1. Project Data

Summary project data			
GEF project ID		4282	
GEF Agency project ID		P121878	
GEF Replenishment Phase		GEF-4	
Lead GEF Agency (include all for joint projects)		World Bank	
Project name		Kiribati Grid Connected Solar Photovoltaic Project	
Country/Countries		Kiribati	
Region		Asia, Middle East & Pacific	
Focal area		Climate Change	
Operational Program or Strategic Priorities/Objectives		Operational Program 6: removing barriers to renewable energy, Strategic Long-term Objective 4: promote on-grid renewable energy GEF-4 Strategic Program 3: promoting market approaches to renewable energy	
Stand alone or under a programmatic framework		Standalone	
If applicable, parent program name and GEF ID		N/A	
Executing agencies involved		Kiribati Public Utilities Board (PUB), with support from the Kiribati Fiduciary Services Unit (KFSU) of the Ministry of Finance and Economic Development	
NGOs/CBOs involvement		N/A	
Private sector involvement (including micro, small and medium enterprises)[1]		N/A	
CEO Endorsement (FSP) /Approval (MSP) date		3/25/2013	
Effectiveness date / project start date		6/18/2013	
Expected date of project completion (at start)		12/31/2016	
Actual date of project completion		10/31/2018	
Project Financing			
		At Endorsement (US $M)	**At Completion (US $M)**
Project Preparation Grant	GEF funding		
	Co-financing	0.2	0.2
GEF Project Grant		1	0.897
Co-financing	IA own	0.05[2]	
	Government		
	Other multi- /bi-laterals	2.92	2.695
	Private sector		
	NGOs/CBOs		
	Other		
Total GEF funding		1	0.897
Total Co-financing		3.17	2.695
Total project funding (GEF grant(s) + co-financing)		4.17	3.592
Terminal evaluation validation information			

[1] Defined as all micro, small, and medium-scale profit-oriented entities, including individuals and informal entities, that earn income through the sale of goods and services rather than a salary. (GEF IEO 2022)

[2] This is an in-kind contribution of USD 50,000 from the Kiribati Public utilities Board (GEF CEO endorsement, p. 1).

TE completion date	ICR: 4/3/2019; ICE: 10/31/2018Click or tap to enter a date.
Author of TE	ICR: Renee Berthome; ICE: Tiaon Aukitino
TER completion date	2/17/2023
TER prepared by	Emanuele Bigagli
TER peer review by (if GEF IEO review)	Ritu Kanotra

Access the form to summarize key project features here: https://www.research.net/r/APR2023.

2. Summary of Project Ratings

Criteria	Final PIR (GRM) [3]	IA Terminal Evaluation (ICE)[4]	IA Evaluation Office Review (ICR)[5]	GEF IEO Review
Project Outcomes	S	S	S	S
Sustainability of Outcomes		Moderate[6]		L
M&E Design		S	S	S
M&E Implementation		S	S	S
Quality of Implementation			S	S
Quality of Execution		S		S
Quality of the Terminal Evaluation Report				MS

3. Project Objectives and theory of change

3.1 Global Environmental Objectives of the project:

The project objective is to contribute to reducing Kiribati's dependence on imported petroleum for power generation in order to improve energy security and to reduce the Greenhouse Gas (GHG) emissions from diesel fuel use for grid electricity supply in Kiribati. The specific objective is to serve as a catalyst for the substitution of the diesel-based electricity generation for the South Tarawa grid by grid-connected solar PV supply of electricity (Grant Reporting and Monitoring Report, p. 1).

3.2 Development Objectives of the project:

The project development objective is to reduce the Recipient's dependence on imported petroleum for power generation in order to improve energy security and to reduce the emissions from diesel fuel use for grid electricity supply in the Recipient's territory through the substitution of the diesel-based electricity generation for the South Tarawa grid by grid-connected solar photovoltaic supply of electricity (ICR, p. 1).

3.3 Were there any **changes** in the Global Environmental Objectives, Development Objectives, or project activities during implementation? What are the reasons given for the change(s)?

The ICR (p. 8) reports no changes or revisions of objectives, outcome targets, indicators, or components.

3.4 Briefly summarize project's theory of change – describe the inputs and causal relationships through which the project will achieve its long-term impacts, key links, and key assumptions.

