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REAL-TIME MONITORING, EVALUATION, AND LEARNING (MEL) IN GEF-9: A JOINT INFORMATION NOTE FROM STAP AND THE IEO BASED ON FOUR CASE STUDIES

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STAP SCIENTIFIC AND TECHNICAL ADVISORY PANEL

An independent group of scientists that advises the Global Environment Facility

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Preface

Encouraged by the Global Environmental Facility (GEF) Council to collaborate on a joint paper, the Scientific and Technical Advisory Panel (STAP) and the Independent Evaluation Office (IEO) of the GEF decided that a paper on Monitoring, Evaluation, and Learning (MEL) would be a timely and appropriate topic. We are grateful to the Gordon and Betty Moore Foundation for providing a summary of their Conservation Markets Initiative (CMI), which was presented at the GEF-9 Technical Advisory Group Meeting in February 2025.

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1. Executive Summary

This document, developed in collaboration with the Global Environmental Facility (GEF)'s Scientific and Technical Advisory Panel (STAP), the Independent Evaluation Office (IEO) of the GEF, and the Gordon and Betty Moore Foundation, provides an overview of monitoring, evaluation, and learning (MEL) frameworks. By highlighting tested practices from the Conservation and Markets Initiative (CMI), the Global Wildlife Integrated Program (GWP), the Food Systems Land Use and Restoration Impact Program (FOLUR), and the Global Snow Leopard Recovery Program, this document identifies best practices, approaches, and lessons that contribute to improving—in real time—monitoring, evaluation and learning (MEL) in the GEF.

Designing programs and projects in concert with countries, GEF agencies, and civil society provides context and insights that enable improvement during implementation to produce durable Global Environmental Benefits. Drawing from GEF project documents, STAP documents, and IEO evaluations, this report builds on publications that have guided adaptive planning across GEF in earlier phases. It also provides case examples beginning in Sections 3 to 6 that demonstrate practices on MEL, and lessons resulting from the use of these systems.

The case studies in this report showcase experiences from around the world on adaptive management and learning. They demonstrate how countries embraced challenges and looked for opportunities to adapt, occasionally driven by change at the organizational level, such as the GEF articulating knowledge management and learning (KM&L) policy or looking for opportunities for strengthening its monitoring and evaluation frameworks based on programming experiences across funding phases in FOLUR and GWP. The Gordon and Betty Moore Foundation similarly demonstrated how it instituted changes to infuse adaptive learning in its CMI program. The Snow Leopard Recovery Program demonstrated some of these same traits, looking for opportunities to continuously embrace adaptive learning to meet conservation outcomes.

Each case example carries meaningful takeaways that can contribute to the GEF's culture of adaptive management, ranging from the value of specific and context-based indicators identified through the theories of change to insights on how agencies and other partners adapt in real-time.

Given the pace of global change, the need to learn rapidly and continuously has become even more important to environmental stewardship and improved livelihoods. Lessons from projects implemented under different contexts of change, even just a few years ago, may not be as relevant under current circumstances. The uncertainty of change is real and learning in real time and is essential to avoid or reduce negative consequences and maladaptation.

Key takeaway points that emerged from the case examples, and which could inform the future of MEL in the GEF include:

Theory of change can be an important MEL tool

- The IEO's Learning from Challenges study[1] reinforces the value of developing and relying on a theory of change for adaptive management. Many of the project trajectories are nonlinear, and projects may only demonstrate durable Global Environmental Benefits (GEBs) and transformational change beyond the mid-term evaluation or possibly decades after the project has been completed. This nonlinearity and observation of change can be captured in the impact trajectories of a theory of change.
- Programs varied in the degree of specificity in articulating their assumptions, which influenced the degree to which they could test them as part of monitoring and evaluation. The CMI team reviews its theory of change annually, which influences priority grantmaking for the following year. However, it is unclear to what extent FOLUR and the GWP use the global knowledge (coordination) platform's theory of change for monitoring and learning.
- A theory of change can complement indicators, or metrics, by showing what and how change occurs. This is important given the complex socioecological nature of the projects in FOLUR and GWP, where the impact of interventions to address unwanted change or contribute to long-term transformation may not be captured by tracking core indicators throughout the project cycle.
- As the CMI case study shows, the theory of change theory of change is used to identify and track indicators along the impact pathways connecting the three initiatives, seafood, agriculture, and financial markets, into one theory of change; thus, allowing it to assess trade-offs and leakages, characterizing globally traded agricultural and seafood commodities. This is different in FOLUR and the GWP, where all the projects are selected at the beginning of each funding cycle; thus, the monitoring and evaluation framework (developed later, including 1-2 years after the program is approved) is not intended to inform tradeoff discussions or decisions.
- For CMI, articulating clear and agreed initiative/program goals and a theory of change has guided project/grant selection to maximize the return on investment to achieve desired outcomes. For example, the CMI's theory of change is used to gauge and monitor time lags between deploying funding, changes in market conditions, and conservation outcomes (see Table 1).

[1] IEO (2024c).

A strong and iterative KM&L Strategy is necessary

- Articulating a KM&L Strategy is an important step the GEF has taken to cultivate learning and adaptive management in projects and programs and across its systems and procedures to advance its mission of achieving GEBs. However, achieving a KM&L culture comes with challenges. Learning must be seen as a strategic benefit for both global environmental outcomes and local benefits (prerequisite co-benefits are essential)[2] and less as a mandatory component in projects and programs, which could diminish its effectiveness. Cultivating incentives and practices (raised in the CMI and FOLUR) that encourage reporting of lessons and failures in real time creates value-added opportunities for the GEF and, above all, for its project beneficiaries.
- STAP and IEO actively promote the GEF to continue strengthening knowledge management, monitoring, and learning in the design and implementation of projects. Implementing these actions will further enable the GEF to systematically gather knowledge through evidence-based practices, such as considering what works, how, why, and under what circumstances[3]. The IEO also stresses the importance of institutionalizing learning, including from past failures. The IEO's summary highlights that GEF-8 recommends "increased candor" in internal monitoring reports to better embrace learning. Adopting real-time learning is increasingly emphasized as a strategy by STAP and the IEO.

  As stated by STAP in its GEF-9 perspective, "…knowledge management and learning systems should be open and networked. The GEF's opportunity to accelerate transformational change lies in part in its ability to share knowledge and learning beyond its investment portfolio with others pursuing similar change pathways. The GEF should also be contributing to learning networks, including those sponsored by philanthropic foundations focusing on innovation and systems change. Bringing GEF agencies and country partners into more frequent and focused conversations with innovators in philanthropy, government, civil society, and the private sector—combined with structured practices to deliberate on progress—could help accelerate learning, adaptation, and exchange of experience in ways that are relatively low cost yet high impact."[4]

Annual and midterm reviews help with adaptive management

- Having frequent reviews of how well the TOC is working is important. Programs conduct regular reviews, using their MEL systems to understand if they are making progress on program-level outcomes (i.e. meeting expected targets). In each case, there has been or will

[2] Stafford Smith and Metternich (2022). Pre-requisite co-benefits are essential to achieving durable GEBs, such as improved health and increased income
[3] IEO (2025).
[4] Bierbaum et al.(2024).

be a mid-term, or terminal evaluation. In the case of CMI, there is also a monitoring system assessment and an expert panel that provides an assessment of the contribution of each strategy to the expected outcomes. The Snow Leopard Recover Program, FOLUR, and GWP learned the need to remain flexible and adaptive to changes with COVID. The Snow Leopard Recovery Program pivoted quickly to continue holding the periodic Steering Committee Meeting using an online platform in place of in-person meetings.

- In addition to midcourse actions, the GWP (implemented across GEF funding cycles from GEF-6 to GEF-8) demonstrated that embracing learning across GEF phases presents important opportunities for strengthening MEL systems. STAP found similar findings through its work on Nature-based Solutions and the GEF. The study showed that projects based their strong adaptive learning on lessons learned from previous GEF interventions.
- In the case of FOLUR and GWP, the monitoring and evaluation frameworks are established after the program design. For FOLUR, the MEL system was developed two years after the program's implementation to properly assess how evaluation mechanisms and indicators should be developed relevant to the context. The GWP (developed in GEF-8) is working on developing its MEL system.

Policy coherence

- Given the length of the programs (e.g., FOLUR at seven years and the CMI), adaptive management was foreseen.[5] However, the nature of the FOLUR and CMI programs—dealing with global commodities and markets that are susceptible to policy changes and market disruptions (e.g., COVID and even the European Union Deforestation Regulation mentioned by the World Bank for FOLUR)—influenced the programs' adaptive management. Thinking carefully about "possible future narratives" can help anticipate the impacts of potential changes.

Scaling learning will be key to effecting transformational change

- To scale impact, FOLUR and GWP rely on global knowledge (coordination) platforms that oversee monitoring and evaluation horizontally across target areas, and vertically, across governance levels (local to national), to support the program's GEBs goal. Identifying learning questions, or hypotheses that emerge from key assumptions, in the global coordination platform's theory of change can help assess adaptive learning needs and opportunities, which are important to scale, innovate, and transform.
- The implicit assumption is that scaling learning will occur through engagement with partners via communities of practice, platforms, and other forms of knowledge networks that seek to

[5] For example, FOLUR and GWP established communities of practice, or communication platforms, between countries for knowledge exchange and adaptive learning.

incentivize broader adoptions of practices or outcomes. Being explicit in the theory of change at the design stage about how learning will occur and be scaled in projects and programs can help identify and address barriers to foster learning. As mentioned above, learning questions, based on key assumptions, can be defined when designing the project and developing the theory of change.

Challenges with monitoring complexity

- The mid-term reviews for several GWP country projects indicate challenges with country project indicators related to complexity and measurability. The complexity of some indicators made it challenging for countries to determine what to measure. In other cases, indicators were chosen that lacked any baseline information, making it essentially impossible to measure change. In general, some indicators are not clearly described or measured regularly; thus, making it challenging to inform decision-making or adaptive management.

Table 1 below summarizes key input for GEF-9 based on the takeaway messages.

Table 1: Input for GEF-9

Input for GEF-9
1. The thrust of the GEF as a catalytic organization is dependent on leveraging knowledge across the partnership and making it a central feature of its operations. To effectively meet this goal, the GEF is encouraged to continue emphasizing systematic, evidence-based learning, collaborating with broader networks, and fostering a culture of reflection. 2. As the GEF enhances its knowledge broker role in GEF-9 and its efforts on data-driven decisions, particularly for the Integrated Programs, the GEF is encouraged to define learning questions and set up robust MEL systems that capture the wealth of tacit knowledge overlooked by routine indicators. 3. It is advisable that the GEF consider strengthening regional and thematic platforms for learning and sharing best practices, including across the Integrated Programs. This will improve knowledge management and the replication of successful practices that can be tailored to diverse contexts. 4. Adaptive management, as discussed in the case examples in greater detail, is essential in achieving the goals of the GEF. As indicated in the Draft GEF-9 programming document, adaptive management focuses on integrating across focal areas and the multilateral conventions, enhancing country planning, monitoring, and reporting. Through adaptive planning, it is not only relevant in improving outcomes but also to open flexible platforms for private sector funding and joint investments, just as with the Global Climate Fund, other philanthropies, for more frequent Multi Fund Projects. 5. In support of GEF-9 efforts on policy coherence, the GEF will continue to strengthen national level planning by working across ministries. This includes assisting countries to deal with changes, notably market policies having global impacts. Potential activities include acting on opportunities presented by policy reforms to better support countries in reaching GEBs and sustainable development goals.[6] 6. Identifying indicators that can track the progress of various scaling processes will be necessary. Transformational change usually takes time, and, hence, an array of indicators that can track this progress, or lack thereof, will be necessary in GEF-9 to inform an investment (i.e. related to risk appetite) to be adaptive and to learn rapidly about the scaling logic.[7]

[6] Stafford Smith and Metternicht (2022).
[7] Stafford Smith, et al., (2022).

