1. Project Data

Summary project data			
GEF project ID		5331	
GEF Agency project ID		130012	
GEF Replenishment Phase		GEF-5	
Lead GEF Agency (include all for joint projects)		UNIDO	
Project name		Promoting investments in small to medium scale renewable energy technologies in the electricity sector	
Country/Countries		Guinea-Bissau	
Region		Africa	
Focal area		Climate Change	
Operational Program or Strategic Priorities/Objectives		CCM-3, CCM-6	
Stand alone or under a programmatic framework		Standalone	
If applicable, parent program name and GEF ID			
Executing agencies involved		Ministry of Energy, Industry and Natural Resources (MEINR) and the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE)	
NGOs/CBOs involvement		Ajuda de Desenvolvimento de Povo para Povo (ADPP); ENERGIA - International Network on Gender and Sustainable Energy as secondary executing agency	
Private sector involvement (including micro, small and medium enterprises)[1]		Associação para o Desenvolvimento(TESE) - secondary executing agency	
CEO Endorsement (FSP) /Approval (MSP) date		8/8/2014	
Effectiveness date / project start date		10/20/2014	
Expected date of project completion (at start)		10/31/2019	
Actual date of project completion		3/1/2020	
Project Financing			
		At Endorsement (US $M)	**At Completion (US $M)**
Project Preparation Grant	GEF funding	0.09	0.09
	Co-financing	N/A	N/A
GEF Project Grant		1.74	1.74
Co-financing	IA own	0.23	N/A
	Government	0.51	0
	Other multi- /bi-laterals	2.6	N/A
	Private sector	5.9	N/A
	NGOs/CBOs		
	Other	0.93	N/A
Total GEF funding		1.83	1.83
Total Co-financing		10.26	N/A
Total project funding (GEF grant(s) + co-financing)		12.09	N/A
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)

TE completion date	11/1/2020
Author of TE	Mr. José de Bettencourt
TER completion date	November, 2022
TER prepared by	Ritu Kanotra
TER peer review by (if GEF IEO review)	Neeraj Negi

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

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review[2]	GEF IEO Review
Project Outcomes		N/A		MS
Sustainability of Outcomes		ML	ML	ML
M&E Design		S	S	S
M&E Implementation		MU	MU	MU
Quality of Implementation		S	S	S
Quality of Execution		MU	MU	MU
Quality of the Terminal Evaluation Report			__	MS

3. Project Objectives and theory of change

3.1 Global Environmental Objectives of the project:

According the Project Appraisal Document (PAD), the goal of the project was to assist Guinea-Bissau in the transformational change of the electricity sector to a sustainable low-carbon development path.

3.2 Development Objectives of the project:

According to the PAD, the development objective of the project was to promote investments (at least USD 8 million) in small to medium scale renewable energy technologies in the electricity sector in Guinea-Bissau. The project had the four main components as detailed under the next section (3.4).

Component 1: Investments into small and medium scale renewable energy technologies- The main of this component was (after the mid-term evaluation changes) to mobilize at least USD 8 million investment to lay the foundation for the development and implementation of a number of high impacts on-grid and off-grid renewable energy demonstration projects with a total electric capacity of 2.5 MW (around 50% of the operating electricity generation capacity of Guinea-Bissau in 2012).

Component 2: Consolidated policy and regulatory framework for renewable energy - This component aimed at reducing institutional, regulatory and policy barriers for the renewable energy investments and markets in Guinea-Bissau. Under the component the National Renewable Energy Policy (NREP) and National Renewable Action Plan (NREAP) for Guinea- Bissau was to be developed in close coordination with the implementation process of the ECOWAS Renewable Energy Policy (EREP).

Component 3: Capacity development and awareness raising on renewable energy - Activities under this component aimed at strengthening the capacities of key market enablers (e.g. policy makers, developers, companies, utility, and banks) on different aspects of renewable energy through the implementation of train-the-trainers approaches and establishment of south-south knowledge transfer from the ECOWAS region.

