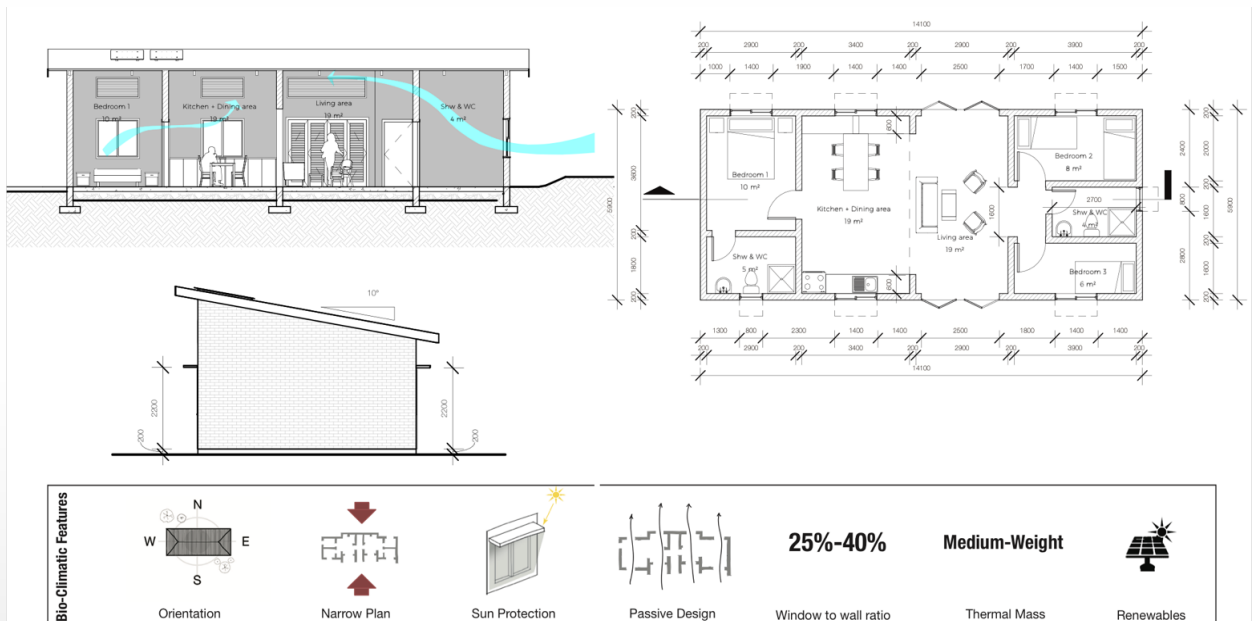


**Terminal Evaluation of the UN Environment Project
 Promoting Energy Efficiency in Buildings in East Africa (EEBA)
 GEF PROJECT ID: 3788, GFL/2328-2720-4C12**

FINAL REPORT



**Evaluation Office of UN Environment
 August 2018**



Evaluation Office of UN Environment

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Promoting Energy Efficiency in Buildings in East Africa (EEBEA)
GEF Project ID: 3788, GFL/2328-2720-4C12
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ABOUT THE EVALUATION¹

Joint Evaluation: No

Report Language(s): English

Evaluation Type: Terminal Project Evaluations

Brief Description: This report is a terminal evaluation of a UN Environment-GEF project implemented between 2011 and 2018. The project's overall development goal was to mainstream energy efficiency in buildings in East Africa, thereby contributing to significantly reduced carbon emissions. The evaluation sought 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 evaluation 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 UN Environment, the GEF and their executing partner UN-Habitat and the relevant agencies of the project participating countries.

Key words: Building Codes; Building Standards; Energy Efficiency; Energy Efficiency in Buildings; Energy Efficiency Benchmarks; Green Buildings; Green Building Credit Lines; Green Building Award; Green Building Council; Project Evaluation; Climate Change; TE; Terminal Evaluation; GEF; GEF Project; Bio-climatic design.

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¹ This data is used to aid the internet search of this report on the Evaluation Office of UN Environment Website

Table of Contents

1	INTRODUCTION	16
2	EVALUATION METHODS	17
3	III. THE PROJECT	20
3.1	CONTEXT	20
3.2	OBJECTIVE AND COMPONENTS	22
3.3	STAKEHOLDERS	24
3.4	PROJECT IMPLEMENTATION STRUCTURES AND PARTNERS	28
3.5	CHANGES IN DESIGN DURING IMPLEMENTATION	30
3.6	PROJECT FINANCING	31
4	IV. THEORY OF CHANGE AT EVALUATION	33
5	V. EVALUATION FINDINGS	38
5.1	STRATEGIC QUESTIONS	38
5.2	STRATEGIC RELEVANCE	41
5.2.1	Relevance to GEF and UN Environment	41
5.2.2	Relevance to regional and national priorities	42
5.2.3	Complementary with existing interventions	45
5.3	QUALITY OF PROJECT DESIGN	47
5.4	NATURE OF EXTERNAL CONTEXT	48
5.5	EFFECTIVENESS	49
5.5.1	Delivery of Outputs	49
5.5.2	Delivery of Outcomes	65
5.5.3	Likelihood of Impact	70
5.6	FINANCIAL MANAGEMENT	72
5.7	EFFICIENCY	77
5.8	MONITORING AND REPORTING	78
5.9	SUSTAINABILITY	79
5.9.1	Socio-political Sustainability	79
5.9.2	Financial Sustainability	82
5.9.3	Institutional Sustainability	82
6	V. CONCLUSIONS AND RECOMMENDATIONS	84
6.1	CONCLUSIONS	84
6.2	LESSONS LEARNED	88
6.3	RECOMMENDATIONS	90
7	ANNEXES	92

List of Tables and Diagrams

Table 1: Stakeholder composition for interviews	18
Table 2: Access to electricity	20
Table 3: Per capita electricity consumption comparison.....	20
Table 4: No Cost extensions	30
Table 5: Budgeted cost per component.....	31
Table 6: Project finance contribution committed per partner	32
Table 7: Actual co-financing reported.....	32
Table 8: Summary of amendments to derive the TOC at evaluation	33
Table 9: Strategic Questions	38
Table 10: Complementary initiatives	45
Table 11: Assumptions that informed the design of activities and targeted outputs	49
Table 12: Outputs from Component 1	50
Table 13: Outputs from Component 2.....	52
Table 14: Outputs from Component 3.....	56
Table 15: Outputs from Component 4.....	61
Table 16: Outputs from Component 5.....	63
Table 17: Delivery on direct outcomes.....	66
Table 18: Unintended consequences.....	71
Table 19: Expenditure by Outcome/Output	73
Table 20: Co-financing Table (as at 31 December 2017)	74
Table 21: Financial Management Table.....	75
Table 22: Lessons Learned	88
Table 23: Recommendations	90
Figure 1: Stakeholder map	26
Figure 2: Africa Green Building Summit Participants (March 2017).....	27
Figure 3: Planned executing arrangements.....	29
Figure 4: Theory of Change at Evaluation.....	37
Figure 5: Average retail electricity prices in Africa, 2016 (USD/megawatt hour).....	43
Figure 6: Samples of publications from the EEBEA	60
Figure 7: Signatories of the Machakos Declaration	60
Figure 8: Garden City Mall site visit	65
Figure 9: Luxury housing development advertisement, M Safiri, August 2018	70

List of acronyms and abbreviations

UN	United Nations
AAK	Architects Association of Kenya
AFD	Agence Française de Développement
AfDB	African Development Bank
APR	Annual Project Report
AWP	Annual Work Plan
CFL	Compact Fluorescent Light
EA	East Africa project countries (Burundi, Kenya, Rwanda, Tanzania and Uganda)
EAC	East Africa Community
EE	Energy Efficiency
EEB	Energy Efficiency in Buildings
EEBEA / EEBA	Energy Efficiency in Buildings in East Africa (Acronym used interchangeably in source documentation)
EP	Executing Partner
EU	European Union
EUR	Euro
FMO	Fund Management Office
FSP	Full Size Project
GEF	Global Environment Facility
GHG	Greenhouse Gases
GW	Gigawatt
GWh	Gigawatt-hour
HMPs	Habitat Program Managers
HVAC	Heating, Ventilation and Air Conditioning
IEA	International Energy Agency
ITC	Information Technology and Communications
KAM	Kenya Manufactures Association
KGBS	Kenya Green Building Society
kW	Kilowatt
kWh	kilo Watt hour
M&E	Monitoring and Evaluation
MEPS	Minimum Energy Performance Standards
MOU	Memorandum of Understanding
MSP	Medium Size Project
MTR	Mid-term Review
MW	Megawatt
MWh	Megawatt-hour
NGO	Non-Governmental Organisation
NSC	National Steering Committee
OECD	Organization for Economic Cooperation and Development
PIR	(Annual) Project Implementation Review
PM	Project Manager
PMU	Project Management Unit

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

PPG	Project Preparation Grant
PO	Project Officer
POW	Programme of Work
ProDoc	UN Environment / GEF Project document
PSC	Project Steering Committee
QPR	Quarterly Progress Report
RwGBA	Rwanda Green Building Association
SDG	Sustainable Development Goal
SE4All	Sustainable Energy for All
SMART	Specific, Measurable, Achievable, Realistic and Time-bound.
SWH	Solar Water Heater
TA	Technical Assistance
TE	Terminal Evaluation
TOC	Theory of Change
toe	Tonne of oil equivalent
TOR	Terms of Reference
TSC	Technical Steering Committee
UN	United Nations
UNEP	United Nations Environment Program (Acronym no longer in use, but still reflected in source documentation)
UNEP-DTIE	UNEP Division of Technology, Industry & Energy
UN HABITAT	United Nations Human Settlements Program
USD	United States Dollar

Project Identification Table

Project Title:	Promoting Energy Efficiency in Buildings in East Africa		
Executing Agency:	UN-HABITAT		
Project partners:	National Ministries of Housing in Kenya, Uganda, Tanzania, Rwanda and Burundi		
Geographical Scope:	East Africa		
Participating Countries:	Kenya, Uganda, Tanzania, Rwanda and Burundi		
GEF project ID:	3788	IMIS number*²:	GFL-2328-2720-4C12
Focal Area(s):	Climate Change	GEF OP #:	
GEF Strategic Priority/Objective:	CC-Sp1-Building-EE	GEF approval date*:	11 th May 2011
UNEP approval date:	May 2011	Date of first disbursement*:	15 th August 2011
Actual start date³:	August 2011	Planned duration:	48 months
Intended completion date*:	December 2017	Actual or Expected completion date:	December 2017
Project Type:	Full-sized project (FSP)	GEF Allocation*:	US\$ 2,853,000
PPG GEF cost*:	N/A	PPG co-financing*:	N/A
Expected MSP/FSP Co-financing*:	12,483,288	Total Cost*:	15,336,288
Mid-term review/eval. (planned date):	June 2013	Terminal Evaluation (actual date):	August 2018
Mid-term review/eval. (actual date):	June 2014	No. of revisions*:	4
Date of last Steering Committee meeting:	17 th April 2015	Date of last Revision*:	10 March-February 2017

² Fields with an * sign (in yellow) should be filled by the Fund Management Officer

³ Only if different from first disbursement date, e.g., in cases where a long time elapsed between first disbursement and recruitment of project manager.

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
 Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

Disbursement as of 30 June 2017*:	US\$ 2,323,072.47	Date of financial closure*:	September 2019
Date of Completion^{4*}:	December 2017	Actual expenditures reported as of 30 June 2017⁵:	US\$ 2,417,553.85
Total co-financing realized as of 30 June 2017⁶:	USD \$ 32,922,626 ⁷	Actual expenditures entered in IMIS as of 31 December 2017*:	1,875,450
Leveraged financing:⁸			

⁴ If there was a "Completion Revision" please use the date of the revision.

⁵ Information to be provided by Executing Agency/Project Manager

⁶ Projects which completed mid-term reviews/evaluations or terminal evaluations during FY16 should attach the completed co-financing table as per GEF format. See Annex 1

⁷ Note typing error in progress reports corrected from \$32,992,626 to \$32,922,626, The evaluation was unable to confirm this co-finance contribution (refer Annex III)

⁸ See above note on co-financing

Executive summary

1. This Terminal Evaluation is undertaken on completion of the “Promoting Energy Efficiency in Buildings in Eastern Africa” project. The evaluation set out to assess the 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 evaluation 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 United Nations Environment, UN-Habitat and the Governments of Kenya, Tanzania, Uganda, Rwanda and Burundi. The evaluation further aim to identify lessons of operational relevance for future project formulation and implementation.
2. This regional project, implemented from 2011 to 2018, intended to address the inefficient use of energy in buildings in the East African partner countries. The stated objectives of the project were “to mainstream energy efficiency measures into housing policies, building codes, municipal bylaws and building practices in East Africa and to achieve considerable avoidance of energy-related greenhouse gas emissions as a result of improved buildings and building practices”.
3. The Promoting Energy Efficiency in Buildings in Eastern Africa project was implemented by the United Nations Environment’s Climate Mitigation Unit, Energy and Climate Branch (i.e. the Implementing Agency) within the Economy Division, in close coordination with the United Nations Environment Regional Office for Africa. UN-Habitat Urban Energy Unit served as the Executing Partner. UN-Habitat is the main partner of the United Nations Environment, directly managing the project in close collaboration with partner Governments of Kenya, Uganda, Tanzania, Rwanda and Burundi.
4. The project was supported through a grant of USD 2,853,000 made available by the Global Environmental Facility. This funding was paired with USD 12,483,288 in-kind co-financing commitments from project partners, for a total project budget of USD 15,336,288.
5. The project offered comprehensive technical assistance across five project components⁹ towards achieving the targeted mainstream energy efficiency measures into housing policies, building codes, municipal bylaws and building practices in East Africa. These components provided a comprehensive approach for creating an environment conducive to the adoption of EEB, addressing the major barriers to

⁹ 1. Energy Efficiency Data and Benchmarks in the Building Sector; 2. Formulation and Adoption of Energy Efficiency Codes in Buildings; 3. Awareness Raising, Capacity Building in Energy Efficiency, and Best Practices in the Building Sector; 4. Appropriate Financial Framework for the Promotion of EE Measures in Buildings; 5. Development and Implementation of Pilot Projects

adoption and entrenching energy efficient building practices into policies, regulations and bylaws.

Evaluation Findings and Conclusions

6. **Strategic relevance:** The promotion of energy efficiency in buildings in East Africa remains consistent with the strategic priorities of Global Environmental Facility, United Nations Environment and UN-Habitat. The project scope and aspirations are also highly relevant to regional and national priorities of partner countries. Relevance is reinforced by the significant number of complementary initiatives that aligned with and sought to collaborate with the project.
7. **Quality of project design:** The project was found to be well designed and well-timed to coincide with an anticipated construction boom in the region. The broad mixture of interventions was well chosen to create a comprehensive enabling platform for mainstreaming energy efficient building practice among the partner countries. Weaknesses in the design related to (i) an over ambitious scope and delivery targets given the available resources (financial and human) and timelines; (ii) heavy reliance on Government partners and slow bureaucratic processes to progress key delivery milestones; and (iii) reliance on national and regional steering committees, with voluntary and unpaid participation from key stakeholders, as key governance structures. The failure of the steering committee structure also meant that high profile government representation and regional forums such as the East Africa Community could not be fully leveraged for support and sponsorship.
8. **Nature of external context.** Project implementation was impacted by political developments in the region. Burundi's participation in the project was significantly impacted by intensified political unrest that escalated since 2015. The continued evolution of Kenya's devolution government also contributed to slower implementation in this country.
9. **Effectiveness** (attainment of project objectives and results): The project successfully established a highly credible knowledge base that will continue to inform policy, planning and development decisions in the region and potentially also other tropical areas. The portfolio of resources developed for training, communication and awareness building is extensive, creating a comprehensive platform for learning and informing future direction by all role players. To maximise the impact and contribution of this excellent resource, material should preferably be made available online for download.
10. Progress has also been made by all countries towards formulation and adoption of energy efficient building codes. Supporting legislation has been passed in Uganda, Burundi and Rwanda – an important achievement considering the typical pace of policy reforms. Rwanda has furthermore made significant progress towards institutionalizing and operationalizing energy efficiency in buildings. Despite the

prolonged project period, Kenya and Tanzania, the two largest markets in the region, have made only limited progress towards the adoption of energy efficient building codes at the time of the evaluation. Kenya's commercial sector has however shown significant interest in efficient building practices, with a vibrant green building society established in the country in partnership with UN-Habitat.

11. The project had limited success with the creation of a supportive financing environment, but work by parallel initiatives has begun to unlock green finance opportunities. Awareness regarding these were still very low, leaving opportunity for increased awareness and utilization.
12. Government mass housing developments, intended to serve as demonstration projects for the new codes and to familiarize building contractors and consumers with the benefits of energy efficient building practices, did not proceed as planned. The failure of Government partners to support the project to the extent initially committed or to the extent anticipated at planning stage, severely impacted implementation and progress. Consequently, the project widened the scope of activity, extending technical advice to all developers aiming to influence building practice and design more broadly.
13. Despite not all outcomes being met in full, a robust platform has been established consisting of a sound knowledge base, a high-level legal framework adopted in three countries, growing voluntary activity at local government level in Kenya and Tanzania, definite growth in capacity and awareness among stakeholders and a few green credit lines created.
14. **Sustainability:** Evaluation did not find adequate evidence that socio-political commitment, financial resources and institutional capacity had been created to ensure sustainability without further support.
15. **Catalytic role and replication:** The project had not set out to influence behavior more broadly than the East African Partner Countries but has actively influenced regional activities through collaboration with the World Green Building Council, its Regional network and regional conferences. Resources from the project have also been shared with another United Nations Environment project in the Caribbean with a similar tropical climate.
16. **Efficiency:** The project execution has been slow, facing challenges with recruiting and retaining suitable team members. Ineffective focal points within Partner Governments meant that the lean PMU was inadequately resourced to cover the full scope of the project activities. This challenge was addressed with the recruitment of UN Volunteers to support the project activities at a national level. This mitigation measure had an unplanned cost implication and required communication and support structures that took time to establish.

17. The project effectively leveraged existing and parallel initiatives. It provided a springboard for several new initiatives and created a platform for entities such as the Green Building Councils to build on.

Lessons learned and Recommendations

18. Nine lessons were noted that may be useful for future projects of a similar nature, focus or with a regional footprint. The three most pertinent are included here.
19. The costs and logistics of a regional steering committee is prohibitive, preventing it from effectively serving its intended governance and communication function. Alternate structures and/or platforms must be sought to appropriately serve regional projects or funding should be earmarked to enable this important oversight function.
20. Measurement and verification of energy savings and monitoring of indicators are not the same as project reporting. The importance of establishing baselines, identifying or establishing instruments, tools and resources to track impacts and then to actually track and report tangible numbers, cannot be overemphasized. The project's ability to demonstrate its contribution may depend on this. Simple, low-cost data collection tools and measures¹⁰, implemented throughout the project can greatly assist with demonstrating and quantifying the project contribution. Monitoring of project contributions and impacts is critical to justify the project investment. Determining direct and indirect energy savings and emission reductions would be considerably easier if appropriately qualified M&V practitioners were appointed early on to develop a baseline and track and report on actual and projected savings.
21. Green Building Councils have proven to be excellent partners for driving energy efficiency in the private sector. The World Green Building Council and its networks and resources amplifies the support for green buildings available in the country. These councils have proven to be vibrant, active spokespeople for green buildings targeting building professionals, developers, Corporates and government. The Rwandan and Kenyan entities have both contributed significantly to expanding the reach of communication and information sharing efforts and to ensuring continuation of the work after project conclusion. Any initiative promoting energy efficiency in buildings stands to benefit greatly from either encouraging the establishment of a local council or by partnering with existing local councils.
22. Seven recommendations are made, assuming further actions can be implemented after 30 September 2018. Five recommendations are intended to maximize the reach and impact of established resources. Two recommendations focus on ensuring the project is in integrity with the original design parameters and commitments which

¹⁰ Simple measures such as keeping a record of all amended building designs, maintaining a record of implemented projects, maintaining a record of training events with analyses of participation, short surveys or feedback questionnaires following training events, tracking frequency and reach of communication

formed the basis on which Global Environmental Facility grant funding was made available. Key recommendations are highlighted.

23. It is critical that a repository of the project resources including publications, guidelines, technical notes, video clips and training material, among others, be made available online with websites from project partners linking to the site.¹¹
24. Case studies and fact sheets highlighting the implemented energy efficiency interventions tangible costs and benefits associated with demonstration projects must be developed and shared (also online) to effectively communicate the value of energy efficiency in buildings in the region. Similarly, the Rwandan experience should be packaged into a best practice case study for government implementation.
25. The comparative energy performance of the energy efficient housing prototypes, developed in Nairobi, should be measured, tracked against the performance of standard units on the same property, and reported. Solid data can inform government decision-making and used to create general awareness regarding the benefits to homeowners.
26. It is recommended that an audit be done to understand the reported co-finance numbers and obtain evidence of stated contributions.
27. The final recommendation is for a suitable service provider to be appointed to conduct an ex-post measurement and verification study for the project that can determine the direct, indirect and projected emission reductions for the project.
28. Overall, the project receives a Moderately Satisfactory rating in the terminal evaluation. The respective project ratings are summarized below:

Criteria	Rating HU - HS
Strategic Relevance	HS
Quality of Project Design	S
Nature of External Context	F
Effectiveness	MS
1. Achievement of Outputs	MS
2. Achievement of Outcomes	MS
3. Likelihood of impact	ML
Financial Management	MS
1. Completeness of information	MS
2. Communication	S
Efficiency	U
Monitoring and Reporting	MS

¹¹ Feedback from the PMU, received 6 December, suggested that a repository was already planned and will be housed by UN-Habitat. A website link was not yet available.

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
 Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

Criteria	Rating HU - HS
1. Monitoring design and budgeting	MS
2. Monitoring of project information	MS
3. Project reporting	S
Sustainability	U
1. Socio-political Sustainability	ML
2. Financial Sustainability	U
3. Institutional Sustainability	MU
Factors Affecting Project Performance	MS
• Preparation and Readiness	MS
• Quality of project management and supervision	MU
• Stakeholders' participation and cooperation	S
• Responsiveness to human rights and gender equity	-
• Country ownership and driven-ness	U
• Communication and public awareness	S

1 Introduction

29. The “Promoting Energy Efficiency in Buildings in Eastern Africa” (EEBEA) project was implemented by UN Environment’s Climate Mitigation Unit, Energy & Climate Branch (i.e. the Implementing Agency), within the Economy Division, in close coordination with the UN Environment Regional Office for Africa. UN-Habitat Urban Energy Unit served as the Executing Partner. It is the main partner of the UN Environment, directly managing the project in close collaboration with partner Governments of Kenya, Uganda, Tanzania, Rwanda and Burundi. UN-Habitat responsibilities include executing project activities, monitoring project progress, managing project staff and funds.
30. A Project Steering Committee was established with representation from the East African Community, Representatives from National Governments and East African Association of Architects. National Steering Committees were also established in each of the partner countries, establishing a comprehensive governance structure.
31. The EEBEA was designed as a regional project to address the inefficient use of energy in buildings in the East African partner countries. The stated objectives of the EEBEA were “to mainstream energy efficiency measures into housing policies, building codes, municipal bylaws and building practices in East Africa and to achieve considerable avoidance of energy-related GHG emissions as a result of improved buildings and building practices”.
32. The Global Environmental Facility (GEF) is the main source of funding. It is a full-size GEF project, ID 3788, with a grant of USD 2,853,000 paired with in-kind co-financing commitments from project partners of USD 12,483,288, for a total project budget of USD 15,336,288. Approval for the project was received from the GEF CEO in a letter dated 11 May 2011, followed by approval by the UN Environment Project Approval Group on 24 June 2011. The legal instrument between UN Environment and UN-Habitat was signed in August 2011. The first transfer of funds was made 15 August 2011.
33. While the actual starting date is reflected as August 2011¹², the EEBEA effectively only got off the ground in April 2012 following the appointment of a Project Manager in April 2012. The EEBEA was initially scheduled to be implemented between July 2011 and June 2015 (48 months). However, four no-cost extensions were granted over the project lifetime, with completion extended to 30 September 2018.

¹² Refer: project identification table. Different sources quote different starting dates. The project starting date was amended to August 2011 in the first project revision. Recent PIRs show December 2011 as the starting date. No evidence was found to confirm this alternate date.

34. A comprehensive, Mid-Term Review (MTR) was completed in August 2014¹³. The review was carried out based on desk work and field missions in the five participating countries to conduct interviews of key stakeholders and project partners as well as site visits of the pilot projects. The MTR mission spanned three weeks, covering all five partner countries. The MTR made eight recommendations intended to focus implementation for more effective delivery.
35. In accordance with the UN Environment Evaluation Policy and the UN Environment Programme Manual, this Terminal Evaluation (TE) is undertaken at completion of the EEBEA project. The evaluation will assess the 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 objectives of the evaluation are two-fold: (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 UN Environment, UN Habitat and the Governments of Kenya, Tanzania, Uganda, Rwanda and Burundi. The expectation is therefore that the evaluation will identify lessons of operational relevance for future project formulation and implementation.
36. The audience for the findings of the terminal evaluation includes (but is not limited to): UN Environment Evaluation Office; UN Environment (the Implementing Agency) project team members and their respective units; The GEF; UN-Habitat (the Executing Agency/Partner) project staff; and, EEBEA Country Partners.