2. Introduction

Durable impact requires integrated, system-based solutions grounded in evidence, resulting from good monitoring and the ability to learn in real time. Carlos Manuel Rodriguez, Chief Executive Officer and Chairperson of the Global Environment Facility (GEF), captured this ambition in June 2024 when he reflected on how the GEF could improve monitoring and learning: "We need to improve continuous monitoring of results throughout the project and program life cycle."[8] He also acknowledged that uptake of learning and results often occurs after the project and program life cycles, stating: "There is a need to improve mid-term evaluations and continuous learning of results *during* project and program implementation."[9]

Monitoring evaluation and learning (MEL) is essential to the GEF for systematic reporting of progress and results across the five environmental sectors (biodiversity, climate change mitigation, international waters, land degradation, and chemicals and waste management[10]). Adequate monitoring frameworks must be put in place to monitor how projects impact individuals and ensure that project objectives are translated into implementable and effective practices that directly improve the livelihoods of target groups, namely, Indigenous Peoples and broader civil society.

Over the years, the GEF has recognized the impact of knowledge management in overcoming environmental and programmatic challenges. The Independent Evaluation Office (IEO), which reviews and assesses the work of the GEF, has published a series of reports. This includes the IEO's 2022 Knowledge Management in the GEF Evaluation[11], and the IEO's Seventh Overall Performance Study[12] which has helped the GEF realize its potential in cultivating an internal learning culture. The most recent GEF performance evaluation (2022-2025) corroborates this and concludes by noting GEF's remarkable progress in results-based management. Data has shown that over 27% of underperforming projects have made remarkable progress in continuous learning and adaptive management, improving the overall performance of projects[13], especially across targeted communities of Indigenous Peoples and civil society organizations.

One important step the GEF took was the development of its Knowledge Management and Learning (KM&L) Strategy[14], alongside the IEOs summary of evaluation. More recent advice from the IEO's summary of evaluation findings for GEF-8[15] continues to recognize areas for

[8] STAP expert convening for scientific advice on GEF strategy, 21-22 June 2024.
[9] Ditto.
[10] GEF(2024a).
[11] IEO (2022a).
[12] IEO (2022a).
[13] (IEO (2025).
[14] GEF (2023).
[15] IEO (2025).

improvement in the GEF's results-based monitoring and learning. This includes cultivating a practice whereby weaknesses or failures resulting from project interventions are embraced as learning opportunities through adaptive management. The IEO also deems relying on local contexts to design and implement projects instrumental in addressing persistent challenges, such as sociopolitical risks that require context-specific metrics to monitor and adapt to changing conditions. The Scientific and Technical Advisory Panel (STAP) of the GEF supports these IEO findings and routinely offers similar recommendations when it screens projects and programs.[16]

STAP drew attention early to learning and knowledge management in its 2018[17] paper highlighting that knowledge systems need to be integrated into the GEF's project cycle and considered an integral in the design language of programs STAP also has been consistent in describing a knowledge management approach as having strong connections to a theory of change, and that relying on a theory of change process is necessary to identify metrics, track change, and pursue adaptive management.

Subsequent advice[18] included key recommendations for embedding knowledge management systematically into the project cycle and considering it an essential part of the project design. STAP regards good MEL as a necessary element of successful systems change. Monitoring the impacts of projects—ideally with real data collection systems in place—is necessary for evaluating what works and what does not, and for learning from both mistakes and successes, to make the GEF transformational and its benefits durable. The IEO has reinforced this statement by recommending that the GEF institutionalize learning: "Learning should not be an incidental exercise but a deliberate component of project management. The GEF partnership needs to invest in real-time learning systems, contextual intelligence, and a culture of continuous adaptation."[19]

However, challenges persist. There can be disconnects between project reporting and reality on the ground. For example, projects are sometimes deemed satisfactory or receive higher ratings in internal reports[20] when the reality is different [21] [22] [23]. This suggests that more significant incentives are necessary to encourage candor about monitoring, reporting, and the actual evidence that emerges. In addition, final evaluations of projects and programs often come too late to influence the next batch of GEF programming. Effectively, the learning opportunities from

[16] STAP (2024a); STAP(2024b); Stafford Smith et al.(2021).
[17] Stocking (2018).
[18] Bierbaum and Cowie (2018).
[19] IEO (2025).
[20] For example, such as in the Project Implementation Reports (PIRs), which are a self-assessment tool used by GEF Agencies for reporting every year on project implementation status
[21] GEF (2024e).
[22] IEO(2024a).
[23] IEO and FAO (2024).

one project cycle that should be applied to the next are often delayed, causing challenges in adopting lessons learned across GEF programming phases, including in the GEF's Impact or Integrated Programs.[24]

This speaks to the need to improve monitoring of projects and programs under implementation to more robustly address their adaptive management and evaluation needs during implementation.[25] The current context emphasizes tacit knowledge as the basis for decisions, which could limit codifying or formalizing knowledge important for scaling and replication. It also indicates a need to strengthen learning in project design and implementation, as STAP indicates further below.

This paper aims to address a fundamental question: How can GEF-9 improve the integration of (early) learning from projects and programs to inform adaptive management and ultimately achieve its desired global environmental benefits (GEBs)?

In its GEF-9 perspective[26], STAP recommends fostering early and adaptive learning and networked knowledge management. As the GEF implements its GEF-9 strategy, it is essential that the GEF identify early lessons, enable rapid exchange, and support dynamic adaptive management in its projects and programs. This would include capturing lessons learned from successes and prevalent barriers, alongside identifying processes of the why, how, and context, with regard to being completed in a timely manner. [27] [28]

GEF-9 offers the opportunity to strengthen the implementation of knowledge management and learning systems across the GEF, fostering transparency, interoperability, open access, and networkability with other systems. STAP also sees opportunities for the GEF to instill and systematize learning as a culture at the institutional level and across projects and programs to improve its impact. The GEF's KM&L Strategy[29] reflects these efforts in its KM&L theory of change, which draws from STAP advice.[30]

[24] IEO (2024b).
[25] IEO(2024a); IEO and FAO (2024).
[26] Bierbaum, et al., (2024)
[27] Metternicht and Stafford Smith (2022).
[28] For past (legacy) projects, there may be opportunities to use new machine learning technologies, such as artificial intelligence, to harvest learning more effectively. The IEO recognized in its highlights of GEF8 evaluations the opportunities in using Artificial Intelligence for monitoring and learning, including analyzing large data sets that help identify trends relevant for tracking progress of global environmental outcomes.
[29] GEF (2023).
[30] (Metternicht and Stafford Smith (2022).

Risk is inherently part of the GEF business. The GEF recognizes this and emphasizes that transformation requires risk-taking to pursue innovation at scale, contributing to GEBs rapidly and durably. Achieving this requires a process of clear risk management practices that are intricately linked with innovation and adaptive management[31] as recently codified by the Council.

The IEO cited evidence in support of mitigating challenges and undesired risks during project design. In its "Learning from Challenges in GEF Projects" study, the IEO showed that when risks are addressed in the project design and adaptive management is applied during implementation, barriers to outcomes are reduced. Additionally, the study compared projects that integrated adaptive feedback in the project design and those that did not. The former type of projects mitigated significantly more risks because of adaptive management, thus enabling projects to deliver on objectives and increasing the chances of durable outcomes. A few practical examples of good MEL in GEF projects were described by STAP in its analysis of nature-based solutions, [32] The two cases in Textbox 1 (Philippines) and Textbox 2 (Paraguay) feature additional examples of what can occur when the trajectory of projects is adapted to incorporate indigenous and local knowledge.

Textbox 1. Inclusive and Adaptive Shifts for Lasting Impact in the Philippines

The GEF project (GEF ID 5826) **Strengthening National Systems to Improve Governance and Management of Indigenous Peoples and Local Communities Conserved Areas and Territories** offers a strong example of adaptive management in action. Initial challenges, such as the inconsistent participation of Indigenous groups and delayed progress, were addressed by timely midterm and terminal evaluations, which promoted a strategic shift in the project design. Adjustments identified in the midterm evaluation improved inclusivity, blended traditional scientific knowledge and strengthened local conservation efforts. By addressing the major challenges of policy gaps and institutional weakness, the project was successful in meeting its objective of strengthening conservation, protection, and management of Key Biodiversity Areas. The project offers valuable lessons on the impact of robust adaptive management mechanisms, which—when integrated adequately—can result in transforming early setbacks into long-term success (Galindo & David Jr., 2019).

[31] GEF (2024c).
[32] Examples of good MEL practices are described in Bierbaum (2020).

Innovation in the GEF comes from diverse sources, including recipient countries, Indigenous Peoples and local communities, civil society, GEF agencies, the GEF secretariat, STAP, IEO, private sector, and academia. While project proponents are explicitly asked about innovation in project and program templates, the extent to which this question is addressed varies greatly. Now that there is a more rigorous expectation that the innovative elements in project design will **be defined and evaluated, it should be** possible to identify "**big bets"** that are high risk but potentially very high reward.[33]

Textbox 2. Consequences of good monitoring and learning in the Atlantic Forest of Paraguay

The project in Paraguay (GEF ID 2690) gives a good example of integrating knowledge, monitoring, and learning feedback cycles within program design. Before the restructuring of the project, titled "**Improving the Conservation of Biodiversity in the Atlantic Forest of Eastern Paraguay**", the project lacked the necessary participation from Indigenous Peoples. Despite economic and societal incentives, key gaps in cultural understanding negatively impacted the meaningful participation of Indigenous communities and resulted in weak program performance. It was ultimately through evaluation and feedback mechanisms that cultural understanding was identified as a barrier to the success of the program. This finding resulted in a redesign of the program, which included the onboarding of an indigenous community expert. Adapting the program to the context resulted in achieving its primary outcomes, such as the creation of a large conservation corridor, which was only possible through the active participation of Indigenous communities, facilitated by the involvement of Indigenous community experts (IEO 2024b).

Given the complex and evolving nature of global environmental challenges, the GEF's ability to adaptively manage its programs and projects and deliver transformational impact hinges on implementing a robust, integrated approach to MEL. The GEF has made substantial strides in managing knowledge and learning in response to the IEO's recommendations and STAP's advice. Greater attention to articulating knowledge management and learning at the project design stage, and applying it throughout the project and program cycles, can help the GEF pursue timely application of monitoring and learning, thus enabling rapid and durable GEBs. Monitoring and learning can be the core engine driving the GEF's mission for transformational, scalable, and durable environmental benefits. Annex 5 summarizes key documents relevant to the concepts discussed above.