Component 4: Monitoring and evaluation - the objectives of this component were to establish a project management office, conduct adequate and systematic monitoring of all project indicators (based on a monitoring plan) together with regular and comprehensive assessment of an on-going and /or

[2] The terminal evaluation was conducted by the Office of Evaluation and Internal Oversight of UNIDO. Therefore, ratings given by the terminal evaluation has been used as the ratings by the IA evaluation office.

completed initiatives to ensure successful project implementation; establish a dedicated website for the project in cooperation with ECREEE; implementation of the dissemination program with project milestones/reports etc., regularly posted on the website.

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)?

According to the TE, there were no changes in the overall Global Environmental and Development objectives of the project. However, some of the activities under the project results framework were amended. The changes are as follows:

Component 1: The project implementation schedule with respect to the mobilization of USD 8 million supporting the development and installation of 2.5 MW of RE investment projects, was changed from completion by mid project to end of the project.

Component 2: The steering committee dropped the output related to creating a National Regulatory Agency concept and support mechanisms for Independent Power Producers (IPPs) and Public-Private Partnerships (PPPs). The steering committee also dropped the output related to the registration of GEF/UNIDO project as Nationally Appropriate Mitigation Action (NAMA) and implementation of Monitoring, Reporting and Verification (MRV) system and replaced it with preparation of a proposal request support for the development of the Nationally Determined Contributions (NDC) from to the Climate Technology Center & Network (CTCN).

Component 3: One of the activities under the component - the development of Renewable Energy Project Development Manual – was replaced by the "Manual of Mini Grid Models". It was decided that the activity in which fifty (50) manuals were to be sent to key stakeholders was modified by the manual being made available on the ECOWAS Observatory for Renewable Energy and Energy Efficiency (ECREEE) website.

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.

The project aimed at transforming a fossil fuel-based energy market to a renewable energy technologies based market. Project activities were designed to achieve this transformation through innovation (introducing new technologies policies and solutions), demonstration (showing that new technologies, policies and solutions are feasible and potential for replication (through establishing mechanisms to promote large scale use/commercialization of proven technologies). This approach was taken with the objective of removing risks due financial, institutional and regulatory, technical and capacity and awareness barriers.

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 TE assessed the relevance of the project as 'highly relevant'. Based on the review of the evidence in the TE, this TER assessed the relevance of the project as 'satisfactory'. As per the TE, the project was quite relevant as it was consistent with the needs of the Guinea-Bissau. At the time of the design of the project, the national energy consumption was characterized by predominance of traditional use of biomass (87.8%), followed by 11.7% from petroleum products and 0.5% from electricity. Country's heavy reliance on expensive diesel-based power generation, with poor transmission and distribution system, made reliable electricity services accessible to only a small proportion of the population (electrification rate estimated at 11.5% in 2010). The chronic energy crises further hampered the social, economic and industrial development of the country, which brought the need for modern, reliable and affordable energy services to be made available at all levels. The project was designed to address this energy challenges of Guinea Bissau by promoting renewable energy investments in the electricity sector.

The project was also relevant to GEF Climate Change focal area's Strategic Program 3 – Promoting market approaches to renewable energy, in particular OP6 promoting grid electricity from renewable sources, and promoting renewable energy for rural energy services.

4.2 **Effectiveness**	MS

The TE has rated the effectiveness of the project as 'highly satisfactory'. However, based on the evidence in the available documents, this TER assesses it as 'moderately satisfactory'. The project was successful in mobilizing investments for renewable energy projects and preparation of the National Rural Energy Investment Plan with a pipeline of concrete projects opening space for further investment in the renewable energy sub-sector. However, the target of implementing all the RE projects as envisaged in the project document, was either delayed or not fully implemented at the time of the TE, due to political instability and delay in mobilizing required co-financing. This was a major bottleneck for implementation of renewable energy activities. The project was successful in providing capacity building support in key areas, such as development and management of solar PV hybrid mini-grid, and promoted south- south cooperation through ECREEEE with the Portugese speaking Cabo-Verde. However, the project had limited impact in developing and strengthening renewable energy policy and regulatory framework, both of which were not pursued due to political instability in the country.