- Problem: Kiribati is a geographically dispersed country, with high volatility in economic performance due to heavy reliance on external factors. Its economy is nearly totally dependent on oil for electricity generation. To address the high cost of service for electricity due to the grid's operational performance

[3] This is the rating assigned by the Final GRM of 2017, as reported by the ICE, annexed to the ICR (ICR, p. 33).
[4] Along the text, this is indicated as "Renewable Energy Development Project implementation and completion Evaluation" (ICE), prepared by Mr. Tiaon Aukitino on October 31, 2018.
[5] Along the text, this is indicated as "Implementation Completion and Results Report" (ICR), prepared by the World Bank on April 3, 2019.
[6] The ICE rates "Risks to outcomes" as Moderate (ICR, p. 47).

and high costs of diesel, the government has provided indirect and non-transparent subsidies, resulting in high and unsustainable fiscal deficits.

- Strategy: (1) Investment in Grid Connected Solar Photovoltaic Equipment; (2) Maintenance Program and Capacity Building.
- Impacts: Reduction of Kiribati's dependence on imported petroleum for power generation to improve energy security, and of emissions from diesel fuel use for grid electricity supply.

4. GEF IEO assessment of Outcomes and Sustainability

Please refer to the GEF Terminal Evaluation Review Guidelines for detail on the criteria for ratings.

The outcome ratings (relevance, effectiveness, efficiency, and overall outcome rating) are on a six-point scale: Highly Satisfactory to Highly Unsatisfactory. The sustainability rating is on a four-point scale: Likely to Unlikely.

Please justify the ratings in the space below each box.

4.1 **Relevance and Coherence**	S

The ICR does not rate Relevance, and the ICE rates it as "High". This review rates it as Satisfactory. The project was highly relevant to World Bank, GEF, regional, and national priorities, plans, and policies; it was well-designed, although the choice of indicators could have been improved.

The project was aligned with the World Bank's Country Assistance for Kiribati, and with the World Bank's ambition to help diversify electricity generation and reduce reliance on imported fuel products (implementation Completion and Results Report, ICR, p. 9). Moreover, the project was aligned with GEF Climate Change Focal Area Operational Program 6 (removing barriers to renewable energy), Strategic Long-term Objective 4 (promote on-grid renewable energy), and Strategic Program 3 (promote market approaches to renewable energy).

The project was consistent with regional and international plans and policies, including the Pacific Plan, Pacific Islands Energy Policy, Millennium Development Goals Declaration, the Mauritius Strategy, and the Kyoto protocol. It was also relevant, realistic, and consistent with Kiribati's national priorities, policies, and plans, including the Kiribati National Energy Policy (2009), built upon the Kiribati Development Plan 2008-2011, as well with the Kiribati integrated Energy Roadmap 2016-2025 and the Development Plan 2016-2019, aiming at ensuring available, accessible, reliable, affordable, clean and sustainable energy options (ICR, p. 5).

The ICE notes that project design was highly relevant, with sound project implementation arrangements (ICR, p. 42).

4.2 **Effectiveness**	HS

The ICR does not rate effectiveness, and the ICE rate separately the effectiveness of both project components as Satisfactory. This review rates it as Highly Satisfactory. Almost all project targets were

overachieved, and the remaining were achieved, such that the project's contribution to global environmental benefits was greater than expected.

The project met and exceeded the targets of all performance indicators, thanks also to project savings that allowed to further scale-up the project outputs by installing 180 kW additional grid connected solar photovoltaic and an energy management system to optimize input into the grid from all generation facilities (ICR, p. 9). More in detail, the first project development indicator of production of energy from renewables was overachieved through the installation of 729 kW solar photovoltaic across the four sites on the South Tarawa grid network (target: 7%, achievement: 8.1%; ICR, p. 10). Moreover, the second project development indicator was also achieved, consisting in the delivery of a feasibility study for solar photovoltaic installation on the grid without storage, and a follow-up study to upscale photovoltaic to achieve energy independence for Kiribati (ICR, p. 10). As for Component 1, the project overachieved the first indicator of reduction in diesel fuel use in liters with 290,172 liters (target: 230,000 liters), and the target of reduction of CO_2 with an estimated 1,048 tonnes per year (target: 765 tonnes per year; ICR, p. 12). As for Component 2, the project achieved the target of developing and implementing at least two programmed maintenance per year, and the target of training 30 staff over 3 years to integrate renewable energy into the grid, having trained 8 PUB staff and 21 staff from other institutions over 2 years.