Below are four case examples from working with countries across the world. A template, with questions similar to those used by the Gordon and Betty Moore Foundation in their adaptive management approach, was applied in each case example to understand their MEL systems.

[33] GEF(2024c).

3. Case Example 1: Conservation and Markets Initiative, Gordon and Betty Moore Foundation[34]

The following case study describes the application of the approach to philanthropy to the Conservation and Markets Initiative (CMI), supported by the Gordon and Betty Moore Foundation. The CMI is focused on eliminating overfishing and ecosystem degradation resulting from global agricultural and seafood value chains.

Situation/Systems analysis

The Environmental Conservation Program of the Moore Foundation presented the original CMI to the board in May 2015. Based on an extensive literature review, consultation with experts and key stakeholders, and pilot grants, the CMI proposal presented a comprehensive systems analysis.

Key points describing the CMI system include:

- Food production for a growing and increasingly wealthy population is the main driver of ecosystem degradation across terrestrial and marine biomes.
- Feeding humanity in 2050, when the world's population is expected to be between 9 and 10 billion, will require a 70% increase in global food production. On land, the projected production could result in the gross expansion of two to four million square km of agricultural land by 2030 and four to seven million by 2050.
- This projected production would come mostly at the expense of tropical forests and savannas, their irreplaceable biodiversity, and the provision of ecosystem services. In the sea, the projections are equally concerning.
- Today, 85% of the world's fish stocks are fully exploited or in decline. Given current trends, most of the world's food fisheries could collapse by 2050.
- Food production systems continue to be largely subsidized by the destruction and degradation of natural ecosystems without regard to long-term impact.
- The conditions for market-driven impact are suitable when environmental performance commitments are explicitly delineated. This allows for accountability and relatively straightforward implementation by supply chain actors.
- Effective implementation of the responsible-sourcing commitments from the major buyers is being slowed by: (a) lack of clear procurement standard; (b) limited accountability for buyers to implement their commitments and to take responsibility for helping to remove barriers to implementation in their supply chains; (c) weak financial incentives for producers to comply with standards; and (d) lack of a regulatory and policy enforcement.

[34] Authored by the Gordon and Betty Moore Foundation.

The CMI team regularly updates its system analysis to stay current on developments influencing conservation and markets and ensure the highest-impact commodity sectors are targeted.

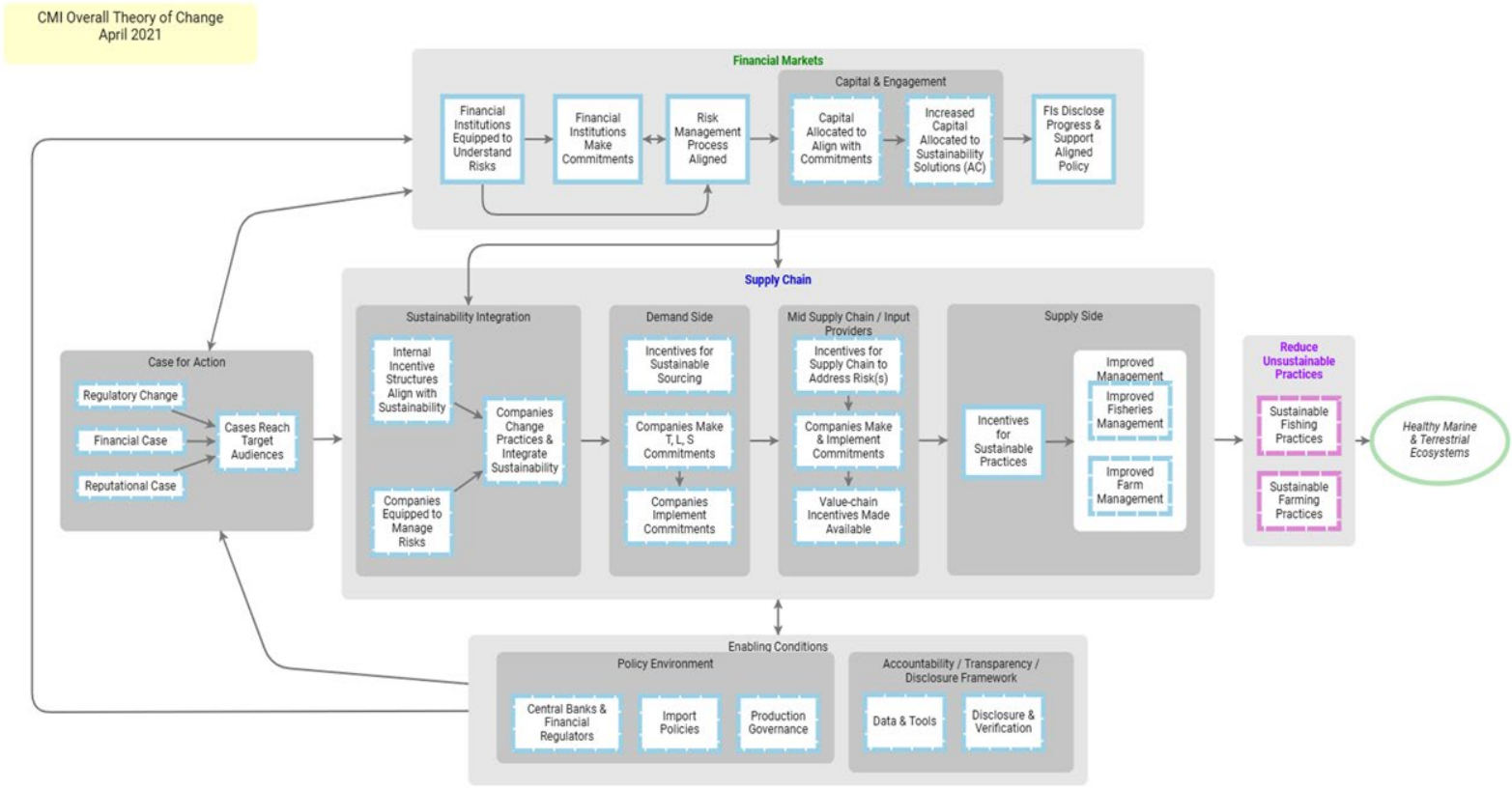
Program goals and theory of change

The CMI's program-level desired outcome is described as: By 2026, a critical mass of market actors responsible for production, distribution and financing of the highest-forest/conversion-risk commodities and top-traded seafood commodities delink their operations and investments from ecosystem degradation.

The goals supporting this outcome include:

- Goal 1: 80% of the soy market and 50% of the beef market in the target region (i.e., Brazilian Amazon and Cerrado and the Chaco in Argentina and Paraguay) are delinked from habitat conversion.
- Goal 2: At least 50% of the global trade, by volume, of top-traded, high conservation concern seafood is delinked from habitat conversion and overfishing.
- Goal 3: Financial institutions that provide at least 50% of financing to supply chain actors engaged in production, sourcing, and end-sale of forest-risk, and traded seafood commodities implement credible no-conversion, no-overfishing commitments and at least a doubling in capital allocated in support of sustainable commodity supply chains.

Figure 1. Conservation Markets Initiative Overall Theory of Change



In 2016, the CMI was composed of three separate initiatives (programs) on agriculture, seafood and financial markets that operated with their own designated budgets, and minimal integration among the initiatives. Assessing tradeoffs between interventions across initiatives was thus impossible. No initiative had a clear and detailed theory of change, and this led to the misunderstanding of priorities among the Foundation's program officers and the grantees. Beginning with the most difficult to manage focal area, Seafood, the program director led an effort to develop a more detailed.

Once the seafood theory of change was finalized, the program director used it to incorporate relevant features from the other two initiatives—agriculture and finance. This led to the CMI team producing a unified theory of change (Figure 1), thus allowing it to think, plan, execute, monitor, evaluate, and learn across all three components, resulting in a single initiative.

CMI has modified its theory of change in 2017 and again in 2020. It first added targeted domestic policy measures around forest code implementation (e.g. Environmental Rural Cadaster, CAR validation) and public credit reform. In 2020, a targeted international policy strategy was added

to level the playing field for companies, e.g., the European Union due diligence law, China green value chains, or the Port State Measure Agreement. Both adjustments reflected the reality that companies operate within a regulatory system and thus respond to policy adjustments. Moreover, CMI data showed progress at the individual company level but also that sector-wide agreements were difficult to achieve. Trade-related policies, especially import requirements, can help level the playing field. At the same time, policies can be more easily formulated if good corporate practices already demonstrate the feasibility of implementation.

The team reviews the theory of change annually, considering how performance stacks up against targets (as measured by initiative indicators). This then influences priority grantmaking for the following year. In other words, what is continuously changing is the weight placed on different elements based on the team's updated systems analysis described above and what it has learned from analyzing data in its monitoring and evaluation system.

Project identification

The CMI initiative selected grants (similar to GEF's projects) based on their potential to maximize the initiative's goals by contributing to outcomes along the initiative's theory of change. Each grant might contribute to a subset of the intermediate and/or ultimate outcomes in the program theory of change. Annex 1 shows the links between grants and initiative outcomes through their own theories of change. A grant can contribute directly to an intermediate outcome (blue box) or the ultimate outcome (green oval). In addition, multiple grants can contribute directly to a single initiative-level outcome.

In addition, each grant (project) description must articulate the specific contribution the grant is expected to make to program-level outcomes, explaining why this intervention was chosen over potential alternatives and which performance gap it is expected to fill. As the Foundation plans in relatively long funding cycles, the CMI team was able to make core grants at the beginning of CMI's inception and then, as it understood the system and the effects it could have over time, it made additional, targeted grants.

Monitoring, evaluation and learning[35]

Based on the Approach to Philanthropy, the CMI team was determined to base its monitoring and monitoring system on its theory of change. The initiative clearly defines the measurable contribution of each grant's outcomes to the initiative's goals using a shared MEL framework. Data are captured and analyzed in CMI's MEL system.

[35] The Gordon and Betty Moore Foundation terminology uses measurement. Refer to the Statement of the Funders' Intent.

The CMI's work is extremely dynamic. Unlike most other work implemented by the conservation community, it is handicapped by a lack of precedents, analysis, and knowledge regarding what market strategies and interventions work best to achieve conservation outcomes. Thus, the CMI must be particularly mindful to articulate and test assumptions rapidly and learn and adapt as quickly as possible. The work is dependent on systematic and continuous learning so that the CMI can direct funding most effectively in market-based conservation work.

The ability to manage adaptively is based on being clear about the problem, proposed solution, and the assumptions that lead from the solution to success. This process requires a clear theory of change, complemented with adequate monitoring indicators forming the basis of all monitoring, evaluation, and learning.

The theory of change is used to identify and stratify by audience core metrics that cut across all three portfolios (agriculture, finance, and seafood). These refined indicators, included in Table 2 below, help i) establish the linkages between investments and market changes; (ii) gauge and monitor time lags that exist between deploying funding and observing changes first in market conditions and in conservation outcomes; and iii) evaluate the impact of market changes on conservation outcomes.