Component 1: Investments into small to medium scale renewable energy technologies

The TE reports that the project mobilized investment for a capacity of 2.8 MW of solar hybrid mini-grid against a target of 2.5 MW (Output 1.1.1). However, at the time of the TE, only about 800 kw of installed capacity was in operation, with project directly contributing to reduction of about 400tCO2 per year and will start avoiding 1000 tCO2 per year instead of the target of nearly 50000 tCO2. As per the TE, timeline

of this output was extended from completion by mid-term to end of the project but some of the projects identified in PPG (fish processing and cashew processing plants) were not implemented, and the political instability prevented the flagship project of installing a roof-top PV system at the Ministry of Energy. The project successfully completed the feasibility studies for 27MW Saltinho Hydro Power – a transformative project likely to cover major parts of electricity generation of the country. As per the TE, this project was being developed by UNIDO in partnership with the African Development Bank and Australian Development Back as a Public Private Partnership, with investment costs projected to be around USD 98 million.

The project successfully supported the development of the National Sustainable Energy Investment Plan (NSEIP), consisting of a pipeline of priority projects with completed feasibility studies and an estimated investment volume of around 700 million USD (as per output 1.2 and 1.3). The project supported and facilitated various meetings and conferences, both nationally and internationally, to attract suitable investors, which shows that the plan was validated by main stakeholders as required under the project. The project was successful in establishing first grant-financing instrument for the country as a result of which 3 projects (as per the target) were selected for co-financing by ECOWAS Renewable Energy Facility (EREF). However, only 1 of the projects was implemented, with other projects delayed due to delay in mobilizing the required co-financing from the local private sector or civil society.

Component 2: Consolidated policy and regulatory framework for renewable energy

As per the TE, given the political instability, the objectives of component 2 were changed in consultation and as agreed by the Project Steering Committee. The project was supposed to support the development and endorsement of National Renewable Energy Policy (NREP) and the National Renewable Energy Action Plan (NREAP); facilitate the creation of National Regulatory Agency for the power sectors along with the awareness campaign of SE4ALL and registration of the project as Nationally Appropriate Mitigation Action (NAMA) facilitated. However, the project prepared a series of documents to achieve SE4ALL objectives by 2030; Nationally Appropriate Mitigation Action (NAMA) was not created and instead a proposal to support UNFCCC Nationally Determined Contribution was prepared. Overall, the original outcome of the outcome under this component of strengthening the existing policy and legal support framework and improving the regulatory mechanisms for renewable energy, was not met.

Component 3: Capacity development and awareness raising on renewable energy

The project achieved the output and target of supporting capacity building of key stakeholders (more than 200) on renewable energy along with the development of various tools and manuals to guide the development of renewable energy projects in the country. Most of the outputs under the component were achieved except following a train-the-trainer approach which involved training of experts (20) certified as trainers. This was mainly due to the absence of qualified energy training institutions in the country as well lack of interest amongst various stakeholders in becoming trainers in RE.

4.3 **Efficiency**	MS

The TE has assessed the efficiency of the project as 'satisfactory' but based on the evidence in the report, this TER assigned a rating of 'moderately satisfactory'. The project was delayed by a year due to external factors beyond the control of the project such as difficult political and economic situation as well as Ebola crisis that led to travel restriction and partial lock-downs in the country. Despite these challenges, project achieved some of the key outputs in timely manner under all three components.

However, the TE notes the implementation timeline for some of the outputs delayed which had an impact on achievement of overall outcome. For instance, output under component 1 of mobilization of USD 8 million supporting the development and installation of 2.5 MW of RE investment projects, was not implemented by mid-term, which had implication on expected impact expressed in MWh and also lost opportunity for these projects to serve as demonstration for wider replication.

4.4 **Outcome**	MS

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.

This review assesses the overall outcome achievement to be 'moderately satisfactory'. The project was relevant and substantially achieved its expected results. However, there were some delays and some activities were replaced or dropped. Key outcomes include:

1. The project provided pre-investment support and match making with banks and investors, mobilizing financing for around USD 22 million for several key solar hybrid mini-grids, with some projects already implemented and other under implementation at the time of the TE. The project also laid the foundation for a 27MW medium scale hydro power project, by providing pre-feasibility support and through building partnerships with development financing institutes. As per the TE, the investment cost of the project was projected to be around 98 million. This project is likely to be transformative as it will cover major parts of electricity generation of the country and generate major GHG emissions. The TE also notes that some of the renewable energy projects identified as part of the investment plan prepared through the project will be funded as part of another forthcoming GEF UNDP projects to be implemented in Guinea-Bissau.
2. As per the TE, the project was directly reducing about 400tCO2 per year and would soon start avoiding 1000 tCO2 per year. However, the project had a target of avoiding nearly 5000 tCO2 per year. This was primarily because all the demonstration project envisaged under the project could not be implemented on time due to factors such as political instability and resulting poor

economic situation with lack of ability of the private sector to raise funds from the domestic and international markets.

