

**Validated Terminal Review of the UNEP Project  
“Renewable Energy Solutions for Industrial Clients  
in Africa (CICSA)” (PIMS ID 0268)  
2019 – 2023**



**UNEP Industry and Economy Division  
Validation date: February 2024**



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Front cover: Solar PV installations at SOTIC company in Kenya, Carolina Merighi

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This report has been prepared by an external consultant as part of a Terminal Review, which is a management-led process to assess performance at the project's operational completion. The UNEP Evaluation Office provides templates and tools to support the review process and provides a formal assessment of the quality of the Review report, which is provided within this report's annexed material. In addition, the Evaluation Office formally validates the report by ensuring that the performance judgments made are consistent with evidence presented in the Review report and in-line with the performance standards set out for independent evaluations. As such the project performance ratings presented in the Review report may be adjusted by the Evaluation Office. The findings and conclusions expressed herein do not necessarily reflect the views of Member States or the UNEP Senior Management.

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## ACKNOWLEDGEMENTS

This Terminal Review was prepared for UNEP, Economy Division, Finance Unit of the Energy and Climate Branch by Andreas Helmut Jahn (Reviewer).

The reviewer would like to express his gratitude to all persons met and who contributed to this review, as listed in ANNEX II.

The reviewer would like to thank the Project Team and in particular Ms Françoise d'Estais and Ms Carolina Merighi for their contribution and collaboration throughout the review process. Sincere appreciation is also expressed to the Members of the Steering Committee, who took time to provide comments to the CICSA Project.

The Reviewer hopes that the findings, conclusions and recommendations will contribute to the successful finalisation of the current project, formulation of a next phase and to the continuous improvement of similar projects in other countries and regions.

Berlin

11<sup>th</sup> December 2023

## BRIEF EXTERNAL CONSULTANT BIOGRAPHY

Mr Andreas H. Jahn (69) is an Energy Economist with more than 40 years of experience in the energy sector. Andreas completed in recent years a number of evaluation projects on behalf of UNEP, UNDP, EU, EBRD, AFD, KfW and EIB on energy projects in various countries (Namibia, Kenya, Ethiopia, Ghana, Eritrea, Rwanda, Tanzania, Uganda, Lebanon, CIS countries, and EU countries). Andreas has studied at Technical University Berlin and was for 18 years Managing Director of an international Engineering and Consulting company. He has worked as an independent freelance consultant since 2006.

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## ABOUT THE REVIEW

**Joint Review:** No

**Report Language(s):** English.

**Review Type:** Terminal Review

**Brief Description:** This report is a management-led Terminal Review of a UNEP/BMWK (former: BMU) project implemented between 2019 and 2023. The project's overall development goal was to support the introduction of clean captive installations (photovoltaic systems) to commerce and industry in Sub-Sahara Africa. The review sought to assess project performance in terms of relevance, effectiveness and efficiency, and determine outcomes and impacts stemming from the project, including their sustainability. The review has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, the Donor (BMWK and formerly BMU) and the relevant agencies of the project participating countries (Ghana, Kenya, Nigeria, South Africa).

**Key words:** Renewable energy, industry sector, Africa, clean captive installations, photovoltaic systems, Sub-Sahara Africa, CICSA, Steering Committee, awareness creation, capacity building, climate change, commerce & industry, BMU, BMWK, UNEP, Frankfurt School, Ghana, Kenya, Nigeria, South Africa

**Primary data collection period:**  
September 2023 to December 2023

**Field mission dates:**  
No field missions were necessary.

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## LIST OF ACRONYMS

AFD	French Development Agency
AfDB	African Development Bank
AMEU	Association of Municipal Electricity Utilities
BAT	Best Available Technologies
BMU	German Federal Ministry for Environment, Nature Conservation and Nuclear Safety (former)
BMWK	German Federal Ministry for Economic Affairs and Climate Action (current)
C&I	Commercial & Industrial
CICSA	Clean Captive Installations for Industrial Clients in Sub-Sahara Africa
CPI	Consumer Price Index
DEFF	Department of Environment, Forestry and Fisheries
DMRE	Department of Mineral, Resources and Energy
DNT	Department of National Treasury
DST	Department of Science and Technology
dtic	Department of Trade, Industry and Competition
DWS	Department of Water and Sanitation
EPC	Engineering, procurement and construction
EPP	Electricity Pricing Policy
ERA	Electricity Regulation Act
ESCO	Energy Service Company
FIRST	The Facility for Investment in Renewable Small Transactions
FIT	Feed-in-Tariff
FNB/RMB	First National Bank / Rand Merchant Bank
FS	Frankfurt School of Finance and Management
FS-UNEP	Frankfurt School-UNEP Collaborating Centre
FS-UNEP CC	Frankfurt School UNEP Collaborating Centre for Climate and Sustainable Energy Finance
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIZ	German International Cooperation Agency
GW	Gigawatt
GWh	Gigawatt-hour
IDC	Industrial Development Corporation
IEP	Integrated Energy Plan
IFC	International Finance Corporation
IKI	International Climate Initiative
INEP	Integrated National Electrification Programme
IPP	Independent Power Producer
IRP	Integrated Resources Plan
KfW	Kreditanstalt für Wiederaufbau
kV	Kilovolt
kVA	Kilovolts-ampere
kWdc	Kilowatt direct current
kWh	Kilowatt-hour
kWp	Kilowatt-peak
LPG	Liquefied Petroleum Gas
MSW	Municipal Solid Waste
MTS	UNEP Medium-Term Strategy
MW	Megawatt

MWh	Megawatt-hour
NDB	New Development Bank
NDP	National Development Plan
NERSA	National Energy Regulator of South Africa
POW	UNEPs Programme of Work
PPA	Power purchase agreement
PV	Photovoltaic
R&D	Research & Development
RECORD	Renewable Energy Centre of Research and Development
REFIT	Renewable Energy Feed-In Tariff
REIPPPP	Renewable Energy Independent Power Producer Procurement Programme
REPA	Renewable Energy Purchasing Policy
SANEDI	South African National Energy Development Institute
SAPP	Southern African Power Pool
SAPVIA	South Africa Photovoltaic Industry Association
SAWEP	South African Wind Energy Programme
SCADA	Supervisory Control and Data Acquisition
SDG	Sustainable Development Goal
SSA	Sub-Sahara Africa
S-SC	South-South Cooperation
SSEG	Small Scale Embedded Generation
SUNREF	Sustainable Use of Natural Resources and Energy Financing
UNEP	United Nations Environment Programme
VAT	Value-added Tax
WASA	Wind Atlas for South Africa
ZAR	South African Rand
ZUG	Zukunft – Umwelt – Gesellschaft gGmbH

**Exchange Rates<sup>1</sup> (interbank rates as of 11 September 2023)**

Euro Zone:	EUR/USD	0.93427
South Africa:	ZAR/USD	19.1048
Ghana:	GHS/USD	11.4394
Nigeria:	NGN/USD	785.141
Kenya:	KES/USD	145.667

<sup>1</sup> Source: <https://www.oanda.com/currency-converter/en/>, 11 September 2023

## PROJECT IDENTIFICATION TABLE

Table 1: Project Identification Table

<b>UNEP PIMS/SMA ID:</b>	PIMS no: 0268	IMPR: 40519	
<b>Donor ID:</b>	German Federal Ministry for Economic Affairs and Climate Action (BMWK) (current); German Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMU) (previously)		
<b>Implementing Partners:</b>	Frankfurt School - UNEP Collaborating Centre for Climate and Sustainable Energy Finance		
<b>SDG(s) and indicator(s)</b>	SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all) and SDG9 (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)		
<b>Sub-programme:</b>	Climate Change	<b>Expected Accomplishment(s):</b>	POW 2018-2019 EA (b) Countries increasingly adopt and/or implement low GHG emission development strategies and invest
<b>UNEP approval date:</b>	24 July 2019	<b>Programme of Work Output(s):</b>	POW 2018-2019 EA (b) Output 5: Readiness of countries and institutions to access or mobilize climate finance strengthened through support to make projects
<b>Start date:</b>	April 2019	<b>Actual start date:</b>	October 2019
<b>Operational completion date:</b>	30 June 2023	<b>Actual operational completion date:</b>	31 October 2023
<b>Total project budget at approval (show breakdown of individual sources/grants):</b>	USD 4,434,199	<b>Actual total expenditures reported as of [date]:</b>	USD 2,844,502, as of 5 June 2023
<b>Expected co-financing:</b>	USD 133,457 (UNEP in-kind)	<b>Secured co-financing:</b>	USD 133,457 (UNEP in-kind)
<b>First disbursement:</b>	October 2019	<b>Planned date of financial closure:</b>	30 September 2023
<b>No. of project revisions:</b>	1	<b>Date of last approved project revision:</b>	24 February 2023
<b>No. of Steering Committee meetings:</b>	4	<b>Date of last Steering Committee</b>	February 2020 March 2021 March 2022 June 2023 Next:
<b>Mid-term Review/</b>	None	<b>Mid-term Review:</b>	2022
<b>Terminal Review</b>	September 2023	<b>Terminal Review:</b>	11/SEP-11/DEC 2023
<b>Coverage - Country(ies):</b>	Sub-Saharan Africa (Ghana, Kenya, Nigeria, South Africa)	<b>Coverage - Region(s):</b>	Sub-Saharan Africa (Ghana, Kenya, Nigeria, South Africa)
<b>Dates of previous project:</b>	n.a	<b>Status of future project</b>	Concept note for Phase II under preparation



## EXECUTIVE SUMMARY

### Project background

1. The background of the CICSА Project and the justification for this intervention is as follows: The biggest economies in Sub-Saharan Africa have well-established industrial and commercial sectors. However, most of them face challenges in terms of further growth due to unreliable or expensive grid-supplied electricity. Expansion of their national industrial sector is hindered by shortage of power, high-energy costs and lack of efficient transmission infrastructure. Accordingly, diesel-powered generators are widely used to back-up the grid or mitigate its fluctuations or as substitutes where there is no grid access. This in turn has a two-fold effect: it increases the total cost spent on electricity for a company, thereby reducing its profit margins; and it generates greenhouse gas emissions that accelerate climate change and cause pollution and health problems.

### This Review

2. The scope of this Terminal Review as described in the given ToR is the CICSА Project over the period of implementation from October 2019 to September 2023 (48 months). Minor activities<sup>2</sup> in the CICSА Project are continuing such knowledge dissemination and fundraising for a second phase. In total 128 documents (reports, papers, contracts, and other documentations) have been collected and reviewed and 17 detailed interviews with the main stakeholders of the CICSА Project have been completed.

### Key findings

3. The project objective of CICSА is to demonstrate the financial and economic viability of captive renewable energy installations at industrial and commercial sites in Sub-Saharan Africa through Pilot Projects in four partner countries (Ghana, Kenya, Nigeria, South Africa) and to disseminate results and enhance their adoption in Sub-Saharan Africa, has been achieved.
4. With reference to the four Components in the project  
Component 1: Baseline studies and awareness raising  
A very detailed and thorough analyses of the energy situation in the four participating countries with regard to captive installations in the C&I sector had been carried out. The Reviewer analysed all Country Reports in detail and states that reports are of very good quality and that they answer the objectives given by the project.  
Component 2: Economic and financial tools and assessments  
Tool 1: "Financing guidelines and business models for solar PV Captive Systems"  
Tool 2: "Metrics for assessing financial viability of renewable energy Projects/Cost Benefit Analysis of renewable energy programmes"  
Tool 3: "User Manual for the preliminary financial model to assess the viability of solar PV captive systems for businesses"  
Tool 4: "Best Available Technology (BAT) for solar PV captive systems"  
All tools had been assessed by the Reviewer in detail. All tools are

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<sup>2</sup> The Final Report on the CICSА Project is planned for March 2024.

completed in very good quality and are very helpful in reaching the given objectives in the CICSА Project<sup>3</sup>.

Component 3: Realization of one Pilot Project per country

In total 6 Pilot Projects had been studied in detail by the Reviewer.

Component 4: Knowledge dissemination and outreach

All expected objectives and results for the CICSА Project have been achieved.

## Conclusions

5. Based on the findings from this review, the project demonstrates performance at the 'Satisfactory' level with a scoring of 5.03 (a table of ratings against all review criteria is found in the Conclusions section, below). The project has demonstrated strong performance in the areas of identification and description of the energy situation at industrial level. Areas that would benefit from further attention are those areas with providing the expertise from within the project to the general public using internet presentation of results achieved and provision of tools for replication processes.

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<sup>3</sup> It should be noted, that these Tools are not directly usable for companies in the C&I sector in SSA as these tools are too detailed and require a lot of know-how to complete the data required. Therefore, the Reviewer understands the Tools provided as an assistance to developers, but not for the final clients.

**Table 2: Overall rating of the CICSA Project**

Evaluation criteria	Rating	Score	Weight	Weighted Score
<b>A Strategic Relevance (select the ratings for sub-categories)</b>	<b>Highly Satisfactory</b>	<b>5,50</b>	<b>6</b>	<b>0,33</b>
<i>Alignment to UNEP's MTS, POW and strategic priorities</i>	Highly Satisfactory	5,50	0,5	
<i>Alignment to Donor/Partner strategic priorities</i>	Highly Satisfactory	5,50	0,5	
<i>Relevance to regional, sub-regional and national issues and needs</i>	Highly Satisfactory	5,50	2,5	
<i>Complementarity with existing interventions</i>	Highly Satisfactory	5,50	2,5	
<b>B Quality of Project Design</b>	<b>Highly Satisfactory</b>	<b>5,50</b>	<b>4</b>	<b>0,22</b>
<b>C Nature of External Context</b>	<b>Favourable</b>	<b>5,00</b>		
<b>D Effectiveness (select the ratings for sub-categories)</b>	<b>Satisfactory</b>	<b>4,83</b>	<b>45</b>	<b>2,18</b>
<i>Availability of outputs</i>	Highly Satisfactory	5,50	5	
<i>Achievement of project outcomes</i>	Highly Satisfactory	5,50	30	
<i>Likelihood of impact</i>	Unlikely	2,50	10	
<b>E Financial Management (select the ratings for sub-categories)</b>	<b>Highly Satisfactory</b>	<b>5,50</b>	<b>5</b>	<b>0,28</b>
<i>Adherence to UNEP's policies and procedures</i>	Satisfactory	4,50		
<i>Completeness of project financial information</i>	Highly Unsatisfactory	5,50		
<i>Communication between finance and project management staff</i>	Highly Satisfactory	5,50		
<b>F Efficiency</b>	<b>Satisfactory</b>	<b>5,00</b>	<b>10</b>	<b>0,50</b>
<b>G Monitoring and Reporting (select the ratings for sub-categories)</b>	<b>Highly Satisfactory</b>	<b>5,50</b>	<b>5</b>	<b>0,28</b>
<i>Monitoring design and budgeting</i>	Satisfactory	5,50		
<i>Monitoring of project implementation</i>	Satisfactory	5,50		
<i>Project reporting</i>	Satisfactory	5,50		
<b>H Sustainability (select the ratings for sub-categories)</b>	<b>Likely</b>	<b>5,00</b>	<b>20</b>	<b>1,00</b>
<i>Socio-political sustainability</i>	Highly Likely	6,00		
<i>Financial sustainability</i>	Likely	5,00		
<i>Institutional sustainability</i>	Highly Likely	6,00		
<b>I Factors Affecting Performance (select the ratings for sub-categories)</b>	<b>Likely</b>	<b>5,06</b>	<b>5</b>	<b>0,25</b>
<i>Preparation and readiness</i>	Likely	5,00		
<i>Quality of project management and supervision</i>	Likely	5,00		
<i>UNEP/Implementing Agency: (select the ratings for sub-categories)</i>	Highly Likely	5,50		
<i>Partner/Executing Agency: (select the ratings for sub-categories)</i>	Likely	4,50		
<i>Stakeholder participation and cooperation</i>	Highly Likely	5,50		
<i>Responsiveness to human rights and gender equity</i>	Likely	5,00		
<i>Environmental and social safeguards</i>	Highly Likely	5,50		
<i>Country ownership and driven-ness</i>	Highly Likely	5,50		
<i>Communication and public awareness</i>	Moderately Likely	4,00		
			<b>100</b>	<b>5,03</b>
			<b>Satisfactory</b>	

## Lessons Learned

6. Lesson Learned #1: Huge market for clean captive installations in the C&I sector in SSA: There is definitely a huge market in Africa for photovoltaic systems in the commerce & industry sector. This has been clearly developed by the CICSA Project, both by the country assessments and by the Pilot Projects with comparatively short pay-back periods due to high electricity prices and load-shedding in these countries.
7. Lesson Learned #2: Transfer of know-how gathered in the CICSA Project to scale-up in other regions of SSA: The information (Country Reports, Tools, Pilot Studies and others) collected for the four countries (Ghana, Kenya, Nigeria and South Africa) within the CICSA Project could be transferred to their neighbouring countries to disseminate clean captive solutions for the C&I sector in SSA.
8. Lesson Learned #3: Assistance and guidance by professional “developers” still required for CCI in C&I sector of SSA: Companies and institutions in the C&I sector of SSA still require professional assistance by professional “developers” to initiating and implementing their project ideas on clean

captive energy solutions. There is definitely a huge market in Africa for photovoltaic systems in the commerce & industry sector. This has been clearly developed by the CICSAs Project, both by the country assessments and by the Pilot Projects with comparatively short pay-back periods due to high electricity prices and load-shedding in these countries.

## Recommendations

9. Based on discussion with the stakeholders of the CICSAs Project and based on detailed analysis of documents provided by the CICSAs Project, the Reviewer gives the following two main recommendations to UNEP:
10. Recommendation 1 “Additional Countries”: In order to deepen captive energy solutions in Africa in a Phase II the project should disseminate its know-how on two ways: (1) Using road-shows and regional workshops to disseminate and scale-up investments in the participating four countries, while using established contacts and information collected in Phase I, and in parallel (2) to disseminate captive energy solutions to less developed and less mature markets (Cameroon, Madagascar, South Sudan, Cape Verde) as a regional assessment has shown that these are “extreme” markets (no licensing, no regulation, no feed-in tariff) and here also policy support would be useful.
11. Recommendation 2 “Additional Pilot Projects”: Keeping the homepage and the information on the homepage with country reports, various tools and pilot Projects for any interested persons, companies and institutions for a reasonable period (for at least two years until end of 2025). Fastening grant procedures by a general approval to PMU for any Pilot Projects allowing faster implementation of the Pilot Projects.

**Validation:** The report has been subject to an independent validation exercise performed by UNEP’s Evaluation Office. The performance ratings for the UNEP project ‘Renewable Energy Solutions for Industrial Clients in Africa (CICSAs)’ set out in the Conclusions and Recommendations section, have been adjusted as a result. The overall project performance is validated at the ‘**Highly Satisfactory**’ level. The Evaluation Office has found the overall quality of the report to be ‘**Moderately Satisfactory**’ (see Annex IX)

## I. INTRODUCTION

12. The scope of this Terminal Review as described in the given ToR<sup>4</sup> is the CICSA<sup>5</sup> project over the period of implementation from October 2019 to September 2023 (48 months). Minor activities in the CICSA Project are continuing<sup>6</sup>. The preparation of the Final Report<sup>7</sup> is planned for March 2024.
13. The project objective of CICSA is to demonstrate the financial and economic viability of captive renewable energy installations<sup>8</sup> at industrial sites in Sub-Saharan Africa through Pilot Projects in four partner countries and disseminate results and enhance their adoption in Sub-Saharan Africa<sup>9</sup>.
14. Formerly for UNEP the project is named "CLEAN CAPTIVE INSTALLATIONS FOR INDUSTRIAL CLIENTS IN SUB-SAHARA AFRICA" however, for the wider public it is referred to as "RENEWABLE ENERGY SOLUTIONS FOR INDUSTRIAL CLIENTS IN AFRICA" to ease communication processes and getting more acceptance by stakeholders in Africa.



**Figure 1: Solar PV installations on the roof of SOTIC company in Kenya (Photo: Carolina Merighi, January 2023)**

15. The background of the CICSA Project and the justification for this intervention is as follows: The biggest economies in Sub-Saharan Africa have well-established commercial and industrial sectors. However, most of them face challenges in terms of further growth due to unreliable or expensive grid-supplied electricity. Expansion of their national industrial sector is hindered by shortage of power, high-energy costs and lack of efficient transmission infrastructure. Accordingly, diesel-powered generators are widely used to

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<sup>4</sup> United Nations Environment Programme: Terms of Reference, Terminal Review of the UNEP project "Renewable Energy Solutions for Industrial Clients in Africa", Project ID: 125.3 (33 p) Paris, revised version 21 March 2023

<sup>5</sup> CLEAN CAPTIVE INSTALLATIONS FOR INDUSTRIAL CLIENTS IN SUB-SAHARA AFRICA.

<sup>6</sup> All project activities were completed by 30 September 2023.

<sup>7</sup> The Final Report to the client (BMWK) is due on 31 March 2024.

<sup>8</sup> "Captive installations" refer to the energy producing technologies, primarily diesel generators, installed by industrial organisations throughout Sub-Saharan Africa as back-up and fluctuation mitigation systems to an un-reliable or un-available grid. Those installations are deemed captive as the electricity produced is primarily generated for the industrial plant's own and the neighbouring communities' use.

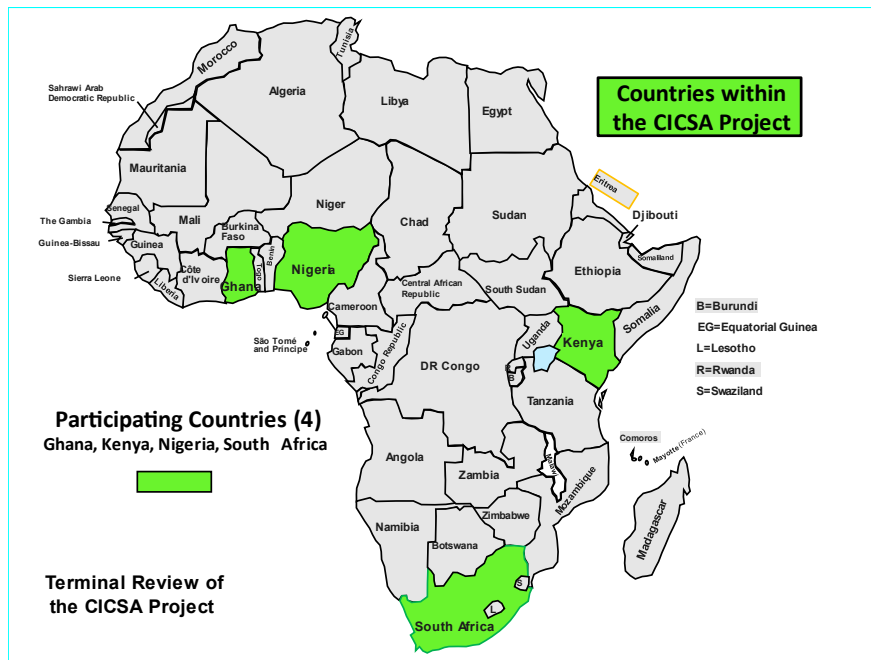
<sup>9</sup> Here we refer to United Nations Environmental Programme: Project Document – Renewable Energy Solutions for Industrial Clients in Africa, ProDoc (91 p), signed on 24 July 2019.

back-up the grid or mitigate its fluctuations or as substitutes where there is no grid access. This in turn has a two-fold effect: it increases the total cost spent on electricity for a company, thereby reducing its profit margins; and it generates greenhouse gas emissions that accelerate climate change and cause pollution and health problems.

16. To meet the climate and development goals of the Paris Agreement, the 2030 Agenda, as well as the "AGENDA 2063" of the African Union, developing countries engage on a low-carbon development pathway, minimizing their CO<sub>2</sub> emissions whilst ensuring development of their economies. This is why the UNEP, in partnership with its collaborating centre at Frankfurt School of Finance and Management, is implementing "Clean Captive Installations for Industrial Clients in Sub-Sahara Africa (CICSA)" in four African countries: Ghana, Kenya, Nigeria and South Africa<sup>10</sup>.
17. Institutional context of the CICSA Project is as follows: This project is part of the International Climate Initiative (IKI) of Germany. The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports this initiative based on a decision adopted by the German Bundestag. With the 2021 German federal elections, there was a reshuffling of Ministries and the project is now under the responsibility of the German Federal Ministry for Economic Affairs and Climate Action (BMWK). And, the given ToR, especially defined in ANNEX VIII, suggests also reference to UNEP internal processes; Medium Term Strategy, Programme of Work and the location of the unit managing the project (Industry and Economy Division, Energy and Climate Branch, Finance Unit).
18. The project aims to demonstrate the economic and financial viability of clean captive energy installations for industries and enhance their adoption of a replicable model in the four partner countries and beyond to the entire continent. Captive renewable energy installations reduce the pressure of electricity generation from national grids and reduce industrial clients' needs to rely on private supplementary fossil-fuelled generators, which are expensive to run. These clean captive installations are frequently referred to as second generation of renewable energy business models, as they do not rely on national governments' incentivizing policies to enhance the deployment of clean energy technologies.

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<sup>10</sup> The Project concept was derived from a publication prepared under a previous Energy & Climate Branch project on off-grid renewable energy projects. The report prepared by the Frankfurt School UNEP Collaborating Centre in 2015 was titled: "Renewable Energy in hybrid mini-grids and isolated grids: economic benefits and business cases". Following an indication of interest by potential donor Germany BMU, a Project proposal was developed building the expertise of the Energy & Climate branch in the mobilisation of private sector for clean energy technology dissemination, the technical financial expertise of the Frankfurt School UNEP Collaborating Centre, and the country knowledge and contacts of the Africa Office and its sub regional offices in Pretoria and Abidjan.



**Figure 2: Countries participating in the CICS Project (Ghana, Kenya, Nigeria, South Africa)**

19. The project will strengthen the ability of countries to move towards low carbon-emitting development strategies. It also contributes to several Sustainable Development Goals, including Climate Action (SDG 13), Responsible Consumption and Production (SDG 12), Affordable and Clean Energy (SDG 7), and Industry, Innovation and Infrastructure (SDG 9). The project will raise awareness amongst industry players, financiers and governments, and support dissemination of clean modern energy technology and leapfrogging of the right business models in Sub-Saharan Africa.
20. Engaging with national public authorities and private sector actors, the project focuses on the financial barriers that hinder the greening of private clean energy generation installations. Industrial actors could turn to available and cost-competitive captive renewable energy sources but are often reluctant to increase their capital intensity for non-core business activities and find it difficult to access third party finance.
21. Ghana, Kenya, Nigeria and South Africa have been selected due to the size and growth of the economy, the existence of an electricity supply gap or an unreliable supply, high end-user tariffs for industrial users and the project's convergence with government strategy. Depending on the local baseline circumstances, clean captive industrial installations provide clean reliable electricity supply, energy cost savings, autonomy from the grid supply, or a combination of those elements.
22. The lessons learnt and knowledge created by the project will be shared within the partner countries and beyond to the Sub-Saharan African region to enhance awareness and replication.

**Table 3: Review of the CICSA Project**

Review of the project design of the project “Renewable Energy Solutions for Industrial Clients in Africa (CICSA)”
✓ UNEP initiated project in 2017 ✓ Project implementation of CICSA from October 2019 to September 2023 (48 months) ✓ The intention was to demonstrate implementation of PV systems in the industry sector in Africa and to disseminate information of captured energy systems in Sub-Sahara Africa ✓ The CICSA Project supports SDG 13, SDG 12, SDG 7 and SDG 9 ✓ Countries covered: Ghana, Kenya, Nigeria, South Africa ✓ Total budget USD 4,434,199 (donors: BMWK, previously BMU) ✓ Co-financing: USD 133,457 by UNEP (in-kind contribution)

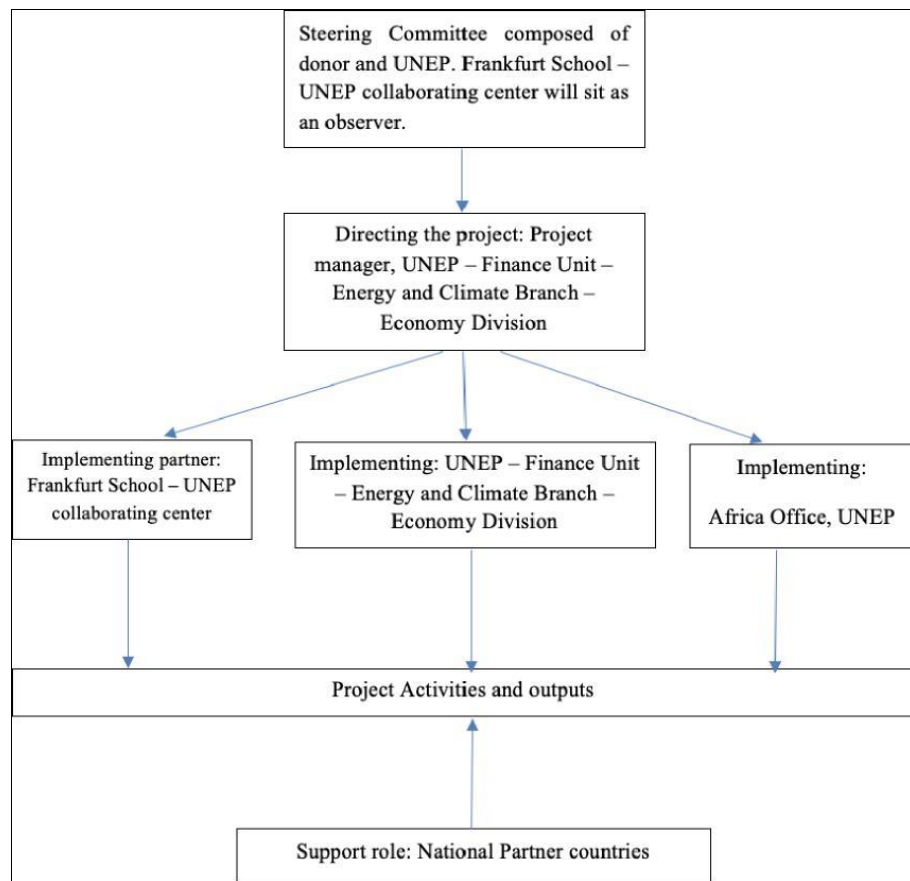
23. This Terminal Review is expected to help UNEP to identify key lessons on designing, planning, management arrangements and project implementation that will provide a useful basis for improved project design, partnerships and delivery. The immediate and priority users of the Terminal Review is the UNEP management (including Industry and Economy Division<sup>11</sup> and Africa Regional Office), the sub-programme coordinator of Climate Change and UNEP units and staff involved in renewable energy as well as BMWK. Interest in the Terminal Review is likely to be shown by other stakeholders and partners, including: the project partner countries, donors and others working in the area of captive energy, research centres and academia.



**Figure 3: CICSA Project Team at Fresha Dairy Farmers Co-operative in Kenya (Photo: Carolina Merighi, January 2023)**

<sup>11</sup> <https://www.unep.org/about-un-environment-programme/why-does-un-environment-programme-matter/divisions>, downloaded on 01 October 2023





**Figure 4: Organisation of the CICS Project<sup>12</sup>**

24. The organisation of the project is as follows: “UNEP is responsible for overall Project Management. The Economy Division, Energy and Climate Branch, Finance Unit and the Africa Office implement project activities with the Economy Division directly accountable for project implementation, progress monitoring, and reporting. UNEP works with the Donor and national partner countries on the Steering Committee who provide strategic guidance for project implementation and approve any deviation from the originally approved project proposal. It also works with its implementing partner, the Frankfurt School-UNEP Collaborating Centre for Climate & Sustainable Energy Finance, who provides financial and technical expertise to engage with public and private stakeholders to ensure that the project is adapted to local conditions”. Frankfurt School also implemented project activities. They hired local consultants during the inception phase for the initial country analyses.

25. The assignment for this Terminal Review started on 11 September 2023 and will be completed on 11 December 2023. This allows time between the work to be done by the Reviewer (desk reviews of documents, interviews pending on availability of experts) and the review process on the findings and recommendations. The Terminal Review is based on given Terms of References and the general and specific review guidelines of UNEP.

<sup>12</sup> UNEP – Finance Unit: Clean Captive Installations for Industrial Clients in Sub-Sahara Africa - Mid-Term Evaluation (25 pages) June 2022.

## II. REVIEW METHODS

### Planned review process and deliverables

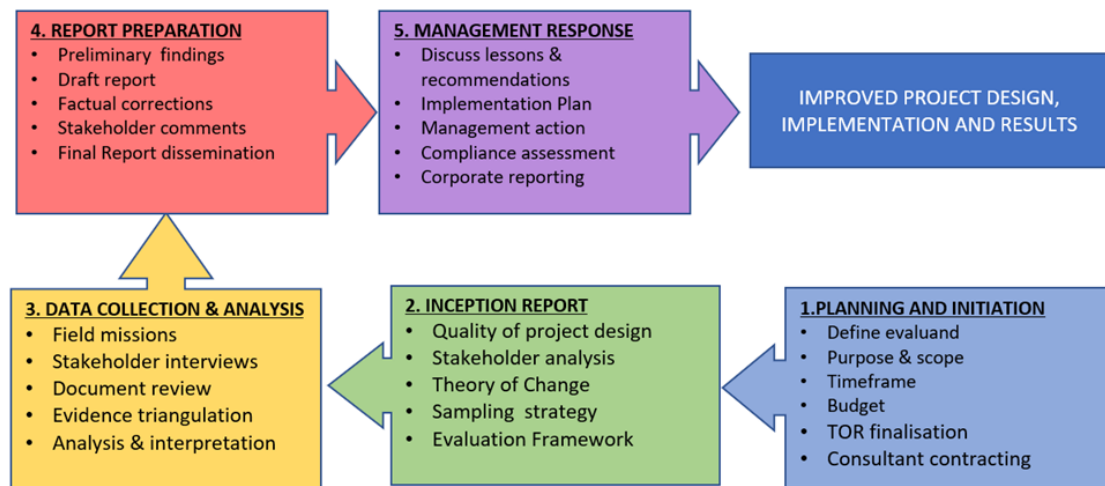
26. The Review Consultant prepares:
- Inception Report: see ANNEX IV.G for a list of all templates, tables and guidance notes.
  - Preliminary Findings: in the form of a PowerPoint presentation, the sharing of preliminary findings is intended to support the participation of the Project Team, act as a means to ensure all information sources have been accessed and provide an opportunity to verify emerging findings.
  - Draft Final Review Report: containing an Executive Summary that can act as a stand-alone document; detailed analysis of the review findings organised by review criteria and supported with evidence; lessons learned and recommendations and an annotated ratings table.
  - Review of the Draft Review Report: The Reviewer will submit a draft report to the UNEP Project Manager and revise the draft in response to their comments and suggestions. The UNEP Project Manager will then forward the revised draft report to other project stakeholders, for their review and comments. Stakeholders may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions as well as providing feedback on the proposed recommendations and lessons. Any comments or responses to draft reports will be sent to the UNEP Project Manager for consolidation. The UNEP Project Manager will provide all comments to the Review Consultant for consideration in preparing the final report, along with guidance on areas of contradiction or issues requiring an institutional response.
27. The UNEP Evaluation Office provides templates and tools (see ANNEX IV.G) to support the review process and provides a formal assessment of the quality of the final Terminal Review report, which is provided within this report's annexed material. In addition, the Evaluation Office formally validates the report by ensuring that the performance judgments made are consistent with evidence presented in the Review report and in-line with the performance standards set out for independent reviews. As such the project performance ratings presented in the Review report may be adjusted by the Evaluation Office. At the end of the review process, the UNEP Project Manager prepares a Recommendations Implementation Plan in the format of a table, to be completed and updated at regular intervals, and circulate the Lessons Learned.
28. The entire procedure of this Terminal Review follows the guidelines given by UNEP<sup>13</sup>.

### Review Framework

29. The Reviewer has constructed a review framework that includes detailed review questions with respect to the review criteria and linked to documents. The questionnaire is added with some topics raising from Project Design Quality and ToC analysis.

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<sup>13</sup> Evaluation Office of UNEP: Evaluation Methodology, Nairobi 08.11.2021.



**Figure 5: Evaluation Methodology (Source UNEP<sup>14</sup>)**

30. The Terminal Review is done in line with the UNEP Evaluation Policy, the UNEP Programme Manual and the Guidelines. In conducting this Terminal Review the Reviewer uses a set of nine commonly applied review criteria which include:

- (A) Strategic Relevance,
- (B) Quality of Project Design,
- (C) Nature of External Context,
- (D) Effectiveness (incl. availability of outputs; achievement of outcomes, ...)
- (E) Financial Management,
- (F) Efficiency,
- (G) Monitoring and Reporting,
- (H) Sustainability and
- (I) Factors Affecting Project Performance and Cross-Cutting Issues.

31. Most review criteria are rated on a six-point scale as follows: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Sustainability and Likelihood of Impact are rated from Highly Likely (HL) down to Highly Unlikely (HU) and Nature of External Context is rated from Highly Favourable (HF) to Highly Unfavourable (HU). The ratings against each criterion are 'weighted' to derive the Overall Project Performance Rating. The greatest weight is placed on the achievement of outcomes, followed by dimensions of sustainability. In addition to the nine review criteria outlined above, the Terminal Review will address a number of strategic questions.