4.3 **Efficiency**	S

The ICE rates "project financial management" as Satisfactory, and this review concurs. The project was cost-effective in delivering the results, achieving cost savings that allowed to overachieve some targets; it had some delays due to internal (insufficient capacity of the executing agency and problems in procurement) and external factors (cyclone in Fiji in 2016).

All outcomes were achieved within budget (ICR, p. 9). The financial management, provided by the Kiribati Fiduciary Service Unit, was generally adequate, with only minor issues (raised in IFRs and not mentioned by the TE) being rectified by the end of the project. As of September 2018, about 78-79% of funds were disbursed (ICR, p. 47). About AU$ 328,000 remained undisbursed due to cost savings in the design, supply, and install contract, and minor currency fluctuations against contracts held in foreign currency; this did not impact the achievement of project objectives (ICR, p. 18).

A 1-year initial delay in the procurement process for the design, supply and install contract for the solar photovoltaic installation was reported, due to unforeseen circumstances (CIR, p. 14). The project was finally extended for 22 months because of: (1) delays in procuring a Project Manager based in Kiribati; (2) The Government's recommendation not to accept the "lowest technically compliant" bid for the solar photovoltaic installations due to irregularities in the bid and prior unfavorable experience with the bidder; and (3) Unanticipated shipping delays and the impact of devastation caused by a category 5 cyclone in Fiji, which required suspension of work for three weeks to allow the contractor's Fiji-based crew to return to Fiji to attend to the cyclone devastation. Also, some minor initial delays were related to the lack of familiarity of the executing agency with World Bank procedures, which were effectively addressed thanks to the help of the Kiribati Fiduciary Service Unit of the Ministry of Finance and Economic Development.

4.4 **Outcome**	S

Summarize key outcomes related to environment, human well-being, and enabling conditions (Policy, Legal & Institutional Development; Individual & Institutional Capacity-Building; Knowledge Exchange & Learning; Multistakeholder Interactions), as applicable. Include any unintended outcomes (not originally targeted by the project), whether positive or negative, affecting either ecological or social aspects.

Where applicable, note how both intended and unintended outcomes have positively and/or negatively affected marginalized populations (e.g., women, indigenous groups, youth, persons with disabilities), and where some stakeholder groups have benefited more/ less than others.

The ICR rates outcomes as Satisfactory, and this review concurs. The project was relevant to global, regional, and national priorities, plans, and policies, and overall well-designed; it over-achieved most of the indicators and achieved all the other indicators, in an overall cost-effective way, although there were delays in implementation that led to project extension. More details on the project outcomes are provided below.

Environmental. The project achieved a reduction in diesel fuel use of 290,000 liters, and catalyzed the substitution of diesel generation of 17.9% of total generation. Moreover, it achieved a reduction in GHG emissions of 1,048,000 tonnes (ICR, p.10). The ICE notes that the electricity produced from renewables contributes to 11% of total generation (ICR, p. 43).

Socioeconomic. The project achieved a levelized cost of energy from solar photovoltaic of 0.28 USD/kWh (ICR p. 10). The reduction in diesel use is calculated to entail annual savings for PUB of AU$ 368,159 (ICR; p. 12).

Enabling conditions. The project strengthened the capacity of staff for project design, bidding, selection and contract management and for operations and maintenance of solar photovoltaic installations (ICR, p. 48), as well as to integrate electricity generated through renewable energy into the national grid (ICR, p. 11). In addition, over 15 locals were provided with training and recruited as interns during the installation phase (ICR, p. 24).

Unintended outcomes. The ICR does not mention any unintended outcomes, and the ICE indicates that there are no other positive or negative impacts of the project (ICR, p. 45).

4.5 **Sustainability**	L

Note any progress made to sustain or expand environmental benefits beyond project closure, using stakeholder (rather than project) resources, e.g. through replication, mainstreaming or scaling-up of GEF-supported initiatives. Examples would be farmers adopting practices using own funds, follow-on replication projects, development of plans for scaling, inclusion in local or national legislation, and allocation of government budgets or private sector investments for institutional adoption.

The ICR does not rate sustainability, and the ICE indicates “Moderate” risks to outcomes. Based on the limited information available, this review rates sustainability as Likely. Although there are some risks, the magnitude of their effect is overall small, and it is likely that the project benefits will continue in the future.

The ICR (p. 18) notes that the risks to the development outcome are negligible, thanks to the institutional strengthening and increased technical capacity of the Public Utilities Board, which has taken over the responsibility of the continued operations and maintenance of the solar PV installations.