2 Evaluation Methods

37. The findings of the TE are largely based on (i) a desk review of key project documents at design and implementation stage, (ii) interviews with key stakeholders and (iii) information shared by a range of stakeholders at a Regional Conference on Energy and Resource Efficiency in Buildings in East Africa, scheduled to coincide with the mission.
38. **Desk review.** The consultant reviewed key project documents at design and implementation stage and relevant sources of information were extracted for report writing and as references to validate during key stakeholder interviews. These included general background documentation and websites; strategy documents; relevant reports; programme management notes; design documents, work plans, and budgets; as well as monitoring and evaluation reports, policy documents, and sector plans.
39. **Field mission.** The evaluation mission was confined by the Evaluation Office to seven days shared between Nairobi, Kenya and Arusha, Tanzania due to budget and resource constraints. It was however scheduled to coincide with a three-day regional conference that brought together a mix of role-players and interested parties from the five partner

¹³ Initiated in June 2014, with August the last date on MTR report documentation.

countries. This facilitated a good overview of scope of activities, progress made (i.e. completed and planned activities, challenges, next steps) and access to participants for interviews or clarification questions. Stakeholders who were not available during the mission week, were interviewed via Skype.

40. **Semi-structured interviews of stakeholders.** A framework of stakeholder categories earmarked for interviews had been prepared prior to the mission and shared with the project team to assist with the identification of corresponding individuals. This framework was structured to include representation across countries and stakeholder categories. Interview questions were aligned to the evaluation framework, with a discussion outline prepared for each interview. Comprehensive, face-to-face interviews were completed with 16 stakeholders (including 3 conducted via Skype). Brief discussions were held with an additional three conference participants to clarify or elaborate on content they had presented during the proceedings. An iterative approach was taken, meaning that evolving findings were considered and validated during subsequent interviews or additional data requests.
41. A complete list of people interviewed is attached as Annex II. The following stakeholder groups were included:

Table 1: Stakeholder composition for interviews

Stakeholder category	Number	Comment
UN Habitat PMU	2	Both the current Acting PM and one past PM; Includes Chief, Urban Energy Unit;
UN Environment	3 (+ 2)	Task Manager; Climate Change Unit, Mitigation Branch representative; Fund Management Officer Two informal discussions were also held with Mr. Victor Tsang, Policy Officer: 2030 Agenda for Sustainable Development and UN Environment and Mr. Martin Okun, Economy Division, UN Environment, to obtain a more general understanding of processes and priorities.
Partner country representatives	4	Including representatives from Ministries, national government institutions and organisations.
Local government representatives	1 (+ 2)	One full interview and two additional persons engaged with clarification questions following their detailed presentations.
Academia	2 (+ 2)	Two additional persons engaged with clarification questions following their detailed presentations.
Financial institutions	1 (+ 1)	One additional person engaged with clarification questions following his detailed presentation.
Implementation partners	2 (+ 1)	One implementation partner also representing a university (already counted) and one additional person engaged with clarification questions following his detailed presentation.
Other	1	EACREEE representative.
Focal points / project officers	(3)	Three previous focal points / project officers all of whom have subsequently migrated into new roles and are already counted above.
Total	16 -	

42. **Site visits.** Three site visits were conducted in Nairobi, facilitated by the Kenya Green Building Society (KGBS). The sites included a green building certified shopping mall, a green building certified high-income housing development and energy efficient, affordable housing prototypes.
43. **Structured surveys.** Structured surveys were planned for the collection of quantitative data. A short, structured survey was drafted for circulation to attendees of training events. The survey was intended to gauge the extent to which building professionals in the private and public sector have benefited from training received and have adopted it into their daily practices. It was recommended by the PM that the survey be done among attendees of the KGBS hosted training events and masterclasses as a good representation across a variety of stakeholder groups. This approach was agreed with the KGBS, but not implemented. Details of attendees could not be obtained by the Evaluator to enable direct contact and the KGBS did not implement the survey as planned. Feedback on the quality and impact of training is therefore confined to the experience and feedback shared by interviewees.
44. Particular emphasis was placed on triangulation (cross-validation) of data sources (monitoring data, interview results, surveys, etc.) and an assessment of plausibility of the results obtained. To validate observations, findings, and areas of recommendation, the Evaluator also reviewed government and other research publications, related news articles and documentation of related initiatives. A complete list of consulted references is provided in Appendix VI.
45. The TE faced a number of challenges with data collection. Information sharing from the project was slow and incomplete. A large number of documents and reports, requested previously, were provided only on the first day of the mission. Names and contact information, corresponding roughly to the requested stakeholder categories, were shared two days before the mission. Consequently, meetings were confined to stakeholders available on short notice. Additional data requests, arising from the data collection and interview phase were only responded to in October 2018¹⁴. It is understood that the project team has mostly disbanded with remaining team members thinly spread, but these challenges have significantly constrained the evaluation.
46. A draft Theory of Change (TOC) was prepared as part of the initial review process, drawing heavily on the results framework and ProDoc. The draft TOC was included in the inception report and shared with the PMU and key UN Environment team members for consideration. The reconstructed TOC was refined with general interview responses, but also discussed in detail during a selection of interviews. The TOC at Evaluation is included here as

¹⁴ Additional inputs, covering some of the requested information, were received on 2 October 2018 and details of co-finance on 11 October 2018, two months after the targeted completion date of the first draft.

3 III. The Project

3.1 Context

47. East Africa does not have adequate energy supply to serve the demand of the region. The Project Document stated that cities and towns experiences severe power shortages and power rationing as a daily occurrence. World Bank data for 2016 (refer Table 2) confirms that low levels of electrification persists throughout the region. With the exception of Kenya, all partner countries are below the average for Sub-Saharan Africa of 43%¹⁵.

Table 2: Access to electricity¹⁶

Country	Access to electricity, 2011 (% of population)	Access to electricity, 2016 (% of population)
Burundi	5.9%	7.6%
Kenya	29%	56%
Rwanda	10.8%	29.4%
Tanzania	14.2%	32.8%
Uganda	14.6%	26.7%

48. World Bank data for 2014 further suggests that Kenya and Tanzania, the two countries with the highest levels of electrification in EA, are more than 65% underserved compared to SADC and more than 90% underserved compared to Latin America and the Caribbean.

Table 3: Per capita electricity consumption comparison¹⁷

Country	Per capita electricity use, 2014 (kWh/capita/annum)	Kenya expressed as a percentage of other regions	Tanzania expressed as a percentage of other regions
Kenya	167	-	-
Tanzania	99	-	-
SADC (excluding high income)	482	35%	21%
European Union	5,908	3%	2%
Central Europe and the Baltic	4,115	4%	2%
Latin America and Caribbean	2,129	8%	5%

¹⁵ IEA Energy Access Outlook, 2016. <https://africacheck.org/reports/80-africas-population-without-electricity/>

¹⁶ Refer <https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS>, retrieved on 18 August 2018.

¹⁷ Refer <https://data.worldbank.org/indicator/EG.USE.ELEC.KH.PC>, retrieved on 18 August 2018. Data is for 2014, but arguably sufficient for illustrative purposes. There is also some correlation with the World Bank's Regulatory Indicators for Sustainable Energy at <http://rise.esmap.org/scores>, made up of energy access, energy efficiency and renewable energy ("RISE").

Country	Per capita electricity use, 2014 (kWh/capita/annum)	Kenya expressed as a percentage of other regions	Tanzania expressed as a percentage of other regions
Latin America and Caribbean (excluding high income)	1,980	8%	5%

49. The available electricity supply is used predominantly in commercial and residential buildings. The Project Document estimated that up to 56% of the total electricity generated in the East African region is consumed in buildings alone, with buildings using more energy than the transport and industry sectors.
50. Many modern buildings in Eastern Africa are European replicas despite the significant differences in climate. Consequently, buildings tend to be reliant on artificial means for indoor comfort, i.e. cooling, heating and lighting. Design and construction practices using materials produced with intensive inputs of energy, combined with poor understanding of thermal comfort, passive building principles and energy conscious behavior, have led to tremendous energy wastage.
51. Estimates made during design phase, as presented in the Project Document, suggested that 20 - 50% (and more) energy savings were possible in East African buildings through appropriate interventions and improved design.
52. An Organisation for Economic Co-operation and Development (OECD) report¹⁸, published in 2017, emphasized the challenges of population growth, urbanisation, migration and climate change in East Africa, with specific consideration given to Kenya, Tanzania and Uganda. The scale of urbanization in the region is contributing to the growing demand for housing and services such as electricity, water and sewerage. At the time of project design, the region was already facing a severe housing backlog, with the annual demand for new urban units estimated to be in excess of 300,000 in Kenya and Tanzania alone. All stakeholders interviewed, stressed the urgent need for affordable housing, both in terms of cost of construction and cost of living, in the region.
53. Buildings globally represent a large consumer of energy, resulting in significant CO₂ emissions generated from the burning of carbon fuels to supply these energy needs. With a shift to greater energy efficiency in buildings, the associated energy-related Greenhouse Gas (GHG) emissions will be reduced. The benefits of improved efficiency in buildings do, however, not only lie in climate change mitigation. Greater energy efficiency also results in cost savings, alleviates energy capacity constraints, improved

¹⁸ OECD (2017), *Social Protection in East Africa: Harnessing the Future*, OECD Publishing, Paris. Available at: <https://doi.org/10.1787/9789264274228-en>. Accessed: August 2018

economic productivity, and is believed to contribute to job creation and social development.

54. This project represented an opportunity to significantly influence the building portfolio in the region, towards efficient building practices, thereby avoiding the challenges of developed countries needing to do expensive retrofits to existing buildings. Projections showed that 75% of the building stock in East Africa in the year 2050 would have been built after the year 2010. By effectively addressing the prevailing, inefficient building practices, these future developments can be influenced towards being more energy efficient with a low carbon footprint.
55. While the grid emissions factor for East Africa is relatively low at 0.5 t/MWh, fossil fuel generation capacity was growing faster than other supply options and taking a growing share of the energy mix in the region. At the time, given resource availability and costs, fossil fuel options seemed likely to remain the dominant option for new capacity.
56. The explosion of building development combined with a deteriorating grid emissions factor, would contribute significantly to a growth in GHG emissions for the participating countries. Energy efficiency in buildings would therefore contribute directly to a reduction in the anticipated growth in GHG emissions in partner countries.
57. Energy efficiency in buildings would furthermore enable more equitable distribution of the available power, improving access to electricity, improving energy productivity and potentially also defer investments in fossil fuel generation plants.

3.2 Objective and components

58. The primary objective of the project was to mainstream energy efficiency measures into housing policies, building codes, municipal bylaws and building practices in East Africa and to achieve considerable avoidance of energy-related GHG emissions as a result of improved buildings and building practices. Targeted sectors include residential, commercial and public (institutional) buildings. The EEBA project estimated that this project will lead to a GHG emission reduction of more than 7.5 million tons over the period of 20 years.
59. Towards this objective, the project focused on country and regional capacity building through comprehensive technical assistance (TA) across five project components:
 - (i) **Component 1: Energy Efficiency Data and Benchmarks in the Building Sector.** This component aimed to address existing information gaps in terms of consistent, relevant and adequate data on energy consumption and energy efficiency of various types of buildings in the region. The outcomes intended to allow the formulation of benchmarks, as well as identifying EE potential in different types of buildings.

- (ii) **Component 2: Formulation and Adoption of Energy Efficiency Codes in Buildings.** This component is the core of Promoting Energy Efficiency in Buildings (EEB) in East Africa and targeted the revision of the country-specific building codes and municipal by laws to include EEB with reference to the specific climatic zones. Moreover, toolkits and guidelines would be developed for the application of the building code, especially in related municipal by-laws. Civil servants will be capacitated to administer the implementation of the new regulations.
 - (iii) **Component 3: Awareness Raising, Capacity Building in EE, and Best Practices in the Building Sector.** This component rests on three main pillars: 1) Awareness creation with the general public, 2) Technical capacity building for professionals on EEB and 3) East African Energy Efficiency in Buildings Award, as an instrument to create regional recognition for architects, building owners, real estate developers and other actors that have adopted EE and green building criteria in their buildings.
 - (iv) **Component 4: Appropriate Financial Framework for the Promotion of EE Measures in Buildings.** This component focused on EEB finance, incorporating top-level advocacy with the top-managements of commercial banks; training and capacity building on EEB finance; and the introduction of the green mortgage concept in the region. Green/EEB investment portfolios were to be developed together with the banks. This component also intended to establish pilot financial mechanisms in all partner countries.
 - (v) **Component 5: Development and Implementation of Pilot Projects.** This project component intended to provide technical assistance to all ongoing government mass housings projects regarding the incorporation of EEB measures. In partner countries where the EEB code had been approved and adopted, the implementation of the code was to be tested in reality and on scale. Operational models were to be created for mainstreaming. An advisory team would provide technical assistance in EEB with respect to planning, design and construction. Important concepts to be promoted included natural lighting, ventilation and cooling systems; adequate building orientation, the use of sun shading devices; solar water heaters, energy saving lamps, among others. The team was meant to also advise on retrofitting existing buildings. The direct GHG emission reductions of this program would have been achieved here.
60. The original project plan had foreseen the credible knowledge base, benchmarks and savings potential developed under Component 1 to inform the formulation of EE building codes (Component 2). Capacity building under Component 3 was planned as an ongoing activity to create awareness across all sectors and support development, adoption and implementation. Strengthened financial frameworks (Component 4) would provide a 'carrot' to facilitate adoption by the private and public sector. Large scale implementation by the planned Government mass housing developments would serve as demonstration projects for the new codes, familiarizing building contractors and consumers with the benefits of EE building practices. The expectation was for this broad mixture of interventions to establish a comprehensive enabling platform that

would advance EE to become commonly adopted into building practice among the partner countries. Realization of this objective relied heavily on the commitments of partner countries to adapt and adopt EE building codes and to incorporate EE principles and codes into the planned housing developments.

61. Although the potential broader benefit and relevance of the EEBEA outputs beyond the borders of the partner countries were recognized **at design stage**, scaling to this extent was not a focus or target of the EEBEA project. Despite this original context, the project did make an important contribution beyond its boundaries (refer Section 5.1, Strategic Question 3 and Section 5.5.3, paragraph 182 for further discussion).

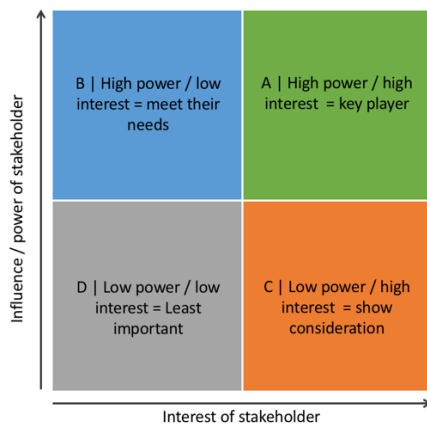
3.3 Stakeholders

62. The EEBEA project targeted a wide range of stakeholders, aiming to establish familiarity with EE building practices among the private and public sectors; encourage adoption within commercial, residential and public buildings; and create demand and interest by policy-makers, policy implementers, homeowners, property developers, building professionals, academia, financing institutions and the media.
63. Extensive stakeholder engagement informed the design of the project, with workshops held in all five partner countries. A comprehensive stakeholder analysis and mapping was prepared at design stage, identifying all key players. Their support and close involvement in the project were effectively secured during design phase, as demonstrated by the stakeholders included in the composition of the Project and National Steering Committees (PSC and NSCs). For each partner country, stakeholders involved in the project included the Ministries of Housing, the Ministries of Energy, the Ministries of Public Works, local or subnational governments, professionals from the construction sector, real estate developers, financial and academic institutions, associations of architects and engineers and the civil society organisations.
64. The project involved the following target groups:
 - i. National governments (including line ministries and governmental departments). This group would be capacitated to play a significant role in the process of amendment, adoption, implementation and enforcement of EEB codes.
 - ii. Local governments and representatives (including administrators, municipal engineers, building inspectors). The project will organise capacity building on EEB requirements amended in the building code and implement technical trainings on how to implement, administer and enforce them.
 - iii. Architects: This group of professionals will be sensitised on EEB requirements and its technical know-how strengthened on how to incorporate them into new buildings including on passive building design.
 - iv. Engineers: The project will provide adequate technical training to engineers, in particular, civil engineers, and build their capacity on EEB code requirements and

how to incorporate them into new and existing buildings for energy savings and conservation purpose.

- v. Property developers and contractors: They will be trained on how to implement properly EEB requirements for new buildings.
- vi. Universities and research centres: They will be associated with the initial data collection on energy consumption trends in buildings and the related benchmark studies together with all subsequent capacity building to train future building sector professionals.
- vii. Financial institutions: They will get access to knowledge on EEB practices, green mortgages examples and guidelines on how to assess the risks and benefits associated to EEB projects. Their participation will be essential in the investment in EEB projects.
- viii. General public (consumer group): These include tenants and users of commercial and public buildings, owners or tenants of high-end residential buildings and beneficiaries of affordable and social housing projects.
- ix. Media: Media houses will be involved in project’s communication outreach campaigns.

65. Following the interviews conducted during the evaluation, stakeholders were mapped on a Johari window (Figure 1) in terms of their interest and influence or power in relation to the project objectives.



Initial / generic analysis

A. High power / high interest

- National governments (including line ministries and governmental departments).

Post evaluation consultation

A. High power / high interest

- Rwandan Government (national and majority of local governments)

Initial / generic analysis	Post evaluation consultation
	<ul style="list-style-type: none"> Ugandan, Kenyan and Tanzanian Governments are placed borderline between A and B Exceptional local governments in Uganda and Kenya Exceptional universities and the Kenyan and Rwandan Green Building organisations (strong influencers) International corporates with sustainability targets or commitments
<p>B. High power / low interest (requiring lobbying to gain interest)</p> <ul style="list-style-type: none"> Financial institutions Local governments and representatives (including administrators, municipal engineers, building inspectors) Universities and research centres Property developers and contractors Architects & Engineers Media 	<p>B. High power / low interest (requiring lobbying to gain interest)</p> <ul style="list-style-type: none"> National Government of Burundi, very low immediate interest Majority of local governments and representatives (including administrators, municipal engineers, building inspectors) Universities and research centres (increased awareness with some demonstrating increased interest) Property developers and contractors Architects & Engineers Media
<p>C. Low power / high interest</p> <ul style="list-style-type: none"> None 	<p>C. Low power / high interest</p> <ul style="list-style-type: none"> None
<p>D. Low power / low interest</p> <ul style="list-style-type: none"> General public 	<p>D. Low power / low interest</p> <ul style="list-style-type: none"> General public (this remains the case in the current climate where housing remains out of reach for the majority of the general public)

Figure 1: Stakeholder map

66. With the release of its Green Growth and Climate Resilience National Strategy for Climate Change and Low Carbon Development in October 2011, the Rwandan Government chartered a clear commitment to Green Growth as key to its economic transformation. Green growth has been at the essence of the country's long-term direction and short-term priorities, with EEB a fundamental component of this transition. As such, the Rwandan government shifted strongly towards a high influence, high interest stakeholder who benefitted greatly from the EEBA.
67. The Rwandan and Kenyan Green Building organisations have also been key change agents, with high interest and significant influence on developers in the commercial sector. They are in turn finding strong allies among global corporates with strong sustainability commitments.
68. Among local Governments, Kasese in Uganda has taken the lead with their commitment for their area to become 100% Renewable, strongly incorporating green building and energy efficiency practices in their globally acclaimed initiative. The Efficient Building Accelerator (EBA) have also assisted a few East African cities, particularly Nairobi, to shift from a position of low to high interest in EEB and therefore

much closer collaboration with the EEBEA project and its partners – notably the Kenya Green Building Society (KGBS).

69. General consensus among interviewees suggested that awareness creation, stakeholder engagement and capacity building efforts would have to be continued to sustain and grow the established levels of interest.
70. Brief consideration was given in the project document to gender and social issues in the assessment of country policies and the contribution of the EEB. Women were identified as important beneficiaries of more equitable energy availability, but expected benefits were incidental rather than targeted. No evidence was found to indicate that the initial stakeholder analysis focused on gender equality issues or representation during the stakeholder participation. Project design was not required, at the time, to include a gender specific focus. No evidence was found of deliberate interventions to support or include women or other marginalised groups during implementation. Stakeholder feedback (multiple responses) during interviews did suggest that the project created a safe space for women within which to participate and that attendance and active participation by women in discussions were high compared to similar industry events. Photos of events, such as the Green Building Summit in 2017, seemed to similarly confirm good representation (~30%) by women attendees.



Figure 2: Africa Green Building Summit Participants (March 2017)

3.4 Project implementation structures and partners

71. The EEBA project was implemented by UN Environment’s Climate Mitigation Unit, Energy & Climate Branch (i.e. the Implementing Agency). The UN-Habitat Urban Energy Unit served as the Executing Partner. It is the main partner of the UN Environment, directly responsible for managing the project in close collaboration with partner Governments of Kenya, Uganda, Tanzania, Rwanda and Burundi.
72. UN-Habitat established a permanent Project Management Unit (PMU) for executing project activities, monitoring project progress, managing project staff and funds. The PMU consisted of a small team, headed by a Project Manager supported by a Project Technical Advisor (part time) and an Administrative Assistant. UN Environment and UN-Habitat supervised the PMU.
73. The project had designed a comprehensive project structure with representation from the relevant partners countries and stakeholders to steer implementation at regional, national and technical levels (refer Figure 3). A Project Steering Committee (PSC) was established with representation from the East African Community, Representatives from National Governments and East African Association of Architects. National Steering Committees (NSCs) were also established in each of the partner countries, thereby creating a comprehensive governance, steering and consulting structure. Consultants and technical experts contracted to the project served as the Energy Efficiency Advisory Team under the supervision of the PMU.

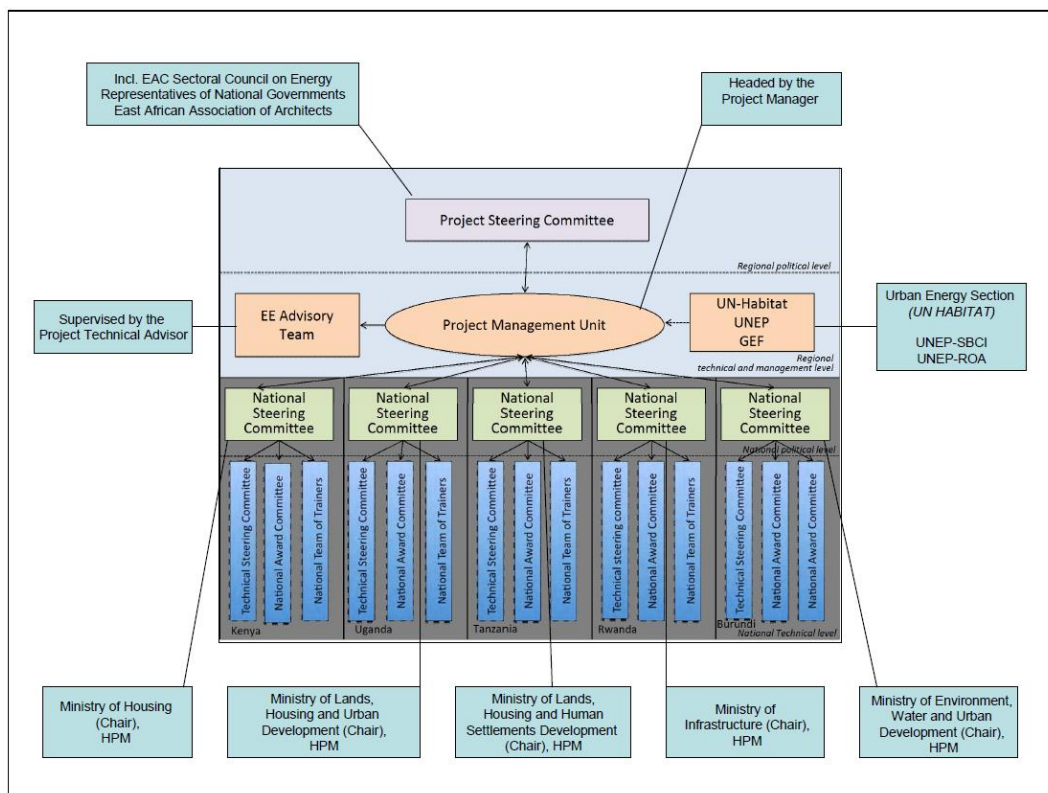


Figure 3: Planned executing arrangements¹⁹

74. Project execution relied on the PMU, a small, core team located in Nairobi, that would be supported at a national level by the resident Habitat Program Managers (HPMs)²⁰ for coordination, technical assistance and reporting on the activities of the project. Country focal points within the respective governments, represented the national country counterparts.
75. The original design had anticipated “strong ownership from the side of the partner countries”, reinforced by the country commitment letters detailing in-kind contributions including staff time and costs. Accordingly, there appear to have been considerable reliance on partner government staff participation to lead national implementation and contribute meaningfully to steering the project towards the collectively agreed outcome. This did not materialize as anticipated.
76. As mitigation, following lessons learnt during the first year, Project Officer (PO) roles were created in 2013 and UN Volunteers recruited to support project coordination in Kenya, Tanzania and Uganda. On the recommendation of the Mid-Term Review, the recruitment of project officers for Rwanda and Burundi were also prioritized. This solution showed agility and offered a cost-effective solution, but also had challenges. Interviews highlighted the following:
 77. PO positions were not well-resourced, offering limited infrastructure (office space, internet access, ICT connectivity, etc.) and limited remuneration. Consequently, project officers were typically junior and/or not suitably qualified to engage on technical issues with professional or government stakeholders.
 78. As inexperienced staff members, project officers required significant support from the PMU. Because the project had extended periods without a PM, this support was not consistently available. With the lack of resources and support, POs easily became despondent or left.
 79. The arrangement was more successful where the country governments agreed to support the project officer role with infrastructure, facilities or top-up remuneration and/or where the PO was allowed to perform the function on a part- or shared-time basis.
 80. At the time of the MTR, the Steering Committee had met only once. A second regional Steering Committee Meeting was held 17 April 2015²¹ No evidence could be found that the steering committee met again for the remaining duration of the project. Similarly, the MTR found that, with the exception of Uganda, the NSCs for each country met only

¹⁹ As sourced from the Project Document, where SBCI refers to Sustainable Building and Climate Initiative and ROA refers to Regional Office for Africa

²⁰ UN-Habitat country staff based at the UNDP national office

²¹ An invitation and progress presentation prepared for the meeting were shared. An attendance register and minutes of the meeting was not made available.

once. Again, no further evidence of meetings was available. The MTR highlighted this as an oversight failure. In principle, steering committees are important structures to provide support, guidance and strategic oversight of progress. With appropriate representation, the steering committee can also facilitate access to key stakeholders and assists with integration of the project into broader national structures.