32. This Terminal Review adopts a participatory approach, this means, that the Reviewer will consult with Project Team, partners and beneficiaries at several stages throughout the process. Consultations are held during the review inception phase to arrive at a nuanced understanding of how the project intended to drive change and what contributing conditions ('assumptions' and 'drivers') would need to be in place to support such change.

<sup>14</sup> Evaluation Office of UNEP: Evaluation Methodology, Nairobi 08.11.2021, page 3.

33. The different groups will be mainly consulted through online interviews and, in general, on individual base. The Reviewer conducted 17 detailed interviews with key stakeholders (see ANNEX II).

#### **Review data sources**

34. A great deal of information is gathered from 128 written sources and documents<sup>15</sup>, which can be seen in ANNEX IV and in the References (CHAPTER VII). Those documents are examined during the course of the review process. Methods to ensure that potentially excluded groups (excluded by gender, vulnerability, disability or marginalisation) are reached and their experiences captured effectively, are made explicit in this section.
35. The Reviewer designed a data collection tool and presents a questionnaire for interviews in the ANNEX III. In total, 17 interviews had been carried out by the Reviewer. In the interviews, efforts were made to interview both men and women to ensure a good gender balance.

#### **Limitations to the review**

36. Any review is somehow limited to the information and material made available to the Reviewer. In general, the Reviewer has had sufficient material for this process.
37. Within the country analyses, mainly officials in the respective ministries, scientific experts and persons from private sector (utilities, developers) were interviewed. It was difficult to get in contact to representatives of local communities at the Pilot Projects due to traveling restrictions and possible difficulties in communication. To overcome these limitations, the Reviewer put special emphasis on the sites while drafting and executing the interviews with stakeholders.

#### **Key strategic questions**

38. In addition to the evaluation criteria the Terminal Review addressed the strategic questions listed in ANNEX III in the left column. These are questions of interest to UNEP and to which the project is believed to be able to make a substantive contribution.

#### **Reviewed documents, minutes of meetings and other records**

39. The Reviewer uses all means to collect necessary data for the review process, which includes reports, record notes of meetings, workshops, conference proceedings, presentations, and other material relevant to the CICSA Project review:
- ✓ Published data on the CICSA Project, which is available on internet homepages
  - ✓ List of documents listed in a folder and prepared by the Evaluation Office
  - ✓ Documents received from UNEP Project Management team
  - ✓ Documents to be recommended to be evaluated during interviews from interview partners
  - ✓ Other relevant documents based on previous experience of the Reviewer in "review projects" and "captive energy projects"

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<sup>15</sup> Excluding those documents related to the evaluation process itself.

Interviews and discussions with Project Manager, Project Officer and main stakeholders

- ✓ Questionnaires as described in ANNEX III
- ✓ Other data collection tools, as checklists, observations, surveys, and others, where appropriate for the Terminal Review.



**Figure 6: Photo from Holy Family Hospital with its PV installations in Ghana (Photo: Yamini Jain, May 2023)**

#### **Questionnaire for interviews during Terminal Review**

40. The following questions are answered within the Terminal Review:
- ✓ What was your role in the CICSA Project and for how long have you been involved in the CICSA Project?
  - ✓ Was the CICSA Project useful for you and your organisation?
  - ✓ To what extent was the CICSA Project useful for RE and industrial PV use in Africa?
  - ✓ What are in your opinion the strengths and weaknesses of the project?
  - ✓ How did COVID19 influence the CICSA Project?
  - ✓ What is your opinion on the CICSA Project?
  - ✓ How do you see the management of the project?
  - ✓ How do you see the governance of project?
  - ✓ What are the lessons learned from the implementation in the project?
  - ✓ Additionality of CICSA support?
  - ✓ Is the project sustainable without support by UNEP?
  - ✓ Any other comments or observations on the CICSA Project in Africa?
  - ✓ What are your recommendations for future design of RE projects in Africa?
  - ✓ Is the captive sector a solution to Africa energy challenge? Does it receive the attention needed?
  - ✓ For what reason the installed capacity of RE in Africa is different by countries?
  - ✓ Any idea on a potential 2nd Phase of the CICSA Project?
  - ✓ Was the design for the CICSA Project adequate?
  - ✓ How should be a design for future projects on the CICSA topic?
  - ✓ Did the CICSA Project supports the needs of the country?
  - ✓ Did the Pilot Projects assist project developers and financiers?

- ✓ How do you see the role of UNEP and where is UNEP added-value?
- ✓ To whom should we speak in addition to you?
- ✓ Other topics or comments?

41. All in all, 17 stakeholders had been contacted and interviewed for the Terminal Review representing all aspects of the CICSА Project. Out of the four African Members of the Steering Committee all of them have been interviewed in detail.

### III. THE PROJECT

#### A. Context

42. In this CHAPTER the Reviewer confirms and presents the formulation of planned project outputs and expected outcomes based on the given ToR for the Terminal Review dated 21 March 2023 (see in detail in ANNEX VIII). The project is assessed against its intended results in the Theory of Change (ToC) as presented in Figure 11.
43. The project has one “Direct Outcome” which is described as follows. “Private industrial and financial sector stakeholders successfully develop Pilot Projects, demonstrate the captive renewable energy business model and raise peer awareness to the partner countries.”
44. The project’s activities as defined in the ToR are suited to the priorities and policies of the donor organisations and the target beneficiaries. The activities defined in the ToR lead to the respective four Outputs. The ToR of the project with its four Components ensure economic and financial viability of clean captive energy installations.

#### B. Objectives and components

45. The project objective of CICSA, to demonstrate the financial and economic viability of captive renewable energy installations at industrial sites in Sub-Saharan Africa through Pilot Projects in four partner countries (Ghana, Kenya, Nigeria, South Africa) and to disseminate results and enhance their adoption in Sub-Saharan Africa, has been achieved.
46. The four Components are as follows:
  - Component 1: Baseline studies and awareness raising  
Awareness of the project is raised with both public and private sector stakeholders, whose feedback is integrated into the project design. This initial phase sees country studies being prepared and scoping missions completed in each partner country.
  - Component 2: Economic and financial tools and assessments  
Tools for assessment of financial and economic viability and suitable financing structures of clean captive installations are elaborated and disseminated among industrial and commercial actors, national and international financiers, and national public institutions. The selection criteria for the national Pilot Projects are defined.
  - Component 3: Realization of one Pilot Project per country  
Four viable and replicable Pilot Projects with industries, one in each partner country, are selected, developed, financially structured, realized and monitored. The country-tailored business models will allow for replicability at the national scale, and in similar contexts.
  - Component 4: Knowledge dissemination and outreach  
Through a knowledge management strategy to be designed jointly with stakeholders, case studies on Pilot Projects are prepared and published, project results and knowledge disseminated through national, regional and other events and other relevant means to allow replication at both national and regional levels.

47. The four outputs refer to these four Components described above:

- Output 1: Design framework of the project is finalized and includes partner countries stakeholders' feedback.
- Output 2: Commercial and industrial stakeholders have access to assessment tools of the financial and economic viability and viable financing structure of on-site renewable energy installations.
- Output 3: Industrial developers and financiers of Pilot Projects have demonstrated the financial and economic viability of on-site renewable energy installations and increased their capacity.
- Output 4: Public and private industrial and financial sector stakeholders are aware of the Pilot Projects, and have access to the knowledge developed on clean captive installations business models and financing structures.

### **C. Stakeholders**

48. The Reviewer has identified a number of key stakeholders and the levels of influence and interest for each stakeholder group during the course of the project (2019-2023) according to given outline of UNEP. This means, that the Reviewer understands "stakeholders broadly as all those who are affected by, or who could affect (positively or negatively) the project's results"<sup>16</sup>.

49. At a disaggregated level the Reviewer has identified these key groups, such as implementing partners, government officials, and industry and commerce. Beneficiaries are commerce and industries, households, businesses, producers of captive energy equipment and tradespeople, that use these captive energy installations.

50. The main stakeholders in the CICSА Project are:

#### CICSА Project Team:

- ✓UNEP, Industry and Economy Division – Finance Unit, Paris, France
- ✓UNEP Project Management – Africa Office, Nairobi
- ✓Frankfurt School - UNEP Collaborating Centre for Climate & Sustainable Energy Finance

#### African Ministries and governmental organisations in the CICSА Project:

- ✓Department of Trade and Industry, South Africa\*
- ✓SANEDI, South Africa
- ✓IPP Office, DoE, Pretoria
- ✓Ministry of Energy and Petroleum, Ghana\*
- ✓Manufacturing Industry Department, Ghana
- ✓Environmental Protection Agency, Ghana
- ✓Ministry of Energy, Kenya\*
- ✓Ministry of Environment and Forestry, Kenya
- ✓Energy Commission of Nigeria\*
- ✓Department of Climate Change, Nigeria

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<sup>16</sup> For details: Evaluation Office of UNEP: Stakeholder Analysis in the Evaluation Process, Nairobi 12.08.2021, page 1.



### Members of CICSA's Steering Committee

#### Donor organisations in relation to CICSA:

- ✓ Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), Germany (former)
- ✓ German Federal Ministry for Economic Affairs and Climate Action (BMWK), Germany (current)

#### Other investors and engineering and financing institutions / companies within the CICSA Project:

- ✓ IRENA
- ✓ Zukunft – Umwelt – Gesellschaft (ZUG), Germany
- ✓ Stella Futura, Africa
- ✓ St. Mary's Hospital, Ghana
- ✓ Christian Health Association of Ghana (CHAG)
- ✓ Tree.Sea\_mals, Kenya
- ✓ Burma Market, Kenya
- ✓ OFGEN, Kenya
- ✓ New Sotik KCC, Kenya<sup>17</sup>
- ✓ Ecoligo, Kenya
- ✓ Fresha Dairies, Kenya
- ✓ PowerGEN / TFE, Nigeria
- ✓ Eye Foundation Centre Ijebu Imushin, Nigeria
- ✓ SOLA Assets / Orionis Fund, South Africa

51. The main stakeholders were identified during the ProDoc development, and this analysis was kept throughout the project.
52. The Project direct beneficiaries are the industrial partners in the four partner countries Ghana, Kenya, Nigeria, South Africa, who are regularly suffering from unexpected blackouts or load shedding and high electricity tariffs from the national grid and are using back up diesel generators. By proving new renewable energy business models through clean captive installation for industrial organisations through four Pilot Projects and raising awareness, the CICSA Project affects most industrial companies, whose behaviour is expected to change as they will be incentivized to move from grid and/or fossil-fuel based self-power generation facilities to renewable energy captive generation to be introduced in off-grid and/or an-grid parallel mode, as applicable.
53. Financial institutions in partner countries and in the region will also benefit from the CICSA Project. An in-depth financial assessment of the contemplated models and attractive financial structures is designed to support their investment in the Pilot Projects, enabling them to acquire transaction experience, create market precedents and demonstrate acceptable risk/return profiles to the industry. It is expected that reducing financial institutions' risk-perception of renewable energy captive installations will un-lock investment.
54. Renewable energy technology providers offering hybrid renewable energy/diesel integration systems incl. battery storage (high renewable penetration technologies preferred to mitigate carbon emissions as much as

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<sup>17</sup> This company is an offtake of OFGEN.

possible) who will be equipped with the tools to prepare a well-balanced financial and economic viability assessment, will also benefit from the CICSA Project.

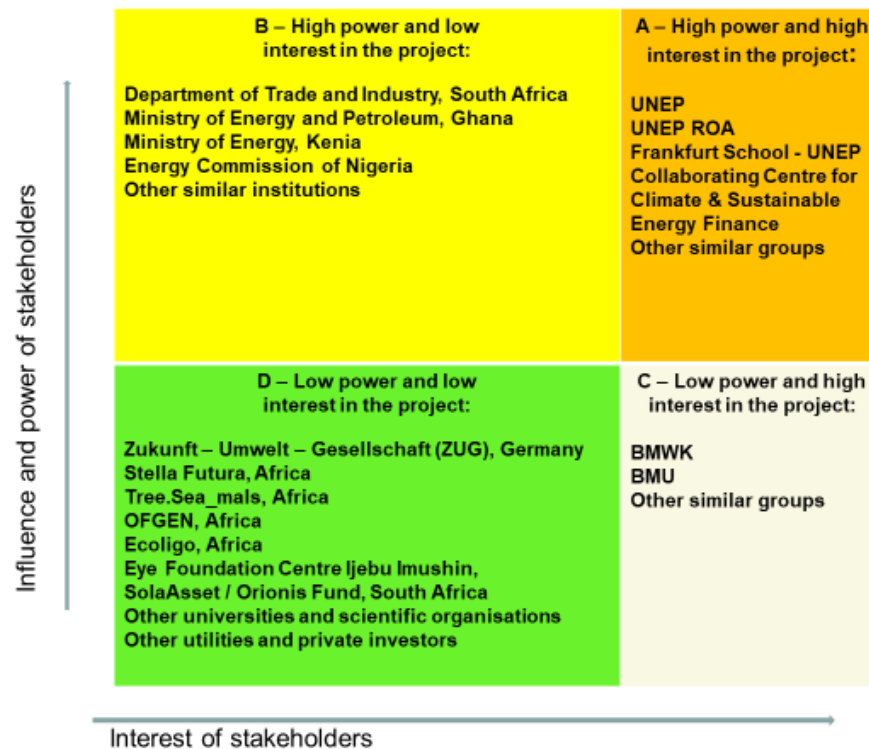
55. National utilities, who will be able to reduce the pressure from the national grid as well as benefit from the surplus of electricity generated to be fed in the grid, especially in countries where the electricity supply is not sufficient to cover the entire country's demand.



**Figure 7: Solar PV installations at Fresha Dairy Farmers Co-operative in Kenya (Photo: Carolina Merighi, January 2023)**

56. UNEP manages the Project and takes responsibility for the implementation of the Project activities. Project activities will be carried out either directly by UNEP or indirectly through implementing partner and UNEP Collaborating Centre, the Frankfurt School of Finance and Management.
57. Frankfurt School of Finance and Management provides for financial expertise and related technical services across the whole duration of the Project.
58. Cooperation with national industry associations is ensured, since they have a multiplier effect in raising awareness of the national industry communities.
59. Additional stakeholders: The project design includes scoping missions to engage with public and private stakeholders in the four partner countries and increase local visibility and build ownership early on in Project implementation. Activities have also been planned such as pre-Pilot Project selection workshops and meetings in the partner countries, and end-of-Project results dissemination workshops at the end of the Project. Tools and guidelines, Pilot Project results will be made available in the public domain and disseminated widely on the ground through local ministries and industrial associations to maximise the impact of the Project in the partner countries and henceforth in the Sub-Saharan Africa region. Complementary development initiatives have also been identified with which partnerships may be developed to build on synergies and enhance impact.
60. Funding partner: The funding comes from BMU, the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (currently known as the German Federal Ministry for Economic Affairs and Climate

Action (BMWK)). Discussions have been held and a formal proposal has been finalized and presented to BMU early February 2019.



- Type A: High power / high interest over the project = Key player
- Type B: High power / low interest over the project = Meet their needs
- Type C: Low power / high interest over the project = Show consideration
- Type D: Low power /low interest over the project = Least important

**Figure 8: Stakeholder analysis in the CICSA Project according to “level of interest” and to “level of power and influence”**

61. Type A stakeholders are considered to be the main influencing partners in this project. They are the “motor” of getting captive energy installations to Africa. Type B stakeholders mainly consist of Ministries that have a responsibility for energy production in the respective country and that can stimulate installations of captive energy solutions. They have relative high power on implementing, but their interest in projects is usually limited, as long as there are no priorities set by the Head of Government. Type C stakeholders are international financing institutions, which are in the position to finance captive energy installations investments in the Africa. In the case of CICSA Project, BMU/BMWK could have had high power in the project but the devolution of most IKI Project Management to ZUG and the high turnover of IKI staff lead them yield limited power. Finally, type D stakeholders are considered to be partners in the project supporting the captive energy activities but usually they have no detailed interest in getting captive energy installations implemented outside their own business.
62. During the course of the project design there was limited attention given to gender and under-represented and marginalised groups and to those living with disabilities. Those groups were not part of main stakeholder analysis.

## D. Project implementation structure and partners

63. Within the inception period a number of interviews and revisions of documents are completed by the Reviewer. This allowed a detailed view on documents and interview partners. The main institutions from the CICSА Project are shown in Figure 9.

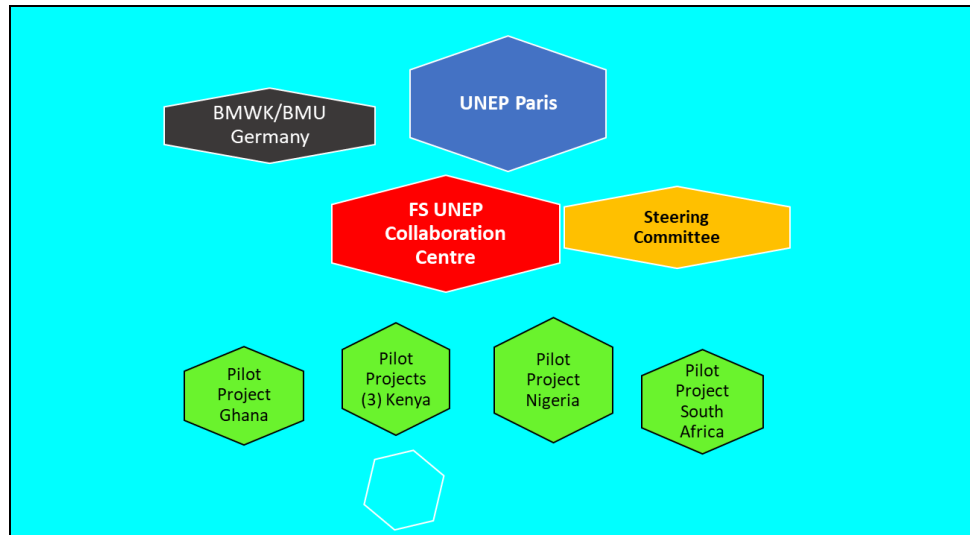


Figure 9: Organisation Chart for the CICSА Project

64. The joint implementation of the Project activities by the Africa Office and the Economy Division, together with the involvement of the West Africa and South Africa sub-regional offices maximize the opportunities to communicate internally within UNEP on the project and its results. Reporting on the project progress is done according to the UNEP Project Management rules. The Communication Division has been associated to project communication activities where appropriate.
65. CICSА ran four calls for proposals to identify the at least four Pilot Projects, with a minimum of one Pilot Project per partner country. The companies applied to the call and, following a rigorous selection and due-diligence process, the projects were selected for grant funding. In total, six Pilot Projects were executed for the four partner countries.
66. CICSА then monitored the Pilot Projects, and the results were disseminated through the Lessons Learnt Publications and presentations were made at the four "Lessons Learnt Workshops" organized earlier this year (April 2023 for Kenya, May 2023 for Ghana and Nigeria, and June 2023 for South Africa). Each Pilot Project was unique in nature and at a different stage in development. A few had other investors behind (e. g. TSM, Stella Futura and PowerGen) while others relied solemnly on CICSА's grant support (SOLA).

## E. Changes in design during implementation

67. The Reviewer used the UNEP template to assess the Project Design Quality<sup>18</sup>. The overall PDQ score was 4.936, which is “Satisfactory”. The overall score calculation template is provided by UNEP and used by the Reviewer during work on the inception phase of the review. The PDQ review rating was executed by the Reviewer and is reflected in ANNEX D which provides individual ratings for the review criteria described in the main table. The quality rating outcome is dependent on the available project data during the work on the inception phase. The PDQ review lowest rates are associated with the “Sustainability / Replication and Catalytic Effects”.
68. The provided templates for PDQ review rating support an assessment of the initial design of a project. The main purpose of the template is to stimulate thinking, based on a review of project design documentation. Where substantive or significant weaknesses are apparent at the project design stage, these may either be potential areas for further questioning.
69. Key sources of information for completing this assessment included the approved project document (ProDoc) and Theory of Change (ToC) as in ANNEX VIII and those documents as described in ANNEX IV.
70. The Steering Committee had a very important role in the CICSA Project. The four Members supported and promoted the CICSA Project during the entire period of the project from the beginning in October 2019 up to September 2023 and this was foreseen in the design of the CICSA Project from the beginning.
71. In general, the CICSA Project had been planned and designed in a professional way ensuring that all important aspects of a project directing to promoting captive energy installations in Africa. After revision of the project documents as described in ANNEX IV, the Reviewer has the following conclusions in relation to project design of CICSA:
- ✓ The concept and the structure of the project are well and clearly designed in order to achieve the aims and goals of the CICSA Project.
  - ✓ The design and the structure of the project supports the private industrial sector in developing successful Pilot Projects, demonstrates the captive renewable energy business model and raises awareness in the partner countries.
  - ✓ The context as defined in the design phase is relevant for the industry sector in Sub-Saharan Africa.
  - ✓ The concept of the design for the project is justified by ensuring both, the demonstration of captive installations in Sub-Saharan Africa and the dissemination of information these installations.
  - ✓ The intention of the project, as to the design, is to effectively demonstrate and promote captive renewable energy solutions in the industry sector in Sub-Saharan Africa.
  - ✓ The design of the project is adequate to demonstrate energy efficiency measures in the industry sector in Africa through the selection,

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<sup>18</sup> For details we refer to Jahn, A.: Inception Report - Terminal Review of the UNEP Project “Renewable Energy Solutions for Industrial Clients in Africa (CICSA)”, on behalf of United Nations, Contract Number 2500344715 (46 pages), Berlin/Paris October 2023

development and implementation of Pilot Projects in the industry sector throughout Sub-Sahara-Africa.

Table 4: Ratings in the different sections with regard to project design (please note that this scoring is exclusively on project design)

	Section	RATING (1-6)	WEIGHTING	TOTAL (Rating x Weighting)
A	Operating Context	5,5	0,4	2,2
B	Project Preparation	5,5	1,2	6,6
C	Strategic Relevance	5,5	0,8	4,4
D	Intended Results and Causality	4,6	1,6	7,36
E	Logical Framework and Monitoring	5,5	0,8	4,4
F	Governance and Supervision Arrangements	5,5	0,4	2,2
G	Partnerships	6,0	0,8	4,8
H	Learning, Communication and Outreach	3,0	0,4	1,2
I	Financial Planning / Budgeting	5,5	0,4	2,2
J	Efficiency	5,0	0,8	4
K	Risk identification and Social Safeguards	5,5	0,8	4,4
L	Sustainability/Replication and Catalytic Effects	3,0	1,2	3,6
M	Identified Project Design Weaknesses/Gaps	5,0	0,4	2
			<b>TOTAL SCORE:</b>	<b>4,936</b>
1 (Highly Unsatisfactory)		< 1.83		
2 (Unsatisfactory)		>= 1.83 < 2.66		
3 (Moderately Unsatisfactory)		>= 2.66 < 3.5		
4 (Moderately Satisfactory)		>= 3.5 <= 4.33		
5 (Satisfactory)		> 4.33 <= 5.16		
6 (Highly Satisfactory)		> 5.16		

72. The overall rating on the quality of project design is 4.936 points. The rating in the different sections with regard to project design are as in the table above. Best ratings are for “Partnerships”. Comparatively low ratings for project design are in the sections for “Sustainability / Replication and Catalytic Effects” and had been covered by project design at a limited level<sup>19</sup>.

## F. Project financing

73. Project financing is comparatively easy to be described as there is only one donor (BMWK / BMU) and one organisation, which uses in-kind-funds (UNEP). Details on project financing can be seen in ANNEX VI.

Table 5: Financing the CICSA Project

Funding source	Planned funding	% of planned funding	Secured funding	% of secured funding
<b>All figures as USD</b>				
<b>In-kind</b>				
Environment Fund staff-post costs	135,457	3.1%	135,457	3.1%
<b>Co-financing*</b>				
BMWK / BMU, Germany	4,298,742	96.9%	4,298,742	96.9%
<b>Total</b>	<b>4,434,199</b>		<b>4,434,199</b>	

<sup>19</sup> For details on the design of the CICSA Project we refer to: Jahn, A.: Inception Report - Terminal Review of the UNEP Project “Renewable Energy Solutions for Industrial Clients in Africa (CICSA)”, on behalf of United Nations, Contract Number 2500344715 (46 pages), Berlin/Paris October 2023

#### IV. THEORY OF CHANGE AT REVIEW

74. A Theory of Change (ToC) is a key factor for review. It illustrates how the CICSAs intervention intends to achieve the desired results. "A Theory of Change is a method used for planning the CICSAs Project, describing the participation that will be needed by different actors and for evaluating the project's performance. It articulates long lasting intended impact and then maps backward to identify the preconditions necessary to achieve this impact(s). It is a comprehensive description and illustration of how and why a desired change is expected to happen in a context. A Theory of Change also allows for unintended positive and/or negative effects to be depicted."<sup>20</sup>



**Figure 10: Photo from St. Marys Hospital, Pediatric Ward, with installations of solar PV systems on the roof of hospital buildings in Ghana (Photo: Yamini Jain, May 2023)**

75. The logic of the intervention, we refer to Figure 11, is seen in the context of the starting situation in the partner countries. The Project's Direct Outcome is to support private industrial and financial sector stakeholders in developing successful Pilot Projects, demonstrating the captive renewable energy business model and raising peer awareness in the partner countries for all outputs.

- ✓ The most suitable industry sectors are identified initially through desk study work and engagement with partner countries' authorities, industries and financial institutions (Output 1).
- ✓ A panel of technologies is selected through Best Available Technology (BAT) market studies (Output 2) carried out in each country to determine the most appropriate technologies for the most relevant industrial sectors targeted. This preparatory work raises awareness about the project and ensures adhesion by the various country stakeholders. Tools for

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<sup>20</sup> Evaluation Office of UNEP: Glossary of results definitions, Version 6, Nairobi April 2021.

assessment of financial and economic viability of renewable energy installations, and tools for definition of suitable financing structures of clean captive installations are elaborated and disseminated (Output 2), paving the way for the identification and selection of the pilot projects. The tools developed (Output 2) during the lifetime of the Project, and the results of the Pilot Projects are disseminated to encourage replication of the captive clean energy generation installations business model in the partner countries (intermediate state) and beyond, to other countries of the region (intermediate state). Replication is driven by the business development prospects generated by the clean and reliable energy supply.

✓ The economic and financial viability of the clean captive energy-generating installations is demonstrated through the selection, development and successful implementation of four Pilot Projects in suitable industry sectors, one in each of the four partner countries within Output 3. The Pilot Projects receive support in assessing their viability from a financial and economic perspective, and technical assistance for financial structuring. Each Pilot Project benefits from a financial support of a maximum of USD 300,000 as set out in the Framework Documents of the Calls for Proposals. To ensure the companies' commitment, they were required to provide a minimum of 30 percent matching funding alongside the grant.

✓ Awareness is subsequently raised through the dissemination of the pilot projects results and of the knowledge materials generated within Output 4. The captive renewable energy business model is replicated within industries and financed in partner countries, industrial GHG emissions decrease, economic development is enhanced due to a cheaper and reliable energy supply, and partner countries advance on the low emission development pathway (impact). Replication at scale is due to the ease of replication, and the breadth and relevance of selected industries for the country and the region.

76. Country studies identify the most relevant industries in the national context for the demonstration Pilot Projects. Depending on the identified targeted sectors, different scales of industrial operations might be elected. It is only when the Pilot Projects are selected that the scale of industrial operations will be known.
77. For the ToC the Reviewer examined the result statements and their causal logic from the project drivers and assumptions and from the narrative sections from the ProDoc in particular from the critical success factors and risks sections. The Reviewer does not find any amendments that should be added to the current ToC as shown in Figure 11 and described in this CHAPTER IV, therefore, the ToC is still valid<sup>21</sup>.

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<sup>21</sup> With reference to the content of the CICSА Project (PV in industry sector in Africa) there is no need to reflect effects on the needs of vulnerable groups, as they are not affected by the CICSА Project.



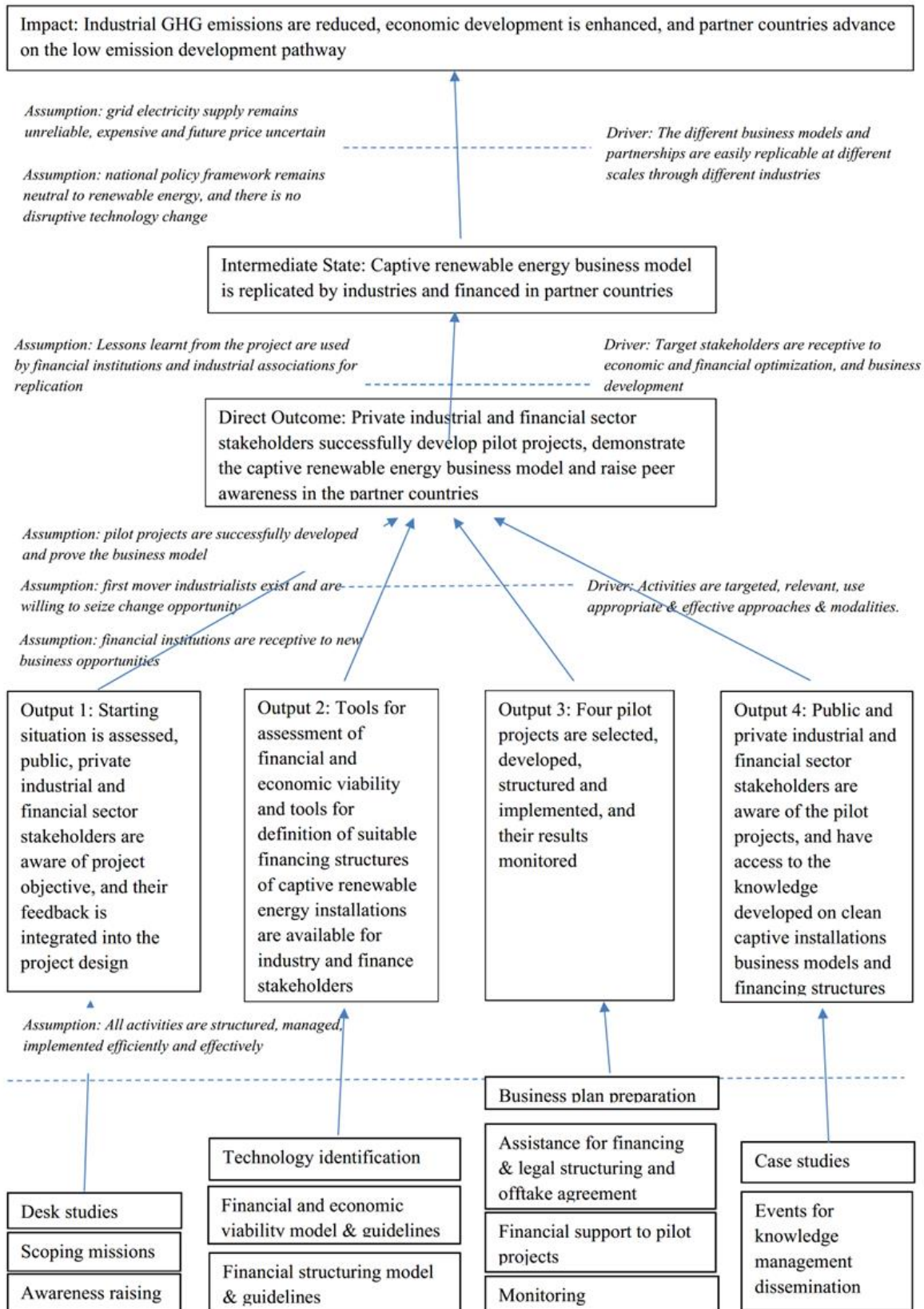


Figure 11: Theory of Change (ToC) for the CICSA Project

## V. REVIEW FINDINGS

### A. Strategic Relevance

78. During interviews with stakeholders of the CICSA Project, the following statements had been given in the context of this CHAPTER V.A (Strategic Relevance). Where appropriate, the Reviewer has considered some of these statements<sup>22</sup> for the Terminal Review.
- The project is very, very beneficial and helpful for my country ...*
  - It really helped clean captive industry ...*
  - Industry is struggling, therefore captive energy is needed for my country ...*
  - Due to a lack of sustainable finance CICSA is needed for implementing PV in the C&I sector ...*
  - CICSA Project has really achieved all its objectives ...*
  - CICSA is more directed to developers, and it is less directed to clients in the C&I sector ...*
  - In the beginning it was the idea in the CICSA Project to support the founding of Energy Service Companies (ESCOs) ...*
  - Due to lack of continuous finance CICSA is needed for implementing PV in the C&I sector ...*
  - CICSA PP projects selected are those with highest impact compared to limited financial resources ...*
  - Diverting financial streams to renewable energy investments for climate protection ...*
  - Due to CICSA finance it was possible to fund DDs for medium scale projects ...*
  - FS came with a strong team to Stella and shared their interest to electrify Ghanaian hospitals at rural sites ...*
  - FS came with good technology to be implemented ...*
  - PV in C&I can complement ideally conventional electricity consumption from national grid ...*
  - The CICSA Project has highly encouraged the company ...*
  - The main aim is to offer electricity from PV with lower prices than national electricity prices for C&I from the grid ...*
  - The PP made an impact on society in Kenya ...*

### Alignment to UNEP's UNEP Medium Term Strategy (MTS), Programme of Work (POW) and Strategic Priorities

79. The CICSA Project is highly relevant in the context of UNEP's Medium-Term Strategy – strategic focus on Climate Change. Expected Accomplishment 2 Low Emission Growth. It is consistent with the POW Sub-programme 1: Climate Change, Expected Accomplishment (b) Countries increasingly adopt or implement low greenhouse gas emission development strategies and invest in clean technologies.
80. In addition, in terms of its relevance to global development priorities, the CICSA Project is consistent with Sustainable Development Goal SDG 7 on affordable and clean energy, and SDG 9 on industry, innovation and infrastructure, most notably Target 7.1 on universal access to modern energy, 7.2 to increase global percentage of renewable energy, and 7.a to

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<sup>22</sup> In total, 286 comments were given by interviewed experts and number of 185 comments, which have relevance to the CICSA project are given in this report. The comments given are reported within this report without any changes, this leads to the fact that some arguments are shown up twice or more times. All arguments collected during interviews are considered by the Reviewer, but this does not mean that the Reviewer followed the arguments given.

promote access to research, technology and investments in clean energy, and target 9.4 to upgrade all industries and infrastructures for sustainability.

81. The CICSA Project is consistent with the GEF 3 "Operational Strategy for its Climate Change Focal Area", and supported the objectives set out in Operational Program #6: "Promoting the Adoption of Renewable Energy by Removing Barriers and Reducing Implementation Costs".
82. The project directly contributes to the 2018-2019 Programme of Work Expected Accomplishment (b) "Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies" and the following indicator: Indicator (b)(ii) Increase in climate finance invested by countries or institutions for clean energy, energy efficiency and/or amount of decarbonized assets. The project focusses on Africa (b) Output 5 which is "Readiness of countries and institutions to access or mobilize climate finance strengthened through support to make projects bankable and replicable".
83. And, the CICSA Project meets Target 9.4, where it is said that by 2030, upgrade infrastructure and retrofit industries should be sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries acting in accordance with their respective capabilities Indicator 9.4.1 CO<sub>2</sub> emission per unit of value added.
84. UNEP MTS and PoW including S-SC goals are adequately addressed in the CICSA Project. The project's activities as defined in the given ToR and in the design phase are suited to the priorities and policies of the donor organisations and the target beneficiaries. And, the context as defined in the ToR are relevant for the commerce and industry sector in Sub-Sahara Africa.

#### **Alignment to Donor/GEF/Partners Strategic Priorities**

85. Donor priorities as in the given ToR are in the project included. The CICSA Project is adequate to demonstrate energy efficiency measures in the commerce and industry sector in Africa through the selection, development and implementation of Pilot Projects in the industry sector throughout Sub-Sahara-Africa.

#### **Relevance to Global, Regional, Sub-regional and National Priorities**

86. The CICSA Project refers to regional and environmental priorities in the African countries.

#### **Complementarity with Existing Interventions/Coherence**

87. As there were nearly no activities in the field of "PV in C&I" use in Africa complementarity with other interventions. This can be seen from the four country reports published and from interviews made with stakeholders. Experts interviewed in the course of the Terminal Review reported that fast track implementation of PV in industry is mainly driven by private initiatives and private financing. Government support in financial terms by national budgets are very limited. Other interventions, mainly by IFIs, are adequately considered in the CICSA Project.

88. In general, the Reviewer did not find any conflicts with existing interventions, as anyhow, there is a very limited number of activities by IFIs and other donor organisations in the field of “PV in C&I” in Africa.

**Rating for Strategic Relevance:**

**Highly Satisfactory**

## B. Quality of Project Design

During interviews with stakeholders of the CICSА Project, the following statements had been given in the context of this CHAPTER V.B (Quality of Project Design). Where appropriate, the Reviewer has considered some of these statements for the Terminal Review.