Table 2. Indicators tracked by the Conservation Market Initiative

Agriculture/Seafood	Finance
• # and % market share of target companies that have made commitments in line with credible standard(s) • # and % market share of target companies that trace product back to point of production • # and % market share of target companies that publicly report progress • # and % market share of target companies that have secured reasonable assurance • # of target companies that integrate habitat conversion and overfishing factors into internal decision-making frameworks • # of target companies that have incentive structures aligned with sustainability • # of target companies that have alignment between material natural resource disclosures and material risks, in line with supplemental COSO Guidance on ESG-related Risks	• # and AUM of target FIs that have made commitments • # of target FIs that track risk exposure in portfolios that include target companies with exposure to habitat conversion and overfishing • # and AUM of target FIs that publicly report progress • # and AUM of target FIs that have secured reasonable assurance • $ and % of transition costs secured by FI and/or company

The MEL system is designed to support effective initiative management, and CMI uses it as a strategic tool throughout implementation. It enables continuous assessment of performance

against initiative-level outcomes and the intended market changes. Additionally, it informs trade-off discussions and decision-making, ensuring that choices are grounded in evidence. Finally, the stem helps place potential grants in the context of existing funded work, promoting alignment and coherence across the initiative.

An external evaluation of CMI indicated the extent to which the initiative has reached its goals and objectives. In summary, the evaluators concluded the following progress was achieved:

Goal I	**Goal II**	**Goal III**
80% of the soy market and 50% of the beef market in the target region (i.e., Brazilian Amazon and Cerrado, and the Chaco in Argentina and Paraguay) are delinked from habitat conversion	At least 50% of the global trade, by volume, of top-traded, high conservation concern seafood is delinked from habitat conversion and overfishing.	Financial institutions that provide at least 50% of financing to supply chain actors engaged in production, sourcing, and end-sale of forest-risk, and traded seafood commodities implement credible no-conversion, no-overfishing commitments and at least a doubling in capital allocated in support of sustainable commodity supply chains.
Goal I Progress	**Goal II Progress**	**Goal III Progress**
Significant progress has been made towards this goal: companies with a combined market share of 51% of soy and 28% of cattle in these regions are delinked from habitat conversion, while few if any met these criteria in 2017.	Significant progress has also been made towards this goal: 60% of shrimp exports from target regions and 41% of global tuna catch meet these criteria, while few if any met the criteria in 2017.	Significant progress has also been made here. Financial institutions providing 36% of financing to target companies meet these criteria, while few, if any, met them in 2017.

Because the initiative aims to reduce habitat loss and overfishing, the evaluation reviewed progress toward the goals and concluded there was strong evidence linking the observed reductions in market-driven pressure to lasting improvements in conservation outcomes.

Learning and adapting

The CMI team constantly takes stock and adapts based on what it learns from its M&E system and other sources of information. More formally, on an annual basis, the CMI team conducts a stock-taking/after-action review/pause-and-reflect exercise. Based on quantitative and qualitative data, the team analyzes what worked and what did not during the preceding year and adjusts its work based on what it has learned. The primary purpose of this review is to plan for the following year's grantmaking, making grants as early as possible in the fiscal year. For example, the most recent internal review revealed that performance on Goal 1 for the cattle sector was lagging behind other commodities. The primary reason was identified: leakage markets, both

domestic and international. This led to a substantial investment in the development of a catalytic capital fund to incentivize sustainable production, as well as doubling down on international trade policies.

4. Case Example 2: Food Systems, Land Use and Restoration Impact Program (FOLUR), GEF[36]

The Food Systems, Land Use and Restoration (FOLUR) Impact Program (IP) brings together twenty-seven countries seeking to transform food and land use systems to deliver global environmental benefits. The program, implemented by the World Bank in partnership with several GEF agencies[37], focuses on accelerating action in landscapes and along value chains for eight major commodities, including livestock, cocoa, coffee, maize, palm oil, rice, soy, and wheat. The program was approved in 2019 and will continue for seven years.

Situation/Systems analysis

The Program Framework Document (PFD) describes the problems and barriers the FOLUR IP seeks to address to achieve its goal.

Some of the problems and barriers described in the FOLUR IP include:

- The global food system is a major force shaping our landscape, biodiversity, and climate.
- The challenge of sustainable food and commodity production is compounded by a projected increase in global food demand.
- Agriculture accounts for nearly a quarter of global greenhouse gas (GHG) emissions.
- While agriculture contributes to climate change, it is also vulnerable to it.
- Most of the expansion of commodity production into forests is concentrated in the tropical rainforests of Latin America, Sub-Saharan Africa, and Southeast Asia.
- Forest loss and landscape degradation have root causes based on global economic forces (commodity supply chains), unsustainable practices, misaligned incentives, consumer awareness/ unresponsive markets, and a range of governance issues relating to policies, planning, institutional mandates, and inclusiveness.
- Unsustainable practices are common in many places where palm oil, beef, soy, cocoa, and coffee, and food products are produced and sourced.

Program goals and theory of change

[36] Sources used to write case study: FOLUR Programmatic Framework Document; FOLUR website and its resources; conversations with Christopher Brett (World Bank).
[37] GEF agencies involved in the implementation of FOLUR are the Food and Agriculture Organization of the United Nations (FAO), and the United Nations Development Programme (UNDP).

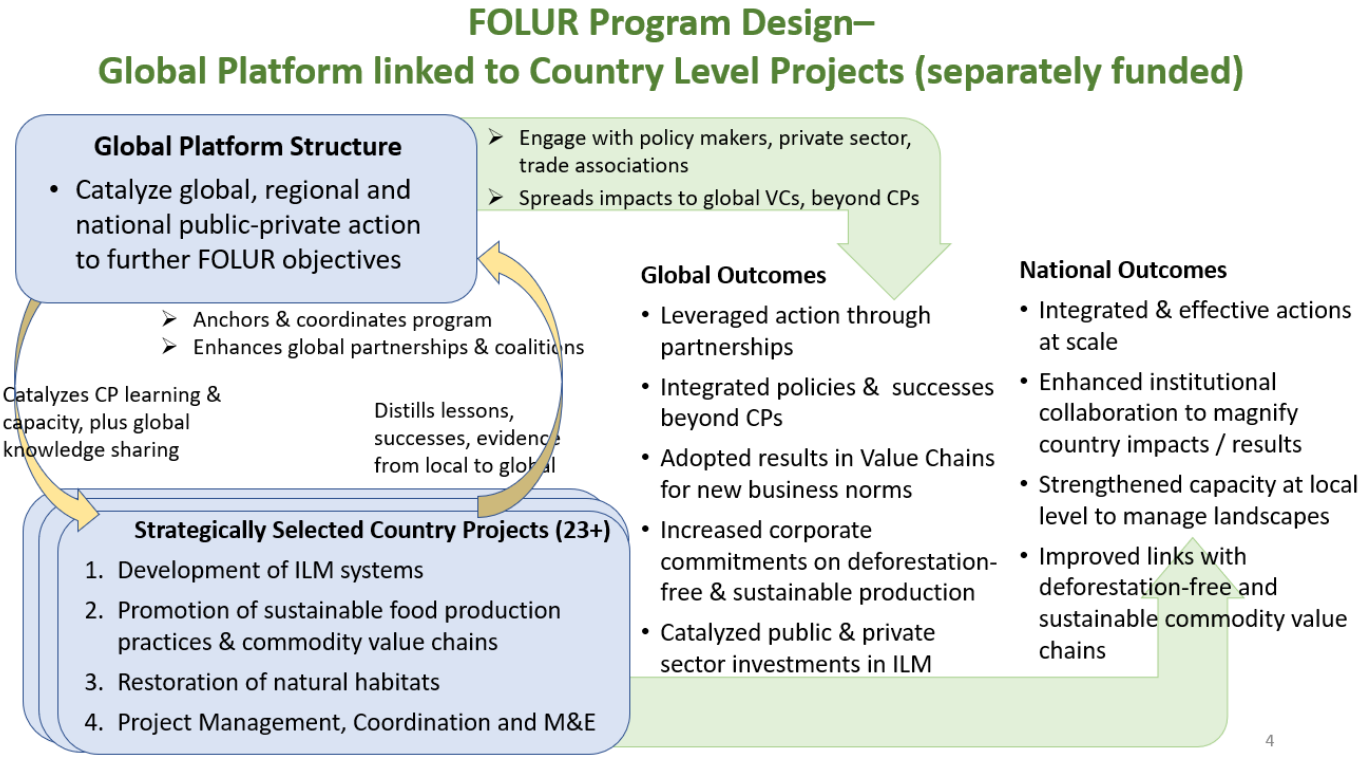
The FOLUR IP assists twenty-seven countries in integrating sustainable landscapes and food value chains (supply chains) at scale. The program supports sustainable food systems, deforestation-free commodity supply chains, and landscape restoration. Program activities focus on reducing the risk of deforestation, overexploitation of land and water resources, overuse of chemical fertilizers and pesticides, biodiversity loss, land degradation, and greenhouse gas emissions.

FOLUR IP's theory of change (Annex 2) can be described as: The program is designed to advance sustainable, integrated landscapes and efficient food supply chains. To achieve this goal, the program will catalyze action by bringing governments, companies, non-governmental organizations, and smallholders together into partnerships to achieve transformative improvements, targeting large-scale food production landscapes and commodity value chains. Four interlinked components will help drive these transformations: i) integrated landscape management; ii) sustainable food production and responsible commodity value chains; iii) restoration of natural habitats; and iv) a global knowledge platform. These actions and investments will be aimed at producing outputs—e.g., improved rules and practices for integrated landscape management and better protection of conservation areas. These outputs will then lead to desired shorter- and longer-term outcomes—e.g., landscapes with improved, sustainable approaches. These outcomes will advance more sustainable food systems, deforestation-free commodity supply chains, and large-scale restoration of degraded landscapes, while also reducing deforestation and negative externalities. These, in turn, will achieve biodiversity conservation, reduced or avoided greenhouse gas emissions, sustainable land management, and climate resilience.

Project identification

FOLUR IP's programmatic approach (described at length in the program document) explains the rationale for selecting country projects that target key landscapes and commodities. Projects were selected based on critical landscapes affected by global commodity value chains and restoration challenges that could be addressed to generate GEBs. The country projects were then integrated holistically through a Global Platform (Figure 2). The Global Platform integrates projects, partners, policies, and practices into the program. Currently, the FOLUR IP works closely with and brings together coalitions and partner organizations based on their comparative advantages for strategic value and impact. The implicit assumption is that partners will be learning, leveraging, and lifting the level of ambition and results, spreading through established platforms and knowledge networks to scale up, mainstream, and incentivize improved practices for better landscape-level outcomes and greener commodity supply chains.