81. Steering committees are conceptually sound, but require resources that are often not possible with the cap on project management allocation on the project. Additional costs are associated with travel and subsistence for attendance of regional steering committee meetings, for which no budget existed. Similar constraints were faced at a National level, although to a lesser extent. In addition to covering travel expenses, three interviews noted that steering committee members were demanding sitting fees for the time spent attending meetings.

3.5 Changes in design during implementation

82. The project scope and results were not formally revised during implementation. An amendment of the project document, dated 10 June 2013, recorded a re-phasing of the project budget and added budget lines to allow for, among others, the addition of project officers in partner countries (refer to discussion in preceding section). Thereafter the project was granted four no-cost extensions over its lifetime, moving the completion date from June 2015 to end September 2018²². These revisions and extensions were recorded as follows:

Table 4: No Cost extensions²³

Date of revisions	Scope of revision
10 June 2013	(i) Re-phasing of the project budget to reflect the unspent balance from 2011 and 2012 (ii) Additional budget lines to reflect specialists and the addition of UN Volunteers as project officers in Uganda, Tanzania and Kenya.
12 November 2015	(i) The second revision on record shows a no-cost extension with the completion date revised to December 2016. It furthermore amends the starting date to August 2011 and reflects December 2015 ²⁴ as the “initial” completion date. (ii) Re-phasing of the project budget to reflect the unspent balance from 2013 and 2014, with new commitments in 2015 and 2016.
22 February 2017 (request dated 14 October 2016)	The third project revision recorded a no-cost extension with the revised completion date December 2017. It also reflects the amended commitments to the end of 2017.

²² Date reflected in the TOR for the TE: September 31, 2018 (stet). The date is unconfirmed as the final revision document was not provided.

²³ Refer <https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS>, retrieved on 18 August 2018.

²⁴ A six-month extension from the initial June 2015 completion date shown in legal instruments.

83. **Documentation for the fourth revision was not provided.** A fourth revision was confirmed during interviews and the revised completion date shown on the Terminal Evaluation Terms of Reference.
84. Project extensions are ascribed to a number of factors. Revision documentation makes specific reference to the lengthy delays recruiting a project manager at the start of the project. This was aggravated by challenges to retain project managers on the project. Between 2011 and 2016, three different project managers were employed. Between each replacement, the project experienced delays without a dedicated project manager. From the start of 2017, the technical advisor / expert has provided an acting project manager service to the project for the remainder of the project duration.
85. Although the formal scope of the project did not change, it was noted that adjustments were made to activities and budget lines to accommodate changing circumstances, unexpected delays, challenges and opportunities. These did not materially change the expected deliverables or project budget, and rather reflected agility and adaptive management by the project team.

3.6 Project Financing

86. The total budget for the EEBEA project was USD 15,336,288. Of this total, the GEF contributed USD 2,853,000 and in-kind contributions committed by the respective project partners totaled USD 12,483,288. The budget had been allocated towards each of the project components as shown in the breakdown in Table 5. Expenditure against project components was not tracked. The FMO confirmed that this was not a requirement for the project.

Table 5: Budgeted cost per component²⁵

Project Component	Planned (USD million)	
	GEF Financing	Project Co-financing
1. Energy Efficiency Data and Benchmarks in the Building Sector	0.300	0.600
2. Formulation and Adoption of Energy Efficiency Codes in Buildings	0.780	1.200
3. Awareness Raising, Capacity Building in EE, and Best Practices in the Building Sector	0.653	1.400
4. Appropriate Financial Framework for the Promotion of EE Measures in Buildings	0.200	1.800
5. Development and Implementation of Pilot Projects	0.635	6.983
Project Management Costs (PMC)	0.285	0.500
Total planned	2.853	12.483

²⁵ Source: Project Document

87. Co-financing was secured from partner governments, the UN-Habitat as Executing Partner and the UN Environment Regional Office for Africa. A breakdown of committed co-financing per source is presented in Table 6.

Table 6: Project finance contribution committed per partner²⁶

Contributors	Amount (USD)	Percentage contribution
GEF Allocation	2,853,000	19%
Co-financing (in-kind)		
Burundi	1,250,000	8%
Kenya	5,063,288	33%
Tanzania	2,050,000	13%
Uganda	2,220,000	14%
Rwanda	1,300,000	8%
UN-Habitat	400,000	3%
UN Environment ROA	200,000	1%
Sub total	12,483,288	
Total	15,336,288	100

88. The most recent available co-finance report as at the end of 2017 showed that USD 32,922,626 had been realized. Planned and realized contributions from the respective sources are provided in Table 7.

Table 7: Actual co-financing reported²⁷

Co-financing (Type / Source)	UN Environment own Financing (USD 1,000)		Government (USD 1,000)		Other* (USD 1,000)		Total (USD 1,000)		Total Disbursed (USD 1,000)
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
Grants	-	-	-	-	2,853	2,305	2,853	2,305	2,305
Loans	-	-	-	-	-	-	-	-	-
Credits	-	-	-	-	-	-	-	-	-
Equity investments	-	-	-	-	-	-	-	-	-
In-kind support	200	287	11,883	31,570	400	1,067	12,483	32,922	32,922
Other (*)	-	-	-	-	-	-	-	-	-
Totals	400	287	11,883	-	200	-	15,336	-	35,227

²⁶ Source: Project Document

²⁷ Source: Co-finance report, December 2017. Note that reported co-finance could only be partially verified (refer Annex III).

* This refers to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

4 IV. Theory of Change at Evaluation

89. A Theory of Change (TOC) was not defined for the EEBEA project at design stage. A reconstructed Theory of Change was drafted at the start of the evaluation, drawing on the following components from the Project Document:
- Intervention logic and key assumptions
 - Results framework
 - Extensive background information and motivation for project development (including reference to improved “thermal comfort”, “extension of the power grid to more consumers” and “more individual household connections” (Paragraph 42 of the Project Document, page 15).
 - The detailed mid-term and detailed end-of-project targets of the EEBEA project.
90. The draft reconstructed TOC was tested and reviewed with stakeholders (directly and indirectly) during the field mission to produce the TOC at Evaluation²⁸ (refer Figure 4). It is noted that the Task Manager did not support reference to SDG 7 and the suggested pathway that would see the outcomes of this project contribute towards “access to affordable, reliable, sustainable and modern energy is ensured for all”. It is acknowledged that the project contributes in some way to several SDGs, the link to SDG 7 is however considered the strongest and therefore retained.
91. The logic and causal pathways of the original results framework were sound, and no significant changes were made to recreate a TOC. The TOC at Evaluation incorporates a few amendments to wording and timing, as follows:

Table 8: Summary of amendments to derive the TOC at evaluation

Component	Original wording	Revision	Rationale for the revision
Outcome 2	Strengthened capacities in developing Energy Efficient building regulations and standards (Building Codes and Municipal Bylaws)	Rephrased as: Partner countries have initiated a review process and progressed towards adopting new building codes with EEB	The original outcome statement does not reflect the critical outcome of amended building codes, regulations and standards. As this is the cornerstone of the project and its sustainability, and likely to be

²⁸ During the Inception Phase of the evaluation process a TOC at Design is created based on the information contained in the approved project documents (these may include either logical framework or a TOC or narrative descriptions). During the evaluation process this TOC is revised based on changes made during project intervention and becomes the TOC at Evaluation.

Component	Original wording	Revision	Rationale for the revision
		regulations and standards	delivered, it should be reflected as such. The amended statement is taken from the indicators and detail end-of-project targets.
Outcome 4	Strengthened Financial Framework in each partner country for the implementation of EEB measures.	Moved from a short term to intermediary state. Outcome 4 restated as: All partner countries initiated the introduction of financial instruments to promote EEB and finance institutions have introduced dedicated lines of credit for green buildings.	The targets stated for this component seem ambitious given the outputs and what is within the control of the project team. The rephrased target is informed by the targets and outputs stated in the results framework.
Drivers (between short and intermediary outcomes)	“Technical Assistance with respect to the five components (below), will remove the barriers to Energy Efficient Buildings...”	Technical Assistance with respect to the five components (below), will lower the barriers to Energy Efficient Buildings...”	The use of the word remove in the ProDoc seems an overstatement. It is suggested to amend to “lower”
Assumptions	Key assumptions as listed in the Prodoc: Strong governmental commitment for a real partnership with the aim to jointly achieve the project objectives. Political stability in the region is a plausible assumption following the developments in the EAC throughout the past decade that led to increasing integration, cooperation and peace. Ethnic conflicts play a major role as a destabilizing factor; however, they are not seen to have a major impact on the project implementation in terms of political commitment. A strong and functional national steering committee must be strong enough to translate into a real and competent partnership, to overcome existing political barriers and to effectively facilitate what is necessary in terms of achieving the	Proposed revision: 1. An opportunity exists to significantly influence energy efficiency in the built environment in the region by introducing EE into building codes and standards. 2. This can be achieved by measures supporting the implementation of the building code, i.e. data collection, awareness creation, capacity building, technical assistance, demonstration projects with a real lighthouse function, and by creation of the first East African EE Building Award. 3. Adequate country / policy-maker commitment exists to drive EE in Buildings provided the necessary tools, information and	Rather than a revision, the proposed summary is intended as a condensed version. The results framework captures very detailed assumptions per outcome and output. The key assumptions listed in the ProDoc captured a summarized version of assumptions. A further summary is proposed, using the ProDoc, to capture the implicit and explicit assumptions that informed the implementation of the project.

Component	Original wording	Revision	Rationale for the revision
	<p>objectives of this joint intervention.</p> <p>The financial sector must have an interest to become active in financing EE, EEB and green building projects. The financial sector is an important multiplier through influencing its customers, through developing tailor-made financial solutions for green projects and through the development of an investment portfolio, etc.</p> <p>The commitment from governments to finance the measures after the project ends. Governmental commitment will optimally translate into the willingness to finance sound measures put in place through this project, especially after this project ends. This is relevant especially for achieving the long-term (indirect) GHG emission reduction targets with this project.</p> <p>Real collaboration with national institutions to collect data. Data are often sensitive. Data collection has a political dimension. In order to achieve a real improvement it is vital that data and information gathering can take place without interference. Only what is properly measured can be sustainably managed. In that sense a real collaboration with national institutions to collect data will be necessary.</p> <p>A sufficient number of experts on a national and regional level is willing to participate, such as to allow the mid and long-term implementation of EEB. A critical mass of such experts will be met in the region, when completing the project and as a result of it.</p>	<p>support can be made available to them.</p> <p>4. Partner governments would assign resources and staff to the initiative (as committed).</p> <p>5. Partner governments will be implementing mass housing projects that will provide a vehicle to progress all components but most specifically be the carrier for pilot and demonstration projects (as committed).</p>	

Global Impact	Contribute to global climate mitigation objectives and SDG 7 i.e.: access to affordable, reliable, sustainable and modern energy is ensured for all				
Assumptions	EA Governments are committed to prioritize and fund EE as part of housing development, universal access (SDG 7) and sustainable development initiatives in the region - building on the platform established by the EEBEA project. It is assumed that EEB can be adequately influenced at national level. EACREEE recently (2016) established with the intent to drive and foster the adoption of EE and RE in East Africa Region, reinforcing this assumed commitment for the region.				
Project Impact	Mainstream energy efficiency measures into housing policies, building codes, and building practices in East Africa and to achieve considerable avoidance of GHG emissions as a result of improved buildings and building practices. • (20% reduction in total energy consumption and GHG emissions in the building sectors in the partner countries by 2035 compared to 2010)				
Assumptions	Continued commitment from key stakeholders (policy-makers, decision-makers, enforcers, administrators, developers, building professionals, etc.) to pursue, enforce and promote EEB. For Governments at national to local level i.e. full adoption, implementation, and enforcement of appropriate legal and regulatory frameworks. Rapid technology advancements and downwards price trends for clean technology (EE, cogeneration, efficient (LED) lighting, etc.) will further contribute and accelerate the shift that has been initiated by the EEBEA project. Rwanda's example and engagement with the region will inspire cross-fertilization. Proactive local governments will contribute a ground swell / bottom up move towards efficient buildings and sustainable cities.				
Project Intermediate state	Reliable Energy Benchmarks and Climatic Data adopted in East Africa to inform policy decisions and building designs	EEB standards made compulsory for residential buildings (mass housing, middle and high-income class etc.), commercial buildings (Hotels, shops, schools), public buildings (Hospitals, offices, schools etc.) and fully enforced.	Accelerated adoption of EEB practices ascribed to capacity building, training and awareness	Strengthened Financial Framework in each partner country for the implementation of EEB measures.	Direct GHG emission reductions • CO ₂ emissions reduced by 7.5 million tonnes from direct and indirect impacts.
Assumptions and Drivers	<p><u>Drivers.</u> Technical Assistance with respect the five components (below), will lower the barriers to EEB by: (i) establishing the necessary legal, institutional and regulatory frameworks to attract buy-in for and financial investment in EEB, (ii) creating awareness and (iii) establishing implementation capacity - both in terms of skills and a sound knowledge base.</p> <p>An adequate and adequately compelling knowledge base was established (component 1) for passive design principles with limited upfront cost impacts to be adopted readily and widely. Adequate capacity and skills have been established (component 3) to enforce and implement EEB. Adequate interest has been created among local governments to actively engage with initiatives and resources available under tools such as the Covenant of Mayors for Sub-Saharan Africa and the Building Efficiency Accelerator.</p> <p><u>Assumptions.</u> Bilateral donors and SDG & SE4ALL initiatives will feed off the EEBEA established frameworks and capacity to leverage additional efficiency improvements in the building sector and the broader EA region (i.e. further than the project boundaries). Established capacity and resources will empower regional governments and country initiatives to pursue EEB.</p>				
Project outcomes (short term)	Outcome 1. Reliable Energy Consumption Benchmarks in the Building sector available for East Africa	Outcome 2. Partner countries have initiated a review process and progressed towards adopting new building codes with EEB regulations and standards ²⁹ .	Outcome 3. Increased awareness of energy efficiency best practices in buildings and capacities built among professionals and line ministries staff	Outcome 4. All partner countries initiated the introduction of financial instruments to promote EEB and finance institutions have introduced dedicated lines of credit for green buildings.	Outcome 5. Implementation of pilot projects for EE demonstration purposes
Drivers* & assumptions	<p><u>Drivers.</u> A sound knowledge base will create the basis for better design and policy decisions</p> <p>Measured data will inform and support the building code development process</p> <p><u>Assumptions.</u> Better information will result in the adoption of more EE design, planning and decision-making by public and private sector</p>	<p><u>Drivers.</u> EEB policy support, guidelines, capacity to implement & enforce + lobbying will create impetus for EEB policy revisions</p> <p><u>Assumptions.</u> Stated commitment of partner countries and stated interest by region will lead to active participation in development, adoption and enforcement of amended building codes</p> <p>Internal institutions (e.g. building code committees) and intergovernmental/multi stakeholder structures existed or would be created by Government partners to lead this process</p>	<p><u>Drivers.</u> Awareness, improved skills and recognition of excellence among building professionals will shift EE design practices.</p> <p>Training interventions and material will translate into adoption / integration of EEB into the existing scope of work of individuals / entities.</p> <p><u>Assumptions:</u> Greater awareness and recognition (award) will drive the demand for EE from the public, interest in EE building in the sector and commitment and implementation by the various spheres of government(s)</p> <p>A top down approach, focusing training on professionals and public sector, is adequate to influence building practices. Technical and "intangible", long-term benefits will create a demand for EEB</p>	<p><u>Drivers.</u> Appropriate funding & financing instruments will overcome the upfront capital investment barrier</p> <p><u>Assumptions:</u> Banks have an interest to offer green loans or credit lines and will introduce it if they understand how and/or can be linked to low cost green funding</p> <p>Banks have, or would create, the finance capacity to offer long term loans, without or with limited seed funding</p>	<p><u>Drivers.</u> Evidence of the benefits possible from EEB will prompt policy adoption and buy-in across all sectors</p> <p><u>Assumptions:</u> Pilot projects will demonstrate benefits that will lead to large scale adoption and uptake</p> <p>Governments will actively participate in or have powerful influence on mass housing projects (as committed at inception)</p> <p>Later assumption: Technical assistance and design revisions will result in construction of EE projects</p>
Project outputs by component (ProDoc)	<p>Output 1.1. Energy Consumption trends in the building sector in EA established</p> <p>Output 1.2 Performance based energy consumption benchmarks for buildings established</p> <p>Output 1.3 EE potential in the building sector in EA estimated</p> <p>Output 1.4 Methodology and process for collection of climatic data in each participating country regarding specific requirements for EEB, RET</p>	<p>Output 2.1 Principles of EEB integrated in country specific building codes</p> <p>Output 2.2 Toolkits and guidelines developed for the application of EEB</p> <p>Output 2.3 Capacities of building code administration staff strengthened</p>	<p>Output 3.1 Awareness raising campaign conducted</p> <p>Output 3.2 Technical training and capacity built for practitioners in EEB</p> <p>Output 3.3 East African Green Buildings Award established</p>	<p>Output 4.1 Awareness of opportunities and benefits of EE finance in buildings, by the top-level management in the finance community in EA, created</p> <p>Output 4.2 Capacity of the local finance community in each participating country reinforced</p> <p>Output 4.3 Capacity of the private sector at national level regarding estimating investment requirements and risks of EEB finance reinforced</p> <p>Output 4.4 Pilot financial mechanisms in the main</p>	<p>Output 5.1 Demonstration projects designed</p> <p>Output 5.2 Demonstration projects implemented</p>

²⁹ The reviewed building code includes: regulations on environmentally friendly building designs; regulations on appropriate building materials; regulations on the use of energy saving appliances such as SWH, energy saving lamps.

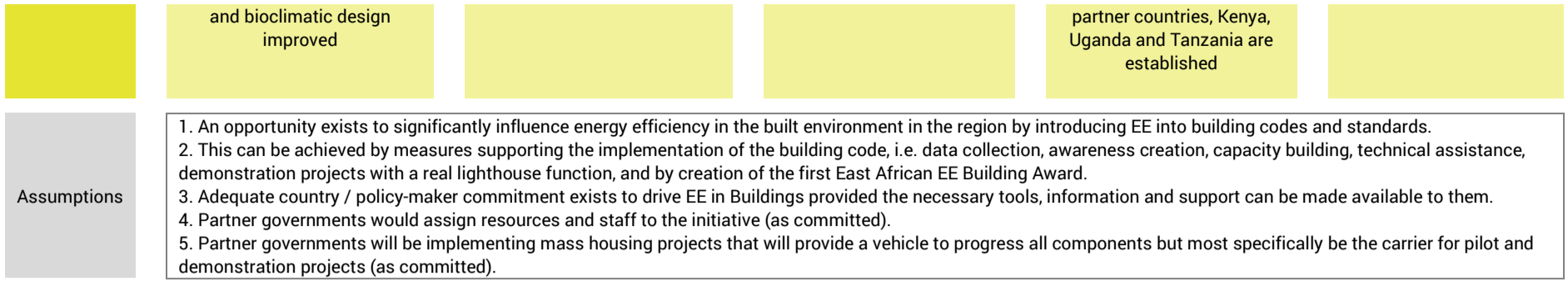


Figure 4: Theory of Change at Evaluation

5 V. Evaluation Findings

5.1 Strategic Questions

92. Five strategic questions were identified in the Terms of Reference and tested during the evaluation. Findings for each are presented below:

Table 9: Strategic Questions

Strategic Question	Evaluation findings and evidence		
To what extent and how did the findings of the Mid Term Review (MTR) inform project implementation?	The MTR made 8 recommendations. The implementation status of each recommendation is shown below:		
	Recommendation	Status	Comment
	1. Adjusting project targets with regards to pilot projects	Not addressed	Project targets were not amended.
	2. Follow-up preparation of database and benchmarking activities	Partially addressed	Audits were prioritized and completed. An online database and web-based platform is not available.
	3. Finalising EE Regulations and municipal bylaws ³⁰	Partially addressed	Reviews of individual country codes were done for partner countries. With respect a support team set up at national level, no evidence of support teams was found, but it was found that some support was provided at national level to assist administrative bodies in charge of building code development e.g. Uganda Martyrs University representative on Ugandan Building Code working group.
4. Outsourcing capacity building activities ³¹	Partially addressed	Partnerships were leveraged for capacity building e.g. KGBS masterclasses. The project also engaged with universities in the five partner countries aiming to integrate green building principles into the curricula of architecture schools in the region. Outsourcing of capacity building to professional associations and technical centres (including engineers and bankers) were not done to the extent	

³⁰ The recommendation stated as: "This activity is the core of the project; therefore it is recommended to assess the actual level of achievement by each country, **and** to set-up a support-team at national level to assist all the administrative bodies in charge of building code development to finalise this important task.

³¹ The recommendation stated as: "There is a huge demand in terms of capacity building for both government staff and professionals (engineers, architects and bankers). The Project Management Unit shall develop a sound partnership with relevant professional associations and technical centres to outsource some capacity building activities."

Strategic Question	Evaluation findings and evidence		
			foreseen by the MTR (refer recommendation).
	5. Implement EEBEA project communication plan ³²	Not addressed	No communication plan was available for review, the website was outdated (2014) and then off-line, all relevant documentation was not made available online for free access and active sharing of project information and knowledge to county teams was not implemented (note cross-fertilization point below).
	6. Assistance to set up supporting regulations on tax exemptions ³³	Partially addressed	UN Habitat hosted a regional workshop in collaboration with the KGBS during the “Africa Green Building Summit 2017” with two training events. A sustainable Finance Model was developed for use during the workshop. The recommendation, as it relates to regulations for tax exemptions, was not addressed.
	7. Assistance to Governments on mass housing programs	Partially addressed	The first part of the recommendation to reinforce project technical assistance to national housing corporations or mass housing companies in order to substantially increase the number of pilot projects was addressed. The second part of the recommendation to develop a proper monitoring tool for measurement of energy savings was not addressed. This was critical to quantify GHG emission reductions from the project.
	8. Specific assistance to Rwanda and Burundi (Management)	Addressed	
Under ‘Country Ownership and Driven-ness’, to what extent are Senior officers in	The MTR recommendations did provide good guidance to the project, but a number of key recommendations were not implemented. All senior officials interviewed and those presenting at the regional conference were well informed regarding the project and the importance of		

³²The recommendation stated as: “It is recommended that UN-Habitat finalise the validation of communication plan including awareness material developed by the project team, as soon as possible and in any case, no later than the beginning of the last quarter of the year. This shall be combined with the launching of the project website and the uploading of all relevant documentation for free access. The PMU should organise adequately, online discussions forums with the support of the communication expert to outreach project information and knowledge to county teams.”

³³ The recommendation is stated as: “It is therefore recommended to reinforce the technical assistance to countries by setting-up the appropriate regulations and design the relevant mechanisms based on the finding of the desk work on financing green buildings in Africa and the baseline survey on housing financial systems and instruments in East Africa.”