- The project was very nice, simple and very well executed ...*
- The CICSА concept is very good ...*
- Problems with the Project Cooperation Agreements (PCAs), they were continuously delayed ...*
- Satisfied with the CICSА Project and the achievements within the Project*
- On the topic of Pilot Studies in South Africa the donor had been informed very lately on the change of selected company and therefore lead to a delay in execution of this Pilot Project*
- CICSА Project was executed with concentration of all efforts to the given goals*
- Project was comparatively simple structured with only one donor and a limited time period of 4 years for implementation ...*
- Only minor delays due to COVID19 ...*
- Loan in local currencies is very good thing ...*
- Largely useful to achieve the objectives ...*
- Good, useful, to be replicated ...*
- FS had the role of a Junior Partner, but it was foreseen to act on same level of responsibilities ...*
- Electricity storage is important ...*
- Due to unplanned load-shedding, which is very big problem for industry in my country, the project is very useful ...*
- CICSА approach is in a “Useful Niche” ...*

89. UNEP is ideally positioned to manage the CICSА Project, combining its ability to access and receive national authorities' interest and support with its technical expertise and proven experience of mobilizing private sector stakeholders to advance innovative renewable energy projects and structures. The Energy and Climate Branch of UNEP has the overall Project Management responsibility. The activities were carried out either directly by either the Energy and Climate Branch or the Africa Office, or indirectly through implementing partner Frankfurt School UNEP Collaborating Centre and subcontractors.

90. The CICSА Project describes and analyse the current situation adequately. The concept and the structure of the project are well and clearly designed in order to achieve the aims and goals of the CICSА Project.

91. The ProDoc of the CICSА Project includes a detailed analysis of stakeholders in the project. After completion of the CICSА Project no additional stakeholder was detected, therefore the original description in the ProDoc was correct. The ProDoc covers the human rights and gender aspects adequately in the CICSА Project.

**Rating for Project Design:**

**Highly Satisfactory**

### C. Nature of the External Context

92. During interviews with stakeholders of the CICSA Project, the following statements had been given in the context of this CHAPTER V.C (Nature of the External Context). Where appropriate, the Reviewer has considered some of these statements for the Terminal Review.

- ☑ *There was a comparatively low interest by South African stakeholders on CICSA due to upcoming elections, communication via UN Office in SA ...*
- ☑ *Teams meeting during COVID19 caused a few headache ...*
- ☑ *There were no meetings of Steering Committee in Nigeria, only Ghana, Kenya and South Africa ...*
- ☑ *Meetings were positive, personal meetings requested by Members, but limitation to travelling cost, then COVID19 hit the project ...*
- ☑ *For whatever reason, SA projects were with limited interest, only a few applications in South Africa ...*
- ☑ *A minor delay in payments was due to system change at UNEP's financial software (system transfer to new financial software) ...*

93. Generally, risks in terms of the nature of external context were low for the four participating countries. At project design phase and during implementation there was no likelihood of conflict in any of the countries.



**Figure 12: Photo from diesel emergency electricity generation station at St. Marys Hospital in Ghana (Photo: Yamini Jain, May 2023)**

94. The project's implementation has faced several challenges both due to internal and external factors.

- Namely, internal institutional delays linked to the development of a new UN levy which coincided with the launch of the project. The clearance of the new 1% UN levy for development projects in 2019 led to a 3-month delay in receiving the funds delaying the start of the project.
- The Covid-19 pandemic, which began in early 2020 and limited in-person gatherings and international travel, led to a reassessment of the workplan. It also disrupted the holding of workshops to launch the country studies as well as the launch of the calls for proposals. These

were eventually held virtually. Because of the international travel restrictions following COVID19 epidemic situation, online due diligence took longer than expected. About 5 months were spent for thorough analysis of financial, legal, technical and risk assessments for Kenya and Ghana. Same applies for COVID19 period in 2020 and 2021, where very limited personal meetings were held and been replaced by videoconferencing. As most of the times within the project were outside this COVID19 period (2010 up to 2020), the Reviewer sees no negative effect on the CICSA Project. Except for COVID19 there were not external features affecting the CICSA Project. The Project Management found a way to handle the workload despite travel restrictions due to the COVID 19 epidemic situation.

- The elections in South Africa delayed for about 6 months the implementation of the Pilot Projects, but this did not harm the overall aims of the CICSA Project.
- Optimistic timelines and expected workloads for the running the open call for proposals also extended the length of the initial selection process and played a role in delaying the start of the implementation process.
- Lack of sufficient or suitable candidates during the open call for proposals for South Africa. There are several considerations to make. First there is a different level of maturity of the market. Others include: (i) The timing of the open call for proposal and the experience of summer business slowdown, with the target countries being no exception. (ii) Covid-19 Pandemic really hit the formal and informal sectors and their level of involvement. (iii) The civil unrest in South Africa the week prior to the call for proposals webinar.
- Resulting delays in the due diligence process. The top-ranking applicants in Nigeria and South Africa were found to pose significant risks, leading to the due diligence team to move on to the second-best ranked applicants. This lengthened the process, and further delayed the start and implementation of the pilot projects. The due diligence process took a total of about 6 months for Nigeria and SA.
- Requiring approval from the donor for pilot projects prior to disbursing funds also delayed the implementation of certain pilot projects due to administrative processes. The situation was exacerbated by the long transition period in the aftermath of the German election in September 2021.

95. Only one Pilot Project in the CICSA Project was affected by an external effect: South Africa has had general elections and therefore the Pilot Project was delayed for about 6 months. Lack of sufficient or suitable candidates during the open call for proposals for South Africa. COVID19 pandemic situation really hit the CICSA Project, especially civil unrest in South Africa at the week prior to the call for proposals webinar. This could not be foreseen in the project, finally, the Project Management handled this situation adequately.

<b>Rating for Nature of the External Context:</b>	<b>Favourable</b>
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## D. Effectiveness

96. During interviews with stakeholders of the CICSA Project, the following statements had been given in the context of this CHAPTER V.D (Effectiveness). Where appropriate, the Reviewer has considered some of these statements for the Terminal Review.
- ☑ *Tool 3 is too complicate for normal companies in the C&I sector, this tool is mainly for developers, who can handle the data input and are able to understand the outcomes from the tool ...*
  - ☑ *The Project Team has had good contact with the developers of the Pilot Projects in the respective countries ...*
  - ☑ *The Due Diligence reports of companies participating in the Calls for Proposals were quite good quality ...*
  - ☑ *Subcontractors gave DD Reports to FS, then given to UNEP, then handed over to IKI for final endorsement, a comparatively long procedure ...*
  - ☑ *Simple and effective management structure ...*
  - ☑ *Project was quite successful ...*
  - ☑ *Organisation of the project was top heavy, as there was huge amount of bureaucracy ...*
  - ☑ *Management was comparatively easy as the project structure is comparatively easy (only one donor organisation, four years of implementation) ...*
  - ☑ *Management very well ...*
  - ☑ *It is a wish to increase exchange between FS and UNEP ...*
  - ☑ *Difficulty in getting access to IKI's responsible persons, IKI responsible persons were overloaded ...*
  - ☑ *Country Report is at high quality ...*
  - ☑ *Cooperation with UNEP in Paris was very good ...*
  - ☑ *Bi-annual PCAs are very problematic, FS had to use own funds to get the Pilot Project running, about 100,000 USD had to be pre-financed by FS ...*
  - ☑ *Co-operation with FS was good ...*
  - ☑ *Cooperation with UNEP and FS was easy, they helped a lot ...*
  - ☑ *Hospitals are very happy with the project and are excited on technology implemented ...*
  - ☑ *Hospitals now do not have to rely on national grid, they operate somehow independently using PV ...*
  - ☑ *Partnership with UNEP and FS was fantastic ...*
  - ☑ *PP helped to stabilize electricity supply to the hospitals, therefor only 1 hour was needed to handle a patient incoming, due to lack of electricity supply usually 3 hours were needed per incoming patient ...*
  - ☑ *The local team from UNEP/FS made useful contributions ...*
  - ☑ *The outcomes are enormous, about 60% electricity cost reduction from national grid ...*
  - ☑ *UNEP and FS were very co-operative ...*

### Availability of Outputs

97. The Reviewer assessed the project's success in producing the programmed four Outputs and making them available to the intended beneficiaries as in the given ToR for the CICSA Project as per the project design document (ProDoc)<sup>23</sup>. The Reviewer sees the availability of outputs as in the project documents, where with the homepage a huge number of results, especially the Country Reports and the Pilot Projects. During interviews the stakeholders confirmed their ownership and usefulness of information

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<sup>23</sup> United Nations Environmental Programme: Project Document – Renewable Energy Solutions for Industrial Clients in Africa, ProDoc (91 p), signed on 24 July 2019, page 20

provided in order to meet the given objectives. All planned outputs were met in the CICSА Project, which means, that:

- Output 1: The design framework of the project is finalized and includes partner countries stakeholders' feedback. The four country studies give a detailed view on the situation of clean captive energy solutions for the C&I sector in the participating countries Ghana, Kenya, Nigeria and South Africa. Following a detailed review of the country studies and following the discussion with stakeholders during Review Phase, Output 1 has been fully achieved.
- Output 2: Developers and industry stakeholders in the participating countries have access to assessment tools of the financial and economic viability and to a viable financing structure of on-site renewable energy installations. The CICSА Project developed various tools to supporting the implementation of captive installations in the respective countries. Following a detailed review of the tools developed following the discussion with stakeholders during Review Phase, Output 2 has been achieved. It should be noted that Tool 3 was only available to those institutions and organisations requesting it and thus was never available to the public as originally planned. This decision was influenced by FS wishing to maintain proprietary rights.
- Output 3: Industrial developers and financiers of Pilot Projects have demonstrated the financial and economic viability of on-site renewable energy installations and increased their capacity. The project objective of having 4 pilot projects in the partner countries has been surpassed with 6 pilot projects on track to be implemented in Kenya, Ghana, Nigeria, and South Africa. Following a detailed review of the 6 Pilot Projects and following the discussion with stakeholders during Review Phase, Output 3 has been fully achieved.
- Output 4: Public and private industrial and financial sector stakeholders are aware of the Pilot Projects, and have access to the knowledge developed on clean captive installations business models and financing structures. Following a detailed review of the publications produced during the CICSА Project and following the discussion with stakeholders during Review Phase, Output 4 has been fully achieved.

98. The intended outputs are fully covered with the CICSА Project as described in the ToR and in the ToC (for details we refer to CHAPTER V.D). Project outcomes are fully achieved and the likelihood of impacts are given following the review of all documents given in the Terminal Review phase. Overall, the CICSА Project has been effective in making significant progress to achieving its stated objectives. The design of the project with its four Components ensures economic and financial viability of clean captive energy installations leads to the results. All outputs are very detailed and have good quality, this is especially true for the country reports, but also other documents produced during the CICSА Project.

### **Achievement of Project Outcome**

99. As to the given ToR for the CICSА Project (ProDoc) and to the ToC this Project has only one Direct Outcome: "Private industrial and financial sector stakeholders successful develop Pilot Projects, demonstrate the captive



renewable energy business model and raise peer awareness in the partner countries<sup>24</sup>. The Project's Direct Outcome is the support of private industrial and financial sector stakeholders in developing successful Pilot Projects, demonstrating the captive renewable energy business model, and raising peer awareness in the partner countries. The project also aimed to disseminate tools and pilot project results to encourage the replication of the captive clean energy generation installations business model within partner countries and beyond to other countries of the region. Once captive renewable energy business model is replicated within industries and financed in partner countries, industrial GHG emissions decrease, economic development is enhanced thanks to a cheaper and reliable energy supply, and partner countries advance on the low emission development pathway (Impact). Replication at scale is expected due to the ease of replication, and the breadth and relevance of selected industries for the country and the region.



**Figure 13: Solar roof installations at Fresha Dairy Farmers Co-operative in Kenya (Photo: Carolina Merighi, January 2023)**

100. The achievement of project outcome was assessed as performance against the project outcomes as defined in the Theory of Change. These are outcomes that were intended to be achieved by the end of the project timeframe and within the project's resource envelope. The Reviewer reports on evidence of attribution between UNEP's intervention and the project outcomes.
101. All key milestones have been achieved. These milestones include, scoping missions, call for proposal workshops, and a rigorous project selection process in each of the four partner countries. The scoping missions in the partner countries, held to meet with all key public stakeholders and to build and strengthen the political buy-in of the country in the CICSA Project. The Project Team met with 30+ stakeholders in each country, assessing (1) the appetite of the different stakeholders in the Project, (2) the gaps and needs of the sector, and (3) the current trends in renewable energy for

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<sup>24</sup> United Nations Environmental Programme: Project Document – Renewable Energy Solutions for Industrial Clients in Africa, ProDoc (91 p), signed on 24 July 2019, page 20

industries, and creating project awareness in the country. The scoping missions were held on:

- September 16th-20th 2019 in Kenya;
- September 23rd-27th 2019 in Ghana;
- November 4th-8th 2019 in Nigeria;
- November 18th-22nd 2019 in South Africa.

102. The call for proposals workshops, gave an opportunity for potential applicants in the respective countries to learn more about the open call for proposals. These also introduced the framework document, which explains in details the application process, eligibility criteria, selection criteria, and application timelines, and also explain the different types of applications forms. The sessions ended with an interactive Q&A session with participants sending their questions to panel-lists in reference to the proposal. These call for proposals workshops, held virtually due to the Covid-19 pandemic, took place on:

- September 15th-16th 2020 in Kenya;
- March 23rd-24th 2021 in Ghana;
- July 15th 2021 in Nigeria;
- July 22nd 2021 in South Africa.

103. During the selection process, an assessment team reviewed, scored, and shortlisted the projects for the open call for proposal for pilot projects in partner countries. The team was composed of UNEP and Frankfurt School of Finance and Management's staff and an independent technical advisor (contracted to ensure impartiality and avoid conflict of interests). The assessment team presents the assessment result to the IKI representative for each stage of the selection process (scoring and due diligence). The selection process (screening, scoring and due diligence) occurred during:

- October 2020 to March 2021 in Kenya;
- April to September 2021 in Ghana;
- August 2021 to February 2022 in Nigeria;
- August 2021 to May 2022 in South Africa.

104. Selected pilot projects have already commenced implementation in some partner countries, while others are pending approval and unblocking of funds. Each project is associated with a defined timeline for implementation. Signature for the implementation of the selected pilot projects:

- Ecoligo (Kenya): 20 December 2021;
- OFGEN (Kenya): 21 December 2021;
- TSm (Kenya): 13 January 2022;
- PowerGen (Nigeria): 26 July 2022;
- Stella Futura (Ghana): 03 March 2023.

105. Timeline for the implementation of selected projects was as follows, most of the Pilot Projects started in late 2021 / beginning 2022 except for the Pilot Project in South Africa:

- Ecoligo (Kenya): April 2021-October 2022;
- OFGEN (Kenya): December 2021-March 2023;
- TSm (Kenya): January 2022-December 2022;
- PowerGen (Nigeria): July 2022-January 2024;
- Stella Futura (Ghana): August 2022-March 2023;
- South Africa: January 2023-September 2023.

106. The project outcome is measured through three indicators: the carbon abatement from pilot projects (with an aim of 3,250-16,200 tonnes of CO<sub>2</sub>), the number of renewable energy installations in industrial sites in partner countries (with an aim of 4), and the total investment mobilized under the pilot projects (with an aim of USD 4.48 M to USD 20.16 M). Currently, all three indicators have been achieved. The carbon abatement goal is on target, six pilot projects have been selected and completed and about USD 43.3 M have been mobilized from other financial resources than UNEP. In detail, the contributions to the six Pilot Projects were as follows: CICSAs support with USD 1,077,832; other public grants USD 494,630; private grants USD 294,217; equities from applicant USD 1,112,019, other equities USD 2,350,000; DFI debt USD 11,071,976 and expected funds of USD 28,000,000. Compared to the CICSAs contribution all other financial contributions summed up to USD 43,322,842, which is 40.2 times the CICSAs financial investment (total mobilized “non-UNEP funds” compared to “UNEP funds”).
107. The Clean Captive Installations for Industrial Clients in Sub-Saharan Africa (CICSAs) project demonstrates the economic and financial viability of clean energy captive installations for industries in Ghana, Kenya, Nigeria, and South Africa. Very well documented references and bibliography, a well-designed homepage and very detailed analyses of energy situation with regard to captive energy in the four participating countries have been analysed by the Reviewer and contribute to the given Direct Outcome. Unintended positive or negative effects were not detected after reviewing all documents in this Terminal Review compared to planned effects as to the given Direct Outcome at ToR. The project outcome indicator to mobilize sufficient investment and to abate CO<sub>2</sub> emissions have also been achieved.

### **Achievement of Likelihood of Impact**

108. The Impact of the CICSAs Project is described in the given ToR and in the ToC and is formulated as follows: “Industrial GHG emissions are reduced, economic development is enhanced, and partner countries advance to low emission development pathway”<sup>25</sup>.
109. The likelihood of the intended, positive impacts of PV in C&I in Africa by the CICSAs Project becoming a reality was assessed by the Reviewer based on the articulation of long-lasting effects in the ToC. The likelihood that the intervention contributed to unintended negative effects was also assessed as well as the extent to which the project played a catalytic role or has promoted scaling up or supports replication.
110. The timeframe was realistic, even with full coverage of COVID19 the CICSAs Project managed to keep the timeframe with a minor delay of 6 months. The planned project outcomes were fully met by the CICSAs Project.
111. The Reviewer has clearly seen an impact for supporting PV in C&I in Africa. This has been confirmed by all persons interviewed (donors, Project Team, and national stakeholders) and by revision of project documents, especially the Country Studies and the Pilot Projects.

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<sup>25</sup> United Nations Environmental Programme: Project Document – Renewable Energy Solutions for Industrial Clients in Africa, ProDoc (91 p), signed on 24 July 2019, page 20

112. Following completion of the CICSA Project, this project including the country analyses and including the Pilot Projects could be replicated without mayor changes in other regions of Africa. There are currently limited plans for dissemination of results after completion of the CICSA Project as the website, which includes the main results will be closed by the end of 2023. Those documents are limited to the project timeline and should be pursued beyond the completion of the project for at least 5 years. And, the excel based Tool 3 developed for this project on calculation of PV installations is not available for the public for public use outside the project for other projects. This limits the likelihood of impacts from the CICSA Project. However, the project management team proactively seeks opportunities to present CICSA both inhouse and to external audiences.

**Rating for Effectiveness:**

**Satisfactory**

### E. Financial Management

113. During interviews with stakeholders of the CICSA Project, the following statements had been given in the context of this CHAPTER V.E (Financial Management). Where appropriate, the Reviewer has considered some of these statements for the Terminal Review.

- The responsiveness to financial requests by the Project Manager and by the Project Team was absolutely given ...*
- The adherence to UNEPs policies and procedures was absolutely given from the beginning to completion ...*
- Stella is a very good company for PV installations ...*
- Signature on contract UNEP-BMU/BMWK was 3 months delayed ...*
- Piloting was really helpful, banks and financing were needed to see successfully implemented projects ...*
- Payments from donor via UNEP delayed payment from UNEP to FS ...*
- From financial point of view the CICSA Project went very well from early start to end of project...*
- Financial Unit is "overworked", therefore, payments were usually delayed for 2 weeks before processing ...*
- Cooperation was cordial...*
- Communication from the Financial Department to the Project Manager and to the Project Team was very good ...*
- All payments and cost calculation and financial processes were completed according to UNEP rules ...*
- All funds from UNEP were disbursed ...*
- All financial information was complete and correct and all relevant legal agreements with context to financial issues were complete ...*
- Co-operation with UNEP/FS was really great ...*
- Delays in getting the contract signed between FS and PP ...*
- FS and UNEP were very strict to our company on audits and financial reports prepared ...*
- Hospitals were very interested in the PP due to large savings in spending money for diesel generation, they would like to replicate the PP ...*

114. The German Federal Ministry for Economic Affairs and Climate Action (BMWK) previously known as BMU Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (under International Climate Initiative - IKI) is the donor for this project. The project has a budget of USD 4,434,199. The project was financed in nine instalments with an instalment every six months.

## Adherence to UNEP's Financial Policies and Procedures

115. The Project Management and expenditures within the CICSA Project were done by an internal unit within UNEP. This ensured, that the Project Management followed the rules of UNEP more easily than an external Project Management outside UNEP. The financial control was much easier for UNEP due to the fact that the Project Management had the same budgeting system.
116. Budgets are adequate with reference to the project design. Due to the comparatively easy design of financing this project with only one donor organisation the CICSA Project fully met the financial rules of UNEP.
117. Resource mobilization is fully adequate to the project.
118. The CICSA Project has had not foreseen an upfront agreement for disbursing the funds for the Pilot Projects, therefore a certain delay in implementation had to be accepted. With regards to the Financial Management based on the Donor Agreements with Germany (BMWK/BMU), each time a Pilot Project was selected, the Donor Agreement had to be amended to “unblock the funds” for the partner country. Thus, a total of four amendments were done to the original Donor Agreement. The fourth Donor Agreement contains both the unblocking of the fund for South Africa and the project's six months extension.



**Figure 14: Photo of the Stella Futura Team, developer of the St. Marys Hospital clean captive solution system in Ghana (Photo: Yamini Jain, May 2023)**

## Completeness of Financial Information

119. Discussion was held by the Reviewer with the Administrative Services in the Industry and Economy Division of UNEP. The Financial Management Officer confirmed that all financial details<sup>26</sup> had been checked by this Department and no problems were detected. The direct access for the Reviewer to financial tables was limited. Following a revision of project

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<sup>26</sup> The direct access for the Reviewer to financial tables was limited.

documents the financial information on the CICSА Project is complete (nevertheless, this is due to a comparatively simple structure of financing the project via only one donor organisation, which eases the follow-up of financial flows).

**Table 6: Financial Table on financing the CICSА Project**

<b>Funding source</b> All figures as USD	<b>Planned funding</b>	<b>% of planned funding</b>	<b>Secured funding</b>	<b>% of secured funding</b>
<b>Cash</b>				
Funds from the Environment Fund				
Funds from the Regular Budget				
Extra-budgetary funding (listed per donor):				
<b>Sub-total: Cash contributions</b>				
<b>In-kind</b>				
Environment Fund staff-post costs	135,457	3.1%	135,457	3.1%
Regular Budget staff-post costs				
Extra-budgetary funding for staff-posts (listed per donor)				
<b>Sub-total: In-kind contributions</b>	135,457		135,457	
<b>Co-financing*</b>				
Co-financing cash contribution				
Co-financing in-kind contribution				
BMWK / BMU, Germany	4,298,742	96.9%	4,298,742	96.9%
<b>Sub-total: Co-financing contributions</b>	4,298,742		4,298,742	
<b>Total</b>	<b>4,434,199</b>	<b>100%</b>	<b>4,434,199</b>	<b>100%</b>

### Communication Between Finance and Project Management Staff

120. During interviews with staff of UNEP it was made clear, that communication of budget and control of budget spendings was comparatively easy as the financial system of the Project Management was part of the financial system of UNEP. Discussion with expert showed that the meetings of Steering Committee within the CICSА Project were done in detail on a regular basis and that financial documents had been shared with the Steering Committee. Communication between the UNEP finance team and the UNEP Project Management were adequately given.

<b>Rating for Financial Management:</b>	<b>Highly Satisfactory</b>
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### F. Efficiency

121. During interviews with stakeholders of the CICSА Project, the following statements had been given in the context of this CHAPTER V.F (Efficiency). Where appropriate, the Reviewer has considered some of these statements for the Terminal Review.

Weekly calls on update the situation of the CICSА Project between FS and

*UNEP were very helpful ...*

*Real implementation of Pilot Projects is part of the success of the CICSA Project, for example at hospitals and meat processing shops ...*

*Clean Capture Investments are profitable, especially for hospital, which have high electricity costs and unreliable supply of electricity, and very expensive diesel generation sets ...*

*A lot of bureaucracy ...*

*Frankfurt School was changing stuff all the time ...*

*Cooperation with FS and UNEP in Paris was very closely ...*

*CICSA has an impact on the ground ...*

*All Calls for Proposals were very efficient ...*

*Availability of data from the hospitals delayed the process ...*

*CICSA Project is also favourable for the diesel emergency units, as there is less maintenance required due to PV solar production ...*

*Due Diligence took a too long period, but finally completed ...*

*The duration of the grant application processes was quite a challenge ...*

122. The CICSA Project is adequately designed to increase energy efficiency effects for the respective commercial and industry sectors at national level. Project design adequately considered pre-existing information. With reference the four Components as in the given ProDoc document, within those components the CICSA Project has met its objectives<sup>27</sup>:

- For Component 1 (Baseline studies and awareness raising): Awareness of the project is raised with both public and private sector stakeholders, whose feedback is integrated into the project design. This initial phase saw very detailed and thoroughly written country studies being prepared and scoping missions successfully completed in each partner country. Therefore, the objectives given by the ProDoc document were fully met by the CICSA Project within Component 1 and implementation was adequate to the given time and financial restraints.
- For Component 2 (Economic and financial tools and assessments): Tools for assessment of financial and economic viability and suitable financing structures of clean captive installations have been successfully elaborated and disseminated among industrial and commercial actors, national and international financiers, and national public institutions. The selection criteria for the national Pilot Projects had been defined. Therefore, the objectives given by the ProDoc document were fully met by the CICSA Project within Component 2 and implementation was adequate to the given time and financial restraints.
- For Component 3 (Realization of one Pilot Project per country): Six viable and replicable Pilot Projects for the C&I sector in one of each partner country were selected, developed, financially structured, realized and monitored. The country-tailored business models allowed for replicability at the national scale, and in similar contexts. And the score of four Pilot Projects was exceeded by the number of 6 implemented Pilot Projects. It should be noted that there were comparatively fast procedures for implementation of Pilot Projects

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<sup>27</sup> For those Components the Reviewer analysed documents listed in "ANNEX IV. Key Documents Consulted". Based on the high number of documents and the quality of documents analysed, and the results delivered the CICSA Project has to be compared to the given budget of USD 4.43 million and is assessed by the Reviewer.

with 4.5 months from first announcement with an open call for proposals up to signature of a grant agreement to award companies with Pilot Projects. As there were four calls for proposals held in the CICSA Project, it would be easier and more efficient to hold only one call for proposal to allow each developer the same amount of time for project implementation. During execution of the CICSA Project, South Africa's Pilot Project saw a significantly shorter project implementation timeline than, for example, Kenya's Pilot Projects. Project Management suffered from a devolution of most IKI Project Management to ZUG, especially at the time of requesting approval of Pilot Projects. Requiring approval from the donor for Pilot Projects prior to disbursing funds also delayed the implementation of certain Pilot Projects. Grants for Pilot Projects had to be endorsed from IKI, which led to time losses and less efficiency in the CICSA Project. Therefore, the objectives given by the ProDoc document was somehow met by the CICSA Project, but implementation of Component 4 was somehow adequate to the given time and financial restraints.

- For Component 4 (Knowledge dissemination and outreach): Through a knowledge management strategy designed jointly with stakeholders, case studies on Pilot Projects were prepared and published, project results and knowledge disseminated through national, regional and other events and other relevant means to allow replication at both national and regional levels. Therefore, the objectives given by the ProDoc document for Component 4 were fully met by the CICSA Project and implementation was adequate to the given time and financial restraints.



**Figure 15: Solar PV installations (converter from DC to AC) at Fresha Dairy Farmers Co-operative in Kenya (Photo: Carolina Merighi, January 2023)**

123. After completion of the CICSA Project and its implementation it has to be stated the Project Team adequately and successfully completed the project including the 6 Pilot Projects during the given timelines of four years and the given budget of USD 4.434.199.



**Table 7: Overview on the Pilot Projects within Component 3 of the CICSA Project (Kenya1, Kenya2, Kenya3, Ghana, Nigeria, South Africa)**

Country	Kenya1	Kenya2	Kenya3	Ghana	Nigeria	South Africa	TOTAL
Company	OFGEN	Tree_Sea.Mals	ECOLIGO	Stella Futura	PowerGen Renewable Energy Nigeria Limited	Sola Group	
<b>Description</b>	EPC contractor for solar systems, OFGEN receives a grant to develop a new third party-financing business line to offer energy services in local currency. The new business line will be hosted by an SPV to be established.	Tsm receives a grant to share transaction costs associated with the development of pilot project Baridi. The project will install a cold storage facility for meat products in three Kenyan meat markets (two in Burma meat market, and one in Kiamaiko goat meat market), and two additional ones under franchising. Pilot project innovations include: pay-as-you go, solar PV generated electricity for own-use, RE in urban meat markets.	Crowd investing platform Ecoligo receives a grant to share costs associated with the launch of a \$9 million SPV to finance Kenyan C&I solar projects (between 500kW and 2MW) for up to 10MW. The SPV will be funded through amix of equity (Ecoligo 500k), institutional lenders (USD 5.8 million) and crowd investors (USD 2.2 million).	Solar PV EPC contractor Stella Futura receives a grant to share costs associated with the establishment of an SPV jointly owned by CHAG and financier Empower New Energy, to develop a proof-of-concept for captive solar installations on four CHAG hospitals in Ghana, for a cumulative capacity of 870kW. Stella Futura will also create carbon credits to help hospitals partially recoup the costs associated with the installations.	RE service provider, PowerGen RE Nigeria Ltd receives a grant to share costs associated with the establishment of the Renewable Futures Fund in partnership with TFE Africa. The Fund will use existing assets as collateral to increase funding available to RE projects. It will also use near real-time smart meter and remote monitoring data to track energy usage and payments at the level of individual energy off-takers.	SOLA group would receive a grant to share costs associated with the setting up of a financial facility (an SPV) jointly with a financier to finance C&I projects in South Africa. The new SPV will mobilize additional private capital from the financier and enable SOLA to have a greater participation in the funding of the projects which it currently develops under the Orionis fund.	
<b>Name of pilot project</b>	<b>OFGEN local currency instrument</b>	<b>BARIDI</b>	<b>Blended portfolio finance approach</b>	<b>CHAG Solar Pilot Project</b>	<b>The Renewable Futures Fund</b>	<b>Orionis Group Restructure</b>	
<b>OFFTAKER</b>	New KCC, Sotik, Kenya	No off taker but location of installation was Burma Market in Nairobi, Kenya	Fresha Dairies, Kenya	St. Mary's Hospital and Holy Family Hospital in Ghana within the Christian Health Association of Ghana (CHAG)	Eye Foundation Hospital		
<b>SME sector</b>	all sectors	Food industry, meat processing	Food industry	Health	Health	all sectors	
<b>Type of grant funding</b>	<b>Type 2</b>	<b>Type 1</b>	<b>Type 2</b>	<b>Type 1</b>	<b>Type 1</b>	<b>Type 2</b>	
<b>Developer</b>	OFGEN	Tree_Sea.Mals	ECOLIGO	Stella Futura	PowerGen Renewable Energy Nigeria Limited	Sola Group	
<b>Responsible person incl. email address</b>	Jibril Omar, CEO OFGEN, jibril.omar@ofgen.africa; Beatrice Songkok, Finance Manger OFGEN, beatrice.songkok@ofgen.africa	Tracy Kimathi, Founder of Tree.Sea_mals, tracykamy@gmail.com	Claudia Roth, Head of Fundraising Ecoligo, claudia.rothe@ecoligo.com	Francis Asante, CEO Stella Futura (Africa), francis@stellafutura.com; Ulrika Tornerefelt, Founder and Group CEO Stella Futura, ulrika@stellafutura.com	Alastair Smith, asmith@powergen-re.com; Sam DUBY, sam.duby@tfe.energy; Kumbirai Makanza, kumbirai.makanza@tfe.energy	Francis Asante; Oliver Braithwaite, oliverb@solagroup.co.za; Marek Raciborski, marek@solagroup.co.za	
<b>Phone</b>	Beatrice Songkok M: +254-716 517 827 Office: +254-0712 287 088	Tracy Kimathi +254-712 950 183	Claudia Rothe +49-151 543 587 20	Francis Asante +233 20 400 4289	Alastair Smith +1 (908) 720-6064 Sam DUBY +27 725 159 350	Francis Asante +233 20 400 4289	
<b>Grant from UNEP</b>	\$100.000,00	\$100.000,00	\$100.000,00	\$279.293,00	\$299.970,00	\$198.569,00	\$1.077.832
<b>Public grants</b>		\$494.630,00					\$494.630
<b>Other private grants</b>				\$150.000,00	\$144.217,00		\$294.217
<b>Equity of the applicant</b>	\$25.000,00	\$25.000,00	\$900.000,00	\$50.000,00	\$52.448,00	\$59.571,00	\$1.112.019
<b>Other equity</b>	\$2.350.000,00						\$2.350.000
<b>Debt by DFI</b>	\$3.000.000,00		\$8.000.000,00	\$71.976,00			\$11.071.976
<b>Expected funds</b>	\$26.000.000,00				\$2.000.000,00		\$28.000.000
<b>Total costs</b>	<b>\$31.475.000,00</b>	<b>\$619.630,00</b>	<b>\$9.000.000,00</b>	<b>\$551.269,00</b>	<b>\$2.496.635,00</b>	<b>\$258.140,00</b>	<b>\$44.400.674</b>
<b>Total mobilized funds compared to UNEP funds</b>	<b>313,8</b>	<b>5,2</b>	<b>89,0</b>	<b>1,0</b>	<b>7,3</b>	<b>0,3</b>	<b>40,2</b>
<b>Signature</b>	21 December 2021	13 January 2022	\$44.665,00	03 March 2022	26 July 2022	no data available	
<b>Implementation period</b>	December 2021 to March 2023	January 2022 to December 2022	April 2022 to October 2022	August 2022 to March 2023	July 2022 to January 2024	operational since October 2021	
<b>Operational (year)</b>	2022	2022	2022	2023	2022	2021	
<b>Exclusively CICSA grant</b>	no	no	no	no	no	yes	
<b>Still operational?</b>	yes	yes	yes	yes	yes	yes	
<b>Monitoring with Annex 1</b>	received	received	received	received	received	received	
<b>Annex 2</b>	received	received	received	received	received	received	
<b>Annex 3</b>	waived	received	received	received	received	received	
<b>Annex 4</b>	received	received	received	received	received	waived	
<b>Currency</b>	local	USD	USD	local	USD	USD	
<b>Business model</b>	ESCO & leasing						
<b>Technical data</b>	data are not per annum	data are not per annum		data are not per annum	data are not per annum	data are not per annum	
<b>kWpeak installed</b>	500,0	5,0	1440,5	104,5	180,0	11.000,0	13.230,0
<b>kWh/a produced with PV</b>	643.813	2.477	922.902	10.000	89.667		Sums only useful on annual data
<b>kWh/a consumed</b>	847.904	10.407	6.070.513		91.973		Sums only useful on annual data
<b>% solar own use</b>	24,0%	23,8%	13,3%	41,0%	97,5%	80,0%	Sums only useful on annual data
<b>Battery capacity in kWh</b>	614	23	0	0	182	0	819
<b>Electricity grid costs savings</b>	24%	32%	80%	41%	100%	80%	Sums only useful on annual data

Country	Kenya1	Kenya2	Kenya3	Ghana	Nigeria	South Africa	TOTAL
Company	OFGEN	Tree_Sea.Mals	ECOLIGO	Stella Futura	PowerGen Renewable Energy Nigeria Limited	Sola Group	
Diesel costs savings	40%	not available	not available	not available	not available	not available	Sums only useful on annual data
CO2 reductions in kg/a	102,046	1,483		11,840	46,000		Sums only useful on annual data
On-grid tariff commercial sector (11)	\$0.12	\$0.12	\$0.12	\$0.17	\$0.08	\$0.08	
On-grid tariff industrial sector (11)	\$0.08	\$0.08	\$0.08	\$0.23	\$0.08	\$0.05	
Diesel generation cost (11)	\$0.36	\$0.36	\$0.36	\$0.94	\$0.40	\$0.42	
Clean Captive Power (11)	\$0.10 - 0.14	\$0.10 - 0.14	\$0.10 - 0.14	\$0.10 - 0.14	\$0.10 - 0.14	\$0.10 - 0.14	
Project Aim (12)	Raise financing in local currency for the development of captive solar power installations for companies in the C&I sector in Kenya.	Prove the business model for solar-powered cold room facilities for commercial urban meat markets in Kenya, reducing post-slaughter loss of meat, yielding economic benefits to vendors.	Implement a blended portfolio finance approach for C&I solar projects, combining junior unsecured crowd-investors and senior secured institutional lenders.	Establish a special purpose vehicle (SPV) that will finance the development of captive solar power plants for private hospitals and create an economically sustainable business model by incorporating Distributed Renewable Energy Certificate (DREC) to monetize the carbon emissions reductions.	Set-up a low transaction-cost fund for CCI project developers using existing projects as collateral to recycle capital and monetize their accounts receivables, allowing for more rapid scaling of projects.	Optimize an existing South African solar fund to enhance its overall financing efficiency, lower its risk profile and increase profitability.	
Regulatory Agency (13)	Energy Regulatory Commission (ERC) Kenya	Energy Regulatory Commission (ERC) Kenya	Energy Regulatory Commission (ERC) Kenya	Energy Commission of Ghana (ECG)	Nigerian Electricity Regulatory Commission (NERC)	National Energy Regulatory of South Africa (NERSA)	
Import duty reductions for solar (14)	available	available	available	somehow available	not available	available	
VAT reductions for solar (14)	available	available	available	available	not available	not available	
Feed-in tariff (14)	available	available	available	somehow available	not available	somehow available	
Net metering (14)	available	available	available	somehow available	not available	somehow available	
Tariff deregulation (14)	somehow available	somehow available	somehow available	somehow available	somehow available	not available	
Retail market liberalization (14)	not available	not available	not available	not available	somehow available	not available	
Diesel subsidies (14)	somehow available	somehow available	somehow available	not available	not available	not available	
Cost reflective subsidies (14)	somehow available	somehow available	somehow available	available	somehow available	not available	
Already existing project	yes	yes	partially	Partially, no physical realization just concept being refined by Stella looking for investors	yes	yes, operational since October 2021	
Technical problems during operation?	no problems	no problems	no problems	Grant agreement had to be amended, KPIS changed from 4 hospitals to 2 as CHAG wasn't approving implementation in time	no problems	no problems	
Current status	implemented	implemented	implemented	implemented	implemented	implemented	
Photos	Carolina Merighi	Carolina Merighi	Carolina Merighi	Yamini Jain	Developer	Developer	
Solar modules	Company	Company	Company	Jingko Solar	Longi Solar	Company	
Storage system	Tesvolt	Company	Company	Company	AlphaESS	Company	
Lessons learned workshop	April 2023	April 2023	April 2023	May 23	May 2023	June 2023	
Comments	Late sending of report	2.3 years pay-back period		Only forecasted data, no data on PV	Data on PV not readable	Only data for 2022, contract signed very late	
Sources	2; 4; 6; 10	2; 4; 6; 10	2; 4; 6; 10	1; 4; 5; 10	3; 4; 7; 10	4; 8; 9	
1 Clean Captive Installations for Industrial Clients in Sub-Saharan Africa. Lessons Learnt from the Implementation of Pilot Project in Ghana (22 p), May 2023							
2 Clean Captive Installations for Industrial Clients in Sub-Saharan Africa. Lessons Learnt from the Implementation of Pilot Project in Kenya (21 p), April 2023							
3 Clean Captive Installations for Industrial Clients in Sub-Saharan Africa. Lessons Learnt from the Implementation of Pilot Project in Nigeria (23 p), May 2023							
4 Frankfurt School - UNEP Collaborating Centre for Climate & Sustainable Energy Finance: Clean Captive Installations for Industrial Clients in Sub-Saharan Africa, Post-Implementation Technical Report, Frankfurt / Paris (18 pages) no date							
5 Frankfurt School of Finance & Management gGmbH (Frankfurt School) and Stella Futura Limited: Partnership Agreement, DocuSign Envelope ID: B7140C4C-409E-43E9-8978-D44C579FE192 (28 Pages), 3rd March 2023							
6 Open Call for Proposals Kenya, Clean Captive Installations for Industrial Clients in Sub-Saharan Africa, Selection Process Summary Report, Phase 2 – Due Diligence Phase (131 p) no date							
7 Frankfurt School of Finance & Management gGmbH (Frankfurt School) and PowerGen Renewable Energy Nigeria Limited: Partnership Agreement Nigeria, Sign Envelope ID: F4428A4E-9A75-4814-A20F-3960B9B099DA (23 pages) 26 July 2022							
8 Frankfurt School of Finance & Management gGmbH (Frankfurt School) and SOLA Assets (Pty) Ltd: Partnership Agreement South Africa, Sign Envelope ID: 19D84F81-5B49-4D1C-9794-A19568C (21 pages) 25.4.2023							
9 Sola Assets: C/CSA Case Study Report (17 p), no location, no date							
10 UN Environment Programme – Finance Unit: Clean Captive Installations for Industrial Clients in Sub-Saharan Africa - Mid-Term Evaluation (25 pages) June 2022							
11 United Nations Environment Programme (2023). Status and Opportunities of Clean Captive Generating Installations in Sub-Saharan Africa (76 pages), Nairobi September 2023, page 24							
12 United Nations Environment Programme (2023). Status and Opportunities of Clean Captive Generating Installations in Sub-Saharan Africa (76 pages), Nairobi September 2023, page 25							
13 United Nations Environment Programme (2023). Status and Opportunities of Clean Captive Generating Installations in Sub-Saharan Africa (76 pages), Nairobi September 2023, page 31							
14 United Nations Environment Programme (2023). Status and Opportunities of Clean Captive Generating Installations in Sub-Saharan Africa (76 pages), Nairobi September 2023, page 51							

**Rating for Efficiency:** Highly Satisfactory

## G. Monitoring and Reporting

124. During interviews with stakeholders of the CICSА Project, the following statements had been given in the context of this CHAPTER V.G (Monitoring and Reporting). Where appropriate, the Reviewer has considered some of these statements for the Terminal Review.