4.5 **Sustainability**	ML

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.

This TER concurs with the rating provided by the TE to the sustainability of the outputs and outcomes of the project as 'moderately likely'. While, the project has laid the foundation through demonstrating cost-effectiveness and feasibility of grid connected RE projects in the country through mobilizing investments and financial support from the donors such as European Union, African Development Bank and GEF; setting up grant facility to provide support for project development and investments in future and equipping the government with National Sustainable Investment Plan (NSEIP); capacity building of the relevant stakeholders on renewable energy issues through developing manuals and strategy documents. However, political and resulting economic instability in the country, as also experienced during project implementation, pose challenges in terms of uncertainty regarding availability of funds and interest from private investors and other donors for RE projects in future. Moreover, given the political turmoil, the strategic and planning documents (including a clear roadmap on how to achieve 50% of RE by 2030) were not yet endorsed by the government at the time of the TE. The project has also had limited impact in devising a mini-grid management model, crucial for sustainability of utilities supporting RE technologies demonstrated through the project.

Financial resources

The TE notes that the project was able to mobilize significant project financing and foreign direct investment that is likely to increase use of renewable energy in the country. For instance, the project facilitated funding from donors such as West Africa Development Bank for the construction of a 27MW solar PV plant as well as two 1MW hybrid mini-grid systems in the country. As per the TE, some of the RE projects identified during the current project are likely to be supported through another GEF-UNDP project approved in 2021. However, the TE also highlights challenges in mobilizing funding from the private sector and its lack of ability to raise affordable funding from the domestic and international markets as a major bottle neck, especially due to political and economic instability in the country during project implementation, due to which this TER assessed the risks from the availability of financial resources as 'moderately likely'.

Sociopolitical

The TE notes that despite the project's contribution to improve the awareness and capacity of various stakeholders including from the government on the potential of RE in the country, socio-political risks remain high due to political turmoil and uncertainty in the country at the time of the project implementation. As per the TE, 'transition of the renewable energy (and the overall energy sector) toward more private sector-oriented approaches and commercial financing will become a reality only if the political situation becomes more stable and regulated' (TE, Pg 25). It seems that overall project suffered due to lack of complete ownership and commitment from the government in the wake of political uncertainties in the country. Although various NGOs such as Tecnologia, Engenharia, Saúde e Educação (TESE) and Associação Lusófona de Energias Renováveis (ALER) were involved and extended their support for project implementation, there was still not enough evidence in the TE on the ownership and interest in the project from the private sector as well from other national government counterparts, due to which risks due to socio-political factors is rated as 'moderately unlikely'.

Institutional framework and governance

The project was instrumental in equipping the government with the investment plans for RE projects and capacity building of all stakeholder including the government representatives. However, as the TE notes, the strategies and plans developed during the project were not endorsed by the government at the time of the evaluation, despite the willingness amongst new line Ministry of Energy about pursuing the potential of RE in the country in future. Moreover, mini-grid projects supported under the project faced management issues, posing a risk towards their institutional stability. For instance, management of the mini-grid of Bambadinca, which was supposed to serve as a model for replication under the project, was 'jeopardized by the governance of the association itself' (TE, Pg 25). Similarly, management of the Bissora mini-grid was yet to be stabilized at the time of the evaluation. Also, the project could not implement a train-the-trainer scheme that would have ensured continuity of the capacity building on RE in the country due to lack of interest and availability amongst the stakeholders to sustain the effort.

Environmental

The TE assessed the risks due to environmental factors as 'moderately likely' but there was not enough evidence to support this rating. The TE also did not highlight any potential risk factors due to environmental factors.

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?

