5, and GEF-6 that have been rated at closure.[3] The study also includes interventions that were initially approved or endorsed by the GEF Chief Executive Officer (CEO) but were later canceled or dropped.[4] Additionally, the study includes a sample of

[3] The small size of the portfolio of closed GEF-6 projects prevents statistical analysis across replenishments.
[4] Some of the dropped or canceled interventions have been rated at closure and are listed in the GEF IEO APR data set; others do not have such ratings and have been sourced from the GEF Portal. The rated interventions were included in the portfolio analysis of closed projects, and the unrated ones are the subject of a qualitative analysis. Note that because the study aims at examining the factors of operational failure and related adaptive management measures, it does not include projects that were dropped prior to CEO approval/endorsement.

ongoing operations with average unsatisfactory development objective ratings in their project implementation reports (PIRs).[5]

16. The study's portfolio analysis compares two distinct types of projects, based on the performance trajectory from implementation start to closure, as indicated by their PIR development objective ratings and the APR outcome ratings, both of which are provided on a six-point scale from highly satisfactory to highly unsatisfactory.

(a). Unimproved projects, which received unsatisfactory outcome ratings[6] at closure with varying ratings throughout the implementation phase.

(b). Improved projects, which had unsatisfactory average development objective ratings[7] during implementation but demonstrated improvement and achieved satisfactory outcome ratings[8] at closure.

17. The study sought to answer the following key questions:

(a). What factors contribute to the development objective/outcome ratings in the unsatisfactory range during implementation and/or at closure?

(b). What lessons can be learned from the underperforming and improved interventions regarding mitigating the risk of failure to achieve the operation's objectives and adapting to challenging circumstances?

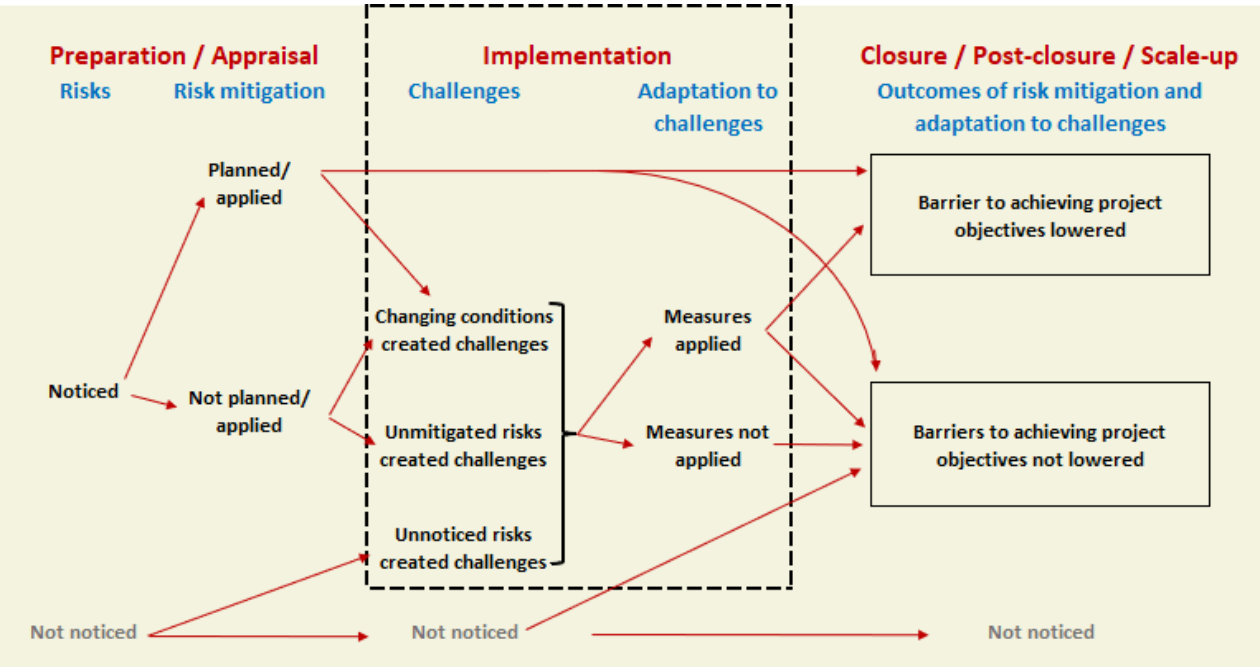
(c). How can the GEF partnership become a stronger learning organization that systematically and intentionally seeks to improve its effectiveness?

3. Methodological approach

18. The study employed a mixed-methods approach incorporating document and literature review, portfolio analysis, case studies, and key informant interviews. The methodological framework utilized in the study (depicted in Figure 1) illustrates the logic of risk mitigation and adaptive management in response to challenges over the project life span. The analysis focused on understanding the challenges faced by low-performing projects and the corresponding adaptive management measures implemented (represented by the section within the dotted line in the figure). The analysis also sought to understand the risks pertaining to the achievement of project objectives or intended outcomes that were either mitigated during the design phase or overlooked, and whether barriers to achieving project objectives were either reduced or persisting by closure.

[5] GEF Agencies report on project implementation and performance through annual PIRs, as required by the GEF Policy on Monitoring. The GEF monitoring policy defines the development objective rating as "a rating of the extent to which a project is expected to achieve or exceed its major objectives" (GEF 2019).
[6] Rating 3 or below.
[7] Average rating 3.5 and below.
[8] Rating 4 and above.

Figure 1: Methodological framework for the study: intervention pathways based on risk mitigation and adaptation to challenges



Note: The figure simplifies the logic of risk mitigation and adaptation to challenges in actual projects where the challenges are often interconnected, and mitigation and adaptive management measures may achieve partial success. Barriers may be partially lowered or addressed, sometimes even after project completion. The elements of the figure presented in gray font were not examined.

19. The framework is built on following assumptions: (1) certain risks to achieving the intervention's objectives can be anticipated and mitigated during the design phase; (2) some challenges can be identified and adapted to during implementation, including those that are outside the intervention's control;[9] (3) challenges may be identified at closure as factors influencing outcome performance, or such opportunity could be missed; (4) adaptive management measures, whether implemented or missed, can be discussed at closure; and (5) for projects with ratings in the unsatisfactory range, the potential for achieving objectives after project closure—including replication or scaling up—can be identified. The list of challenges to achieving a given intervention's objectives and the corresponding mitigation/adaptive management measures was developed through a literature review and analysis.[10] It draws upon evaluations conducted by the GEF IEO and partner Agencies, as well as the academic literature on aid effectiveness, the science of delivery, delivery challenges, adaptive learning, and resilience.

[9] Based on the literature, challenges either can be within the GEF partnership's control and addressed by the project itself or by other operations; or outside its control, requiring adapting the project to the circumstances, including to changing country conditions, during project implementation. The importance of considering the latter is discussed at length in a recent GEF IEO evaluation, which shows that adapting to external challenges that are outside of the GEF control is critical for the performance of GEF projects (GEF IEO 2020b).

[10] See annex A: Literature and annex B: Classification of challenges and adaptive management measures.

20. **The document and literature review** synthesized lessons learned on factors that influence the success and failure of international development and environmental projects and programs. This review drew upon discussions of delivery challenges and approaches to adaptive management found in publications on aid effectiveness, the science of delivery, and delivery challenges. It also drew on evaluations conducted by the IEO; GEF strategies, policies, and guidelines; GEF STAP information and advisory documents; relevant publications by the independent evaluation units of the GEF Agencies; as well as on the learning and resilience literature. The documents and literature reviewed are listed in annex A.

21. **The portfolio analysis** reviewed two groups of GEF interventions: (1) closed interventions that received unsatisfactory ratings at closure, and (2) closed interventions that had unsatisfactory ratings during implementation but managed to improve their performance and achieve a satisfactory rating at closure. These categories included projects that were canceled but still received a rating at closure. During the review, the projects were coded based on information in the project documents including design stage, implementation, and evaluation documents.[11] The review utilized the study's methodological framework (Figure 1) and the classification of risks/challenges to achieving the intervention's objectives and adaptive measures (see annex B), which were specifically designed for this study based on the literature review. The study examined the typical combinations of challenges and adaptive management measures (both applied and missed) for the two types of projects in the portfolio at three different points of time in the project timeline (as shown in Figure 1). The study included a qualitative analysis of interventions that were canceled before closure to understand the reasons for cancellation. It also analyzed a sample of ongoing interventions with average unsatisfactory PIR development objective ratings.

22. **Case studies were an important source of information.** By employing the process tracing approach,[12] the study examined underperforming interventions through in-depth case studies. This approach involved tracing the key events that defined intervention performance during implementation, understanding the team's reactions to these events, retroactively assessing these reactions, and determining whether and how the underperformance could have been mitigated. For interventions that demonstrated improvement, the case studies delved into how they successfully redirected their performance toward a satisfactory outcome. The case studies focused on recently closed interventions with outcome ratings in the unsatisfactory range; and interventions that experienced setbacks but took remedial action, ultimately achieving outcome ratings in the satisfactory range at closure. The case studies included an in-depth analysis of factors associated with unsatisfactory performance and the corresponding mitigation/adaptive management measures. They were based on the document reviews (see the document review template in annex C), interviews (the interview template can be found in annex D) with project implementation team leaders typically from GEF Agencies and project staff. The selection of case study interventions aimed to ensure representation

[11] The review covered the entire document, including country and sector background sections, project relevance justification, project design, project risk assessments, implementation arrangements, lessons learned from previous operations, development objective and implementation progress assessments, midterm review and terminal evaluation recommendations and lessons, and any restructurings or recommendations on project adjustment or adaptive management.

[12] For more about this approach, see, for example, Raimondo (2023) and Woolcock (2022).

across focal areas, regions, and GEF Agencies. Upon completion of the data collection and analysis, key informant interviews were conducted to validate the findings.

23. **Triangulation.** The information gathered through the literature review, portfolio review and analysis, case studies, and key informant interviews was triangulated to determine trends and to identify the main findings and conclusions.

24. **Addressing limitations**. The study used outcome and project implementation report ratings as an objective way to identify projects that were not successful or that experienced challenges.[13] However, ratings might not always offer a comprehensive perspective. To address this limitation, document reviews, interviews, and case studies were integrated into the analysis. To counteract the potential limitation of stakeholders being reluctant to discuss challenges and unsuccessful projects openly, interviews were structured with a primary focus on fostering a learning environment; the information gathered was cross-verified through a variety of sources, including document reviews.

4. Report organization

25. Section 2 describes the portfolio and the project cases utilized in this study. It includes details on the composition of the overall portfolio, including closed, ongoing, and canceled projects. It also describes the methodology for selecting the case studies. Section 3 discusses the main findings based on the portfolio and case study analyses. Section 4 analyzes the case study projects in terms of their trajectories, drawing inferences for the GEF partnership. Section 5 provides insights and implications on how the GEF partnership can become a stronger learning organization.

[13] Poor outcome and PIR ratings are signals of challenges and concerns about the projects. For more information, see, for example, GEF IEO 2020a, GEF IEO 2020e, GEF IEO 2021e.

SECTION II. PORTFOLIO DATA AND CASE STUDY DESCRIPTION

This section presents a description of the portfolio and project cases utilized in this study.

1. Portfolio

26. The portfolio review included three groups of projects: a sample of 141 closed underperforming projects, a sample of 38 ongoing underperforming projects, and 23 canceled projects. Altogether, 202 projects were sampled and reviewed (Table 1). Each group was analyzed separately, with particular emphasis on the closed projects. The structure of the closed projects reviewed by the study is presented in Table 2.

Table 1: Structure of the three components of the overall portfolio

Characteristics	Closed underperforming projects	Ongoing underperforming projects	Canceled projects	Portfolio total
Number	141	38	23	202
Share of the portfolio (%)	70	19	11	100

Source: GEF IEO, based on the GEF APR 2023 data set and the GEF Portal.

Portfolio of closed underperforming projects

27. The portfolio of closed underperforming projects was selected from a pool of 1,072 completed projects from GEF-4 onwards. The selection criteria involved projects with accessible outcome ratings from the GEF IEO APR data set, and development objective PIR ratings in the Project Implementation and Completion Report data set, available through the GEF Portal as of May 2023. The selection of closed projects for the portfolio review focused on two groups—those that demonstrated improvement over time (improved) and those that did not (unimproved). The selection method employed an uncontrolled quota sampling approach.[14]

28. The total set of unimproved projects—that is, those with outcomes in the unsatisfactory range at closure,—was 158. A total of 103 unimproved projects was selected for the review. The selection process followed two criteria: (1) inclusion of all projects from GEF-5 and subsequent replenishments (57 projects); (2) a sampling of GEF-4 projects (46 projects) to ensure alignment with the broader structure of the closed projects portfolio. This alignment was achieved through considering characteristics such as GEF Agency, focal area, region, and project size (full or medium size).

29. The improved projects (a total of 38) are those that had unsatisfactory average development objective PIR ratings during implementation but managed to improve and ultimately receive outcome ratings in the satisfactory range at closure. Given their limited number, all improved projects were included in the portfolio.

[14] Non-random selection of projects for each quota, as per the study objectives.

30. The portfolio analysis, coupled with the case study analysis, primarily concentrates on the comparison of these two project types. The structure of the closed project portfolio is presented in Table 2.

Table 2: Structure of the portfolio of closed projects (number of projects and percentage of total projects)

Characteristics	Unimproved	Improved	TOTAL
Number	103	38	141
Share of the portfolio of closed projects, %	73	27	100

Source: GEF IEO, based on the GEF APR 2023 data set and the GEF Portal.

31. Tables 3, 4, 5, 6, and 7 provide information on the structure of the reviewed projects by focal area, region, country type, Agency, and trust fund. The climate change and biodiversity focal areas account for the largest shares of the closed project portfolio, together comprising about two-thirds of the portfolio. By region, Africa accounts for the largest percentage of closed projects (39 percent).

Table 3: Portfolios, by focal area (number and percentage)

Focal area	Closed			Ongoing	Canceled
	Unimproved	Improved	TOTAL		
Biodiversity	32 (31%)	15 (39%)	47 (33%)	4 (11%)	4 (17%)
Climate change*	35 (34%)	13 (34%)	48 (34%)	17 (45%)	12 (52%)
Chemicals and waste	8 (8%)	0 (0%)	8 (6%)	3 (8%)	2 (9%)
International waters	4 (4%)	4 (11%)	8 (6%)	0 (0%)	1 (4%)
Land degradation	5 (5%)	2 (5%)	7 (5%)	1 (3%)	1 (4%)
Multifocal	19 (18%)	4 (11%)	23 (16%)	13 (34%)	3 (13%)
Total	**103 (100%)**	**38 (100%)**	**141 (100%)**	**38 (100%)**	**23 (100%)**

Source: GEF IEO, based on the GEF APR 2023 data set and the GEF Portal. *The climate change focal area includes projects from several trust funds, including GEF Trust Fund (GET), Least Developed Countries Fund (LDCF), Special Climate Change Fund (SCCF), and the Capacity-Building Initiative for Transparency (CBIT). Distribution of projects by trust funds is presented on Table 7.

Table 4: Portfolios, by region (number and percentage)

Region	Closed projects			Ongoing projects	Canceled projects
	Unimproved	Improved	TOTAL		
Africa	46 (45%)	9 (24%)	55 (39%)	11 (29%)	8 (35%)
Asia	18 (17%)	16 (42%)	34 (24%)	10 (26%)	9 (39%)
Europe and Central Asia	10 (10%)	3 (8%)	13 (9%)	6 (16%)	2 (9%)
Latin America and the Caribbean	26 (25%)	10 (26%)	36 (26%)	10 (26%)	3 (13%)
Global and interregional	3 (3%)	0 (0%)	3 (2%)	1 (3%)	1 (4%)
Total	**103 (100%)**	**38 (100%)**	**141 (100%)**	**38 (100%)**	**23 (100%)**

Source: GEF IEO, based on the GEF APR 2023 data set and the GEF Portal.

Table 5: Portfolios, by country type, national projects (number and percentage)

Country type	Closed projects			Ongoing projects	Canceled projects
	Unimproved	Improved	TOTAL		
SIDS	15 (17%)	3 (9%)	18 (15%)	8 (23%)	0 (0%)
FCV	21 (24%)	4 (12%)	25 (21%)	13 (37%)	8 (40%)
LDCs	30 (34%)	7 (21%)	37 (31%)	11 (31%)	8 (40%)
Landlocked	16 (18%)	3 (9%)	19 (16%)	11 (31%)	8 (40%)
Rest of countries	40 (45%)	22 (67%)	62 (51%)	10 (29%)	7 (35%)
Total	**88 (100%)**	**33 (100%)**	**121 (100%)**	**35 (100%)**	**20 (100%)**

Source: GEF IEO, based on the GEF APR 2023 data set and the GEF Portal. *Note:* The sum of country types does not add up to 100% because they are not mutually exclusive. SIDS = Small Island Developing States; FCV = countries affected by fragility, conflict, and violence; LDCs = Least Developed Countries.

Table 6: Portfolios by GEF Agency (number and percentage)

Agency	Closed projects			Ongoing projects	Canceled projects
	Unimproved	Improved	TOTAL		
ADB	2 (2%)	0 (0%)	2 (1%)	0 (0%)	2 (9%)
CI	1 (1%)	0 (0%)	1 (1%)	0 (0%)	0 (9%)
FAO	6 (6%)	0 (0%)	6 (4%)	1 (3%)	0 (0%)
GEFSEC*	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (9%)
IDB	5 (5%)	0 (0%)	5 (4%)	3 (8%)	2 (9%)
IFAD	7 (7%)	0 (0%)	7 (5%)	0 (0%)	0 (0%)
IUCN	0 (0%)	0 (0%)	0 (0%)	1 (3%)	0 (0%)
JOINT	2 (2%)	1 (3%)	3 (2%)	0 (0%)	0 (0%)
UNDP	50 (49%)	31 (82%)	81 (57%)	27 (71%)	7 (30%)
UNEP	10 (10%)	2 (5%)	12 (9%)	2 (5%)	4 (17%)
UNIDO	5 (5%)	0 (0%)	5 (4%)	1 (3%)	0 (0%)
WB	15 (15%)	4 (11%)	19 (13%)	3 (8%)	6 (26%)
Total	**103 (100%)**	**38 (100%)**	**141 (100%)**	**38 (100%)**	**23 (100%)**

Source: GEF IEO, based on the GEF APR 2023 data set and the GEF Portal. *Includes direct access projects.
Note: ADB = Asian Development Bank; CI = Conservation International; FAO = Food and Agriculture Organization of the United Nations; GEFSEC = GEF Secretariat; IDB = Inter-American Development Bank; IFAD = International Fund for Agricultural Development; IUCN = International Union for Conservation of Nature; UNDP = United Nations Development Programme; UNEP = United Nations Environment Programme; UNIDO = United Nations Industrial Development Organization; WB = World Bank Group.

Table 7: Portfolios by trust fund (number and percentage)

Trust fund	Closed projects			Ongoing projects	Cancelled projects
	Unimproved	Improved	TOTAL		
CBIT	1 (1%)	0 (0%)	1 (1%)	0 (0%)	0 (0%)
GET	83 (81%)	34 (89%)	117 (83%)	35 (92%)	19 (83%)
LDCF	12 (12%)	2 (5%)	14 (10%)	3 (8%)	3 (13%)
MTF	2 (2%)	0 (0%)	2 (1%)	0 (0%)	1 (4%)
NPIF	0 0%)	1 (3%)	1 (1%)	0 (0%)	0 (0%)
SCCF	5 (5%)	1 (3%)	6 (4%)	0 (0%)	0 (0%)
Total	**103 (100%)**	**38 (100%)**	**141 (100%)**	**38 (100%)**	**23 (100%)**

Source: GEF IEO, based on the GEF APR 2023 data set and the GEF Portal. *Note:* CBIT = Capacity-building Initiative for Transparency; GET = GEF Trust Fund; LDCF = Least Developed Countries Fund; MTF = multi-trust fund; NPIF = Nagoya Protocol Implementation Fund; SCCF = Special Climate Change Fund.

Portfolio of ongoing underperforming projects

32. The portfolio of ongoing underperforming projects consists of projects that experienced challenges in achieving their objectives, resulting in unsatisfactory average development objective PIR ratings.[15] This portfolio was derived from the most recent replenishments since GEF-6. The selection process was based on two criteria: (1) the project's unsatisfactory average development objective rating, and (2) the availability of at least three annual development objective ratings. Thirty-eight ongoing projects were selected that meet these criteria.