Figure 2. FOLUR Intervention Structure



Monitoring, evaluation, and learning

The monitoring and evaluation framework for the global knowledge platform was developed after implementation started (at the end of year two). Project Implementation Reports for each country project provide the project objectives with the associated indicators. There are three types of indicators: core, intermediate, and outcome. For each indicator, the countries report a baseline, target, and progress toward the target. Countries also provide narrative descriptions, justifications, and evidence for their progress on each indicator. Each county's project data is uploaded to FOLUR IP's monitoring and evaluation framework. Progress toward the target for each country-level indicator is aggregated for the FOLUR IP-level indicator progress. In addition, staff from each of the country projects are interviewed twice a year by the communications specialist to capture storytelling about the program's impacts on communities, or issues not commonly reported in the monitoring and evaluation framework.

Learning and adapting

Given that FOLUR is a seven-year impact program, the GEF agencies recognized at the start of the global knowledge platform that, from the original design, changes would likely be required. For example, COVID had significant impacts on the national budgets, and this led to reduced funding by national governments in country projects. Another example is the introduction of the

European Union's Deforestation Regulation (EUDR) affecting five of the eight FOLUR IP's commodities; therefore, national production and procurement systems had to change. Also, direct dialogue between the public and private sectors was required to respond to operational requirements.

FOLUR supported country projects in adapting to these changes through the following mechanisms. However, it is important to note that it is too early to see GEBs emerging due to the delayed start of many country projects.

Communities of Practice: The GEF report, "Advancing Integrated Approaches to Tackle Commodity-Driven Deforestation"[38], states, "Communities of Practice are effective channels for engaging stakeholders, including the private sector, to shape collaborative solutions. Regional and commodity-focused Communities of Practice can bridge GEF programs across cycles and funding streams, contributing to program design and enhancing continuity." The communities of practice are managed by the United Nations Development Program's Food and Agricultural Commodity Systems (FACS) platform.

Learning missions: Learning missions are led by the GEF Secretariat and aim to gather lessons during project implementation rather than waiting until the end of the project and evaluating lessons learned. The GEF report, Advancing Integrated Approaches to Tackle Commodity-Driven Deforestation[39], states, "There are challenges in adopting lessons learned due to delays in integrating insights from one project cycle to the next. Learning missions can help speed up this exchange."

Global Commodity Dialogues coordinated through the global knowledge platform: These dialogues have been important for scaling learning, networking, and building operational relationships between the projects and the private sector. To date, dialogues have covered coffee, cocoa, rice, cereals, while palm oil, livestock, and soy (before end of 2025) are in the pipeline.

Mid-term review: A comprehensive mid-term review of the global knowledge platform and status of the country projects started in February 2025. This will be completed by June 2025 and will give the opportunity to refocus the overall program where needed and prioritize technical support activities for delayed country projects

[38] GEF (2024b).
[39] GEF (2024b).

Lessons learned

Co-Partners management model: As a key part of the program design, the World Bank, through the global knowledge platform, decided to follow a core partners contract model. The core partners[40] were specifically contracted to deliver a series of defined activities within the workplans to scale up the potential impact of the global knowledge platform. This was an innovative idea of the World Bank and not specified by GEF to ensure a systems approach and learning. Although it is yet to be proven if this is an effective approach to managing a large impact program, early indications are positive. Each partner brought different areas of knowledge, innovation, and important linkages to global stakeholders and country-level projects. Also, the overarching assumption is that knowledge generated from FOLUR can be connected to the direct beneficiaries of the global knowledge platform, and within the Core Partners to scale actions and impact. The influence of this approach should be formally assessed to inform future knowledge management and learning models of the GEF.

Lead agency responsibility to adaptively manage program: Adaptive management by the World Bank as the lead agency of FOLUR IP has been important. During the program, there have been changes to international markets (e.g., EUDR impacting five of the eight FOLUR commodities) and to governments, as well as reorganizations of ministries, agencies, and staff that have had direct impacts on country projects. Also, FOLUR IP has remained agile to support country projects' different needs. For example, projects operate at different 'speeds or stages within their cycle' and, therefore, the FOLUR IP needed to tailor the types and levels of technical services and support to each country project.

Coordination with country ministries: In some cases, FOLUR engagement in countries, especially in Latin America, has been delayed because of the need to coordinate among ministries. Clearly, FOLUR is relevant to both the agricultural and environmental ministries, among others. Therefore, policy coherence is key.

County projects engagement with private sector: Many country projects initially assumed that the private sector would readily engage in developing and implementing a public-private sector engagement structure. However, various country projects have reported that engagement with the private sector in creating these structures has been a key challenge[41].

[40] The core partners are Food and Agriculture Organization of the United Nations (FAO), United Nations Development Programme (UNDP) and the World Resources Institute (WRI) contract included World Business Council for Sustainable Development), Global Landscape Forum, and International Finance Cooperation,
[41] FOLUR's Latin America Regional Workshop (April 2025), countries reported engagement with the private sector has been a key challenge.

5. Case Example 3: Global Wildlife Program (GWP), GEF[42]

The Global Wildlife Program, implemented by the World Bank, is one of the largest global partnerships responding to declining wildlife worldwide. With financing from the GEF, the program targets 38 countries in Africa, Asia, and Latin American and the Caribbean.

Situation/systems analysis

The Global Wildlife Program (GWP) was initially approved by the GEF Council in 2015 for GEF-6 (2014-2018), with the World Bank as lead agency for A Global Partnership on Wildlife Conservation and Crime Prevention for Sustainable Development. The program was developed in response to eighteen declarations and pledges made by governments, intergovernmental organizations and non-governmental organizations between 2013-2014 to address illegal wildlife trade and improve wildlife management. Based on decades of research and experience, the program presented a baseline situation assessment, emphasizing declines of charismatic and threatened species, together with an analysis of the root causes of wildlife crime, particularly poaching and illegal trade.

The GWP continued through GEF-7 (2018-2022), as the "Global Wildlife Program", and now in GEF-8 (2022-2026), when it evolved into the "Wildlife Conservation for Development Integrated Program". Integrated Programs are a flagship GEF approach, emphasizing systems approaches to transformational change. The World Bank has remained the lead agency for GWP throughout all three phases, currently spanning a decade. For simplicity, and following the World Bank's naming convention, here we use GWP to refer to all three phases of the program.

The GWP updated its systems analysis before the beginning of each GEF cycle to reflect the changing context, new scientific literature (including the 2019 assessment of the Intergovernmental Panel on Biodiversity and Ecosystem Services), and lessons learned during each successive funding cycle.

Program objective and theory of change

The global program objectives and the theory of change have evolved from GEF-6 to GEF-8 to reflect a growing understanding of the underlying drivers and threats to wildlife conservation and interconnected interventions across multiple scales, from landscapes to nations, regions, and the globe, to catalyze systemic change.

In GEF-6, the overall, global program objective was to: "Promote wildlife conservation, wildlife crime prevention and sustainable development to reduce impacts to known threatened species from poaching and illegal trade" In GEF-7, this evolved to: "Conserve global biodiversity, improve

[42] Authored by Sandy Andelman (STAP).

livelihoods for local communities and enhance their resilience" For GEF-8, the objective of the Integrated Program is to: "Conserve wildlife and landscapes to maximize global environmental benefits and ensure that countries and communities are benefiting from these natural assets"

The GEF-8 theory of change (visualized in Annex 3 in greater detail) has four components: (1) coexistence of people and wildlife across connected landscapes; (2) illegal, unsustainable and high zoonotic risk wildlife use and trade; (3) wildlife for prosperity; and (4) coordination and knowledge exchange for transformational impact. The emphasis in GEF-8 has shifted, especially in comparison with GEF-6, to focus on systemic interventions that tackle the threats directly and address the many underlying drivers of these threats to achieve transformative change. It recognizes that interventions need to be planned and implemented in a coordinated way at national, regional, and global scales to transform both the way people coexist with wildlife on the ground and the global supply chains through which wildlife products are traded and trafficked. Without systemic interventions to achieve this transformation, the trajectory of wildlife loss and extinction of species will continue.

Project identification

The GEF's Management Response to the IEO Evaluation of the GWP [43] recognized that GWP grants are made to recipient countries based on both country interest and priorities, and on contributions to some or all of the global objectives. This information is reflected in the project proposals, along with a theory of change articulating how the country project aligns with the global program's overall logic chain. Across the three phases, 389 countries in Africa, Asia, and Latin America have received grants.

Monitoring, evaluation and learning

The GEF core indicators are standardized across all GEF projects and tied to the environmental conventions and funding sources. For example, funding for GWP comes from the GEF Trust Fund and the Least Developed Countries Fund (LDCF).[44] However, the GWP has additional, important indicators, based on the theory of change. For each phase of GWP, there is a single global monitoring and evaluation framework, with a set of program-level indicators for each phase, managed through a global coordination project. These indicators are selected by the lead agency, in consultation with the GWP Steering Committee, based on careful analysis of the theory of change. The lead agency receives a separate grant and is responsible for the program-level monitoring and evaluation. During GEF-6 and GEF-7, each country project defined its own results

[43] GEF (2024d).
[44] The LDCF was established under the UNFCCC to support climate change adaptation programs and projects.

framework and indicators. The lead agency reports progress annually to the GEF. All national projects also report progress annually to the GEF.

At the global-level, for GEF-7, there were initially 32 program-level indicators, nine each for Components 1 and 2; five for Component 3; three for Component 4; and six for Component 5. These include the standard, core GEF indicators. However, since each country project designed its own monitoring and evaluation framework, in 2021, the lead agency went through a process of systematically mapping each country project-level indicator to the global results framework. This resulted in 232 country project indicators mapped to the GWP global results framework, requiring four mapping iterations. However, despite this extensive mapping exercise, 25 child project indicators could not be mapped to the global framework for various reasons. As a result of this adaptive management process, some global-level indicators were revised with the aim of maximizing alignment.

This resulted in a set of global indicators (of which some are listed in Table 3) tracked by the GWP (in addition to GEF and LDCF core indicators):

Table 3: Some of the global indicators tracked by the GWP

Ecological and Conservation Outcomes	Enabling Conditions and System Strengthening
• Stabilization or increase in populations of, and area occupied by, wildlife program sites • Reduced threats to the ecological integrity of wildlife habitats • Reduced threats to wildlife from poaching and illegal activities • Strengthened Integrated Landscape Management to address threats and improve connectivity • Increased HWC (Human-Wildlife Conflict) Strategies and site interventions deployed • Improve enforcement, judicial, and prosecutorial institutional capacity to combat wildlife crime	• Strengthened institutional and technical capacity for protected area management • More inclusive governance and increased community engagement in the stewardship of wildlife habitats • Enhanced policy, legal, and regulatory frameworks to foster a wildlife-based economy • Strengthening the capacity of stakeholders to develop non-forest timber products and sustainable use activities • Diversified and resilient livelihoods to build community support for wildlife-based economy, coexistence, decreasing wildlife crime and illegal use of wildlife-based economy • Improved coordination among countries' donors, and other key stakeholders engaged in the implementation of the GWP • Improved knowledge sharing on wildlife conservation

Learning and adapting

The GWP results framework is evolving in GEF-8, because of experience during the previous two phases and in response to recommendations made by the IEO[45]. A significant improvement is that currently, the GWP GEF-8 Integrated Program is developing a single, integrated results framework that fully aligns the global program and the fifteen child country projects participating in GEF-8. Additional resources, as a percentage of project investments, are also being allocated for monitoring and evaluation. This new framework will be fully developed by August 2025. Several strategic approaches have been key to achieving this unified framework, reflecting both top-down and bottom-up strategies. Over time, there has been an increasing emphasis on bottom-up approaches and peer-to-peer learning, which inform the design of both the next phase of GWP and the design of the global coordination project (refer to Annex 4 for examples of mechanisms unifying countries in the program).