The TE has presented information on co-financing per project component but did not provide a break down by the source of financing. As per the TE, project mobilized co-financing commitment of at least

USD 22 million for small and medium scale renewable energy technologies (Component 1) as against a target of around USD 9.7 million as mentioned in the Project Document (PD, pg 2). This claim is validated by the TE through cross checking and referring to signed financial commitments by different donors. However, only part of the RE projects were actually operating as others were still at procurement stage or approaching bankable feasibility stage at the time of the TE. Hence, it is difficult to comment on the extent to which the claimed co-financing of USD 22 million would result in concrete activities on ground.

As per the TE, the co-financing against Component 2 and 4 for around USD 75,820 and USD 90,000 was not accounted for. The project did not achieve all the outputs under component 4 related to monitoring and evaluation of project. Some of the outputs under Component 2 were revised by the Project Steering Committee and funds were used for activities not initially listed in the project document. The co-financing of USD 210,000 against component 3 was fully met. The TE also notes that co-financing from government, which was for around USD 500,000 did not materialize.

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?

The project was delayed by one year due to external factors such as difficult political and economic situation as well as Ebola crisis that led to travel restriction and partial lock-downs in the country. As a result, project was granted one year extension without any additional cost or budget implication. Despite extension, some of the projects such as all 3 pilot projects selected under the grant financing window supported by ECOWAS Renewable Energy Facility, were not implemented in timely manner due to delay in mobilizing funds. These projects were selected due to high potential for replication and positive social, economic and environmental impact but could not be fully demonstrated during the project due to delays in mobilizing funds from the private sector.

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.

The project was implemented during a time of political turmoil and uncertainty, which according to the TE, 'prevented a real ownership and coordination by the successive governments' (TE, pg 39). The Project Steering Committee set up for overseeing the progress of the project, was supposed to have representation from Ministry of Energy and Industry (MEINR) and Ministry of Finance, besides other stakeholders. However, it seems that the committee did not have much participation from the government other than National Project Coordinator, who represented the Directorate of Energy. The government also failed to keep its co-financing commitment. Various government departments did participate in the trainings and capacity building activities organized by the project. However, the plans and strategies prepared under the project were yet to be endorsed by the government at the time of the evaluation.

Although the project contributed to improve the capacity of various stakeholders, it had limited success on the willingness of the private sector to invest in renewable energy (TE, Pg 19). Performance of the

other stakeholders such as local institutions, market enablers and the National Utility (EAGB), is not discussed in detail in the TE. It is also not clear if the awareness spread through the project helped in improving the willingness of the recipients/buyers of energy services and technologies.

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.

NA

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

This TER concurs with the TEs assessment that the M&E design at entry was 'satisfactory'. The project document included a project results framework, defining baseline and targets, the proposed indicators and sources of verification for the project development objective, outputs and outcomes to monitor progress. Most of the proposed indicators were smart and could be easily verified. The project had a separate component and budget to support the monitoring and evaluation function, which was well integrated into the project design. The project document clearly indicated the preparation of a monitoring track to report and review project activities and accomplishments. It also clearly defined parties responsible for monitoring the progress of the report, with the provision to use tools such as tracking tools, periodic progress reports, mid and end term evaluation. It also recommended setting up the Project Steering Committee for the overall supervision, review and corrective action during the course of project implementation.

6.2 **M&E Implementation**	MU

The TE concurs with the rating assigned in the TE for the M&E implementation as 'moderately unsatisfactory'. The project failed to establish a M&E system which was supposed to be prepared at the start of the project with results framework defined in the project document as a basis for its development. As per the TE, 'the M&E…done in an ad-hoc way and focused on achieving the project's overall impacts and key results' instead of measuring the progress regularly and a systematic way (TE, pg 27). However, reporting on the progress of the project was done through project implementation reports and project management spreadsheets (based on results framework). The Project Steering Committee (PSC) was also constituted to review the progress from time to time. But the participation of national stakeholders in the PSC was less than expected. Also, due to political instability and Ebola crisis, PSC meetings were reduced from twice to once per year. The project, however, carried out the mid-term evaluation and end of term evaluation as per the schedule. The recommendations from the midterm evaluation were discussed during the PSC meetings for review and corrective action.

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

This TER concurs with the rating assigned by the TE to the quality of project implementation as 'satisfactory'. As per the TE, the UNIDO HQ staff provided adequate support through attending annual meetings, site visits and engaging with the partners and stakeholders. UNIDO had also hired an international consultant, whose support was much appreciated amongst project functionaries. It seems that the National Project Coordinator, responsible for project execution, had adequate technical support from the UNIDO staff for management of the project.