33. Comparing this portfolio with that of closed projects proved challenging due to differences in the sources of project performance data: for closed operations, the core source are postclosure terminal evaluations; for ongoing operations, only PIRs and midterm reviews can be available in some cases. Additionally, the ongoing operations portfolio in this study is predominantly comprised of projects that were significantly affected by COVID-19, further contributing to a lack of comparability with the closed portfolio. The comparison of structure of the underperforming ongoing projects, with the structure of the underperforming closed projects is presented in tables 3, 4, 5, 6, and 7. Overall, the structural differences are minor, with a few notable distinctions. In terms of focal area, the ongoing portfolio has a lower percentage of biodiversity projects compared to the closed portfolio. Conversely, the shares of climate change and multifocal area projects are larger in the ongoing portfolio. By region, the ongoing portfolio registers a lower percentage of projects in Africa compared to the closed portfolio, while the proportion of projects in Europe and Central Asia is higher.

[15] Defined as average PIR development objective rating of 3.5 and below. GEF Agencies report on project implementation and performance through annual PIR, as required by the GEF Monitoring Policy. The GEF Policy on Monitoring defines the development objective rating as "a rating of the extent to which a project is expected to achieve or exceed its major objectives" (GEF, 2019).

Portfolio of canceled and dropped projects

35. The study examined interventions that had been approved/endorsed by the CEO but were subsequently canceled or dropped. The review included all projects that received CEO approval or endorsement during GEF-4 and subsequent replenishments, and for which cancellation or drop dates were recorded. As shown in table 1, twenty-three projects were canceled or dropped and reviewed for this study.

36. Canceled/dropped projects are a specific case of underperforming operations. The GEF Project Cancellation Policy (2018), and the Guidelines on the GEF Project and Program Cycle Policy (2020) explain why and how projects may be canceled or dropped.[16] An adequate comparison with the portfolio of closed and ongoing projects is not possible because the sources of project performance data differ: for closed operations, the core source are postclosure terminal evaluations; for ongoing operations, only PIRs and midterm reviews can be available in some cases; the performance of canceled projects is documented through cancellation memos and PIRs (if available).

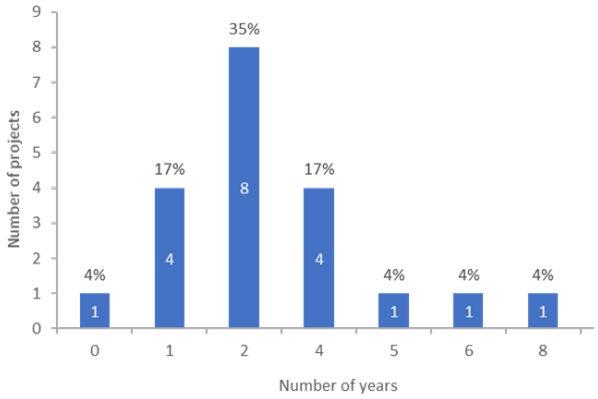
37. The review of canceled/dropped projects aimed at to assess the length of time between project approval or implementation start and cancellation and examine the reasons for cancellation; this latter is discussed in section 3. The study also reviewed the risk ratings available through PIRs.

38. The number of years between CEO approval/endorsement and cancellation ranged from 0 to 10 (Figure 2a). The majority of projects (17 projects, 74 percent of the total) were canceled within five years of approval, with two years being the median. Figure 2b shows the number of years from start of implementation to cancellation. Over half of the canceled projects (15 projects, 65 percent of the total) did not start implementation; the remainder were canceled between two and nine years into implementation.

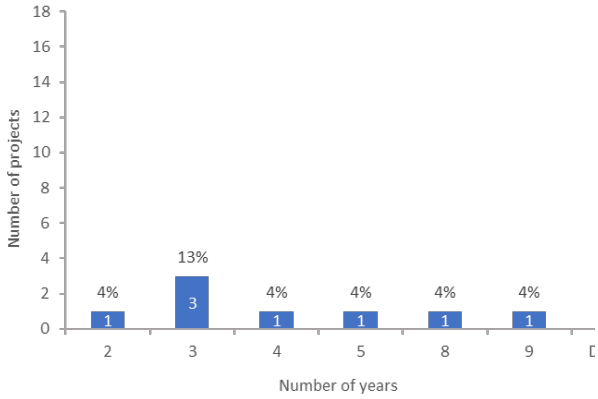
[16] GEF projects may be dropped/canceled based on changes in national priorities or in the operating environment, poor implementation performance leading to a conclusion that the project no longer meets its objectives, and unmet benchmarks for project preparation, among others. For more information, see the GEF policies (GEF 2018b, 2020a). GEF policies differentiate between cancellation and dropping of projects. Dropping refers to the termination of further preparation of a project concept, when no GEF financing has been set-aside. Cancellation refers to the cessation of project preparation or implementation (GEF 2020a). According to the GEF Portal, 23 projects received CEO approval/endorsement since GEF-4 and were subsequently dropped or cancelled. Out of these 23, two projects (GEF ID 4726 and 4798) were dropped, and the remaining 21 were cancelled. Neither of the dropped projects started their implementation.

Figure 2: Time frame from projects' approval/endorsement or implementation start to cancellation/drop

a. Years from CEO approval/endorsement to the cancellation/drop



b. Years from implementation start to the cancellation/drop



Source: GEF IEO, based on the GEF Portal database.

2. Case studies

39. Twelve projects were selected for in-depth examination from the portfolio of closed underperforming projects. These projects were selected through an iterative process beginning with a desk review and then confirmations with the project team leader to verify the project's attributes and performance. Both unimproved and improved cases were selected to represent a diversity of GEF Agencies, focal areas, regions, and project sizes. The selection criteria also included projects that applied adaptive management measures to address external and internal challenges, projects where barriers were not lowered despite adaptive management measures, projects where barriers were lowered through adaptive management measures, projects without adaptive management measures, and projects with complex or transformational objectives.

40. Following the outlined criteria, the case studies presented in Tables 8 and 9 were undertaken through a comprehensive document review and process tracing interviews with either the project's team leader or the manager overseeing the project restructuring. A detailed description of the process tracing methodology employed in document review and interviews is presented in annexes C and D.

Table 8: Case Studies on Unimproved Projects (projects that failed to improve by closure)

GEF ID	Project Title	Agency	Country	Size	Focal Area	GEF Phase	Project Objective
2766	Integrated Ecosystem and Water Resources Management in the Baiyangdian Basin Project	ADB	China	FSP	BD	GEF-4	To demonstrate an integrated ecosystem and water resources management approach to improve the environmental conditions in the Baiyangdian Basin in Hebei province.
3777	Sustainable Management of the Wildlife and Bushmeat Sector in Central Africa	FAO	Regional*	FSP	BD	GEF-4	To demonstrate the benefits of participatory wildlife management and encourage its adoption through regional and national strategies, as well as community demonstration projects.
3822	A Regional Focus on Sustainable Timber Management in the Congo Basin	UNEP	Regional**	FSP	MFA	GEF-4	To promote a harmonized regional approach to sustainable management of production forests in the Congo Basin.
3986	Disposal of POPs Wastes and Obsolete Pesticides	FAO	Mozambique	FSP	CW	GEF-4	To reduce risks to public health and the environment caused by poor pesticide management and obsolete pesticide waste in Mozambique.
5157	Transforming the market for Urban Energy Efficiency in Moldova by introducing Energy Service Companies (ESCO)	UNDP	Moldova	MSP	CC	GEF-5	To promote energy efficiency in municipal buildings through the introduction of the energy performance contracting and the establishment of Energy Service Companies (ESCOs) as a business model.
5671	Building Shoreline Resilience of Timor-Leste to Protect Local Communities and their Livelihoods	UNDP	Timor-Leste	FSP	CC***	GEF-5	To strengthen the resilience of coastal communities though the introduction of nature-based approaches to coastal protection.
5692	Mainstreaming of Biodiversity Conservation into River Management	UNDP	Malaysia	MSP	BD	GEF-5	To integrate riverine biodiversity into stakeholder policies, operational procedures and budgeting to create an enabling environment to prevent biodiversity loss in Malaysia's riverine ecosystems.

* Central African Republic, Congo, Gabon, Congo DR. **Central African Republic, Congo, Cameroon, Gabon, Equatorial Guinea, Congo DR. *** GEF ID 5671 is funded by the Least Developed Countries Fund (LDCF).

Table 9: Improved Projects (Projects that were turned around and improved by closure)

GEF ID	Project Title	Agency	Country	Size	Focal Area	GEF Phase	Project Objective
2690	Improving the Conservation of Biodiversity in Atlantic Forest of Eastern Paraguay	WB	Paraguay	FSP	MFA	GEF-4	To assist the country's efforts to achieve sustainable natural resource-based economic development in the project area. It aimed to recreate biodiversity connectivity between protected areas in the proposed Conservation Corridor in the Atlantic Forest.
3223	Shanghai Agricultural and Non-Point Pollution Reduction project (SANPR)	WB	China	FSP	IW	GEF-4	To demonstrate effective and innovative pollution reduction activities in Shanghai's rural areas to reduce the rural and agricultural pollution load (especially nutrients) in the surface water flowing to the East China Sea.
5276	Sustainable Land Use Management in the Semi-Arid Region of North-East Brazil (Sergipe)	UNDP	Brazil	FSP	LD	GEF-5	To strengthen sustainable land management governance frameworks to combat land degradation in the semiarid region of the state of Sergipe in the Northeast of Brazil.
5686	Low Carbon Development Path: Promoting Energy Efficient Applications and Solar Photovoltaic Technologies in Streets, Outdoor areas and Public Buildings in Island Communities Nationwide (LCDP)	UNDP	Dominica	MSP	CC	GEF-5	To remove the policy, technical, and financial barriers to energy-efficient applications and solar photovoltaic technologies, while implementing demonstration projects.
8015	Enhancing Resilience of Liberia Montserrado County Vulnerable Coastal Areas to Climate Change Risks	UNDP	Liberia	MSP	CC*	GEF-6	To reduce vulnerability and build resilience to the threats of climate change in Liberia's coastal County of Montserrado.

* GEF ID 8015 is funded by the Least Developed Countries Fund (LDCF).

SECTION III. MAIN FINDINGS: CHALLENGES AND ADAPTIVE MEASURES

41. This section presents findings related to the risks and challenges encountered by low-performing interventions during the design and implementation phases contributing to their difficulties in achieving objectives. It also explores the adaptive measures implemented by projects to address the challenges. The analysis is grounded in insights gathered from both the portfolio review and case studies. To ensure clarity and comprehension, definitions for the terms used in this section and descriptions of the risks and challenges are provided in Box 1 and Box 2, respectively. In this context, the term "risk" applies to the design stage, while "challenges" refers to obstacles faced during the implementation stage.

Box 1: Definitions of terms

Risk—the risk of project failure to achieve its stated objectives. In this study, this term is applied to design-level risk estimation.

Risk mitigation measures—measures taken at the design stage to prevent anticipated challenges during implementation.

Challenges—external circumstances or internal issues with project design that create barriers to project implementation.

Adaptive management in response to challenges—measures taken to adapt the project to challenges during implementation. In this study, successful adaptive management of underperforming projects leads to the achievement of their stated outcomes and to improved ratings.

Failure—defined as inability to achieve planned outcomes by project closure as indicated by the unsatisfactory outcome rating. It is important to note that unsatisfactory outcome rating does not necessarily mean the project completely failed as it may have made valuable contributions to global environmental benefits, or its outcomes might materialize in the future. See Section 4 of this report for more information.

Learning—in the context of analysis-based project adaptive management, projects learn from the challenges they confront in the course of implementation and apply the outcomes of such learning to the design of their adaptive management strategies. Successful learning and adaptive management support improved project performance.

Low performing or underperforming projects —defined as projects with unsatisfactory ratings during implementation and/or at closure; they include both improved and unimproved projects.

Improved projects—projects that had unsatisfactory annual ratings during implementation, but then improved their performance, reached objectives, and received satisfactory ratings at closure.

Unimproved projects—projects that had unsatisfactory ratings at closure (and varied ratings during implementation).

Overambitious or unrealistic objectives—project objectives or expected outcomes that are

unrealistic to achieve within one project, considering the starting point/baselines and/or the complexity of the required action.

Overcomplicated design—an overextended number of inputs (activities) or an overstretched geographic coverage; scope incompatible with funding/timeline/country capacity.

Transformational change—an environmental impact with the following characteristics: (1) relevant to the GEF's focus (addresses a global environmental challenge); (2) deep (a fundamental change in a system or market); (3) large-scale (impact at a local, national, or regional level); and (4) sustainable (financially, economically, socially, and politically; long-term).

Box 2: Risks/Challenges

1. External Risks/challenges outside of project control:

a. Political complications or changes (e.g., through elections or other changes in government);
b. Low government ownership, insufficient coordination across and within relevant government agencies;
c. Conflict, economic shocks, natural disasters, pandemics/epidemics.

2. External Risks/challenges within project control

a. Inadequacy of policy/legal framework;
b. Social/cultural challenges (including gender inequality);
c. Stakeholder interests creating complications (including government stakeholders, civil society organizations, private sector, communities, the public, other donors)**;**
d. Low capacity of government institutions, civil society organizations, private sector, urban or rural beneficiary communities; lack of awareness.

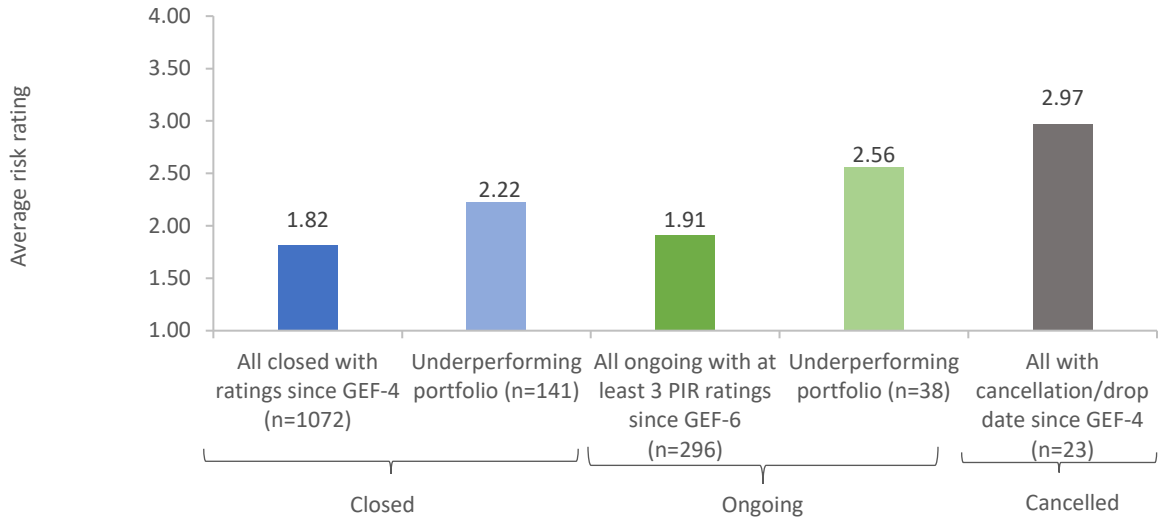
3. Internal risks/challenges:

a. Overambitious/unrealistic objectives or expected outcomes;
b. Transformational objectives;
c. Overextended project scope (too many activities; scope incompatible with funding/timeline/country capacity);
d. Inadequate measurement of achievements/results framework;
e. Low implementation quality (poor GEF Agency's oversight, poor selection of executing institutions, weak project implementation unit).

1. Challenges in design: underestimation of project risks[17]

42. **The study highlighted the significance of both the level of risk to the achievement of project objectives and the implementation of a robust risk estimation strategy during the design phase as critical factors influencing project performance.** As depicted in Figure 3, the portfolio of closed underperforming projects exhibits elevated risk levels compared to all closed GEF projects with an average project risk of 2.22 in the portfolio in contrast to 1.82 for all closed projects.[18] In this context, limited comprehensive analytics during the design phase and risks that were either overlooked or insufficiently addressed, during the design phase can impede a project's performance or hinder its ability to improve its performance before closure. Therefore, it is imperative to prioritize risk management during the design phase involving analytical work, thorough risk assessment, and planning for potential adaptive management actions during implementation.

Figure 3: Average risk rating in the portfolio of underperforming closed and ongoing, as well as canceled projects compared with all GEF projects that have available ratings



Note: Average PIR risk ratings in projects with available ratings. Risks are assessed on the scale from 1 to 4, with 1 the lowest and 4 the highest risk. As required by the GEF Policy on Monitoring, every year during implementation Agencies prove an overall risk rating of a project. The GEF Policy on Monitoring defines risk rating as "the overall risk rating of factors internal or external to the project that may affect implementation or prospects for achieving project objectives" (GEF, 2019).

[17] This section focuses on the most salient risks observed by the study. Projects also faced other external risks outside their control, such as conflicts, natural disasters, pandemics and epidemics. While force majeure can significantly affect project implementation, targeted planning and rapid adaptive management can reduce its impact. For more information, see GEF IEO (2020).

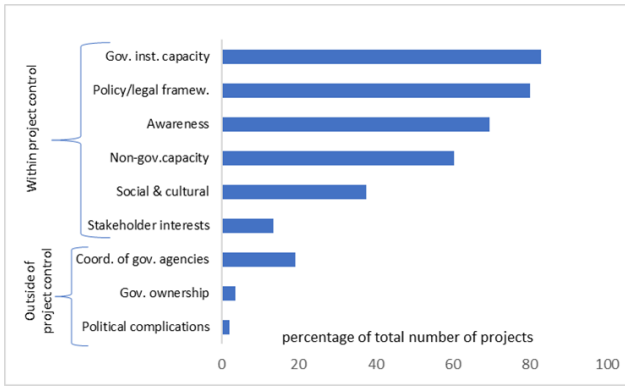
[18] The average risk ratings were calculated based on the risk ratings in PIRs. Every year, during implementation, Agencies provide an overall risk rating of a project, as required by the GEF Monitoring Policy. The GEF Policy on Monitoring defines risk rating as "the overall rating of factors internal or external to the project that may affect implementation or prospects for achieving project objectives" (GEF 2019).

2. External risks during the design phase

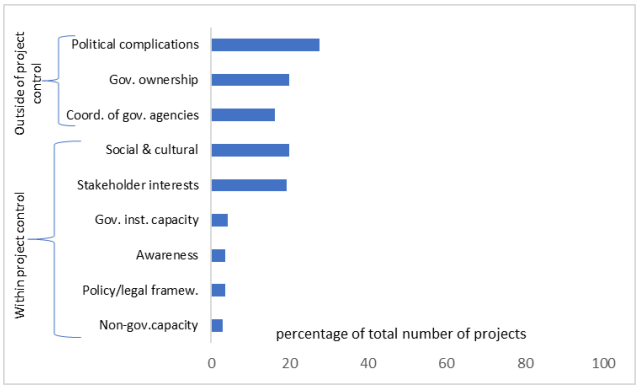
43. **Several external risks which the project had the ability to anticipate and manage were explicitly considered and incorporated into the project designs** (Figure 4a). These risks were associated with challenges such as limited government capacity, limited awareness among government and other stakeholders regarding the project's issues and solutions and deficiencies in the legal and policy framework. Notably, approximately seventy percent of the projects within the portfolio acknowledged and addressed these risks during the design phase. On the other hand, risks perceived as beyond the project's direct control, including political (linked to political instability) and economic uncertainties, as well as risks of insufficient government ownership and limited coordination among government agencies, were less likely to be incorporated in the design phase (Figure 4a).

Figure 4: Addressing external risks that are within and outside of project control

a. Percentage of projects in the portfolio that addressed specific risks at design



b. Percentage of projects in the portfolio that addressed specific risks during implementation



44. Nevertheless, the portfolio includes various instances that highlight situations wherein the levels of external risks, manageable by the project, were underestimated during the project design phase. This oversight frequently resulted in impediments to the achievement of project objectives during implementation. Such instances were attributable to either insufficient analysis or a perception that certain risks did not warrant analysis because they were perceived as beyond the project's capacity for mitigation. Some of the external risks outside the project's control that were not assessed during the design phase were recognized during the implementation phase (Figure 4b).

3. Addressing external risks during the design phase

45. The following discussion highlights the main external risks, within a project's control, that are imperative to consider during the design phase, drawing on examples from the portfolio and the case studies.

Country enabling environment

46. One crucial aspect of project planning revolves around estimating the risks associated with the enabling environment in the client country. Although these risks are typically acknowledged during the design phase, their assessment is not always thorough. Risks linked to policy, legal, and institutional frameworks, all within the control of developmental agencies for mitigation, fall into this category. According to the results of the portfolio analysis, 80 percent of projects factored these risks during the design phase, often through project components/sub-components. However, the analysis in addressing these risks is not consistently comprehensive or thorough. As a result, by closure 46 percent of projects in the portfolio still faced deficiencies in the legal and policy frameworks as a barrier to achieving their objectives.