Strategic Question	Evaluation findings and evidence
<p>the Line Ministries in Kenya, Tanzania, Uganda, Rwanda and Burundi aware of the project and what key innovations do they associate with the intervention?</p>	<p>EEB. This includes a significant cross section of representatives from countries and government departments and agencies.</p> <ul style="list-style-type: none"> - All government officials were aware of the work towards developing and influencing building codes and training and workshops - Very few were aware of work around the green finance although all agreed that it was an essential component. <p>It is noted that conference attendees and interviewees were part of the project in some way or had a direct interest and therefore would be expected to have awareness. Only one person interviewed volunteered a guess regarding the level of awareness among other senior officials and colleagues who were not directly associated with the project and estimated it at only 15%. While nobody else was prepared to venture a percentage claim, all respondents agreed that awareness creation requires sustained effort.</p> <p>Interviewees repeatedly raised a lack of adequate, high level government sponsorship as a hurdle for the project. The challenge was reportedly aggravated by the many ministries and departments involved in sustainability, environment, energy and housing, without a clear lead authority.</p> <p>The Kigali Declaration on Mainstreaming Energy Efficiency in Building Codes; Building Policies and Building Regulation in East African Countries, 26 April 2014, captures commitments by representatives from government institutes.</p> <p>Similarly, the declaration that concluded the Regional Conference in Arusha, August 2018 (draft declaration included as Annex IX), captured high level intent and interest in realizing EEB in East Africa. Although these symbolic declarations, in principle show support, they do not translate into a binding commitment.</p> <p>It is noted that the Rwandan Government has been the exception, demonstrating strong country ownership (refer Section 3.3, paragraph 66, and Section 5.2) resulting in good progress towards mainstreaming of EEB.</p>
<p>To what extent and how did the project promote learning and cross fertilization among project countries and what actions were anticipated for scaling up project results into other Eastern African countries?</p>	<p>As discussed under quality of project design (Section 6.3), the project structures intended for cross-fertilization were not functional. Several respondents commented on the excellent progress made in Rwanda and that it served as an example and aspiration for the other countries. In the absence of appropriate and functional project structures, this progress was not adequately leveraged.</p> <p>Among the project officers there appear to have been an informal information sharing platform with no formal forum or regular calls or meetings to facilitate sharing of knowledge, experience and learnings. Such a platform was recommended by the MTR.</p> <p>Project officers also voiced frustrations with the availability of support and communication from the project head office.</p> <p>Although scaling up beyond the partner countries was not a focus of the project, some level of scaling up has already been achieved. The EEBEA team has engaged with consultants preparing building codes for Nigeria, Senegal and Cameroon and consequently also the building code committees in East Africa. Resources and 'how to' guides were shared with regards implementing energy efficiency in building codes in their respective countries.</p> <p>The World Green Building Council set up the Africa Regional Network that has facilitated engagement, escalation and sharing with, among others, the DRC, Ethiopia and Nigeria.</p>

Strategic Question	Evaluation findings and evidence
	<p>The UN Environment Task Manager noted that material from this project has also served to inform a similar UN Environment initiative in the Caribbean.</p> <p>Attendees of the regional conference in Arusha (1 – 3 August 2018) concurred that the project efforts should be extended to and/or the material and resources made available to South Sudan and Ethiopia.</p>
<p>To what extent were the mix of knowledge and expertise made available by the project appropriate to steer the intervention in Kenya, Tanzania, Uganda, Rwanda and Burundi?</p>	<p>With one exception, every person interviewed felt that the mixture of knowledge and expertise made available by the project was appropriate to steer the interventions in the respective countries.</p> <p>Although delivery was slow in some instances, outputs and activities generally made meaningful contributions.</p> <p>From progress reports, interview responses and the limited impact made with green finance, funding and incentives (Component 4) it is deduced that the project did not have access to the appropriate skills and expertise to (i) understand the sector and (ii) support the development of appropriate instruments.</p> <p>The examples of successful interventions in this area were achieved by other initiatives. It also appears that there was limited collaboration and leverage with these parallel activities.</p>

5.2 Strategic Relevance

5.2.1 Relevance to GEF and UN Environment

93. The extended project duration meant that the EEBEA spanned more than one planning and operational windows of both the GEF and the UN Environment. At inception, the project aligned with the GEF Operational Program 5: Removal of Barriers to Energy Efficiency and Energy Conservation³⁴ and GEF-5 Climate Change Focal Area, Objective 2: *“Promote market transformation for energy efficiency in industry and the building sector³⁵”*. It remained relevant under the GEF-6 Programming that covered the period from July 2014 to June 2018, under the Climate Change Mitigation Focal Area Objective 1: *“Promote innovation, technology transfer, and supportive policies and strategies”*.
94. At the time of adoption, the project aligned with the UN Environment Medium-Term Strategy (MTS) 2010 – 2013. It also corresponds with the UN Environment MTS of 2014 - 2017³⁶ as described under the Climate Change Strategic Focus. It specifically aligned with the second Expected Accomplishment: *“Low emission growth, Energy efficiency is improved and the use of renewable energy is increased in partner countries to help reduce greenhouse gas emissions and other pollutants as part of their low emission development pathways.”* It continues to be relevant in terms of the UN Environment MTS for the period 2018 – 2021, aligning with the Climate Change priority area defined as *“Transitioning to low-emission economic development, enhancing adaptation and building resilience to climate change”*. This priority area in turn maps to, among others,

³⁴ https://www.thegef.org/sites/default/files/documents/OP_5_English.pdf;

³⁵ https://www.thegef.org/sites/default/files/documents/GEF-5_FOCAL_AREA_STRATEGIES.pdf

³⁶ https://wedocs.unep.org/bitstream/handle/20.500.11822/7670/-UNEP_Medium_Term_Strategy_2014-2017-2015MTS_2014-2017.pdf;

Sustainable Development Goals 1 and 7 i.e. “No Poverty” and “Affordable and Clean Energy”.

95. The project’s outputs also align with UN Environment’s Programme Framework, Subprogramme 1 - Climate Change for 2014-2017, Output 3, “*Tools and approaches designed and piloted in countries to develop mitigation plans, policies, measures and low emission development strategies and spur sector investment and innovation within and across selected sectors.*”
96. Subsequent initiatives such as the Energy for Sustainable Development in Caribbean Buildings project (initiated in 2013) and the Building Efficiency Accelerator (initiated in 2016), reinforces the continued relevance of greater efficiency in buildings.
97. The project scope and aspirations remain consistent with the strategic priorities of both GEF, as donor, and the UN Environment as implementing agency.

5.2.2 Relevance to regional and national priorities

98. Energy supply constraints, increasing access to modern energy services and energizing development remain immediate priorities for East Africa (refer Table 2 and Table 3). Forecasts presented by UN Habitat predicts that 75% of the building stock in East Africa by 2050 would be developed post 2010. Growing urban populations is also increasing demand for affordable housing alongside the growing demand for commercial buildings. Clean and affordable energy is critically needed to support these developments in the region.
99. As recognized in the Sustainable Energy for All (SE4ALL) objectives, energy efficiency is a core element of ending energy poverty and securing access to affordable, reliable, sustainable, and modern energy. Implementing energy efficiency in parallel with expanding both the electricity grid and new clean energy generation reduces electricity demand and helps optimize the power supply so that it can serve more customers reliably at minimum cost. Incorporating cost-effective energy efficiency measures in the planned developments for the region will unlock broader economic and socio-economic benefits associated with improved quality of living, lower cost of living, higher energy productivity and resource efficiency.
100. Electricity prices in East Africa are comparable to tariffs in OECD countries and generally higher than those in the United States³⁷. High electricity prices throughout the region (Figure 5 shows 2016 electricity pricing for Kenya, Rwanda, Tanzania and Uganda relative to African peers), improves the business case for, and relevance of, investments in efficiency improvements in buildings.

³⁷ 2016 Average household tariff in the EU: USD 0.2/kWh; U.S.: USD 0.13/kWh; industrial tariffs EU: USD 0.16/kWh and US: USD 0.7/kWh (IEA, 2016 Energy Statistics)

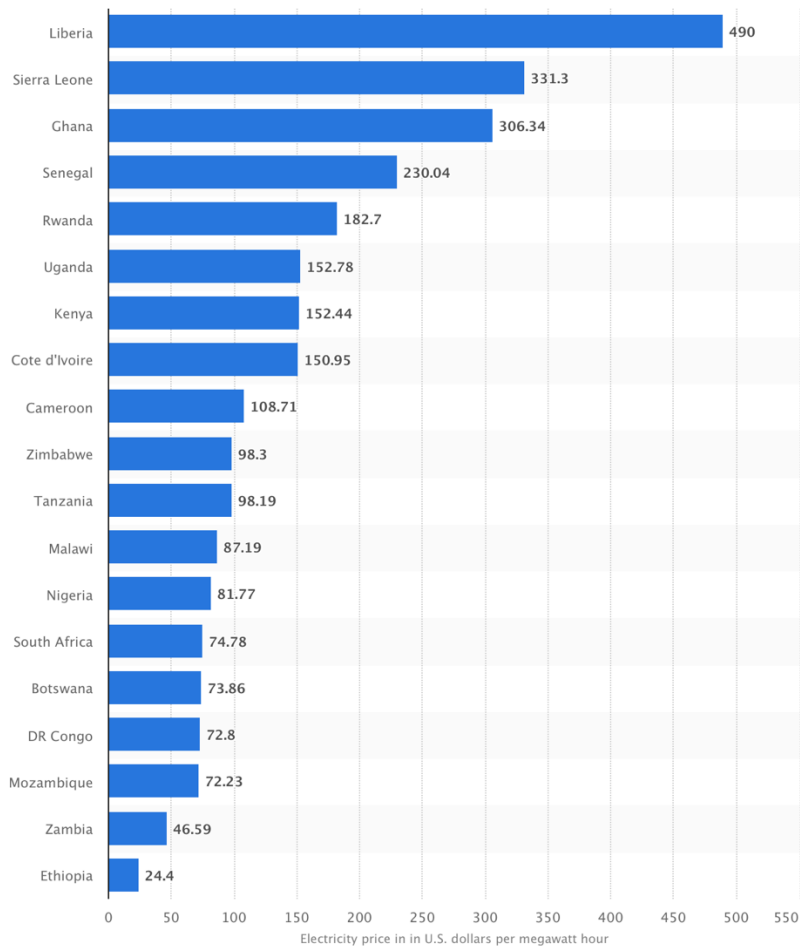


Figure 5: Average retail electricity prices in Africa, 2016 (USD/megawatt hour)³⁸

101. All stakeholders interviewed stated their belief that resource- and energy efficient buildings are aligned with the national priorities of the respective countries and region. This view was confirmed by a scan of documentation found in the public domain and/or those shared during the field mission. The extent of relevance varies across the respective countries, as follows:
102. **Burundi.** Burundi’s energy outlook falls within the framework of Vision 2025 that states, as a principle objective: “ensure that by 2025 both the rural and urban populations have access to reliable, clean sources of energy and at competitive prices”. The Vision furthermore recognizes the importance of environmental and resource protection. In 2016, Burundi promulgated Codes for Building and Urban Planning that explicitly incorporates energy efficiency and green buildings. Since the 2015 elections, Burundi has been wracked by political tensions and violence, with conflict escalating over the

³⁸ Source: <https://www.statista.com/statistics/503727/retail-electricity-prices-in-africa-by-select-country/>

preceding three years. Energy Efficiency in buildings remain aligned with national policy, but understandably have not been a focus area for the country.

103. **Kenya.** The relevance of EE is confirmed by Kenya’s policy framework that increasingly incorporates elements related to EE³⁹. It was evident from the interviews that the significance of EE is recognized at various government departments and institutions. During the field mission, a Kenyan government official stated that “mainstreaming energy and resources use efficiency into the built environment is a major objective in Kenya’s national development policy” and “energy efficiency is one of the most powerful tools for combatting global climate change and boosting the national and local economy”. Evidence of this policy position is beginning to reflect in recent policy developments.
104. **Rwanda.** As discussed earlier (refer paragraph 66), Rwanda has fully committed to their Green Growth and Climate Resilience National Strategy for Climate Change and Low Carbon Development as published in October 2011. The Rwandan Government identified Green Growth as key to its economic transformation and has incorporated green buildings as an aspect of this transition. Alignment is demonstrated by the comprehensive adoption of EEB policies⁴⁰ and integration of codes and practices throughout all levels of government (refer Section 5.9: Sustainability).
105. **Tanzania.** Energy Efficient Buildings fit into the country’s broader policy framework, including Tanzania’s Vision 2025⁴¹, its 2nd Five-year Development Plan 2016/17 - 2020/21 and the country’s strong commitment to implementing the SDGs⁴². Building and energy in rural and urban development has also been identified as a priority by the President’s Office – Regional Administration and Local Government. This unit has been tasked to:
 106. Formulate the Government of Tanzania’s definition of the national spatial system inclusive of Networks of Cities, Towns and Rural Settlements and their respective Consumption Patterns of Energy, and
 107. Establish Smart Habitations that entails (i) creating constant and sustainable economic development and high quality of life excelling in Environment, Economy, Mobility, Governance, Living & People, and (ii) Developing Dodoma as “National Capital with a Difference” with consideration to climate change

³⁹ WorldBank RISE rating for Energy Efficiency Policy and Regulations improved from 31 in 2014 (<https://tradingeconomics.com/kenya/rise-energy-efficiency--policies-and-regulations-wb-data.html>) to a current score of 48 (<http://rise.esmap.org>, accessed August 2018)

⁴⁰ GGGI National Roadmap for Green Secondary City Development, 2015; Rwanda Building Code, 2015; National Strategy for Transformation (NST1) and Vision 2050; Ministerial Orders for Green Buildings developed, 2018; Green Buildings captured in Urbanization Sector Strategic Plan 2018-24

⁴¹ Tanzania’s National Vision 2025 (published 1999) is based on the principle sustainable development, where present generations will be able to derive benefits to rational use of natural resources of the country, without compromising the needs of future generations.

⁴² As reported: <https://allafrica.com/stories/201806270630.html> and <http://una.or.tz/how-are-the-sustainable-development-goals-implemented-in-tanzania/>

108. **Uganda.** Uganda’s Energy Policy, 2002 established a Department for Energy Efficiency and Conservation in the Ministry of Energy and Mineral Development. EE is included in the Renewable Energy Policy for Uganda and an Energy Efficiency Roadmap was developed with support from USAID and published in 2017, incorporating a strong focus on energy efficiency in buildings. Country representatives also believe that EE is an important contributor to the country’s climate change commitments and National Development Plan II (2015 – 2020).

5.2.3 Complementary with existing interventions

109. Multiple interventions that are complementary to the EEBA were identified, many of these working in close collaboration with the EEBA and receiving direct support from the EEBA project in the form of knowledge sharing or leveraging on data, knowledge and networks. A selection of the most relevant existing interventions is listed in Table 10.

Table 10: Complementary initiatives

Initiative name and description	Implementing organisation	Country active	Date initiated
<p>Joint Development of Courses for Energy-Efficient, Sustainable Housing in Africa (Jenga). Fill key capacity/skill gaps; Develop cross/inter disciplinary thinking and working.</p> <ul style="list-style-type: none"> Uganda Martyrs University (UMU) Kigali Institute of Science and Technology, Rwanda Jomo Kenyatta University for Agriculture and Technology – Kenya 	<p>Funded by the EU through the ACP-EU Cooperation Programme in Higher Education (EDULINK) UN-Habitat credited as contributing partner</p>	<p>Uganda Rwanda Kenya</p>	<p>2013</p>
<p>Urban Energy Transitions, Supporting African Municipalities in Sustainable Energy Transitions (SAMSET). Aiming to grow a critical mass of energy aware practitioners; Make energy an agenda item; Grow a base of reference information.</p>	<p>Co-funded by UK aid from the UK Department for International Development (DFID), the Engineering & Physical Science Research Council (EPSRC) and the Department for Energy & Climate Change (DECC)</p>	<p>Uganda</p>	<p>2013</p>
<p>Energy and Low Income Tropical Housing (ELITH). Make headway into a database of local materials; Explore and demonstrate efficiencies following reflections on traditionally/locally manufactured spaces.</p> <ul style="list-style-type: none"> Uganda Martyrs University (UMU) National Housing and Building Research Agency (NHBRA), Tanzania 	<p>Same as SAMSET</p>	<p>Uganda, Tanzania</p>	<p>2013</p>
<p>Africa Green Building Network and Green Building Councils. Green building councils has collaborated closely with the EEBA to create awareness, strengthen capacity and skills, share knowledge and lobby government stakeholders and industry associations. Significant effort going into</p>	<p>Kenya Green Building Society (KGBS); Rwanda Green Building Organization (RwGBO); World Green Building</p>	<p>Kenya, Rwanda</p>	<p>Varies</p>

Initiative name and description	Implementing organisation	Country active	Date initiated
expanding efforts beyond current EA partner countries.	Council and Africa Regional Network		
SEforAll Building Efficiency Accelerator (BEA) project. Working with Nairobi City Council in collaboration with the KGBS for the development of building guidelines.	World Resources Institute (WRI)	Kenya	2016
The Covenant of Mayors for Sub-Saharan Africa. A regional chapter of the Global Covenant of Mayors. Comprehensive support to Sub-Saharan Cities in their Climate and Energy Actions. Thirteen pilot cities, including Kampala, Uganda, have received grants awarded through the EU delegations in the country.	Voluntary commitment by mayors. Funded by the EU. UN-Habitat credited as partner	Uganda ⁴³ Burundi; Kenya; Tanzania	2017 (Active outside EU)
East African Centre for Renewable Energy and Energy Efficiency (EACREEE). Aiming to create an enabling environment for renewable energy and energy efficiency markets and investments and contribute to SEforAll and SDGs.	Collaboration between East African Community (EAC), UNIDO and Makerere University College of Engineering, Art, Design and Technology (CEDAT)	Region	2016
Global Green Growth Institute (GGGI) Rwanda Country Program. The project is focused on Climate Resilient Green Cities under which it provides support to a number of initiatives promoting green buildings in Rwanda. Team members are placed at Ministries, Agencies and district offices. The project also provides technical support to FONERWA ⁴⁴	GGGI, Rwanda Green Building Organisation, Rwanda Housing Authority, Building and Construction Authority	Rwanda	2012
SUNREF East Africa. SUNREF provides financing for development of renewable energy and energy efficiency solutions. Support for private investment in renewable energy and energy efficiency is made available in partnership with local banks by allocating green credit in favourable conditions (low interest rates, long tenor, grace period) for tailored made debt.	Agence Française de Développement (AFD) with 6 local partner banks, including: Diamond Trust Bank (Uganda); Bank of Africa (Tanzania); Commercial Bank of Africa (CBA), Cooperative Bank of Kenya and Diamond Trust Bank (Kenya)	Kenya, Tanzania, Uganda	2011
Kenya Urban Support Programme is aimed at the implementation of National Urban Development Policy (NUDP) and Urban Areas and Cities Act (AUCA). The intent is to establish and strengthen urban institutions to deliver improved infrastructure and services in participating counties in Kenya. The Kenya Government and World Bank has prioritized environmental sustainability as a condition for project implementation and is providing capacity assistance to Counties towards “ <i>mainstreaming resource and energy efficiency in the development approval systems</i> ”.	Government of Kenya with funding support from the World Bank. 59 municipalities in Kenya are participating in the programme	Kenya	July 2017

⁴³ Website <https://www.globalcovenantofmayors.org/region/africa> shows 113 signatory cities in SSA as at August 2018. Burundi – 4; Kenya – 2; Tanzania – 1; Uganda - 1

⁴⁴ French Acronym referring to Rwanda’s Environment and Climate Change Fund or Green Fund.

Strategic Relevance rated 'Highly Satisfactory'

5.3 Quality of project design

110. The project design was found to be highly relevant and well-timed to coincide with an anticipated construction boom in the region. The design reflected a comprehensive approach to creating an environment conducive to the adoption of EEB, addressing the major barriers to adoption and entrenching EEB in policies, regulations and bylaws. It effectively combined a “carrot and stick” approach to promote the adoption of EE. The role of the PMU as a “facilitator” rather than an “implementer”, is tactically sound, demanding buy-in and ownership to be taken by partner Governments and industry stakeholders. These same elements also create excellent conditions for sustainability of the intervention.
111. The project design was informed by extensive stakeholder consultation and significant buy-in from high-level stakeholders. Consequently, it also benefitted from high profile representation in the designed governance structures.
112. Challenges with the project design relate predominantly to an over ambitious scope and delivery targets given the available resources (financial and human) and timelines as well as the heavy reliance on Government partners and slow bureaucratic processes to progress key delivery milestones. These perceived challenges identified at inception were confirmed during the course of the evaluation. In particular the design of the project implementation structure, depending on a small central PMU with Government partners to drive implementation at a national level, proved to be a major challenge. The challenge associated with such a high degree of dependence on external partners was foreseen by GEFSEC and could not be adequately resolved with the mitigation measures proposed by the project team (Annex B: Responses to Project Reviews, CEO endorsement).
113. A further challenge identified during the evaluation related to the design of the governance and supervision arrangements. Although conceptually regional and national steering committees provided a sound oversight structure, the logistical requirements and costs related to hosting regular meetings across the region and in each of the five partner countries, proved too onerous. Besides the cost of travel and subsistence, Steering Committee members reportedly expected compensation or a “sitting fee” for attendance of meetings⁴⁵, similar to fee structures used for payment of board members. This practice will have implications for future projects in the region, impacting significantly on project management budget allocations and the feasibility of having regional steering committees. The failure of the steering committee structure

⁴⁵ This information was volunteered during two interviews and tested by prompting in a third.

also meant that high profile government representation and regional forums such as the EAC could not be fully leveraged for support and sponsorship.

114. A complete evaluation of the project design was included in the Inception Report. The quality of project design was found to be Satisfactory (total score = 4.64).

Project Design rated 'Satisfactory'

5.4 Nature of external context

115. The EEBEA Project Document did not note any concerns related to external context at the time of design. Since 2011, there were a number of notable changes in the external context that impacted the project's performance.
116. The project has been challenged by the turbulent political climate in Burundi. Political instability escalated into a political crisis during the 2015 elections and continues until today. Activities in the country were subsequently scaled down and the project officer position discontinued 16 April 2016. Information sharing to stakeholders continued and it appears that academia, in particular, persisted the pursuit for EEB with the support from the EEBEA project⁴⁶.
117. Operationalizing of Kenya's newly elected devolution government (2013), establishment of counties, shifts in national priorities and subsequent elections hampered implementation, although not to the extent experienced in Burundi. National commitments for housing at the time of design was temporarily replaced by a focus on land ownership, before the more recent renewed Presidential commitment to housing as one pillar of the Big 4 Agenda. Consequently, project progress was slowed and government acceptance less enthusiastic than anticipated during the planning and initial stakeholder consultation phases. These challenges were mitigated by broadening the engagement to multiple government agencies (including the Building Research Centre, National Construction Agency) and more targeted engagement of local government.
118. The external context in Tanzania's did not change. It did however take the project team until 2015 to discover that the Ministries identified during the design stage (Ministry of Energy (lead) and Ministry of Lands, Housing and Human Settlement Development) were not the appropriate ministries to influence and enforce building codes. Progress was only seen with the engagement of the Regional and Local Government

⁴⁶ Evidenced by the presentations made at the Regional Conference held 1 – 3 August by Athanase NDIHOKUBWAYO, ECOLE NORMALE SUPERIEURE, BUJUMBURA-BURUNDI and Architecte Amédée BIZIMANA, Professeur à la Faculté des Sciences de l'Ingénieur (FSI) – Université du Burundi and in-person clarification questions.

Administration Ministry (refer paragraph 105). This was ascribed to the difficulty of understanding the dynamics and work of the respective ministries in Tanzania where mandates are reportedly not well understood even within the ministries themselves. From the presentations made at the Arusha Regional Conference, the Regional and Local Government Administration Ministry does seem to have the appropriate focus and commitment.

119. As indicated earlier, the intensified focus by the Rwandan Government's on the Green Economy in 2012 contributed positively to the project's success in this country.

Nature of the external context is rated 'Favourable'

5.5 Effectiveness

5.5.1 Delivery of Outputs

120. A number of key assumptions informed the design of project activities and targeted outputs during planning. While most of these assumptions held true, some did not. The table below captures the assumptions reflected in the TOC (refer Section 5) and the status of each at evaluation:

Table 11: Assumptions that informed the design of activities and targeted outputs

Assumption	Status
1. An opportunity exists to significantly influence energy efficiency in the built environment in the region by introducing EE into building codes and standards.	This held true for all partner countries. Each did initiate a process of reviewing building codes that, where they did exist, were historic (e.g. dating from 1968), outdated and inadequate.
2. This can be achieved by measures that supports the implementation of the building code, i.e. data collection, awareness creation, capacity building, technical assistance, demonstration projects with a real lighthouse function, and by creation of the first East African EE Building Award.	This held true, with different areas requiring emphasis in different countries.
3. Adequate country / policy-maker commitment exists to drive EE in Buildings provided the necessary tools,	This did not hold universally true for all partner countries. The commitment in Rwanda was adequate that the available information and support did serve as the intended catalyst All other countries required more active engagement, lobbying and support.

Assumption	Status
information and support can be made available to them.	
4. Partner governments would assign resources and staff to the initiative (as committed).	This did not hold true for partner countries. Despite the commitments made, facilities, infrastructure and resources were not dedicated to the project, the steering committees or the project objectives as anticipated.
5. Partner governments will be implementing mass housing projects that will provide a vehicle to progress all components but most specifically be the carrier for pilot and demonstration projects (as committed).	This did not hold true for partner countries.

121. The failure of Government partners to support the project to the extent initially committed or to the extent anticipated at planning stage, did impact implementation and progress, as will be seen from the assessment below.

122. A complete inventory of the resources that were shared by the project team is attached in Annex IV.

123. Outputs for each component are discussed in subsequent tables. Considering the extensive portfolio of resources developed by the project, a selection of the most pertinent ones is highlighted in the discussion.

Table 12: Outputs from Component 1

Expected Project Outputs	Examples of Outputs
<p>Output 1.1. Energy Consumption trends in the building sector in EA established</p> <p>Output 1.2 Performance based energy consumption benchmarks for buildings established</p> <p>Output 1.3 EE potential in the building sector in EA estimated</p>	<p>Outputs 1.1, 1.2 and 1.3: Energy audits conducted in 1,086 housing units in three countries (Kenya, Tanzania and Uganda) informed analysis of building habits, climatic zones, savings potential and recommended building practices. A consolidated⁴⁷ report was produced:</p> <ol style="list-style-type: none"> 1. Blanco, Z. G.; Muzee, K.; 2016. Assessment of Energy and Resource Consumption in Buildings in East Africa: A case study of sample buildings, benchmarking and evaluation of energy saving potentials. UN-Habitat. Nairobi 2016

⁴⁷ A number of preliminary reports preceded this final publication, including: Performance evaluation systems for sustainable buildings (2013) and individual country specific audit reports.