Financial. The ICR does not mention any financial risks to project sustainability.

Sociopolitical. The building of the Supervisory Control and Data Acquisition system and of the Energy Management System contributed to the improvement of grid stability and reliability for the South Tarawa network (ICR, p. 16), thereby contributing to the sustainability of electricity generation.

Institutional frameworks and governance. The contractor of the Energy Management System and of the Supervisory Control and Data Acquisition system will continue to provide technical and troubleshooting support beyond the current contractual relationship (ICR, p. 14).

Environmental. The ICR does not mention any environmental risks to project sustainability.

5. Processes and factors affecting attainment of project outcomes

Before describing the factors, you may choose to summarize reported outcomes and sustainability here: https://www.research.net/r/APR2023.

5.1 Co-financing. To what extent was the reported co-financing essential to the achievement of GEF objectives? If there was a difference in the level of expected co-financing and actual co-financing, what were the reasons for it? Did the extent of materialization of co-financing affect project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

A grant of USD 2.9 million was provided by the AUS Aid through the Pacific Region Infrastructure Facility (PRIF). About USD 2.308 million (79%) of this grant were disbursed as of September 2018 (ICR, p. 47), which raised to USD 2.695 million by the end of the project (ICR, p. 2). Although not explicitly indicated neither by the CIR nor by the ICE, it may be inferred that this amount was essential for project achievement, given the lower planned contribution of GEF (USD 1 million), and the fact that all project outcomes were satisfactorily achieved. About AU$ 328,000 remained undisbursed due to cost savings in the design, supply, and install contract, and minor currency fluctuations against contracts held in foreign currency; this did not impact the achievement of project objectives (ICR, p. 18). Moreover, the GEF CEO endorsement (p. 1) reports an in-kind contribution of USD 50,000 from the Kiribati Public Utilities Board; however, the ICR does not report on the actual mobilization of this amount, nor about its impact on project outcomes and/or sustainability.

5.2 Project extensions and/or delays. If there were delays in project implementation and completion, then what were the reasons for it? Did the delay affect the project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

There was a delay of almost 12 months in the procurement process for the design, supply, and installation of the solar photovoltaic installation, due to unforeseen circumstances (ICR, p. 14), related to the capacity of firms and the regularity of bids submission (ICR, p. 15). This was finally beneficial to the project, as during this time a significant decrease in the capital cost of solar photovoltaic and associated equipment

occurred globally, which entailed an overall reduction in the budgeted cost estimate and final contract price of the solar photovoltaic for the project. Moreover, some delays were recorded at the beginning of the project due to the insufficient implementation capacity of Public Utilities Board (PUB), which lacked familiarity with the World Bank fiduciary processes. To address this problem, fiduciary support arrangements were provided through Kiribati Fiduciary Service Unit (KFSU), which supported the financial management processes on behalf of PUB and provided procurement support, demonstrating flexibility and adaptability of management (ICR, p. 15).

The ICR (p. 2) reports that in May 2016, it was decided to extend the project closing date by 22 months, to October 31, 2018, in order to facilitate the completion of a two-year operations and maintenance period under the solar photovoltaic contract (ICR, p. 8), including training (ICR, p. 9), given the delays in implementation because of the impact of the cyclone that struck Fiji in 2016 (ICR, p. 9).

5.3 Stakeholder ownership. Assess the extent to which stakeholder ownership has affected project outcomes and sustainability. Describe the ways in which it affected outcomes and sustainability, highlighting the causal links.

Neither the ICR nor the ICE discuss the role and engagement of stakeholders, nor how this affected outcomes and sustainability.

5.4 Other factors: In case the terminal evaluation discusses other key factors that affected project outcomes, discuss those factors and outline how they affected outcomes, whether positively or negatively. Include factors that may have led to unintended outcomes.

A category-5 cyclone that struck Fiji in February 2016 caused unanticipated shipping delays and had a high level of devastation, causing a suspension of work for three weeks to allow the contractor's Fiji-based crew to return to Fiji to attend to the cyclone devastation, contributing to delays and the subsequent request of extension (ICR, p. 9). Other factors, not explicitly captured by the project indicators, and which positively contributed to the safety of the installed solar photovoltaic and improved energy security, were the existence of clear land ownership, on-site security, and distributed geographic location of the selected sites (ICR, p. 11).

6. Assessment of project's Monitoring and Evaluation system

Ratings are assessed on a six point scale: Highly Satisfactory to Highly Unsatisfactory.