47. The project Development of a National Implementation Plan in India as a First Step to Implement the Stockholm Convention on Persistent Organic Pollutants (POPs) (GEF ID 1520) did not thoroughly analyze the country's enabling environment during the design phase. Prior to the project, there was no legislation that required owners of PCB-containing equipment to declare the quantity of contaminated oil and the type of equipment. Neither was basic information on the number of sources of dioxin-emitting industries available. The insufficient analysis of the legislative and policy requirements, coupled with the absence of new legislation drafts that could assist with the management, reduction and elimination of POPs prevented India from submitting its national implementation plan (NIP) within the expected time frame of two years. At evaluation, the legislation to prevent dioxin emissions was present but not enforced. Legislative and administrative measures to manage stockpiles of dichlorodiphenyltrichloroethane (DDT) and polychlorinated biphenyls (PCBs) were not in place either. The lack of legislation and/enforcement negatively affects the likelihood of post-NIP projects to manage, reduce and eliminate POPs in an efficient and environmentally sound manner.

48. The project Transforming the market for Urban Energy Efficiency in Moldova by introducing Energy Service Companies (ESCO) (GEF ID 5157), had a policy/legal framework that was inadequate for establishing an Energy Service Companies (ESCO) mechanism, which was the very objective of the project. However, no analysis of this issue was conducted during project preparation, and the consequences were that the project concept turned out to be inapplicable to country conditions. After the project was terminated, a successor project, using a different approach based on the analysis of the country context and lessons from this project, was launched and thus far has been implemented with satisfactory annual outcomes.

49. In contrast to the above, the appraisal stage of the project Strengthening Capacity to Control the Introduction and Spread of Alien Invasive Species (GEF ID 2472) in Sri Lanka revealed weak policies and an inadequate legal framework concerning Invasive Alien Species (IAS). To address this challenge, one of the components of this project aimed to establish a

comprehensive national regulatory framework for the control of IAS in the country. By closure, this outcome was fully achieved by delivering an Invasive Alien Species Policy, finalizing the Strategy and Action Plan for immediate implementation, and proposing the IAS Act for approval and adoption.

Stakeholder analysis and engagement

50. The initial oversight of stakeholder involvement can result in significant setbacks to project performance, emphasizing the critical importance of this aspect in project planning and execution. To mitigate these risks, thorough stakeholder analysis and engagement are crucial. However, only 13 percent (19 projects) in the portfolio implemented relevant mitigation measures during the design phase, leading to the realization of these risks during subsequent implementation[19]. Consequently, by closure 40 percent (57 projects) faced barriers to outcome achievement created by conflicting stakeholder interests.

51. The project titled Elimination of Obsolete Pesticide Stockpiles and Addressing Persistent Organic Pollutants (POPs) Contaminated Sites within a Sound Chemicals Management Framework (GEF ID 4737) in Armenia did not involve beneficiary communities at the design stage. Specifically, there was no engagement with the community residing near the intended storage site for obsolete pesticides containing POPs. This lack of initial involvement led to concerns regarding the potential groundwater contamination and environmental pollution. Consequently, the community did not give its consent for the storage and treatment of hazardous chemical waste in the proposed facility.

52. In the project titled Building Shoreline Resilience of Timor-Leste to Protect Local Communities and their Livelihoods (GEF ID 5671), the project design fell short in adequately addressing the risk posed by politically supported economic interests that conflicted with the environmental objectives of the project. One of the project's designated restoration sites was in the area of the strategically significant for the country Tibar Bay port, which was being constructed at the time. Both during design and implementation phases, the project discussed a potential partnership and environmental offsets, but unsuccessfully. More extensive efforts, with a consideration of a wider set of options for negotiations, should have been made during the design phase, to ensure success. The failure of the project to carry out its climate adaptation activities at the port location was one of the main reasons for the non-achievement of the key objectives and an unsatisfactory rating at closure.

53. In contrast to the above, the project Strengthening the Implementation of the Nagoya Protocol on Access to Genetic Resources and Benefit Sharing in the Cook Islands (GEF ID 5613) initially considered a limited number of stakeholders during the design phase. This was noted in the Inception Report which recommended the inclusion of a broader range of stakeholders for the successful implementation of the project. While not all key stakeholders, such as the Ministry of Agriculture and Ministry of Culture, were extensively involved, the project effectively engaged a diverse set of partners through public awareness campaigns and consultation events. This inclusive approach contributed to strengthening of implementation arrangements and facilitated the potential replication of project activities. Notably, local

[19] Projects in the portfolio precede the GEF Policy on Stakeholder Engagement (SD/PL/01).

communities actively supported the participation of traditional Maori social institutions, offering potential benefits for the future utilization of traditional knowledge and genetic resources.

Building government capacity

54. Capacity building is a fundamental and standard element in projects financed by the GEF. Analysis of the project portfolio revealed that addressing low government capacity at the design level is widespread, with 83 percent of projects in the portfolio incorporating mitigation measures. However, a number of projects tend to underestimate the risks related to insufficient government capacity and awareness concerning the issues targeted by the project. By closure, 35 percent of projects in the portfolio encountered challenges in achieving their outcomes due to the limited capacity of government institutions.

55. The Project titled Sustainable Management of the Wildlife and Bushmeat Sector in Central Africa aimed at introducing participatory wildlife management. Project implementation was impeded by low government and nongovernmental entities' capacity, as well as insufficient capacity of executing agencies (Ministries). The capacity building efforts during project implementation were insufficient at all levels, from central government, whose capacity to implement participatory wildlife management was still inadequate at project closure, to cooperatives and associations, who remained fragile and often nonfunctional.

56. In Mozambique, the project Disposal of POPs Wastes and Obsolete Pesticides (GEF Project ID 3986) aimed to dispose of existing stocks of obsolete pesticides and contaminated soil, thereby mitigating risks to public health and the environment. During the design stage, the limited capacity for local disposal of hazardous waste was not recognized as a potential implementation risk. Mozambique has only one facility for hazardous waste disposal, operating under constraints due to insufficient resources and technical capacity. This limitation resulted in significant bottlenecks, including prolonged difficulties in progressing with tenders for local disposal. While the project eventually succeeded in exporting obsolete pesticides and containers, the local disposal of contaminated soil is still ongoing four years after the project's completion, requiring additional resources.

57. In contrast to the above situations, in Jamaica, public sector institutions, including those in the health and education sectors, faced challenges in reducing their high energy consumption due to limited knowledge and capacity to develop and implement energy efficiency and renewable energy initiatives. To address this challenge, the Deployment of Renewable Energy and Improvement of Energy Efficiency in the Public Sector project (GEF ID 5843) was designed. One of its components was specifically aimed at enhancing the technical knowledge and institutional capacity within Jamaica´s public sector for clean energy development. As a result, the government successfully raised awareness among health sector operators on the importance of energy management and renewable energy technologies. The project also supported the procurement of a power generator for an energy efficiency testing laboratory at the Bureau of Standards Jamaica. In the education sector, the project contributed to establishing the minimum expected standards for postsecondary education programs in sustainable energy.

4. Addressing challenges during project implementation

58. The common challenges encountered during implementation in the portfolio and case studies included internal and external challenges: (1) limited government ownership often associated with political changes or project complexity; (2) complications arising from stakeholder interests affecting implementation; (3) increased engagement requirements due to social and/or cultural specifics; (4) overambitious/unrealistic project objectives or expected outcomes.

59. **The study findings highlight the pivotal importance of implementing adaptive management measures to boost project performance.** Among the 141 projects, 38 demonstrated success by learning from challenges and adapting during the implementation phase. Improved projects implemented more comprehensive restructuring through analyzing and addressing root causes of performance failure across all types of challenges they encountered. In contrast, the less successful (unimproved) projects did not apply analysis-based adaptive management. While adaptive management was used in unimproved projects too, it was usually employed too late; or focused on only specific challenges, rather than addressing the full range of issues faced; or was applied superficially. Comparative analysis of the experience of these two project types provided insights about the ways in which future operations can learn from the challenges they face and adapt, improving their effectiveness.

60. **The econometric analysis conducted in the study yielded significant findings. It concluded that addressing risks during project design or adapting to challenges during implementation increases the likelihood of overcoming related barriers to achieving project objectives by 44 percentage points, compared to cases where risks and challenges were noted but left unaddressed.** Notably, successful and improved projects applied adaptive management measures during implementation more frequently addressing more than 80 percent of identified challenges, while the less successful projects only tackled 44 percent of noticed challenges (Table 10). Furthermore, the econometric analysis revealed a correlation between low outcome ratings and specific project characteristics: low government ownership, overambitious/unrealistic project design, and insufficient involvement of the government counterpart during implementation.

Table 10: Average number of risks/challenges noticed and mitigation and adaptive management measures applied

Project type	At design			At implementation			At closure
	Noticed (#)	Mitigated (#)	Mitigated (%)	Noticed (#)	Adapted to (#)	Adapted to (%)	Noticed (#)
Closed (n = 141)	**3.9**	**3.6**	**92**	**8.3**	**4.4**	**53**	**1.5**
Unimproved (n= 103)	3.8	3.5	92	8.7	3.9	44	1.6
Improved (n = 38)	4.0	3.8	94	7.0	5.8	82	1.0
Ongoing (n = 38)	**6.1**	**5.9**	**96**	**9.8**	**4.7**	**47**	**NA**

61. **Portfolio analysis underscored that the improved projects mitigated more risks and applied more adaptive management measures during the design and implementation stages compared with the unimproved projects** (Table 10). Improved projects employed both mitigation measures during project preparation and implementation as illustrated in Figure 6a and 6b. Unimproved projects more often than the improved ones noticed barriers to achieving their objectives at closure only (and missed them prior to that point of time). In the realm of removing external barriers to achieving project objectives, the successful application of adaptive management measures contributed to resolving issues arising from stakeholder interests complicating the project, low levels of government ownership, and deficiencies in policy and legal frameworks. The main internal (or project level) barriers that were removed were: overly complex project designs, delays in implementation, and a lack of capacity within the project implementation unit. As a result of these concerted efforts, improved projects achieved higher outcome ratings, showcasing the tangible benefits of proactive adaptive management during implementation. On average, improved projects had a higher barrier removal rate for internal and external challenges compared with unimproved projects (Figure 5).

Figure 5: Barrier removal ratio by project type and challenge type

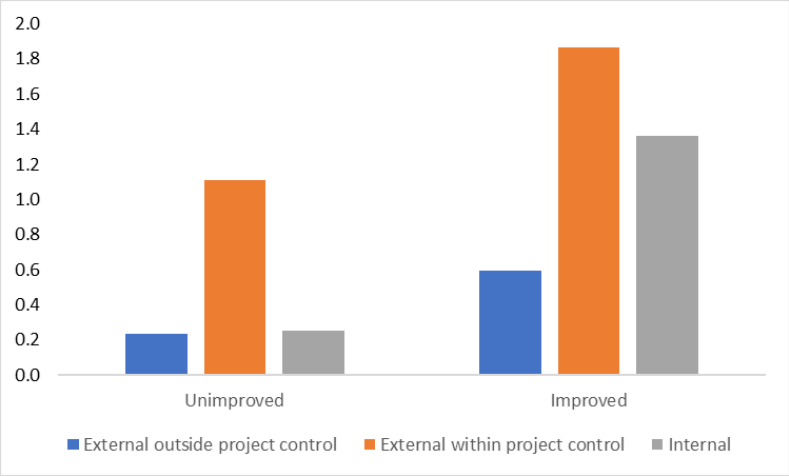
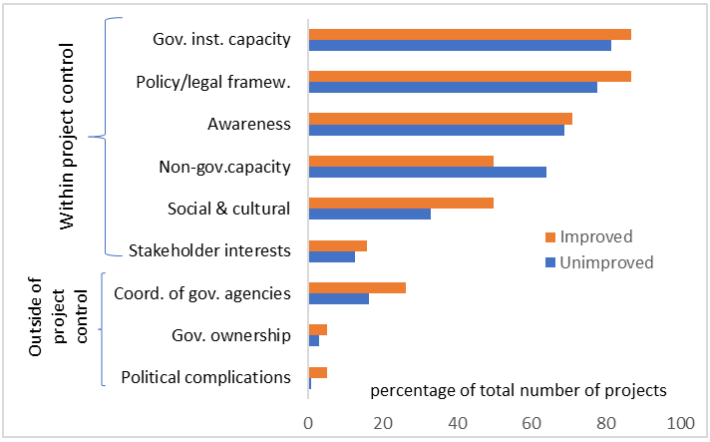
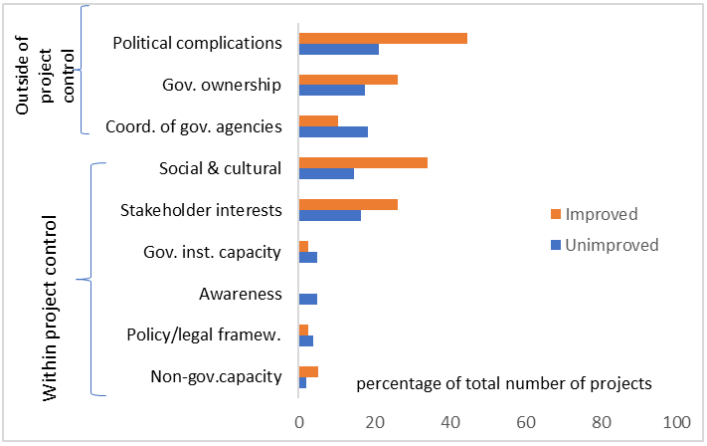


Figure 6: Mitigating risks and adapting to challenges: improved projects applied more mitigation and adaptive management measures

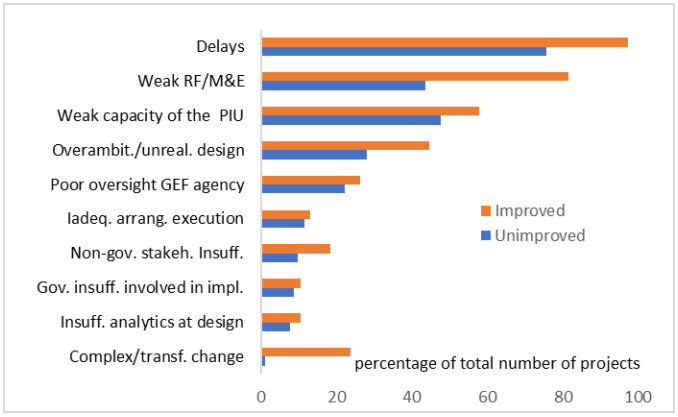
a. Percentage of projects in the portfolio that addressed specific external risks at design



b. Percentage of projects in the portfolio that addressed specific external challenges during implementation

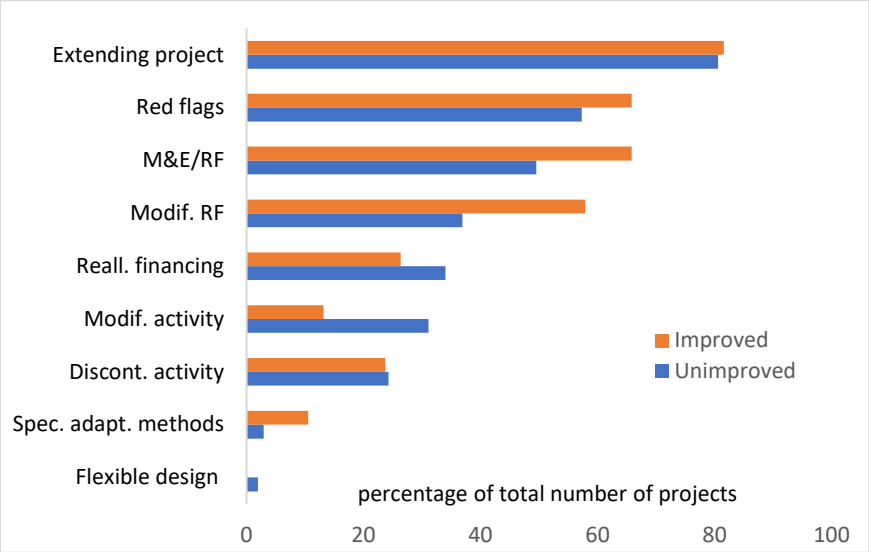


c. Percentage of projects in the portfolio that addressed specific internal risks during implementation*



*Internal challenges mitigation at design is not applicable because these are project design issues that are realized at implementation

Figure 7: Types of adaptive management measures implemented by improved and unimproved projects



62. Examples from the portfolio and the case studies highlighted that improved projects demonstrate a distinct approach, employing a comprehensive analysis that delves into the root causes of performance issues across various types of challenges. This method leads to substantial project restructuring, ultimately resulting in the achievement of satisfactory outcome ratings by the project's conclusion. In contrast, unimproved projects tend to lack this depth of analysis-based adaptive management. It is important to note that both improved and unimproved projects incorporate some level of adaptive management. However, in the case of unimproved projects, this adaptive management often comes into play too late, is applied inadequately, or focuses on only specific challenges, rather than addressing the full range of issues faced.

63. The following discussion focuses on the main implementation challenges and the corresponding adaptive measures applied in projects.

Government ownership

64. **This challenge primarily stems from two key factors: political changes during project implementation and project complexity**. Despite the expectation of country-driven project design based on dialogue with government counterparts in the preparation of the GEF-financed projects, the issue of low government ownership remains a common challenge in low-performing operations. Political changes during project implementation are a common occurrence in GEF projects, due to the short length of typical election cycles. Many projects span more than one government administration, and when there is a change in leadership, it can result in a shift in the government's interest in the project, resulting in diminished government ownership. Furthermore, political crises can disrupt project continuity, leaving the project without a government counterpart for an extended period.

65. In some instances, project complexity presents a hurdle to the ownership. While the government may support the broader goals that the project aims to achieve, they may lack ownership over the project's theory of change. This theory of change outlines the processes through which project activities are expected to yield the desired outcomes and contribute to the overarching objectives. The government may not fully embrace or understand this complex framework, leading to a lack of ownership.

66. Portfolio analysis demonstrated that the risk of low government ownership was seldom mitigated during the design phase occurring in only 3 percent of the unimproved projects and 5 percent of the improved projects. Conversely, a much larger share of projects faced the realization of this risk during implementation. Consequently, 17 percent of unimproved projects and 26 percent of improved projects employed related adaptive management measures. It is worth noting that improved projects more frequently utilized adaptive management measures in response to this challenge.

67. In the project "Mainstreaming of Biodiversity Conservation into River Management" in Malaysia (GEF ID 5692), low government ownership was a major challenge, and post closure the project was evaluated as not being demand driven. While the government supported the goal of biodiversity conservation, the lack of clarity and complexity of the task of biodiversity mainstreaming across multiple agencies and jurisdictions led to insufficient government ownership of the project. The initiative was perceived as a "GEF project" rather than aligned with national priorities. At the same time, the focus of the project on policy development meant that the counterpart support was critical. This was one of the main reasons for the project's closing with the unsatisfactory outcome rating: the mainstreaming could not be accomplished without the counterpart's participation. The post-closure evaluation concluded that substantive dialogue aimed at aligning project objectives with the national targets would have supported ownership.

68. In the case of the Shanghai Agricultural and Non-Point Pollution Reduction project (GEF ID 3223), the implementation faced challenges due to low government ownership. The project was given very low priority by the counterpart, attributed to limited grant financing and a lack of clarity regarding its benefits; the project was considered for cancellation. However, the project invested in a close and substantive dialogue with the counterpart, conveying the value-added of the project (technical expertise applied through pilot demonstrations), and clear working solutions were proposed. A technical analysis was conducted to design adaptive management measures, and project restructuring was implemented, leading to the achievement of intended objectives and satisfactory ratings. The team gained the trust of the counterpart and government ownership based on technical expertise and persistence.

69. The project Sustainable Land and Forest Management in the Greater Caucasus Landscape (GEF ID 4332) in Azerbaijan is another example of how government ownership can be strengthened. The midterm review of this project identified the lack of support and involvement from key government entities, including the Ministry of Ecology and Natural Resources, the Ministry of Agriculture, as well regional administrations. This lack of engagement may have been caused by their limited participation during the project's design phase and the outsourcing of various activities. To address this issue, the midterm review recommended developing a strategy to actively involve government stakeholders. A crucial

step taken by the project was to convene relevant stakeholders for the National Forest Policy Dialogue, leading to the review and update the draft National Forestry Programme. By project closure, the restructuring of forestry institutions became a political priority, with the government committed to resolving key issues related to the sustainable management of natural resources.