Expected Project Outputs	Examples of Outputs
<p>Output 1.4 Methodology and process for collection of climatic data in each participating country regarding specific requirements for EEB, RET and bioclimatic design improved</p>	<p>Outputs 1.4 A second publication⁴⁸ focuses on climatic data collection, analysis, relevance to EE building design and the definition of the climatic zones in EA. The report also gave passive design recommendations for each climate zone:</p> <p>2. Ngungui, J. 2016. East Africa Climatic Data and Guidelines for Bioclimatic Architectural Design. UN-Habitat. Nairobi 2016.</p> <p>Climatic data “posters” were also developed for each of the six climatic zones in East Africa and covering major cities in the region.</p>

124. Outputs for Component 1 are of high quality, well presented and packaged and were evidently well received by attendees at the Arusha Regional conference that concluded the project in August 2018.
125. The project was responsive to challenges it encountered, amending the outputs to be relevant to the reality and requirements in the region. As an example, the initial expectation to develop benchmarks that are expressed in terms of kWh/m² proved too simplistic for areas that are underserved by electricity. This approach was replaced with radar charts with a more practical breakdown of parameters.
126. The following shortcomings are noted:
127. The material was readily available and shared at the conference, but is not available on the EEBEA website. At the start of the evaluation the website contained only old information and reports, **last updated in 2014**. The website was unavailable during more recent visits (most recent 12 September 2018)⁴⁹. Establishing a central repository of the knowledge base and outputs of this projects is critical to expand the reach and for longevity.
128. Even though current energy use is low because of limited access, poor efficiency habits and practices were documented. Current, inefficient practices were not extrapolated to project what consumption would be without intervention i.e. a baseline projection was not established. Consequently, savings potential could not be stated against a ‘business as usual’ baseline. This limits the ability to quantify the economic benefits as a business case for governments or developers as motivation to prevent a ‘business as usual’ consumption growth scenario as energy access becomes universal. This “failure” was noted repeatedly during interviews and voiced as a question by one of the counties during the Regional conference.
129. Component 1 was originally planned to be delivered within the first 9 months to provide critical input into Component 2. Audits and reports were only concluded in 2015, delivered too late for the intended application. It will however remain relevant and

⁴⁸ Preceded by a number of earlier reports including: *Introduction to Bio-Climatic Data in East Africa (draft, no date or author)*,

⁴⁹ The PM indicated that the website is being revamped and will be moved to the UN-Habitat website once completed, containing all documents produced by the project.

credible for future revisions of codes and to support planning and decision-making in general. The Building Charter provided adequate guidelines for the development of Codes and the detail technical material is available to support operationalization of the codes, inform detailed building standards and support the renewed government commitments to housing.

130. Delivery on the outputs of this Component is rated **Satisfactory**

Table 13: Outputs from Component 2

Expected Project Outputs	Examples of Outputs
<p>Output 2.1 Principles of EEB integrated in country specific building codes</p>	<p>Output 2.1 Rwanda, Burundi and Uganda have adopted building codes that incorporate energy efficiency and sustainable building practices. Kenya and Tanzania are at various stages of progress. It is noted that, the two largest markets in the region did not pass building codes, limiting the extent to which mainstreaming will be achievable.</p> <p>Burundi’s building code was promulgated 12 August 2016 (reviewed). It explicitly references environmentally friendly building practices, incorporates the 20 points of the “Build Green” building charter and commits public buildings (schools) to be constructed in accordance to these rules. the code set a legal framework, signed by the President. Effective operationalization requires further development of standards and norms for different sectors. Reportedly, there are already evidence of new buildings and school buildings adopting the code.</p> <p>Rwanda’s building code was gazetted 18 May 2015 (reviewed). The code explicitly includes appropriate lighting and ventilation and energy conservation. Under Minimum Building Performance Requirements, the code covers environmental soundness, energy efficiency and renewable energies. It also specifies building material that ‘use the least energy for their production and transport. Interviewees credited EEBA for critical inputs into the code. Rwanda has also made significant progress with institutionalizing the adopted codes and commitments (refer discussion below the table).</p> <p>Uganda Building Control Act (BCA) was enacted into Law in 2013 and Commenced on 2nd April 2018. Among others, it aims to provide for building standards or a National Building Code. It calls for a National Building Code and Building Regulations to be developed and published within 6 months after implementation of the Act. The building codes were initially still in development and not available for review. Information provided by the Commissioner of Public Structures and coordinator of the relevant EEB working group, stated that the draft code provides for energy efficiency and thermal comfort, natural lighting, ventilation, and others. Also includes design information provided by UN- Habitat (RECM: Resource Energy and Conservation Measures) and automation of installations (operation-wise). UNDP Uganda has played a pivotal role in providing the assistance of Makerere University of Kampala to the Ministry of Works in charge of the new Building Code in order to ensure that energy efficiency requirements are included into the regulatory framework. A copy of the Building Code, adopted 14 November 2018, was made available in response to the draft TE. It includes a chapter on environmental</p>

Expected Project Outputs	Examples of Outputs
	<p>protection and energy efficiency standards that describes the climatic zones and building design prescriptions related to energy efficiency.</p> <p>It was suggested that Kenya's building codes (National Building Regulations, 2009) had been amended to incorporate aspects of EE and had been with Parliament since 2014 for approval. It was also suggested during interviews that Kenya had been "reserved about incorporating green building" principles into the codes and that further work would be required to fully integrate EEB and green building concepts. Although several sources referred to the draft document and it was claimed to be in circulation and used in anticipation of its adoption, a copy could not be obtained (either directly or from an internet search) for review. The evaluator was therefore unable to confirm first-hand the extent to which these Building Codes have been amended to reflect aspects of EEBs. A presentation made in July 2014 by Dr Robert Rukwaro of the University of Nairobi, provided an overview of the proposed building code for Kenya. It highlights the energy efficiency aspects incorporated into the revised building code, but also highlights the shortcomings with suggestions to strengthen the proposed Regulation in its application for enhancing energy efficient buildings. The 2017/18 – 2021/22 Strategic Plan of the Kenya Building Research Centre, launched early September 2018, also reflects the "Coordination of Sustainable (green) Building Agenda for Kenya" as a key results area for this state-owned entity.</p> <p>Kenya had also enacted regulations to make solar hot water compulsory for all buildings⁵⁰ – a goal targeted by the EEBEA project. The Energy (Solar Water Heating) Regulations were published in 2012, with implementation targeted from May 2017. In August 2018 the Members of Parliament retracted clauses that imposed fines for non-compliance. The National Assembly committee on Energy recommended the Regulation be annulled in entirety⁵¹.</p> <p>In Tanzania, the Prime Minister's Office has established a team to develop building codes. Currently there are no building codes in place and only a few historic building standards. Reportedly, as an interim measure, the Regional and Local Government Administration Ministry, which is located under the President's Office, was approached to incorporate guidelines related to EE in the permitting process for new buildings. Basic, but key principles have been adopted and is being implemented by local municipalities as part of the process of issuing building permits. These are not mandatory, but are made as recommendations alongside other planning requirements, in order to qualify for a permit. A copy in Kiswahili was shared accompanied by an excerpt in English highlighting the green building requirements. These include check points related to daylight harvesting, rainwater harvesting, orientation, ventilation and glass to wall ratio, among others.</p> <p>As input to these developments, several reports were produced to (i) review existing building codes in Kenya, Uganda and Rwanda for opportunities to strengthen resource efficiency and conservation measures and (ii) propose draft rules for Burundi and Tanzania.</p>

⁵⁰ The regulations required buildings with hot water demand exceeding 100 liters per day, install solar water heating systems to cater for at least 60% of the demand. The regulations required owners of new buildings to comply at the time of publishing of the notice while existing buildings had a grace period of five years to do so.

⁵¹ ESI Africa. 6 August 2018. <https://www.esi-africa.com/kenya-parliament-dismantle-penalty-for-solar-water-heating-systems> Accessed 6 August 2018

Expected Project Outputs	Examples of Outputs
<p>Output 2.2 Toolkits and guidelines developed for the application of EEB</p>	<p>Output 2.2.</p> <ol style="list-style-type: none"> 1. A model building code for tropical countries was developed: Blanco, Z. G.; <i>Energy and Resource Efficiency Building Code for Tropical Countries. Guidelines</i>. DRAFT. The only copy shared was marked as DRAFT and with: "This is a work document and should not be distributed neither quoted nor reproduced in any form". 2. 'Build Green' Charter for sustainable building, neighborhood design and urban mobility in tropical countries. This was packaged into a very effective booklet format and is available in both English and French. 3. Twenty-one (21) technical notes of which number 7, <i>Energy and Resource Efficiency checklist</i>, provided a checklist against which to assess building plans.
<p>Output 2.3 Capacities of building code administration staff strengthened</p>	<p>Project progress reports listed at least 18 workshops and training events of which at least 8 appear to have included government technical staff such as "town clerks, district/town engineers, physical planners, environment officers, natural resource officers, health officers and district administrators" as target audience.</p> <p>Workshop or training reports and/or attendance records were requested, but not provided. Attendance records for the Energy Efficiency Building Codes Workshop, held April 2013, shows attendance by 16 officials from partner countries (not including any representation from Kenya) and an additional 6 from Senegal, Cameroon and Nigeria.</p> <p>The Workshop with National Construction Authority (NCA) technical personnel, reported in the PIR 2017, was confirmed directly with an attendee.</p> <p>Delivery against the targeted "At least 20 administrative staff trained per country" is therefore believed to have been met.</p>

131. At a national level, significant progress was made in all five countries towards creating a legal framework for and incorporating EE into building codes. Even for those countries where building codes were successfully adopted, the next challenge (as highlighted by themselves) lies with the operationalization of these into building standards, building permitting processes, and implementation. Only Rwanda has made significant progress with institutionalization and implementation.

132. Rwanda has made significant progress along their green building journey marked by a number of key milestones:

133. MoU was signed between the Rwandan Housing Authority and Building Construction Authority, Singapore in 2016;

134. Technical Assistance from GGGI Rwanda, since Nov 2016;

135. Launch of Rwanda Green Building Organization (RwGBO), Nov 2016;

136. Extensive Stakeholder Consultations⁵², 2017;
137. Rwanda Green Building Minimum Compliance Guidelines are being developed and is already far advanced, 2017-18. This mandatory system for green building compliance will be relevant to all new buildings above a specified size⁵³ including Commercial Buildings, Public administrative and institutional buildings, Social, cultural and assembly buildings, Health facilities and Educational buildings;
138. Ministerial Orders for Green Buildings have been developed, 2018; and
139. Green Buildings have been captured in the Urbanization Sector Strategic Plan 2018-24
140. In Kenya, the 2017/18 – 2021/22 Strategic Plan of the Kenya Building Research Centre launched early September 2018 reflects the “Coordination of Sustainable (green) Building Agenda for Kenya” as 1 of 8 key results areas for this state-owned entity. It includes a comprehensive list of activities that would significantly advance the platform created by the EEBEA project. The strategic plan identifies a budget requirement of Kshs 200 million over the 5-year planning horizon towards “mainstreaming of sustainable (green) building principles in building and construction projects”. This was not mentioned during the interviews conducted in August 2018 and it is not clear to what extent this budget requirement has been committed, but this signifies an important step towards institutionalization. The PM further noted that the Architects Association of Kenya are developing similar instruments, but no further details were available.
141. It had been assumed at the start of the project that government commitments and structures were in place or would be readily established, to drive the development and adoption of building codes. As stated earlier, this was not the case, contributing to project delays.
142. The MTR named a few local governments that had started the integration of EEB into building permitting requirements. Follow up conversations with some of these suggested that the process remained ongoing. As an example, the Nairobi County continues work on building guidelines and has obtained support from the building efficiency accelerator (BEA). The BEA makes international resources available, and financial support for qualifying ‘deep dive’ partner cities. The KGBC, acting as ‘agents’ to this accelerator programme, has approached several counties to collaborate on this initiative. They have identified building codes / guidelines drawing from global experience to share with Counties. At the time of the evaluation interviews only Nairobi

⁵² Stakeholders included: Ministry of Infrastructure; Ministry of Environment; Rwanda Environment Management Authority; City of Kigali; Rwanda Standards Board; Water and Sanitation Corporation; Rwanda Energy Group; Rwanda Institute of Architects; Institution of Engineers Rwanda; Association of Building and Civil Works Contractors, among others

⁵³ All new category 3 and 4 buildings i.e.: Category 3 buildings are characterized with more than two floors (G+1) and capacity to host more than 100 people. Category 4 comprises of buildings with a capacity to host more than 500 people.

and Kisii had signed up and Nairobi had started the process of setting up building guidelines.

143. For most partner countries, a high-level policy framework has been created. Engagement has started with local governments to filter policies into local planning, policies and bylaws. There is a growing interest from cities, counties and municipalities, but still significant work is required to integrate the adoption of EEB principles and practices through all structures, to all levels of decision-making, administration and implementation.
144. The EEBEA actively promoted the Global Covenant of Mayors (GCM) for Climate and Energy and encouraged local governments and mayors to join the GCM.
145. Delivery on the outputs for Component 2 is rated **Satisfactory**.

Table 14: Outputs from Component 3

Expected Project Outputs	Examples of Outputs
<p>Output 3.1 Awareness raising campaign conducted</p>	<p>Most of the stakeholders interviewed agreed that the EEBEA has contributed to increased awareness and interest among national and local government staff and agencies, building professionals, housing associations, property developers and academia.</p> <p>The communication plan, identified for development at the start of the project and highlighted as a requirement in the MTR recommendations to give structure to and guide awareness activities, was not finalized.</p> <p>A wealth of excellent communication material has been developed including technical material and material aimed at general awareness or ‘demystifying’ the concepts of EEB or Green Building. These resources include:</p> <ul style="list-style-type: none"> • Articles for the UN Habitat publication: The Journal of Sustainable Building Design (8 draft copies shared) • Animations (video clips) that effectively unpack the concepts around building and neighborhood design in an engaging, simple and visually pleasing format. • More than 30 lectures in a short video format explaining principles of EEB, from introducing climatic zones to window sizing. • Handbooks and technical notes • Posters, introducing relevant concepts and project case studies on one page <p>It is however not evident how this information was disseminated; what fora or channels were used for information sharing; who was identified as target audience for specific communication, nor what frequency of communication or reach were achieved.</p> <p>It is again noted that the website (www.eebea.org) was 4 years out of date (reflecting events and publications from 2014) at the start of the evaluation and unavailable / offline towards the end of the evaluation.</p> <p>The project had targeted awareness of EE among at least 30% of urban residents. No market research or surveys were done to assess and track awareness at the start and end of the project and can therefore not be demonstrated or verified.</p>

Expected Project Outputs	Examples of Outputs
	<p>The following, meaningful interventions with broader awareness impacts were noted:</p> <ol style="list-style-type: none"> 1. Early in 2016, a training workshop was held for journalists around East Africa to assist journalists “to understand the subject and increase activism on sustainable building design in the region”. Project reporting noted “over 20 articles have been published in mainstream media in the five partner countries and even more publications are being prepared”. 2. The KGBS has signed an agreement with the UN Habitat to use and promote the knowledge created by the EEBEA. While the primary focus of the KGBS is on the building sector, they have also targeted education of primary level and lower schools. Activities reported by the KGBS included (i) a Green Bus Tour to show case green elements and (ii) Green Apple Day of Service celebrated every September by all green councils. The intent is to sensitize all educators from kindergarten to tertiary regarding energy efficiency, switch off lights, etc. 3. The KGBS and the RwGBA have both aligned strongly with the EEBEA and leveraged material and events (e.g. global green building week) to extend awareness creation efforts. These two councils have also collaborated with the regional and world building council and are working towards having green building councils operational in Uganda and Tanzania shortly. 4. The KGBS credited the EEBEA and UN-Habitat for giving them access to high level stakeholders in the relevant Ministries to engage and lobby for EE housing, for training of government officials, for certification of government buildings. 5. The project also signed MOUs with a number of stakeholder groups⁵⁴ confirming a shared intent to share information, engage on topics of EEB and promote principles of energy and resource efficiency in their respective industries. Although these are not linked to any formal commitments, it does establish a network of interest and communication. <p>Several stakeholders further highlighted other initiatives that have grown out of and/or is building on the awareness and capacity created by the EEBEA. These include the JENGA, SAMSET, ELITH and Kenya Urban Support Programme, among others.</p>
<p>Output 3.2 Technical training and capacity built for practitioners in EEB</p>	<p>A series of information/sensitization and technical training workshops has been organized in all partner countries. Project progress reports listed at least 18 workshops and training events covering a broad range of stakeholders including built environment practitioners (architects, engineers, surveyors, urban planners), property developers, students of architecture, government officials, banks, housing agencies and journalists. From progress reports and information published on the website the evaluator counted well over 700 delegates reportedly in attendance⁵⁵. Reports for 4 and attendance records for an additional 6 workshops or training events were made available for review. These aligned with the numbers reported and showed good representation across the private and public sectors, including local and national government officials, government</p>

⁵⁴ Kenya Property Developers Association (KPDA), Tourism Finance Corporation, Town and county planners developers associations

⁵⁵ The project overview presented in Arusha, 1 – 3 August stated this number as more than 500

Expected Project Outputs	Examples of Outputs
	<p>agencies and centres, professionals, professional bodies and academia. From the names listed, it is evident that women were in attendance, but women as a percentage of total attendees cannot be accurately determined.</p> <p>At the mid-term period (mid 2014), the review confirmed 5 training sessions to have taken place with at least 200 practitioners involved.</p> <p>During the last year, the EEBEA project teamed up with the KGBS to continue capacity building and training. The KGBS has offered regular masterclasses for building professionals including quantity surveyors, architects and engineers from both the private and public sectors. Topics were selected based on market interest. Attendance has reportedly grown from around 10 people initially to 30 – 40 people at recent classes. Attendance records were repeatedly promised by KGBS, but not shared. <i>Attendance numbers and composition (e.g. occupation, gender, country, etc.) could therefore not be verified.</i></p> <p>A workshop held February 2016 with deans and senior lecturers from 16 universities around East Africa resulted in the adoption of the “<i>The Machakos Declaration on Mainstreaming Sustainable Building Design in Curricula of Higher Learning and Practice in East Africa</i>”. The declaration was endorsed by all the schools present. It stipulates that all schools will review and integrate sustainable building design in their curriculum and highlights the key areas of focus.</p> <p>UN-Habitat indicated that they had received orders of the Handbook from the majority of signatories⁵⁶ and that 10 universities have adopted the handbook as a tool of instruction. Incorporation of learning material and/or the Sustainable Building Design for Tropical Climates Handbook into curricula was confirmed by (i) the University of Dar es Salaam, Tanzania and (ii) Uganda Martyrs University – both signatories of the declaration. It was understood (unconfirmed) from one of the interviews that the MBEYA University of science and technology & Ardhi University had also formally adopted it. The UN-Habitat website also showed more than 13,000 downloads of this handbook by mid-September 2018⁵⁷.</p> <p>Other excellent technical resources were developed, including:</p> <ul style="list-style-type: none"> - Build green: 100 ways to save money and the environment - Sun shading catalogue. Adequate shading: sizing overhangs and fins - Technical notes (21) spanning a range of practical topics (previously referenced under Outcome 2.2) - Energy and resource efficient urban neighbourhood design principles for tropical countries, practitioner’s guidebook. (previously referenced under Outcome 2.2)
<p>Output 3.3 East African Green Buildings Award established</p>	<p>At the time of the MTR (June 2014), the East African Green Buildings Award was launched officially in April 2014 in Kenya in close collaboration with the Kenya Association of Manufacturers (KAM) and the Kenya Architects Association. The green building award was added to the annual Energy Management Awards event, held by KAM in April (13th Energy Management Awards were held in 2017). The Green Buildings Award introduced a new award category recognizing the incorporation of green building concepts in design, construction of new buildings and modification of existing ones. Not enough, suitable</p>

⁵⁶ Letters requesting copies from two universities, University of Dar Es Salaam and Jomo Kenyatta University, were shared by the project.

⁵⁷ Refer: <https://unhabitat.org/books/sustainable-building-design-for-tropical-climates/>, Accessed 30 July 2018 and 14 September 2018

Expected Project Outputs	Examples of Outputs
	<p>entries were received for this new award to be made every year since the launch in 2014. The lists of winners in 2017 and 2018 published by KAM were reviewed and among the energy management awards listed, there was no award made or shown for Green Buildings. The KGBS indicated that they had been approached to help promote this award and assist with evaluations of nominations going forward.</p> <p>No evidence was found to indicate that the Green Buildings Award was extended to other countries, as targeted.</p>

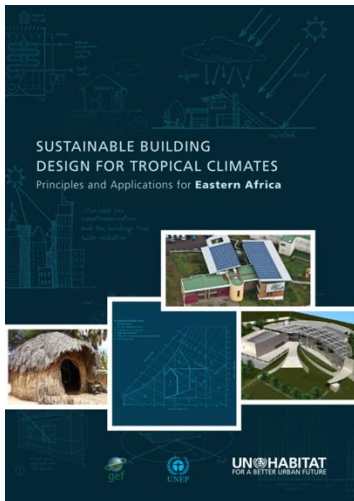
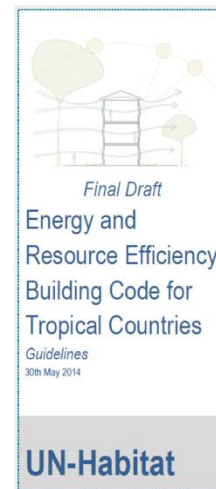
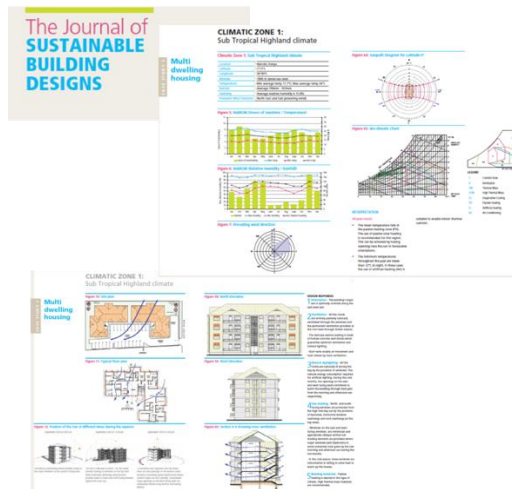
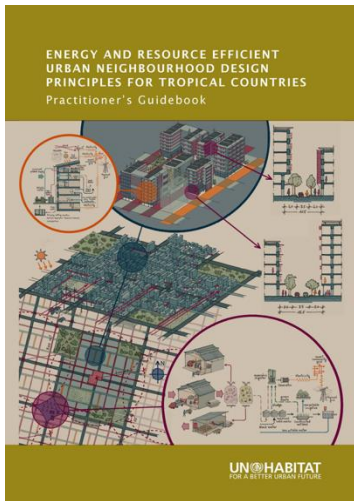


Figure 6: Samples of publications from the EEBA

1. University of Nairobi (Kenya),
2. Jomo Kenyatta University of Agriculture and Technology (Kenya),
3. Technical University of Kenya (Kenya),
4. Kenyatta University (Kenya),
5. Uganda Martyrs University (Uganda),
6. Kyambogo University (Uganda),
7. Ardhi University (Tanzania),
8. University of Dar es Salaam (Tanzania),
9. University of Rwanda, College of Science and Technology (Rwanda),
10. Nile Source Polytechnic of Applied Arts (Rwanda),
11. University of Burundi (Burundi),
12. Light University of Bujumbura (Burundi),
13. Ntare Rugamba University (Burundi),

Figure 7: Signatories of the Machakos Declaration

146. The portfolio of resources developed for training, communication and awareness building is extensive, creating a comprehensive platform for learning and informing future direction by all role players. **It is unfortunate that the majority of this material is not readily available online for download.** This has been the case since 2014 (last updated) and remains the case at present. The project indicated that the website is being redeveloped and will be incorporated under the UN-Habitat website, including all documents developed by the project, once completed⁵⁸.
147. A communication implementation and monitoring plan would have contributed to more focused and tangible / measurable contributions over the 7 years.
148. The Green Buildings Award was established in Kenya, but not extended to the region. After initial interest and three years of awards, very few projects were presented. It may have been ahead of its time, with inadequate numbers of green buildings at this stage for an annual competition and award. Having it established for qualifying projects, may however serve as an aspiration for developments in future.
149. Strictly measured against the indicators and targets defined for this Component, it did not deliver against all targets. However, considering the extensive networks established (refer Table 10 and MOUs listed above) and complementary initiatives that flowed from or built on the EEBA, awareness and capacity building has contributed an invaluable resource for East Africa. Provided the website is activated and resources made readily available online, the project will continue to do so.
150. Considering the extensive contribution made by the Component, it is rated **Satisfactory**.

⁵⁸ Update provided December 2018 that this is in progress.