Lessons learned

One of the greatest challenges for the GWP in GEF-6 and GEF-7 was delivering country project implementation and outcomes in the absence of a unified MEL framework. This has been addressed for the GWP in GEF-8, which is developing a unified MEL framework (by August 2025) with clear linkages between country projects and global, program-level indicators. Country projects are now accountable for annual reporting, not only to the GEF but also to the lead agency and global coordination project.

One of the greatest challenges to GEF-6 and GEF-7 was delivering country project implementation and outcomes in the absence of the MTR.

Clear and measurable indicators: The mid-term reviews for several GEF-7 GWP country projects indicate challenges with country project indicators related to complexity and measurability. The complexity of some indicators made it challenging for countries to determine what to measure. A particularly relevant example for GWP of a theory of change with a linked MEL framework that enabled understanding of the value of a direct payments ecotourism program for reducing illegal wildlife hunting and trade in Laos is provided by Eshoo et al. (2018)[46].

Mid-term course corrections: Largely because of implementation challenges associated with COVID-19, several country projects were required to reprioritize, indicating the importance of mid-term reviews and adaptive management. Some were restructured based on unsatisfactory mid-term reviews. For example, a project was asked to simplify its objective by focusing on

[45] IEO (2024b).
[46] Eshoo et al. (2018).

strengthening forest capacity administration and forest co-management by Indigenous Peoples and local communities. Another project was extended by thirteen months because of COVID-19.

Collaboration among GEF Integrated Programs: GWP followed the GEF International Waters Program to adopt the country-to-country collaboration, which has proven to be very effective. The IEO report[47] points out further opportunities for collaboration among GEF IPs, e.g., between GWP and the Drylands Sustainable Landscapes IP on human-wildlife conflict, which is a common issue for several countries in both programs.

6. Case Example 4: Snow Leopard Recovery, Snow Leopard Trust[48]

The Global Snow Leopard and Ecosystems Protection Program (GSLEP) seeks to conserve snow leopards and their valuable high-mountain ecosystems in Asia. Through the GSLEP, the snow leopard range countries and partners agreed to effectively secure at least 20 key snow leopard landscapes, creating favorable ecological and social conditions as key indicators of conservation progress. Snow leopards are under threat (listed as vulnerable in the International Union for the Conservation of Nature (IUCN)'s Red List with a global population less than 10,000) due to illegal hunting, and habitat destruction.

Situation/Systems analysis

The systems analysis was a result of multiple processes, especially based on primary research. Over the years, scientists and conservationists have studied the species and the threats that snow leopards face. Research findings and collaborative efforts across countries led to the Bishkek Declaration on the Conservation of the Snow Leopard, which subsequently has informed interventions. Projects are informed by the National Snow Leopard and Ecosystem Priorities and Global Support Components, where the former identified country-wide threats, opportunities, risks, and financial needs, while the latter compiled issues that transcend international borders. The Global Support Components included issues such as engaging local communities in conservation, managing habitats and prey based upon monitoring and evaluation of populations and range areas, combating poaching and illegal trade, transboundary management and enforcement, engaging industry, building capacity and enhancing conservation, and building awareness. These were developed through a series of workshops bringing together government officials, and national and international experts, and are currently being revised.

[47] IEO (2024b).
[48] Authored by Koustubh Sharma, PhD, Director, Science and Conservation, Snow Leopard Trust.

A significant portion of the snow leopard population resides near international borders, and their large home ranges necessitate transboundary conservation efforts. The elusive nature of snow leopards and differences in policies and mandates between governments could further complicate the situation. Recognizing the potential of aligning biodiversity conservation with sustainable economic development provides a holistic option to achieve multiple environmental and social goals.

Program goals and theory of change

The **Bishkek Declaration** (in 2013 and 2017) laid the foundation for a global collaborative effort to ensure the long-term survival of snow leopards, and the health of their mountain ecosystems. The primary goal of GSLEP is to coordinate activities within and between range countries towards achieving the goals of the Bishkek Declaration. Following the steering committee meeting in Delhi in 2019, the goal of conserving snow leopards and their habitat was expanded beyond the original timeline of 2020. In 2024, countries have initiated a process to update the National Snow Leopard and Ecosystem Priorities and Global Support Components while also identifying synergies with other multilateral environmental agreements or commitments supported by the snow leopard countries. Snow leopard conservation generates significant GEBs and addresses multiple Sustainable Development Goals.

Project identification

The GSLEP has provided a framework for coordinated action towards biodiversity conservation, climate adaptation, transboundary cooperation, and ethical and respectful engagement with local communities as partners. Twelve countries endorsed the Bishkek Declaration and are part of the GSLEP. Environment ministers of these twelve countries (or their nominees) meet every 12-24 months as a steering committee where funding organizational partners serve as observer members. One of the key value additions of the GSLEP has been that of allowing countries to get access to cutting edge expertise, such as the Population Assessment of the World's Snow leopards (PAWS), which is one of the most statistically robust population assessment methods developed partially with GEF-5 regional grant support.

The country-level projects within the GSLEP framework were determined through discussions at the Ministerial Steering Committee Meeting. The GEBs for each country project are additive, contributing directly to the GSLEP and aligning with broader GEF programs, such as the FOLUR IP and Integrated Program of GEBs. These projects address specific national priorities while also addressing the Global Support Components that transcend across international borders.

Monitoring, evaluation and learning

The GSLEP utilizes a shared MEL framework to track the contribution of each country program to the overall program goals and GEBs, ensuring monitoring community engagement and benefits. Indicators are developed at both program and project levels to measure progress towards conservation outcomes and socio-economic improvements in local communities.

Specific indicators monitored by GSLEP include:

- **Population and Distribution of Snow Leopards**: This includes tracking the number of snow leopards and their geographical distribution using robust statistical models based on data collected using methods like camera traps, genetic analysis, and local ecological knowledge.
- **Habitat Quality and Extent**: Monitoring the quality and extent of snow leopard habitats, including factors like prey availability and habitat connectivity.
- **Human-Wildlife Conflict**: Tracking incidents of human-wildlife conflict, such as livestock depredation by snow leopards, and the effectiveness of mitigation measures.
- **Community Engagement and Livelihoods**: Assessing the level of community involvement in conservation activities and the impact of these activities on local livelihoods.
- **Policy and Institutional Support**: Evaluating the implementation and effectiveness of policies and institutional frameworks supporting snow leopard conservation.
- **Climate Change Impacts**: Monitoring the impacts of climate change on snow leopard habitats and prey species.

GSLEP work has led to the following outcomes:

- **Habitat Preservation**: GSLEP has played a crucial role in safeguarding and managing the ecosystems that snow leopards inhabit. This involves protecting critical landscapes and establishing conservation areas.
- **Cross-Border Collaboration**: The program unites twelve snow leopard range countries with the shared goal of protecting and preserving these majestic animals and their habitats. This collaborative approach has been essential in addressing the multifaceted challenges facing snow leopards and their habitats.
- **Climate Change Adaptation**: GSLEP has also focused on monitoring the impacts of climate change on snow leopard habitats, prey species and local communities, ensuring that conservation strategies are adaptive and resilient.

These outcomes are primarily a result of the following interventions:

- **Enhanced Monitoring and Evaluation**: GSLEP has improved the monitoring and evaluation of snow leopard populations and their habitats. This includes the development and implementation of standardized protocols for population monitoring, which ensure accurate data collection and analysis.

- **Community Engagement**: The program has successfully engaged local communities in conservation efforts ethically and respectfully. This includes offering education and sustainable livelihood options that reduce human-wildlife conflict.
- **Policy and Institutional Support**: GSLEP has strengthened policies and fostered international cooperation to address threats like illegal hunting and habitat fragmentation. This has led to the establishment of conservation areas and the promotion of sustainable land-use practices.
- **Scientific Research and Capacity Building**: The program has supported research, monitoring, and training programs to enhance understanding of snow leopard ecology and conservation strategies.

Countries 'share information' instead of providing 'reports' typically during the steering committee meetings where each country uses specific presentation templates focusing on long-standing targets (e.g. snow leopard population, number of communities engaged in conservation, funds raised, etc.), as well as short term targets (e.g., status of imbibing policy advisories released during a previous steering committee meeting into national policies). This approach ensures a high level of enthusiasm and proactive contributions that allow countries to showcase the work being done in each country. The country updates are later transformed into a document and shared publicly following a few rounds of reviews and edits from national focal points on the global snow leopard website as 'country updates'.

Learning and adapting

The GSLEP's emphasis on learning and adapting is crucial for the effective implementation of conservation initiatives. Periodic coordination events and technical sessions facilitate the sharing of experiences and best practices in ethical and respectful community engagement and conservation interventions. The program's proactive approach to developing policy advisories and conducting capacity-building initiatives reflects a commitment to continuous improvement based on monitoring data and the evolving needs of local communities and ecosystems.

As described above, steering committee meetings also provide the opportunity to collectively learn and adapt. Represented by ministers or their nominees, they take stock of activities undertaken during the previous period (one to two years since the last meeting) and identify future priorities in the short and long term.