Considering stakeholders' interests

70. The importance of understanding the political economy and specifically the economic interests of stakeholders, cannot be emphasized enough when it comes to the successful implementation of GEF projects. GEF-supported projects are often designed as demonstration pilots, making the replication and scaling up of project-financed investments a critical factor for achieving the intended and substantial impact. Furthermore, GEF projects often combine investments in demonstration pilots with support for the development of policy, legal, and institutional frameworks; and the latter requires active collaboration of multiple stakeholders. Moreover, many GEF projects, particularly those dedicated to addressing critical issues such as biodiversity loss, land degradation, and climate adaptation, heavily depend on the support and active engagement of local stakeholders who possess intimate knowledge of their respective environments and communities.

71. The project titled Low Carbon-Energy Islands: Accelerating the Use of Energy Efficient and Renewable Energy Technologies in Tuvalu, Niue and Nauru (GEF ID 4000) encountered difficulties in engaging the private sector and demonstrating the financial viability of grid-connected solar photovoltaic systems. Given the dominant role of the government in the three islands where the project was implemented, and the relatively small role of the private and banking sectors, the project faced limitations in illustrating the feasibility of financing low-carbon energy technologies through private sector or public-private partnerships. Consequently, the solar photovoltaic pilot projects were established with minimal participation of the private sector. Although the private sector occasionally provided roof spaces for these projects, it was unable to contribute cofinancing as originally planned. This lack of private sector engagement hindered the reduction of greenhouse gas (GHG) emissions in the three countries in the short to medium term.

72. The project A Regional Focus on Sustainable Timber Management in the Congo Basin (GEF ID 3822) aimed to promote sustainable forest management, but faced challenges due to conflicting stakeholder interests and its inability to engage key stakeholders. The project dealt with sensitive governance issues around illegal logging and corruption in the timber industry. Some government officials opposed greater transparency, as they owned concessions. The project did not identify key stakeholders to involve (communities, large logging firms, political and administrative elites in the region, demand-side actors from Asia (governments and firms)). The regional bodies, such as the Central African Forests Commission (COMIFAC), lacked capacity and resources to disseminate project outputs and the project did not involve COMIFAC on a strategic level. Some of these challenges were identified at the design stage by the GEF Agency's internal project review committee. However, the committee recommendations were insufficiently addressed in the project document.

73. The midterm review underscored institutional and operational weaknesses, leading to the simplification of some outputs and the strengthening of the implementation structure. Despite concerted efforts by partners, certain conceptual flaws from the project's inception remained unaddressed. Crucially, the project failed to involve almost any key stakeholders in its implementation or governance. There were minimal efforts to communicate, raise awareness, or engage in activities to create shared knowledge and build relationships with other entities. Consequently, there was very little ownership of the project outputs.

74. In contrast to the examples above, in the project Sustainable Land Use Management in the Semi-Arid Region of North-East Brazil (Sergipe) (GEF ID 5276), adaptive management efforts focused on engaging government stakeholders at the state level, despite the new national government's relatively low prioritization of environmental projects. At the state level, the project's economic co-benefits were critical because of the developmental needs of this poor, prone-to-desertification state. In addition, the project actively reached out to grassroot organizations within the state. The identification of subnational actors and garnering support beyond government institutions was a successful adaptive management strategy. This approach played a pivotal role in reversing the project's initially low performance ratings and ultimately contributed to the successful achievement of project objectives by closure.

Considering social and cultural sensitivities

75. GEF-financed projects are often implemented in remote and economically disadvantaged regions of client countries, affecting populations with distinct social and cultural attributes. These nuances, integral to project success, might not always be fully grasped by the project team. The relevant adaptive management measures were applied during implementation in 15 percent of unimproved projects and 34 percent of improved projects.

76. In Paraguay, the design of the restructured project Improving the Conservation of Biodiversity in Atlantic Forest of Eastern Paraguay (GEF ID 2690) (after significant adaptive management measures) relied on the participation of the indigenous communities (ICs) as main stakeholders. While the ICs had economic and societal incentives to participate in the project, understanding the cultural specifics of communication was critical for their engagement, and the team's efforts in learning about such specifics and investing in effective stakeholder relations based on this knowledge was a prerequisite for this project's successful adaptive management. The restructured project hired an IC expert, and individual action plans were developed for every participating IC. These extensive efforts paid off when the project achieved its main outcomes, including the creation of a large land corridor under conservation (which would not happen without the IC participation), and closed with a satisfactory rating.

77. In Liberia, the project Enhancing Resilience of Liberia Montserrado County Vulnerable Coastal Areas to Climate Change Risks (GEF ID 8015) avoided significant delays and potential stakeholder confrontations by proactively engaging and resolving disagreements with local communities. The project focused on poor, predominantly fishing communities, involved them in the construction of a coastal protection structure and addressed their concerns as they became evident midway during implementation. To encourage local ownership, community members were trained in construction and maintenance, and were employed as laborers in the construction. However, the fishers became concerned that the revetment structure would

hinder their access to the coast and escalated this issue through a complaint to their representative in the House of Parliament. In response, the project engineers addressed these concerns by leaving openings for canoe landings at both ends of the revetment. Another community concern related to the potential for flooding due to water blockage by the revetment. In response, the project constructed a water catchment and discharge system along the lowest point of the revetment to help minimize the risk of flooding. By actively responding to the community needs, the project was able to deliver its outcomes and contributed to reducing the vulnerability of the local communities.

Setting realistic objectives

78. **Over ambitious or unrealistic project objectives can create barriers to the achievement of project outcomes.** Overambitious/unrealistic project objectives are defined here as objectives formulated above the level reachable by a project, even when substantial resources are available. It is unrealistic to expect that such objectives can be achieved considering the starting point (baselines) and/or the complexity of the required action. However, this does not imply that the projects should not be ambitious and transformational. The GEF's mission is linked to achieving transformational change in relation to global environmental challenges: a fundamental change with a large-scale impact and sustainable outcomes. This overall objective is reflected in the objectives of specific programs and projects, which together are expected to create a systemic change. Therefore, projects should indeed strive to be ambitious—in fact, to maximize their transformational potential—but only by first considering the limitations that the on-the-ground conditions. This, in turn, means that it is critical to analyze and understand the conditions on the ground for the projects to maximize their transformational impact.

79. One of the reasons for overambitious objectives observed is that sometimes projects are prepared without a proper design-level analytical work, and the expected outcomes are unrealistic. Either way, unless adaptive management measures are applied and expected outcomes are reformulated to operationalize the ambition, such project suffer from challenges and often fail to perform satisfactorily.

80. An example is the Sustainable Management Models for Local Government Organizations to Enhance Biodiversity Protection and Utilization in Selected Eco-regions of Thailand project (GEF ID 5726). The project faced the challenge of an insufficient 5 year implementation time frame to expect mainstreaming biodiversity in local government planning to lead to a habitat and species response. To bridge the gap between project design and reality, the project collaborated with recognized research institutions as project contractors, laying the foundation for the successful mainstreaming of biodiversity at the local government level. Upon completion, the project's development outcome was rated as moderately satisfactory.

5. Risks and challenges in ongoing projects

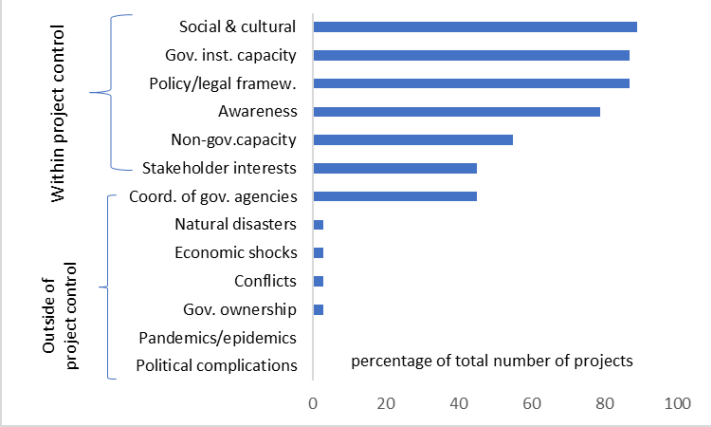
81. The **study conducted coding of the ongoing projects, using the same framework and protocol as for the closed operations.** The projects in the ongoing portfolio exhibit more risks during the design stage, and more challenges during implementation compared to the closed project portfolio. (Table 10). This difference can be attributed, in part, to the impact of COVID-

19 on nearly all projects in the ongoing portfolio (95 percent), whereas only 28 percent of projects in the closed portfolio were affected by pandemics/epidemics. The ongoing projects also implemented more adaptive management measures during implementation compared unimproved closed projects. The effectiveness of adaptive management measures will be possible to assess by project closure.

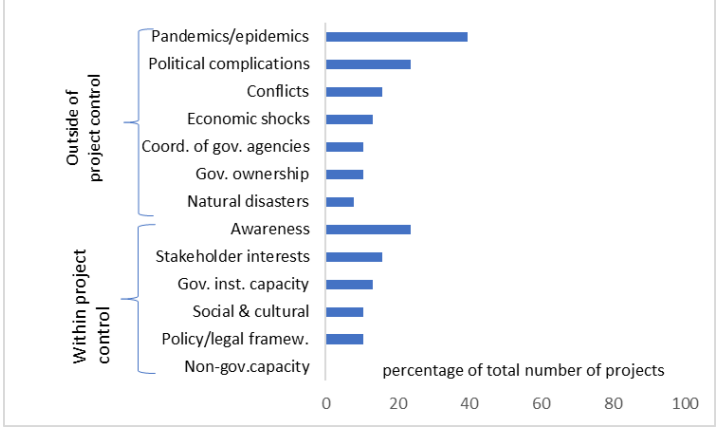
82. Despite **the differences in sources of data and the impact of COVID-19 on the ongoing operations, the main findings from the analysis of the portfolio of ongoing operations are the same as of the closed one**. The risks that are outside of project's control were less frequently anticipated and mitigated at design (including through planning for adaptive management in response to related challenges that can be experienced during implementation) than the risks that are under project control. The least mitigated project-controlled risk was that of stakeholder low support/resistance to project implementation (Figure 8a). The missed opportunities to mitigate these risks resulted in the need to address the related external challenges during implementation, as shown in Figure 8b. Figure 8c shows that among the internal challenges addressed during implementation, the most frequent ones were delays with project implementation, weak capacity of the project implementation unit, insufficient involvement of both the governmental and nongovernmental stakeholders in project implementation, and a weak results framework/M&E.

Figure 8: Mitigating risks and implementing adaptive management measures

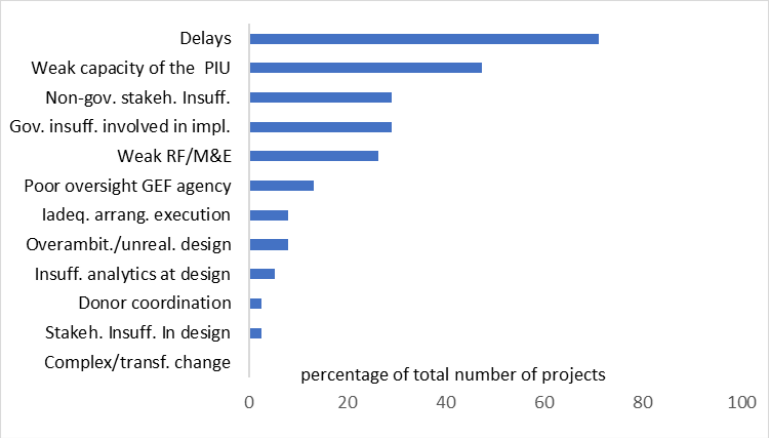
a. Percentage of projects in the portfolio that addressed specific external risks at design



b. Percentage of projects in the portfolio that addressed specific external challenges at implementation

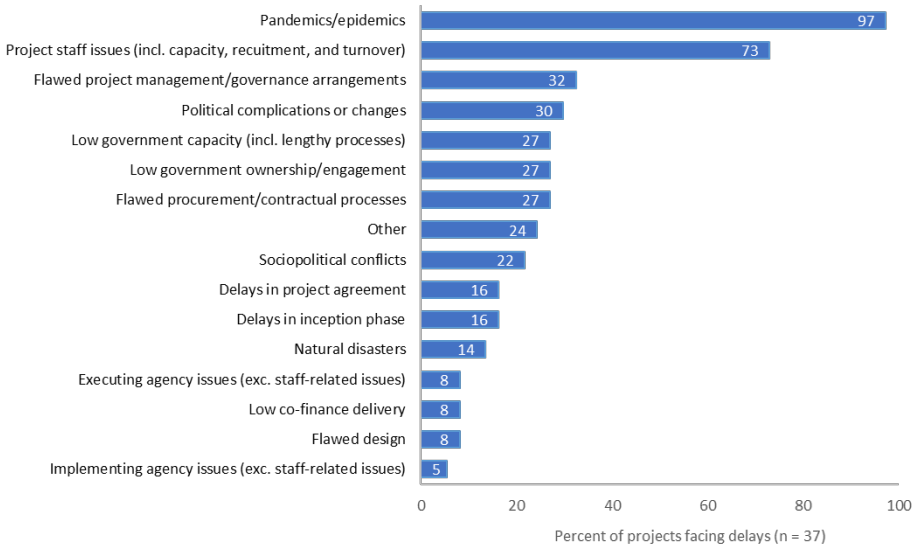


c. Percentage of projects in the portfolio that addressed specific internal challenges at implementation*



83. **The study examined reasons for implementation delays in ongoing underperforming operations.** Of the 38 ongoing projects analyzed, 37 faced delays and one was suspended. The most common reasons for delay were COVID-19, project staffing issues, and flawed arrangements in project management or governance (figure 9).

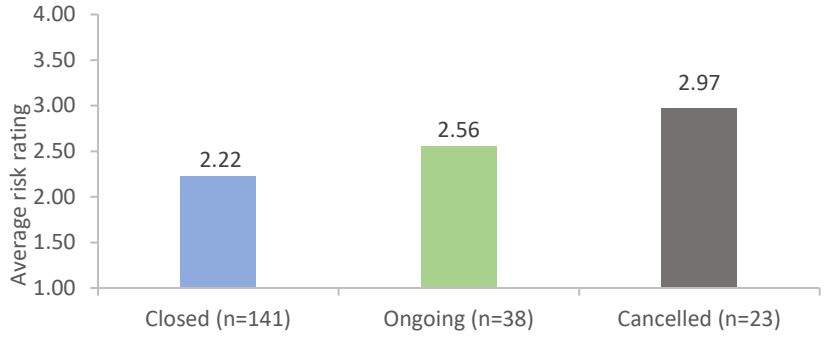
Figure 9: Reasons for delays in ongoing projects



6. Canceled and dropped projects

84. As seen in Figure 10, the canceled projects are characterized by higher risks than the reviewed portfolio of underperforming closed and ongoing projects (the average risk rating is 2.97 in the canceled projects versus 2.22 in the portfolio of closed underperforming projects and 2.56 in the portfolio of ongoing underperforming projects).

Figure 10: Average risk rating in the portfolio of underperforming projects



Note: Average PIR risk ratings in projects with available ratings. Risks are assessed on the scale from 1 to 4, with 1 the lowest, and 4 the highest risk.

85. The primary reasons for cancellation were conflict and instability, changes in national priorities or operating environment, and difficulties in meeting preliminary conditions for the start of activities.[20] Conflict and instability caused the cancellation of projects in Afghanistan, Central African Republic, Syria, and Yemen.

86. Changes in national priorities or operating environment can make some interventions impossible or irrelevant. For instance, the Government of Eritrea introduced a policy that prevented the construction of water diversion structures along riverine forests which made the intended project activities impossible (GEF ID 3406). A project in the State of Uttar Pradesh in India (GEF ID 5364) aimed to support energy access through renewable energy mini-grid projects. Since the Government launched its own universal electrification scheme, the project was no longer needed. Difficulties in meeting preliminary conditions for the start of activities was another common reason for cancellation. The project activities in Algeria (GEF ID 3927) were contingent on the construction of a new city by the Government; the project was eventually canceled because of lack of progress in implementation of the baseline activities.

[20] This review further builds on the previous qualitative analysis of canceled projects conducted by GEF IEO. APR 2020 reviewed the reporting on canceled projects that were approved since GEF-3 and noted that reasons for cancelation varied from project to project, including exogenous political shocks or issues related to a slow startup (GEF IEO 2020a).

SECTION IV. LEARNING FROM THE NONLINEAR, NON-UNIFORM IMPACT TRAJECTORIES OF GEF PROJECTS

87. This section explores the analytics of inherent nonlinearity and non-uniformity in the impact trajectories of complex projects to consider how different factors within and beyond GEF projects drives variation in outcomes, and how certain unsatisfactory projects identify and solve their challenges.

1. Nonlinear, non-uniform project trajectories

88. The impact of project and program interventions can unfold through diverse trajectories. Some trajectories may exhibit consistent linearity, steadily rising or falling, while others may distinctly follow nonlinear patterns, exhibiting significant variations over time.[21] The impact of the same intervention can also vary considerably across different contexts, depending on how diligently it is implemented and the extent to which it is compatible with local cultural sensibilities and political structures. Furthermore, impact trajectories may vary for different recipient groups: women and men, the aged and the young, the rich and the poor, etc. Moreover, this variation over time, space, and groups can be not only nonlinear but non-uniform: a trajectory unfolding along a j-curve path in one context (getting worse before it gets better) may follow an inverted-U path in another (starting well but fading thereafter) which in turn can greatly complicate efforts to predict its impact trajectory in a novel context or for a different group or at a larger scale of operation.

89. **Attempts to modify or rectify projects during implementation are explicitly aimed at shifting the impact trajectory. The primary purpose of these adjustments is to change the current trajectory with the intention of realigning the project to its intended course.** And despite diligent and well-intentioned efforts, they may prove unable to turn things around. Though the primary focus on this report is on understanding the deep challenges that characterize GEF's underperforming projects, such interventions are clearly only a relatively small percentage of the overall portfolio. Engaging with the reality that complex interventions are highly likely to have nonlinear and non-uniform performance trajectories, however, enables us to recognize that the best projects will have some underperforming aspects, that the least successful projects will achieve some successes, and that all of these may change over time and place. Moreover, as noted above, the broader objective of this report—to enable the GEF to become a more effective learning organization—is premised on the notion that a declining impact trajectory in the early life of a project (one that leads it to be deemed unsatisfactory during implementation) can be transformed into an improving one. As such, this section explores the analytics of inherent nonlinearity and non-uniformity in the impact trajectories of complex projects to consider how different factors within and beyond GEF projects drives variation in outcomes, and how certain unsatisfactory projects identify and solve their challenges.

90. Making defensible and actionable claims about the impact of a given intervention, whether during a midterm review, or after a pilot initiative requires benchmarking such claims against where one would expect this intervention to be at this particular time for this particular

[21] The arguments outlined in this section draw on the longer discussion provided in Woolcock 2022.

group in this particular place at this particular scale**.** Alas, in public policy generally, and in environmental and development policy more specifically, such detailed information is rarely available. This matters, and becomes even more consequential when assessing highly complex interventions, since here the array of possible impact trajectories will likely be even more variable and non-uniform.

91. **Many projects funded by the GEF are complex interventions:** (1) their design and implementation frequently requires extensive dialogue over long periods of time (before, during, and after a project's life) between different groups, often with competing interests and understandings pertaining to the use of natural resources; (2) the stakes are high—perhaps existentially high, in the case of Indigenous Communities fearing the integrity of their entire cultural heritage may be compromised by development; and (3) what exactly should be done by whom can only be discerned *as a result of* the extensive dialogue, which itself, crucially, must come to be regarded as sufficiently legitimate by all parties in order for it to bear the weight of the many difficult trade-offs a final decision may require all parties to make. (Further explication of the specific case studies prepared for this review, in the light of such a framing, are presented below.)