Table 15: Outputs from Component 4

Expected Project Outputs	Examples of Outputs
<p>Output 4.1 Awareness of opportunities and benefits of EE finance in buildings, by the top-level management in the finance community in EA, created</p> <p>Output 4.2 Capacity of the local finance community in each participating country reinforced</p> <p>Output 4.3 Capacity of the private sector at national level regarding estimating investment requirements and risks of EEB finance reinforced</p>	<p>The MTR reported on a workshop held in September 2013 in Nairobi, Kenya, aimed at creating awareness among the finance community of East Africa. The Financing Green Building in Africa workshop was a first of its kind, offered with assistance of Strathmore University. It was attended by a total of 10 local financing institutions, including commercial and development banks of the region have attended together with 2 international financing institutions (IFC and KfW). The MTR found it had contributed to create a minimal awareness level among the target group.</p> <p>A Bank Breakfast was held in September 2016 (PIR 2017) to showcase existing green mortgages and to create the conditions necessary to activate credit lines.</p> <p>The KGBS reported a collaborative summit, focused on sustainable finance towards SDGs, held with UN Habitat in 2017. The event was attended by more than 300 attendees. It was held over three days, incorporating conference sessions and training.</p> <p>The EEBEA developed two publications to support sustainable building financing in the region:</p> <ul style="list-style-type: none"> - Ulterino, M. 2018. Sustainable Building Finance: A Practical Guide to Project Financing in East Africa. - Ulterino, M. 2018. Green Finance Models: Assessing Finance Product Capacity to Lower Barriers to Green Building in East Africa.
<p>Output 4.4 Pilot financial mechanisms in the main partner countries, Kenya, Uganda and Tanzania are established</p>	<p>Pilot financial mechanisms were not established and the recommendations of the MTR regarding the development of draft regulations was not implemented. One significant change since the start of the programme is the interest of key financing institutions to establish lines of credit in support to clean energy. These initiatives were identified, and although not directly ascribed to the EEBEA, this growing interest would suggest a more conducive environment has been created:</p> <ul style="list-style-type: none"> - AFD Sunref programme. This initiative (introduced in Table 10) offers finance through local banks for clean energy projects at preferential rates. The initiative had been identified during the project design phase and launched early on, but its focus has primarily been on RE with a limited EE scope. The KGBS has reportedly lobbied with SUNREF to include EEB to provide a 100% loan for Energy Certified buildings. This will be introduced with the launch of the next phase. [It was noted by respondents that most local branches of local banks are not aware that this offering exists and is therefore not extended to clients on a regular basis.] - Kenya Green Bond. The Kenya Bank Association and Nairobi Security Exchange, in collaboration with other entities, launched a green bond in 2017. The bond will invest in green building developments verified by the KGBS. - Rwanda has launched the Rwanda Green Fund (FONERWA, www.fonerwa.org) that provides grants and concessional finance (up to USD300,000) for projects with green technologies. The fund was established with seed funding from the Government, UNDP, Green Climate Fund and KfW and the Green Growth Initiative (GGI) provides technical support. Call for proposals are made twice a year and projects

Expected Project Outputs	Examples of Outputs
	<p>compete for funding. Fund applications are overseen by the Fund Management Team/Secretariat with ultimate funding decisions made by the Fund Managing Committee based on evaluations and recommendations provided by the Fund Management Team and Fund Technical Committee.</p>

151. This component struggled to gain traction.
152. The banking sector was found to be more complex than anticipated at project design stage. As an example, in Kenya, mortgage finance is dominated by the 5 tier 1 banks, holding over 70% of the market. The overall mortgage market is small, estimated at 250 billion Kenyan Schillings, totaling approximately 25,000 mortgages for the country. The potential size is estimated to be only 4 times this at present with only 11% of the urban population being able to afford a mortgage. Affordability of housing is aggravated by the housing demand that outstrips supply 4 times. Projections are that more than 2 million homes are needed in the next 4 years, with the government Big 4 Agenda targeting construction of 500,000 affordable and social housing.
153. In this context, banks are not competing to attract borrowers and offering incentivized loans is not a priority. Engagement with banks are now shifting to present EEB as a way of “de-risking” finance, promoting the idea that developers willing to invest in EEB would present a lower lending risk.
154. Feedback from interviews stated that the work that was done (publications and workshops) are being used to engage stakeholders in the finance sector, including the Treasury Departments, with discussions and presentations.
155. The component showed limited direct progress but work by parallel initiatives have begun to unlock green finance opportunities. Awareness regarding these however remained very low among all people interviewed. Despite the steps taken (Table 15) and the extenuating circumstances noted, this component did not deliver on 3 of the 5 stated targets as captured in the results framework. The recommendations of the MTR were also not implemented.
156. Considered against the indicators and targets for this component, delivery is rated **Moderately Unsatisfactory**.

Table 16: Outputs from Component 5

Expected Project Outputs	Examples of Outputs
<p>Output 5.1 Demonstration projects designed</p>	<p>The following outputs were available for review:</p> <ul style="list-style-type: none"> - Technical advice template and example of a completed technical advice report. - A list of projects and project partners was collated from project progress reports showing agreements established for the EEBA to provide technical input on designs. Projects listed are in Burundi, Kenya, Rwanda, Tanzania and Uganda and includes low cost and higher end housing developments and commercial buildings (including office buildings, a hotel, school, club house and an airport terminal). The majority of these developments were however reported as “not yet started” in the last available PIR 2017. A consolidated list with updated status was requested from the PMU. - A list, “<i>Breakdown of technical advices provided</i>” was provided indicating that technical advice had been delivered to eight projects. “Technical Advice Review” reports for two of these projects were also shared. It is not apparent what the implementation / construction status is on any of these⁵⁹. - The project reports to have provided technical advice that influenced 10,000 housing units directly and approximately 5,000 units indirectly with technical advice mostly targeted at government projects, developers and building owners. The list referenced in the previous point, “<i>Breakdown of technical advices provided,</i>” listed only 5,300 housing units.
<p>Output 5.2 Demonstration projects implemented</p>	<p>A list of implemented demonstration projects was not available for review. The MTR referred to pilot projects implementing EE best practice principles in Kenya, Tanzania and Rwanda, but provided no details that allowed cross referencing or confirmation. The list of projects collated from progress reports (refer Output 5.1 above) offered limited insight regarding implementation status⁶⁰.</p> <p>The majority of projects listed as evidence of co-finance (refer paragraph 5.6 and Annex III) appear to be in planning phase. Two projects, the Kigamboni Housing project in Tanzania and Tanzanian National Housing Corporation Head Office building, were confirmed as constructed⁶¹.</p> <p>Site visits were arranged by the KGBS to green buildings certified by the council as well as housing prototypes built by the Kenyan Government for a planned affordable housing development:</p> <ol style="list-style-type: none"> 1. Garden City Mall, Nairobi, Kenya 2. Garden City Apartments and Villas, Nairobi, Kenya 3. Ministry of Housing prototypes, undisclosed location⁶², Nairobi, Kenya

⁵⁹ A further list titled: “EEBA technical Advice and CO2 calculation” (included in Annex III), with additional information was provided on 24 October 2018. This list requires further analysis, cross referencing against previous data sets and triangulation against publicly available information, but do provide names for additional projects and some data regarding projects status for a selection of the projects.

⁶⁰ As above, further list titled: “EEBA technical Advice and CO2 calculation”, with additional information was provided on 24 October 2018. This list requires further analysis, cross referencing against previous data sets and triangulation against publicly available information, but do provide names for additional projects and some data regarding projects status for a selection of the projects.

⁶¹ The submission sent 24 October, titled: “EEBA technical Advice and CO2 calculation” may also provide further clarification pending review.

⁶² The project site was deemed sensitive. The exact location was not disclosed, and photos were not allowed.

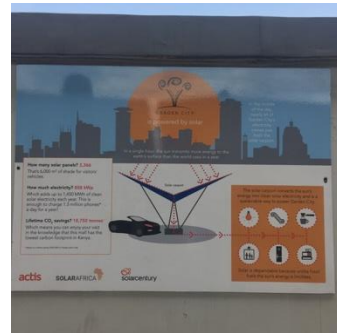
Expected Project Outputs	Examples of Outputs
	<p>The Garden City commercial and housing developments demonstrated clearly demonstrated green building design principles. The KGBS reportedly have 6 buildings certified in the country (could not be confirmed from the KGBS website) and a pipeline of 34 applications in various stages of certification. This suggests a growing interest from high end, commercial developers for green buildings.</p> <p>The prototype energy efficient housing unit was built alongside a number of prototypes intended to inform an affordable housing development in Nairobi. The Ministry had built three prototypes, one each of a 1, 2- and 3-bedroom units. KGBS obtained permission to retrofit a half-constructed unit with energy efficiency measures (insulation, sun shading, solar water heating, efficient lighting, etc.) to demonstrate the benefits of building green. The Ministry was also building another unit incorporating passive design principles (orientation, natural light, ventilation and locally produced blocks). No decision had been taken regarding which prototype and which measures would inform the remainder of the development. Discussions with the Ministry in the regard was ongoing. Informal discussions with the Ministry representative at the site suggested a reluctance to invest any additional costs.</p> <p>The site will receive high profile and media exposure once launched and the prototype developments can serve to showcase the benefits of EEB in affordable housing. This initiative would benefit greatly from measurement and verification that quantifies usage and compares the energy usage of the respective units to demonstrate improved affordability of use.</p>



Garden City Mall: Natural ventilation and lighting.



Garden City Mall: Recycling area.



Garden City Mall: Solar PV installation.



Garden City Village



Sun shading



Solar water heater tank (collector plate on roof) with insulated pipes

Figure 8: Garden City Mall site visit

157. Under Component 5, the project had ambitious targets for implementing energy efficiency measures as demonstration projects in the respective national housing developments identified during the planning phase. These housing developments did not proceed as planned. The focus of the project therefore shifted towards other planned developments and offering an advisory function to review plans and influence designs to be more energy efficient.
158. It is unclear how many of the projects identified for technical assistance (as per progress reports) proceeded with (i) technical assistance, (ii) adoption of EE design recommendations and (iii) actual implementation in construction.
159. Interviews and discussions during the regional conference confirmed that discussions with housing associations, governments, donors and developers to encourage the adoption of EE principles continue. It is also noted that practical training is offered to developers and other housing stakeholders to sensitize and provide them with technical assistance on EEB.
160. The number of buildings constructed to demonstrate EEB and the extent to which EE has been adopted was not evident. The impact of adopted EE interventions was not measured and verified for any of the developments in order to quantify emission reductions achieved or to employ as compelling motivation for further developments to follow suit.
161. Based on the available information, it appears that progress towards the targets⁶³ were limited and delivery on outputs for Component 5 is rated **Unsatisfactory**.
162. The contribution of Component 2 is critical to establish a policy framework for future progress. Components 1 and 3 are important to support the adoption and refinement of Component 2. Component 4 has shown limited direct progress, but work by parallel initiatives have begun to unlock green finance opportunities. Awareness regarding these was very low among all people interviewed. Delivery of outputs across the five components is rated **Moderately Satisfactory**.

5.5.2 Delivery of Outcomes

163. Table 17 summarizes progress against targeted direct outcomes⁶⁴ as defined in the reconstructed Theory of Change.

⁶³ Targets for Outcome 5.1: Technical Assistance provided to at least 50 EEB projects in the five countries; Outcome 5.2: At least 600,000 housing units in the region and at least 100 large institutional and commercial buildings adopt EE technologies. CO₂ emissions reduced by 7.5 million tons from direct and indirect impacts.

⁶⁴ Direct outcomes understood as short and medium-term effects of the intervention's outputs; a change of behaviour resulting from the use/application of outputs, which is not under the direct control of the intervention's direct actors

Table 17: Delivery on direct outcomes

Outcomes as per the TOC at Evaluation	Indicators	Status	Comments / Evidence
Outcome 1. Reliable Energy Consumption Benchmarks in the Building sector available for East Africa	Establishment of a common energy use measurement system and bioclimatic database for building and urban planning for the region.	Achieved	Consumption benchmarks and bioclimatic data developed and published for six climatic zones in the East Africa Region (refer Outputs for publication titles). Concerns relate to the availability of this information in the absence of a central online data repository or functional website.
Outcome 2. Partner countries have initiated a review process and progressed towards adopting new building codes with EEB regulations and standards ¹ .	All partner countries have reviewed and/or adopted new building code with EEB regulations and standards ⁶⁵ Increased number of housing projects that apply EEB measures. Increased number of building permits for EE retrofitting.	Partially achieved	Burundi, Rwanda and Uganda adopted building codes. Rwanda is implementing a mandatory system for green building compliance relevant to all new buildings. This will be administered by District one Stop Centers (building permitting centres) and Rwandan Housing Authority. Burundi is also working on operationalization of the code and have identified EE appliances (e.g. SWH, lighting, etc.) as one the first priority areas for standards; Uganda established a legal framework and adopted building codes that incorporate EE in November 2018 (legal requirement that it be released 6 months after adoption of the Act, April 2018); Amended building codes for Kenya has been at Parliament for approval since 2014*; Tanzania: Working group established, with aspects of EEB included in building permitting at local government level.
Outcome 3. Increased awareness of energy efficiency best practices in buildings and capacities built among professionals and line ministries staff	Increased awareness of EE and EEB; East African Buildings Award established; and Increased number of submitted and approved building permits that are EE Compliant.	Partially achieved	Increased awareness was confirmed by attendee numbers reported for training and workshop events and interview feedback. An EA green building award was established in Kenya, but not extended to other countries. Data not available regarding building permits compliant with EE.
Outcome 4. All partner countries initiated the introduction of financial instruments to promote EEB and finance institutions have introduced dedicated lines of credit for green buildings.	Attractive credit lines with low interest rate for financing EEB investments available in the region	Limited	Training and capacity building done. "Green" credit lines introduced by parallel initiatives (refer Outputs); Green bond issued for Kenya to attract green investment.

⁶⁵ Incorporates regulations on environmentally friendly building designs, appropriate building materials and use of integrated energy savings appliances such as SWH and efficient lighting

Outcomes as per the TOC at Evaluation	Indicators	Status	Comments / Evidence
	Appropriate financial incentives set by governments for investments in EEB		No evidence found of progress made towards tax rebates, favourable import duties or any other government incentives for EEB or EEB technologies in the region.
Outcome 5. Implementation of pilot projects for EE demonstration purposes	<p>Sufficient number of demonstration projects implemented in each of the Partner Countries; increased investment in EEB as a result of successful demonstration projects implemented.</p> <p>It is noted that this outcome specifically links to the direct carbon emission reduction target for the project.</p>	Limited	<p>As discussed under outputs, the targets linked to this outcome were ambitious and dependent on the mass housing developments committed as co-finance by partner countries.</p> <p>There is a lack of information available to assess the extent to which this outcome was achieved (refer related Outputs discussion).</p> <p>Importantly, interventions were in no way monitored or verified to gauge the direct carbon emission reductions. To quantify the savings, an ex-post M&V / savings quantification will be required, but is likely to be hampered without a properly defined baseline. The project manager noted the intent for a M&V study to be commissioned as a final piece of work on the project, but no further information regarding this study (e.g. terms of reference, scope of work, etc.) was provided.</p>

* Copy was not available for review, but an overview presentation was shared.

164. From the TOC (refer Section 4) a number of drivers and assumptions were noted to support the pathways from outputs to outcomes. A few assumptions and drivers were not realised as foreseen, thereby impacting the progress made towards the intended Outcomes. These are noted here:

165. It was intended for measured data from Component 1 to inform and support the building code development and adoption process. Extensive delays with delivery of Component 1 (planned for completion within the first 9 months, but delivered only in 2015) limited the contribution of quantifiable savings data to influence the extent to which EE were incorporated into amended building codes.

166. It was assumed that the stated commitment of partner countries and stated interest by the region will lead to active participation in development, adoption and enforcement of amended building codes. It was further assumed that internal institutions (e.g. building code committees) and intergovernmental/multi stakeholder structures existed or would be created by Government partners to lead this process. Despite the extensive stakeholder engagements that preceded the project approval and the country commitments, this was not the case. For example, steering

committees were not supported, or participation was made conditional on receiving compensation, and country efforts did not proceed without the added support of a project officer – a new role created for this purpose. It took a long time for the project to re-orientate itself to this changed reality.

167. It was anticipated that training interventions and high-quality training material will translate into adoption and integration of EEB principles and practices into the existing scope of work of individuals and entities. These interventions were helpful for sensitization but was generally too short or limited to create adequate capacity or confidence for independent implementation, despite time for practical application of learnings being allowed in training workshops. This was raised during a number of interviews and illustrated by the dependence created on technical assistance from the project.
168. To a large extent training took a top down approach, focusing training on professionals and public sector, with the assumption that this would be adequate to influence building practices in the region. Although public was identified as a target audience, material was initially too technical for general consumption. The project recognised this and adjusted to create awareness and demand from consumers.
169. It was also assumed that technical and “intangible”, long-term benefits would create a demand for EEB. In reality government officials were more interested in tangible immediately demonstrable benefits to their communities. The project was challenged to identify the messaging that could effectively support these communication needs.
170. It was furthermore assumed that banks and financial institutions have an interest in offering green loans or credit lines and would introduce these if they understand how or if they could be linked to low cost green funding. This was proven to be untrue. The majority of banks in the region function as community banks, with limited capital and limited appetite for offering mortgages. Those international or ‘tier 1’ banks active in the region that do have green mortgage instruments, do not currently make them available in the region. In general, mortgages constitute a very small percentage of the banking business and interest rates are very high⁶⁶ reflecting the perceived high risk of this business offering. Commercial banks were not interested and not easily swayed to participate without seed funding or the availability of low interest finance.
171. The project logic relied heavily on the commitment from Partner Governments to actively participate in or have powerful influence on mass housing projects. Accordingly, the project anticipated that the mass housing demonstration projects would deliver compelling evidence of the benefits associated with EEB resulting in prompt policy adoption and buy-in across all sectors. It had also anticipated that significant direct carbon emission reductions will be achieved by implementing EE in

⁶⁶ The Kenyan government has been concerned that high interest rates were deterring potential borrowers and therefore passed legislation to regulate rates. The Banking (Amendment) Act 2016 capped loan interest at 4% above the Central Bank Rate from September 2016. The CBK main lending rate is currently 10%, giving a maximum commercial interest rate of 14%. Source: African Business Magazine, 6 September 2017.

600,000 housing units and 100,000 public and commercial buildings planned for demonstration purposes (as committed by Partner Governments at inception). In the absence of mass government housing projects this project outcome was not realistically achievable.

172. Consequently, the project shifted its focus to providing technical assistance and design revisions for planned developments. The new assumption was that this input and revisions will result in EE buildings being built. Constructions have, however, not always proceeded as planned (may potentially still) and no data collection mechanism was established to gauge to what extent the proposed EE measures have been implemented. Reportedly, there were also instances of developers wanting financial support for implementing the proposed efficiency upgrades. A partial solution might be to make TA subject to feedback or data sharing following construction.
173. The assumption was that pilot projects would demonstrate benefits that will lead to large scale adoption and uptake of EE measures. For a pilot or demonstration project to successfully serve for demonstration purposes, the building needs to be available for site visits and/or energy consumption or thermal comfort levels or some form of data would be necessary to demonstrate the superior performance to 'business as usual' practice. No evidence can be found that there was effort made to measure and report or showcase any of the multiple projects listed as candidate pilot or demonstration projects on progress reports. This was also pointed out at MTR.
174. The high level of reliance on project partners to lead processes and contribute infrastructure has severely hampered the project's ability to deliver. Where challenges were identified that were within the control of the project, adjustments were made to mitigate the impact (e.g. appointment of project officers and offering of technical assistance for building developments).
175. Several interviewees emphasized that shifting ingrained behaviour is difficult, requires time and perseverance. The majority of interviewees felt that the project is at a tipping point requiring more communication, wider and continued awareness creation, encouragement and training to achieve the envisaged mainstreaming.
176. The growing pipeline of projects wanting green certification, reported by the KGBS, suggests a definite shift in behavior in the commercial and high-end housing sector. An advertisement in the Kenya Airways in-flight magazine that uses EE as a selling point for a new luxury housing development (refer Figure 9, second last paragraph, listing SWH, rainwater harvesting and energy saving technologies), seem to confirm that EE is becoming a desirable characteristic of new buildings.
177. With consideration of the diminished support and contribution from partner countries, Delivery of Outcomes is rated **Moderately Satisfactory**.

First class. Without the jet lag.

DEERPARK
MIOTONI - KAREN
By Bogertman + Partners Architects

Located in the exclusive Miotoni Karen area near The Hub, Karen Country Lodge, Karen Hospital and international schools such as Millcrest, Banda and Brookhouse. Inside UN Green Zone (approved UN staff accommodation) and adjacent to National Defence College.

The entire development of 10 units sits nestled within 5 acres of enchanting indigenous forest. Each unit has a built-up area of 500m², 5 ensuite bedrooms, double volume dining and family rooms, family kitchen, hotel standard fry kitchen and 2 staff quarters. All units have detached personal entertainment wings with gym, pool, steam room, Jetmaster wood fireplace and lawn.

24-hour multi-guard coverage, CCTV cameras, electronic chip and pin access and guarded gatehouse. Drive through Porte Cochere and parking for up to 6 cars. 24-hour standby generator and private borehole. Solar water heating system, rainwater harvesting, energy saving technology features and waste recycling plant. Groundbreaking took place in Q1 of 2016, and completion is expected at the end of August 2018.

Scan for a virtual tour

DEERPARK IS A DEVELOPMENT OF DEERPARK LIMITED
To view this spectacular development, call +254 700 308 308 or visit www.deerpark-karen.com

Figure 9: Luxury housing development advertisement, M Safiri, August 2018

5.5.3 Likelihood of Impact

178. The assumptions and drivers that will support a transition from outputs to direct outcomes are partially in place, as discussed above under delivery of outcomes.
179. Despite not all outcomes being met in full, a robust platform has been established consisting of a sound knowledge base, high level legal framework in three countries, growing voluntary activity at local government level in Kenya and Tanzania, definite growth in capacity and awareness among stakeholders and a few green credit lines created. The majority of assumptions and drivers that would support the transition to an intermediary state holds true, with significant impetus established outside of Partner Governments likely to partly maintain momentum.

180. In an informal discussion with the Kenyan government representative on site where the housing prototypes were being developed, cost containment was stated as a priority and it was made clear that any EE measures associated with additional implementation costs would be avoided. **The absence of mandatory requirements or building codes for EE presents a high risk that EE will not be adequately incorporated into the mass housing developments.** It is noted that the current Project Manager and Chief of the Energy Unit at UN-Habitat was included onto a committee appointed to inform the planned Big 4 housing developments. The KGBS was also actively lobbying government and the relevant Permanent Secretary. These engagements will be critical to try influence the design and construction of the 500,000 affordable houses planned in Kenya for the next 5 years.

181. Unintended consequences were noted, both positive and negative, but none expected to significantly influence the project making its intended contribution.

Table 18: Unintended consequences

Project activity	Negative impact (if any)	Positive impact (if any)
Kenyan regulation imposing SWHs for new buildings above a specified size.	<p>There is no local manufacturer for SWH, requiring all SWHs to be imported. Only a few suppliers were active in the market therefore the available volumes were limited and insufficient for the demand created by the regulation.</p> <p>Although preferential import duties were considered, these were not applied therefore SWHs remained expensive.</p> <p>No quality standards were imposed for SWH, resulting in an influx of low-quality products.</p> <p>These complications have led to the Regulation being partially suspended with all fines revoked.</p>	<p>This context did create an opportunity for the establishment of local manufacturing capacity. This was however not explored timeously.</p>
EE creating a perverse incentive (i.e. the rebound effect of EE)	<p>It was noted by respondents that energy efficient technologies such as energy savings bulbs and EE computers, create despondence from consumers. Lamps are left burning longer or computers are left on.</p> <p>Costs remain the primary driver for EE rather than the environment, therefore lower energy costs result in poor behavior and habits.</p> <p>More education and awareness are necessary.</p>	-
Dependency on Technical Assistance offered by the EEBEA	<p>Technical assistance did not create internal capacity and independence, but rather encouraged repeat or follow up requests for review of plans/drawings.</p> <p>This observation related mainly to property developers. It was noted,</p>	<p>Repeat requests for support does suggest that value was perceived.</p>

Project activity	Negative impact (if any)	Positive impact (if any)
	repeatedly, that skills transfer is not immediate, requiring a period of active handholding in a way that will enable integration of new techniques into everyday practices i.e. needed to effectively achieve mainstreaming.	

182. The project had not set out to influence behavior more broadly than the East African Partner Countries. Through the World Green Building Council, the Regional network and regional conferences (e.g. Regional Conference on Sustainable Cities, Energy and Climate held in Cameroon during May 2016 with attendance from 20 countries), building practices and building codes have been actively influenced and information shared more broadly. The Task Manager also indicated that material from the EEBEA was shared with and used by another UN Environment project in the Caribbean with similar tropical climate.
183. The excel-based flow chart, 'Likelihood of Impact Assessment Decision Tree', did not produce an automatic rating. The evaluator's view is that the project impact is **Moderately Likely** considering (i) the two largest markets did not adopt building codes, no timelines for adoption were indicated and a 2014 presentation overview of the proposed building codes for Kenya was the only building code related document available for review, (ii) demonstration projects were not constructed and (iii) limited financial instruments and no tax incentives were created.

Effectiveness is rated Moderately Satisfactory

5.6 Financial Management

184. The project budget, as stated earlier, was USD 15,336,000 with in-kind support of Partners matching the GEF grant 4:1. While the budget is within the acceptable range for a GEF full size project⁶⁷, it underestimated the scope of project.
185. Financial management information for the project was readily shared including expenditure reports, cash advances and co-financing reports.
186. The project budget per line item was presented in detail in the Project Document (Annexure 1). Subsequent expenditure reports track expenditure progress against each line item. Interviews confirmed that unspent budgets were reprogrammed with annual budget revisions. Funds were transferred between budget lines to meet changing

⁶⁷ GEF Project Financing of more than two million US Dollars

needs and provide more resources for training. This was done through consultation between the UN Environment and UN Habitat.

187. The evaluation requirements call for an analysis of expenditure by project component. Table 19 shows the initial funding allocation planned for each component. The project did not track expenditure against components. Project partners were required to report against budget lines rather than project components and the previous system (IMIS) used for tracking and reporting, did not allow for reporting against activities. Consequently, there is no way to reflect expenditure reports back to components.