Please justify ratings in the space below each box.

6.1 **M&E Design at entry**	S

Both the ICE and the ICR rate the overall quality of M&E as Satisfactory, and this review rates M&E design as Satisfactory. The M&E arrangements were practical and well-thought, addressing the project's theory of change and expected outcome and impacts, and the indicators were appropriate.

The M&E arrangements in the Project Document (p. 3) included the provision to develop a detailed work plan, development of indicators based on the project results framework, periodic implementation and

financial reports, and the realization of supervision visits by the World Bank team to project sites (ICR, p. 16). The ICR (p. 18) further notes that the indicators were appropriate to inform on the achievement of project objectives. However, two intermediate indicators, namely 'Reduction in diesel use per year' and 'Carbon Dioxide reduction per year', could have been designed as indicators of achievement of the project development objective, in order to better measure the achievement of the expected objective (ICR, p. 11).

6.2 **M&E Implementation**	S

The TE rates the overall quality of M&E as Satisfactory, and this review rates M&E implementation as Satisfactory. implementation of the M&E plan as scheduled, and the data gathered were used to monitor project progress.

The M&E activities were fulfilled in a timely manner, including annual visits, data collection, and reporting, except for quarterly reports that were included into the 6-months reports prepared by PUB. Indicators were used to monitor actual project progress (ICR, p. 17).

7. Assessment of project implementation and execution

Quality of Implementation rating is based on the assessment of the performance of GEF Agency(s). Quality of Execution rating is based on performance of the executing agency(s). In both instances, the focus is upon factors that are largely within the control of the respective implementing and executing agency(s). A six-point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess.

Please justify ratings in the space below each box.

7.1 **Quality of Project Implementation**	S

The ICR rates the quality of project implementation as Satisfactory, and this review concurs. The performance of the World Bank met expectations, with adequate preparation, coordination, and supervision of the project, although with some initial delays due to team turnover.

The project was implemented in coordination with two other grid-connected solar photovoltaic projects, one funded by the Pacific Environment Community fund and the other by the United Arabian Emirates (ICR, p. 13). The quality of performance of the World Bank at entry was satisfactory, having identified, prepared and appraised the operation in such a manner that it was likely to achieve the planned development objective (ICR, p. 18). The World Bank also provided a satisfactory supervision of the technical matters thanks to experienced team members and task team leader, which did not change during project implementation. The team conducted periodical missions at least twice per year and prepared concise and regular reporting to inform on project progress. Fiduciary matters were supervised satisfactorily and regularly. The turnover of some procurement team members contributed to the initial delays in procurement (ICR, p. 18).

7.2 **Quality of Project Execution**	S

The ICE rates “Project Management” as Satisfactory, and this review concurs. Despite some initial delays due to lack of capacity, which were effectively addressed, performance met the expectations and was without salient weaknesses, contributing to the success of the project, although entailing some delays in implementation.

Public Utilities Board had initial shortcomings in implementation capacity because of lack of familiarity with World Bank fiduciary process, which led to initial implementation delays. These entailed procurement delays, and delays in the hiring of the Project Manager, also because of the difficulty to find a suitable candidate. These problems were effectively addressed through the support of the Kiribati Fiduciary Support Unit, demonstrating flexibility in the approach of the upcoming issue for the benefit of the project (ICR, p. 15). The Project Manager performed well and was responsible for the success of the project, thanks also to the support of a local Project Manager that contributed to building strong local capacity (ICR, p. 15).

8. Lessons and recommendations

8.1 Briefly describe the key lessons, good practices, or approaches mentioned in the terminal evaluation report, including how they could have application for other GEF projects. Lessons must be based on project experience.

The ICR (p. 19) proposes the following lessons:

- In a highly constrained environment, it is important that project design deliberately consider the existing implementation capacity and implement realistic, incremental steps to improve capacity during implementation.
- Project supported technical assistance can be instrumental for coordinating broader involvement of donor partners beyond just the immediate activities of the Project.
- When multiple donors are involved in investing in the same type of infrastructure on a small grid network with different equipment, it is critical to ensure standardization of equipment and spare parts for optimal infrastructure operation and maintenance.