92. **This means that the impact trajectories associated with GEF projects are highly likely to be nonlinear and non-uniform across time and space, whether they are unaltered or altered during implementation**. It also means that, in the absence of a corresponding theory of change that enables benchmarking of what outcomes can be reasonably expected by when, accurately inferring what successful and unsatisfactory outcomes ratings *mean*, and thus what the implications are for current and future decisions-making, is itself highly complex. For example, if a given GEF project is supported because it is ambitious—i.e., bravely tackling a high-priority but vexing development problem—it may also be the case that it will take several years (even decades) for positive outcomes to emerge[22]… and when they do so, they may well indeed be truly transformational and welcomed by all. But if the underlying theory of change associated with this project has not accommodated this flat initial impact trajectory, in which nothing may be visible at (say) the midterm review, a verdict of unsatisfactory will be misleading. Evaluators will need additional data and a solid theory of change to discern whether the project is indeed performing unsatisfactorily (thus requiring certain design or implementation aspects to be changed) or whether it is doing perfectly well as is—the project's

[22] Gender equality, for example, has been a social policy objective in some countries for over two centuries, but remains unrealized in even the seemingly most propitious places… Does this mean that initiatives to bring it about have thus far failed, or that the realization of such an objective requires sustained, centuries-long efforts, even (or especially) when there is little to show for it at any given moment? Evidence and experience thus far would seem to suggest the impact trajectory for such initiatives resembles a j-curve: many setbacks (sometimes violent setbacks) are endured in the initial stages as intense resistance is mounted against change, with slow positive outcomes subsequently emerging as laws, economic incentives, and social norms incrementally shift. (One can tell a similar story for changes in the acceptance of marriage equality, human rights, and democracy promotion.) But if one assumes that such a trajectory is uniformly true, does an initial increase in domestic violence as a result of a women's empowerment program signal that the program is "on the right track" or that it is clearly harmful and thus should be shut down immediately? The ethics, empirics, and practical decision-making associated with these issues are more highly fraught that is often appreciated. In their own way, GEF projects—or at least certain aspects of them—are, by virtue of their key ('complex') characteristics, likely to be caught up in similar conundrums when it comes to assessing, interpreting, and responding to a given project's impact at a particular point in time.

objectives are not expected to be met at this point but are on track to emerge in due course. The difference in these interpretations matters enormously, both for those whose lives/careers are shaped by the project's fortunes and for senior managers needing to explain their decisions to oversight boards and donors.

93. In the analysis conducted for this review, the specific focus has been on understanding how the most challenging of GEF's projects found themselves in this position (because of the various risks they did or did not anticipate), and what adaptive management measures they implemented (or not) in response to these risks. Beyond the structural characteristics of these challenging projects' design and implementation, the risks and responses themselves altered the projects' impact trajectory over time. As figure 1 in the introduction conveys stylistically, certain risks to project effectiveness were noticed (or not) during the preparation and appraisal period; if those risks were noticed, particular measures were applied (or not) in response to them. Similarly, during the implementation phase, challenges were created by long-standing and newly emergent risks (a product of changing conditions) and measures were taken (or not) to address them; certain other risks also continued to be consequential but unnoticed. Together, this combination of factors—(a) the complexity of the problem faced, (b) the project's particular design characteristics, (c) the diligence with which the project was implemented, (d) the significance of the known and unknown risks it encountered across its existence (design to completion), and (e) the extent to which effective adaptive management measures were taken in response to these risks—shaped the project's overall impact trajectory.

94. **The GEF has engaged with the key factors that shape a project's impact trajectory over time;[23] further systematic engagement with each of these factors would strengthen learning across the partnership. This approach enables a comprehensive understanding of where, how, when, why, and for whom its projects are working**. It also means that efforts to learn from the experiences of GEF projects deemed to have been successful/unsatisfactory—whether during implementation or upon completion—engage with more than data or performance metrics taken at face value if they are to enhance the ways in which organizations such as the GEF learn (and thereby become more consistently effective). Such efforts entail seeking to understand the key factors within and beyond the project shaping its impact trajectory over time, space, groups, and scale.

95. The broader implications of this for organizational learning is addressed in section 5; in the remainder of this section, we use the framework outlined above to unpack the variability observed in impact trajectories across twelve case studies of GEF projects assessed in this review, to explore their implications for the kinds of inferences, implications, and lessons one might draw from them.

2. Drawing inferences from projects unsatisfactory at closure

96. There are two broad categories in the cases reviewed in this section: (1) those unsatisfactory completion, despite efforts to correct them (unimproved projects); and (2) those deemed unsatisfactory during implementation but who were able to make constructive adjustments that enabled them, upon completion, to be declared satisfactory (improved

[23] GEF IEO 2022b; GEF 2023.

projects). These are two relatively stylized differences in impact trajectories, shaped by factors within and beyond the project itself (these are discussed in more detail below). Importantly, the time frames over which these trajectories unfold—four to six years—correspond to, and are ultimately driven by, political imperative and/or administrative convenience as opposed to a considered understanding of how long it might reasonably take, given the complexity of the problem, to realize the intervention's objectives and thus respond effectively to the broader development problem they are addressing. These relatively short time frames strongly favor those problems that can plausibly be addressed within that four-six year period; those problems that may actually be of greater importance and consequence, but are perceived to be either beyond the scope of a project or a project requiring a decade or more to realize its objectives, will struggle to find support.

97. In light of this analytical framing, understanding why certain GEF projects remained unsatisfactory (unimproved) from start to end, despite diligent efforts to alter their trajectory, requires further exploration. At face value, given that these projects are complex, one could provide four explanatory accounts of their non-improvement: (1) the changes introduced were themselves either poorly designed or inadequately implemented;[24] (2) the challenges faced were so entrenched and debilitating that no type or intensity of reform could have redressed them; (3) the project may have fallen even further off track (i.e., become *highly* unsatisfactory) were it not for the changes introduced; and (4) the changes made were effective in and of themselves, but were offset by unanticipated negative events in the latter half of the project's life, either within or beyond the project, that could not be countered in real time.[25] A single source of data or performance metrics, by itself, cannot distinguish between these four options, but from a project management and organizational learning perspective, it matters a lot which of these explanations—singularly, or in combination—is correct. Careers, budgets, reputations, and political fortunes turn on which explanation is given, and which is most accurate. Carefully conducted analytical case studies can help provide the deeper granular evidence required to elicit both strong explanations and actionable insights for subsequent decision-making.

98. The following excerpts from the seven analytical case studies summarize those instances in which GEF projects were unsatisfactory at closure, despite good faith efforts by decision-

[24] To push the analysis even further, of course, key decision-makers would ideally want to know the relative importance of each of the changes made, and their interaction effects. If, say, six changes were made to the project's design, which of them was decisive? Was it certain *combinations* of changes that drove improvement? Was one of the changes in fact undermining the otherwise positive effects of the others? Such questions cannot be answered by the available evidence in the cases under consideration, though in reality no truly complex intervention would *ever* have enough detailed evidence (or corresponding theory) enabling team leaders to cleanly answer each of these questions. But learning organizations at least know the importance of asking these t*ypes* of questions, and building a culture in which team leaders are alert to seeking answers to them.

[25] Importantly, even a project deemed consistently unsatisfactory *on average* across its lifetime may nonetheless have yielded a wide variation in effects for different groups in different places—i.e., it may simultaneously have been enormously beneficial to some, had no effect on others, and been clearly harmful to still others. The net effect of such a project would be declared zero, but from both an ethical and operational perspective it is surely important to understand the standard deviation not just compute the mean (or local average treatment effect). For a specific example of what can be gleaned from such an analysis in a democracy promotion project, see Rao, Kripa, and Kabir 2017. As it pertains to GEF projects, space constraints and data limitations preclude further discussion of this point here.

makers to respond to challenges and to get them back on track during implementation. A distinction is drawn between efforts made to address the project's internal design/implementation characteristics (from technical corrections to altered level of ambition) and measures undertaken in response to broader external challenges (e.g., those stemming from political crises, natural disasters).

Moldova: Transforming the Market for Urban Energy Efficiency (GEF ID 5157)
Within project life (low performance at start, then restructured and reduced ambition):

99. The project was initially designed to demonstrate and incentivize energy efficiency improvements in the municipal buildings sector by introducing Energy Performance Contracting and Energy Service Companies (ESCO) as a sustainable business model, with the ultimate goal of nationwide implementation. A new financial mechanism, the Loan Guarantee Fund was to be established to support energy service providers and financial institutions. In addition, the project aimed to develop and implement the Green Urban Development Plan for the capital city of Chisinau.

100. **Critical external risks, including low government ownership, corruption, and mistrust in the banking system, were not anticipated at the design.** During implementation, none of the expected partnerships with government agencies materialized, including the financial support agreed at approval. The banking crisis with a subsequent rise in interest rates disincentivized energy service providers to use the ESCO business model in building retrofits due to a significant risk to their investment, without guarantees. Another shock came from the corruption scandal in the municipal government of Chisinau and the Energy Efficiency Fund (which housed the project's Loan Guarantee Fund), leading to the abolishment of the Energy Efficiency Fund.

101. **Certain conditions for successful project implementation were not evaluated at the design stage**. The policy and legal framework for the ESCO mechanism was inadequate, however, the project did not envisage support for establishment of the relevant policies. Also, the project did not anticipate the risk of low energy savings due to low energy consumption in the baseline scenario. Due to the lack of budgetary funds, the managers of public buildings could not afford the adequate level of heating and lighting. Once the energy efficiency measures resulted in reduced energy bills, the managers would likely use the budgetary savings to increase the comfort level for their residents, i.e., the energy savings would be insignificant. Due to this risk, companies opposed the Energy Performance Contracting and preferred traditional contracts without the linkage to energy savings.

102. In summary, **the project objectives were overambitious,** considering the level of private sector development, the stage of the energy sector reform, the level of financial and technical capacities of the energy service providers, the lack of knowledge of the ESCO model and the Energy Performance Contracts, and the awareness of the energy efficiency measures in the buildings sector. The project was intended as innovative and transformational, while there were no economic or policy underpinnings, or stakeholder support, or public awareness. This happened because a model successfully used in other countries (including the neighboring

Ukraine) was applied without analytical preparatory work. In addition, the project management was inadequate with weak PIU capacity, and insufficient staffing.

103. During implementation, adaptive management measures were applied: after the banking crisis, the Loan Guarantee Fund could not be placed with the local banks, and instead was placed in the Energy Efficiency Fund, a public entity. The Executing Agency (Ministry of Environment) was replaced with the Ministry of Economy. The project was terminated based on the GEF Agency's decision that in the existing circumstances, no adaptive management measures would be applicable. Almost all GEF funds (USD 1 million out of USD 1.3 million) were returned to the GEF Trust Fund.

Beyond project life:

104. The lessons from this project were used to design a new GEF-supported project with similar objectives but a different approach, and tailored to the country context. Among other activities, the project Moldova Sustainable Green Cities (GEF ID 9042) relies on the state energy provider to perform a Super ESCO function as a viable alternative to private sector ESCOs. Under this model, the apartment owners are eligible for Energy Performance Contracts with their state energy provider who they trust. The provider invested on its own and is being paid back. The implemented measures may generate energy consumption savings of up to 30 percent in the participating buildings. The project received satisfactory annual ratings thus far.[26]

Central Africa Wildlife (regional): Sustainable Management of the Wildlife and Bushmeat Sector (GEF ID 3777)
Within project life (low performance at start, then restructured and reduced ambition):

105. The project was designed to demonstrate the benefits of participatory wildlife management and promote its adoption through regional and national strategies, as well as community demonstration pilots. The project aimed to support the development and approval of a regional strategy for sustainable use of wildlife by the Central Africa Forests Commission (COMIFAC), as well as national action plans and new laws and regulations in four participating countries (Central African Republic, Congo, Gabon, Democratic Republic of the Congo). Additionally, it planned to develop participatory wildlife management tools though 8 pilot demonstration projects, including human-wildlife management, sustainable financing, wildlife M&E systems, and knowledge management.

106. In general, the project did not experience external challenges that could not be mitigated. However, participation of one of the countries—Central African Republic—was limited due to ongoing internal conflict.

107. While **a regional strategy was developed and adopted, almost no laws for the management of wildlife at the national level were produced.** The postclosure evaluation concluded that there was insufficient analysis of existing laws and regulations at the design

[26] https://www.undp.org/moldova/press-releases/heating-system-three-multi-apartment-residential-buildings-chisinau-will-be-modernized-undp-support; https://www.undp.org/moldova/press-releases/residents-178-apartments-chisinau-will-have-savings-30-thermal-energy-consumption-thanks-support-undp-and-gef;

stage. In fact, this analysis was conducted by closure in three out of four countries (Gabon, Congo, and DRC). The evaluation recommended that future projects include a thorough analysis of existing legal texts in all relevant sectors from the start. For example, an analysis of the legal framework governing community-based wildlife management is not limited to hunting regulations but must consider the rights of local communities regarding their access, control, participation, conservation, and use of the resource.

108. The innovative concept of participatory wildlife management caused active resistance among stakeholders (including international environmental NGOs), resulting in reduced support from the governments who were not approving the communities' project activities. The community ownership was limited at the beginning due to insufficient initial consultations and delays with implementation. The postclosure evaluation recommended that in future projects, wildlife conservation organizations be involved from the design stage in discussions on changing regulatory framework.

109. Moreover, low capacity of government and nongovernmental entities were delaying the implementation. Capacity of executing agencies (Ministries) was low, while technical support was insufficient. Cooperatives and associations were fragile and often nonfunctional. Capacity to implement participatory wildlife management was still inadequate at project closure.

110. **The design was too complex, and the scope overextended, considering the financing and time frame.** The project covered 8 sites (two per country), to be scaled up to another 24 sites. The geographical spread was difficult to manage, and the project struggled to deal with different levels of intervention: community, national, sub-regional, including coordinating multiple steering committees at different levels (research, ministries, NGOs). An institutional set-up involving fewer partners would facilitate the implementation of action-research projects and achievement of project objectives. In terms of project duration, the postclosure evaluation recommended that similar projects aim for at least 7 years. During the fifth year of implementation and one year prior to the actual closing, the Sub-Regional Steering Committee decided to concentrate efforts on a limited number of sites, but because of the late application of this measure, and several other challenges the project closed with an unsatisfactory rating.

111. The original sequence of components was revised in the project. The plan was to start with the policy component first and then work on demonstration pilots. However, the policy component took two years to implement. Therefore, different models for the community demonstration pilots were tested in the field first. The pilots informed policy reforms, including the subregional strategy and national action plans. The pilots also incentivized local communities to adopt sustainable practices. The models used were based on community consultations and economic incentives, resulting in benefits such as the transfer of land rights to the communities from the state. The project, as the interviewee stated, lead to a fundamental change of perceptions about bushmeat and participatory management of wildlife.

112. The main adaptive management measures applied in response to the challenges were advocacy with the policymakers to achieve recognition of the project following the disagreement with the NGOs and the extension of the project closure date by 15 months.

Beyond project life:

113. Based on the results achieved at the community level and the lessons learned, there is now a new, much larger (financially and considering the number of participating countries) EU-financed operation, for which the project served as a model.[27] The Sustainable Wildlife Management (SWM) programme aims to improve wildlife conservation and food security in 15 African, Caribbean and Pacific countries. Three out of four beneficiary countries of the GEF project (Gabon, Congo, and DRC) participate in the ongoing SWM programme which directly builds on the GEF experience. Wildlife Conservation Society (WCS), one of the leading international NGOs in wildlife conservation—that initially opposed the participatory wildlife management approach—is now implementing this approach as part of the consortium of partners of the ongoing SWM programme.

Mozambique: Disposal of Persistent Organic Pollutants (POPs) and Obsolete Pesticides (GEF ID 3986)
Within project life (satisfactory ratings during implementation; delays, restructuring, reduced ambition):

114. The project was designed to reduce the risks to public health and the environment posed by poor pesticide management and obsolete pesticide waste. The Global Environmental Objective was to eliminate risks from Persistent Organic Pollutants (POPs) and obsolete pesticides in Mozambique through the use of sound environmental management methods to dispose of existing stocks and contaminated soils and prevent further accumulation of POPs and obsolete pesticides. The project aimed to dispose buried pesticides and contaminated containers and improve pesticide lifecycle management.

115. The project experienced some external challenges outside its control: political changes delayed implementation and security issues made field work difficult in parts of the country.

116. The project sought to strengthen national pesticide management policy to minimize the risk to the environment and public health from obsolete pesticide and associated wastes in the future. During implementation, the countries of the South African Development Community (SADC) created a regional body called South African Pesticide Register Forum (SAPReF) with one of the aims to develop a regional harmonized legislation. In response, the Government of Mozambique decided to postpone the approval of the national guidelines (drafted by the project), to ensure alignment with the regional legislation.

117. **Although the project included activities to strengthen institutional capacity in pesticide management and use, the design did not anticipate the risk of low capacity for local disposal.** The country had limited capacity for safe pesticide management and local disposal of hazardous waste. Limited capacity created bottlenecks, including prolonged difficulty to progress with tenders for local disposal. Mozambique has only one sanitary landfill for the hazardous waste disposal, which operates with limitations due to insufficient financial and material resources. The government had to provide the landfill with permission to receive the contaminated soil delaying implementation for more than a year. During that time, the cost for local disposal doubled, exceeding the project budget. Even four years after the project

[27] https://www.swm-programme.info/homepage

completion, the local disposal of contaminated soil is not finished and requires additional resources.

118. **During implementation, the project faced decreasing government ownership which was a key challenge that could have been mitigated**. The ownership weakened because the project was seen as driven by the GEF Agency rather than the government, partially because the National Project Coordinator was a GEF Agency employee rather than based in the relevant government unit as in the previous projects. In addition, managing obsolete pesticides was a lower priority for the government versus promoting agricultural productivity. The project missed opportunities to sustain government champions through closer engagement of high-level officials.

119. The **lack of a detailed baseline and limited budget for site characterization led to significant underestimates of the amount the hazardous waste**. To deal with the higher amounts of the safeguarded material, the project canceled the prevention activities (the future container management activities) and reallocated the available financing for disposal. In addition, the pesticide management information system was impractical for the country context (it required high Internet bandwidth that was not available) and could not be implemented.

120. **The project also experienced delays due to its implementation arrangements, including the late start of the parallel cofinancing project.**[28] In addition, the GEF Agency's country office was not a budget holder for the GEF grant. Instead, the responsibility for managing the budget rested with the Agency's headquarters' division. As a result, the country office found it easier to utilize the funding of the parallel cofinancing project, and for three years they did not disburse GEF funds. Furthermore, there was a lack of supervision and technical support from the headquarters to the country office, and poor communication between the Agency, the Ministry of Agriculture, and the authorities in charge of the landfill. According to the National Project Coordinator, the project had been left to run with very few checks.

121. **In response to experienced challenges, the project received five no-cost extensions between 2014 and 2019 but did not achieve intended outcomes by completion.** While it was successful in safeguarding the hazardous materials, it was not able to dispose them. The project also failed to establish a system for sustainable pesticide container management (because the funds were reallocated for disposal) or install the pesticide information management system (because the system was not adapted to the country context which required reliable Internet bandwidth). Although the guidelines for pesticide life-cycle management and a waste management plan were drafted, they were not adopted by the government; and as a result, inspectors and customs officials could not be trained.

Beyond project life:

122. The disposal activities continued postproject due to sustained engagement by the GEF Agency. As of 2023 (four years after the project completion), the disposal of obsolete pesticides

[28] The Unilateral Trust Fund (UTF) project was financed by the Government of Japan and provided cofinancing for safeguarding and disposal of obsolete pesticides.

and containers is complete, reducing the risks to public health and the environment. The disposal was done through exportation and subsequent incineration. Local disposal of contaminated soils is still ongoing and requires additional financing. Lack of progress on prevention (establishment of a sustainable system for container management) points to the need for upfront investment in baseline data, realistic designs, and commitment to systems-level changes for long-term impact. Since the accumulation of pesticide waste has not been prevented yet, and because of the lack of knowledge at the government level and in the general public about the risks of the pesticides, the GEF Agency prepared a concept for another project and is looking for partners.

Malaysia: Mainstreaming of Biodiversity Conservation into River Management (GEF ID 5692)

123. Some challenges cannot be solved within the limits of one project. They may require programmatic planning and careful work on the enabling conditions.

Within project life (low performance at start, then restructured and reduced ambition):

124. The project aimed at systemic change in the management of river biodiversity in Malaysia: to mainstream and integrate biodiversity conservation in river management across multiple agencies, jurisdictions, sectors, land and water uses and to transform the highly fragmented governance (institutional and policy) of the river management by improving coordination, capacities, policies, on-the-ground practices. It was one of the first projects that addressed integrated river basin management and facilitated broader recognition of riverine biodiversity in the country.

125. **A major challenge for the project was low government ownership due to changes in the government administration and lack of clarity among counterparts of the project's theory of change**. First, government reorganizations in 2018 and 2020 moved the executing partner to new agencies twice and altered its mandate, capacities, and powers. Second, while the overall objective of integrated biodiversity conservation in river management was fully supported by the government, the complexity of the task of mainstreaming it across multiple agencies (the objective of the project) was not sufficiently discussed and therefore not recognized, leading to the project being perceived as "the GEF project." The postclosure assessment concluded that this could have been mitigated at the design stage and recommended that the right approach at design would be to have a substantive dialogue with the counterpart aimed at aligning project objectives with the goals and targets of national commitments and promoting the counterpart's participation in this activity, as opposed to only sharing the GEF programming objectives.