7.2 **Quality of Project Execution**	MU

This TER agrees with the rating provided to the 'quality of project execution' as 'moderately unsatisfactory'. The project was executed through setting up the Project Management Unit (with National project Coordinator as sole member) in the Renewable Energy Unit of the line Ministry of Energy. Overall, the TE highlights challenges in eliciting support from the government due to political instability and frequent changes in the ministry, also reflected in lack of participation of national entities in the Project Steering Committee meetings. However, other executing partner – ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEEE) played a significant and satisfactory role in providing technical assistance, managing grants and hosting the website. Other secondary executing partners – such as Ajuda de Desenvolvimento de Povo para Povo (ADPP) and Associação para o Desenvolvimento pela Tecnologia, Engenharia, Saúde e Educação (TESE) also played a satisfactory role through providing technical support and co-financing for implementation of various project activities.

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.

1. The project showed the importance of partnerships with other donors and development finance institutions.

2. Demonstrative projects with a light management structure have the potential to be catalyzers and bring about change, if they are flexible enough. Even a small project can have significant finance leverage, when focusing on initial technical activities for high-impact projects.

3. The project demonstrated the private sector's general interest to invest in grid-connected and decentralized RE infrastructure, even in the least developed countries (LDCs), with very difficult political contexts. However, stability of the financial sector and its ability to provide affordable financial products remains one of the key barriers for investment and private participation.

4. Partnership with civil society organizations for the delivery of public services is a possible way to manage mini-grids. However, it requires a close monitoring as community structures may lack management capacity and be influenced by financial interests of a part of the group.

5. Awareness through information campaigns among private sector of the benefits (financial and other) to invest in RE can be a main driver of the market.

8.2 Briefly describe the recommendations given in the terminal evaluation.

UNIDO

1. A quick assessment of the changes in conditions should be done and project's context reviewed in case of time lag between the appraisal of a project, approval and the implementation kick off, particularly for countries with political instability.
2. The political instability and weakness of the financial sector leads to limited capacity of the private sector to mobilize the required financing at affordable price and also to a limited appetite for investing. In such cases, innovative ways of getting financing to the private sector by private investors such as impact investing and similar other possibilities should be considered. Alternatively, in countries with very limited access to electricity, if private sector investment component does not advance, the project should consider other possibilities, such as rural electrification.
3. In future projects, UNIDO should provide appropriate training to the national project manager/team on results-based management, M&E, and outcome-oriented reporting.
4. There is a strong need for capacity development to enhance the management of mini-grid utilities.

National Stakeholders

5. Need for more involvement of national stakeholders such as different ministries and representatives of private sector.
6. National stakeholder should be more engaged in awareness raising of the private sector regarding the potential of renewable energy and energy efficiency, namely through showing future financial benefits.

GEF

7. GEF should consider financing a Phase II of the project to ensure replication and scaling up of results.
8. To overcome identified key barriers during the first phase, a particular focus on private-sector approaches in combination with modalities to improve the availability of affordable domestic financing could be laid.
9. The ECOWAS Renewable Energy Facility (EREF) was a first initiative in this context. It could be further expanded and equipped with other financing instruments (e.g. concessional loans, guarantees, insurance products), in partnership with national and development banks.

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?	TE was carried out very close to completion of the project.	S
2. General information: Provides general information on the project and evaluation as per the requirement?	The TE provides all the critical information on the project and evaluation as per requirement	S
3. Stakeholder involvement: the report was prepared in consultation with – and with feedback from - key stakeholders?	The TE notes that evaluation findings, conclusions and recommendations were discussed in detail with the main stakeholders.	S
4. Theory of change: provides solid account of the project's theory of change?	The TE provides a detailed account of the project's theory of change	S
5. Methodology: Provides an informative and transparent account of the methodology?	**The methodology is described in adequate details**	S
6. Outcome: Provides a clear and candid account of the achievement of project outcomes?	All the expected outcomes are not discussed in adequate detail.	MS
7. Sustainability: Presents realistic assessment of sustainability?	**TE doesn't provide a candid and detailed account of some aspects of sustainability. Such as risks from institutional and governance factors are not dealt with in detail. Moreover, the TE does not discuss limited success on the willingness of the private sector to invest in renewable energy, which is mentioned under different section in the report and not taken into account under sustainability.**	MS