8.2 Briefly describe the recommendations given in the terminal evaluation.

The ICE (ICR, p. 48) proposes the following recommendations:

- It is suggested that standard procurement procedure, report and project implementation standard are employed locally to raise the standard of project implementation.
- In the light of procurement delays of the project, there is a need to review the national procurement procedure which can assist project procurement needs related with contractors past and current project performance and compliances with national and international standards.
- It is recommended that future similar projects will select project components that are easy to install, operate and maintain.

- It is highly recommended that additional training on the Supervisory Control and Data Acquisition system and the Energy Management System systems is carried out to strengthen Public Utilities Board's capacity to operate and maintain the system. In addition, as the communication link currently used for the system is not stable, it is recommended that a reliable link is used to ensure full functionality of the system.

9. Quality of the Terminal Evaluation Report

Before rating the quality of the terminal evaluation, click here to summarize your observations on the sub-criteria: https://www.research.net/r/APR2023.

A six-point rating scale is used for each sub-criteria and overall rating of the terminal evaluation report (Highly Satisfactory to Highly Unsatisfactory)

Criteria/indicators of terminal evaluation quality	GEF IEO COMMENTS	Rating
1. Timeliness: terminal evaluation report was carried out and submitted on time?	The ICE was prepared at project completion, and submitted within 12 months	HS
2. General information: Provides general information on the project and evaluation as per the requirement?	The ICE provides project ID (not the GEF ID), lists evaluators and the executing agencies, and specifies key project milestones, but is does not list GEF objectives	S
3. Stakeholder involvement: the report was prepared in consultation with – and with feedback from - key stakeholders?	The ICE identifies the key stakeholders, but their feedback on the report was not asked, nor that of the OFP	U
4. Theory of change: provides solid account of the project's theory of change?	The ICE discusses the causal links and mechanisms to achieve impact, but does not present the theory of change, nor its assumptions, and does not evaluate if they remained valid	MS
5. Methodology: Provides an informative and transparent account of the methodology?	The ICE does not discuss the information sources for evaluation; it discusses the project activities; it does not provide information on stakeholders interviewed, nor on the tools and methods used for evaluation, and does not identify limitations of evaluation	U
6. Outcome: Provides a clear and candid account of the achievement of project outcomes?	The ICE does not evaluate relevance to GEF priorities; it assesses relevance to national priorities and of project design. It reports on performance of all targets, discusses factors that affected their achievement, reports on timeliness of activities and assesses efficiency in using project resources	S

7. Sustainability: Presents realistic assessment of sustainability?	The ICE does not rate sustainability, nor does it identify risks, their likelihood and effects	U
8. M&E: Presents sound assessment of the quality of the M&E system?	The ICE analyzes quality of M&E design and implementation, but does not discuss the use of data from M&E for project management	MS
9. Finance: Reports on utilization of GEF funding and materialization of co-financing?	The ICE briefly reports on use of GEF resources and co-financing, their source and type, and reasons for variations in materialization, but does not discuss their contribution to project results	MS
10. Implementation: Presents a candid account of project implementation and Agency performance?	The ICE reports on the performance of the executing agency (but not of the implementing agency); it discusses factors that affected execution and how challenges were overcome	MU
11. Safeguards: Provides information on application of environmental and social safeguards, and conduct and use of gender analysis?	The ICE reports on environmental and social safeguards, but not on gender as not applicable to this project	HS
12. Lessons and recommendations are supported by the project experience and are relevant to future programming?	The ICE presents lessons based on project experience, but does not discuss their applicability; it presents clear recommendations but without specifying the action taker	S
13. Ratings: Ratings are well-substantiated by evidence, realistic and convincing?	The ICE provides ratings based on succinct and credible evidence	S
14. Report presentation: The report was well-written, logically organized, and consistent?	The ICE is written in English; it is well-written, well-organized, consistent, and easy to read	HS
Overall quality of the report		MS

10. Note any additional sources of information used in the preparation of the terminal evaluation report (excluding PIRs, TEs, and PADs).