126. The project aimed to integrate riverine biodiversity into stakeholder policies, procedures, and budgeting to prevent biodiversity loss**. However, the analysis at the design stage overlooked the importance of the enabling environment and the logical sequencing of components**. It assumed that the enabling environment and demonstration outcomes could occur simultaneously, instead of prioritizing the regulatory and institutional framework and capacity building. The postclosure evaluation concluded that the project design took a

reductionist approach to analyze a complex system and overlooked important institutional, regulatory, and hierarchical drivers.

127. **Another challenge was the conflicting interests of multiple government agencies.** The project design treated mainstreaming biodiversity as a technical task, but it required changes across multiple agencies and increased institutional capacity. Collaboration was needed across the fragmented institutional landscape, supported by participatory tools and processes, which were missing in the project design. The lesson learned is that projects addressing complex, multi-stakeholder challenges should assist stakeholders in engaging with system complexity, uncertainty, and scale, such as using scenario planning.

128. **The project had an overambitious objective to catalyze systemic change across institutional mandates, regulatory frameworks, financial allocations, and practices to sustainably incorporate biodiversity into river management**. The design did not account for complexity of the governance system and time needed for institutional change. The project could not move beyond the inception phase during the first three years of implementation, and then had to change the objectives through restructuring to reduce its ambition. At the end, the project delivered some outputs to contribute to longer-term mainstreaming efforts but did not achieve its outcomes.

Beyond project life:

129. As of 2023, there are no GEF projects related to biodiversity mainstreaming in Malaysia. At the same time, the GEF Agency moved its biodiversity mainstreaming efforts from the national level to a state level and is currently undertaking a project in partnership with the Sarawak State Government to formulate the state's Biodiversity Master Plan.[29] Among other objectives, the master plan aims to integrate biodiversity considerations into the state's development agenda, promoting effective conservation and the protection of natural resources.

130. **This case highlights that certain challenges cannot be easily solved through technical solutions alone**. The postcompletion evaluation of this project distinguishes between technical problems, which can be addressed with expertise and resources, and adaptive challenges, which require changes in mindsets and behaviors across institutions and stakeholders. Adaptive challenges necessitate experimentation, discovery, and time for solutions to emerge. Solutions to these challenges lie in the process of learning and adapting, trying new approaches, and collectively solving non-rule-based problems. The postcompletion evaluation also concludes that mainstreaming (i.e., mainstreaming of biodiversity into productive sectors) requires a longer time horizon and should be nested in continuous reform processes.

Central Africa/Congo Basin (regional): A Regional Focus on Sustainable Timber Management (GEF ID 3822)
Within project life (satisfactory ratings during implementation, delays, restructured, reduced ambition):

[29] https://www.undp.org/malaysia/blog/mainstreaming-biodiversity-malaysia-through-undp-and-sarawaks-collaboration

131. The project aimed to promote a harmonized regional approach to the sustainable management of production forests in the Congo Basin. It covered six countries in Central Africa: Cameroon, Central African Republic, Democratic Republic of Congo, Equatorial Guinea, Gabon, and Republic of Congo. The design identified three interventions: the formulation of instruments to tackle illegal logging in a harmonized manner, the promotion of market and fiscal incentives, and the improvement of environmental governance. The project conducted policy assessments at the regional level and pilot activities in three countries: Central African Republic, Equatorial Guinea, and Republic of Congo.

132. The **project experienced a number of external challenges beyond its control.** Due to civil war in the Central African Republic the project had to terminate demonstration activities in the country and reallocate funds to other areas. Due to unexpected economic crisis in the region (linked to low oil price), countries did not provide their agreed financial contributions to the project's regional partner—the Central Africa Forests Commission (COMIFAC). As a result, COMIFAC operated with inadequate resources. The countries also struggled to fulfil their cofinancing commitments. Low regional integration made obtaining visas and travel very difficult and led to delays and cancellation of regional workshops and training sessions.

133. The **project faced challenges due to conflicting stakeholder interests and inability to engage key stakeholders.** The project dealt with sensitive governance issues around illegal logging and corruption in the timber industry. Some government officials opposed greater transparency, as they owned concessions. The project did not identify key stakeholders to involve (communities, large logging firms, political and administrative elites in the region, demand-side actors globally). Some of these challenges were identified at the design stage by the GEF Agency's internal project review committee. However, the committee's recommendations were insufficiently addressed in the project document. Almost no key stakeholders were involved in project implementation or governance. The project lacked any substantive efforts to communicate or raise awareness, with minimal activity to create shared knowledge and build relationship with other entities. As a result, there was a very little ownership of the project outputs.

134. The **objectives and the results framework were overambitious, given the time frame, secured funding, and complexity of addressing illegal logging and governance issues**. The design underestimated the external context, especially legality, finance, and the governance of the forest sector in the Congo Basin countries. The design assumed that with key policy assessments directed at the regional level at COMIFAC, combined with some pilot activities and overall global supportive trends to conserve forest for its carbon value, it would drive sustainable forest management practices in the region. The design had overlooked some fundamental issues, such as the exact beneficiaries and local partners, a budget/human resources for activities such as monitoring, communication and public awareness, stakeholder participation and cooperation, and responsiveness to human rights and gender equity.

135. The initial project implementation set up was complicated with several layers of technical and financial responsibilities in six locations (overall responsibility in Washington, regional responsibility Kinshasa for WRI, main project partner in Yaoundé, and three pilot projects in other countries (CAR, Equatorial Guinea). This generated carbon footprint of the project due to international travel and delayed decision-making.

136. The midterm review highlighted institutional and working weaknesses, and as a result some outputs were simplified, and the implementation structure was strengthened. Despite partners' best efforts, some of the initial conceptual flaws could not be addressed. At closure, only about a third of intended outputs were fully delivered; most of the outputs that would affect outcomes were delivered late, and there was very low user ownership.

Beyond project life:

137. The case illustrates challenges in catalyzing adoption of policies and practices in a complex sector (with vested political interests and corruption) and region (affected by security issues and economic crises). Weak design hampered linking of activities for systemic change. However, relationships built with the regional entity—the Central African Forests Commission (COMIFAC)—shows some benefits can emerge over time. Some of the outputs produced by the project (e.g., studies) were useful for COMIFAC and helped build partnerships between the GEF Agency, the regional partner, and countries in the region. The GEF Agency is currently implementing a GEF-7 Impact Program with COMIFAC as one of the partners.[30]

Timor-Leste: Building Shoreline Resilience of Timor-Leste to Protect Local Communities and their Livelihoods (GEF ID 5671)
Within project life (satisfactory ratings during implementation, unsatisfactory at closure)

138. The project was designed to strengthen resilience of coastal communities by the introduction of nature-based approaches to coastal protection by: (1) creating a policy framework and institutional capacity for climate resilient coastal management; (2) establishing mangrove-supportive livelihoods to incentivize mangrove rehabilitation and protection; and (3) adopting integrated approaches to coastal adaptation to contribute to protecting coastal populations and productive lands (including upstream watershed replantation, coastal wetland restoration, and coastal protection infrastructure). At the time of implementation, this was the biggest climate change/environmental project for UNDP in Timor-Leste, involving 100 sites across 7 municipalities, 127 community groups, and many local NGOs.

139. **The project design did not sufficiently invest in mitigating the risk of the politically supported economic interests that contradicted the environmental objectives of the project**. Specifically, project implementation overlapped with the construction of a big and politically important Tibar Bay port, where one of the project's sites, aimed at restoring mangroves, was located. During design, the project had interacted with the IFC (who was providing advice in relation to the construction) about potential partnership and environmental offsets. During implementation, the project invested in negotiations with the private port construction company. However, to be successful, these efforts should have been made at design and been more involved. At the end, the project did not gain access to the site because project activities in the port were perceived as disruptive for economic activities. This challenge and the failure of adaptive management efforts were among the main reasons the project was unable to achieve its outcomes.

[30] GEF-7 Impact Program—the Congo Basin Sustainable Landscapes Impact Program (CBSL IP), GEF ID 10208.

140. Some of the local coastal communities resisted the mangrove protection efforts such as fencing (which prevented free roaming of animals). Although the communities initially expressed support to the project during the design stage, they were not effectively engaged during implementation. This was due to missed opportunities to negotiate a public agreement (tarabandu) for conservation rehabilitation and to develop mangrove-positive livelihoods using project-designed strategies and tarabandu. As a result of the local resistance, the project was unable to complete certain technical tasks and did not achieve its main outcomes. However, in other sites in the same project, the project invested in community engagement, tarabandu was applied, and the intended results were achieved.

141. **The project was highly complex with a large number of activities, many sites spread across the country, and a large number of NGOs with varying capacity, which made supervision and implementation difficult.** The livelihoods component lacked baseline assessment and proper market analysis, and as a result was largely ineffective. The measurement of the main outcomes was incorrect with targets that included postcompletion scaling up, and a mix-up of outcomes and outputs. The project team defended their approach, stating that the measurement of impacts on a certain area did not necessarily mean the project covered it, as the assumption was that intervention in critical areas would lead to scaling up. However, the terminal evaluation criticized the project's chances of achieving scaling up. Lastly, the project management unit exercised poor oversight and quality control of consultancies and policy and technical documents produced.

Beyond project life (no known follow-up activities):

142. The project did not have a plan to ensure the continuity and sustainability of the achieved outputs and benefits, and many are likely not to continue postcompletion. The terminal evaluation noted in 2021 an urgent need for a targeted follow-up integrated coastal management (ICM) project. One significant gap in the project design was that it did not include an explicit activity to develop a documented and budgeted replication and sustainability plan before project end, which should ideally be a standard element of all project designs.

China/Baiyangdian Basin: Integrated Ecosystem and Water Resources Management in the Baiyangdian Basin Project (GEF ID 2766)

Within project life (satisfactory ratings during implementation, unsatisfactory at closure)

143. The project aimed at demonstrating an innovative integrated ecosystem and water resources management (IWRM/IEM) to address the environmental issues of the Baiyangdian Basin in Hebei province. The Baiyangdian Lake is one of the most important and vulnerable ecosystems in China. The project's design included a series of pollution control and ecological rehabilitation programs and the rehabilitation of the Baiyangdian Lake Wetland Provincial Nature Reserve. The GEF Agency financing covered institutional strengthening and investment in 22 subprojects, which included wastewater treatment plants; water supply systems; reforestation; urban flood management; integrated water management; solid waste management; and clean energy development. The GEF grant covered biodiversity conservation, to support the above activities.

144. **One of the main challenges experienced by the project was its complexity and overextended scope**. The scope of the planned activities was inconsistent with the size of the grant financing: the allocation of the GEF's US$1.3 million grant devoted to the demonstration activities was too widely dispersed across the project's six modules and 22 activities, making the budget for each activity unreasonably limited. There was no budget for project preparation activities, such as preliminary design and feasibility studies. The effectiveness of the funding (the release of the funds) was delayed, forcing the government to finance activities planned by the GEF project. The project successfully pursued other financing sources, thereby enabling the demonstration projects to be implemented.

145. Another **challenge was related to the lacking focus on the dialogue with the central government and on the centrally based implementation support.** Contrary to the need in such arrangements, the executing agency was selected at the local level, where capacity and decision-making potential were low. The executing agency—the Baoding Municipal Government (BMG), acting through the Baoding Development and Reform Commission (BDRC—had little experience with international agencies and had high staff turnover, created significant bottlenecks for the project's implementation.

146. The **project encountered significant delays, amounting to 40 months** due to the following reasons: (1) a delay in requesting restructuring: the need to replace subprojects was identified in 2009, but formal requests were sent after the mind-term review in 2013; (2) changes in government plans; (3) lack of available counterpart fund; (4) the need to implement new subprojects; (5) a temporary construction ban in the Beijing–Tianjin–Hebei area. To adapt to challenges, the project canceled infeasible subprojects and replaced them with new ones, allowing the focus on a less diverse and shorter set of activities.

Beyond project life (sustainability through mainstreaming):

147. The integrated ecosystem and water resources management (IWRM/IEM) approach was adopted by the Baiyangdian Ecological Environment Management and Protection Plan (2018-2035) and approved by the state council. The IEM framework will guide long-term environmental improvement of the lake ecosystem. Thus, while facing challenges during implementation, the project played a role in influencing long-term environmental governance in the basin.

3. Drawing inferences from projects improving from unsatisfactory to satisfactory

148. As with the unsatisfactory cases considered above, single sources of data also cannot readily distinguish between rival explanations for why certain complex projects deemed unsatisfactory during implementation were seemingly able to improve by closure. Again, this is so because of the inherently nonlinear and non-uniform manner in which the impact trajectories of complex projects unfold.

149. Four analogous explanatory accounts can be provided of GEF projects that improved after the midterm review: (1) the changes introduced, in terms of both design and implementation quality, deftly matched the nature and extent of the diagnosed problems; (2) the challenges identified during implementation were in fact not as serious or entrenched as they were deemed to be, and would have readily resolved themselves in the absence of any

efforts to correct them; (3) the reforms introduced clearly worked, but less hasty and more rigorous diagnostic work by midterm would have identified *even more effective ways* to improve; and (4) the introduced reforms had neither a positive nor negative effect in and of themselves, but strongly positive, but unanticipated and uncontrollable, external events unfolding in the second half of the project's life served to considerably amplify its performance. Which of these different types of explanations is most accurate requires a more detailed understanding of the project's design, implementation, and context, such as that provided by these brief case study summaries.

150. The following excerpts are summaries of the five cases documenting the steps taken, within and beyond the GEF project in question, to successfully shift an impact trajectory over the course of implementation from unsatisfactory to satisfactory.

Paraguay: Improving the Conservation of Biodiversity in the Atlantic Forest (GEF ID 2690)
Within project life (low performance at start, then improvements after the midterm review):

151. The project was designed as a demonstration initiative to achieve sustainable natural resource-based economic development in the project area by recreating biodiversity connectivity between protected areas in the proposed Conservation Corridor in the Atlantic Forest. The implementation model included participation of regional implementing agencies (NGOs, women's groups, indigenous peoples' (IP's) associations, and farmers' cooperatives). Activities included reforestation, restoring stream banks, reducing use of toxic agrochemicals, supporting new regulations and policies for watershed conservation, and investing in community assets (e.g., infrastructure for basic services or productive assets). Participation of indigenous communities (IC) in conservation activities was key: they hold large forest areas in the Atlantic Region and have incentives to take part in conservation efforts.

152. **The project experienced external challenges beyond its control, including a political crisis and economic boom**. First, a political crisis in Paraguay a year after the project begun led to the president's impeachment and transitional government. During the transition period, there was little interest in the project, and low government ownership affected the implementation. The newly elected government was supportive of the project, and its establishment coincided with the project's midterm review and restructuring. Second, the country experienced an economic boom, driven by export commodities such as soybean and corn accompanied by increase in commodity and land prices. This created disincentives for forest protection because economic benefits from converting the land into soy fields were significant, while keeping forest reserves or reforesting meant reduced income.

153. **The most critical external challenges were economic interests of landowners and limited government ownership and capacity**. The project design and the results framework were built under the assumption that large and small landowners would be participating in the project, implementing forest restoration and agroforestry activities. This only happened to a very limited extent, and the project ultimately had to rely on the participation of Indigenous Communities and some small farmers, which negatively affected the size of the land area under the project and required adjustments to the results framework. Government's support to project implementation was also limited, partially because of strong economic interests linked

to soy production and government corruption, and partially due to a limited government capacity to lead implementation or to provide funding. The capacity of two government agencies that were co-implementing partners (together with another partner, Itaipu) was inadequate for project management which resulted in bottlenecks in decision-making and delays. Both issues can be attributed to a lack of analytical work and strategy at the design level. The resources the GEF Agency had to invest to turn the project around and achieve a satisfactory outcome were significant.

154. **The project was turned around following the midterm review based on an in-depth, on-the-ground analysis and close work with all potential stakeholders**. The project had faced the possibility to be terminated due to its low initial performance, the low priority given to projects with limited budgets at the World Bank due to the disproportionally high transaction costs, and the significant costs associated with restructuring. However, it was turned around through several measures. First, the original reliance on large landowners was reversed to the indigenous communities: they owned a large share of land in the country, and their livelihoods depended on environmental restoration and conservation; therefore, they supported the project. Although the cultural specifics of working with the indigenous communities were not considered at design, the restructured project employed an expert in indigenous communities and developed an individual action plan for each participating community.

155. The restructuring involved a change in project governance, from the inadequate counterpart co-execution to Itaipu being the only executing agency. In contrast to the government agencies, Itaipu—the third largest hydro dam globally and an international entity created by the governments of Brazil and Paraguay—had high level of capacity, availability of financing, and a mission to support forest restoration.

156. **Engaging a nongovernment agency was a nontraditional approach, but it proved to be key to achieving project outcomes**: Itaipu led project implementation, provided cofunding, participated in the development of the forest restoration strategy, and (postclosure) led and financed a scale-up. The level of achievements at closure (the size of the forest corridor created, the area where sustainable land management practices were adopted, and successful institutional development) puts this project in the category of big wins.

Beyond project life:

157. Long term implementation arrangements were developed with a nongovernmental agency (Itaipu), Itaipu became a major World Bank counterpart in this project and beyond: there is now a World Bank Reimbursable Advisory Services (RAS) and an agreement to continue Itaipu's work in consolidating and restoring the Atlantic Forest Corridor. In addition, the Atlantic Forest Corridor created by the project was made a national priority. The project played a role in UNESCO's decision to include this corridor as part of a Itaipu Biosphere Reserve which covers an area of over a million hectares in Eastern Paraguay and is one of the globally most important ecosystems for biodiversity conservation.

Brazil: Sustainable Land Use Management in a Semiarid Region (GEF ID 5276)
Within project life (low performance at start, then improvements at midpoint):

158. The project was designed to address land degradation in the state of Sergipe of Brazil by supporting sustainable land management, reversing land degradation, strengthening environmental governance framework and addressing the main drivers of land degradation and desertification, such as conflicts over land use and unsustainable agriculture practices. The expected outcomes were: (1) strengthened governance framework to avoid, reduce, and reverse land degradation in Sergipe; and (2) uptake of SLM/SFM practices increased in Alto Sertão of Sergipe, with replication in the rest of the state's desertification prone areas.

159. **The political and economic risks were underestimated**, and the postclosure evaluation concluded that the project would have benefited from a greater priority and detail of the analysis of such risks from the outset. First, the project was affected by the 2016 post–presidential election political changes when the new administration was reluctant to support environmental projects. Government ownership of the project, which was relatively strong prior to the political changes, significantly diminished after just a year of implementation. Support from the Ministry of Environment, the executing agency, significantly reduced, and the ministerial unit designated to work with the GEF Agency was dissolved. Project implementation was stalled, and counterpart's cofinancing was not met. Second, the project suffered from an economic crisis, recession, and currency devaluation. Both risks could have been anticipated and mitigated at the start, as project restructuring showed. Specifically, one of the approaches used in restructuring in order to increase ownership was involving the stakeholders in the drafting of the action plans the project was supporting.

160. **The project had overambitious objectives which had to be scaled down at restructuring and replaced by an objective within the project reach.** The objectives included reversing the land degradation and increasing the vegetation cover and tree density, which are long-term outcomes and hard to achieve within the project's original time frame of 5 years (or the revised one of 6.5 years). The Substantive Revision adjusted the outcome targets to be more realistic and aligned with the capacities of the institutions involved. The targets were mostly achieved, and the project closed with a satisfactory rating.

161. **The project's low performance was addressed though an in-depth analytical substantive revision and subsequent restructuring**. The team identified warning signs and conducted a root cause analysis to understand the reasons for the project's underperformance. Adaptive management strategies were then implemented in all relevant areas of concern. The team shifted its focus from the national to a sub-national level and was very persistent in re-engaging the Sergipe State government counterparts to highlight the economic co-benefits of the environmental project. The project's Steering Committee was reactivated; and a new project strategy emphasized adaptive management, putting state institutions at the center of decision making. Apart from re-engaging with state government institutions, the project also connected with state grassroot organizations. Identifying subnational actors and finding support outside of government institutions turned out to be a winning adaptive management strategy, which supported the achievement of project objectives by closure. The project went through a low performance period, but after restructuring, it was able to achieve the following main outcomes: (1) the share of farmers who had adopted the SLM practices was 98.15percent by the time when the terminal evaluation was prepared; and (2) the State Policy to Combat Desertification for Sergipe was published on November 6th, 2020.

Beyond project life:

162. During the final 6-12 months of implementation, the project was integrated into existing programs, allowing for scaling up. A pre-closure assessment showed that the provided technologies were being used by farmers because they now met their economic, social, and environmental needs (based on prior analysis). The project supported 5-year desertification combat plans.

Shanghai: Agricultural and Non-Point Pollution Reduction (GEF ID 3223)
Within project life (low performance at start, then improvements at midpoint):

163. The project was designed to demonstrate effective and innovative pollution reduction activities in Shanghai's rural areas in order to reduce the rural and agricultural pollution load (especially nutrients) in the surface water flowing to the East China Sea. It involved demonstration of agricultural pollution reduction technologies, wetland ecological restoration, wetland sewerage system, introduction of organic fertilizers, and replication strategy.