- Weekly meetings with UN-FC-AO as Jour Fixe were very helpful ...*
- Reporting on PP is relatively heavy, it takes about 5-7 days ...*
- Weekly meetings helped to keep the pace of the project with a Jour Fixe ...*
- Missing communication with Paris ...*
- Communication within the Project Team easy and constructive ...*

### Monitoring Design and Budgeting

125. For budgeting and monitoring some project documents were made available to the Reviewer. The ProDoc includes in CHAPTER 8 a very detailed monitoring plan for the CICSА Project, which was followed by the Project Management during execution of the CICSА Project. A positive effect on implementation of the CICSА Project was the approach of a kind of “Jour Fixe”, which was hold weekly on Wednesdays for the internal Project Team to “keeping the pace”:

### Monitoring of Project Implementation

126. The CICSА Project published a quite large number of 128 documents including contracts to follow the progress of work, especially the four Country Reports and the reports on the implementation of the Pilot Projects, here we refer for details to ANNEX IV and to CHAPTER VII with the references. The monitoring of the CICSА Projects was in the responsibility of UNEP Project Management. Due to total absence of any meeting protocols for the internal meetings within the CICSА Project Team, there is very limited evidence that the project was widely monitored.

### Project Reporting

127. The Reviewer assessed the extent to which UNEP<sup>28</sup> and donor reporting commitments have been fulfilled. A huge number of reports had been provided to the Reviewer. The CICSА Project produced and published a wide range of documents, most of them are available on the CICSА homepage. There is still the Final Report on the results of the CICSА Project missing, which is due in March 2024, and is currently under development.

**Rating for Monitoring and Reporting:  
Satisfactory**

**Highly**

## H. Sustainability

128. During interviews with stakeholders of the CICSА Project, the following statements had been given in the context of this CHAPTER V.H (Sustainability). Where appropriate, the Reviewer has considered some of these statements for the Terminal Review.

- Steering Committee took real ownership ...*

<sup>28</sup> UNEP has a centralised Project Information Management System (PIMS) in which project managers upload six-monthly progress reports against agreed project milestones.

- Some governments realised due to CICSA Project that captive solutions, mainly PV installations, help the economy and its C&I sector ...*
- Sharing experience with the other three countries was very useful, especially to build on experience gained in Kenya ...*
- Scaling-up is important, therefore it is important that companies participating in CICSA are repeating the Pilot Projects ...*
- Scale it up! ...*
- Presentation of results from CICSA at African Climate Summit in Nairobi (60 Attendees) ...*
- Keeping the PV tool (Tool No 3) only available for developers participating in the CICSA Project and not giving to the public is a real problem (software should maintain as a "Public Good" for free to everybody, as this is financed by BMU German Taxpayers money, at least as a simplified model ...*
- High impact from the CICSA Project, especially through implementation of Pilot Projects ...*
- Future for PV in industry is bright, as bills for electricity in industry are very high, there is an excellent potential for PV ...*
- Eye Hospital was clever to get crowdfunding and, in addition funding by Climate Fund ...*
- Based on experience in the PP there are plans for additional projects at 11 new sites ...*
- CICSA has opened the market for PV, not only Ghana, but also Cameroon ...*
- Partners being responsible for the construction of PV installations in Kenya bring new project ideas to the developer, even proposals for new PV installations in less developed, neighbouring countries to Kenya ...*
- The PP has been replicated not only in Kenya ...*
- We choose the PP projects for the hospitals as there is great potential for replication ...*

### **Socio-political Sustainability**

129. The relevance of the topic of PV in C&I in Africa increased considerably in the participating four countries during the CICSA Project implementation according to interviews with stakeholder in the participating countries. Without CICSA intervention on the topic of PV in C&I this topic would not be at the current level of attention in the participating countries. All persons interviewed stated, that the CICSA Project have encouraged PV use in C&I in their countries and in general in Africa. The CICSA Project and therefore PV investments in Africa in the C&I sector are fully supported by all Members of the Steering Committee representing the national administration for the introduction of PV in C&I sector.
130. Furthermore, CICSA Project has established a website where all technical papers and reports on PV and C&I is available. The web site is an information sharing platform and hub for PV related information in Africa.
131. Attracting private investments by supporting the Pilot Projects with a grant of USD 1,077,832 by CICSA to setup investments of about USD 44.4 M within these Pilot Projects; CICSA project mobilized 41.2 times non-CICSA funds. This is a comparatively high value for mobilizing additional funds.

### **Financial Sustainability**

132. In general, the implementation of PV in Africa to C&I is not a public task, except for preparation of a market for PV investments in this sector. Therefore, in general, no financial sustainability by UNEP is required. The market participants will ensure financial sustainability as most of the PV

investments are profitable in the market. As this principle does not work in Africa, for a certain period an intervention by the public sector is needed.

133. Through the implementation of 6 Pilot Projects, CICSА has demonstrated the economic and financial viability of clean captive installations for commercial and industrial (C&I) clients in the private sector. Several pilot projects focus on creating a “Special Purpose Vehicle” to fund clean captive projects. This includes some large and medium-sized businesses which would otherwise not receive financing to build captive solar plants. Demonstrating the financial viability of this model facilitated financing for renewable energy projects which has until now been seen as risky by commercial banks in the region. More specifically, proving that investing in clean captive installations is economically and financially viable, and that replacing fossil fuel-powered generators leads to cost savings for C&I clients, which is essential to convincing commercial lenders and investors to adopt this model. This in turn catalyses greater action and CO<sub>2</sub> emissions mitigation at the sectoral, national, and regional levels. The Stella Futura pilot project focuses on financing captive solar installations to power three hospitals in Ghana. Successful demonstration of this model serves to promote its adoption by the healthcare sector in the country and in the region.
134. The success of the 6 Pilot Projects in the 4 partner countries ensures its sustainability by encouraging other actors in the sector to adopt the clean captive model and by making financing for clean captive installations easier in demonstrating it is economically and financially viable for C&I clients.

### **Institutional Sustainability**

135. For the Reviewer it is a concern regarding sustainability considering that the CICSА Project has ended. Stakeholder interviewed by the Reviewer highlighted that for a certain period additional support by UNEP or other IFIs is needed. Other stakeholders mentioned and valued the input by the Project Management Team and the Project Manager.
136. The intention of the project, as to the design, is to effectively demonstrate and promote captive renewable energy solutions in the industry sector in Sub-Saharan Africa. Within the project design there is no insurance that the detailed homepage of the CICSА Project will be extended after 2023. For the “Homepage” and for the excel based “Tool 3” there were no agreements made between UN and FS for a continuous use of this very important information for the sustainability of results.

**Rating for Sustainability:**

**Likely**

### **I. Factors Affecting Performance and Cross-Cutting Issues**

137. During interviews with stakeholders of the CICSА Project, the following statements had been given in the context of this CHAPTER V.I (Factors Affecting Performance and Cross-Cutting Issues). Where appropriate, the Reviewer has considered some of these statements for the Terminal Review.

- Outreach of homepage is relatively low ...*
- Closing of the homepage is a real problem ...*

- ✓ *UNEP is engaging in transferring to UNEP homepage ...*
- ✓ *Project Management was well processed ...*
- ✓ *Homepage has a large amount of useful information ...*
- ✓ *CICSA was a very quick way to get a lot of people on board ...*
- ✓ *Advertising in local media would have a much bigger impact ...*
- ✓ *Initiating captive power installations in Kenya is more complicate then in Asian and South American countries, for example in Vietnam ...*
- ✓ *Presentation at LL workshop was on very short notice ...*
- ✓ *Without CICSA the hospitals would have not a single chance to implement PV installations, the grant given by UNEP unlocked the projects in Ghana ...*

## Preparation and Readiness

138. In general, all interviewed partners (national stakeholders and external experts) confirmed the necessity and the effectiveness of the Project Management of the CICSA Project. Project Management and Financial Management by UNEP followed the project outline as defined in the beginning. The start of CICSA implementation was without any major delay<sup>29</sup>. And, there were no reasonable obstacles detected that delayed the CICSA Project start in 2019.

## Quality of Project Management and Supervision

139. Based on interviews, the topic of Project Management was addressed by the Reviewer in all its interviews. Without any exception, the Project Management Team was considered extremely helpful and efficient. Without the Project Management of CICSA the topic of PV in C&I in Africa would not have reached the status of the current high level of attention.

- Supervision and governance are adequately covered in the CICSA Project and had been effectively designed during ToR phase.
- UNEP Project Management has adequately implemented the CICSA Project.
- Capacities of partners are correctly assessed in the CICSA Project documents.
- All experts interviewed reported that the management of the CICSA Project was very efficient and directed to the given objectives.
- Experts interviewed judged the execution of the CICSA Project as very good.

140. As before, it must be seen that there was no internal documentation of the weekly meetings (usually there are Minutes of Meetings to be noted). The established procedure entailed sharing the agenda in advance of the meeting, and key decisions were subsequently summarized and communicated via email after the meeting.

## Stakeholders Participation and Cooperation

141. Ghana, Kenya, Nigeria, and South Africa have been selected due to some of the following reasons: the size and growth of the economy, the existence of an electricity supply gap or an unreliable supply, high end-user tariffs for industrial users, and the project's convergence with government strategy. Depending on the local baseline circumstances, clean captive

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<sup>29</sup> UNEP began the work as planned in July 2019 despite financial contributions from Germany being received in October 2019 (three months delay).

industrial installations will provide reliable electricity supply, energy cost savings, autonomy from the grid supply, or a combination of those elements. The partners for this project are for Kenya it is Ministry of Energy and Petroleum, for Ghana it is Ministry of Energy and Petroleum, for South Africa it is Department of Trade and Industry and for Nigeria it is Energy Commission of Nigeria.



**Figure 16: Photo from photovoltaic installations at NKCC, New Sotik Market in Kenya (Photo: Yamini Jain, January 2023)**

142. A Steering Committee (SC) was maintained as a forum for project direction, coordination and information exchange on project progress and performance. The SC met once a year and included nominated representatives of the four CICSAs, UNEP and the co-financing country Germany. The Reviewer sees a significant relevance for the project progress, information exchange and quality of outcome.
143. The design of the project with four Members from the four participating countries having in the Steering Committee and, keeping the entire structure simple and straightforward to the giving UNEP goals helped considerably ensuring the effective implementation of the project.

### **Responsiveness to Human Rights and Gender Equality**

144. The project facilitated implementation of the SDG 5 and decisions made by Africa Environment Ministers (AMCEN) on empowering women in energy sector through the programme of “Women Entrepreneurs and Sustainable Energy in Africa-WESE”. The approach was: (i) Ensuring gender responsive policies in energy (e.g. captive energy solutions) in the C&I sector; (ii) Technical skill development; and (iii) Ensuring access to finance and market.
145. No obstacles were identified that human rights and gender issues were not considered in the CICSAs Project. Participation of disaggregated groups (including gendered, vulnerable, or marginalised groups) in project activities were mentioned in the beginning of the CICSAs Project in 2019. Funds

allocated for monitoring were not used to support this activity (we refer also to “Safeguards” and “Adaptive Management”). In the course of implementation of the CICSА Project strategies and resources have been utilised to ensure that female beneficiaries were targeted and that their social functions allowed participation. The relation and outcome of the key actors, stakeholders, gender, minority groups are adequately considered in the CICSА Project.

146. The CICSА Project has reached substantial progress in promoting gender inclusivity and representation. The initial project target of achieving at least 40% female participation during meetings<sup>30</sup>, stakeholder’s consultations and scoping missions has been successfully met. This achievement underscores the project’s commitment to diversity and inclusivity, ensuring that a wide range of voices and perspectives are actively contributing to the project’s success. The CICSА Project recognizes that gender inclusivity is not only a matter of equity but also a driver of innovation and holistic project outcomes. By actively involving women in key project activities and decision-making processes, the project aims to harness diverse insights and experiences to enhance its impact and effectiveness.

### **Environmental and Social Safeguards**

147. Within the CICSА Project, environmental issues were considered during the entire implementation of the project. This can be seen from documents published and by the discussions in the Steering Committee. Negative environmental impacts could not be identified during the implementation of the CICSА Project.

### **Country Ownership and Driven-ness**

148. Interviews with all stakeholders in the CICSА Project clearly showed the ownership of officials, researchers and national experts in the participating countries on PV use in C&I in Africa. Without the efforts made by the CICSА Project, both within Component 1 and Component 2, the topic of PV in C&I would not been developed as the current status shows by the October 2023.
149. All country representatives in the project acknowledged that the CICSА Project is fully in line with their governments’ objectives with regards to increasing renewable energy adoption. They argued that the CICSА Project had been very well managed and expressed their appreciation at the frequent updates to country representatives about the development and implementation of the Pilot Projects. They specified that the stakeholder consultations were done with their Ministry’s full backing, and that their governments fully support the CICSА Project. They argued that the CICSА Project provided their governments with a learning curve to reflect on its policies and its long-term energy transition plan. The Kenya country representative detailed how the CICSА Project already addressed the policy directive promoted by his government. All participating countries were not in the position to take over the topic of promoting and developing PV in C&I solely in their respective country.

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<sup>30</sup> In total, 17 Interviews were made during the Terminal Review, where 9 interviews were with female experts, 8 interviews with male experts.



150. The content of the CICSА Project is fully owned by the national governments and the respective countries. The content of the CICSА Project is fully owned by the national governments and the respective countries.

### **Communication and Public Awareness**

151. Before the start of the CICSА Project there were very limited activities on PV in C&I in Africa. With the implementation of CICSА for all participating countries communication on PV in C&I increased for those stakeholders, which were involved in the CICSА Project.
152. The communication strategy is directed to the overarching CICSА Project goal to proof a new renewable energy model, i.e. the use of renewable energy produced through captive installations for their own use by industrial entities. The CICSА Project is designed to prove the model through six Pilot Projects in core national industries and to allow for its replication by peers in the partner countries and beyond, in the Sub-Sahara African region. A knowledge management and communication strategy was designed as one of the first project deliverables and includes a project website, hosted by implementing partners website, linked to the UNEP website and other relevant African clean energy partners' websites; a Project corporate brochure, country fact sheets with mid-term Project update; end-of-project brochure, publication with results and lessons learnt, and all with supporting power-point presentations. Therefore, the design of the communication strategy<sup>31</sup>, which is one of the most important tasks, is fully adequate to the CICSА Project.
153. As shown in Table 8 CICSА produced 40 publications. Most of these publications were on activities in Kenya (13) and in Nigeria (9). The type of publication was mainly articles (23), but also one video and one research paper by CICSА. With progress in the project the number of publications increased in year 2022 to 12 and following in year 2023 to 16 publications.

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<sup>31</sup> FS-UNEP Collaborating Centre: Communication Strategy (29 pages) Paris / Frankfurt 2020

**Table 8: Overview on dissemination activities by the CICSA Project Team from 2019 to 2023**

Title	Organisation	Count	Year	Type	Link
CICSA website	UNEP, Frankfurt School	All	2019	Website	<a href="https://www.captiverenewables.africa.org/">https://www.captiverenewables.africa.org/</a>
FS-UNEP website	Frankfurt School	All		Website	<a href="https://www.fs-uneep-centre.org/project/clean-captive-installations/">https://www.fs-uneep-centre.org/project/clean-captive-installations/</a>
IKI website	IKI (International)	All		Website	<a href="https://www.international-climate-initiative.com/en/project/clean-captive-installations-for-industrial-clients-in-sub-sahara-africa-19-1-279-afrika-m-clean-captive-installations/">https://www.international-climate-initiative.com/en/project/clean-captive-installations-for-industrial-clients-in-sub-sahara-africa-19-1-279-afrika-m-clean-captive-installations/</a>
Clean Captive Power Webinar	UNEP CCC, DTU	Kenya	2020	Webinar	<a href="https://unepccc.org/wp-content/uploads/2020/09/webinar-presentation-ic-bio.pdf">https://unepccc.org/wp-content/uploads/2020/09/webinar-presentation-ic-bio.pdf</a>
CICSA Call for Proposal	UNEP, Frankfurt School	Kenya	2020	Webinar	<a href="http://www.carbonafrica.co.ke/clean-captive-installations-for-industrial-clients-in-sub-sahara-africa-project-webinars-for-kenya/">http://www.carbonafrica.co.ke/clean-captive-installations-for-industrial-clients-in-sub-sahara-africa-project-webinars-for-kenya/</a>
Three Energy Developers Acquire CCISA Funding	The Electricity Hub	N/A	2022	Article	<a href="https://theelectricityhub.com/three-energy-developers-acquire-ccisa-funding/">https://theelectricityhub.com/three-energy-developers-acquire-ccisa-funding/</a>
KENYA: three solar energy providers get CCISA funding	Africa Energy Portal	Kenya	2022	Article	<a href="https://africa-energy-portal.org/news/kenya-three-solar-energy-providers-get-ccisa-funding">https://africa-energy-portal.org/news/kenya-three-solar-energy-providers-get-ccisa-funding</a>
CICSA Ghana lessons learnt	UN Ghana	Ghana	2023	Article	<a href="https://ghana.un.org/en/230757-clean-captive-installation-industrial-clients-sub-saharan-africa">https://ghana.un.org/en/230757-clean-captive-installation-industrial-clients-sub-saharan-africa</a>
Nigeria, Germany, UNEP partner for clean energy	Peoples gazette	Nigeria	2023	Article	<a href="https://gazettar.com/nigeria-germany-uneep-partner-for-clean-energy/">https://gazettar.com/nigeria-germany-uneep-partner-for-clean-energy/</a>
Nigeria ranked Africa's biggest economy in energy	The Guardian Nigeria	Nigeria	2023	Article	<a href="https://guardian.ng/news/nigeria-ranked-africas-biggest-economy-in-energy/">https://guardian.ng/news/nigeria-ranked-africas-biggest-economy-in-energy/</a>
Manufacturing Sector Projects To Have Greatest Clean Captive Power Uptake	Oriental News	Nigeria	2023	Article	<a href="https://orientalnews.com/manufacturing-sector-projects-to-have-greatest-clean-captive-power-uptake/">https://orientalnews.com/manufacturing-sector-projects-to-have-greatest-clean-captive-power-uptake/</a>
Federal Govt Partners UNEP, Frankfurt School On Clean Captive Installations	Leadership Nigeria	Nigeria	2023	Article	<a href="https://leadership.ng/federal-govt-partners-uneep-frankfurt-school-on-clean-captive-installations/">https://leadership.ng/federal-govt-partners-uneep-frankfurt-school-on-clean-captive-installations/</a>
FG Collaborates with UNEP and Frankfurt School to Promote Clean Captive Installations	ReadersLogue	Nigeria	2023	Article	<a href="https://readerslogue.com.ng/fg-collaborates-with-uneep-and-frankfurt-school-to-promote-clean-captive-installations/?utm_source=rss&amp;utm_medium=rss&amp;utm_campaign=fg">https://readerslogue.com.ng/fg-collaborates-with-uneep-and-frankfurt-school-to-promote-clean-captive-installations/?utm_source=rss&amp;utm_medium=rss&amp;utm_campaign=fg</a>
Clean captive power: Understanding the uptake and growth of commercial and industrial (C&I) solar PV in Kenya	UNEP CCC, DTU	Kenya	2020	CICSA materials	<a href="https://tech-action.unepccc.org/wp-content/uploads/sites/2/2020/09/2020-clean-captive-power-report-executive-summary.pdf">https://tech-action.unepccc.org/wp-content/uploads/sites/2/2020/09/2020-clean-captive-power-report-executive-summary.pdf</a>
Clean Captive Installations for Industrial Clients in Sub-Saharan Africa, Project Brief	UNEP, Frankfurt School	All	2023	CICSA materials	<a href="https://southafrica.un.org/en/238172-clean-captive-installations-industrial-clients-sub%27e%80%91sahara-africa">https://southafrica.un.org/en/238172-clean-captive-installations-industrial-clients-sub%27e%80%91sahara-africa</a>
South-Africa Country Study - CLEAN CAPTIVE INSTALLATIONS FOR INDUSTRIAL CLIENTS IN SUB-SAHARA AFRICA	UNEP, Frankfurt School	SA	2021	CICSA materials	<a href="https://sun-connect.org/wp-content/uploads/CLEAN-CAPTIVE_SOUTH-AFRICA_16-07-21.pdf">https://sun-connect.org/wp-content/uploads/CLEAN-CAPTIVE_SOUTH-AFRICA_16-07-21.pdf</a>
UNEP's Energy Finance Unit Factsheet	UNEP	All	2019	CICSA materials	<a href="https://wedocs.unep.org/bitstream/handle/20.500.11822/31586/EnFin.pdf?sequence=1&amp;isAllowed=y">https://wedocs.unep.org/bitstream/handle/20.500.11822/31586/EnFin.pdf?sequence=1&amp;isAllowed=y</a>
Tobias Panofen post - workshop lessons learnt	Frankfurt School	All	2023	LK post	<a href="https://www.linkedin.com/posts/tobias-panofen-6504b14a_ccisa-lessons-learnt-workshops-dates-unveiled-activity-7052654749497618432">https://www.linkedin.com/posts/tobias-panofen-6504b14a_ccisa-lessons-learnt-workshops-dates-unveiled-activity-7052654749497618432</a>
Clean captive installations for industrial clients in Sub-Saharan Africa – Ghana Country	Sun-Connect	Ghana		Article	<a href="https://sun-connect.org/document/clean-captive-installations-for-industrial-clients-in-sub%27e%80%91saharan-africa-ghana-country-study/">https://sun-connect.org/document/clean-captive-installations-for-industrial-clients-in-sub%27e%80%91saharan-africa-ghana-country-study/</a>
Clean captive installations for industrial clients in Sub-Saharan Africa – Nigeria Country	Sun-Connect	Nigeria		Article	<a href="https://sun-connect.org/document/clean-captive-installations-for-industrial-clients-in-sub-saharan-africa-nigeria-country-study/">https://sun-connect.org/document/clean-captive-installations-for-industrial-clients-in-sub-saharan-africa-nigeria-country-study/</a>
Clean captive installations for industrial clients in Sub-Saharan Africa – South Africa	Sun-Connect	SA		Article	<a href="https://sun-connect.org/document/clean-captive-installations-for-industrial-clients-in-sub-sahara-africa-south-africa-country-study/">https://sun-connect.org/document/clean-captive-installations-for-industrial-clients-in-sub-sahara-africa-south-africa-country-study/</a>
German business school empowers renewable energy projects across Africa	The Guardian Nigeria	Nigeria	2023	Article	<a href="https://guardian.ng/news/german-business-school-empowers-renewable-energy-projects-across-africa/">https://guardian.ng/news/german-business-school-empowers-renewable-energy-projects-across-africa/</a>
Yamini Jain post - Nigeria pilot project	Frankfurt School	Nigeria	2022	LK post	<a href="https://www.linkedin.com/posts/yamini-jain-6b751713_clean-captive-installations-for-industrial-activity-6980102983736795136">https://www.linkedin.com/posts/yamini-jain-6b751713_clean-captive-installations-for-industrial-activity-6980102983736795136</a>
KENYA: THREE SOLAR ENERGY PROVIDERS GET CCISA FUNDING	Expogroup	Kenya	2022	Article	<a href="https://expogr.com/solar/africa/detail_news.php?newsid=6491&amp;pageid=2">https://expogr.com/solar/africa/detail_news.php?newsid=6491&amp;pageid=2</a>
Call for Proposals: Clean Captive Solar PV Pilot Projects	FundsforNGOs	All	2020	Article	<a href="https://www2.fundsforngos.org/latest-funds-for-ngos/call-for-proposals-clean-captive-solar-pv-pilot-projects/">https://www2.fundsforngos.org/latest-funds-for-ngos/call-for-proposals-clean-captive-solar-pv-pilot-projects/</a>
CFAO Kenya Invests in OFGEN; Enters Commercial and Industrial Solar Energy Market	SolarQuarter	Kenya	2022	Article	<a href="https://solarquarter.com/2022/07/07/cfao-kenya-invests-in-ofgen-enters-commercial-and-industrial-solar-energy-market/">https://solarquarter.com/2022/07/07/cfao-kenya-invests-in-ofgen-enters-commercial-and-industrial-solar-energy-market/</a>
Nigeria Ranked Africa's Biggest Economy In Energy	The Street Journal	Nigeria	2023	Article	<a href="https://thestreetjournal.org/nigeria-ranked-africas-biggest-economy-in-energy/">https://thestreetjournal.org/nigeria-ranked-africas-biggest-economy-in-energy/</a>
Clean Captive Power: Understanding the Uptake and Growth of Commercial and Industrial (C&I) Solar PV in Kenya	UNEP CCC, DTU	Kenya	2020	Research paper	<a href="https://www.researchgate.net/publication/341322672_Clean_Captive_Power_Understanding_the_Uptake_and_Growth_of_Commercial_and_Industrial_C_I_Solar_PV_in_Kenya">https://www.researchgate.net/publication/341322672_Clean_Captive_Power_Understanding_the_Uptake_and_Growth_of_Commercial_and_Industrial_C_I_Solar_PV_in_Kenya</a>
KENYA: CFAO invests in Ofgen and enters the solar C&I market	Energy Matters to	Kenya	2022	Article	<a href="https://www.e-mc2.africa/en/news/kenya-cfao-invests-ofgen-and-enters-solar-ci-market">https://www.e-mc2.africa/en/news/kenya-cfao-invests-ofgen-and-enters-solar-ci-market</a>
CFAO et GreenYellow investissent dans le solaire, Mirova dans l'agriculture durable	CFNews	Kenya	2022	Article	<a href="https://www.cfnews.net/L-actualite/CFNEWS-Afrique/CFAO-et-GreenYellow-investissent-dans-le-solaire-Mirova-dans-l-agriculture-durable-409003">https://www.cfnews.net/L-actualite/CFNEWS-Afrique/CFAO-et-GreenYellow-investissent-dans-le-solaire-Mirova-dans-l-agriculture-durable-409003</a>
KENYA: CFAO invests in Ofgen and enters the solar C&I market	Afrik21	Kenya	2022	Article	<a href="https://www.afrik21.africa/en/kenya-cfao-invests-in-ofgen-and-enters-the-solar-ci-market/">https://www.afrik21.africa/en/kenya-cfao-invests-in-ofgen-and-enters-the-solar-ci-market/</a>
Tracy Kimathi post - Tree_Sea.mals Ltd	Baridi	Kenya	2022	LK post	<a href="https://www.linkedin.com/posts/tracy-kimathi-b32670173_clean-captive-installations-for-industrial-activity-6894221674657517568">https://www.linkedin.com/posts/tracy-kimathi-b32670173_clean-captive-installations-for-industrial-activity-6894221674657517568</a>
Tobias Panofen post - CCI Kenya workshop	Frankfurt School	Kenya	2023	LK post	<a href="https://www.linkedin.com/posts/tobias-panofen-6504b14a_energy-africa-re-activity-7055481015842009088-ik-u?utm_source=share&amp;utm_medium=member_desktop">https://www.linkedin.com/posts/tobias-panofen-6504b14a_energy-africa-re-activity-7055481015842009088-ik-u?utm_source=share&amp;utm_medium=member_desktop</a>
KENYA: three solar energy providers get CCISA funding	Afrik21	Kenya	2022	Article	<a href="https://www.afrik21.africa/en/kenya-three-solar-energy-providers-get-ccisa-funding/">https://www.afrik21.africa/en/kenya-three-solar-energy-providers-get-ccisa-funding/</a>
STELLA Futura Rolls Out The Largest Healthcare Facilities' Energy Access Project in Ghana	Stella Futura	Ghana	2023	Article	<a href="https://stellafutura.com/blog/stella-futura-rolls-out-the-largest-healthcare-facilities-energy-access-project-in-ghana">https://stellafutura.com/blog/stella-futura-rolls-out-the-largest-healthcare-facilities-energy-access-project-in-ghana</a>
Tobias Panofen post - Stella Futura post	Frankfurt School	Ghana	2023	LK post	<a href="https://www.linkedin.com/posts/tobias-panofen-6504b14a_solar-renewables-activity-7060932682339209216-hakm?utm_source=share&amp;utm_medium=member_desktop">https://www.linkedin.com/posts/tobias-panofen-6504b14a_solar-renewables-activity-7060932682339209216-hakm?utm_source=share&amp;utm_medium=member_desktop</a>
Internationellt första pris till Stella Futura och Cake på VivaTech-mässan	Cision News	Ghana	2023	Article	<a href="https://news.cision.com/se/stella-futura/internationellt-forsta-pris-till-stella-futura-och-cake-pa-vivatch-massan.c3790745">https://news.cision.com/se/stella-futura/internationellt-forsta-pris-till-stella-futura-och-cake-pa-vivatch-massan.c3790745</a>
ECN, UNEP, Frankfurt School hold workshop on clean captive installations	New National Star	All	2023	Article	<a href="https://newnationalstar.com/een-uneep-frankfurt-school-hold-workshop-on-clean-captive-installations-2/">https://newnationalstar.com/een-uneep-frankfurt-school-hold-workshop-on-clean-captive-installations-2/</a>
Captive Solar PV Market Insights from Uganda	UNEP CCC	Uganda	2022	CICSA materials	<a href="https://unepccc.org/wp-content/uploads/2022/07/temarin-uganda-captive-solar-pv-market-insights-report.pdf">https://unepccc.org/wp-content/uploads/2022/07/temarin-uganda-captive-solar-pv-market-insights-report.pdf</a>
Lessons learnt Workshop on Clean Captive Installations #unep	UN South Africa	SA	2023	Video	<a href="https://www.youtube.com/watch?v=naa2GBS4mhg">https://www.youtube.com/watch?v=naa2GBS4mhg</a>

154. The Project website is set-up and is used for publication of the developed toolkits. The results were disseminated via social media. For direct communication the CICSA Project also informed the national authorities of the four partner countries through organized events (scoping missions, pre-project selection workshops and meetings in the partner countries, and Pilot Project results dissemination workshops at the end of the Project). Private industrial and financial stakeholders through local ministries and industrial associations to maximise the impact of the project in the target countries and beyond in the SSA region. In September 2023 at the “Africa Climate Summit 2023” and at the “Regional Climate Week” the results from the CICSA Project were presented, see No 9 in Table 9.

**Table 9: Overview on events in relation to completion of the CICSA Project**

No	Conference	Date / Location
1	2nd IKI Networking Workshop	November 2019, South Africa
2	The High-Level Geothermal conferences (ARGEo-C9)	November 2022, Djibouti
3	5th IKI Networking Workshop	November 2022, South Africa
4	Africa Regional Forum on Sustainable Development	February 2022, Niger
5	World Environment Day	June 2022, South Africa
6	Africa Energy Forum	June 2023, Kenya
7	UN CiT South Africa on Just Energy Transition	June 2023, South Africa
8	Ministerial level Discussion on Just Energy Transition as experience sharing of Presidential Climate Commission in SA during AMCEN 18	September 2023, Ethiopia
9	Africa Climate Summit and Africa Climate Week	September 2023, Kenya

No	Conference	Date / Location
10	COP28 SDG7 Global South Pavilion	December 2023, UAE

155. Case studies were included in the education programmes offered by the Frankfurt School-UNEP Collaborating Centre such as its Summer Academy and its e-Learning courses. The CICSА Project has received by end of September 2023 the go ahead from communication department of UNEP to publish on the website the lessons learnt, these are now online and available. Communication between partners and stakeholder were reported as very good.

### Knowledge Management

156. As stated above the overarching CICSА Project goal is to proof a new renewable energy model, i.e. that captive clean energy installations in industrial settings are both economically and financially viable, and to demonstrate this through the realization of concrete Pilot Projects. This forms the key learning of the Project. Creation and dissemination of knowledge is at the core of the Project Theory of Change.

157. External knowledge dissemination forms an entire Project Output, namely Output 4: Public and private industrial and financial sector stakeholders are aware of the Pilot Projects and have access to the knowledge developed on clean captive installations business models and financing structures. Activities under this Output 4 have been successfully produced and have been implemented including:

- Development of a knowledge management strategy
- Setting-up a Project website where knowledge supports can be disseminated widely
- Dissemination of Project results and knowledge through national events, and relevant clean energy and development-related national and regional conferences
- Development and publication of specific knowledge products, including: (i) model for financial and economic viability assessment, and guidelines, (ii) model for assessing suitable energy off-take financial structures, guidelines and corresponding checklist, (iii) case studies on supported Pilot Projects, highlighting economic and financial results, challenges and lessons learned, (iv) an end-of-project brochure including lessons learned from the CICSА Project.