Table 19: Expenditure by Outcome/Output

Component / Output / Outcomes	Estimated cost at design (USD)	Actual cost expenditure (USD)	Expenditure ratio (actual/planned)
Component 1: Energy Efficiency Data and Benchmarks in the Building Sector.	900,000	Not available	-
Component 2: Formulation and Adoption of Energy Efficiency Codes in Buildings.	1,980,000	Not available	-
Component 3: Awareness Raising, Capacity Building in EE, and Best Practices in the Building Sector.	2,053,000	Not available	-
Component 4: Appropriate Financial Framework for the Promotion of EE Measures in Buildings	2,000,000	Not available	-
Component 5: Development and Implementation of Pilot Projects	7,618,000	Not available	-
Project management	785,000	Not available	-
Total	15,336,000	Not available	-

188. Component 5 (Development and implementation of pilot projects) contributed the largest cost component. Of this budget, Partners had committed USD 6,983,000 in in-kind contributions in the form of mass housing developments. Table 20 presents the levels of planned and actual expenditure for the GEF, UN Environment, UN-Habitat and government contributions. It was noted in Section 5.5 that government housing had not proceeded as anticipated at design stage. The numbers of projects and building units listed (noting that the provided information is incomplete), present a fraction of the units anticipated in the Project Document⁶⁸ and committed by Partner Governments. However, the Government Co-finance⁶⁹ that was reportedly realized has more than doubled. The bulk of this in-kind contribution is reflected against Component 5. The Partner contributions report reflect large sums against Component

⁶⁸ The project reported ~15,000 units were influenced (directly and indirectly) compared to the target of “at least 600,000 housing units in the region and at least 100 large institutional and commercial buildings”

⁶⁹ Co-finance are project resources committed by the EA itself or by other non-GEF sources at the inception of the project, and which are essential for meeting the GEF project objectives. Meeting co-financing obligations and reporting on them is part of this legal agreement.

5 for every country, with the “Actual” contribution of USD 24 million from Tanzania most notable.

189. Clarifications and supporting information to substantiate these contributions was supplied as a tabled list (refer Annex III) on 11 October 2018 totaling USD 28,778,000. Given the timing of this submission, the list could only be verified using an internet search. The internet search confirmed the existence of Government projects or Government supported projects accounting for USD 18,974,000. The exact share contributed by the respective Governments towards these projects could not be determined from online resources. Inadequate information could be found to confirm projects and contributions related to another USD 7,070,000 reported co-finance. The remainder of the reported co-finance did not appear to qualify as co-financing or could not be confirmed in any way⁷⁰.
190. It is further noted that the MTR had captured a similar concern regarding co-financing, Paragraph 188, page 42: *“No data was available for assessment of the level of countries in-kind contribution (co-financing).”*
191. The FMO confirmed that the magnitude of the reported amount was noted, queried and confirmed by the EP, without additional clarification.
192. It is noted that USD 18,000,000 of the reported co-finance is for the construction of the Tanzanian National Housing Commission Head Quarters Building - “NHC Place”. The construction of this facility and its budget could be confirmed⁷¹. It was also confirmed that the building obtained a Green Mark Certificate for its green building design elements, that included energy – reportedly the first commercial building in Tanzania to qualify for this mark. While this development does not align with the original social and affordable mass housing sentiment, it is an investment into green building with a financial contribution that well exceeds the total in kind co-financing commitment of USD 12,483,000.

Table 20: Co-financing Table (as at 31 December 2017)

Co-financing (Type / Source)	UN Environment own financing (USD '000)		Government (USD '000)		UN-Habitat & GEF (USD '000)		Total (USD '000)		Total Disbursed (USD '000)
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
- Grants	-	-	-	-	2,853	2,305	-	-	2,305 (GEF)
- Loans	-	-	-	-	-	-	-	-	-
- Credits	-	-	-	-	-	-	-	-	-

⁷⁰ A further list titled: “EEBEA technical Advice and CO2 calculation” (included in Annex III), with additional information was provided on 24 October 2018. This document lists projects that benefitted from technical advice and lists additional co-finance values. Numbers reported are not consistent with the earlier co-financing information (also provided in Annex III) and would require further scrutiny to assess stated values.

⁷¹ Source: <https://archello.com/project/nhc-place>

Co-financing (Type / Source)	UN Environment own financing (USD '000)		Government (USD '000)		UN-Habitat & GEF (USD '000)		Total (USD '000)		Total Disbursed (USD '000)
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
- Equity investments	-	-	-	-	-	-	-	-	-
- In kind support	200	287	11,883	31,570	400	1,067	12,483	32,922*	32,922*
- Other ⁷²	-	-	-	-	-	-	-	-	-
Totals	200		11,883		400		12,483		35,227

193. The project document had foreseen opportunities for leveraged financing from other initiatives and organizations⁷³. Discussion during the evaluation suggested that significant contributions were leveraged using the EEBA as basis for further donor funded projects and initiatives such as JENJA, SAMSET and ELITH. The AfD and IFC supported green credit lines, identified in the project document, were also realized. The AfD SUNREF is reportedly being extended in its next phase to include for EEBA if certified by the KGBS. Progress reports reflect no leveraged finance for the project.

194. Financial Management is rated in Table 21, below, with reservations related to the lack of transparency regarding co-financing and whether this potentially has a bearing on the rating. It is recommended that ideally an audit be done to understand the reported co-finance numbers and obtain evidence of stated contributions. If co-financiers are unwilling to participate, the audit should focus on confirming the information provided by the project to the extent possible.

Table 21: Financial Management Table

Financial management components		Rating	Evidence / comments
1. Completeness of project financial information:			
Provision of key documents to the evaluator (based on the responses to A-G below)		MS	81% – 100% applicable items A G are complete and made available to the evaluation.
A.	Co-financing and Project Cost's tables at design (by budget lines)	Yes	Comprehensive breakdown of the budget included as Appendix 1 to the Project Document with a breakdown to 4-digit budget line items e.g.: Budget Item 1201 Meteorologist under 1200 Consultants (local).
B.	Revisions to the budget	N.A.	The overall budget was not revised. Allocations per line were revised as reflected in expenditure reports. Confirmed by the FMO that in line variations were confined to a specified percentage and that the review and realignment of the budget were done annually done per line item in consultation between UN Environment and UN-Habitat.

⁷² This refers to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

⁷³ Resources which are not committed as part of the essential financing package at the outset, but which are mobilized subsequently, are not considered "co-finance" but "leveraged" resources.

Financial management components		Rating	Evidence / comments
C.	All relevant project legal agreements (e.g. SSFA, PCA, ICA)	Yes	Co-finance commitments included in the comprehensive letter of agreement
D.	Proof of fund transfers	Yes	Cash advance requests and signed approvals were made available.
E.	Proof of co-financing (cash and in-kind)	No	Limited information that does not correspond with the reported co-finance amount (refer Annex III)
F.	A summary report on the project's expenditures during the life of the project (by budget lines, project components and/or annual level)	Yes (partially)	Expenditure report by budget lines available to 31 December 2017 (not to date).
G.	Copies of any completed audits and management responses (where applicable)	N.A.	No audit on record
H.	Any other financial information that was required for this project.	N.A.	None identified
Any gaps in terms of financial information that could be indicative of shortcomings in the project's compliance ⁷⁴ with the UN Environment or donor rules		Yes	Clarification regarding co-financing was not provided (refer discussion above under co-finance)
Project Manager, Task Manager and Fund Management Officer responsiveness to financial requests during the evaluation process		S	FMO highly responsive. The Project Manager was slow to respond to requested clarifications and information, with a partial breakdown of co-finance only provided two months after the first draft of the TE was due.
2. Communication between finance and project management staff			
Project Manager and/or Task Manager's level of awareness of the project's financial status		S	
Fund Management Officer's knowledge of project progress/status when disbursements are done		S	Good substantiating information subject to review
Level of addressing and resolving financial management issues among Fund Management Officer and Project Manager/Task Manager.		MS	Challenges were presented by project delays, extensions, misalignment between how funds are accounted for between UN Environment and UN Habitat and the switch over to the UMOJA system from the old IMIS software. Feedback from interviews indicated that because of open channels of communication, these challenges were generally addressed and resolved with relative ease.
Contact/communication between by Fund Management Officer, Project Manager/Task Manager during the preparation of financial and progress reports.		S	Close proximity of UN-Habitat and the shared engagement system facilitated communication.

Rating for Financial Management: Moderately Satisfactory

⁷⁴ Compliance with financial systems is not assessed specifically in the evaluation. Nevertheless, if the evaluation identifies gaps in the financial data, or raises other concerns of a compliance nature, a recommendation should be given to cover the topic in an upcoming audit, or similar financial oversight exercise.

5.7 Efficiency

195. As discussed in Section 3.5, four no cost extensions were allowed over the project life, extending completion by three years, from June 2015 to September 2018.
196. While not cost effective for the Executing Agent and Partner, the no cost extensions did not obviously impact the delivery of the project in a negative way. Extended implementation timelines appear to have better aligned with government processes and provided for a prolonged period of engagement that may contribute positively. By chance, it is also well aligned to the Kenyan Government's recommitment to large scale development of affordable housing.
197. The project workplan and timetable (Appendix 5 of the Project Document) had anticipated the five components to run in parallel, but with a number of key dependencies between workstreams. Most notably, the development of benchmarks from Component 1 was scheduled to complete within 9 months with outputs informing Components 2 and 3. Technical training and capacity developed in Component 3 was in turn anticipated to support the implementation of the building codes adopted as outputs from Component 2. At the time of the MTR, mid 2014, no deliverables from Component 1 had been delivered. Work on Component 2 had proceeded without these inputs.
198. The project started off slowly, taking a long time to recruit a project manager. The project experienced a high turnover of project managers, further contributing to delays. Observations by the project team was that project managers were well qualified, but not adequately senior to gain (or be granted) access to high level government officials and building professionals, impeding project progress. The project budget did not allow for more senior recruitments.
199. As noted earlier, interfaces with project partners were not as well established and understood as anticipated, requiring additional time to understand where to focus engagement with the respective governments. This is partly ascribed to the long time that lapsed between project development stage, stakeholder consultation and the final approval.
200. Ineffective focal points within Partner Governments meant that the lean PMU was inadequately resourced to cover the full scope of the project activities. As a mitigation measure, UN Volunteers were recruited as project officers to support delivery in partner countries. This measure also faced challenges (discussed earlier, including limited funding for remuneration, inadequate infrastructure, facilities and resources), but once staffed with suitably qualified professionals, this provided for a more suitable and effective structure. It is noted that project officers were dependent on strong support from the PMU, which was not always available particularly when the PM role was vacant or filled in a part time capacity. Internal communication structures proposed by

the MTR to support this regionally distributed project implementation structure was not established.

201. The project effectively leveraged existing and parallel initiatives. As noted earlier, the EEBA provided a springboard for new initiatives (JENGA, SAMSET, ELiTH) and created a platform for entities such as the Green Building Councils to build on.
202. The rating for the efficiency of the project is informed by the high number of extensions. It is however noted that each one of the extensions was shorter than the norm. The evaluation also did not identify any group of stakeholders to have been negatively impacted on by the extensions. For these reasons an Unsatisfactory replaces the Highly Unsatisfactory rating associated with three or more-time extensions.

Efficiency is rated Unsatisfactory

5.8 Monitoring and Reporting

203. A comprehensive monitoring and evaluation plan was prepared as part of the project design phase (refer Project Document, Section 6 and Appendix 7). The M&E plan was appropriately structured with the majority of indicators SMART, baselines, indicators mid-point and end of project targets defined. It identified the means of verification, monitoring and sampling requirements, responsibility and time frames. The MTR provided a more detailed analysis of the design, baselines, indicators and targets. This evaluation confirms the M&E design rating of the MTR as Satisfactory.
204. The budget allowance of USD 60,000 for the Mid-term Review and Terminal evaluation is inadequate to allow for an evaluation in all participating countries in order to effectively assess project progress and performance. The Terminal Evaluation was shortened from two weeks to one and confined to Nairobi, Kenya and Arusha, Tanzania where the regional conference was hosted.
205. The costed M&E plan (Appendix 7 of the Project Document) also lists additional M&E activities with related costs, totaling USD 40,000 per year over four years “included in the project personnel activity”. This costing and assumption that the activities (annual surveys, GHG monitoring reports, etc.) could be absorbed under personnel costs is unrealistic. These activities were not implemented. Failure to implement these have limited the ability of the evaluation to assess the extent to which specific targets were achieved.
206. Regular reporting and performance tracking required by the M&E plan were implemented in adherence with the UN Environment and GEF reporting requirements. The roll-out of the M&E plan has included the preparation of project progress reports based on regular gathering and analysis of information relating to the project implementation that allowed the supervisory / backstopping agency to assess the

performance of the project. Reporting included half yearly progress reports; Progress Implementation Reports (PIR) on an annual basis, six monthly expenditure reports and the MTR. The MTR also referred to quarterly reports. These were however not made available. Reporting at such frequency would not be expected as a requirement for this project. The following reports were available for review:

207. PIRs for 2014, 2015, 2016 and 2017
208. Half yearly reports for 2014 and 2015
209. Mid-term Review, August 2014
210. Minutes of one regional project steering committee meeting (19 April 2013) and two national steering committee meetings (Burundi, 23 March 2015 and Uganda, 26 November 2013) were made available. No other minutes or meeting reports for steering committees were provided, despite requests for copies of these.
211. An initial draft PIR for 2018⁷⁵
212. The draft close out report for the project was requested, but not available.
213. The project was not required to report on gender.

Monitoring and Reporting is rated Moderately Satisfactory

5.9 Sustainability

5.9.1 Socio-political Sustainability

214. Socio-political sustainability varies across countries.
215. Rwanda has demonstrated clear commitment to green growth and has fully leveraged the knowledge and support made available by the EEBEA. It was recognised that continued awareness and capacity building will be helpful to assist with operationalization and integration across structures, but successful implementation is not dependent on receiving this from the EEBEA. Sustainability is expected to be high, without any dependency.
216. Burundi and Uganda have progressed well with the establishment of the high-level enabling policy context. Both countries have recognised the need for operationalization and the challenges associated with full implementation and integration. Adequate knowledge resources are available to both countries to progress

⁷⁵ Made available 4 October 2018

EEB. It is unclear from the interviews to what extent the political will exist to pursue this when competing with other national priorities. Both countries have the benefit of strong, vibrant and innovative academic institutions. Based on the limited insight gained from interviews with project related stakeholders with a natural bias and the challenges presented by conference attendees, it is anticipated that the process will likely continue, although slowly. Sustained progress would benefit greatly from continued support and engagement especially in the form of capacity building, awareness creation and training.

217. Burundi's sustained focus on EEB is likely to be diluted as a consequence of the ongoing civil unrest.
218. In Kenya, the extended delay in adopting EE building codes is problematic. The Presidency has launched its Big 4 Agenda, covering affordable and sustainable housing and urban planning. It targets the development of 500,000 affordable homes as one of the four priority interventions for the next five years. All Kenyan interviewees nominated this initiative as an important step forward for EE building practices. It is however noted that in reviewing available documentation relating to the Big 4 Agenda, the affordable housing component clearly covered cost of construction, however no reference was found to confirm that energy efficiency resulting in lower cost of living were being considered as part of the affordability measures. Informal discussions with Ministry representatives at the housing prototype site visit did not suggest that this was a priority. Added costs are in conflict with the urgent drive to deliver on housing targets. Without promulgation and implementation of building codes, mass housing under the Big 4 will be delivered without or with limited EE measures.
219. During interviews it was stated that 47 pieces of legislation or regulations relevant to affordable housing are being fast-tracked for promulgation, to support implementation of the Big 4 Agenda. This reportedly included those related to EE building codes and practices. Representatives from Kenyan government and government agencies such as the National Construction Authority and Kenyan Building Research Council showed keen interest and support for EEB, but also doubted the level of awareness and drive that exists within Government.
220. The Kenyan Building Research Council launched a strategic plan for the period 2017/18 – 2021/22 that incorporates sustainable (green) building in the 8 key result areas, both in terms of a research focus and coordination of a green building agenda for the country. The plan indicates 'strategies' under these key result areas that would build on the EEBA and comprehensively support progress towards the intended mainstreaming objective. It also projects a funding requirement for delivery on these areas and highlights the need for resource mobilization. Pending successful mobilization of resources, the extent to which implementation will be realized is uncertain, but inclusion of EEB as a strategic priority is a significant step. This is further

supported by two letters⁷⁶ from the Ministry of Transport, Infrastructure, Housing and Urban Development, acknowledging the importance of sustainable building, commending the EEBA project and requesting continued support and collaboration with UN-Habitat. Two further letters, dated 2016, were received from the Ministry, pledging continued support for the EEBA objective and suggestions to ensure the sustainability of the EEBA in Kenya. It is not apparent to what extent these proposed activities have been implemented.

221. At the time of the evaluation, the Kenyan Government announced that the Regulation requiring the installation of SWHs for all new buildings would be reviewed and discontinued fines for non-compliance. This does not suggest political commitment to EEB.
222. Kenya and Uganda may both benefit from active local governments, that could potentially create a groundswell towards EEB and sustainable cities, but at present this is not evident. Participation in the Covenant of Mayors and BEA initiatives may contribute to the desired level of participation at local government level.
223. Presentations made by the Tanzanian Government suggests that the Government has a renewed focus on sustainable urban and rural development, although the focus is currently broader than EEB. After the initial engagements with other Ministries, recent engagement with the President's Office – Regional Administration and Local Government, has seen greater participation. The country presentations identified many opportunities to influence building design and construction, including government-led mass housing developments.
224. EEB is not contrary to any of the country policies, but considering the level of participation while the project was active, there is limited evidence suggesting that there is a high level of ownership, interest and commitment among the Partner Governments (excluding Rwanda) to drive the implementation of EEB after project closure.
225. Sustainability will therefore largely depend on (i) active partners such as the KGBS, RwGBA, Uganda Martyrs University, Green Growth Initiative; (ii) continued efforts of complementary initiatives such as the BEA, SUNREF, etc, (iii) the quality of the academic platform created for building professionals; and (iv) global and regional trends influencing government and project developers at the high end of the market.
226. The majority of respondents had the view that change takes time, that it is difficult to shift behavior and that the project has only begun to create the required impetus, that it is now at a critical tipping point. Without continued inputs, it is unlikely that the momentum will be sustained. This perception is somewhat supported by the declaration drafted at the conclusion of the regional conference. The level of participation, interest and buy-in from all participants in formulating a memorandum

⁷⁶ Dated November 2017 and January 2018

representing their intent for a green building future, was high, but unlikely to be maintained without continued effort.

227. The impact of political factors on the project success is evident in the shift in focus from housing to land tenure, following the initial signing of the EEBEA in 2011. With Uganda following Rwanda and Burundi's lead in adopting a new Building Code in November 2018 and the inclusion of green buildings as a key results area for the KBRC Strategic Plan, the dependence on political factors have been somewhat mitigated.

Socio-political Sustainability is rated Moderately Likely

5.9.2 Financial Sustainability

228. All respondents raised funding as a major challenge. With the exception of Rwanda, all Partner Governments require significant further actions to implement and enforce the policy framework that has been established or to follow through on the policy review process that was initiated.
229. All respondents identified continued capacity building, sensitization, awareness creation, training as key to taking this process forward. Continued communication to the extent suggested will be highly dependent on additional funding.
230. Leveraged funding for complementary initiatives will not fulfil the financial requirement and only Rwanda has secured funding to progress the implementation of the Rwanda Green Building Minimum Compliance Guidelines.

Financial Sustainability is rated Unlikely

5.9.3 Institutional Sustainability

231. Once again, Rwanda is the only country where a comprehensive institutional framework has been created. District One Stop Centers (Building Permitting Centers) and the Rwanda Housing Authority (Central Agency) have been mandated to implement the Green Building Minimum Compliance System⁷⁷. Implementation has been integrated into employee performance compacts (KPIs). Compliance with the system is expected to be high because of high penalties imposed for non-compliance.
232. Kenya has taken a first step with the incorporation of green buildings as a key results area for the KBRC, provided resources can be mobilized for implementation.

⁷⁷ The system consists of 5 Modules with 29 Green Building Indicators (10 Mandatory Indicators and 19 Optional Indicators) A total of 190 points are available and 60 points are required to achieve Green Building Minimum Compliance.

233. Formal amendments to university curricula have to follow a lengthy government process (highlighted during two separate interviews). “The Machakos Declaration on Mainstreaming Sustainable Building Design in Curricula of Higher Learning and Practice in East Africa”, endorsed by 13 universities across the region, opened an opportunity for tertiary institutions to initiate this process to review and integrate sustainable building design in their curriculum. It could be demonstrated that learning material and/or the Sustainable Building Design for Tropical Climates Handbook have been incorporated as tools for instruction by some of the participating municipalities.
234. No other evidence was found of Government structures or institutions established and mandated with EEB or of integration of EEB into existing institutions, frameworks and structures.
235. The establishment of the green Building Councils (KGBS, RwGBA and regional network) combined with the Green Building Award are likely to support the growth and sustainability of green buildings in the commercial sector and high-end residential market. A similar organisation is being established in Tanzania. – currently listed as “prospective” on the World Green Building Council website. Reportedly, Uganda will follow suit.

Institutional Sustainability is rated Moderately Unlikely

6 V. Conclusions and Recommendations

6.1 Conclusions

236. The EEBEA project has made important inroads in raising the profile of energy efficient buildings in East Africa, placing the topic on the agenda in all partner countries [*Strategic Question*]. It has created an extensive portfolio of high-quality knowledge resources, establishing a comprehensive platform to support planning and inform decision-making by the important role-players related to building developments.
237. Rwanda, Uganda and Burundi have made good progress towards establishing a high-level policy framework for efficient building practices.
238. Rwanda has established a comprehensive institutional framework, serving as a best practice case study for progressing mainstreaming of energy efficiency in buildings. District One Stop Centers (Building Permitting Centers) and the Rwanda Housing Authority (Central Agency) have been mandated to implement the Green Building Minimum Compliance System⁷⁸. Implementation has also been integrated into employee performance compacts (KPIs). This level of integration creates conditions that are highly conducive to mainstreaming of efficient building practices.
239. Whilst the project had not set out to influence behavior more broadly than the East African Partner Countries, it has had significant influence beyond its boundaries. It has influenced regional activities through collaboration with the World Green Building Council, its Regional network and regional conferences. Through the UN Environment networks, resources from the project were also made available to Caribbean countries with a similar, tropical climate. [*Strategic Question*]
240. The EEBEA has also demonstrated exceptional success with leveraging complementary initiatives and international funding to widen its sphere of influence. The EEBEA was successfully used as basis for further donor funded projects and initiatives such JENJA, SAMSET and ELITH. It provided a springboard for new initiatives funded by AfD, IFC and Nordic Climate Fund, among others, and created a platform for entities such as the Green Building Councils to build on. [*Strategic Question*]
241. The project faced many challenges. It targeted a well-designed, but highly ambitious scope of activities within a very short timeframe. This comprehensive scope that included policy revisions, was not fully enabled by the available budget and small project unit.

⁷⁸ The system consists of 5 Modules with 29 Green Building Indicators (10 Mandatory Indicators and 19 Optional Indicators) A total of 190 points are available and 60 points are required to achieve Green Building Minimum Compliance.

242. Project implementation was hindered by limited support from project partners (both the resident Habitat Program Managers and national focal points from partner countries) as well as changed priorities or implementation plans related to mass government housing projects. The failure of Government partners to support the project to the extent initially committed or to the extent anticipated at planning stage, negatively impacted implementation and progress.
243. The reliance on project partners to lead processes and contribute infrastructure has severely hampered the project's ability to deliver. Where challenges were identified that were within the control of the project, adjustments were made to mitigate the impact (e.g. appointment of project officers and offering of technical assistance for building developments).
244. The governance structures designed for the project failed to provide the governance, oversight and strategic direction function it was intended. The failure of the steering committee structure also meant that high profile government representation and regional forums such as the EAC could not be fully leveraged for support and sponsorship. Consequently, an opportunity for cross-fertilization between countries was underutilized. [*Strategic Question*]
245. The MTR recommendations provided good guidance to the project, but a number of key recommendations were not implemented or only partially implemented. [*Strategic Question*]
246. After seven years of implementation, the sustainability of interventions and the adequacy of the momentum created towards mainstreaming of energy efficient building practices remain uncertain. Sustainability is directly related to the extent to which the policy framework has been established, operationalized and institutionalized and/or the extent to which buy in has been demonstrated by Government building programs.
247. Kenya and Tanzania, the two largest markets in the region, have not adopted energy efficient building codes. No timelines could be confirmed for adoption in either of these countries and the draft building codes for Kenya were not available for review. Demonstration projects were not constructed, and limited financial instruments and no tax incentives were created. Uganda and Burundi still require considerable work to operationalize and implement their newly adopted policy frameworks and both countries have recognized the numerous challenges anticipated in the integration of EEB into existing institutions, frameworks and structures.
248. EEB is not contrary to any of the country policies, but considering the level of participation while the project was active, there is limited evidence suggesting that there is an adequate level of ownership, interest and commitment among the Partner Governments (excluding Rwanda) to drive the implementation of EEB after project closure. [*Strategic Question*]

249. Sustainability will therefore largely depend on (i) active partners such as the KGBS, RwGBA, Uganda Martyrs University, Green Growth Initiative; (ii) continued efforts of complementary initiatives such as the BEA, SUNREF, etc, (iii) the quality of the academic platform created for building professionals; and (iv) global and regional trends influencing governments and project developers at the high-end of the market.
250. The establishment of the green Building Councils (KGBS, RwGBA and regional network) combined with the Green Building Award are likely to support the growth and sustainability of green buildings in the commercial sector and high-end residential market.
251. Preparation and readiness: The first disbursement was made within 3 months of the approval date, all legal instruments were signed timeously and comprehensive stakeholder analysis and engagement were done at design stage. Challenges pertained to the mobilisation of staff, which delayed project start by six months. Although project steering committees were established with high-level representation by key stakeholders, the only evidence of meetings provided were for 2013. **Moderately Satisfactory.**
252. Project management and supervision: The working relationship between the PM, TM and FMO appear to have been effective and constructive. Some challenges were experienced with the changeover of project management systems, although partly mitigated by virtue of the shared reality between executing partner and agent. The majority of team members were well-qualified for their roles, although a lack of seniority and the turn-over rate of key project team members presented challenges. The creation of project officer roles in partner countries demonstrated agility and ensured that team members were well located to fulfil their functions. Support to remotely located team members was limited and opportunities for information exchange and collaboration were not fully optimised. Concerns (multiple respondents) were raised regarding the responsiveness of the PMU to national issues and questions, as well as the turnaround time on key decisions. While no evidence was provided to substantiate this, the evaluator experienced a similar lack of responsiveness, both acknowledgement and responses to requests, and is therefore inclined to accept the validity without further evidence. The regional and national steering committees were established, but not fully functional. **Moderately Unsatisfactory**
253. Stakeholders' participation and public awareness: The project benefitted from a strong analysis of stakeholder groups. Workshops, training and engagement with stakeholders groups was generally good, although not always consistent. Collaboration with partner organisations was effective, unlocking significant value for the project. The project contribution and impact on poor and vulnerable groups was duly considered and affordable housing remained a key focus area for the project. **Satisfactory**

254. The project was not subject to the gender index. The impact on gender was noted at design stage, but was not reflected in the logframe or budget. While no major failings were noted, there was also no evidence of opportunities used to promote gender and human rights. **The project is not rated on this aspect.**
255. Country ownership and driven-ness: With the exception of Rwanda, Governments from the participating countries have not demonstrated a leadership role in provision of in-kind co-financing, strategic guidance, securing additional resources or driving or advocating for change to achieve higher level results. **Unsatisfactory**
256. Communication and Public Awareness: **Satisfactory.**
257. Overall, the project receives a Moderately Satisfactory rating in the terminal evaluation. The respective project ratings are summarised below:

Table 22: Project ratings table

Criteria	Rating HU - HS
Strategic Relevance	HS
Quality of Project Design	S
Nature of External Context	F
Effectiveness	MS
• Achievement of Outputs	MS
• Achievement of Outcomes	MS
• Likelihood of impact	ML
Financial Management	MS
• Completeness of information	MS
• Communication	S
Efficiency	U
Monitoring and Reporting	MS
• Monitoring design and budgeting	MS
• Monitoring of project information	MS
• Project reporting	S
Sustainability	U
• Socio-political Sustainability	ML
• Financial Sustainability	U
• Institutional Sustainability	MU
Factors Affecting Project Performance	MS
• Preparation and Readiness	MS
• Quality of project management and supervision	MU
• Stakeholders' participation and cooperation	S
• Responsiveness to human rights and gender equity	-
• Country ownership and driven-ness	U
• Communication and public awareness	S

6.2 Lessons learned

258. Based on the findings of the evaluation, a number of lessons may be useful for future projects of a similar nature, focus or with a regional footprint.