8. M&E: Presents sound assessment of the quality of the M&E system?	**M&E is discussed in adequate detail**	S
9. Finance: Reports on utilization of GEF funding and materialization of co-financing?	**The TE does not report or provide a breakdown of materialization of co-financing**	U
10. Implementation: Presents a candid account of project implementation and Agency performance?	Project had more than one executing agency and the TE does not adequately cover the support project had from the government coordinating agency - MEINR	MS
11. Safeguards: Provides information on application of environmental and social safeguards, and conduct and use of gender analysis?	**The TE provides information on gender analysis and not on the application of other environmental and social safeguards**	MS
12. Lessons and recommendations are supported by the project experience and are relevant to future programming?	**Lessons and recommendation are mainly derived from the project experience with few recommendations relevant for future programming**	S
13. Ratings: Ratings are well-substantiated by evidence, realistic and convincing?	**Most of the ratings are well-substantiated but some ratings lack adequate evidence**	MS
14. Report presentation: The report was well-written, logically organized, and consistent?	The report is more or less well written but some of the evidence provided is not adequate to make a convincing and complete argument.	MS
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

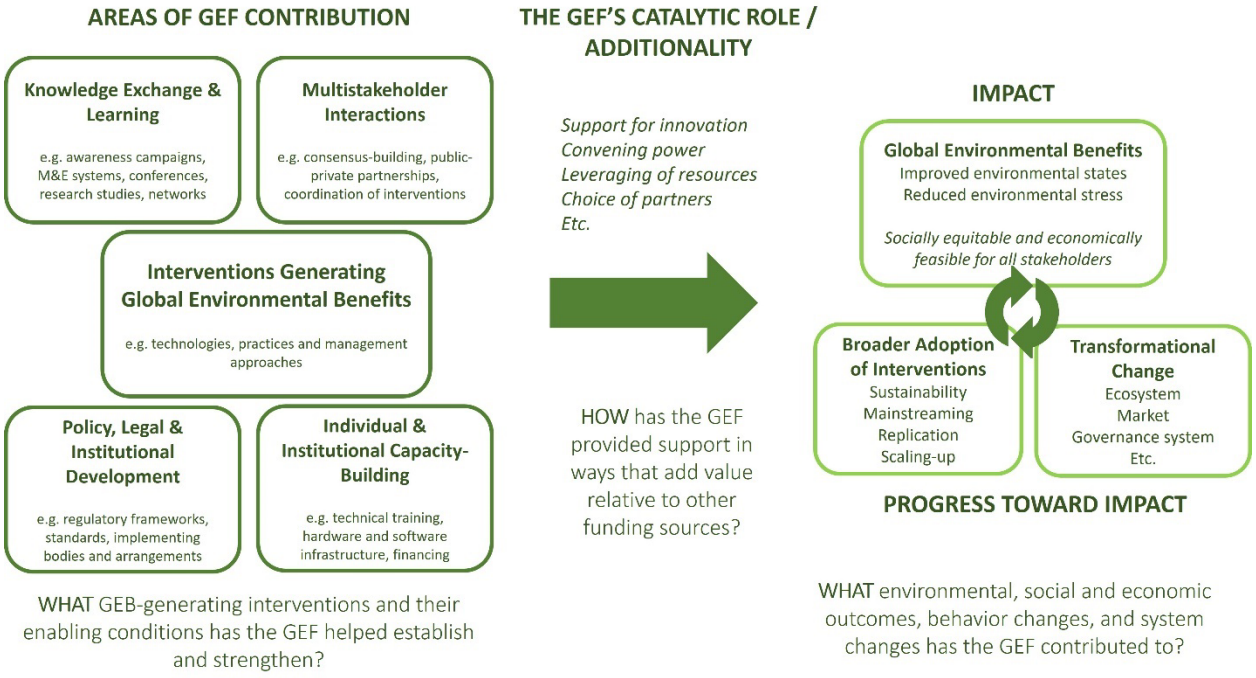

Figure 1. The GEF IEO's updated Theory of Change Framework on how the GEF achieves impact

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