164. **A critical challenge for the project was low government ownership which was not addressed at design**. The actual value of this demonstration project was not clear to the counterparts; the project was considered a very low priority and was nearly canceled. Project restructuring experience—successful adaptive management through technical discussions with the government—demonstrated that this risk could have been mitigated at the design stage through a more involved dialogue with the counterpart. The GEF Agency team conducted detailed technical analysis to design adaptive management measures, proposing clear working solutions to the government partners. Technical expertise and consistent engagement were critical to earn the trust and achieve government ownership.

165. **The project's scope was overcomplicated which hindered its implementation.** It included eight technologies, all of which were innovative; several project management units, some with low capacity; an overextended geographic scope with seven locations in four districts; and an excessive number of subcomponents, linked to the number of technologies. This issue was resolved through restructuring: several activities (technologies and subcomponents) were revised or dropped, sites changed, and targets revised. More specifically, the innovative technologies were re-thought from the point of view of their relevance, applicability, complexity, and usefulness for the beneficiaries, which involved on-the-ground analysis.

166. In addition, the original executing agency, Shanghai Development and Reform Commission, lacked technical knowledge of agricultural development and nonpoint source pollution. The team changed the executing agency from to the Shanghai Agricultural Commission that had the right technical expertise.

Beyond project life:

167. **The project took important measures to ensure sustainability of demonstrated technologies beyond its closure.** It invested in understanding the on-the-ground situation and the interests of potential beneficiaries. In addition, a subcomponent was dedicated to developing a replication and scaling up strategy for the demonstrated sub-projects. Actual

replication started before closure: following the village sewage treatment system demonstration, the district government replicated the technology in other parts of the district. The project's sustainability is likely due to demonstrated effectiveness and low cost of the project interventions.

Liberia: Enhancing Resilience of Vulnerable Coastal Areas to Climate Change (GEF ID 8015)
Within project life (low performance at start due to delays and disagreements, then restructured, implemented adaptive management, improved performance at closure)

168. The project aimed to reduce vulnerability and build resilience to the threats of climate change in Liberia's coastal County of County of Montserrado. It involved strengthening the capacity of local institutions and demonstrating sustainable and affordable measures to protect coastal areas against impacts of climate change at the pilot sites of Hotel Africa and New Kru Town.

169. **The project encountered several delays.** First, the political transition in 2017 delayed the inception workshop for almost a year. Second, due to increased coastal erosion, the government wanted to focus activities only on once site (with critically important infrastructure at risk), instead of two originally planned. Getting approval for a minor amendment of project strategy caused a delay, as the government took time to produce the documents required by the GEF Secretariat to approve the amendment. Third, there was a disagreement between the government and the GEF Agency on the strategy for the construction of the coastal defense structure. Because of the critical situation with the coastal erosion in New Kru Town, the government wanted to start the construction as soon as possible, while the GEF Agency wanted to do an assessment to ensure no harm was done by the construction. Eventually, the partners found the solution by synergizing with the Green Climate fund that was preparing another project in the area. As a result of these delays, the cost of construction became larger compared to what was expected in the initial design. The solution was found by negotiating with the government and increasing their no-cost cofinancing in the form of rocks that were needed for the construction.

170. **During implementation, there were some disagreements with the local community**. The fishers were concerned the revetment would block the canoe landing and escalated this issue through a complaint to their representative at the House of Parliament. The project engineers addressed these concerns by leaving openings for landing at both ends of the revetment. Another community concern was the blocking of water by the revetment which could have flooding effects. In response, the project constructed a water catchment and discharge along the lowest point of the revetment to help minimize flooding. In addition, as the community lacked sanitation facilities, the project constructed latrines on each side of the revetment. By responding to the community needs, the project was able to deliver its outcomes and reduce vulnerability of the local communities.

171. Despite these challenges, and due to ongoing adaptive management measures, by closure the project demonstrated the feasibility of affordable coastal defense structures to protect vulnerable communities from erosion and flooding. It built local capacity and strengthened national institutions to support sustainability postcompletion.

Beyond project life:

172. The constructed revetment structure is expected to provide protection for 40-50 years through a combination of the community and government maintenance. By demonstrating the coastal protection approaches, the project created conditions for replication and scaling up in other coastal areas of Liberia. Two new large ongoing projects by the GEF (Enhancing the Resilience of Vulnerable Communities in Sinoe County of Liberia [GEF ID 10376] implemented by UNDP) and the Green Climate Fund (Monrovia Metropolitan Climate Resilience Project , also implemented by UNDP) have drawn on the lessons and practices from this project. In addition, these new projects are utilizing integrated approaches that combine engineered coastal protective structures (e.g., revetments) with nature-based solutions (e.g., mangroves). They also incorporate livelihood activities to reduce vulnerability and engage women in decision-making. This evolution shows a nonlinear trajectory, with the initial project putting in place building blocks for the coastal resilience in the country to emerge over time.

Dominica: Promoting Energy-Efficient Applications and Solar PV (GEF ID 5686)
Within project life (low performance at start, then restructured and reduced ambition):

173. The project aimed at the removal of the policy, technical, and financial barriers to solar photovoltaic (PV) and energy efficient (EE) applications; and at implementing demonstration projects installing PV capacity and energy efficiency improvements (the latter through energy performance contracts). To support scaling up of the demonstration projects, a new financial mechanism, a Climate Change Trust Fund, was to be established.

174. **The project experienced external challenges beyond its control**, including elections in 2019 leading to replacement of all counterparts, two devastating hurricanes, and COVID-19. In addition, the lack of government ownership during a long period between CEO endorsement (January 2016) and inception workshop (May 2018) created significant delays. Further, the GEF portfolio in the country was focused on biodiversity, and the climate change focal area (where this project belonged) was a low priority. Adaptive measures could have been applied thought a change in the executing agency, replacing the Ministry of Environment with the semi-governmental energy agency or the Energy Ministry, who, according to the postclosure evaluation, would have likely taken ownership. However, this adjustment was not made. After the change in government in December 2019 and the replacement of the GEF portfolio coordinator, the situation improved, but it took three years to correct this problem and achieve sufficient ownership.

175. **The conditions for successful project implementation were not assessed at the design phase**. The project aimed to remove policy, technical, and financial barriers to solar photovoltaic (PV) and energy efficiency applications, followed by the implementation of demonstration PV and energy efficiency subprojects. However, the barriers were too high to overcome within a single project and included a lack of standards for imported renewable energy and energy efficiency equipment, a utility-driven cap on renewable energy implementation, no feed-in tariff policy, and no detailed action plans for renewable energy and energy efficiency. At project restructuring, the entire policy component had to be dropped for the project to add value and to close with a satisfactory outcome rating. This experience shows

that there should have been an assessment of the policy and regulatory environment at design to avoid the failure with the implementation of this component.

176. **Overall, the project objectives were too ambitious, considering the state of the energy sector reform, institutional capacity, the lack of knowledge of low carbon development strategies.** The necessary legal and policy environment was nonexistent, and there was no stakeholder support. The design was too complex, with several expected outcomes to be achieved within four years, including (1) creating enabling environment for energy efficiency and renewable energy; (2) implementing demonstration projects, and (3) creating financial mechanism for energy efficiency and renewable energy (Climate Change Trust Fund). The time and capacity were insufficient.

177. The original sequence of components was revised: the policy component was supposed to be implemented first, followed by the demonstration projects. However, since the policy component could not be implemented, the demonstration pilots, in fact, were expected to inform policy reforms, which were to be implemented after project closure.

178. Considering these significant design issues, the adaptive management measures applied during restructuring amounted to a cancellation of all project activities except one: the installation of the demonstration renewable energy and energy efficiency capacity. While this allowed the project to achieve its revised objectives and have a satisfactory outcome rating at closure, the dropped policy/institutional/strategy component represents a failure of adaptive management. The necessary foundational elements to enable scaling up and sustainability of the demonstration projects were not established. Thus, the adaptive management measures were insufficient and did not set the project up for long-term success beyond its immediate objectives.

Beyond project life:

179. Based on the collected data, there is no evidence regarding sustainability, a scale-up, or an effort to go back to the dropped policy/institutional/strategy component. It is also unclear if the demonstration projects were replicated. The interviewed GEF Agency's regional coordinator conveyed that a 15-page sustainability/scale-up/continuation strategy was produced but never shared it. No doubt climate change strategies and action plans, as well as the "low-hanging fruit" mitigation action (such as PV solar and energy efficiency), are being pursued in the Caribbean region with the support of multilateral institutions, including GEF Agencies, but probably with no link to this project. However, while the contribution of this project was likely minimal, in one sense it was nevertheless positive: the funds were used to increase access to renewable energy and increase energy efficiency.

Conclusions

180. One can draw various interpretations and infer an array of lessons from these findings of unsatisfactory and turnaround projects—that is, projects that were unsatisfactory during implementation, and then followed different trajectories: some remaining unsatisfactory, others considerably improving.

181. **The first lesson is that something can be learned, and substantively gained, from even the most disappointing project—providing intentional efforts are made to understand where,**

how, and why initial decisions and subsequent correctional efforts did not result in objectives being attained. The positive impact of projects, even those deemed unsatisfactory at closure, is not limited to the realization of their objectives alone. It is possible that: (1) the project's very presence helped inspire similar successful initiatives elsewhere; (3) in the process of being authorized, the project favorably altered broader institutional structures and overcame erstwhile legal constraints, thereby enabling subsequent initiatives to be conceived and refined; (3) the project generated unanticipated and unexpected positive results,[31] (4) despite failing on average, the project nonetheless generated some clearly positive impacts somewhere for some groups; and (5) the project mobilized expertise, financial resources and young talent that paved the way for future policy initiatives that yielded more positive, tangible results.

182. The possibility of any such subsequent outcomes, however, does not excuse inadequate preparation the first time around. Due diligence must always be applied conscientiously across the life of the project. The abiding challenge, then, is to build and sustain a normative culture of learning and problem-solving across all the organizations involved in delivering project outcomes (see section 5), such that ambition, scale, and innovation are realistically embraced, yet primed from the outset to (1) generate actionable lessons in real time, (2) track within-project variation across groups and contexts, and (iii) remain alert to documenting unexpected outcomes, no matter whether the project in general succeeded or failed to meet its stated objectives.

183. **A second important lesson is that effective midterm changes can generate not just notable improvements but seriously big wins.** Of the cases considered in this review, Paraguay's Improving the Conservation of Biodiversity in Atlantic Forest project (GEF ID 2690) exemplified this outcome, making a series of major changes grounded in an extensive contextual re-analysis and close consultation with all potential stakeholders, including Indigenous Peoples. At midterm, it was inherently uncertain that these changes would work, let alone succeed spectacularly, but bold efforts were made to both clearly identify the key problems and to map them onto correspondingly supportable and implementable solutions. This reform effort is all the more notable for having successfully negotiated two fundamentally different kinds of challenges: *technical* problems, for which experienced engineers could be mobilized to articulate sound solutions; and the more socially complex *adaptive* problems, which required conducting sensitive negotiations between political leaders, technical staff, and Indigenous Peoples and local communities—all of whom initially had different understandings of both the problems and the potential solutions. Reconciling these divergent views into a shared sense of understandings and interests, and doing so by establishing a negotiation process regarded by all stakeholders as legitimate, is the signature accomplishment of this project. But achieving this success—at this scale, across fundamentally different types of problems, and with such positive subsequent outcomes for all—is surely a rare feat; it clearly *can* be achieved, but it is not reasonable to expect that it will occur routinely. The very essence of this type of complex challenge is that a single highly successful resolution should be learned from but its particular practices not superficially replicated: these particular solutions in

[31] Development scholar Albert Hirschman famously argued that such results were both common yet routinely uncaptured in official project assessments; he referred to this as "the principle of the hiding hand." See Hirschman 1967.

Paraguay were crafted by particular people in response to a particular problem under particular constraints.

184. **The third lesson is that modest but thoughtful midterm changes can deliver small wins, and do so quite consistently.** Projects that may have initially "wandered" can indeed get back on track. This is especially the case where the prevailing problems are deemed to be technical in nature—that is, amenable to correction by the application of expert knowledge. Such knowledge travels more smoothly across contextual borders, so can more readily be shared and adopted by others. To the extent such challenges predominate, the implication is that intra-project learning itself can and should be undertaken in a systematic way from the outset, so that both problems and solution emerging from different contexts and scales of operation can be more readily and accurately discerned, and then engaged with by others. This, in turn, implies that the GEF should be working to curate learning protocols that enable technical problems to be more systematically identified, shared, and addressed (see additional discussion in section 5).

185. **More sobering implications, however, emerge if the challenges are predominantly adaptive in nature**. That is they are highly idiosyncratic (context specific), entail extensive face-to-face negotiation, have no known solution, and are understood in fundamentally different ways by key stakeholders. Here, a full array of outcomes is likely to be possible as the problem is addressed, ranging from big wins to small (but still important) wins to stalling to failure to making the situation worse. Forging and sustaining shared trust and legitimacy between stakeholders is essential to enhancing the likelihood that positive outcomes are eventually attained. Such adaptive challenges require very different skills and forms of expertise; they also require space to be created and protected wherein difficult high-stakes negotiations can be undertaken. Integrating scientific and traditional knowledge regarding the management of land and the sustainability of natural resources is only one of the many instances in which intensely adaptive work is required to *create* a solution. The Brazil and Liberia cases in this report provide instructive examples of how such work was done, but it bears repeating that (1) the larger and more ambitious environmental and climate change projects of the future are only going to have more and more intense adaptive challenges to address, and (2) different kinds of approaches are going to be required of the GEF and its partners to elicit the lessons from both successful and unsuccessful efforts to address these challenges, and their implications for new/novel cases.

186. With or without efforts to bring about midcourse corrections, GEF projects—now and especially in the future—that are boldly tackling complex binding-constraint environmental problems are highly likely to unfold along nonlinear and non-uniform trajectories. This creates enormous challenges for those seeking to determine whether any given project at any given moment is on track or not, let alone then trying to discern whether specific corrective mechanisms have independently succeeded in bringing about desired change. The cases considered in this section exemplify the range of outcomes that are possible.

187. The cases presented demonstrate the importance of have a clearly articulated theory of change against which to benchmark performance claims, and having effective real-time learning mechanisms in place to manage what can (and should) be managed, and to inform contingency plans when factors external to the project threaten to derail it. Projects can learn;

the best of them lead to scale up after closure, achieving the hoped-for big wins, yet even unimproved projects can nonetheless create space for improving the design and funding levels of successors. How the GEF partnership can become increasingly effective learning organizations is the subject matter of section 5.

SECTION V. LESSONS LEARNED: HOW THE GEF CAN BECOME A STRONGER LEARNING ORGANIZATION[32]

188. The GEF partnership has increasingly acknowledged the importance of knowledge management and learning in fulfilling its mandate and in ensuring operational effectiveness. Over the years, the GEF has dedicated resources and launched knowledge and learning initiatives at various levels (GEF IEO 2020c).[33] This report is timely, following the recent the approval of the GEF-wide Strategy for Knowledge Management and Learning (GEF 2023). The GEF Secretariat is currently collaborating with Agencies, STAP, countries and other members of the partnership to facilitate the implementation of this Strategy. This section delves into the principles, derived from the portfolio and case study analysis, key informant interviews, and a comprehensive literature review. These principles offer valuable insights on how the GEF partnership can enhance its role as a learning organization as it embarks on the implementation of the new Strategy.

189. To address the escalating interlinked environmental and climate change crises, and to effectively address the associated demands for funding larger projects and programs, as well as for more innovative and impactful projects, especially in fragile political contexts—the GEF partnership would benefit from embracing a learning approach that more formally and explicitly documents three broad categories of knowledge. First, this would include documenting the analytical, operational, and contextual lessons from its experiences thus far—in real time as the project unfolds (monitoring), at midterm (formative evaluation), and upon its conclusion (summative evaluation), doing so in ways that enable lessons to be shared and aggregated. Second, it would include documenting the extent to which—when considering whether and how to replicate successful projects in novel contexts—the key legal, social, and political characteristics of such contexts are an appropriate fit. And third, when considering whether to scale up pilot interventions, it would be important to document the likelihood that the implementation capability of the teams designated to deliver on these expectations is sufficiently robust. For example, can the team manage the political and financial risks that may be less salient or consequential at the pilot stage?

190. An organization that coherently and consistently collects, curates, and carefully interprets data across these three domains has the raw material for it to become a more effective *learning* organization. By harnessing this data though a systematic and organized approach, the GEF partnership will be better positioned to more reliably anticipate, assess, and respond to the four categories of risks of failure identified earlier in this report—unwarranted ambition, excessive scope, inadequate contextual analysis, and wavering political support—and identify spaces for improvement opportunities.

191. This review, and its particular focus on GEF-funded projects that struggled to meet their objectives during implementation but sought to implement adaptive management measures,

[32] That is, a 'learning organization' in ways broadly consistent with the spirit of Peter M. Senge's classic book, The Fifth Discipline: The Art and Practice of the Learning Organization. New York: Doubleday, 2006. Most recently, see Amy Edmonson (2023) Right Kind of Wrong: The Science of Failing Well New York: Atria Books.

[33] For detailed analysis, please see the Evaluation of Knowledge Management in the GEF (GEF IEO 2020c) and Section 9.3. Knowledge Management in the GEF: Constraints and opportunities in the Seventh Comprehensive Evaluation of the GEF (GEF IEO 2022b).

highlights the process through which the GEF can seek to become a more effective learning organization. Indeed, learning from challenges—systematically and intentionally—is a defining feature of learning organizations, such as the GEF: they explicitly recognize that solutions to the most complex challenges will only emerge through the design and implementation process itself, and so invest time, effort, and resources to generate the specific feedback they need to make necessary refinements or changes.

192. To this end, eight guiding principles or lessons are identified and discussed below. These principles may well be refined, replaced, or added to as the GEF partnership operationalizes and implements its Knowledge Management and Learning Strategy; indeed, doing so would itself be a mark of such progress. These principles are articulated in line with the analytical lessons from the portfolio analysis and case studies prepared for this review, the broader literature on building learning organizations, and specific insights emerging from interviews conducted with key informants associated with the GEF including internal managers or formal external observers. Accompanying most of these principles are practical steps or initiatives that could help to realize them.

193. **Principle/Lesson 1: Active engagement with high priority but deeply complex environmental projects over time and through experimentation.** The challenge for a learning organization such as the GEF is to go beyond demonstrating that it can, for the most part, successfully deliver projects that meet their stated objectives: the higher order challenge is whether it can continue to design and deliver effective responses to the deep challenges posed by environmental degradation. Learning how to do so—consistently, reliably, and at scale—would be the particular form of ambition the GEF continues to embrace and realize.

194. Taking such a stance would entail, and enable, actively engaging with high-priority but deeply complex problems whose resolution may stretch over many years and that may only emerge through a long process of local experimentation. Such a process may yield few promising results in the early stages, and may be vulnerable to abandonment by successive governments. But if addressing the hardest environmental problems requires taking such a stance, then the GEF may be one of the few development partners that can tackle them. Not every GEF project has to tackle the most vexing environmental challenges, of course; rather, as a practical measure, the GEF would benefit from structuring its risk portfolio around both (1) the degree of difficulty of the environmental problem its projects are addressing; and (2) the likelihood that the design, implementation, and political support of individual projects is such that they can meet their stated objectives. Learning how to do this will also set an example for other major funders of environmental projects.

Principle/Lesson 2: Importance of establishing scope conditions

195. A truly scientific claim is one that connects mechanisms with limits—how inputs are connected to outcomes, and the conditions under which these outcomes can and cannot be expected. When making claims about the impacts and effectiveness of a given project, a learning organization must be able to articulate (1) how key aspects of the design, when faithfully implemented and robustly supported, generated the project's objectives; and (2) the factors (or combinations of factors) within and beyond the project that need to be in place for these outcomes to be expected elsewhere. A key guiding question for the GEF could be: Where

and for whom will this GEF project *not* work? GEF projects that have numerous complex components, and thus are likely to require adaptive rather than technical measures to correct emergent problems, will have narrower scope conditions than those that are primarily technical. The more complex but consequential the nature of the underlying environmental problem, the more precisely the scope conditions will need to be articulated so reasonable goals and expectations can be set. There will potentially be many hard trade-offs: broad scope conditions will enable more positive outcomes, but are possible because they are a response to less challenging and thus less consequential problems. Narrower scope conditions reduce the likelihood of widespread success, but the successes generated might be in response to highly challenging and consequential problems. Articulating clear scope conditions enables project objectives to be set in ways reflecting the specific type of challenges a given project is addressing—thereby reducing the risk of setting misguided targets and/or pursuing an excessively ambitious operational scope.