<b>Rating for Factors Affecting Performance and Cross-Cutting Issues:</b>	<b>Likely</b>
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**Table 10: Summary of weighted project findings and ratings**

Evaluation criteria	Rating	Score	Weight	Weighted Score
Strategic Relevance (select the ratings for sub-categories)	<b>Highly Satisfactory</b>	<b>5,50</b>	6	0,3
Alignment to UNEP's MTS, POW and strategic priorities	Highly Satisfactory	5,50	0,5	
Alignment to Donor/Partner strategic priorities	Highly Satisfactory	5,50	0,5	
Relevance to regional, sub-regional and national issues and needs	Highly Satisfactory	5,50	2,5	
Complementarity with existing interventions	Highly Satisfactory	5,50	2,5	
Quality of Project Design	<b>Highly Satisfactory</b>	<b>5,50</b>	4	0,2
Nature of External Context	<b>Favourable</b>	<b>5,00</b>		
Effectiveness (select the ratings for sub-categories)	<b>Satisfactory</b>	<b>4,61</b>	45	2,1
Availability of outputs	Highly Satisfactory	5,50	5	
Achievement of project outcomes	Highly Satisfactory	5,50	30	
Likelihood of impact	Unlikely	1,50	10	
Financial Management (select the ratings for sub-categories)	<b>Highly Satisfactory</b>	<b>5,50</b>	5	0,3
Adherence to UNEP's policies and procedures	Satisfactory	4,50		
Completeness of project financial information	Highly Unsatisfactory	5,50		
Communication between finance and project management staff	Highly Satisfactory	5,50		
Efficiency	Satisfactory	5,00	10	0,5
Monitoring and Reporting (select the ratings for sub-categories)	<b>Satisfactory</b>	<b>4,67</b>	5	0,2
Monitoring design and budgeting	Moderately Satisfactory	5,50		
Monitoring of project implementation	Satisfactory	5,50		
Project reporting	Unsatisfactory	3,00		
Sustainability (select the ratings for sub-categories)	<b>Moderately Unlikely</b>	<b>3,00</b>	20	0,6
Socio-political sustainability	Moderately Unlikely	6,00		
Financial sustainability	Moderately Unlikely	3,00		
Institutional sustainability	Moderately Unlikely	6,00		
Factors Affecting Performance (select the ratings for sub-categories)	Likely	5,06	5	0,3
Preparation and readiness	Likely	5,00		
Quality of project management and supervision	Likely	5,00		
UNEP/Implementing Agency: (select the ratings for sub-categories)	Highly Likely	5,50		
Partner/Executing Agency: (select the ratings for sub-categories)	Likely	4,50		
Stakeholder participation and cooperation	Highly Likely	5,50		
Responsiveness to human rights and gender equity	Likely	5,00		
Environmental and social safeguards	Highly Likely	5,50		
Country ownership and driven-ness	Highly Likely	5,50		
Communication and public awareness	Moderately Likely	4,00		
			<b>100</b>	<b>4,52</b>
<b>Satisfactory</b>				

158. Overall, the CICSA Project has managed to achieve all of its stated outputs. Partner country representatives, who have been surveyed through interviews, have expressed their high satisfaction with the CICSA Project's progress. They acknowledged that CICSA Pilot Projects are addressing policy objectives in their countries. They are satisfied with the progress that is being made. The inclusion and involvement of partner country representatives on the Steering Committee has allowed greater awareness of the CICSA's work in these countries, and has facilitated country ownership. The successful implementation of the Pilot Projects plays a vital part in the annual reduction of CO2 emissions. The overall scoring for the CICSA Project is 5.03, which is "Satisfactory".

The conclusions and findings from this review are given with the Draft Final Report to all stakeholders to get opportunities for feedback into both directions (from Reviewer to Project Management and stakeholders et v.v.). It is planned to share draft preliminary lessons learned and recommendations at earliest stage of Terminal Review in order to get feedback on this from main stakeholders.

## VI. CONCLUSIONS AND RECOMMENDATIONS

### A. Conclusions

159. In general, the design of the CICSA Project was very straightforward to supporting implementation of clean captive installations (photovoltaic systems) to the commerce & industry sector in Sub-Sahara Africa. Therefore, the Project Management followed the given information from the ProDoc document to implement the CICSA Project. In general, with some minor exemptions, the implementation of the CICSA Project by the Project Team was very successful in reaching the given objectives and goals.

160. When looking at the strengths and weaknesses of the CICSA Project the conclusions are made with regard to project design and with regard to project delivery. The strengths and weaknesses of the CICSA Project are described in the two following Table 11 on the strengths and Table 12 for the weaknesses of the CICSA Project.

**Table 11: Strengths within the CICSA Project (please note that this table in the upper part is only about the design for the project, in the lower part it is about project implementation and deliverables)**

#### CICSA Project Strengths (Project Design and Project Deliverables)

- ✓ Project design: **Application forms** 1 to 3: Very good, that they are in one excel file, not several documents (doc/xls)
- ✓ Project design: **Attracting private investments** by supporting the Pilot Projects with a grant of USD 1,077,832 setup investments of about USD 43 M
- ✓ Project design: Building up a **detailed homepage** for dissemination of project results, very good presented and documented homepage, layout, downloads, videos (far beyond other projects in Africa)
- ✓ Project design: **Clear management structure** by UNEP Project Management and forming a **team** of UNEP and Frankfurt School experts
- ✓ Project design: **Combination** of general information and country reports with practical PPs
- ✓ Project design: **Comparatively fast procedure** of 4.5 months from first announcement with an open call for proposals up to signature of a grant agreement to award companies with Pilot Projects
- ✓ Project design: Getting constructive support by **Steering Committee** from all four countries
- ✓ Project design: Good **communication** ensured
- ✓ Project design: **Good Project Management** foreseen, therefore unforeseen events could be handled, for example Covid-19 pandemic, which began in early 2020 and limited in-person gatherings and international travel, leads to a reassessment of the workplan. It also disrupted the holding of workshops to launch the country study as well as the launch of the calls for proposals. But the Project Team limited the effects by COVID19 pandemic situation.
- ✓ Project design: **Jour Fixe** every week for internal Project Team, “keeping the pace”
- ✓ Project design: Large amount of **very well documented information**, for example Kenya, number of captive PV installations above 50 kW peak by size and facility type within the country reports
- ✓ Project design: Very well documented **references and bibliography**
- ✓ Project deliverables: Very well-presented project on the **homepage**
- ✓ Overview on **media coverage** with 40 publications provided
- ✓ Project deliverables: **Very detailed analyses of energy situation** with regard to captive energy in the four participating countries

**Table 12: Weaknesses within the CICS Project (please note that this Table in the upper part is only about the design for the project, in the lower part it is about project implementation and deliverables)**

**CICS Project Weaknesses (Project Design and Project Deliverables)**

- Project design: **Application forms** are not “ready for printing” and they do not include “date / name of xls-file / name of sheet”
- Project design: **Calculation tool for PV investments** in excel-form from Frankfurt School not available to the public. Software calculation tool PV in xls-form from Frankfurt School should maintain as a “Public Goods” for free to public, Tool 3 is not available for download for public use outside of project
- Project design: Continuation of the very detailed **homepage** with all information to stakeholders for new PV projects in industry in Africa is not foreseen, ensuring that the homepage is available to the public also at least 5 years after completion of the project
- Project design: **Minutes** of the Project Team not filled in
- Project design: No **proxies** were planned for absence of Members of Steering Committee
- Project design: **One call for all countries**, otherwise delays for projects where the country is last one in call for proposals
- Project design: Project Management suffered from a **devolution of most IKI Project Management** to ZUG, especially, at the time of requesting approval of Pilot Projects
- Project design: **Requiring approval** from the donor for pilot projects prior to disbursing funds also delayed the implementation of certain Pilot Projects due to administrative processes. Grants for Pilot Projects had to be **endorsed** from IKI, which led to time losses. IKI should have given general agreement to finance Pilot Projects by PMU, not to be checked and endorsed by IKI, this would speed up the entire process, “Funding should be upfront”
- Project deliverables: **Final Report (FR)**, 2023 is missing
- Project deliverables: **Minutes of Meetings** of CICS Team are missing
- Project deliverables: Tool 1-Tool 4: **no table of content**
- Project deliverables: Tool 4, page 11: only **outdated lead-acid batteries**, no new lithium batteries. So far, within the CICS Project, **no sophisticated new electricity storage systems** were used, mainly battery systems were provided within the Pilot Projects.
- Project deliverables: **Lack of sufficient or suitable candidates** during the open call for proposals for South Africa. Covid19 pandemic hit the formal and informal sectors and their level of involvement. The **civil unrest** in South Africa the week prior to the call for proposals webinar and **general elections** in South Africa limited participation in the call for proposals.

**B. Summary of project findings and ratings**

161. Table 13 below provides a summary of the ratings and finding discussed in CHAPTER V. Overall, the project demonstrates a rating of is 5.03 (“Satisfactory”).

### **UNEP Evaluation Office Validation of Performance Ratings:**

The UNEP Evaluation Office formally quality assesses (see Annex IX) management led Terminal Review reports and validates the performance ratings therein by ensuring that the performance judgments made are consistent with evidence presented in the Review report and in-line with the performance standards set out for independent evaluations.

The Evaluation Office assesses a Terminal Review report in the same way as it assesses the initial draft of a Terminal Evaluation report. It applies the following assumptions in its validation process:

- That what is being assessed is the contents of the report and the extent to which it makes a consistent and justifiable case for the performance ratings it records.
- That the consultant has, within the report, presented all the evidence that was made available to them.
- That the Review has been based on a robust Theory of Change, reconstructed where necessary, which reflects UNEP's definitions at all levels of results.
- That the project team and key stakeholders have already reviewed a draft version of the report and provided substantive comments and made factual corrections to the Review Consultant, who has responded to them. The Evaluation Office assumes, therefore, that it has received the Final (revised) version of the report.

In this instance the Evaluation Office validates the overall project performance rating at the '**Highly Satisfactory**' level.

**Table 13: Summary of project findings and ratings**

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
<b>A - Strategic Relevance</b>		<b>5.5</b>		<b>S</b>
1. Alignment to UNEP MTS, POW and strategic priorities	UNEP MTS and PoW including S-SC goals are adequately addressed in the CICSА Project. The project's activities as defined in the given ToR and in the design phase are suited to the priorities and policies of the donor organisations and the target beneficiaries. And, the context as defined in the ToR are relevant for the commerce and industry sector in Sub-Sahara Africa.	5.5	The rating is adjusted to 5 (Satisfactory) based on evidence of just alignment and consistency with UNEP's mandate, MTS, PoW and S-SC goals but contributions not directly reported to outcome indicators in PoW.	<b>S</b>
2. Alignment to Donor/Partner strategic priorities	Donor priorities as in the given ToR are in the project included. The CICSА Project is adequate to demonstrate energy efficiency measures in the commerce and industry sector in Africa through the selection, development and implementation of Pilot Projects in the industry sector throughout Sub-Sahara-Africa.	5.5	The rating adjusted to 5. Alignment with donor's (Germany) strategy not presented and verified in the assessment and refers to ToR.	<b>S</b>
3. Relevance to global, regional, sub-regional and national environmental priorities	The CICSА Project refers to regional and environmental priorities in the African countries.	5.5	The rating is adjusted to 5 (Satisfactory) to ensure rating follows 6-point scale.	<b>S</b>
4. Complementarity with relevant existing interventions/coherence	Other interventions, mainly by IFIs, are adequately considered in the CICSА Project.	5.5	The rating is adjusted to 5 (Satisfactory).	<b>S</b>



Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
<b>B - Quality of Project Design</b>	<p>The CICSА Project describes and analyse the current situation adequately. The concept and the structure of the project are well and clearly designed in order to achieve the aims and goals of the CICSА Project.</p> <p>The ProDoc of the CICSА Project includes a detailed analysis of stakeholders in the project. After completion of the CICSА Project no additional stakeholder were detected, therefore the original description in the ProDoc was correct.</p> <p>The ProDoc covers the human rights and gender aspects adequately in the CICSА Project.</p>	<b>5.5</b>	The rating is adjusted to 5 (Satisfactory) which is given for assessment of project design quality of >4.33<=5.16. The assessment does not refer to the QPD template used for the inception report, but lists strengths of the project design.	<b>S</b>
<b>C - Nature of External Context</b>	<p>Except for COVID19 there were not external features affecting the CICSА Project. The Project Management found a way to handle travel restrictions due to COVID19 epidemic situation.</p> <p>Only one Pilot Project in the CICSА Project was affected by an external effect: South Africa has had general elections and therefore the Pilot Project was delayed for about 6 months. Lack of sufficient or suitable candidates during the open call for proposals for South Africa. COVID19 pandemic situation really hit the CICSА Project, especially civil unrest in South Africa at the week prior to the call for proposals webinar. This could not be foreseen in the project, finally, the Project Management handled this situation.</p>	<b>No rating</b>	No rating is provided in table 13 of this criterion, however, it is rated in table 10 and 14. No change to this rating.	<b>F</b>
<b>D - Effectiveness</b>		<b>4.83</b>	The rating is 4.83 in table 14.	<b>HS</b>
1. Availability of outputs	<p>The intended outputs are fully covered with the CICSА Project as described in the ToR and in the ToC (for details we refer to CHAPTER V D). Project outcomes are fully achieved and the likelihood of impacts are given following the review of all documents given in the Terminal Review phase.</p> <p>The design of the project with its four Components ensures economic and financial viability of clean captive energy installations leads to the results. All outputs are very detailed and have good quality, this is especially true for the country reports, but also other documents produced during the CICSА Project.</p> <p>The relation and outcome of the key actors, stakeholders, gender, minority groups are adequately considered in the CICSА Project.</p> <p>Following completion of the CICSА Project, this project including the country analyses and including the Pilot Projects could be replicated without mayor changes in other regions of Africa.</p>	5.5	The rating is adjusted to 6 (highly satisfactory). All planned outputs were met in the CICSА Project.	<b>HS</b>

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
2. Achievement of project outcomes	<p>The timeframe was realistic, even with full coverage of COVID19 the CICSA Project managed to keep the timeframe with a minor delay of 6 months. The planned project outcomes were fully met by the CICSA Project.</p> <p>Very well documented references and bibliography, a well-designed homepage and very detailed analyses of energy situation with regard to captive energy in the four participating countries have been analysed by the Reviewer.</p> <p>Unintended positive or negative effects were not detected after reviewing all documents in this Terminal Review compared to planned effects as to the given ToR.</p>	5.5	<p>The Reviewer reports on evidence of attribution between UNEP's intervention and the project outcomes. All three outcome indicators, for the project's one outcome, have been achieved.</p> <p>All key milestones have been achieved. The rating is adjusted to 6 (HS).</p>	<b>HS</b>
3. Likelihood of impact	<p>There are no plans for dissemination of results after completion of the CICSA Project as the website, which includes the main results will be closed by the end of 2023. Those documents are limited to the project timeline and should be pursued beyond the completion of the project for at least 5 years.</p> <p>And, the excel based Tool 3 developed for this project on calculation of PV installations is not available for the public for public use outside the project for other projects. This limits the heavily the likelihood of impacts from the CICSA Project.</p>	2.5	<p>The assumptions identified in the ToC; grid network unreliable and national policy network is neutral to renewable energy appear to hold, provided the assessments are adequate precursors for impact to occur. Assessment seems to focus on assumptions between outputs and outcome and not at the impact level. The rating is 2.5 in Table 14 and 1.5 in Table 10. Rating is adjusted to ML.</p>	<b>ML</b>
<b>E - Financial Management</b>		<b>5.5</b>		<b>S</b>

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
1. Adherence to UNEP's financial policies and procedures	<p>Budgets are adequate with reference to the project design. Due to the comparatively easy design of financing this project with only one donor organisation the CICSА Project fully met the financial rules of UNEP.</p> <p>Resource mobilization is fully adequate to the project.</p> <p>The CICSА Project has had not foreseen an upfront agreement for disbursing the funds for the Pilot Projects, therefore a certain delay in implementation had to be accepted.</p>	4.5	The rating is adjusted to 4 (S). The agreement for disbursing funds for the pilot project resulted in initial delay.	<b>MS</b>
2. Completeness of project financial information	Following a revision of project documents the financial information on the CICSА Project is complete (nevertheless, this is due to a comparatively simple structure of financing the project via only one donor organisation, which eases the follow-up of financial flows).	5.5	The rating is adjusted to 5 (S).	<b>S</b>
3. Communication between Finance and Project Management staff	Communication between the UNEP finance team and the UNEP Project Management were adequately given.	5.5	The rating is adjusted to 5 (S). Evidence of good communication based on interviews with UNEP staff and an expert.	<b>S</b>
<b>F - Efficiency</b>	<p>The management of the project is adequately designed to increase energy efficiency effects for the respective commercial and industry sectors at national level.</p> <p>Project design adequately considered pre-existing information.</p> <p>Comparatively fast procedure for implementation of Pilot Projects with 4.5 months from first announcement with an open call for proposals up to signature of a grant agreement to award companies with Pilot Projects.</p> <p>At Terminal Review the project design and project implementation are adequately completed by the Project Team considering the given timelines of four years and the given budget of USD 4.434.199.</p> <p>As there were four calls for proposals held in the CICSА Project. it would be easier and more efficient to hold only one call for proposal to allow each developer the same amount of time for project implementation. During execution of the CICSА Project, South Africa's Pilot Project saw a significantly shorter project implementation timeline than, for example, Kenya's Pilot Projects.</p> <p>Project Management suffered from a devolution of most IKI Project Management to ZUG, especially at the time of requesting approval of Pilot Projects. Requiring approval from the donor for Pilot Projects prior to disbursing funds also delayed the implementation of certain Pilot Projects due to administrative processes. Grants for Pilot Projects had to be endorsed from IKI, which led to time losses and less efficiency in the CICSА Project.</p>	<b>5.0</b>	Rating validated.	<b>S</b>

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
<b>G - Monitoring and Reporting</b>		<b>5.5</b>	This is rated 5.5 in table 14 and 4,67 in table 10.	<b>MS</b>
1. Monitoring design and budgeting	The ProDoc includes in CHAPTER 8 a very detailed monitoring plan for the CICSА Project, which was followed by the Project Management during execution of the CICSА Project. A positive effect on implementation of the CICSА Project was the approach of a kind of “Jour Fixe”, which was hold weekly on Wednesdays for the internal Project Team to “keeping the pace”:	5.5	The rating is adjusted to 5 (S). Evidence of monitoring plan disaggregated by stakeholder including gender and minority/ disadvantaged groups not provided.	<b>S</b>
2. Monitoring of project implementation	The monitoring of the CICSА Projects was in the responsibility of UNEP Project Management. Due to total absence of any meeting protocols for the internal meetings within the CICSА Project Team, there is very limited evidence that the project was widely monitored.	5.5	While stakeholder interviews and pilot projects provided evidence of delivery of project activities, the reviewer could not identify evidence of timely tracking of results and progress during implementation by the project team. Data was not sensitive to and collected on vulnerable groups and gender in project activities. Rating therefore adjusted downwards.	<b>MS</b>
3. Project reporting	The CICSА Project produced and published a wide range of documents, most of them are available on the CICSА homepage. There is still the Final Report missing, which is due in March 2024.	5.5	This is rated 5.5 in table 14 and is rated 3 in table 10. Evidence not available to confirm consistency between project progress in PIMS/IPMR/donor reports and available reports to the reviewer. There is no change to the rating.	<b>MU</b>

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
<b>H - Sustainability</b>		<b>5.0</b>	This is rated 5 in table 14 and 3 in Table 10	<b>ML</b>
1. Socio-political sustainability	<p>The CICSА Project and therefore PV investments in Africa in the C&amp;I sector are fully supported by all Members of the Steering Committee representing the national administration for the introduction of PV in C&amp;I sector.</p> <p>Attracting private investments by supporting the Pilot Projects with a grant of USD 1,077,832 to setup investments of about USD 34 M within these Pilot Projects.</p>	6.0	National stakeholder support and ownership according to interviews. Further evidence of support is not provided. Private investment interest resort under financial sustainability. Rating is therefore adjusted to 5 (L).	<b>L</b>
2. Financial sustainability	Not relevant. The implementation of PV in Africa to C&I is not a public task, except for preparation of a market for PV investments in this sector. Therefore, no financial sustainability by UNEP is needed. The market participants will ensure financial sustainability as most of the PV investments are profitable in the market.	5.0	This is rated 5 in table 14 (and it is rated 3 in table 10). Private sector interest in investing in PV documented, which means funding requirements for more PV installations is likely to be secured, however, there is no exit strategy for maintaining tools and web-site providing important information for replication. Rating is therefore adjusted to 4 (ML).	<b>ML</b>

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
3. Institutional sustainability	<p>Within the project design there is no insurance that the detailed homepage of the CICSА Project will be extended after 2023.</p> <p>The intention of the project, as to the design, is to effectively demonstrate and promote captive renewable energy solutions in the industry sector in Sub-Sahara Africa.</p> <p>For the "Homepage" and for the excel based "Tool 3" there were no agreements made for a sustainable use of this very important information for the sustainability of results.</p>	6.0	There is no exit strategy for maintaining tools and web-site providing information for replication. Project implemented successful pilot demonstration projects but there does not appear to be a strong mechanism for continued support. The rating is therefore adjusted to 4 (ML).	<b>ML</b>
<b>I - Factors Affecting Performance</b>		<b>5.06</b>		<b>S</b>
1. Preparation and readiness	<p>The start of CICSА implementation was without any delay.</p> <p>There were no obstacles detected that delayed the CICSА Project in 2019.</p>	5.0	No change in rating. The agreement needed with country partner was not foreseen and caused initial delay.	<b>S</b>
2. Quality of project management and supervision	<p>Supervision and governance are adequately covered in the CICSА Project and had been effectively designed during ToR phase.</p> <p>UNEP Project Management is adequately implemented in the CICSА Project.</p> <p>Capacities of partners are correctly assessed in the CICSА Project documents.</p>	5.0	Rating Validated.	<b>S</b>
<i>2.1 UNEP/Implementing Agency:</i>	All experts interviewed reported that the management of the CICSА Project was very efficient and directed to the given objectives.	5.5	Evidence is not sufficiently presented in the report with regards to the implementing entity's role.	<b>S</b>
<i>2.2 Partners/Executing Agency:</i>	Experts interviewed judged the execution of the CICSА Project as very good. As before, it must be seen that there was no internal documentation of the weekly meetings (usually there are Minutes of Meetings to be noted).	4.5	Evidence is not sufficiently presented in the report of role of executing partner.	<b>S</b>

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
3. Stakeholders' participation and cooperation	The design of the project with four Members from the four participating countries having in the Steering Committee and, keeping the entire structure simple and straightforward to the giving UNEP goals helped considerably ensuring the effective implementation of the project.	5.5	The rating is adjusted to 5 (Satisfactory) to ensure rating follows 6-point scale.	<b>S</b>
4. Responsiveness to human rights and gender equality	No obstacles were identified that human rights and gender issues were not considered in the CICS A Project.	5.0	Assessment of human rights and gender equality found evidence of female beneficiaries were targeted in implementation and 40% female participation but found no project expenditure made to towards this. The rating is therefore adjusted to 4 (MS).	<b>MS</b>
5. Environmental and social safeguards	Negative environmental impacts could not be identified during the implementation of the CICS A Project.	5.5	While no change in rating is given, the absence of safeguarding issues/ reporting information could have been reviewed in terms of risks identified in the project document and benefited the assessment and its verification of evidence and perceptions of stakeholders. Rating adjusted to the 6 point-scale for ratings (S).	<b>S</b>
6. Country ownership and driven-ness	The content of the CICS A Project is fully owned by the national governments and the respective countries.	5.5	The rating is adjusted to the 6 point rating scale. Country entities have been successful in sourcing more funds and investments.	<b>HS</b>

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
7. Communication and public awareness	Communication between partners and stakeholder were reported as very good. A number of articles and TV sets were produced, but there is no overview on these activities available, missing table with the communication including content, location and date.	4.0	Rating Validated.	MS
<b>Overall Project Performance Rating</b>		5.03		HS



162. The overall total rating of the CICSA Project is quite high compared to other projects, as it could be seen in the summary Table 14 with a total score of 5.03 ("Satisfactory").

**Table 14: Summary of project ratings**

Evaluation criteria	Rating	Score	Weight	Weighted Score
<b>A Strategic Relevance (select the ratings for sub-categories)</b>	<b>Highly Satisfactory</b>	<b>5,50</b>	<b>6</b>	<b>0,33</b>
<i>Alignment to UNEP's MTS, POW and strategic priorities</i>	Highly Satisfactory	5,50	0,5	
<i>Alignment to Donor/Partner strategic priorities</i>	Highly Satisfactory	5,50	0,5	
<i>Relevance to regional, sub-regional and national issues and needs</i>	Highly Satisfactory	5,50	2,5	
<i>Complementarity with existing interventions</i>	Highly Satisfactory	5,50	2,5	
<b>B Quality of Project Design</b>	<b>Highly Satisfactory</b>	<b>5,50</b>	<b>4</b>	<b>0,22</b>
<b>C Nature of External Context</b>	<b>Favourable</b>	<b>5,00</b>		
<b>D Effectiveness (select the ratings for sub-categories)</b>	<b>Satisfactory</b>	<b>4,83</b>	<b>45</b>	<b>2,18</b>
<i>Availability of outputs</i>	Highly Satisfactory	5,50	5	
<i>Achievement of project outcomes</i>	Highly Satisfactory	5,50	30	
<i>Likelihood of impact</i>	Unlikely	2,50	10	
<b>E Financial Management (select the ratings for sub-categories)</b>	<b>Highly Satisfactory</b>	<b>5,50</b>	<b>5</b>	<b>0,28</b>
<i>Adherence to UNEP's policies and procedures</i>	Satisfactory	4,50		
<i>Completeness of project financial information</i>	Highly Unsatisfactory	5,50		
<i>Communication between finance and project management staff</i>	Highly Satisfactory	5,50		
<b>F Efficiency</b>	<b>Satisfactory</b>	<b>5,00</b>	<b>10</b>	<b>0,50</b>
<b>G Monitoring and Reporting (select the ratings for sub-categories)</b>	<b>Highly Satisfactory</b>	<b>5,50</b>	<b>5</b>	<b>0,28</b>
<i>Monitoring design and budgeting</i>	Satisfactory	5,50		
<i>Monitoring of project implementation</i>	Satisfactory	5,50		
<i>Project reporting</i>	Satisfactory	5,50		
<b>H Sustainability (select the ratings for sub-categories)</b>	<b>Likely</b>	<b>5,00</b>	<b>20</b>	<b>1,00</b>
<i>Socio-political sustainability</i>	Highly Likely	6,00		
<i>Financial sustainability</i>	Likely	5,00		
<i>Institutional sustainability</i>	Highly Likely	6,00		
<b>I Factors Affecting Performance (select the ratings for sub-categories)</b>	<b>Likely</b>	<b>5,06</b>	<b>5</b>	<b>0,25</b>
<i>Preparation and readiness</i>	Likely	5,00		
<i>Quality of project management and supervision</i>	Likely	5,00		
<i>UNEP/Implementing Agency: (select the ratings for sub-categories)</i>	Highly Likely	5,50		
<i>Partner/Executing Agency: (select the ratings for sub-categories)</i>	Likely	4,50		
<i>Stakeholder participation and cooperation</i>	Highly Likely	5,50		
<i>Responsiveness to human rights and gender equity</i>	Likely	5,00		
<i>Environmental and social safeguards</i>	Highly Likely	5,50		
<i>Country ownership and driven-ness</i>	Highly Likely	5,50		
<i>Communication and public awareness</i>	Moderately Likely	4,00		
			<b>100</b>	<b>5,03</b>
			<b>Satisfactory</b>	

### C. Lessons learned

163. There is definitely a huge market in Africa for photovoltaic systems in the commerce & industry sector. This has been clearly developed by the CICSA Project, both by the country assessments and by the Pilot Projects with comparatively short pay-back periods due to high electricity prices and load-shedding in these countries.

164. Due to the limitations for the continuation of the very detailed and highly informative homepage of the CICSA Project, a continuation is urgently required to avoid loss of know-how and ensure sustainability of the goals of the project implemented.

165. The information (Country Reports, Tools, Pilot Studies and others) collected for the four countries (Ghana, Kenya, Nigeria and South Africa)

within the CICSА Project could be transferred to their neighbouring countries to disseminate clean captive solutions for the C&I sector in SSA.

166. Tools for calculating photovoltaic solutions in an early stage of project implementation require easy to be used models. Tool 3 is too sophisticated for a first calculation of technical and economic effects of a possible investment in photovoltaic systems. Therefore, to ensure sustainability of the project results, an easy-to-use Tool 3 should have been developed (of course, if a company decides to look further into an installation of an PV system, the suppliers and dealers will provide the client with a more detailed technical and financial offer).

<b>Lesson Learned #1:</b>	<b>Huge market for clean captive installations in the C&amp;I sector in SSA</b>
<b>Context/comment:</b>	There is definitely a huge market in Africa for photovoltaic systems in the commerce & industry sector. This has been clearly developed by the CICSА Project, both by the country assessments and by the Pilot Projects with comparatively short pay-back periods due to high electricity prices and load-shedding in these countries.
<b>Lesson Learned #2:</b>	<b>Transfer of know-how gathered in the CICSА Project to scale-up in other regions of SSA</b>
<b>Context/comment:</b>	The information (Country Reports, Tools, Pilot Studies and others) collected for the four countries (Ghana, Kenya, Nigeria and South Africa) within the CICSА Project could be transferred to their neighbouring countries to disseminate clean captive solutions for the C&I sector in SSA.
<b>Lesson Learned #3:</b>	<b>Assistance and guidance by professional “developers” still required for CCI in C&amp;I sector of SSA</b>
<b>Context/comment:</b>	Companies and institutions in the C&I sector of SSA still require professional assistance by professional “developers” to initiating and implementing their project ideas on clean captive energy solutions.

## D. Recommendations

167. During interviews with stakeholders of the CICSА Project, the following statements had been given in the context of this CHAPTER VI.D (Recommendations). Where appropriate, the Reviewer has considered some of these statements for the Terminal Review.
- ☑ *With Phase II it is possible to build on current developed know-how for the current countries ...*
  - ☑ *Good evidence to set-up government procedures to replicate CICSА Projects in neighbouring countries and scale-up with projects in the current countries ...*
  - ☑ *Understanding that “agrivoltaics” is an important topic ...*
  - ☑ *Toolbox not priority for Phase II, this Phase II is more directed to developers ...*
  - ☑ *Toolbox idea is good for industry to go on their own, at least in the “finding phase” of a project ...*
  - ☑ *Phase II should concentrate on less developed African countries (SSA)*
  - ☑ *In future, “approval of grants” for the Pilot Projects at one specific date*
  - ☑ *This CICSА Project is guide for future interventions ...*
  - ☑ *Steering Committee should have one meeting per year in personal form, additional meetings only on request, other meetings as video-conferencing ...*
  - ☑ *Spreading to the regions is a good idea ...*
  - ☑ *Spread the pilot project all over the country in different cities for different industries, for ex. cooling milk and other agricultural areas ...*
  - ☑ *South Africa is good in software development for batteries (Cape Town), not in production of solar PV cells, this is better to be imported from China ...*

- ☑ Smart grids like in Germany could be interesting ...
- ☑ Road-Show not, awareness raising is directed to project developers ...
- ☑ Road-Show and communication and awareness raising is bringing information to the people and giving more attention ...
- ☑ Request for extension has been send as Amendment 4 between UNEP and BMWK
- ☑ Raising critical awareness through more workshops ...
- ☑ Processes are already set up, this will very efficiently be used within Phase II ...
- ☑ Planned extension of CICSAs Phase II is mostly welcomed for my country ...
- ☑ Pilot projects in Business Parks with smart and small grids for C&I sector ...
- ☑ Phase II will be a regional approach with regional Calls for Proposals ...
- ☑ Phase II to be replicated all over Africa ...
- ☑ Phase II should have grants with separate PCAs, to be decided by an "Investment Committee" to speed up processes ...
- ☑ Phase II should better concentrate on Pilot Projects than on "Policy Support" ...
- ☑ Phase II should be mainly as a grant ...
- ☑ Phase II new "Call for Proposals" will be on regional level, not on various national levels ...
- ☑ Phase II idea is to stay with CICSAs Phase II in Africa and go to less developed and less mature markets (Cameroon, Madagascar, South Sudan, Cape Verde) as a regional assessment has shown that these are extreme markets (no licensing, no regulation, no feed-in tariff) and here also policy support would be useful. ...
- ☑ Phase II demonstrating to others and support local stakeholders ...
- ☑ Phase I was on country calls, Phase II will be on regional calls ...
- ☑ One call for all countries, otherwise delays for projects where the country is last one in call for proposals ...
- ☑ No need for two personal meetings of Steering Committee a year ...
- ☑ New idea for Phase II with USD 6-8 M with 20-25 Pilot Projects to achieve upscaling, Pilot Project calls at best in one single call ...
- ☑ Mr Guterres leads a call to make Africa 'renewable energy superpower', but UN funding for this programme is not setup ...
- ☑ Lighthouse projects as fast instrument to replication ...
- ☑ Lighthouse project for a long-term sustainability ...
- ☑ Lighthouse project could of interest to boost PV in C&I sector in Africa ...
- ☑ Interventions should be continued in the current countries ...
- ☑ Industrial parks in Free State as Pilot Projects ...
- ☑ Green hydrogen with PV cells for the C&I sector in Africa ...
- ☑ Great potential for scale-up ...
- ☑ Funding should be upfront in order to avoid delay in work due to time delays of financial transfers ...
- ☑ Developing charging infrastructure for trucks with solar PV and batteries (in the C&I sector)
- ☑ Concept for financing Phase II is unclear, could be via IKI ...
- ☑ CICSAs with Phase I was a kind of Pilot Project for Phase II ...
- ☑ CICSAs as a "Help the Pioneers" ...
- ☑ Battery industries for shopping centres, large and medium sized industries and parking places with a large space at roofs for solar PV ...
- ☑ Battery factory in Cape Town is a cluster centre of excellence, to be boosted ...
- ☑ Avoid duplication of projects, similar projects CICSAs Phase II are underway ...
- ☑ A simple tool for C&I could be online for a fast pre-check for them whether PV is on economic interest for possible participating companies ...
- ☑ "Handbook" and "Toolbox" could be useful ...
- ☑ A combination of asset financing and project financing on PV installations is ideal for the C&I sector ...
- ☑ Comoros are a market we are looking in to re-use the PP intervention ...
- ☑ Compared to other captured power technologies, for example waste energy use, the supply chain for spare parts for PV is much more advanced ...
- ☑ For future it is recommended to shorten the grant application processes ...
- ☑ For future projects, it is recommended to continue with developed SSA markets as there is still enough to do with and funds made available give a higher pay-back

*then in less developed markets ...*

*For future, for example projects in the area of food processing or in agriculture sector could be target for PPs ...*

*For Phase II it is strictly recommended to stay with supporting projects in the C&I sector ...*

*Lack of capital is the main cause for not-implementing this kind of PV projects besides an enormous demand for PV solar production ...*

*Main cause for limitations for PV installations in the C&I sector of SSA are comparatively high risks of failures in the projects, reduction of risks would help to unlock capital flows ...*

*PP in less developed countries have a high risk of failure, interventions should be carefully selected and monitored ...*

*The developer sees a huge number of problems coming up when going to very less developed countries, for example Madagascar, where no experience with this kind of projects is and recommends, if going to these countries to be very careful with new projects there ...*

*We would like to see continued communication with UNEP/FS ...*

168. Based on discussion with the main stakeholders of the CICSA Project (17 interviews) and based on detailed analysis of the 128 documents provided by the CICSA Project, the Reviewer gives a number of recommendations to UNEP. The analysis is based on a "Concept Note"<sup>32</sup> published during summer 2023 by FS UNEP Collaboration Centre.

169. CICSA Phase II will undertake Lessons Learned drawn from CICSA Phase I have guided the design of CICSA Phase II to strengthen the project's catalytic function. Phase II will enable market and financial innovation through targeted support to private developers and their clients in developing marketable and financially viable clean captive power solutions, and to national authorities for enabling policies and regulations. To efficiently support the sector and respond to the markets' demand, CICSA Phase II will focus on the two major recommendations including respective workshops to be implemented regionally and locally.