ANNEX 1. GEF IEO THEORY OF CHANGE FRAMEWORK

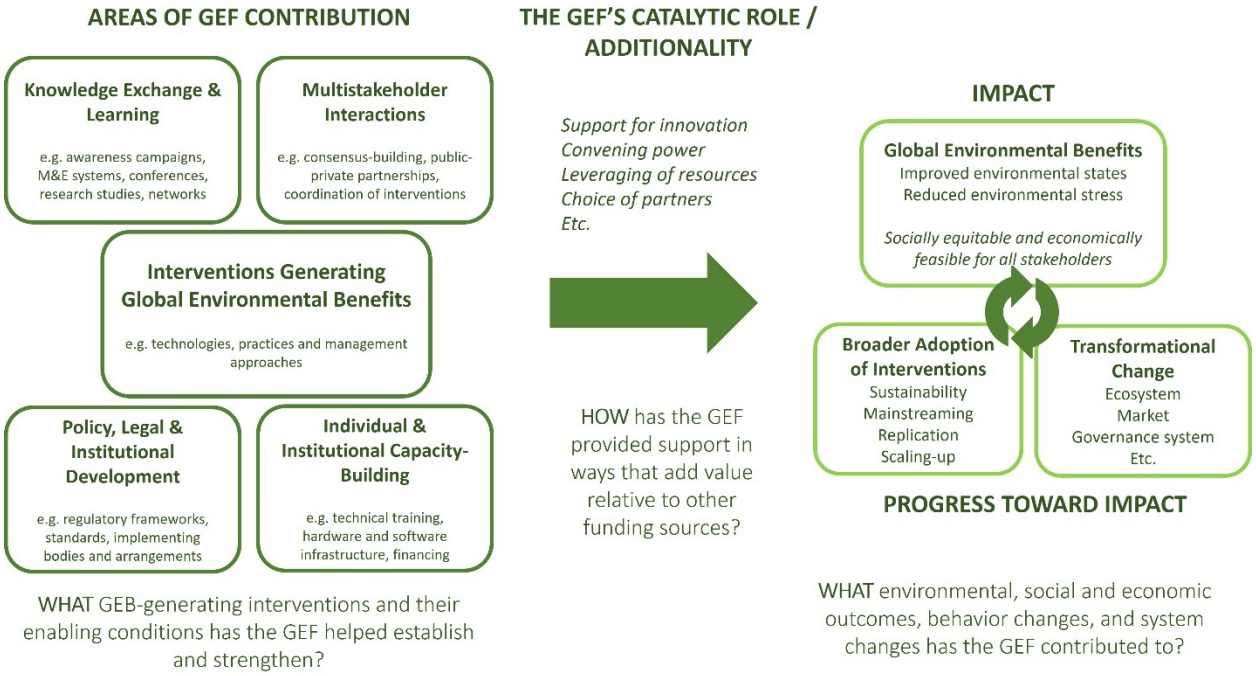

Figure 1. The GEF IEO's updated Theory of Change Framework on how the GEF achieves impact

The general framework for the GEF's theory of change (figure 1) draws on the large amount of evaluative evidence on outcomes and impact gathered over the years by the GEF Independent Evaluation Office. The framework diagram has been updated to reflect the IEO's learning since OPS5 (GEF IEO 2014, p. 47-50) about how the GEF achieves impact, as well as the evolution of the GEF's programming toward more integrated systems-focused and scaled-up initiatives.

The framework outlines the three main areas that the IEO assesses in its evaluations: a) the GEF's contributions in establishing and strengthening both the interventions that directly generate global environmental benefits, and the enabling conditions that allow these interventions to be implemented and adopted by stakeholders, b) the GEF's catalytic role or additionality in the way that the GEF provides support within the context of other funding sources and partners, and c) the environmental, social and economic outcomes that the GEF has contributed to, and the behavior and system changes that generate these outcomes during and beyond the period of GEF support.

The circular arrow between impact and progress toward impact, as before, indicates how bringing about positive environmental change is an iterative process that involves behavior change (in the form of a broader group of stakeholders adopting interventions) and/or systems change (which is a key characteristic of transformational change). These three areas of change can take place in any sequence or simultaneously in a positively reinforcing cycle, and are therefore assessed by the GEF IEO as indicators of impact.

Assessing the GEF's progress toward achieving impact allows the IEO to determine the extent to which GEF support contributes to a trajectory of large-scale, systemic change, especially in areas where changes in the environment can only be measured over longer time horizons. The updated diagram in particular expands the assessment of progress towards impact to include transformational change, which specifically takes place at the system level, and not necessarily over a long time period.

The updated diagram also more explicitly identifies the link between the GEF's mandate of generating global environmental benefits, and the GEF's safeguards to ensure that positive environmental outcomes also enhance or at the very least do not take away from the social and economic well-being of the people who depend on the environment. Thus the IEO assesses impact not only in terms of environmental outcomes, but also in terms of the synergies and trade-offs with the social and economic contexts in which these outcomes are achieved.