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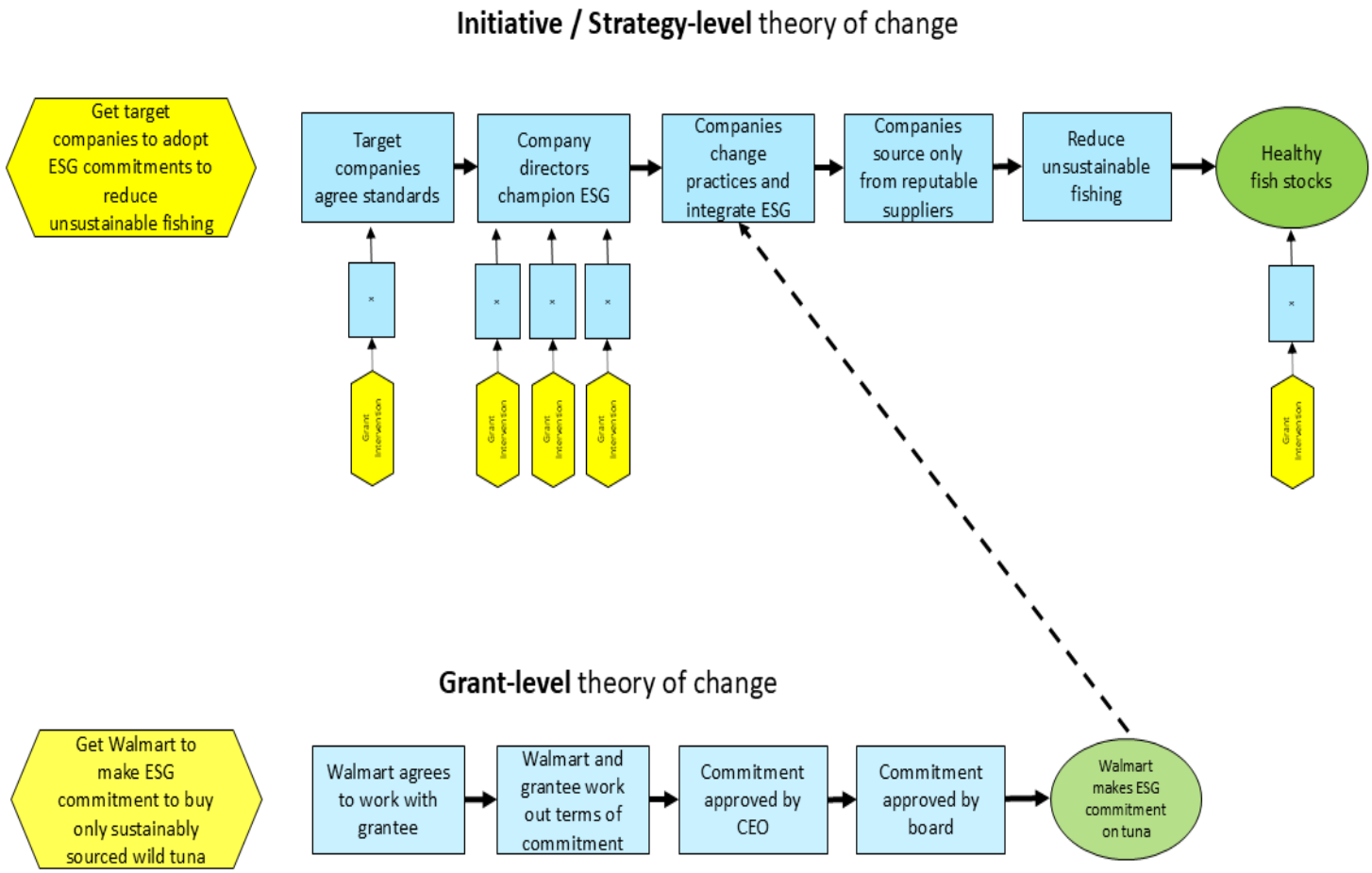
Annexes

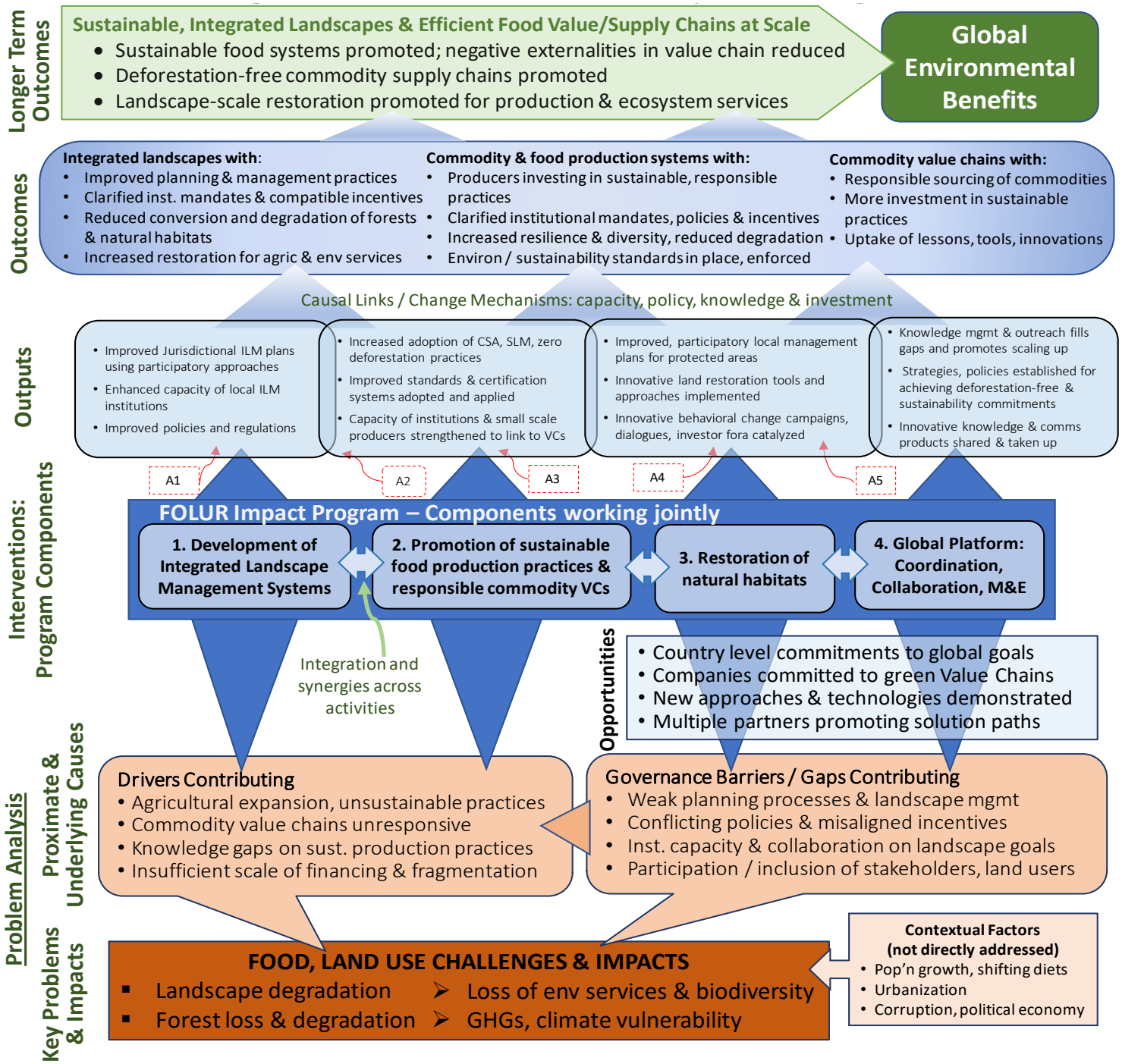
Annex 1: Conservation Markets Initiative: Strategy-level Theory of Change

Figure 3. Conservation Markets Initiative Strategy-level Theory of Change



Annex 2: Theory of Change for FOLUR IP

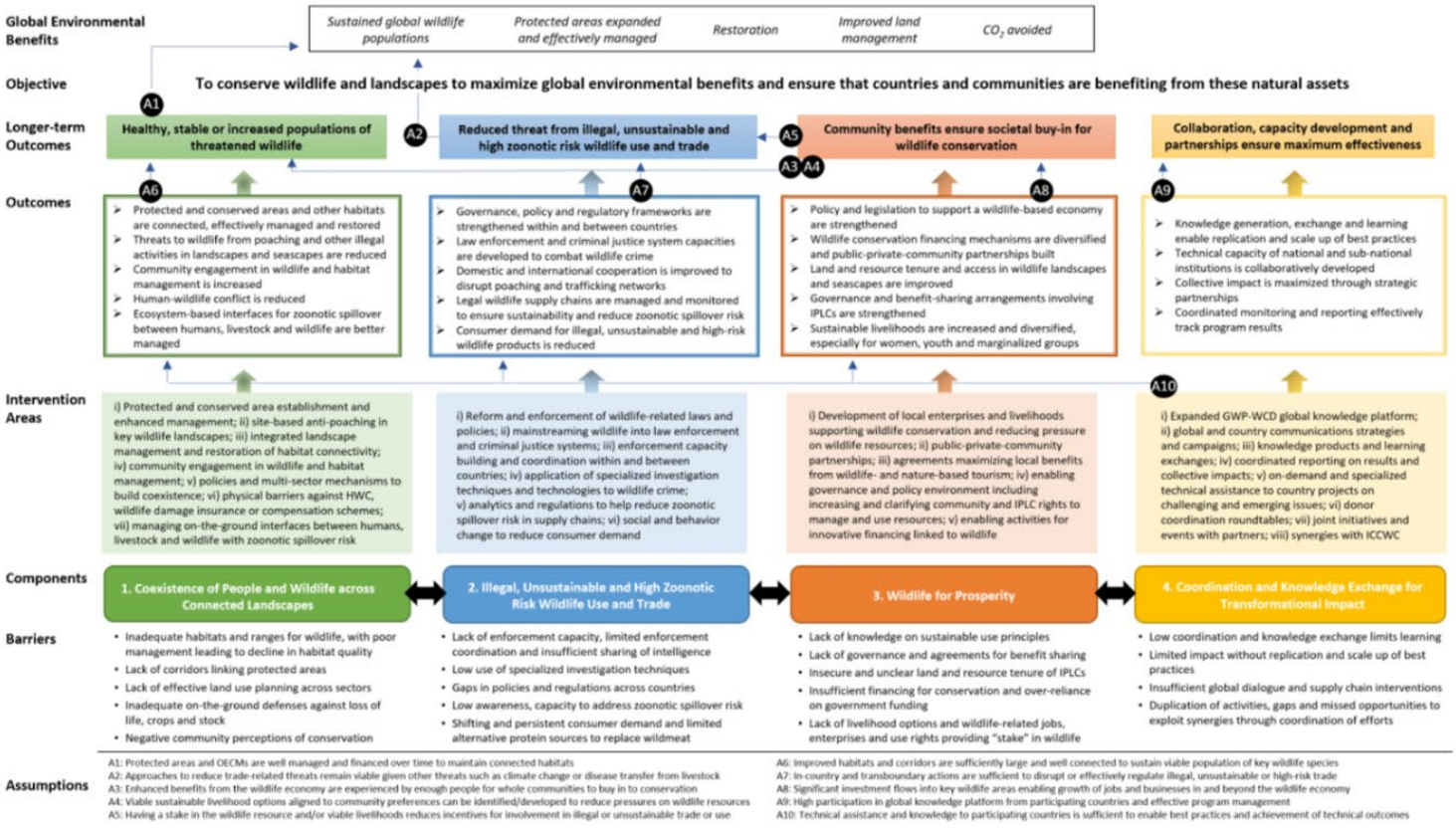
Figure 4. FOLUR IP TOC



Critical assumptions:
A1: Key ministries, agencies will have sufficient incentives to work together on ILM at jurisdictional and higher levels
A2: ILM plans can be implemented, leading to increased areas under improved practices and amount of land restored/conserved
A3: ILM + improved standards lower risk; more private sector actors invest in responsible commodity VCs, & adopt sustainable (climate smart) ag practices
A4: Improved policies & institutions incentivizing improved management of natural habitats increases area restored and protected & reduces GHG emissions
A5: Ownership/rights for natural habitats/forests are realized by local communities

Annex 3: Theory of Change for the Global Wildlife Integrated Program, GEF-8

Figure 5. Global Wildlife Integrated Program GEF-8 TOC



Annex 4: Key Mechanisms to Promote More Unified Approaches Among Country Projects in the Global Wildlife Integrated Program

Collaboration with International Consortium on Combatting Wildlife Crime (ICCWC): The Global Wildlife Integration Program (GWP) is collaborating with the ICCWC, whose mission is to strengthen criminal justice systems and provide coordinated support at the national, regional, and international levels to combat wildlife and forest crime. ICCW has developed an indicator framework, based on eight outcomes and fifty indicators, which combine both quantitative and qualitative metrics. Some indicators are more readily measured than others, however, the guidance document does a good job of providing examples of how the indicators can be measured. GWP is encouraging country projects to adopt ICCW indicators where useful.