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<sup>32</sup> Source: United Nations Environment Programme and Frankfurt School-UNEP Collaborating Centre: Scale up and replication of Clean Captive Installations for industrial clients in sub-Saharan Africa (CICSA) project. Concept Note (4 p), Paris/Frankfurt no date

**Figure 17: Photo from photovoltaic installations at NKCC, New Sotik Market with cold storage facilities for meat production in Kenya (Photo: Yamini Jain, January 2023)**

170. Recommendation 1 “Additional Countries”: In order to deepen captive energy solutions in Africa in a Phase II the project should disseminate its know-how on two ways: (1) Using road-shows and regional workshops to disseminate and scale-up investments in the participating four countries, while using established contacts and information collected in Phase I, and in parallel (2) to disseminate captive energy solutions to less developed and less mature markets:
- More countries, “Scaling up Clean Captive Installations in countries with a relatively advanced market: One approach discussed was the expansion of clean captive installations in additional developed countries in Sub-Sahara Africa (SSA). This involves increasing the adoption and implementation of clean energy solutions in industries and companies with initial technological and financial capabilities. The focus of that approach should be on scalability.”<sup>33</sup>
  - “Access to Markets in Countries with Less Developed markets”, in this case Cameroon, Madagascar, South Sudan, Cape Verde as a regional assessment has shown that these are “extreme” markets (no licensing, no regulation, no feed-in tariff) and here also policy support would be useful. Another approach considered was to focus on facilitating access to markets for clean captive installations in countries with less developed markets. The aim would be to promote the adoption of clean energy solutions in SSA where there is a significant potential for growth and development. Here, the approach should focus on capacity building and pioneering.<sup>34</sup>
171. Recommendation 2 “Additional Pilot Projects”: Fastening grant procedures by a general approval to PMU for any Pilot Projects allowing faster implementation of the Pilot Projects. About 20 Pilot Projects and USD 6 M, additional 4 countries (Cameroon, South Sudan, Madagascar, Cape Verde), two Components, grant facility to support innovative business models, policy support and public outreach campaigns<sup>35</sup>.
172. Recommendation 3 “Easy-to-use Tool Box”: Handbook guidance and forms for implementing PV in Sub-Sahara Industry (design, call for proposals, evaluation of PV suppliers and installers, awarding a supplier/Installer, contracting, DD, supervision of works, technical and financial calculations of planned project, photos, drawings, other documents)
173. Recommendation 4 “Dissemination and Road Shows”: (4.1) Dissemination with press releases, TV, exhibition using already available material by a professional marketing team (4.2) Training for local banks and other local financing institutions on financing medium sized installations of PV in the C&I sector in Africa (4.3) Organizing a Market Place (Road Show) for all market participants, namely in each of the participating countries with one central meeting place in the capital of the country and additional 4

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<sup>33</sup> Source: Project Steering Committee #4, Clean Captive Installations for Industrial Clients in Sub-Sahara Africa, Steering Committee Minutes (7 p), 26 June 2023 page 5f

<sup>34</sup> Source: Project Steering Committee #4, Clean Captive Installations for Industrial Clients in Sub-Sahara Africa, Steering Committee Minutes (7 p), 26 June 2023, page 6

<sup>35</sup> Source: United Nations Environment Programme and Frankfurt School-UNEP Collaborating Centre: Scale up and replication of Clean Captive Installations for industrial clients in sub-Sahara Africa (CICSA) project. Concept Note (4 p), Paris/Frankfurt no date

meetings places on regional level with INDUSTRY (industrial companies, industrial associations and others), SUPPLIERS and INSTALLERS (for PV in industry sector), FINANCIERS (commercial local banks, international financing institutions (IFI), Third Party Financing, ESCOs and others), GOVERNMENT (ministries, regulators, parliament and others) and UTILITIES (regional electric utilities and others). Keeping the homepage and the information on the homepage with country reports, various tools and pilot Projects for any interested persons, companies and institutions for a reasonable period (for at least two years after completion of the project).

174. The following Table 15 gives an overview on the recommendations by the Reviewer.

**Table 15: Overview on recommendations for the CISA project with two recommendations each for “high priority” and for “priority”**

Recommendation #1:	“Additional Countries”
<b>Challenge/problem to be addressed by the recommendation:</b>	Policy support and public outreach campaigns: Several factors contribute to the success of captive power projects. Supportive policy and regulatory frameworks enable the uptake, and innovative financing models ease the accessibility. Phase I demonstrated that public outreach campaigns and knowledge sharing is particularly valuable. Furthermore, promoting South-South cooperation is important in this dynamic context and sector. Accordingly, Component 2 will pick-up on these successes and further strengthen corresponding activities. The Component is sub-divided into three interconnected tasks: market studies and gap analysis, lessons learned and information dissemination and private sector engagement. Reaching out to new markets, identifying market opportunities and regulatory gaps for CCI deployment require diligent market assessments informing stakeholders accordingly. This support is especially crucial in less mature markets. Following findings from these studies, stakeholders can engage and make informed decisions building on a solid foundation. During CICSA Phase I the engagement opportunities have been very fruitful and appreciated by participants.
<b>Priority Level:</b>	<b>Priority Level 1 (high priority)</b>
<b>Type of Recommendation</b>	Preparation of project design for a Phase II project
<b>Responsibility:</b>	United Nations Environment Programme (UNEP), Industry and Economy Division / Finance Unit / Climate and Energy Branch
<b>Proposed implementation time-frame:</b>	2024 to 2028

Recommendation #2:	“Additional Pilot Projects”
<b>Challenge/problem to be addressed by the recommendation:</b>	Grant facility to support innovative business models for additional Pilot Projects: A Grant facility, in line with Phase I, the grant facility will focus on innovative business models demonstrating feasibility and leveraging private finance. However, the focus of CICSA might differ depending on the maturity of the respective market, thus duly accounting for the regional approach of Phase II. Scalability will be further strengthened in more advanced markets, where captive generation is already somewhat established but not mainstream. At the same time, pioneers will be supported with the CICSA Project infrastructure in more nascent markets where the project development and/or financial landscape is less mature. Such targeted support can be best organized by publishing dedicated calls for proposals with a respective weighting of selection criteria. As such, specific regions or purposes (e.g., scale vs. demonstration) will be targeted per call to ensure appropriate representation and avoid concentration. Furthermore, new features will be added to the grant facility under Phase II. Companies operating in or throughout sub-Saharan African countries will be eligible for grants as well. Similar to Phase I, grants will be availed to successful beneficiaries on a cost-sharing basis to ensure sufficient ownership.

	Additionally, after the first few calls for proposals, a repayable grant can be considered after evaluating the respective first round of applicants. That way, specific grant support would need to be paid back at some point upon reaching KPIs. At the same time, projects that are particularly additional may continue to receive non-repayable grants.
<b>Priority Level:</b>	<b>Priority Level 1 (high priority)</b>
<b>Type of Recommendation</b>	Preparation of project design for a Phase II project
<b>Responsibility:</b>	United Nations Environment Programme (UNEP), Industry and Economy Division / Finance Unit / Climate and Energy Branch
<b>Proposed implementation time-frame:</b>	2024 to 2028

<b>Recommendation #3:</b>	<b>“Easy-to-use Tool Box”</b>
<b>Challenge/problem to be addressed by the recommendation:</b>	In order to allow a larger number of companies and institutions in the C&I sector of SSA an easy-to-use tool box should be developed by the Project Team and provided to interested companies and institutions. This will allow those companies and institutions to carry out a “First Preliminary Check” whether the project idea for a captive energy solution could be viable. Of course, in case that there is a positive feed-back from these tool box, then additional, more detailed calculations are definitely necessary.
<b>Priority Level:</b>	<b>Priority Level 2 (priority)</b>
<b>Type of Recommendation</b>	Preparation of project design for a Phase II project
<b>Responsibility:</b>	United Nations Environment Programme (UNEP), Industry and Economy Division / Finance Unit / Climate and Energy Branch
<b>Proposed implementation time-frame:</b>	2024 to 2028

<b>Recommendation #4:</b>	<b>“Dissemination and Road Shows”</b>
<b>Challenge/problem to be addressed by the recommendation:</b>	CICSA Phase II should host specific workshops bringing together stakeholders from the private and public sector. Lessons learned educated efforts to engage with the private sector and attempt to bring in debt and equity providers to support service providers and/or C&I companies. CICSA’s objective is to serve as a facilitator and enabler for companies and investors alike. Especially going to the different regions in a country with workshops and a kind of Road Show will allow a scale-up of clean captive installations.
<b>Priority Level:</b>	<b>Priority Level 2 (priority)</b>
<b>Type of Recommendation</b>	Preparation of project design for a Phase II project
<b>Responsibility:</b>	United Nations Environment Programme (UNEP), Industry and Economy Division / Finance Unit / Climate and Energy Branch
<b>Proposed implementation time-frame:</b>	2024 to 2028

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## ANNEX I. RESPONSE TO STAKEHOLDER COMMENTS

**Table 16: Response to stakeholder comments received but not (fully) accepted by the reviewers, where appropriate**

Page Ref	Stakeholder comment	Reviewer Response
	No comments by stakeholders	No Reviewer Response

## ANNEX II. PEOPLE CONSULTED DURING THE REVIEW

**Table 17: People consulted during the Review**

Organisation	Name	Position, Location	Gender
United Nations Environment Programme (UNEP), Industry and Economy Division / Finance Unit / Climate and Energy Branch	Francoise d'Estais	Unit Head, Energy & Finance, Climate and Energy Branch, Paris (retired)	female
United Nations Environment Programme (UNEP), Industry and Economy Division / Finance Unit / Climate and Energy Branch	Carolina Merighi	Project Manager, Paris	female
Department of Trade and Industry, South Africa	Gherard Fourie	Chief Director, Green Industries, Pretoria	male
Ministry of Energy and Petroleum, Ghana	Seth Agbeve Mahu	Deputy Director, Renewable Energy, Accra	male
Ministry of Energy, Kenia,	Stephen Nzioka	Senior Deputy Director, Renewables, Nairobi	male
Energy Commission of Nigeria	Okon Nsehenyin Ekpenyong	Director, Linkages and Consultancy, Abuja	male
United Nations Environment Programme (UNEP), Africa Office (AO)	Meseret Teklemariam Zemedkun	Head of Energy, Environment and Climate Office for Sub-Saharan Africa, Pretoria	female
United Nations Environment Programme (UNEP)	Amanda Lees	Fund Manager, Paris	female
United Nations Environment Programme (UNEP)	Jimmy Mutuk	Senior Finance Officer, Paris	male
Frankfurt School of Finance and Management (FS)	Tobias Panofen	Project Director, Frankfurt	male
Frankfurt School of Finance and Management (FS)	Yamini Jain	Project Management, Frankfurt	female
Zukunft – Umwelt – Gesellschaft (ZUG), IKI Office at ZUG gGmbH for Bundesministerium für Wirtschaft und Klimaschutz (BMWK)	Franziska Kamm	Project Manager, Team Energy, Industry, Technology, Berlin	female
OFGEN Ltd.	Beatrice Songok	Project Finance Manager	female
Tree_Sea.Mals Ltd.	Tracy Kimathi	Managing Director, Founder	female
ECOLIGO GmbH	Claudia Rothe	Head of Fundraising, Senior Manager Project Finance	female
Stella Futura Africa Ltd.	Francis Asante	CEO	male
PowerGen Renewable Energy Nigeria Limited	Sam Duby	Project Manager	male

**ANNEX III. REVIEW FRAMEWORK / MATRIX**

<b>Review Criteria</b>	<b>Review Indicators</b>	<b>Means of Verification</b>
<b>A-Strategic relevance</b>		
What is the alignment to UNEP and other donor organisations <b>strategies and priorities</b> ?	Level of alignment with UNEP long-term and Medium-Term Strategy	Number of strategic objectives met by the project, comparison of documents with strategy paper of UNEP
Did the <b>political context</b> change during implementation and how did the project adapt to this?	Reported management measures to changes in political context	Reports, interviews with project staff and stakeholders
How <b>successful</b> was the project in producing the outcomes and outputs?	Outcome level and output level	Reports, interviews with staff and stakeholders, publications, studies
<b>B-Quality of project design</b>		
How was the overall <b>collaboration</b> between different functional units of UNEP involved in the project? What coordination mechanisms were in place?	Perceived level of collaboration and coordination within UNEP	Interviews with project staff, UNEP staff and members of SC and the stakeholders of the Pilot Projects within CICSA
Were the <b>stakeholders adequately involved</b> in producing outputs and outcomes?	Reported contribution of stakeholders to outputs and outcomes	Interviews with staff, interviews with stakeholders, protocols of Steering Committee Meetings
What was the achieved degree and <b>effectiveness of collaboration</b> and interactions between the project partners	Level of participation of project partners in project design and actual inclusion in project implementation arrangements	Reports and interviews

and stakeholders during design and implementation of the project?		
How did the <b>relationship</b> between the project and the collaborating partners develop?	Perceived satisfaction of main partners in the project	Interviews with stakeholders
<b>C-Nature of external context</b>		
In how far have the national partners <b>assumed responsibility for the project</b> and provided adequate support to project execution, including the degree of cooperation received from the various public institutions involved in the project?	Endorsement of project by governmental organisations, provision of counterpart funding	Documented endorsement and co-financing agreements, interviews with UNEP staff and stakeholders, reports and financial documents
How and how well did the project <b>stimulate</b> country ownership of project outputs and outcomes?	Perception of ownership by the national authorities	Minutes of meetings, interviews with members of SC and project staff
<b>D-Effectiveness</b>		
Has the project been successful in <b>influencing government</b> to implement CICSA investments?	Indicator of outputs and outcomes	Interviews with policy makers and regulatory institutions, interviews with project staff, field visits (if applicable)
To what degree have the project products (for ex. trainings, studies, etc.) been <b>accessible</b> to decision makers and other relevant interest groups, and what effect has this had on the appraisal of captive energy systems in Africa?	Indicator of outputs and outcomes	Interviews with beneficiaries, project reports
Are policies and plans on captive energy systems in Africa <b>effectively implemented</b> , sustained over time and monitored?	Number of new policy plans that include captive energy systems in Africa	Interviews with governmental staff, project reports, documentation of policies and plans including captive energy systems

Did the project effectively <b>build local capacity</b> in Captive energy systems in Africa?	Number of trainees, number of persons involved in	Reports and interviews with staff and stakeholders
To what extent have the project findings, tools and methodologies been <b>made available</b> to state and federal decision makers as well as the public, and relevant interest groups?	Quantity and distribution of information on captive energy systems and quality of information	Project products (publications, data, homepage, newsletter), interviews with staff and stakeholders
Did the main project <b>assumptions</b> hold?	Level of compliance of the assumptions	Reports, interviews, analysis of assumptions versus project results
<b>E-Financial management</b>		
How well are <b>standards</b> (clarity, transparency, audit etc.) of financial and operational (staff recruitment, evaluation, secondary conditions) planning, management and reporting applied, to ensure that sufficient and timely financial resources were available to the project and its partners?	Quality of standards for financial and operational management	Financial and audit reports (if any), interviews with UNEP staff and staff from Frankfurt School
To what extent <b>co-financing</b> has materialized as expected at project approval?	Level of co-financing in relation to original planning	Financial reports, interviews
What resources has the project <b>leveraged</b> since inception and how have these resources contributed to the project's ultimate objective?	Level of other leveraged resources from participating countries	Financial reports, interviews
Have there been any <b>irregularities</b> in procurement, use of financial resources and human resource management that impacted project performance? In that case, what measures have been taken by UNEP to prevent such irregularities in the future?	Number of cases of irregularities	Financial and audit reports (if any), interviews with UNEP staff
<b>F-Efficiency</b>		

Did the <b>project build adequately</b> existing institutions, lessons of other initiatives, data sources, partnerships with third parties? Did the project create complementariness on existing initiatives on Captive energy systems in AFRICA?	Level of inclusion of pre-existing initiatives and institutions	Project documents, interviews with stakeholders on pre-existing initiatives
How was the <b>operational execution</b> vs. original planning?	Level of compliance with project planning / annual plans	Interviews, reports
If present, what have been the <b>main reasons for delay / changes</b> in implementation? Have these affected project execution, costs and effectiveness?	List of reasons validated by project staff	Interviews with project staff and stakeholders
Was adaptive management <b>applied adequately</b> ? Were any cost- or time-saving measures put in place in attempting to bring the project as far as possible in achieving its results?	Measures taken to improve project implementation based on project monitoring and review	Project reports, interviews with project staff
<b>G-Monitoring and Reporting</b>		
Was an M&E system operational and facilitated <b>timely tracking</b> of results and progress towards projects objectives throughout the project implementation period?	Level of timely tracking implementation of M&E system (execution of activities)	Interviews with project staff, stakeholders, revision of reports
Were the results used to improve project performance and to <b>adapt to changing</b> needs?	Changes in project implementation as result of mid-term review or other supervision	Interviews with key stakeholders, project implementation reports, management response to mid-term review
<b>H-Sustainability</b>		
Are there any <b>legal or political factors</b> that may influence positively or negatively the sustenance of project results and progress towards impacts?	Key factors that positively or negatively influence the impacted project results	Project reports, interviews with stakeholders



Is the <b>level of ownership</b> by the main national and regional stakeholders sufficient to allow for the project results to be sustained?	Stakeholders actively participating in the implementation and replication of project results	Interviews with stakeholders, project documents
To what extent are the continuation of project results and the impact of the project dependent on <b>continued financial resources</b> ? What is the likelihood that adequate financial resources will be available to continue implementation of Captive energy systems programs, plans and investments? Are there any <b>financial risks</b> that may jeopardize sustenance of project results and onward progress towards impact?	Calculation and estimation of financial requirements within the respective budgets of stakeholders	Interviews with staff and stakeholders, documented estimations of future budgets for Captive energy systems in Africa
Was sustainability improved through <b>stakeholder strengthening</b> ? Was capacity building conducted for key stakeholders?	Governmental agencies and organisations of beneficiaries perceiving better capacities to sustain project results through understanding, improved plans and strengthened power positions	Interviews with stakeholders
<b>I-Factors on project performance and cross-cutting issues</b>		
To what extent have the project implementation mechanisms outlined in the project document been followed and were effective in delivering project milestones, outputs and outcomes? Were pertinent adaptations made to the approaches originally proposed?	Level of implementation and monitoring	Reports, interview with project staff
Was the Project Management <b>adequate, effective and efficient</b> in relation to leadership, coordination, and adaptive capacity?	Level of satisfaction on the overall management	Interviews, revision of minutes of meetings

Did Project Management <b>respond</b> to direction and guidance provided by the UNEP Task Manager and the Project Steering Committee?	Perception of functioning of working groups	Interviews, protocols
How was the <b>performance</b> of the different working groups established in the project?	Perception of functioning of working groups	Interviews, minutes of meetings
<b>J-Other review criteria</b>		
Are lessons and experiences coming out of the project <b>replicated or scaled up</b> ? What are the factors that influence replication and scaling up of project experiences and lessons?	Documented examples for replication of results	Reports, publications by non-CICSA institutions, interviews
To what extent the project created <b>opportunities</b> for individuals or institutions to implement Captive energy systems in Africa?	Number of identified follow-up activities, size of financing input and project output,	Interviews, financing and leveraged co-financing
Were PIR reports, Progress & Financial Reports <b>complete</b> and accurate?	Level of completeness of reports	Project reports, mid-Term review

## ANNEX IV. KEY DOCUMENTS CONSULTED

During this Terminal Review the following main project documents had been considered.

### **A - Project preparation and design**

- “Renewable energy in hybrid mini-grids and isolated grids: Economic benefits and business cases” a UNEP Frankfurt School collaborating centre report, 2015
- UNEP “Clean captive installations for industrial clients in Sub-Sahara Africa” proposal and annexes to the International Climate Initiative of Germany, dated 7 February 2019
- Renewable energy in hybrid mini-grids
- UNEP Project design documents (including minutes of the project design review meeting at approval)

### **B - Project contracts**

- Signed Donor Agreement
- Donor Agreement Amendment No 1
- Amendment No 1 official letter
- Donor Agreement Amendment No 2
- Amendment No 2 official letter
- Donor Agreement Amendment No 3
- Amendment No 3 official letter
- Donor Agreement Amendment No 4
- Amendment No 4 official letter

### **C - Project monitoring**

- Six-monthly and annual progress and financial reports to the donor
- Project UNEP financial statements
- Steering committee meetings minutes
- Progress reports from implementing partners
- Pilot Project factsheets
- Lessons Learned Reports

### **D - Internal UNEP documents**

- Annual Work Plans and Budgets or equivalent
- Mid-Term Evaluation, June 2022
- Revisions to the project (Project Document Supplement), part of the Project Document
- Logical framework, part of the Project Document
- Project revision dated January 2023

### **E - Project deliverables - direct**

- Initial partner country reports:
  - Kenya 2020
  - Ghana 2021
  - Nigeria 2021
  - South Africa 2021
- Analytical tools
  - Financing guidelines and business models for captive solar PV projects (Tool 1)
  - Metrics for assessing financial viability/Cost benefit analysis of projects (Tool 2)
  - Sample financial model to assess the viability of solar PV systems for businesses / User manual (Tool 3)
  - Best available technology for solar PV captive systems (Tool 4)

- Communication strategy (Tool 4)
- Videos explaining the tools (Tool 1 to Tool 4)
  - Video on Tool 1: Financing guidelines and business models for captive solar PV projects (Tool 1)
  - Video on Tool 2: Metrics for assessing financial viability/Cost benefit analysis of projects (Tool 2)
  - Video on Tool 3: Sample financial model to assess the viability of solar PV systems for businesses / User manual (Tool 3)
  - Video on Tool 4: Best available technology for solar PV captive systems (Tool 4)
- Calls for Proposals and Application Forms:
  - Application form Type 1: Transaction costs, 169 KB downloaded on 4 August 2023
  - Application form Type 2: Financing vehicle, 165 KB downloaded on 4 August 2023
  - Application form Type 3: Capacity building, 161 KB downloaded on 4 August 2023
- Due Diligence Reports
- Gender-related brochures:
  - “Female employment in the energy transition”
  - “Women in captive renewable sector”
- “Lessons learnt from the implementation of the pilot projects and case study” report for each country
- Final Report “Status of clean captive installations for industrial clients in Sub-Sahara Africa” publication, NOT COMPLETED, ongoing

#### **F - Project deliverables - indirect**

- Agreements on Pilot Projects
  - Frankfurt School of Finance & Management gGmbH (Frankfurt School) and PowerGen Renewable Energy Nigeria Limited: Partnership Agreement Nigeria, Sign Envelope ID: F4428A4E-9A75-4814-A20F-3960B9B099DA
  - Frankfurt School of Finance & Management gGmbH (Frankfurt School) and SOLA Assets (Pty) Ltd: Partnership Agreement South Africa, Sign Envelope ID: 19D84F81-5B49-4D1C-9794-A19568C
  - Frankfurt School of Finance & Management gGmbH (Frankfurt School) and Stella Futura Limited: Partnership Agreement, DocuSign Envelope ID: B7140C4C-409E-43E9-8978-D44C579FE192
- Inception workshop reports
- Country scoping mission reports
  - Lessons Learned Workshop, Minutes (Kenya 20 April 2023)
  - Lessons Learned Workshop, Minutes (Ghana 09 May 2023)
  - Lessons Learned Workshop, Minutes (Nigeria 11 May 2023)
  - Lessons Learned Workshop, Minutes (South Africa 26 June 2023)
- Pretoria Communiqué
- Closing regional workshop – report
- Status and Opportunities of Clean Captive Generating Installations in Sub-Sahara Africa, Nairobi Sept. 2023

#### **G - Tools prepared by Evaluation Office – see page 20 of ToR**

- Tools Description and Mapping (Word File)
- UNEP Glossary Results Definitions (PDF file)
- List of Documents Needed for Reviews (Word File)
- Review Criteria (Word File)
- Criterion Rating Descriptions Matrix (Word File)
- Review Ratings Table (Word File)
- Weighed Ratings Table (Excel File)

- Project Identification Table only (Word File)
- Inception Report Structure and Contents (Word File)
- Main Review Report Structure and Contents (Word File)
- TOC Reformulation Justification Table only (Word File)
- Quality of Project Design Assessment (Word File)
- Quality of Project Design Assessment Template (Excel File)
- Stakeholder Analysis Guidance Note (Word File)
- Gender Methods Note for Consultants (Word File)
- Safeguards Methods Note for Consultants (Word File)
- Use of Theory of Change in Project Reviews (Word File)
- Financial Tables (Word File)
- Likelihood of Impact.xlsm (Excel File)
- Likelihood of impact Test Case (Excel File)
- Recommendations Quality Guidance Note (Word File)
- Template Presenting Recommendations and Lesson Learned (Word File)
- Recommendation Implementation Plan Template (Word File)
- Cover Page Prelims and Style Sheet Main Review Report (Word File)
- Review Assessment Quality of the Terminal Review Report (Word File)

## ANNEX V. PROJECT BUDGET AND EXPENDITURES

**Table 18: Project Funding Sources Table**

Funding source	Planned funding	% of planned funding	Secured funding	% of secured funding
<b>All figures as USD</b>				
<b>Cash</b>				
Funds from the Environment Fund				
Funds from the Regular Budget				
Extra-budgetary funding (listed per donor):				
<b>Sub-total: Cash contributions</b>				
<b>In-kind</b>				
Environment Fund staff-post costs	135,457	3.1%	135,457	3.1%
Regular Budget staff-post costs				
Extra-budgetary funding for staff-posts (listed per donor)				
<b>Sub-total: In-kind contributions</b>	135,457		135,457	
<b>Co-financing*</b>				
Co-financing cash contribution				
Co-financing in-kind contribution				
BMWK / BMU, Germany	4,298,742	96.9%	4,298,742	96.9%
<b>Sub-total: Co-financing contributions</b>	4,298,742		4,298,742	
<b>Total</b>	<b>4,434,199</b>		<b>4,434,199</b>	

\*Funding from a donor to a partner which is not received into UNEP accounts, but is used by a UNEP partner or collaborating centre to deliver the results in a UNEP – approved project.

**Table 19: Expenditure by outcome/output (estimated figures)**

Component/sub-component/output	Estimated cost at design	Actual Cost/ expenditure
<b>All figures as USD</b>		
Component 1 / Outcome 1 (15%)	665,130	Not available
Component 2 / Outcome 2 (35%)	1,551,970	Not available
Component 4 / Outcome 4 (45%)	1,995,390	Not available
Component 4 / Outcome 4 (5%)	221,710	Not available

## ANNEX VI. FINANCIAL MANAGEMENT

**Table 20: Financial Management Table**

Financial management components:		Rating	Evidence/ Comments
<b>1. Adherence to UNEP's policies and procedures:</b>		<b>HS</b>	Absolutely from beginning to completion
Any evidence that indicates shortcomings in the project's adherence <sup>36</sup> to UNEP or donor policies, procedures or rules		No	No evidence
<b>2. Completeness of project financial information<sup>37</sup>:</b>			
Provision of key documents to the reviewer (based on the responses to A-H below)		<b>HS</b>	
A.	Co-financing and Project Cost's tables at design (by budget lines)	Yes	Co-financing from IKI fully completed]
B.	Revisions to the budget	No	There was no revision of the budget, only one time extension without changes in the budget
C.	All relevant project legal agreements (e.g. SSFA, PCA, ICA)	Yes	All necessary contracts including respective amendments filed
D.	Proof of fund transfers	Yes	All funds from IKI were transferred
E.	Proof of co-financing (cash and in-kind)	Yes	As in-kind contribution UNEP calculates staff costs by UNEP Project Team
F.	A summary report on the project's expenditures during the life of the project (by budget lines, project components and/or annual level)	No	An ERP report was signed by the Certificate Officer
G.	Copies of any completed audits and management responses ( <i>where applicable</i> )	No	No external audit is required, only UNEP as organisation is audited externally.
H.	Any other financial information that was required for this project (list):	No	No evidence for additional information.
<b>3. Communication between Finance and Project Management staff</b>		<b>HS</b>	
Project Manager and/or Task Manager's level of awareness of the project's financial status.		HS	Level of awareness at Project Team was absolutely given
Fund Management Officer's knowledge of project progress/status when disbursements are done.		HS	Due to inhouse financial system Project Manager was always informed to financial status of the project
Level of addressing and resolving financial management issues among Fund Management Officer and Project Manager/Task Manager.		HS	Very good, if there was a problem to be solved
Contact/communication between by Fund Management Officer, Project Manager/Task Manager during the preparation of financial and progress reports.		HS	Absolutely given from beginning to completion
Project Manager, Task Manager and Fund Management Officer responsiveness to financial requests during the review process		HS	Fast answers from Project Manager
<b>Overall rating</b>		<b>HS</b>	<b>Highly Satisfactory</b>

<sup>36</sup> If the review raises concerns over adherence with policies or standard procedures, a recommendation maybe given to cover the topic in an upcoming audit, or similar financial oversight exercise.

<sup>37</sup> See also document 'Criterion Rating Description' for reference

## ANNEX VII. BRIEF CV OF THE REVIEWER

Andreas Helmut Jahn

<b>Profession</b>	Energy Economist
<b>Nationality</b>	German
<b>Country experience</b>	Evaluation of energy projects in various countries: Namibia, Kenya, Ethiopia, Ghana, Eritrea, Rwanda, Tanzania, Uganda, Lebanon, CIS countries, and EU countries
<b>Education</b>	Diplom-Volkswirt, Technical University of Berlin Specialisation in Energy Economics

**Short biography: Andreas H. Jahn** (69) is an Energy Economist with more than 40 years of experience in the energy sector. Mr Jahn completed in recent years a number of evaluation projects on behalf of UNEP, UNDP, EU, AFD, KfW; and EIB on energy projects in various countries (Namibia, Lebanon, China, Brazil, South Africa, CIS countries, and EU countries). Mr Jahn has studied at Technical University Berlin and was for 18 years Managing Director of an Engineering and Consulting company. Since 2006 he works as an independent freelance consultant.

**Key specialties and capabilities cover:** Technical and economic energy expertise, feasibility studies, acquisition of energy projects, tender preparation, technical and economic analyses of infrastructure projects, financing of energy projects, project management, project report revision, mid-term project evaluation and final project evaluation, quality control, feasibility (pre-feasibility) studies, supervision of works, preparation of Terms of Reference (ToR), programme evaluation.

### **Selected assignments and experiences and independent evaluations:**

- Jahn, A.: Country Energy Efficiency and Renewable Energy Demonstration Project for the Recovery of Lebanon - **Final Evaluation** Services for CEDRO I Project, funded by the Government of Spain through the Lebanon Recovery Fund, on behalf of United Nations Development Programme (UNDP), Project Number: LEB/CO IC/37/11; Reference Code: RFP1211, Beirut, Lebanon November 2011.
- Jahn, A.: **Mid-term Evaluation** of the Project “Facility in Support of Small and Medium Enterprises Energy Efficiency Investments” (MEFE), Reference Number: Decision ENPI/2007/018-883, project on behalf of NIXUS Consulting and Training Services / OCA GROUP, for EU Delegation to Lebanon, Beirut.
- Jahn, A.: Support to the Design, Implementation and **Evaluation** of Municipal Energy Efficiency Programmes in South Africa, SAGEN Phase II (SDIEMEEP2), Project on behalf of Prognos AG, for Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH South African-German Energy Programme (SAGEN2), Pretoria / Berlin.
- Jahn, A.: **Final Evaluation** of the Project “Enhancing Information for Renewable Energy Technology Deployment in Brazil, China and South Africa” (EIRET), on behalf of United Nations Environment Programme (UNEP), UNEP-Contract No 17591, Nairobi, April 2011.
- Jahn, A.: **Mid-term Evaluation** of the Global Solar Water Heating Transformation and Strengthening Initiative (GSWH), funded through the Global Environment Facility (GEF), Reference Number: 62901, on behalf of United Nations Development Programme (UNDP), Beirut, Lebanon November 2011.
- Jahn, A./ Magnusson, J.-R.: **Evaluation** of the African Rift Geothermal Development Facility (ARGeo), GEF ID number 2119 (2010 - 2021), on behalf of Evaluation Office of UNEP, Final Report, Berlin/Reykjavik/Nairobi (119 pages) November 2022.
- Jahn, A.: **Evaluation** Summary Report and Due Diligence for the Shortlisted Company Project “Sixteen47 Expansion Ghana”, IFE-09-REG-C1-0817 (Ghana), on behalf of IFE Investing for Employment GmbH and Kreditanstalt für Wiederaufbau (KfW), Accra (Ghana)/Hamburg (172 pages) March 2023.



## ANNEX VIII. REVIEW TORS (WITHOUT ANNEXES)

Management-Led Terminal Review, UNEP

Last revised: 21.03.23

### TERMS OF REFERENCE

#### Terminal Review of the UNEP project RENEWABLE ENERGY SOLUTIONS FOR INDUSTRIAL CLIENTS IN AFRICA Project ID: 125.3

#### Section 1: PROJECT BACKGROUND AND OVERVIEW

*(This section describes what is to be reviewed. Key parameters are: project timeframe, funding envelope, results framework and geographic scope)*

#### 1. Project General Information

**Table 1. Project summary**

*(This is a generic table to summarise a project. Integrate the information below with the standard 'project summary' table of the relevant donor e.g. Adaptation Fund, GCF, GEF).*

<b>UNEP PIMS/SMA<sup>1</sup> ID:</b>	PIMS no: 0268	IMPR: 40519	
<b>Donor ID:</b>	German Federal Ministry for Economic Affairs and Climate Action (BMWK) (current) German Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMUB) (previously)		
<b>Implementing Partners:</b>	Frankfurt School - UNEP Collaborating Centre for Climate and Sustainable Energy Finance		
<b>SDG(s) and indicator(s)</b>	SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all) and SDG9 (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation)		
<b>Sub-programme:</b>	Climate Change	<b>Expected Accomplishment(s):</b>	POW 2018-2019 EA (b) Countries increasingly adopt and/or implement low GHG emission development strategies and invest in clean technologies
<b>UNEP approval date:</b>	24 July 2019	<b>Programme of Work Output(s):</b>	POW 2018-2019 EA (b) Output 5: Readiness of countries and institutions to access or mobilize climate finance strengthened through support to make projects bankable and replicable
<b>Expected start date:</b>	April 2019	<b>Actual start date:</b>	October 2019
<b>Planned operational completion date:</b>	30 June 2023	<b>Actual operational completion date:</b>	30 June 2023
<b>Planned total project budget at approval (show breakdown of individual sources/grants):</b>	USD 4,434,199	<b>Actual total expenditures reported as of [date]:</b>	USD 2,844,502, as of 5 June 2023
<b>Expected co-financing:</b>	USD 133,457 (UNEP in-kind)	<b>Secured co-financing<sup>2</sup>:</b>	USD 133,457 (UNEP in-kind)
<b>First disbursement:</b>	October 2019	<b>Planned date of financial closure:</b>	30 September 2023

<sup>1</sup> Acronym for ID assigned by the Integrated Planning, Monitoring and Reporting (IPMR) system.

<sup>2</sup> State whether co-financing amounts are cash or in-kind.

<b>No. of project revisions:</b>	1	<b>Date of last approved project revision:</b>	24 February 2023	
<b>No. of Steering Committee meetings:</b>	3	<b>Date of last/next Steering Committee meeting:</b>	Last: February 2020 March 2021 March 2022	Next: June 2023
<b>Mid-term Review/ Evaluation<sup>3</sup> (planned date):</b>	None	<b>Mid-term Review/ Evaluation (actual date):</b>	None	
<b>Terminal Review (planned date):</b>	September 2022	<b>Terminal Review (actual date):</b>	September 2023	
<b>Coverage - Country(ies):</b>	Sub-Sahara Africa (Ghana, Kenya, Nigeria, South Africa)	<b>Coverage - Region(s):</b>	Sub-Sahara Africa (Ghana, Kenya, Nigeria, South Africa)	
<b>Dates of previous project phases:</b>	n.a	<b>Status of future project phases:</b>	Concept note for Phase II under preparation	

## 2. Project Rationale<sup>4</sup>

### [Describe project context and justification]

Some of the biggest economies of sub-Sahara Africa have well-established industrial sectors. The lack of reliable and affordable energy however is challenging further growth in these countries. As industries commonly face unreliable grids, outages and high electricity tariffs, captive diesel generators are widely used.

As a result, there exists a great potential for captive clean energy generating installations that will allow for an increase of renewable energy uptake and a reduction of carbon emissions for countries and at the same time allow for a direct conversion of brown cash flows (expenses for captive diesel generators and fossil fuel) into green investments for industries leading to a lower cost and easier way of doing business. This can be achieved at no cost for regulatory authorities while reducing national utility burdens resulting from intermittent electricity supply into the grid. This however has not been occurring due to a lack of precedent and awareness.

"Captive installations" refer to the energy producing technologies, primarily diesel generators, installed by industrial organizations throughout sub-Sahara Africa as back-up and/or fluctuation mitigation systems to an un-reliable or un-available grid. Those installations are deemed captive as the electricity produced is primarily generated for the industrial plant's own and/or the neighbouring communities' use. Those installations are usually referred to as the second generation of renewable energy business models, a generation of installations which do not rely on national Feed-in Tariffs or other scarce public money for sustainability, reduce the burden on the grid operator resulting from intermittent renewable energy, and create value for its users who will use the generated clean power mainly for self-consumption.

The RENEWABLE ENERGY SOLUTIONS FOR INDUSTRIAL CLIENTS IN AFRICA project has intended to demonstrate the financial and economic viability of clean energy captive installations for industries in pilot commercial sites in key industries for four partner countries, namely Ghana, Kenya, Nigeria, and South Africa, and to use pilots results to raise awareness among industry players and prepare the ground for technology and business model leapfrogging in the four partner countries, and beyond in sub-Sahara Africa.

## 3. Project Results Framework

### [Present the project objective(s), components, outputs, outcomes and long-lasting impacts as per the Project Document (i.e. the results framework). Include the Theory of Change diagram, where available. Use tables as appropriate.]

As explained above, the project's objective of demonstrating the financial and economic viability of clean energy captive installations for industries is achieved through the implementation of pilot projects in the four partner countries and subsequent awareness raising among regulators, industry players and financiers. The demonstration and awareness raising leads to the dissemination of the business model of clean energy

<sup>3</sup> UNEP policies require projects with planned implementation periods of 4 or more years to have a mid-point assessment of performance. For projects under 4 years, this should be marked as N/A.

<sup>4</sup> Grey =Info to be added

captive installations taken up by industries and financed locally, ultimately leading to economic development on a low-emission pathway in the target countries and beyond in the Continent.

The project has been structured as follows:

Its Direct Outcome is to support private industrial and financial sector stakeholders in developing successful pilot projects, demonstrating the captive renewable energy business model and raising peer awareness in the partner countries.