ANNEX 2. DEFINITION OF TERMS

Intervention	Any programmatic approach, full-sized project, medium-sized project, or enabling activity financed from any GEF-managed trust fund, as well as regional and national outreach activities. In the context of post-completion evaluation, an intervention may consist of a single project, or multiple projects (i.e. phased or parallel) with explicitly linked objectives contributing to the same specific impacts within the same specific geographical area and sector. https://www.gefieo.org/evaluations/gef-evaluation-policy-2019
Activity (of an intervention)	An action undertaken over the duration of an intervention that contributes to the achievement of the intervention's objectives, i.e. an intervention is implemented through a set of activities. E.g. training, (support to) policy development, (implementation of) management approach.
Outcome	An intended or achieved short- or medium-term effect of a project or program's outputs. https://www.gefieo.org/evaluations/gef-evaluation-policy-2019
Impact	The positive and negative, primary and secondary long-term effects produced by a project or program, directly or indirectly, intended or unintended. https://www.gefieo.org/evaluations/gef-evaluation-policy-2019
Environmental outcomes	Changes in environmental indicators that could take the following forms: • Stress reduction: reduction or prevention of threats to the environment, especially those caused by human behavior (local communities, societies, economies) • Environmental state: biological, physical changes in the state of the environment http://www.gefieo.org/sites/default/files/ieo/evaluations/ops5-final-report-eng.pdf
Social and economic outcomes	Changes in indicators affecting human well-being at the individual or higher scales, e.g. income or access to capital, food security, health, safety, education, cooperation/ conflict resolution, and equity in distribution/ access to benefits, especially among marginalized groups.
Synergies	Multiple benefits achieved in more than one focal area as a result of a *single intervention*, or benefits achieved from the interaction of outcomes from at least two separate interventions in addition to those achieved, had the interventions been done independently.

	http://www.gefieo.org/evaluations/evaluation-multiple-benefits-gef-support-through-its-multifocal-area-portfolio-map-2016
Trade-offs	A reduction in one benefit in the process of maximizing or increasing another benefit. http://www.gefieo.org/evaluations/evaluation-multiple-benefits-gef-support-through-its-multifocal-area-portfolio-map-2016
Broader adoption	The adoption of GEF-supported interventions by governments and other stakeholders beyond the original scope and funding of a GEF-supported intervention. This may take place through sustaining, replication, mainstreaming, and scaling-up of an intervention and/or its enabling conditions (see definitions below). http://www.gefieo.org/sites/default/files/ieo/evaluations/ops5-final-report-eng.pdf
Sustainability	The continuation/ likely continuation of positive effects from the intervention after it has come to an end, and its potential for scale-up and/or replication; interventions need to be environmentally as well as institutionally, financially, politically, culturally and socially sustainable.https://www.gefieo.org/evaluations/gef-evaluation-policy-2019
Replication	When a GEF intervention is reproduced at a comparable administrative or ecological scale, often in different geographical areas or regions. http://www.gefieo.org/sites/default/files/ieo/evaluations/ops5-final-report-eng.pdf
Mainstreaming	When information, lessons, or specific aspects of a GEF initiative are incorporated into a broader stakeholder initiative. This may occur not only through governments but also in development organizations and other sectors. http://www.gefieo.org/sites/default/files/ieo/evaluations/ops5-final-report-eng.pdf
Scaling-up	Increasing the magnitude of global environment benefits (GEBs), and/or expanding the geographical and sectoral areas where they are generated to cover a defined ecological, economic, or governance unit. May occur through replication, mainstreaming, and linking. http://www.gefieo.org/evaluations/evaluation-gef-support-scaling-impact-2019
Transformational change	Deep, systemic, and sustainable change with large-scale impact in an area of major environmental concern. Defined by four criteria: relevance, depth of change, scale of change, and sustainability. http://www.gefieo.org/evaluations/evaluation-gef-support-transformational-change-2017
Additionality	a) Changes in the attainment of direct project outcomes at project completion that can be attributed to GEF's interventions; these can be reflected in an acceleration of the adoption of reforms, the enhancement of outcomes, or the reduction of risks and greater viability of project interventions. b) Spill-over effects beyond project outcomes that may result from systemic reforms, capacity development, and socio-economic changes. c) Clearly articulated pathways to achieve broadening of the impact beyond project completion that can be associated with GEF interventions. https://www.gefieo.org/sites/default/files/ieo/council-documents/files/c-55-me-inf-01.pdf