Principle/Lesson 3: Benchmarking expectations and time frames realistically: what outcomes should be reasonably expected and by when?

196. Two key criteria must inform discussions around expectations and time frames: (1) the nature or shape of the impact trajectory over which the project is expected to unfold under normal circumstances (as determined by insights from previous initiatives, related empirical evidence, and the experience of seasoned sectoral practitioners); and (2) the capability of the designated implementing apparatus—conditional on sufficient resources provided, authorization granted, and sustained political support—to deliver the stated project objectives. More complex problems and projects are likely to unfold along highly nonlinear impact trajectories—which includes the possibility that success may take many years to be empirically discernable, even with projects that are technically sound, faithfully implemented, and fully supported.

197. It also includes the likelihood that there will be high intra-project variation across space and groups: what works in some places for some people might not work for others elsewhere. Practically, this means articulating two theories of change: one that provides the normal arguments for how inputs will generate outputs and then outcomes; and another that benchmarks expectations regarding outcomes against a time frame and contextual characteristics. This helps ensure that project expectations are reasonable and that correct inferences are drawn from impact data. What this approach inherently struggles to do—but at least offers some guidance—is discern the difference between a project that is truly struggling and should be canceled or shut down or radically changed, and a project that is going just fine but will only bear fruit in the distant future. The GEF Secretariat and Agencies management and project leaders need to harness an array of data, experience, and expertise to reach defensible decisions.

Principle/Lessons 4: For complex interventions, design, scaling, and replication decisions must be informed by comprehensive contextual analysis

198. Even rigorous evidence from a single project in a particular place operating at a particular scale is insufficient for making scaling and replication decisions. Such evidence shows that an intervention *can* work, but not that it will work always and everywhere. Imputing the

likelihood that a demonstrably successful intervention might credibly work elsewhere or when scaled requires careful inquiry into the precise mechanisms and conditions of its initial implementation, and the extent to which they are present elsewhere. A learning organizational culture will be sensitive to the importance of such details and their role in enabling informed decisions in the face of inherent uncertainty. It bears repeating that this review finds that failing to heed this principle is one of the four debilitating sources of risk faced by GEF projects.

199. From a practical standpoint, two important extensions of this principle are that the GEF can (1) help partner organizations conduct their contextual analyses by curating a basic common structure for how these will be done—this will ensure there is a similar baseline standard against which key decisions can be made; and (2) prepare initial documents on the lessons emerging from common sectoral problems associated with its projects—for example, guidance on how previous projects responded when political support suddenly seemed to wane or a crucial leader departed, or sustained engagement was needed with indigenous communities, or an unforeseen decline in national macroeconomic conditions compromised the availability of domestic revenue to support the project.

Principle/Lesson 5: Monitoring should be regarded more as a learning tool and less as a compliance instrument

200. Learning organizations not only have access to reliable real-time data on the everyday aspects of their implementation systems, but corresponding knowledge among their senior leaders as to what these data *mean*—how they should be interpreted—and thus what should be done, if anything. What data mean is not self-evident; data must always be interpreted in the light of a theory. That said, solid monitoring data, especially for complex interventions, provide a basis on which to learn by doing. Precisely because solutions to the most vexing challenges can only be discovered by local experimentation, carefully curated monitoring data enable different approaches to be taken, and the most promising of these to be identified. If such data are only collected to ensure that rules are being followed, the data only enable the status quo to be maintained and not hard problems to be solved by new innovative advances.

201. Not all of the vital information needed to inform key decisions may be available as clean data. If political support appears to be waning for a project, for example, this might initially be manifested in low attendance at key meetings; a sudden crisis elsewhere across the government might lead to attention being diverted elsewhere. This kind of information cannot be tracked, but such moments need to be documented nonetheless, along with the solicitation of regular feedback from those closest to the key political decision-makers.[34] More broadly, this point strongly implies that both qualitative and quantitative monitoring data are needed to help leaders navigate the complex and shifting terrain on which many environmental projects exist.

202. A related point is that the integrity and provenance of the data used to create performance metrics must be transparently upheld. The legitimacy of the entire M&E process—and thus the capacity of organizations to learn—rests on this.[35] Also, while reliance on data for decision-making might be entirely normal for well-educated project administrators, it can be

[34] As one interviewee noted, "Information sharing isn't knowledge management."
[35] See, for example, Jerven (2013) on the manipulation of macroeconomic statistics data in Africa.

completely alien to groups that apprehend the world, and especially nature, through a different epistemological lens. The knowledge of indigenous peoples regarding optimal water management practices, for example, and the types of claims on which such knowledge rests, may initially appear very difficult to reconcile with the types of knowledge claims made by professional hydrologists. Such situations will require not only the admission of fundamentally different kinds of monitoring data into a common conversation, but the creation and protection of spaces infused with respect and trust to enable a shared and legitimate path forward to be found, especially when significant changes are deemed to be necessary to get a project back on track. In such moments, everyone will be learning—and will need to participate with an attitude of learning, not compliance.[36]

Principle/Lesson 6: Ambition and innovation are associated with a heightened likelihood of major breakthroughs—and serious disappointments

203. In the coming years, the GEF will continue to confront intensifying pressures to respond with ambition to the rising scale of climate and environmental challenges. Rising to these challenges will require bold and innovative responses, which may not always work, but can lead to the discovery of effective solutions. From a management perspective, the higher likelihood of disappointment—and the unwanted attention, political pushback, or reputational risks that goes with this disappointment—is a reason to make such decisions judiciously and strategically, with a clear focus on extracting usable lessons and learnings no matter the outcome. Offsetting these higher risks of failure might require countervailing investments in large but safer projects.

204. That a certain level of project failure is to be expected, even encouraged, as the price of success is well understood by everyone in the GEF partnership. Even so, the sheer magnitude of the environmental challenges confronting the world in the coming years, and the existential consequences for hundreds of millions of highly vulnerable people if those challenges are not substantively addressed, means that the GEF has a vital public pedagogy task to perform. It must help supporters, critics, funders, governments, and vulnerable people themselves understand the crucial difference between failure borne of mismanagement or indifference and failure that is the price of breakthrough success. To the extent that the GEF is one of the few global funders that can potentially embrace tough challenges for which the solutions require long-run horizons and experimentation, the partnership needs to teach the world how to support such challenges.

Principle/Lesson 7: It is imperative to ensure the robustness of the authorizing environment and the sustained support of key local leaders

205. Several cases stressed the often-underappreciated importance of ensuring that the necessary legal structures, administrative procedures, and direct political support are in place to support a proposed project—especially as it evolves over time, potentially changing its scale, scope, and design characteristics. Discerning where such gaps exist, and how supportable responses to them can be found, requires seasoned experience and contextual knowledge. Learning organizations are highly attuned to such matters; they prioritize solving them from the

[36] It was suggested during the study interviews that young indigenous people could potentially play important mediating roles in these processes, since they are more likely than their elders to have received some formal education while also being familiar with traditional knowledge.

beginning, knowing that initial enthusiasm for an otherwise promising project can quickly wane if extensive time and effort need to be allocated to fixing a legal constraint or established administrative procedure. Given the frequency with which such challenges emerge in all types of countries and sectors, the GEF can help its partners get ahead of such concerns by identifying lessons from those who have successfully addressed such challenges.

Principle/Lesson 8: Developing credible measures of the extent to which everyday problems—especially those that have been clearly identified and prioritized—are being solved, and how this was actually achieved is critical

206. Learning organizations are problem-solving organizations; they ultimately achieve their larger goals because they carefully anticipate problems and are able to promptly and effectively respond to unanticipated ones; many also have meticulous investigative teams assigned to explain precisely how and why failure occurred (e.g., the National Aeronautics and Space Administration). Outcome metrics and dashboards are useful, but they cannot identify where, how, and why specific problems emerged at a particular time and place, and they certainly cannot provide effective solutions to these problems.

207. Focusing on everyday process outcomes, on the other hand, and curating reliable measures to identity where and, how emergent problems were addressed, or not, during implementation, is a prioritized practice in learning organizations. Enhancing a given entity's capability to implement is fundamental to realizing project objectives. Such capability is learned through discerning how to collectively identify and prioritize problems, how to navigate the authorizing environment shaping policy response options, and creating protected space for experimenting with alternative solutions. The GEF can facilitate this learning and implementation capability among its partners and within itself by helping implementers be more intentional and strategic about how they engage with everyday problems. In this way, the GEF can generate influence at scale and not just operate at scale. Learning how to address everyday problems consistently well is the foundation on which more complex problems can then be more confidently and competently addressed.

Recommendation

208. The challenge for the GEF is to go beyond demonstrating that, for the most part, it can successfully deliver projects that meet their stated objectives: the higher order challenge is how it will continue to design and deliver effective responses to the deep challenges posed by environmental degradation. Learning to do so—consistently, reliably, at scale—should be the particular form of ambition it continues to embrace and realize. Learning from challenges—systematically and intentionally—should be further embraced by the GEF partnership at all levels. As a learning organization, the GEF partnership needs to explicitly recognize that solutions to the most complex challenges will only emerge through well-developed design and implementation processes.

209. This report recommends that while the GEF Secretariat operationalizes the recently approved GEF Knowledge Management and Learning Strategy in consultation with members of

the GEF partnership, it would be beneficial to reflect and apply the lessons/guiding principles relevant to the GEF, in the detailed action plans for knowledge and learning.

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ANNEX B. CLASSIFICATION OF RISKS/CHALLENGES AND ADAPTIVE MANAGEMENT MEASURES FOR PORTFOLIO REVIEW AND CASE STUDIES

I. Risks/Challenges to project performance

I.1. External risks/challenges outside of project control

- Political complications or changes (e.g., through elections or other changes in government)
- Low government ownership/commitment (including low priority of environmental projects in government agencies)
- Insufficient coordination/joint decision making across and within relevant government agencies
- Conflict and instability (armed conflicts, coup d'etat, riots, etc.)
- Economic shocks
- Natural disasters (including climate change-related)
- Pandemic and epidemics
- Other: please list and explain (text)

I.2. External risks/challenges within project control

- Policy and legal framework inadequate/insufficient for achieving project objectives (including weak business environment)
- Social/cultural challenges (including gender inequality). E.g.: (potential) disputes linked to ignoring traditional institutions or practices; or inequities increased by the project
- Stakeholder interests create complications/conflict (including government and non-governmental stakeholders, the latter could be: CSOs, private sector, communities, the public, other donors, etc.)
- Low capacity of government institutions
- Low capacity of non-governmental stakeholders (CSOs, private sector, urban or rural beneficiary communities)
- Lack of knowledge/awareness of the issue the project seeks to resolve or of possible solutions (among governmental and non-gov. stakeholders, and the public)
- Other: please list and explain (text)

1.3 Internal risks/challenges

- Problems addressed by the project not fully understood due to insufficient analysis at design
- Overambitious/unrealistic design (incl. weak logical links; many/complicated activities; project scope not compatible with financing/timeline/country capacity)
- Project tackles complex issues/transformational change/long-term objectives (results can only be achieved beyond project closure)
- Weakness of results framework /M&E (in measuring outcomes/outputs, indicators, data)

- Implementation delays (incl. due to financing issues and delays)
- Stakeholders insufficiently involved in design
- Inadequate government counterpart arrangements during implementation
- Non-governmental stakeholders (CSOs, private sector) insufficiently involved during implementation
    - Including: beneficiary communities insufficiently involved during implementation
- Coordination with other donors insufficient
- Poor oversight & and insufficient implementation capacity of GEF agency (including agency's high TTL /staff turnover or inadequate experience/skills)
- Inadequate institutional arrangements for project execution (e.g., inadequate selection of executing institutions (including sectors and levels)
- Week capacity of project implementation unit (PIU)/staff turnover or inadequate experience/skills in PIU
- Other: please list and explain (text)

II. Adaptive management measures and scaling up

II.1. Adaptive project design and implementation

- Project was specifically designed to allow flexibility/modifications if circumstances change
- Specific adaptative management methods used: scenario planning; other methods described in documents as adaptative management methods; applying adjustable/adaptive Theory of Change, results framework, and indicators
- M&E/results framework was used for risk management/adaptative management during implementation
- Adaptative management measures were applied following early warning signs during the first half of project implementation

II.2. Project restructuring and adjustment

- An activity/component was discontinued
- Design or activities were modified (without discontinuation of activities)
- Results frameworks/indicators were modified
- Financing was reallocated among components
- Project was extended
- Other adaptative management measures

II.3. Scaling up/post-completion

- Implementation of scaling up/replication has started
- Conditions for scaling up/replication were created (policy/institutional frameworks, financing, detailed plans)

ANNEX C. CASE STUDY (PROCESS TRACING) INSTRUMENTS: DOCUMENT REVIEW TEMPLATE

Approach: Document review should use the portfolio review template and project documents (including design stage, implementation, and evaluation documents) and aim at: (i) registering specific risks/challenges the project faced and the adaptative management measures used by the team to mitigate the risks/challenges (or missed opportunities to do so); and (ii) registering information from the documents that could explain the observed reaction to challenges (explain how and under what conditions the observed decisions were made and outcomes achieved, considering evolution of the project over time).

GEF ID, Project title, CEO endorsement/approval year, closure year, project size

I. Project information

Project objectives:

Components:

Key outcome indicators:

Project Type: failed or improved.

II. Data from project documents and portfolio review

a. **External challenges within and outside project's control**

Risks/Challenges	When noticed	Adaptative management measures applied in response	Missed opportunities to adapt	Barriers to achieving project outcomes lowered by closure? How?	Comments

b. **Internal challenges (project design and implementation)**

Risks/Challenges	When noticed	Adaptative management measures applied in response	Missed opportunities to adapt	Barriers to achieving project outcomes lowered by closure? How?	Comments

c. **Adaptive management measures (please describe the specifics or register if this was mentioned as a missed opportunity).**

- Was the project **specifically designed to allow flexibility/modifications** if circumstances change? Were **specific adaptive management methods part of the design**: scenario planning; adjustable/adaptive Theory of Change and results framework/indicators, etc.?
- Was **M&E/results framework used for adaptive management** during implementation?
- Were **early warning signs noticed and hence adaptive management measures applied**? When was it done (early in implementation, midterm, late, right before closure)?
- Were any of the **design or implementation adjustment measures used**, including: an activity/component was discontinued; design or activities were modified; results framework/indicators were modified; financing was reallocated among components; the project was extended; other?

d. **Scaling up/replication/post completion**: Did **scaling up/replication** start (or conditions for it developed)? Any other developments **post closure?**

III. Restructuring data for the interview protocol

a. **Causes of effects**. Which risks/challenges were critical factors of project performance? Were they noticed or missed at design? At mid-points of implementation? Did they cause poor performance at closure? Were adaptive management measures used?

b. **Explanation of mechanisms and processes by which the outcomes were obtained**: **from observed challenges/adaptive management measures to outcomes**. How did it happen that the challenges were addressed? Why were they missed or adaptive management measures not used? How related decisions were made? Were adaptive management measures possible? Which measures were effective, and which did not work?

c. **Lessons learned (overall**): What main lessons or recommendations could be derived for future projects in terms of managing risks of failure and adapting to challenges?

d. **Lesson learned (for the GEF**): How can the GEF better support adaptive management and provide a more flexible and adaptive environment?

ANNEX D. CASE STUDY (PROCESS TRACING) INSTRUMENTS: INTERVIEW TEMPLATE

1. **Introduction**

   - Describe the purpose of the evaluation and methods used (why the interviews are important).
   - Explain why the role the interviewee played during project design/implementation is important for the study (as TTL they designed reforms, made decisions about project adaptive management, directly observed what happened, learned lessons for the future; we need to understand their perspective, especially if it is not reflected in project documents).
   - Introduce the logic of the interview ("I will ask several questions, first about the risks and challenges the project faced, then about…, then…").

2. **Risks/Challenges and adaptive management questions**

   - In the form of a preliminary hypothesis, describe your understanding of "What this case is about (type of challenges faced, type of adaptive management measures/adjustment applied)". "**As I understand it, the project faced challenge(s) in achieving its outcomes. Here is our understanding of what happened (based on documents)**" [insert a summary of section III of the document review protocol]:
   - Ask the following: "**How would you characterize the risks/challenges the project faced, the ones that were critical for achieving the project objectives, and the adaptive management measures used?**"
   - Follow-up questions about:
     - Process tracing (time dimension: start, implementation, closure).
     - Sources of support and pressure/resistance when dealing with risks/challenges.
     - Team's decision making (how decisions were made and why).
     - Why did the measures fail to work? Why no measures were applied?
     - Correct measurements, including: good outcomes not measured, negative outcomes not measured (and opportunities to adjust were missed?), important long-term outcomes/transformational change not measured.
   - **Was the project transformational**? Had long-term or non-linear path to achieving objectives? What should be done differently to support such projects?
   - If there was a disconnect between your pre-interview hypotheses and the interviewee views, **try to triangulate the type of challenges this project faced**. Ask if this is how the interviewee sees it.

3. **Post-closure**

   - **If you have information about project outcomes post-closure, what were they? Was there further replication/scaling up post-closure?**

4. **Lessons learned**

   - "To summarize, I'd like to understand which lessons you find important. Let me put it this way: **If you had to manage this project over again, what would you do differently?** Would a different kind of adaptive management strategy—one that might not have been known at the time—would have made a positive and lasting difference? **What advice or tips would you give to a colleague who is about to start a similar project in similar circumstances**?

   - Were the lessons about challenges and mitigation/adaptive management measures used in any follow-up initiatives or elsewhere?

   - Based on this project experience, what lessons should the GEF partnership derive, how can the GEF support adaptive management and provide a more flexible and adaptive environment?

5. **Concluding question:**

   - "This was a challenging project, but you have accomplished __, ___, ____. Now that you went back to that time to share your experience with us, is there anything else in addition to what we have discussed that makes you **especially proud/satisfied with your work on that project**?"

ANNEX E. LIST OF PEOPLE INTERVIEWED

- Adamou Bouhari, Regional Task Manager, GEF Biodiversity/Land Degradation Unit, United Nations Environment Programme (UNEP)
- Alexandra Fischer, Regional Technical Advisor, Biodiversity and Ecosystem Services, United Nations Development Programme (UNDP)
- Alisi Rabukawaqa, Deputy Chair, Indigenous Peoples Advisory Group (IPAG)
- Chris Whaley, Senior Adviser to the Chair, Scientific and Technical Advisory Panel (STAP)
- Claude Gascon, Director of Strategy and Operations, GEF Secretariat
- Gabriel Jaramillo, Regional Technical Specialist on Ecosystems and Biodiversity, United Nations Development Programme (UNDP)
- Gang Qin, Senior Water Supply and Sanitation Specialist, World Bank
- Giovanni Reyes, Chair, Indigenous Peoples Advisory Group (IPAG)
- Gonzalo Oviedo, former member, Indigenous Peoples Advisory Group (IPAG)
- Ian Kissoon, Senior Director, Environmental and Social Management System, GEF/GCF Agencies, Conservation International (CI)
- Inga Podoroghin, Programme Specialist on Climate Change, Environment & Energy, United Nations Development Programme (UNDP)
- Jean-Claude Nguinguiri, Project Manager, Food and Agriculture Organization of the United Nations (UN FAO)
- Keti Chachibaia, Senior Technical Advisor on Climate Change Adaptation, United Nations Development Programme (UNDP)
- Khalid Cassam, Project Manager, Food and Agriculture Organization of the United Nations (UN FAO)
- Luana Lopez, Program Officer, United Nations Development Programme (UNDP)
- Ludmilla Diniz, Regional Technical Specialist on Climate Change Mitigation & Energy, United Nations Development Programme (UNDP)
- Mariana Simões, Regional Technical Specialist on Climate Change Adaptation, Nature Climate and Energy, United Nations Development Programme (UNDP)
- Maude VeyretPicot, Regional Lead for Africa and Near East, Food and Agriculture Organization of the United Nations (UN FAO)
- Mohamed Bakarr, Lead Environmental Specialist, GEF Secretariat
- Moses Massah, Program Specialist, United Nations Development Programme (UNDP)
- Rosina Bierbaum, Chair, Scientific and Technical Advisory Panel (STAP)
- Ruth Tiffer-Sotomayor, Senior Environmental Specialist, World Bank
- Sano Akhteruzzaman, Chairperson, GEF CSO Network
- Silvia Pana-Carp, Programme Analyst, United Nations Development Programme (UNDP)
- Sunday Leonard, Head of Secretariat, Scientific and Technical Advisory Panel (STAP)

- Xin Shen, Senior Project Officer (Natural Resources and Agriculture), Portfolio Management Unit, Asian Development Bank