The project results have been organized around four Outputs. The economic and financial viability of the clean captive energy-generating installations is demonstrated through the selection, development and successful implementation of pilot projects in suitable industry sectors, one in each of the four partner countries (Output III). The pilot projects receive support in assessing their viability from a financial and economic perspective, and technical assistance for financial structuring. Successful implementation of the pilot projects assumes industrial first movers exist who will seize the change opportunity offered by the supported pilot projects. It also assumes financial institutions will be receptive to new business opportunities.

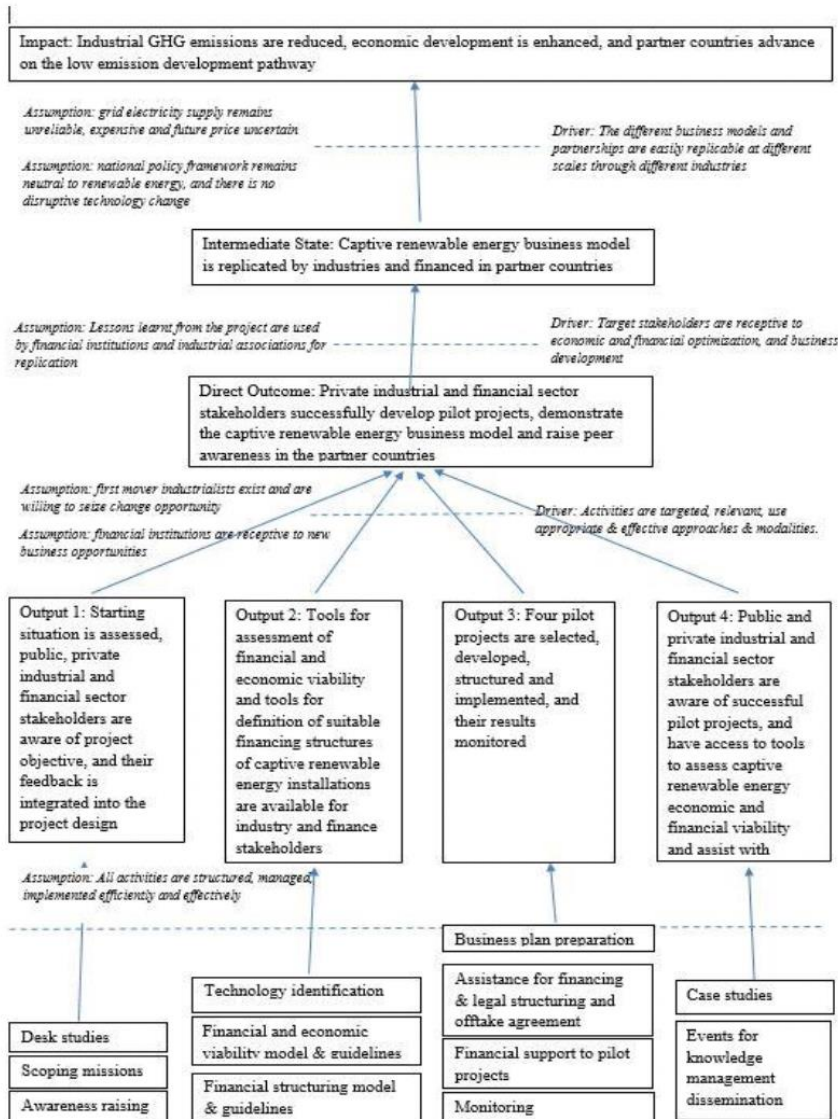
Awareness is subsequently raised through the dissemination of the pilot projects results and of the knowledge materials generated (Output IV).

The most suitable industry sectors are identified initially through desk study work and engagement with partner countries' authorities, industries, and financial institutions (Output I). This preparatory work at the same time raises awareness about the project and ensures adhesion of the various country stakeholders. Tools for assessment of financial and economic viability of renewable energy installations, and tools for definition of suitable financing structures of clean captive installations are then elaborated and disseminated (Output II), paving the way for the identification and selection of the pilot projects.

The tools developed during the lifetime of the Project, and the results of the pilot projects are disseminated to encourage replication of the captive clean energy generation installations business model in the partner countries and beyond, to other countries of the region (Intermediate State). Replication is then driven by the business development prospects generated by the clean and reliable energy supply, and increased business profitability due to the economic and financial optimization.

Once captive renewable energy business model is replicated within industries and financed in partner countries, industrial GHG emissions decrease, economic development is enhanced thanks to a cheaper and reliable energy supply, and partner countries advance on the low emission development pathway (Impact), Replication at scale is expected due to the ease of replication, and the breadth and relevance of selected industries for the country and the region.

The project Theory of Change diagram is presented below.



The activities planned under the four Project outputs are detailed in Appendix [XXX](#).

#### 4. Executing Arrangements

[Specify UNEP Branch and Unit responsible for project implementation and project execution partners. Briefly describe role and composition of management and supervision structures of the project. Use table or diagram as appropriate. NOTE: For GEF-funded projects highlight internally executed projects, providing details on reporting lines for implementation and execution.]

The Energy & Climate Branch of UNEP Industry and Economy Division and UNEP Regional Office for Africa Office have been jointly implementing the project activities, with the Energy & Climate Branch assuming the project management responsibility. They have been involved as follows:

Project output	UNEP entities
<b>Output I:</b> Design framework of the project is finalized and includes partner countries stakeholders' feedback.	Africa Office (lead), Energy & Climate Branch (support)
<b>Output II:</b> Finance and industry stakeholders have access to assessment tools of the financial and economic viability and viable financing structure of on-site renewable energy installations	Energy & Climate Branch (lead), Africa Office (support)
<b>Output III:</b> Industrial developers and financiers of pilot projects have demonstrated the financial and economic viability of on-site renewable energy installations and increased their capacity .	Energy & Climate Branch (lead), Africa Office (support)
<b>Output IV:</b> Public and private industrial and financial sector stakeholders are aware of the pilot projects, and have access to the knowledge developed on clean captive installations business models and financing structures	Africa Office (lead), Energy & Climate Branch (support)

A senior project manager of the Energy and Climate Branch acted as project manager, supported by a consultant. Other members of the UNEP project team have been a senior project manager and a junior project manager of the Africa Office. There have been staffing changes during the project.

The project activities have been carried out either directly by UNEP or by the Frankfurt School UNEP Collaborating Centre for Climate and Sustainable Energy Finance (Frankfurt School), implementing partner for the project. The Frankfurt School of Finance and Management established this collaborating centre with UNEP in 2011. They have provided financial expertise and related services for the duration of the project, being tasked inter alia of preparing country studies, assessing financial and economic viability of the clean captive business models and the most suitable financial structures, providing technical assistance to the pilot projects, and preparing knowledge dissemination materials.

The project is governed by a Steering Committee composed of one Donor representative, one representative from each of the four partner countries and one representative from UNEP. Frankfurt School has sat as observer on the Steering Committee.

## 5. Project Cost and Financing

[Present total project budget at design, broken down per component and per funding source. Use tables as appropriate. Present most recent figures on disbursement.]

The table below present the theoretical project budget of USD 4,434,200, broken down per component and activities. The theoretical project budget was calculated at project start based on the donor grant of EUR 3,489,949, UNEP in-kind contribution of USD 133,457, a theoretical exchange rate of EUR 1 = USD 1.12, and prior to the 1% levy fee introduced by the United Nations mid 2019 on all UN project funding to finance the newly established UN Resident Coordinator system.

Project Output	Product/service	1. Staff and Other Personnel Costs	2. Contractual Services	3. Travel	4. Equipment Vehicles and Furniture	5. Operating and Other Direct Costs	6. Supplies Commodities and Materials	7. Transfers and Grants Issued to Implementing Partner (IP)			Subtotal	PSC	Total
								Staff	Travel	Other			
Output 1. Starting situation is evaluated and awareness for second generation of renewable energy business models is raised with public and private sector stakeholders whose feedback is integrated into the project design													
Activity 1.1 : Desk country studies of target countries (Deadline: Q3 2019)		15,173						30,240			45,413	5,904	51,316

Activity 1.2 – Communication and scoping meetings (Q4 2019)		60,691		26,320			168,174	27,093		282,279	36,696	318,975
Activity 1.3 – Review of best practices in other regions and assessment of potential and needs for replication in target countries - Finalisation of country studies (Q4 2019)		25,288					63,504			88,792	11,543	100,335
<b>Total</b>												<b>470,626</b>
<b>Output 2. Tools for assessment of financial and economic viability and tools for definition of suitable financing structures of clean captive installations are elaborated, developed and disseminated</b>												
Activity 2.1 – Identification of technology, technology providers, characteristics and costs of their systems							26,880			26,880	3,494	30,375
Activity 2.2 – Preparation of financial model assessment and definition of decision criteria for financial and economic viability of captive solutions under different demand curves and technologies							22,960			22,960	2,985	25,945
Activity 2.3 – Development of check-list, guidelines and financial models							109,724			109,724	14,264	123,988
Activity 2.4 – Preparation of call for pilot projects		20,401					11,032			31,433	4,086	35,520
Activity 2.5 – Launch workshops in the four countries with relevant stakeholders and to launch calls for pilot projects (identify participants, workshop material development)		47,602		21,495		46,341	56,000	26,430		197,868	25,723	223,591
<b>Total</b>												<b>439,419</b>
<b>Output 3. Four viable and replicable pilot projects are selected, developed, structured and realized, one in each of the partner countries</b>												
Activity 3.1 – Selection of the pilot projects (due-diligence reports on select sites/projects/pre-feasibility studies)		92,863		0			60,552			153,415	19,944	173,359
Activity 3.2 – Technical Assistance for viability assessment, gap assessment, business plan/financing proposal development, financial model development, bank due-diligence incl financial closing for 4 select projects		9,286		0			414,170	27,093		450,549	58,571	509,121
Activity 3.3 – Technical assistance for financial structuring and finalization of energy-off take structures (external services; legal costs)		18,573		0					389,760	408,333	53,083	461,416
Activity 3.4 – Provision of incremental cost		37,145		0					1,033,536	1,070,681	139,189	1,209,870

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sharing to pilot projects on an additional basis where required (external services)													
Activity 3.5 – Development of case Study template and post-construction project monitoring		18,573		21,495						17,556	57,624	7,491	65,115
Activity 3.6 – Detailed technical performance analysis and assessment of the pilot projects is carried out (Post implementation)		9,286		0				34,373			43,659	5,676	49,335
<b>Total</b>													<b>2,468,215</b>
<b>Output 4. Extensive knowledge regarding technology, business models and financing frameworks has been developed</b>													
Activity 4.1 : Communication Strategy		53,408		0		0	7,133	50,209			110,751	14,398	125,148
Activity 4.2 – Engagement with project stakeholders (country fact sheets etc.)		106,816		30,201		89,052	22,531	37,745	7,034		293,379	38,139	331,518
Activity 4.3 – Setup of project website		0		0		0	0	36,121			36,121	4,696	40,817
Activity 4.4. Press Releases		35,605		0		0	0				35,605	4,629	40,234
Activity 4.5. Lessons Learned Publication		53,408		0		0	14,611				68,019	8,842	76,861
Activity 4.6. End of Project Brochure		35,605		0		0	12,273				47,879	6,224	54,103
Activity 4.7. Project results dissemination		71,211		73,998		135,344	62,154				342,707	44,552	387,259
<b>Total</b>													<b>1,055,940</b>
<b>TOTAL</b>													<b>4,434,200</b>

The actual project funding totalled USD 4,044,346, i.e., USD 3,910,889 received from BMWK plus UNEP in-kind contribution of USD133,457. The difference between the theoretical project budget of USD 4,434,200 and the actual project funding is due to (i) the 1% UN Resident Coordinator levy, and (ii) the actual exchange rates applied to the nine euro-denominated instalments made over the four-year project duration by the donor.

The project financial statement as of 31 December 2022 presented below shows the most recent figures on disbursement.

STATEMENT OF INCOME AND EXPENDITURE FOR THE PERIOD ENDED 31st Dec 2022 M1-32CPL-000451/32CPL/M99/11264/14AC001/SB-013100					
INCOME	2019	2020	2021	2022	Total
Voluntary Contributions excl 1% levy	755,482	1,586,738	1,246,663	159,341	3,748,224
<b>Total Income</b>	<b>755,482</b>	<b>1,586,738</b>	<b>1,246,663</b>	<b>159,341</b>	<b>3,748,224</b>
EXPENDITURE					
Staff and Personnel Costs	-	125,853	10,696	350,227	486,777
Consultants	623	7,247	6,708	-	14,578
Contractual Services	503,114	136,502	860,180	672,161	2,171,957
Travel	14,129	(111)	-	36,000	60,018
Operating Expenses	44				44
<b>TOTAL EXPENDITURE exl PSC</b>	<b>517,910</b>	<b>269,491</b>	<b>877,584</b>	<b>1,058,388</b>	<b>2,723,374</b>
Programmes Support Costs 13%	67,328	35,034	114,086	137,590	354,039
<b>TOTAL EXPENDITURE</b>	<b>585,238</b>	<b>304,525</b>	<b>991,670</b>	<b>1,195,979</b>	<b>3,077,412</b>
<b>EXCESS OF INCOME OVER EXPENDITURES</b>	<b>170,243</b>	<b>1,282,213</b>	<b>254,993</b>	<b>(1,036,638)</b>	<b>670,811</b>
<b>FUND BALANCE AT THE BEGINNING OF THE PERIOD</b>		<b>170,243</b>	<b>1,452,457</b>	<b>1,707,449</b>	
<b>FUND BALANCE AT THE END OF THE PERIOD</b>	<b>170,243</b>	<b>1,452,457</b>	<b>1,707,449</b>	<b>670,811</b>	<b>-</b>

## 6. Implementation Issues

[Describe any important issues emerging from Mid-Term Review/ Mid-Term Evaluation, important revisions to logframe or funds allocations, significant delays, changes in partners, implementing countries, risks mentioned in project reports during project implementation etc. Note the dates when such changes have been approved and who by]

There has been no significant issue emerging during project implementation, beyond a six-month delay in project activities implementation.

A midterm assessment was carried out in 2022. Review findings were presented on project performance against Theory of Change and initial results framework, along with the project's efficiency, effectiveness, sustainability, lessons learnt and challenges, among others. The assessment also considered feedback from recipient partners, both countries and project partners.

The review found the project to be on track to meet its aims, albeit with a delayed timeline due to unforeseen internal and external factors: (i) delayed start of the project, (ii) Covid-19-Pandemic, (iii) heavier and longer than anticipated process for donor's specific approval of each of the pilot projects.

The six-month delay in project activities implementation was reflected in an amendment to the Donor agreement signed on 23 January 2023 and in an internal UNEP no-cost project extension to complete project activities by 30 June 2023 (originally 31 December 2022) and close the project by 30 September 2023 (originally 31 March 2023), approved on 23 January 2023.



## Section 2. OBJECTIVE AND SCOPE OF THE REVIEW

*(Apart from section 9, where you could insert up to 3 strategic questions that are in addition to the review criteria, this section is standard and does not need to be revised for each project)*

### 7. Objective of the Review

In line with the UNEP Evaluation Policy<sup>5</sup> and the UNEP Programme Manual<sup>6</sup>, the Terminal Review (TR) is undertaken at operational completion of the project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The Review has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UNEP, partner countries Ghana, Kenya, Nigeria and South Africa, and project donor BMWK. Therefore, the Review will identify lessons of operational relevance for future project formulation and implementation, especially for future phases of the project, where applicable.

### 8. Key Review principles

Review findings and judgements will be based on **sound evidence and analysis**, clearly documented in the Review Report. Information will be triangulated (i.e. verified from different sources) as far as possible, and when verification is not possible, the single source will be mentioned (whilst anonymity is still protected). Analysis leading to evaluative judgements should always be clearly spelled out.

**The “Why?” Question.** As this is a Terminal Review and **similar interventions are envisaged for the future**, particular attention will be given to learning from the experience. Therefore, the “why?” question should be at the front of the consultant(s)’ minds all through the review exercise and is supported by the use of a theory of change approach. This means that the consultant(s) need to go beyond the assessment of “what” the project performance was and make a serious effort to provide a deeper understanding of “why” the performance was as it was (i.e. what contributed to the achievement of the project’s results). This should provide the basis for the lessons that can be drawn from the project.

**Attribution, Contribution and Credible Association:** In order to *attribute* any outcomes and impacts to a project intervention, one needs to consider the difference between what has happened with, and what would have happened without, the project (i.e. take account of changes **over time** and **between contexts** in order to isolate the effects of an intervention). This requires appropriate baseline data and the identification of a relevant counterfactual, both of which are frequently not available for reviews. Establishing the *contribution* made by a project in a complex change process relies heavily on **prior intentionality** (e.g. approved project design documentation, logical framework) and the articulation of **causality** (e.g. narrative and/or illustration of the Theory of Change). Robust evidence that a project was delivered as designed and that the expected causal pathways developed supports claims of contribution and this is strengthened where an alternative theory of change can be excluded. A *credible association* between the implementation of a project and observed positive effects can be made where a strong causal narrative, although not explicitly articulated, can be inferred by the chronological sequence of events, active involvement of key actors and engagement in critical processes.

**Communicating Review Results.** A key aim of the Review is to encourage reflection and learning by UNEP staff and key project stakeholders. The consultant should consider how reflection and learning can be promoted, both through the review process and in the communication of review findings and key lessons. Clear and concise writing is required on all review deliverables. Draft and final versions of the main review report will be shared with key stakeholders by the UNEP Project Manager. There may, however, be several intended audiences, each with different interests and needs regarding the report. The consultant will plan with the UNEP Project Manager which audiences to target and the easiest and clearest way to communicate the key review findings and lessons to them. This may include some or all of the following: a webinar, conference calls with relevant stakeholders, the preparation of a review brief or interactive presentation.

### 9. Key Strategic Questions

<sup>5</sup> <https://www.unenvironment.org/about-un-environment/evaluation-office/policies-and-strategies>

<sup>6</sup> <https://wecollaborate.unep.org>

In addition to the review criteria outlined in Section 10 below, the Review will address the **strategic questions** listed below (no more than 3 questions are recommended). These are questions of interest to UNEP and to which the project is believed to be able to make a substantive contribution:

- (a) **Up to 3 key review questions or topics to which the consultant(s) should pay particular attention.**
  - (i) What benefits did partner countries and captive installations market stakeholders gain from the project implementation? Are those benefits sustainable? Did one country benefit more than the others and, if so, why? (ii) Could the delivery model followed for the project implementation, i.e., joint implementation between UNEP Industry and Economy Division and UNEP Regional Office for Africa, supported by Frankfurt School UNEP Collaborating Centre, be improved and how? (iii) What recommendations or lessons learnt can be applied to a second phase of the project currently being considered?
- (b) What changes were made to adapt to the effects of COVID-19 and how might any changes affect the project's performance?

## 10. Review Criteria

All review criteria will be rated on a six-point scale. Sections A-I below, outline the scope of the review criteria. The set of review criteria are grouped in nine categories: (A) Strategic Relevance; (B) Quality of Project Design; (C) Nature of External Context; (D) Effectiveness, which comprises assessments of the availability of outputs, achievement of outcomes and likelihood of impact; (E) Financial Management; (F) Efficiency; (G) Monitoring and Reporting; (H) Sustainability; and (I) Factors Affecting Project Performance.

A suite of various tools, templates and guidelines that can help Review Consultant to follow a thorough review process that meets all of UNEP's needs is available via the UNEP Project Manager.

### A. Strategic Relevance

The Review will assess the extent to which the activity is suited to the priorities and policies of the donor, implementing regions/countries and the target beneficiaries. The Review will include an assessment of the project's relevance in relation to UNEP's mandate and its alignment with UNEP's policies and strategies at the time of project approval. Under strategic relevance an assessment of the complementarity of the project with other interventions addressing the needs of the same target groups will be made. This criterion comprises four elements:

#### i. *Alignment to the UNEP's Medium-Term Strategy<sup>7</sup> (MTS), Programme of Work (POW) and Strategic Priorities*

The Review should assess the project's alignment with the MTS and POW under which the project was approved and include, in its narrative, reflections on the scale and scope of any contributions made to the planned results reflected in the relevant MTS and POW. UNEP strategic priorities include the Bali Strategic Plan for Technology Support and Capacity Building<sup>8</sup> (BSP) and South-South Cooperation (S-SC). The BSP relates to the capacity of governments to: comply with international agreements and obligations at the national level; promote, facilitate and finance environmentally sound technologies and to strengthen frameworks for developing coherent international environmental policies. S-SC is regarded as the exchange of resources, technology and knowledge between developing countries.

#### ii. *Alignment to Donor/Partner Strategic Priorities*

Donor strategic priorities will vary across interventions. The Review will assess the extent to which the project is suited to, or responding to, donor priorities. In some cases, alignment with donor priorities may be a fundamental part of project design and grant approval processes while in others, for example, instances of 'softly-earmarked' funding, such alignment may be more of an assumption that should be assessed.

#### iii. *Relevance to Global, Regional, Sub-regional and National Environmental Priorities*

<sup>7</sup> UNEP's Medium Term Strategy (MTS) is a document that guides UNEP's programme planning over a four-year period. It identifies UNEP's thematic priorities, known as Sub-programmes (SP), and sets out the desired outcomes, known as Expected Accomplishments (EAs), of the Sub-programmes. <https://www.unenvironment.org/about-un-environment/evaluation-office/our-evaluation-approach/un-environment-documents>

<sup>8</sup> <http://www.unep.fr/ozonaction/about/bsp.htm>

The Review will assess the alignment of the project with global priorities such as the SDGs and Agenda 2030. The extent to which the intervention is suited, or responding to, the stated environmental concerns and needs of the countries, sub-regions or regions where it is being implemented will also be considered. Examples may include: UN Development Assistance Frameworks (UNDAF) or, national or sub-national development plans, poverty reduction strategies or Nationally Appropriate Mitigation Action (NAMA) plans or regional agreements etc. Within this section consideration will be given to whether the needs of all beneficiary groups are being met and reflects the current policy priority to leave no-one behind.

iv. **Complementarity with Relevant Existing Interventions/Coherence<sup>9</sup>**

An assessment will be made of how well the project, either at design stage or during the project inception or mobilization<sup>10</sup>, took account of ongoing and planned initiatives (under the same sub-programme, other UNEP sub-programmes, or being implemented by other agencies within the same country, sector or institution) that address similar needs of the same target groups. The Review will consider if the project team, in collaboration with Regional Offices and Sub-Programme Coordinators, made efforts to ensure their own intervention was complementary to other interventions, optimized any synergies and avoided duplication of effort. Examples may include work within Cooperation Frameworks or One UN programming. Linkages with other interventions should be described and instances where UNEP's comparative advantage has been particularly well applied should be highlighted.

**B. Quality of Project Design**

The quality of project design is assessed using an agreed template during the review inception phase. Ratings are attributed to identified criteria and an overall Project Design Quality rating is established. The complete Project Design Quality template should be annexed in the Review Inception Report. Later, the overall Project Design Quality rating<sup>11</sup> should be entered in the final review ratings table (as item B) in the Main Review Report and a summary of the project's strengths and weaknesses at design stage should be included within the body of the Main Review Report.

**C. Nature of External Context**

At review inception stage a rating is established for the project's external operating context (considering the prevalence of conflict, natural disasters and political upheaval<sup>12</sup>). This rating is entered in the final review ratings table as item C. Where a project has been rated as facing either an *Unfavourable* or *Highly Unfavourable* external operating context, and/or a negative external event has occurred during project implementation, the ratings for Effectiveness, Efficiency and/or Sustainability may be increased at the discretion of the Review Consultant and UNEP Project Manager together. A justification for such an increase must be given.

**D. Effectiveness**

i. **Availability of Outputs<sup>13</sup>**

The Review will assess the project's success in producing the programmed outputs and making them available to the intended beneficiaries as well as its success in achieving milestones as per the project design document (ProDoc). Any formal modifications/revisions made during project implementation will be considered part of the project design. Where the project outputs are inappropriately or inaccurately stated in the ProDoc, reformulations may be necessary in the reconstruction of the Theory of Change (TOC). In such cases a table should be provided showing the original and the reformulation of the outputs for transparency. The availability of outputs will be assessed in terms of both quantity and quality, and the assessment will consider their ownership by, and usefulness to, intended beneficiaries and the timeliness of their provision. It is noted that emphasis is placed on the performance of those outputs that are most important to achieve

<sup>9</sup> This sub-category is consistent with the new criterion of 'Coherence' introduced by the OECD-DAC in 2019.

<sup>10</sup> A project's inception or mobilization period is understood as the time between project approval and first disbursement. Complementarity during project implementation is considered under Efficiency, see below.

<sup>11</sup> In some instances, based on data collected during the review process, the assessment of the project's design quality may change from Inception Report to Main Review Report.

<sup>12</sup> Note that 'political upheaval' does not include regular national election cycles, but unanticipated unrest or prolonged disruption. The potential delays or changes in political support that are often associated with the regular national election cycle should be part of the project's design and addressed through adaptive management of the project team. From March 2020 this should include the effects of COVID-19.

<sup>13</sup> Outputs are the availability (for intended beneficiaries/users) of new products and services and/or gains in knowledge, abilities and awareness of individuals or within institutions (UNEP, 2019)

outcomes. The Review will briefly explain the reasons behind the success or shortcomings of the project in delivering its programmed outputs and meeting expected quality standards.

#### ii. Achievement of Project Outcomes<sup>14</sup>

The achievement of project outcomes is assessed as performance against the outcomes as defined in the reconstructed<sup>15</sup> Theory of Change. These are outcomes that are intended to be achieved by the end of the project timeframe and within the project's resource envelope. Emphasis is placed on the achievement of project outcomes that are most important for attaining intermediate states. As with outputs, a table can be used to show where substantive amendments to the formulation of project outcomes is necessary to allow for an assessment of performance. The Review should report evidence of attribution between UNEP's intervention and the project outcomes. In cases of normative work or where several actors are collaborating to achieve common outcomes, evidence of the nature and magnitude of UNEP's 'substantive contribution' should be included and/or 'credible association' established between project efforts and the project outcomes realised.

#### iii. Likelihood of Impact

Based on the articulation of long-lasting effects in the reconstructed TOC (i.e. from project outcomes, via intermediate states, to impact), the Review will assess the likelihood of the intended, positive impacts becoming a reality. Project objectives or goals should be incorporated in the TOC, possibly as intermediate states or long-lasting impacts. The Evaluation Office's approach to the use of TOC in project reviews is outlined in a guidance note and is supported by an excel-based flow chart, 'Likelihood of Impact Assessment Decision Tree'. Essentially the approach follows a 'likelihood tree' from project outcomes to impacts, taking account of whether the assumptions and drivers identified in the reconstructed TOC held. Any unintended positive effects should also be identified and their causal linkages to the intended impact described.

The Review will also consider the likelihood that the intervention may lead, or contribute to, unintended negative effects (e.g. will vulnerable groups such as those living with disabilities and/or women and children, be disproportionately affected by the project?). Some of these potential negative effects may have been identified in the project design as risks or as part of the analysis of Environmental and Social Safeguards.

The Review will consider the extent to which the project has played a catalytic role<sup>16</sup> or has promoted scaling up and/or replication as part of its Theory of Change (either explicitly as in a project with a demonstration component or implicitly as expressed in the drivers required to move to outcome levels) and as factors that are likely to contribute to greater or long-lasting impact.

Ultimately UNEP and all its partners aim to bring about benefits to the environment and human well-being. Few projects are likely to have impact statements that reflect such long-lasting or broad-based changes. However, the Review will assess the likelihood of the project to make a substantive contribution to the long-lasting changes represented by the Sustainable Development Goals, and/or the intermediate-level results reflected in UNEP's Expected Accomplishments and the strategic priorities of funding partner(s).

### E. Financial Management

Financial management will be assessed under three themes: *adherence* to UNEP's financial policies and procedures, *completeness* of financial information and *communication* between financial and project management staff. The Review will establish the actual spend across the life of the project of funds secured

<sup>14</sup> Outcomes are the use (i.e. uptake, adoption, application) of an output by intended beneficiaries, observed as changes in institutions or behavior, attitude or condition (UNEP, 2019)

<sup>15</sup> UNEP staff are currently required to submit a Theory of Change with all submitted project designs. The level of 'reconstruction' needed during a review will depend on the quality of this initial TOC, the time that has lapsed between project design and implementation (which may be related to securing and disbursing funds) and the level of any changes made to the project design. In the case of projects pre-dating 2013 the intervention logic is often represented in a logical framework and a TOC will need to be constructed in the inception stage of the review.

<sup>16</sup> The terms catalytic effect, scaling up and replication are inter-related and generally refer to extending the coverage or magnitude of the effects of a project. Catalytic effect is associated with triggering additional actions that are not directly funded by the project – these effects can be both concrete or less tangible, can be intentionally caused by the project or implied in the design and reflected in the TOC drivers, or can be unintentional and can rely on funding from another source or have no financial requirements. Scaling up and Replication require more intentionality for projects, or individual components and approaches, to be reproduced in other similar contexts. Scaling up suggests a substantive increase in the number of new beneficiaries reached/involved and may require adapted delivery mechanisms while Replication suggests the repetition of an approach or component at a similar scale but among different beneficiaries. Even with highly technical work, where scaling up or replication involves working with a new community, some consideration of the new context should take place and adjustments made as necessary.

from all donors. This expenditure will be reported, where possible, at output/component level and will be compared with the approved budget. The Review will verify the application of proper financial management standards and adherence to UNEP's financial management policies. Any financial management issues that have affected the timely delivery of the project or the quality of its performance will be highlighted. The Review will record where standard financial documentation is missing, inaccurate, incomplete or unavailable in a timely manner. The Review will assess the level of communication between the UNEP Project Manager and the Fund Management Officer as it relates to the effective delivery of the planned project and the needs of a responsive, adaptive management approach.

#### **F. Efficiency**

Under the efficiency criterion, the Review will assess the extent to which the project delivered maximum results from the given resources. This will include an assessment of the cost-effectiveness and timeliness of project execution.

Focusing on the translation of inputs into outputs, *cost-effectiveness* is the extent to which an intervention has achieved, or is expected to achieve, its results at the lowest possible cost. *Timeliness* refers to whether planned activities were delivered according to expected timeframes as well as whether events were sequenced efficiently. The Review will also assess to what extent any project extension could have been avoided through stronger project management and identify any negative impacts caused by project delays or extensions. The Review will describe any cost or time-saving measures put in place to maximise results within the secured budget and agreed project timeframe and consider whether the project was implemented in the most efficient way compared to alternative interventions or approaches.

The Review will give special attention to efforts made by the project teams during project implementation to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities<sup>17</sup> with other initiatives, programmes and projects etc. to increase project efficiency.

The factors underpinning the need for any project extensions will also be explored and discussed. Consultants should note that as management or project support costs cannot be increased in cases of 'no cost extensions', such extensions represent an increase in unstated costs to UNEP and implementing parties.

#### **G. Monitoring and Reporting**

The Review will assess monitoring and reporting across three sub-categories: monitoring design and budgeting, monitoring implementation and project reporting.

##### **i. Monitoring Design and Budgeting**

Each project should be supported by a sound monitoring plan that is designed to track progress against SMART<sup>18</sup> results towards the achievement of the project's outputs and outcomes, including at a level disaggregated by gender, marginalisation or vulnerability, including those living with disabilities. In particular, the Review will assess the relevance and appropriateness of the project indicators as well as the methods used for tracking progress against them as part of conscious results-based management. The Review will assess the quality of the design of the monitoring plan as well as the funds allocated for its implementation. The adequacy of resources for Mid-Term and Terminal Evaluation/Review should be discussed, where applicable.

##### **ii. Monitoring of Project Implementation**

The Review will assess whether the monitoring system was operational and facilitated the timely tracking of results and progress towards project objectives throughout the project implementation period. This assessment will include consideration of whether the project gathered relevant and good quality baseline data that is accurately and appropriately documented. This should include monitoring the representation and participation of disaggregated groups, including gendered, marginalised or vulnerable groups, such as those living with disabilities, in project activities. It will also consider the quality of the information generated by the monitoring system during project implementation and how it was used to adapt and improve project execution, achievement of outcomes and ensure sustainability. The Review should confirm that funds allocated for monitoring were used to support this activity.

<sup>17</sup> Complementarity with other interventions during project design, inception or mobilization is considered under Strategic Relevance above.

<sup>18</sup> SMART refers to results that are specific, measurable, achievable, relevant and time-oriented. Indicators help to make results measurable.

### **iii. Project Reporting**

UNEP has a centralised Project Information Management System (PIMS) in which project managers upload six-monthly progress reports against agreed project milestones. This information will be provided to the Review Consultant(s) by the UNEP Project Manager. Some projects have additional requirements to report regularly to funding partners, which will be supplied by the project team. The Review will assess the extent to which both UNEP and donor reporting commitments have been fulfilled. Consideration will be given as to whether reporting has been carried out with respect to the effects of the initiative on disaggregated groups.

## **H. Sustainability (for Adaptation Fund, read Human and Ecological Sustainability and Security)**

Sustainability<sup>19</sup> is understood as the probability of the benefits derived from the achievement of project outcomes being maintained and developed after the close of the intervention. The Review will identify and assess the key conditions or factors that are likely to undermine or contribute to the endurance of achieved project outcomes (i.e. 'assumptions' and 'drivers'). Some factors of sustainability may be embedded in the project design and implementation approaches while others may be contextual circumstances or conditions that evolve over the life of the intervention. Where applicable an [assessment of bio-physical factors](#) that may affect the sustainability of direct outcomes may also be included.

### **i. Socio-political Sustainability**

The Review will assess the extent to which social or political factors support the continuation and further development of the benefits derived from project outcomes. It will consider the level of ownership, interest and commitment among government and other stakeholders to take the project achievements forwards. In particular the Review will consider whether individual capacity development efforts are likely to be sustained.

### **ii. Financial Sustainability**

Some project outcomes, once achieved, do not require further financial inputs, e.g. the adoption of a revised policy. However, in order to derive a benefit from this outcome further management action may still be needed e.g. to undertake actions to enforce the policy. Other project outcomes may be dependent on a continuous flow of action that needs to be resourced for them to be maintained, e.g. continuation of a new natural resource management approach. The Review will assess the extent to which project outcomes are dependent on future funding for the benefits they bring to be sustained. Secured future funding is only relevant to financial sustainability where the project outcomes have been extended into a future project phase. [Even where future funding has been secured, the question still remains as to whether the project outcomes are financially sustainable.](#)

### **iii. Institutional Sustainability**

The Review will assess the extent to which the sustainability of project outcomes (especially those relating to policies and laws) is dependent on issues relating to institutional frameworks and governance. It will consider whether institutional achievements such as governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. are robust enough to continue delivering the benefits associated with the project outcomes after project closure. In particular, the Review will consider whether institutional capacity development efforts are likely to be sustained.

## **I. Factors Affecting Project Performance and Cross-Cutting Issues**

*(These factors are rated in the ratings table but are discussed within the Main Review Report as cross-cutting themes as appropriate under the other review criteria, above. If these issues have not been addressed under the Review Criteria above, then independent summaries of their status within the reviewed project should be given in this section)*

### **i. Preparation and Readiness**

<sup>19</sup> As used here, 'sustainability' means the long-term maintenance of outcomes and consequent impacts, whether environmental or not. This is distinct from the concept of sustainability in the terms 'environmental sustainability' or 'sustainable development', which imply 'not living beyond our means' or 'not diminishing global environmental benefits' (GEF STAP Paper, 2019, Achieving More Enduring Outcomes from GEF Investment)

This criterion focuses on the inception or mobilisation stage of the project (i.e. the time between project approval and first disbursement). The Review will assess whether appropriate measures were taken to either address weaknesses in the project design or respond to changes that took place between project approval, the securing of funds and project mobilisation. In particular, the Review will consider the nature and quality of engagement with stakeholder groups by the project team, the confirmation of partner capacity and development of partnership agreements as well as initial staffing and financing arrangements. (*Project preparation is included in the template for the assessment of Project Design Quality*).

**ii. Quality of Project Management and Supervision**

In some cases 'project management and supervision' may refer to the supervision and guidance provided by UNEP to implementing partners and national governments while in others it may refer to the project management performance of an implementing partner and the technical backstopping and supervision provided by UNEP. The performance of parties playing different roles should be discussed and a rating provided for both types of supervision (UNEP/Implementing Agency; Partner/Executing Agency) and the overall rating for this sub-category established as a simple average of the two.

The Review will assess the effectiveness of project management with regard to: providing leadership towards achieving the planned outcomes; managing team structures; maintaining productive partner relationships (including Steering Groups etc.); maintaining project relevance within changing external and strategic contexts; communication and collaboration with UNEP colleagues; risk management; use of problem-solving; project adaptation and overall project execution. Evidence of adaptive management should be highlighted.

**iii. Stakeholder Participation and Cooperation**

Here the term 'stakeholder' should be considered in a broad sense, encompassing all project partners, duty bearers with a role in delivering project outputs, target users of project outputs and any other collaborating agents external to UNEP and the implementing partner(s). The assessment will consider the quality and effectiveness of all forms of communication and consultation with stakeholders throughout the project life and the support given to maximise collaboration and coherence between various stakeholders, including sharing plans, pooling resources and exchanging learning and expertise. The inclusion and participation of all differentiated groups, including gender groups, should be considered.