Annual surveys: These provide an effective and efficient mechanism for information gathering. For example, in 2022, a survey of 254 GWP project stakeholders was conducted to prioritize knowledge needs for project management. Seventy-seven percent (77%) of participants rated knowledge needs for documenting and sharing lessons learned as very important; 72% rated monitoring and evaluation as very important and 50% rated adaptive management as very important.

Networking and collaboration: Inspired by twinning arrangements in the GEF International Waters Learning Exchange and Resource Network (IW:Learn), and other GEF platforms, the 2023 GWP annual conference piloted "twinning or triplet sessions" to promote peer to peer knowledge exchange and learning. Each set of countries self-selected to pair or form triplets with one or two other countries, for targeted exchanges during the meetings to identify commonalities, challenges and discuss solutions. Following the conference, some country groups established WhatsApp groups to continue these exchanges. Based on the success of these sessions, funding has been made available, on a competitive basis, for twinning visits. This is proving to be a very effective approach for deeper learning among countries and for knowledge creation.

Workshops and e-libraries. Based on bottom-up, country-driven demand and priorities (e.g., as determined through annual surveys) targeted workshops and e-libraries on key topics relevant to GWP are being created. Currently e-library topics include Countering Corruption In Wildlife Trade And Conservation, Behavior Change for Wildlife Conservation, Nature-Based Tourism Tools and Resources Collection, Conservation Technology and Ecological Corridors And Connectivity Resources Library.

Annex 5: Review of Relevant STAP and IEO Documents on Monitoring, Evaluation and Learning

The existing documents from STAP and the IEO have guided the GEF in applying adaptive management to ongoing program and project design and implementation. Through its advice on the Theory of Change, durability, sound project design, transformational change, and risk, STAP showcased pathways for enhancing project effectiveness in complex and evolving contexts. The IEO's findings and recommendations have equally strengthened the GEF to anticipate challenges and risks, foster innovation, and ensure durable environmental benefits over time by relying on evidence-driven approaches applied throughout the project cycle. Integrating knowledge management, evaluation, and learning creates an environment of responsive, accountable future planning to achieve global environmental change as covered by these documents.

Introducing a theory of change in GEF programs and projects, and its links to adaptive management

In the early stages of GEF-7 programming in 2019, STAP noted that when reviewing the Integrated Programs, and other projects in the work program, there were varying interpretations of what constituted a theory of change. To help those developing GEF projects, STAP developed a Theory of Change Primer[49]. The primer explains how to develop a theory of change, why and when to apply it, and how to assess the relevance of the theory of change to the project/program.

STAP has identified four reasons why developing a theory of change is strongly correlated with effective monitoring and adaptive management. These reasons include, but are not limited to:

- A theory of change enhances project design by providing a greater opportunity for reflective analysis of the project through causal pathways and incorporating stakeholders' diverse perspectives.
- A theory of change assists in developing a shared sense of intervention with partners and stakeholders.
- A theory of change is an effective communication tool centered around the project's aims and activities.
- A theory of change is necessary to identify adequate monitoring indicators of success, allowing for adaptive adjustment during the project and program's lifetime.

The IEO's Learning from Challenges study[50] reinforces STAP's views on the value of developing and relying on a theory of change for adaptive management. Many of the project trajectories will be nonlinear. They may only begin to demonstrate durable global environmental benefit outcomes and transformational change beyond the mid-term evaluation or possibly decades

[49] Stafford Smith (2020).
[50] IEO (2024b).

after the project has been completed. Thus, a theory of change will need to develop an impact trajectory that accounts for the fact that the desired change may not be visible at a project's midpoint. As the IEO notes, "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. That is, the project's objectives are not expected to be met at this point but are on track to emerge in due course."[51]

A robust theory of change is necessary to confidently assess whether an intervention aims to ensure a durable and transformative impact, both at the project or program level. This is increasingly important to the GEF, given that program interventions tackle complex social-ecological problems involving multi-level governance, which could fail based on oversimplistic assumptions that do not consider obstacles and enablers of change. Notably, a well-thought-out theory of change will establish monitoring of key assumptions and challenges to the project and set up learning. This consistent tracking of change should be complemented by insights and lessons captured in GEF evaluations, such as mid-term reviews and other reports.

Planning for enduring GEB outcomes by relying on MEL

On the heels of its advice on the theory of change, STAP provided the GEF with advice on durability. Its advisory document noted enduring impacts[52] must persist in the face of long-term external changes, such as economic downturns and climate change. Projects need to be designed to avoid or manage unintended consequences or risks. Iterative monitoring and learning are important in managing undesired or unwanted changes.

STAP also developed its advice on durability to improve the design of scaling interventions. The widespread assumption is that scaling and transformational change imply greater durability. However, this is not always true. It is important to scale both for systems change, i.e., broad impact, and for durability or long-term impact. Larger investments do not necessarily guarantee success. **Longevity must be integrated into the design of the program** for durability benefits to be realized.

For this reason, STAP points out that transformation needs to be embedded in planning from the outset. It may require additional financing after the initial GEF investment, more innovation, and additional stakeholders. Monitoring for transformation should also be considered during project design and throughout the project lifecycle. System change for transformation requires innovation, which occurs in diverse ways, including technological, financial, policy, competitive,

[51] IEO (2024b).
[52] Stafford Smith (2019).

and institutional avenues.[53] Greater innovation will likely result in higher failure rates, so rapid learning must be embedded in the project design. Additionally, because significant transformational change usually takes time, STAP consistently notes in its advice that it is essential to monitor progress through indicators on various scaling processes to facilitate adaptive investments and to learn rapidly about the success of scaling logic.[54]

Following STAP's work on durability, the GEF Council decided to establish longevity[55] as a standard practice across GEF operations. The decision recognizes that durability is intricately connected to the theory of change process that manages resilient, transformational, and enduring project outcomes, adapting to both predictable and unforeseen changes. Multistakeholder engagement, when built into project design and implementation, capitalizes on continuous and equitable engagement of stakeholders and showcases a process that is at the forefront, flexible, and iterative for MEL).

MEL is essential for risk management and achieving a high-risk appetite

Strong links also exist between MEL and pursuing a high-risk appetite. As the GEF's risk appetite framework[56] is rolled out, STAP took the opportunity to issue advice on risk[57] so that it is effectively dealt with at project design; thereby, helping to establish early monitoring and learning processes. In its advice, STAP argues that proposals need to delineate between:

- challenges that arise from drivers of change, such as institutional capacities, political instabilities, climate change trends, population, and market or economic trends or shocks (which should be addressed as part of the theory of change and designed into the project); and
- risks that could affect the project outcomes as designed (which should be addressed in the risk section of the project/program template, including those related to innovation).

A rapid cycle of learning and adaptive management is important for mitigation measures and addressing innovation risks. For example, if new technology is demonstrated to align with market-readiness successfully, monitoring the risks associated with scaling the technology (e.g., crowding-in investments and replication) will be the next critical step for the initial investment, or innovation, to be enduring. STAP's risk note[58] highlights other examples of technological innovation risks and the potential monitoring and learning needs.

[53] Toth (2018).
[54] Stafford Smith et al. (2022).
[55] GEF (2019).
[56] GEF (2024c).
[57] STAP(2024a).
[58] STAP(2024a).

The GEF knowledge management and learning strategy: MEL needs to be built systematically in projects

As the IEO noted in its summary of GEF-8 findings, the GEF is advancing as a knowledge management and learning institution. In 2023, the GEF articulated its Strategy on Knowledge Management and Learning,[59] which defined a structured approach to adaptive management. The theory of change for this strategy, rooted in STAP's advice[60]states that monitoring and learning are necessary to embrace innovation and change successfully. For example, merging top-down and bottom-up actions and efforts across GEF recipient countries requires constant experimentation and learning from collaborative and institutional approaches. Explicitly capturing knowledge generated and applying this learning iteratively as activities is necessary to ensure that projects capitalize on dynamic monitoring and learning.

Thus, to attain more rapid improvement in GEF's impact, STAP and the IEO support knowledge management, monitoring, and learning in the design and implementation of projects to systematically gather and apply evidence on what works, how, why, and under what circumstances. In addition, the IEO[61] stresses the importance of institutionalizing learning, including from past failures. The IEO's summary highlights that GEF-8 recommends increased candor in internal monitoring reports to better embrace learning.[62] The case studies highlighted in Textboxes 1 and 2 showcase the importance of shifting away from ad hoc adaptive management.

Enabling elements of good project design: A synthesis of STAP guidance for the GEF

STAP further guided the GEF on core elements that enable good project design[63]. Among the eight elements highlighted, STAP explicitly noted the necessity of developing explicit knowledge management systems into the program designs using monitoring and evaluation frameworks to facilitate knowledge platforms to improve upon past lessons, track innovation, integration, transformation, and progress on durability. STAP repeatedly highlighted that GEF needs to make explicit knowledge management plans with ample room for funding directed to high-quality knowledge management systems and sustainable databases. Ultimately, STAP noted early on that knowledge management and MEL must be integrated to take full advantage of innovation and use past examples to mitigate against risks to facilitate adaptation.

[59] GEF (2023).
[60] STAP (2024a).
[61] IEO(2025).
[62] IEO (2025).
[63] Stafford Smith et al. (2021).

Core principles

For integrated programs to deliver sustained value, STAP has highlighted strategically designing programs from their initial outset, ensuring value addition from the start[64]. This includes integrating a systems thinking approach to project and program design, informed by comprehensive contextual analysis (e.g. sociopolitical context) that helps inform the theory of change and early assessments of challenges and risks, and necessary adaptive management.

Embedding knowledge management and learning systems in projects and programs proliferates knowledge to inform practices through platforms, partnerships, and communities of practice. Additionally, the focus of knowledge management systems creates an enabling environment for learning and capacity building, expanding collaboration across partners. Notably, this implies that MEL should be transparent, openly accessible, and networked with other actors to increase the GEF's effectiveness and impact across stakeholders. Furthermore, STAP's pertinence in incorporating system-oriented adaptive management principles is rooted in assisting projects and programs to achieve durable outcomes. Assessing change (e.g., how, why, and under what context), including monitoring assumptions and risks, through a theory of change can help evaluators assess the project's progress in delivering global environmental benefits that may not be seen at the project's mid-term point, or possibly decades after the project is completed.

Ultimately, STAP's emphasis on robust monitoring and learning frameworks, based on a systems-oriented approach and institutionalizing learning, presents compelling adaptive management opportunities, especially to support the ample testing and learning across programs.

[64] IEO and FAO (2024).