**iv. Responsiveness to Human Rights and Gender Equality**

The Review will ascertain to what extent the project has applied the UN Common Understanding on the human rights-based approach (HRBA) and the UN Declaration on the Rights of Indigenous People. Within this human rights context the Review will assess to what extent the intervention adheres to UNEP's Policy and Strategy for Gender Equality and the Environment<sup>20</sup>.

The report should present the extent to which the intervention, following an adequate gender analysis at design stage, has implemented the identified actions and/or applied adaptive management to ensure that Gender Equality and Human Rights are adequately taken into account. In particular the Review will consider to what extent project design, implementation and monitoring have taken into consideration: (i) possible inequalities (especially those related to gender) in access to, and the control over, natural resources; (ii) specific vulnerabilities of disadvantaged groups (especially women, youth and children and those living with disabilities) to environmental degradation or disasters; and (iii) the role of disadvantaged groups (especially women, youth and children and those living with disabilities) in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation.

**v. Environmental and Social Safeguards**

UNEP projects address environmental and social safeguards primarily through the process of environmental and social screening at the project approval stage, risk assessment and management (avoidance, or mitigation of potential environmental and social risks and impacts associated with project and programme activities. The Review will confirm whether UNEP requirements<sup>21</sup> were met to: review risk ratings on a regular

<sup>20</sup> The Evaluation Office notes that Gender Equality was first introduced in the UNEP Project Review Committee Checklist in 2010 and, therefore, provides a criterion rating on gender for projects approved from 2010 onwards. Equally, it is noted that policy documents, operational guidelines and other capacity building efforts have only been developed since then and have evolved over time. [https://wedocs.unep.org/bitstream/handle/20.500.11822/7655/-/Gender\\_equality\\_and\\_the\\_environment\\_Policy\\_and\\_strategy-2015Gender\\_equality\\_and\\_the\\_environment\\_policy\\_and\\_strategy.pdf.pdf?sequence=3&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/7655/-/Gender_equality_and_the_environment_Policy_and_strategy-2015Gender_equality_and_the_environment_policy_and_strategy.pdf.pdf?sequence=3&isAllowed=y)

<sup>21</sup> For the review of project concepts and proposals, the Safeguard Risk Identification Form (SRIF) was introduced in 2019 and replaced the Environmental, Social and Economic Review note (ESERN), which had been in place since 2016..

basis; *monitor* project implementation for possible safeguard issues; *respond* (where relevant) to safeguard issues through risk avoidance, minimization, mitigation or offsetting and *report* on the implementation of safeguard management measures taken. UNEP requirements for proposed projects to be screened for any safeguarding issues; for sound environmental and social risk assessments to be conducted and initial risk ratings to be assigned, are reviewed above under Quality of Project Design).

The Review will also consider the extent to which the management of the project minimised UNEP's environmental footprint.

**vi. Country Ownership and Driven-ness**

The Review will assess the quality and degree of engagement of government / public sector agencies in the project. While there is some overlap between Country Ownership and Institutional Sustainability, this criterion focuses primarily on the forward momentum of the intended projects results, i.e. either: a) moving forwards from outputs to project outcomes or b) moving forward from project outcomes towards intermediate states. The Review will consider the involvement not only of those directly involved in project execution and those participating in technical or leadership groups, but also those official representatives whose cooperation is needed for change to be embedded in their respective institutions and offices (e.g. representatives from multiple sectors or relevant ministries beyond Ministry of Environment). This factor is concerned with the level of ownership generated by the project over outputs and outcomes and that is necessary for long term impact to be realised. Ownership should extend to all gender and marginalised groups.

**vii. Communication and Public Awareness**

The Review will assess the effectiveness of: a) communication of learning and experience sharing between project partners and interested groups arising from the project during its life and b) public awareness activities that were undertaken during the implementation of the project to influence attitudes or shape behaviour among wider communities and civil society at large. The Review should consider whether existing communication channels and networks were used effectively, including meeting the differentiated needs of gendered or marginalised groups, and whether any feedback channels were established. Where knowledge sharing platforms have been established under a project the Review will comment on the sustainability of the communication channel under either socio-political, institutional or financial sustainability, as appropriate.

### Section 3. REVIEW APPROACH, METHODS AND DELIVERABLES

The Terminal Review will be an in-depth review using a participatory approach whereby key stakeholders are kept informed and consulted throughout the review process. Both quantitative and qualitative review methods will be used as appropriate to determine project achievements against the expected outputs, outcomes and impacts. It is highly recommended that the consultant(s) maintains close communication with the project team and promotes information exchange throughout the review implementation phase in order to increase their (and other stakeholder) ownership of the review findings. Where applicable, the consultant(s) should provide a geo-referenced map that demarcates the area covered by the project and, where possible, provide geo-reference photographs of key intervention sites (e.g. sites of habitat rehabilitation and protection, pollution treatment infrastructure, etc.)

The findings of the Review will be based on the following:

(a) A desk review of:

- Relevant background documentation, inter alia “Renewable energy in hybrid mini-grids and isolated grids: Economic benefits and business cases” a UNEP Frankfurt School collaborating centre report, 2015, and the UNEP “Clean captive installations for industrial clients in sub-Saharan Africa” proposal and annexes to the International Climate Initiative of Germany, dated 7 February 2019.
- Project design documents (including minutes of the project design review meeting at approval); Annual Work Plans and Budgets or equivalent, revisions to the project (Project Document Supplement), the logical framework and its budget, together with project revision dated January 2023 (exact approval date to be confirmed)



- Project reports such as six-monthly and annual progress and financial reports to the donor, progress reports from implementing partners, steering committee meetings minutes, relevant correspondence and any other monitoring materials etc.;
  - Project deliverables (e.g. publications, assessments etc), inter alia:
    - the initial partner country reports: Kenya 2020, Ghana 2021, Nigeria 2021 and South Africa 2021,
    - the four analytical tools: Financing guidelines and business models for captive solar PV projects (Tool 1), Metrics for assessing financial viability/Cost benefit analysis of projects (Tool 2), the Sample financial model to assess the viability of solar PV systems for businesses, and its User manual (Tool 3), and the Best available technology for solar PV captive systems (Tool 4),
    - gender-related brochures: "Female employment in the energy transition" and "Women in captive renewable sector",
    - "Lessons learnt from the implementation of the pilot projects and case study" reports for each partner countries,
    - the "Status of clean captive installations for industrial clients in sub-Saharan Africa" publication,
    - the project website [www.captiverenewables-africa.org](http://www.captiverenewables-africa.org).
  - Mid-Term Review of the project;
  - Evaluations/Reviews of similar projects.
- (b) **Interviews** (individual or in group) with:
- UNEP Project Manager;
  - Project management team composed of both UNEP Energy and Climate branch and in UNEP Regional Office for Africa personnel;
  - UNEP Fund Management Officer (FMO);
  - Sub-Programme Coordinator;
  - Project partners, including implementing partner the Frankfurt School UNEP Collaborating Centre, and steering committee members representatives of countries' partner institutions: the Ministry of Energy and Petroleum of Ghana, the Ministry of Energy of Kenya, the Energy Commission of Nigeria, the Department of Trade and Industry of South Africa.
  - Relevant resource persons,
  - Representatives from civil society and specialist groups, such as the pilot projects developers and clean captive installation market participants like financial institutions.
- (c) Field visits. They are not contemplated.

## 11. Review Deliverables and Review Procedures

The Review Consultant will prepare:

- **Inception Report:** (see Annex 1 for a list of all templates, tables and guidance notes) containing an assessment of project design quality, a draft reconstructed Theory of Change of the project if required, project stakeholder analysis, review framework and a tentative review schedule.
- **Preliminary Findings Note:** typically in the form of a PowerPoint presentation, the sharing of preliminary findings is intended to support the participation of the project team, act as a means to ensure all information sources have been accessed and provide an opportunity to verify emerging findings.

- **Draft and Final Review Report:** containing an Executive Summary that can act as a stand-alone document; detailed analysis of the review findings organised by review criteria and supported with evidence; lessons learned and recommendations and an annotated ratings table.

A **Review Brief** (a 2-page overview of the evaluation and review findings) for wider dissemination through the UNEP website may be required. This will be discussed with the UNEP Project Manager no later than during the finalization of the Inception Report.

**Review of the Draft Review Report.** The Review Consultant will submit a draft report to the UNEP Project Manager and revise the draft in response to their comments and suggestions. The UNEP Project Manager will then forward the revised draft report to other project stakeholders, for their review and comments. Stakeholders may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions as well as providing feedback on the proposed recommendations and lessons. Any comments or responses to draft reports will be sent to the UNEP Project Manager for consolidation. The UNEP Project Manager will provide all comments to the Review Consultant for consideration in preparing the final report, along with guidance on areas of contradiction or issues requiring an institutional response.

The UNEP Evaluation Office provides templates and tools to support the review process and provides a formal assessment of the quality of the [final Terminal Review report](#), which is provided within this report's annexed material. In addition, the Evaluation Office formally validates the report by ensuring that the performance judgments made are consistent with evidence presented in the Review report and in-line with the performance standards set out for independent evaluations. As such the project performance ratings presented in the Review report may be adjusted by the Evaluation Office.

At the end of the review process, the UNEP Project Manager will prepare a **Recommendations Implementation Plan** in the format of a table, to be completed and updated at regular intervals, and circulate the **Lessons Learned**.

## 12. The Review Consultant

The Review Consultant will work under the overall responsibility of the Head, Energy Branch and UNEP Project Manager Ms Françoise d'Estais, in consultation with the Fund Management Officer Ms Amanda Lees, the Chief of the Energy and Climate Branch, and the Sub-programme Coordinator of the [Climate Change subprogramme](#), Mr Niklas Hagelberg.

The Review Consultant will liaise with the UNEP Project Manager on any procedural and methodological matters related to the Review. It is, however, the consultants' individual responsibility (where applicable) to arrange for their visas and immunizations as well as to plan meetings with stakeholders, organize online surveys, obtain documentary evidence and any other logistical matters related to the assignment. The UNEP Project Manager and project team will, where possible, provide logistical support (introductions, meetings etc.) allowing the consultants to conduct the Review as efficiently and independently as possible.

The Review Consultant will be hired over a period of 2 months and should have the following: a university degree in environmental sciences, international development or other relevant political or social sciences area is required and an advanced degree in the same areas is desirable; a minimum of 5 years of technical / evaluation experience is required, preferably including evaluating large, regional or global programmes and using a Theory of Change approach; and a good/broad understanding of renewable energy and finance is desired. English and French are the working languages of the United Nations Secretariat. For this consultancy, fluency in oral and written English is a requirement. Working knowledge of the UN and specifically the work of UNEP is an added advantage. The work will be home-based.

The Review Consultant will be responsible, in close consultation with the UNEP Project Manager, for overall quality of the review and timely delivery of its outputs, described above in Section 11 Review Deliverables, above. The Review Consultant will ensure that all review criteria and questions are adequately covered.

## 13. Schedule of the Review

The table below presents the tentative schedule.

**Table 3. Tentative schedule for the Review**

Milestone	Tentative Dates
Inception Report	19 September 2023
Review Mission	n.a.

E-based interviews, surveys etc.	25 September to 11 October 2023
PowerPoint/presentation on preliminary findings and recommendations	20 October 2023
Draft Review Report to UNEP Project Manager	20 October 2023
Draft Review Report shared with wider group of stakeholders	31 October 2023
Final Main Review Report	10 November 2023
Final Main Review Report submitted to the UNEP Evaluation Office for validation and quality assessment	17 November 2023
Final Main Review Report shared with all respondents	6 December 2023

#### 14. Contractual Arrangements

The Review Consultant will be selected and recruited by the UNEP Project Manager under an individual Special Service Agreement (SSA) on a "fees only" basis (see below). By signing the service contract with UNEP/UNON, the consultant certifies that they have not been associated with the design and implementation of the project in any way which may jeopardize their independence and impartiality towards project achievements and project partner performance. In addition, they will not have any future interests (within six months after completion of the contract) with the project's executing or implementing units. All consultants are required to sign the Code of Conduct Agreement Form.

Fees will be paid on an instalment basis, paid on acceptance and approval by the UNEP Project Manager of expected key deliverables. The schedule of payment is as follows:

Schedule of Payment:

Deliverable	Percentage Payment
Approved Inception Report ( <i>as per Guidance Note</i> )	30%
Approved Draft Main Review Report ( <i>as per Guidance Note</i> )	30%
Approved Final Main Review Report ( <i>as per Report Template</i> )	40%

**Fees only contracts:** Where applicable, air tickets will be purchased by UNEP and 75% of the Daily Subsistence Allowance for each authorised travel mission will be paid up front. Local in-country travel will only be reimbursed where agreed in advance with the UNEP Project Manager and on the production of acceptable receipts. Terminal expenses and residual DSA entitlements (25%) will be paid after mission completion.

The consultant may be provided with access to UNEP's information management systems (e.g. PIMS, IPMR, Anubis, SharePoint, etc.) and, if such access is granted, the consultants agree not to disclose information from that system to third parties beyond information required for, and included in, the Review Report.

In case the consultant is not able to provide the deliverables in accordance with these guidelines, and in line with the expected quality standards by the UNEP Project Manager, payment may be withheld at the discretion of the Head of Branch until the consultant has improved the deliverables to meet UNEP's quality standards.

If the consultant fails to submit a satisfactory final product to the UNEP Project Manager in a timely manner, i.e. before the end date of their contract, UNEP reserves the right to employ additional human resources to finalize the report, and to reduce the consultant's fees by an amount equal to the additional costs borne by the project team to bring the report up to standard or completion.

## ANNEX IX. QUALITY ASSESSMENT OF THE REVIEW REPORT (UNEP EVALUATION OFFICE)

### Quality Assessment of the Terminal Review Report

Review Title: Renewable Energy Solutions for Industrial Clients in Africa (CICSA)" (PIMS ID 0268)

Consultant: Andreas H. Jahn

All UNEP Reviews are subject to a quality assessment by the UNEP Evaluation Office. This is an assessment of the quality of the review product (i.e. Main Review Report).

	Consolidated Comments	Final Report rating
<b>Report Quality Criteria</b>		
<p><b>Quality of the Executive Summary</b>  <u>Purpose:</u> acts as a stand alone and accurate <u>summary</u> of the main review product, especially for senior management.            To include:</p> <ul style="list-style-type: none"> <li>• concise overview of the review object</li> <li>• clear summary of the review objectives and scope</li> <li>• overall review rating of the project and key features of performance (strengths and weaknesses) against exceptional criteria</li> <li>• reference to where the review ratings table can be found within the report</li> <li>• summary response to key strategic review questions</li> <li>• summary of the main findings of the exercise/synthesis of main conclusions</li> <li>• summary of lessons learned and recommendations.</li> </ul>	<p>Concise overview of evaluand and review.</p> <p>Missing responses to the three strategic review questions and question on COVID-19 adaptation of the TOR.</p> <p>More findings on other key criteria, especially sustainability desirable.</p> <p>Summarized performance rating table require that the rating scale used for factors affecting performance is corrected to scale of satisfactoriness.</p> <p>No mention of vulnerable group, human rights or gender.</p>	4
<p><b>Quality of the 'Introduction' Section</b>  <u>Purpose:</u> introduces/<u>situates</u> the evaluand in its institutional context, establishes its main parameters (time, value, results, geography) and the purpose of the review itself.            To include:</p> <ul style="list-style-type: none"> <li>• institutional context of the project (sub-programme, Division, Branch etc)</li> <li>• date of PRC approval, project duration and start/end dates</li> <li>• number of project phases (where appropriate)</li> <li>• results frameworks to which it contributes (e.g. POW Direct Outcome)</li> <li>• coverage of the review (regions/countries where implemented)</li> <li>• implementing and funding partners</li> <li>• total secured budget</li> <li>• whether the project has been evaluated in the past (e.g. mid-term, external agency etc.)</li> <li>• concise statement of the purpose of the review and the key intended audience for the findings.</li> </ul>	<p>The clear and well-structured introduction meets most of the elements of the report quality criteria. However, while some elements are missing such as the date of the PRC approval, this data is found in the Project Identification table.</p> <p>Includes project country map and photos from project sites in Kenya provided by the Project Team.</p>	4.5

<p><b>Quality of the 'Review Methods' Section</b></p> <p><u>Purpose:</u> provides reader with clear and comprehensive description of review methods, demonstrates the <u>credibility</u> of the findings and performance ratings.</p> <p>To include:</p> <ul style="list-style-type: none"> <li>• description of review data collection methods and information sources</li> <li>• justification for methods used (e.g. qualitative/quantitative; electronic/face-to-face)</li> <li>• number and type of respondents (see <i>table template</i>)</li> <li>• selection criteria used to identify respondents, case studies or sites/countries visited</li> <li>• strategies used to increase stakeholder engagement and consultation</li> <li>• methods to include the voices/experiences of different and potentially excluded groups (e.g. vulnerable, gender, marginalised etc)</li> <li>• details of how data were verified (e.g. triangulation, review by stakeholders etc.)</li> <li>• methods used to analyse data (scoring, coding, thematic analysis etc)</li> <li>• review limitations (e.g. low/ imbalanced response rates across different groups; gaps in documentation; language barriers etc)</li> <li>• ethics and human rights issues should be highlighted including: how anonymity and confidentiality were protected. Is there an ethics statement? E.g. <i>'Throughout the review process and in the compilation of the Final Review Report efforts have been made to represent the views of both mainstream and more marginalised groups. All efforts to provide respondents with anonymity have been made.'</i></li> </ul>	<p>Detailed description of review process, including the limitations to the methodology and justification for methods.</p> <p>Questionnaire for interviews would be better in the annex.</p> <p>More explicit description of data verification and triangulation would have been useful, including of ethics in evaluation and gender balance in interviews conducted and how gender was otherwise considered in the review approach and methods applied.</p>	<p>4</p>
<p><b>Quality of the 'Project' Section</b></p> <p><u>Purpose:</u> describes and <u>verifies</u> key dimensions of the evaluand relevant to assessing its performance.</p> <p>To include:</p> <ul style="list-style-type: none"> <li>• <i>Context:</i> overview of the main issue that the project is trying to address, its root causes and consequences on the environment and human well-being (i.e. synopsis of the problem and situational analyses)</li> <li>• <i>Results framework:</i> summary of the project's results hierarchy as stated in the ProDoc (or as officially revised)</li> <li>• <i>Stakeholders:</i> description of groups of targeted stakeholders organised according to relevant common characteristics</li> <li>• <i>Project implementation structure and partners:</i> description of the implementation structure with diagram and a list of key project partners</li> <li>• <i>Changes in design during implementation:</i> any key events that affected the project's scope or parameters should be described in brief in chronological order</li> <li>• <i>Project financing:</i> completed tables of: (a) budget at design and expenditure by components (b) planned and actual sources of funding/co-financing</li> </ul>	<p>This section almost all the elements of the report quality criteria.</p> <p>Figure 9. Organisation chart for CICSA project does not show how the entities in the chart are linked.</p> <p>No mention of the one formal project revision (see table 1: Project Identification Table).</p>	<p>4.5</p>

<p><b>Quality of the Theory of Change</b></p> <p><u>Purpose:</u> to set out the TOC at Review in diagrammatic and narrative forms to support consistent project performance; to articulate the causal pathways with drivers and assumptions and justify any reconstruction necessary to assess the project’s performance.</p> <p>To include:</p> <ul style="list-style-type: none"> <li>• description of how the <i>TOC at Review</i><sup>38</sup> was designed (who was involved etc)</li> <li>• confirmation/reconstruction of results in accordance with UNEP definitions</li> <li>• articulation of causal pathways</li> <li>• identification of drivers and assumptions</li> <li>• identification of key actors in the change process</li> <li>• summary of the reconstruction/results re-formulation in tabular form. <i>The two results hierarchies (original/formal revision and reconstructed) should be presented as a two-column table to show clearly that, although wording and placement may have changed, the results ‘goal posts’ have not been ‘moved’.</i> This table may have initially been presented in the Inception Report and should appear somewhere in the Main Review report.</li> </ul>	<p>No changes in the results framework of the project presented by reviewer, hence no RTOC appears.</p> <p>Missing vulnerable groups, HR and women as driver or assumption in the TOC.</p> <p>Narrative on causal pathways strength from outcome to intermediate state to impact is not provided.</p>	<p>3.5</p>
<p><b>Quality of Key Findings within the Report</b></p> <p><u>Presentation of evidence:</u> nature of evidence should be clear (interview, document, survey, observation, online resources etc) and evidence should be explicitly triangulated unless noted as having a single source.</p> <p><u>Consistency within the report:</u> all parts of the report should form consistent support for findings and performance ratings, which should be in line with UNEP’s Criteria Ratings Matrix.</p> <p><u>Findings Statements (where applicable):</u> The frame of reference for a finding should be an individual review criterion or a strategic question from the TOR. <b>A finding should go beyond description and uses analysis to provide insights that aid learning specific to the evaluand.</b> In some cases a findings statement may articulate a key element that has determined the performance rating of a criterion. Findings will frequently provide insight into ‘how’ and/or ‘why’ questions.</p>	<p>Concise assessments provided in line with the criteria and sub-criteria.</p> <p>Key findings only provide ratings of overall criteria. Sub-criteria are rated in the summary table in Conclusion and Executive Summary.</p> <p>Each criteria includes a text box with quotes from stakeholders. However, it would have been better to organize the quotes by type of stakeholder.</p> <p>In some cases quotes are not all relevant to the criteria to which they are presented.</p>	<p>4</p>

<sup>38</sup> During the Inception Phase of the review process a *TOC at Review Inception* is created based on the information contained in the approved project documents (these may include either logical framework or a TOC or narrative descriptions), formal revisions and annual reports etc. During the review process this TOC is revised based on changes made during project intervention and becomes the *TOC at Evaluation*.

<p><b>Quality of 'Strategic Relevance' Section</b></p> <p><u>Purpose:</u> to present evidence and analysis of project strategic relevance with respect to UNEP, partner and geographic policies and strategies at the time of project approval.</p> <p>To include:</p> <p>Assessment of the evaluand's relevance vis-à-vis:</p> <ul style="list-style-type: none"> <li>• Alignment to the UNEP Medium Term Strategy (MTS), Programme of Work (POW) and Strategic Priorities</li> <li>• Alignment to Donor/GEF/Partners Strategic Priorities</li> <li>• Relevance to Regional, Sub-regional and National Environmental Priorities</li> <li>• Complementarity with Existing Interventions: complementarity of the project at design (or during inception/mobilisation<sup>39</sup>), with other interventions addressing the needs of the same target groups.</li> </ul>	<p>A well-structured section covering almost all the elements of the report quality criteria.</p> <p>However, alignment with donor's (Germany) strategy not presented.</p> <p>Lack of presenting ratings for each sub-criteria with the assessment in the main text.</p> <p>Section presents text box with selected quotes from stakeholder interviews (source as in type of stakeholder, is not provided). The selected quotes are less useful and relevant for this criterion.</p>	4
<p><b>Quality of the 'Quality of Project Design' Section</b></p> <p><u>Purpose:</u> to present a summary of the strengths and weaknesses of the project design, on the basis that the detailed assessment was presented in the Inception Report.</p>	<p>Missing reference to project design analysis at inception and rating.</p> <p>Weaknesses are not directly mentioned.</p> <p>Mentions that human rights and gender aspects were adequately covered in the CICSA project without evidence.</p> <p>Quotes provided are mix of views, few quotes directly relate to the criterion. The quotes would have been better included in the main text to provide context supported by other evidence.</p>	3.5
<p><b>Quality of the 'Nature of the External Context' Section</b></p> <p><u>Purpose:</u> to describe and recognise, when appropriate, key <u>external</u> features of the project's implementing context that limited the project's performance (e.g.</p>	<p>This sector covers all elements.</p> <p>The challenges faced by the project are presented in a structured and clear way.</p> <p>Some of the quotes presented relevant to the criterion.</p>	4.5

<sup>39</sup> A project's inception or mobilization period is understood as the time between project approval and first disbursement. Complementarity during project implementation is considered under Efficiency, see below.

<p>conflict, natural disaster, political upheaval<sup>40</sup>), and how they affected performance.</p> <p>While additional details of the implementing context may be informative, this section should clearly record whether or not a major and unexpected disrupting event took place during the project's life in the implementing sites.</p>		
<p><b>Quality of 'Effectiveness' Section</b></p> <p><b>(i) Availability of Outputs:</b></p> <p><u>Purpose:</u> to present a well-reasoned, complete and evidence-based assessment of the outputs made available to the intended beneficiaries.</p> <p>To include:</p> <ul style="list-style-type: none"> <li>• a convincing, evidence-supported and clear presentation of the outputs made available by the project compared to its approved plans and budget</li> <li>• assessment of the nature and scale of outputs versus the project indicators and targets</li> <li>• assessment of the timeliness, quality and utility of outputs to intended beneficiaries</li> <li>• identification of positive or negative effects of the project on disadvantaged groups, including those with specific needs due to gender, vulnerability or marginalisation (e.g. through disability).</li> </ul>	<p>A clear presentation and an assessment of the outputs is provided.</p> <p>Rating for the sub-criterion is not provided.</p> <p>Para. 98 appear to be a summary conclusion.</p> <p>Each project output is assessed and achieved level indicated.</p> <p>Some of the quotes provided are relevant to the criterion</p>	4
<p><b>ii) Achievement of Project Outcomes:</b></p> <p><u>Purpose:</u> to present a well-reasoned, complete and evidence-based assessment of the uptake, adoption and/or implementation of outputs by the intended beneficiaries. This may include behaviour changes at an individual or collective level.</p> <p>To include:</p> <ul style="list-style-type: none"> <li>• a convincing and evidence-supported analysis of the uptake of outputs by intended beneficiaries</li> <li>• assessment of the nature, depth and scale of outcomes versus the project indicators and targets</li> <li>• discussion of the contribution, credible association and/or attribution of outcome level changes to the work of the project itself</li> <li>• any constraints to attributing effects to the projects' work</li> <li>• identification of positive or negative effects of the project on disadvantaged groups, including those with specific needs due to gender, vulnerability or marginalisation (e.g. through disability).</li> </ul>	<p>This section covers most elements. However, identification of positive or negative effects of the project on disadvantaged groups is not provided.</p> <p>Rating for the sub-criterion is not provided.</p> <p>Somewhat unclear wording in parts of analysis with reference to direct outcome (TOC, fig. 11), project outcome (outcome achievement) and outcomes, as the project had one outcome only.</p>	4

<sup>40</sup> Note that 'political upheaval' does not include regular national election cycles, but unanticipated unrest or prolonged disruption. The potential delays or changes in political support that are often associated with the regular national election cycle should be part of the project's design and addressed through adaptive management of the project team.



<p><b>(iii) Likelihood of Impact:</b></p> <p><u>Purpose:</u> to present an integrated analysis, guided by the causal pathways represented by the TOC, of all evidence relating to likelihood of impact, including an assessment of the extent to which drivers and assumptions necessary for change to happen, were seen to be holding.</p> <p>To include:</p> <ul style="list-style-type: none"> <li>• an explanation of how causal pathways emerged and change processes can be shown</li> <li>• an explanation of the roles played by key actors and change agents</li> <li>• explicit discussion of how drivers and assumptions played out</li> <li>• identification of any unintended negative effects of the project, especially on disadvantaged groups, including those with specific needs due to gender, vulnerability or marginalisation (e.g. through disability).</li> </ul>	<p>This section covers most elements.</p> <p>Rating for the sub-criterion is not provided.</p>	<p>4.5</p>
<p><b>Quality of 'Financial Management' Section</b></p> <p><u>Purpose:</u> to present an integrated analysis of all dimensions evaluated under financial management and include a completed 'financial management' table (may be annexed).</p> <p>Consider how well the report addresses the following:</p> <ul style="list-style-type: none"> <li>• <i>adherence</i> to UNEP's financial policies and procedures</li> <li>• <i>completeness</i> of financial information, including the actual project costs (total and per activity) and actual co-financing used</li> <li>• <i>communication</i> between financial and project management staff</li> </ul>	<p>This section covers most elements.</p> <p>However, verification of completeness of financial information could have been verified by the donor.</p> <p>Timeliness of approval and disbursement not addressed in this section.</p> <p>Some elements could have been backed up with more evidence. For example, "Resource mobilization is fully adequate to the project" because...."</p> <p>Quotes would have been more useful if specific quotes relevant to a sub-criteria had been highlighted in the assessment of that sub-criterion.</p>	<p>4</p>
<p><b>Quality of 'Efficiency' Section</b></p> <p><u>Purpose:</u> to present an integrated analysis of all dimensions evaluated under efficiency (i.e. the primary categories of cost-effectiveness and timeliness).</p> <p>To include:</p> <ul style="list-style-type: none"> <li>• time-saving measures put in place to maximise results within the secured budget and agreed project timeframe</li> <li>• discussion of making use, during project implementation, of/building on pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc.</li> <li>• implications of any delays and no cost extensions</li> <li>• the extent to which the management of the project minimised UNEP's environmental footprint.</li> </ul>	<p>This section covers most elements.</p> <p>Assessment of efficiency by each of the four components. More detailed on component 3 which contained the pilot projects.</p> <p>A table with a comprehensive overview of the six pilot projects is provided.</p> <p>List of quotes provided, mostly relevant to the criteria.</p>	<p>5</p>

<p><b>Quality of 'Monitoring and Reporting' Section</b></p> <p><u>Purpose:</u> to present well-reasoned, complete and evidence-based assessment of the evaluand's monitoring and reporting.</p> <p>Consider how well the report addresses the following:</p> <ul style="list-style-type: none"> <li>• quality of the monitoring design and budgeting (including SMART results with measurable indicators, resources for MTE/R etc.)</li> <li>• quality of monitoring of project implementation (including use of monitoring data for adaptive management)</li> <li>• quality of project reporting (e.g. PIMS and donor reports) \</li> </ul>	<p>This section covers most elements.</p> <p>Little evidence provided to the reviewer on whether the project was widely monitored.</p> <p>Unclear if the monitoring system worked and was used regularly such as PIMS and IPMR.</p> <p>Quotes provided relevant to the overall criteria.</p>	<p>4</p>
<p><b>Quality of 'Sustainability' Section</b></p> <p><u>Purpose:</u> to present an integrated analysis of all dimensions evaluated under sustainability (i.e. the endurance of benefits achieved at outcome level).</p> <p>Consider how well the report addresses the following:</p> <ul style="list-style-type: none"> <li>• socio-political sustainability</li> <li>• financial sustainability</li> <li>• institutional sustainability</li> </ul>	<p>Overall rating of likely awarded for sustainability. The ratings of sub-criteria are not included with the analysis but in the overall summary elsewhere in the report.</p> <p>Exit strategy is addressed indirectly.</p> <p>Interview quotes presented in box.</p> <p>Capacity of stakeholders to continue work is not assessed.</p> <p>Analysis focus on country partners. Roles of implementing (UNEP Finance Unit) and executing partners (UNEP Africa Office and Frankfurt School) are not assessed.</p>	<p>4</p>
<p><b>Quality of Factors Affecting Performance Section</b></p> <p><u>Purpose:</u> These factors are not always discussed in stand-alone sections and may be integrated in the other performance criteria as appropriate. However, if not addressed substantively in this section, a cross reference must be given to where the topic is addressed and that entry must be sufficient to justify the performance rating for these factors.</p> <p>Consider how well the review report, either in this section or in cross-referenced sections, covers the following cross-cutting themes:</p> <ul style="list-style-type: none"> <li>• preparation and readiness</li> <li>• quality of project management and supervision<sup>41</sup></li> </ul>	<p>Analysis provided of all factors provided with some evidence.</p> <p>Rating scale of likely is used instead of the required satisfactory scale. An overall rating of Likely is provided of factors affecting performance.</p> <p>Assessment of project management and supervision does not distinguish between</p>	<p>3.5</p>

<sup>41</sup> In some cases 'project management and supervision' will refer to the supervision and guidance provided by UNEP to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping provided by UNEP. This includes providing the answers to the questions on Core Indicator Targets, stakeholder engagement, gender responsiveness, safeguards and knowledge management, required for the GEF portal.

<ul style="list-style-type: none"> <li>• stakeholder participation and co-operation</li> <li>• responsiveness to human rights and gender equality</li> <li>• environmental and social safeguards</li> <li>• country ownership and driven-ness</li> <li>• communication and public awareness</li> </ul>	<p>responsibilities of implementing and executing agency.</p> <p>Assessment of environment and social safeguards appears superficial.</p> <p>Assessment of human rights and gender equality find evidence of female beneficiaries were targeted and 40% female participation but found no project expenditure made to towards this.</p>	
<p><b>Quality of the Conclusions Section</b></p> <p><b>(i) Conclusions Narrative:</b>  <u>Purpose:</u> to present summative statements reflecting on prominent aspects of the <u>performance of the evaluand as a whole</u>, they should be derived from the synthesized analysis of evidence gathered during the review process.  To include:</p> <ul style="list-style-type: none"> <li>• compelling narrative providing an integrated summary of the strengths and weakness in overall performance (achievements and limitations) of the project</li> <li>• clear and succinct response to the key strategic questions</li> <li>• human rights and gender dimensions of the intervention should be discussed explicitly (e.g. how these dimensions were considered, addressed or impacted on)</li> </ul>	<p>Conclusions highlights project strengths and weaknesses at detailed level.</p> <p>Summary of project findings and ratings in table using numerical ratings rather that the corresponding satisfactory/likely rating.</p> <p>Strengths and weaknesses are not well integrated in the performance conclusions.</p> <p>Conclusion on relative balance/relationship between project strengths and weaknesses is not provided.</p> <p>Missing responses to the three strategic review questions and question on COVID-19 adaptation of the TOR.</p>	3.5
<p><b>ii) Utility of the Lessons:</b>  <u>Purpose:</u> to present both positive and negative lessons that have potential for wider application and use (replication and generalization)  Consider how well the lessons achieve the following:</p> <ul style="list-style-type: none"> <li>• are rooted in real project experiences (i.e. derived from explicit review findings or from problems encountered and mistakes made that should be avoided in the future)</li> <li>• briefly describe the context from which they are derived and those contexts in which they may be useful</li> <li>• do not duplicate recommendations</li> </ul>	<p>Three lessons learned are presented and rooted in findings of the report.</p> <p>Formulation of the lessons appear as findings and does not enhance usefulness for other entities to take-up and learn from them.</p>	3.5
<p><b>(iii) Utility and Actionability of the Recommendations:</b>  <u>Purpose:</u> to present proposals for specific action to be taken by identified people/position-holders to resolve concrete problems affecting the project or the sustainability of its results.  Consider how well the lessons achieve the following:</p> <ul style="list-style-type: none"> <li>• are feasible to implement within the timeframe and resources available (including local capacities) and specific in terms of who would do what and when</li> </ul>	<p>Table with many quotes from interviews presented.</p> <p>The recommendations presented in the table format do not formulate a short recommendation action, instead the recommendation action is presented under the challenge/problem to be addressed.</p>	3

<ul style="list-style-type: none"> <li>include at least one recommendation relating to strengthening the human rights and gender dimensions of UNEP interventions</li> <li>represent a measurable performance target in order to monitor and assess compliance with the recommendations.</li> </ul> <p><b>NOTES:</b></p> <p><b>(i)</b> In cases where the recommendation is addressed to a third party, compliance can only be monitored and assessed where a contractual/legal agreement remains in place. Without such an agreement, the recommendation should be formulated to say that UNEP project staff should pass on the recommendation to the relevant third party in an effective or substantive manner. The effective transmission by UNEP of the recommendation will then be monitored for compliance.</p> <p><b>(ii)</b> Where a new project phase is already under discussion or in preparation with the same third party, a recommendation can be made to address the issue in the next phase.</p>	<p>Proposed timeframe for implementation of recommendations is 2024-2028 and beyond the recommendation implementation tracking period of 12 months.</p> <p>A recommendation relating to strengthening the human rights and gender dimensions of UNEP interventions is not included.</p>	
<p><b>Quality of Report Structure and Presentation</b></p> <p><b>(i) Structure and completeness of the report:</b></p> <p>To what extent does the report follow the Evaluation Office structure and formatting guidelines?</p> <p>Are all requested Annexes included and complete?</p>	<p>The report follows most of the guidelines for the structure of sections and criteria. However, the weighted rating table was not used properly, as the Reviewer should have used round numbers. Also, there was a mismatch of some of the ratings between Tables 10, 13, and 14.</p> <p>The report is very well structured. Annexes were provided.</p> <p>Separate assessment of knowledge management provided.</p> <p>Annex I Response to stakeholder comments is not used as 'no comments from stakeholders'.</p> <p>Overall rating of criteria provided with assessment in the main text, whereas sub-criterion ratings are provided in the summary performance rating tables.</p> <p>The report includes table with quotes from interviewees (these are tied to a criterion and not tied to a direct finding).</p>	4
<p><b>(ii) Writing and formatting:</b></p> <p>Consider whether the report is well written (clear English language and grammar) with language that is adequate in quality and tone for an official document?</p> <p>Do visual aids, such as maps and graphs convey key information?</p>	<p>Overall, the report is well written and in an appropriate tone for an official document. Assessments are written in a short and concise manner.</p> <p>The quotations from stakeholders are relevant. However, it would have been better to structure them by type of stakeholder.</p>	4.5

	Relevant photos from pilot project sites.	
<b>OVERALL REPORT QUALITY RATING</b>		<b>4</b> <b>Moderately Satisfactory</b>

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1. The overall quality of the review report is calculated by taking the mean score of all rated quality criteria.