Table 23: Lessons Learned

Lesson no. and reference	Lesson learned
<p>Lesson 1 References in report: Paragraphs 75 and 112</p>	<p>Dependence on external partners. The heavy reliance on Government partners and slow bureaucratic processes to progress key delivery milestones were identified as challenges at inception. In particular the design of the project implementation structure, depending on a small central PMU with Government partners to drive implementation at a national level, proved to be a major challenge. Delivery timelines on the overall project and delivery of the outputs for Component 5 were adversely impacted because of this.</p> <p>This is certainly a repeat lesson, encountered by many projects before. Projects aiming to influence policy positions, should be very assertive in its engagement with policy makers, ensuring a precise understanding of the relevant role players, identifying the most effective government entity to engage (avoiding the Tanzania experience), ensure strong, high-level project sponsorship, and ensuring appropriate and strategic placement of project representatives to effectively facilitate progress.</p>
<p>Lesson 2 References in report: Paragraphs 80 and 81</p>	<p>Regional steering committee an inappropriate governance structure. Steering committees are conceptually sound, but require resources that are often not possible with the cap on project management allocation on the project. Additional costs are associated with travel and subsistence for attendance of regional steering committee meetings, for which no budget existed. Similar constraints were faced at a National level, although to a lesser extent. In addition to covering travel expenses, it was noted that steering committee members were demanding sitting fees for the time spent attending meetings.</p> <p>Alternate structures and/or platforms must be sought to appropriately serve regional projects.</p>
<p>Lesson 3 References in report: Paragraphs 74, 76 and 77</p>	<p>Design of the PMU and satellite implementation structure. Following from Lesson 1, it is noted that reliance on a small core project management team, located centrally in one country, is inadequate for the effective execution of a regional project.</p> <p>Dependence on government representatives to prioritise project activities and objectives above other daily priorities, is not practical or realistic.</p> <p>The introduction of UN Volunteers as project officers by the project was a helpful measure, but not fully adequate. Project implementation structures should more appropriately support the delivery objectives.</p> <p>To the extent that it is possible, partner governments should be locked in with specific commitments to provide infrastructure, contribute to remuneration and/or dedicated people to support project execution.</p>
<p>Lesson 4 References in report: Paragraph 126, bullet 2</p>	<p>Projections of energy usage against business as usual. Despite low levels of energy usage found by the benchmark study, poor efficiency habits and practices were also found. Savings potential would be best quantified if these inefficient practices were extrapolated to project what consumption would be without intervention i.e. by developing a “business as usual” baseline projection is poverty and supply constraints were not suppressing usage.</p> <p>This limits the ability to quantify the economic benefits as a business case for governments or developers as motivation to prevent a ‘business as usual’ consumption growth scenario as energy access becomes universal.</p>
<p>Lesson 5 References in report:</p>	<p>Impact monitoring is critical. Projects indicators and baselines are defined at design stage to enable project contributions to be gauged and demonstrated. The</p>

Lesson no. and reference	Lesson learned
<p>Table 16 (outputs from Component 5); Table 17 (discussion related to outcome 5) & Section 5.8</p>	<p>monitoring plan suggested several data collection tools and instruments that were not implemented. Similarly, no effort was made to quantify the impact of activities under Component 5. Measurement and verification of energy savings and monitoring of indicators are not the same as project reporting. This should be clearly differentiated. The importance of establishing baselines, identifying or establishing instruments, tools and resources to track impacts and then to actually track and report tangible numbers, cannot be over emphasized. The project's ability to demonstrate its contribution may depend on this.</p> <p>Simple measures such as keeping a record of all amended building designs, maintaining a record of implemented projects, maintaining a record of training events with analyses of participation, short surveys or feedback questionnaires following training events, tracking frequency and reach of communication, can all provide a valuable indication of the project contribution without excessive cost implications.</p> <p>Determining direct and indirect energy savings and emission reductions would be considerably easier if appropriately qualified M&V practitioners were appointed early on to develop a baseline and track and report on actual and projected savings.</p>
<p>Lesson 6 References in report: Paragraph 167</p>	<p>Capacity development vs technical assistance.</p> <p>It was noted that skills transfer is not immediate, requiring a period of active engagement in a way that will enable integration of new techniques into everyday practices in order to effectively achieve mainstreaming. Once off training creates awareness, but does not fully empower individuals to implement or integrate concepts into their daily activities.</p> <p>Ideally a balance should be sought between awareness creation and interventions aimed at entrenching a new approach to working among key role players and decision-makers.</p>
<p>Lesson 7 References in report: Table 16 (outputs from Component 5); Table 17 (discussion related to outcome 5)</p>	<p>Technical assistance offered in exchange for data. The project offered to provide technical assistance to a wide variety of projects. Very little information is available regarding the status of the projects and/or any benefits derived from implementing efficiency measures.</p> <p>Technical assistance to developers should be offered in exchange for information e.g. updates on building progress, confirmation of energy efficiency measures adopted, quantified energy savings and any benefits perceived by building occupants. This can be included as a condition for obtaining free technical advice at the time of signing the MOU.</p>
<p>Lesson 8 References in report: Section 5.1 and Table 9, Strategic question 3</p>	<p>Leveraging successes across partner countries. Opportunities for cross fertilization at regional level should be pursued more assertively (refer also Lesson 2). Governance structures, even when inactive, high-level representation and regional bodies such as the EAC, should be leveraged more actively to lobby and share successes and learnings. Feedback suggested that clever and strategic utilization of a success story such as that of Rwanda can effectively serve to encourage and facilitate faster progress.</p> <p>At a project level, an effective and regular communication platform established between remotely located team members is a key support requirement.</p>
<p>Lesson 9 References in report: Section 65 and 67</p>	<p>Green Building Councils are strong partners. Green Building Councils have proven to be excellent partners for driving energy efficiency in the private and specifically commercial sector⁷⁹. The World Green Building Council and its networks and resources amplifies the support for green buildings available in the country. These councils have proven to be vibrant, active spokespeople for green buildings targeting building professionals, developers, Corporates and government. The Rwandan and Kenyan entities have both contributed significantly</p>

⁷⁹ Namibia had a similar experience with the UNDP Namibia Energy Efficiency in Buildings Programme.



Lesson no. and reference	Lesson learned
	<p>to expanding the reach of communication and information sharing efforts and to ensuring continuation of the work after project conclusion.</p> <p>Any initiative promoting energy efficiency in buildings stands to benefit greatly from either encouraging the establishment of a local council or by partnering with existing local councils.</p>

6.3 Recommendations

259. The following actions are recommended for the EEBEA project, assuming further actions can be implemented after 30 September 2018. The first five are recommended to ensure the project fully leverages the excellent resources that have established. The last two recommendations are aimed at ensuring the project is in integrity with the original design parameters and commitments which formed the basis on which GEF grant funding was made available. Responsibility for implementation of the recommendations reside with the PMU, unless otherwise stated.

Table 24: Recommendations

Recommendation no. and reference	Recommendation
<p>Recommendation 1 References in report: Paragraph 126, bullet 1; Table 12 (outputs from Component 1) and Table 14 (outputs from Component 3)</p>	<p>It is highly recommended that the entire knowledge base and portfolio of resources for communication, training and awareness created by this project, be made available online. It will further benefit from banners or links to this content being embedded into all partner websites, notably that of the KGBS, RwGBA, ELiTH, SAMSET, University partners and all housing and related agencies of government partners.</p> <p>This should be easy and quick to implement, with limited cost implications and will make a significant contribution to the longevity and wider impact of the project.</p> <p>This knowledge base should be online as soon as possible and before the end of 2018, in a place that will be accessible for the foreseeable future.</p> <p>Links from partner websites should also be established before the end of the year.</p>
<p>Recommendation 2 References in report: Table 16 (outputs from Component 5) and Table 17 (discussion related to outcome 5)</p>	<p>It is recommended that fact sheets and case studies be developed for the few projects that have been implemented to ensure they serve their purpose as demonstration projects.</p> <p>Ideally, a case study or fact sheet should indicate the cost of implementing the energy efficiency intervention (if there are any additional costs), the measures taken to improve efficiency, the improved operational conditions and the benefits in electricity and costs savings to the occupant. Content may incorporate a mixture of lay facts and slightly more technical detail, with a link where further details can be found.</p> <p>These should be developed before the project closes and available by latest end of 2018.</p> <p>An excellent example of “fact sheet” content for “NHC Place” is available at: https://archello.com/project/nhc-place, showing the costs of the project, highlighting the measures taken to improve efficiency and environmental sustainability and the savings achieved.</p> <p>Two further examples are available from the South African National utility, Eskom.</p>

Recommendation no. and reference	Recommendation
	<p>The first is a case study detailing a retrofit of a hotel, The Capetonian, that participated in the Integrated Demand Management incentive programme. It shows the efficiency measures, the annual energy savings and total costs of the project⁸⁰. The case study is available at the link in the footnotes.</p> <p>The second case study details the efficiency upgrades implemented in the Eskom head office building, showing the range of interventions and the impact on electricity use.</p> <div data-bbox="581 491 1304 1016" style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">The proof is in the ... case studies considering case studies in state-owned companies</p>  <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>MEGA CASE STUDY</p> <p>Key features</p> <ul style="list-style-type: none"> • An extensive EE retrofit in 4 phases from 2007 – 2014 that included, amongst others: • Efficiency improvements. Phases 1 and 2: • Retrofit of lighting system (efficient lamps and fittings, using natural light and optimised light levels in basement and parking) • Motion sensors to control lighting in unoccupied rooms • Switch off lights, fountains and escalators after hours • Ventilation, waste heat recovery and VSDs introduced to optimise the AC system • Solar water heating and heat pumps for hot water requirements • Switching to EE lifts, sensor activated escalators, water cooled AC and adjusting average room temperature by 1C Phase 3 (2013): Installed 358kWp solar PV power Phase 4 (2014): Installing efficient streetlights² <p>Key benefits</p> <p>Reduced electricity use from 3.2GWh per month to 2.2 GWh in 2014</p> <p><small>1. Phase 1 (easy retrofits and staff awareness campaign) alone reduced operational cost by 10 – 18%; 2. Replacing mercury vapour lamps with LED lamps are saving 120,000kWh per day</small></p> </div> </div> </div>
<p>Recommendation 3 References in report: Paragraph 231</p>	<p>Aligned to the above, it is further recommended that the Rwanda’s successes be developed into a case study to encourage partner countries and provide practical guidelines for implementation, operationalization and institutionalization. This may serve as “cross-fertilization” following the conclusion of the project, helping the countries (Burundi and Uganda) that have just started on the journey to operationalize their adopted high-level legal frameworks.</p> <p>As above, this should be completed as soon as possible, but before the end of 2018.</p>
<p>Recommendation 4 References in report: Paragraph 193</p>	<p>It is recommended that funding leveraged through the project be quantified and reported, as this seems to be an area where the project excelled that has been neglected.</p> <p>It may also be helpful for the project to note any specific suggestions or recommendations for other projects that may help unlock or crowd in development partners or complementary projects to the same extent – A “how to” leverage complementary initiatives and international funding.</p> <p>This recommendation aims to showcase the strengths of the project, and as such implementation and timing thereof is left to the discretion of the PMU.</p>
<p>Recommendation 5 References in report: Table 16 (outputs from Component 5) and</p>	<p>In the interest of demonstrating and showcasing tangible benefits of efficient housing, it is recommended that the energy performance of the prototype energy efficient housing units that were built in Nairobi, be measured and reported.</p> <p>The site will receive high profile and media exposure once launched and the prototype developments can serve to showcase the benefits of EEB in affordable housing. This initiative would benefit greatly from measurement and verification that quantifies usage and compares the energy usage of the respective units to demonstrate improved affordability of use.</p> <p>Measuring and verification should be started as early as possible. Data from this project should be tracked for at least the next 12 months and actively used to</p>

⁸⁰ http://www.eskom.co.za/sites/idm/Documents/922_ESKOM_Capetonian_Hotel_case_study_07_09_2012.pdf

Recommendation no. and reference	Recommendation
	<p>influence and inform government design and build decisions under the Big 5 Agenda. Data can also be used for a case study.</p> <p>This recommendation can be implemented by the KGBS, if a commitment can be secured and formalised. The KGBS may be able to obtain sponsorship for the monitoring equipment, data logging, analysis and reporting.</p>
<p>Recommendation 6 References in report: Paragraph 1</p>	<p>The lack of reporting on and transparency regarding co-financing is a concern. GEF funding is made available on the basis of partner commitments. Tracking of partner contributions throughout the project should be a priority of the project team. Reported co-finance of the magnitude relevant to this project (> USD 32 million), should be substantiated. It is recommended that an audit be done to understand the reported co-finance numbers and obtain evidence of stated contributions.</p> <p>The audit should be conducted within six months, but no later than the window period for financial close. It is assumed that the audit will be commissioned by the UN Environment.</p>
<p>Recommendation 7 References in report: Paragraph 173 and Table 17 (discussion related to outcome 5)</p>	<p>Considering the targeted Objective to “achieve considerable avoidance of GHG emissions as a result of improved buildings and building practices” for the project, it is highly recommended that effort is made to quantify the projected (direct and indirect) emission reductions that will arise from the project. Written input from the PM that this it was verbally agreed (without a TOR or budget indication) with the KGBS to quantify the GHG impact is noted, but not deemed adequate considering the significance of the targeted emission reductions in initiating the project. Monitoring and verification of energy savings and emission reductions to an appropriate degree of accuracy is a specialized function, particularly when back fitting ex-post without a baseline.</p> <p>If the project chooses to conduct an M&V study, a scope of work for quantifying actual and projected energy savings should be developed and services procured within three months, ensuring quantified savings can be reported within the window period for financial close.</p>

7 Annexes

Annex I. Responses to stakeholder comments

The inputs received on the draft Terminal Evaluation Report were incorporated as follows:

No.	Comment received	Page	Paragraph reference	Response	How addressed
1.	Inputs/comments on Question regarding the correct “Actual Start Date” to reflect	8	Project Identification table	Response to question regarding actual start date not clear and no additional evidence provided. In absence for any other documentation, the formal date as per	August date retained.

No.	Comment received	Page	Paragraph reference	Response	How addressed
				revision document kept.	
2.	Clarification regarding the date of the last steering committee meeting requested. Inputs suggested that the last steering committee meeting coincided with the UN-Habitat Governing Council in 2014.	8	Project Identification table	Amended to reflect corrected with later input confirming date in 2015	Amended
3.	Commentary on Evaluator's perceived failure of the steering committee	11	7	Opinion noted. Two steering committee meetings in 7 years cannot be described as a success.	Not amended
4.	Comments regarding: (i) Government changeover in 2013 impacting on mass housing developments proceeding as planned and (ii) attendance of the Ministry of Housing and Urban Development attending a workshop to integrate sustainable building design into university curriculum. Reference made to report of the training and picture.	11	12	The impact of the KENYA government changes is noted, echoing the findings of the evaluation (refer section 5.4, paragraph 117, page 45), but does not refute the failure of partner governments to deliver on committed mass housing developments as demonstration projects for EE. Reference made to workshop report and picture, but these not received.	Not amended.
5.	Comments regarding (i) a perceived contradiction with paragraph 7; (ii) policies established in Rwanda, Burundi and Uganda; (iii) university curricula adopting the EEB Handbook; and (iv) establishment of Green Building Councils.	12	14	All these points, including the extent to which adoption had advanced and could be demonstrated, were considered as part of the assessment regarding sustainability (refer section 5.9.1 in the evaluation report)	Not amended
6	Efficiency. Inputs provided by PM to explain the slow implementation.	12	16	Contributing factors noted and also acknowledged in the evaluation report (refer section 5.7, paragraphs 193	No amended

No.	Comment received	Page	Paragraph reference	Response	How addressed
				- 200), but does not change the finding that project execution was slow and the PMU – as originally designed and implemented – was inadequately resourced without the promised support from partner countries. As discussed in the TE, the PMU did seek and implement innovative solutions to this challenge, but the finding regarding efficiency holds.	
7	Comments relating to M&V, data collection tools and measures. The radar rating system for assessing building efficiency – developed as part of the benchmarking project stream - is pointed to as a measurement tool.	12	20	These two matters are unrelated. There is a misunderstanding between A.) the development of a measurement tool for building efficiency and measurement tools to gauge the efficiency (as a deliverable of the project) and B.) tracking and demonstrating the impact of the project. It is disconcerting that the difference between these two seem to not be understood.	Not amended
8	Comments regarding repository of project resources, indicating an online repository will be available	13	23	That is great news. Please provide link.	Footnote added to reflect this indication provided by the PMU.
9	Comments regarding rating of project, reference to East Africa universities using the handbook and link provided to a letter received from the Jomo Kenyatta University requesting	13	28	The letter is noted. The engagement with the universities is commended and	No amendment made to the project rating.

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

No.	Comment received	Page	Paragraph reference	Response	How addressed
	20 copies for use in the school of architecture and building sciences.			the positive interest shown by participating universities is heartening. This is recognised and discussed at length in the evaluation report (refer section 5.5.1, Table 14 Output 3.2).	
10	Socio-political Sustainability. Disagreement with rating for socio-political sustainability with a statement that the project had influenced policy in all 5 countries.	14	Table	The rating and reason for this score is discussed at length in paragraph 5.9. Recent developments i.e. Uganda's adoption of building code November 2018, the KBRC Strategic plan added and letters from Ministry in Kenya incorporated.	Amended to ML
11	Financial Sustainability. Comments reference the financing mechanisms that are available under Workstream 4.	14	Table	Financial sustainability of the project appears to have been misunderstood. It does not refer to the mechanisms established to finance green buildings, but rather to (i) the continued investment by partners to pursue energy efficiency in buildings in East Africa and (ii) the likelihood of the required funding being available to continue the level of education and awareness creation that would institutionalise and mainstream EEB.	Not amended

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

No.	Comment received	Page	Paragraph reference	Response	How addressed
				No further information provided to support this.	
12	Institutional sustainability. Green Building Councils and university adoption referenced as examples of institutional sustainability.	14	Table	Inclusion of EE into KBRC strategic plan key results areas, inclusion of material by universities as tools of instruction added.	Amended to ML
13	Country ownership and driven-ness. Rwanda quoted as example. Reference to MOUs signed	14	Table	Country ownership and driven-ness was not evident during the project's implementation. Rwanda noted as a good example. MOUs referenced were not provided (unless this refers to original commitments that were not delivered on)	Not amended MOUs not provided
14	Structured surveys. Comment indicating that participant lists were provided on 2 October with link to screenshot of the email sent.	18	43	The submission was made well after the data collection period had closed (after multiple extensions). The data that was received included no details of the respective training events and only included PDF copies of handwritten attendance registers . In no way does this constitute a database on which to conduct a survey.	Not amended
15	Availability of data for the evaluation	18	45	Challenges with data collection hold. The PMU was aware since the inception of the project that a TE is	Not amended

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

No.	Comment received	Page	Paragraph reference	Response	How addressed
				<p>required. Project information should have been maintained throughout the project and available for review at the time of the TE. More key information was shared for the first time at the end of the evaluation process.</p>	
16	Scaling. Comment regarding the project impact beyond the borders of the project.	22	61	<p>The project design document noted the potential, but did not seek to impact wider than the borders of EA as a stated project objective. The project did however make a contribution beyond the borders of the region (Refer to table 9, strategic question 3, page 37 where this is discussed in greater detail).</p>	Amended to better reflect this and include the link.
17	Inclusion of women. Comment related to deliberate interventions to support or include women.	25	70	<p>Attendance list noted showing ~20% attendance by women at Arusha Conference. This supports the finding (last sentence same paragraph) that: <i>“Stakeholder feedback (multiple responses) during interviews did suggest that the project created a safe space for women within which to participate and that attendance and</i></p>	No material change. Photo of Africa Green Building Summit added to support claim of event participation.

No.	Comment received	Page	Paragraph reference	Response	How addressed
				<p><i>active participation by women in discussions were high compared to similar industry events"</i></p> <p>No evidence has been provided of deliberate interventions such as: attendance quotas, special wording of invitations, women specific events, side-events, capacity building, training or any other intervention to support marginalised groups. It was however also noted in the TE (same paragraph) that: <i>"Project design was not required, at the time, to include a gender specific focus."</i></p>	
18	<p>Comment regarding a recent request for technical assistance in support of the Kenyan Big 4 Agenda.</p> <p>Letter from the Kenya Building Research Centre, dated 5 January 2018 Re: "Awareness creation and information dissemination on Sustainable Building Practices in Kenya" as supporting evidence.</p>	27	75	<p>The request to the UN-Habitat to support an awareness programme for sustainable building is noted. The stated government support for the EEBEA project is also noted – as at January 2018. This letter will be considered in terms of sustainability. It does not however provide any additional evidence with respect to: <i>"partner government staff participation to lead national</i></p>	Not amended

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

No.	Comment received	Page	Paragraph reference	Response	How addressed
				<i>implementation and contribute meaningfully to steering the project towards the collectively agreed outcome."</i>	
19	Information pertaining to a second Regional SCM, held in April 2015, provided. Invitation and presentation, not including minutes or attendance register.	27	80	Updated to include the 2 nd SCM meeting	Amended
20	Comment confirming the drivers captured in the reconstructed TOC / TOC at evaluation	34	TOC diagram	Agreement Noted	No amendment required
21	Comment regarding recommendation to adjust project targets (Strategic Question 1, MTR recommendation 1)	35	Table 9	Comment not understood. It appears to deal with the uncertainty regarding delivery against targets rather than responding to the recommendation to adjust targets.	Not amended
22	Comment regarding database and web-based platform recommended to share benchmarking data (Strategic Question 1, MTR recommendation 2) + reference to audit report	35	Table 9	The referenced audit report not provided. Uncertain how the audit report would amend the finding regarding the availability of data online.	Not amended
23	Comment regarding Finalising EE regulations and bylaws (Strategic Question 1, MTR recommendation 3) + "SEE document".	35	Table 9	Tanzania bylaw noted, but not provided as suggested by "SEE document". No additional information provided regarding support teams at national level. Statement regarding the support provided at national level elaborated on for clarification. Link provided is to the Kenyan BRC strategic plan, 2017/18 – 2021/22.	Spelling mistake corrected to correctly reflect the review of the country codes. Full wording of the recommendation added as a footnote. The assessment remains partial.

No.	Comment received	Page	Paragraph reference	Response	How addressed
				Relevance to this recommendation not apparent.	
24	Inputs on recommendation to outsource capacity building activities (Strategic Question 1, MTR recommendation 4)	35	Table 9	Workshop with universities to influence curricula noted, in itself an important initiative. Outsourcing to professional associations including banking and engineers across the five partner countries not pursued / implemented.	Full wording of the recommendation added as a footnote.
25	Comment regarding recommendation to implement a EEBEA project communication plan (Strategic Question 1, MTR recommendation 5)	36	Table 9	Copy of draft communication plan not provided A communication plan describes key messaging, target audience, tailoring of messaging for target groups, priority communication channels to use, frequency of communication i.e. describing what should be communicated to whom, how and by when . It typically also covers the indicators that will be used to track impact. It is clear that the workshop with journalists was an effective communication and training tool that brought exposure for the project (refer also discussion under Output 3.1 Table 14), but a workshop with	Not amended Full wording of the recommendation added as a footnote.

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

No.	Comment received	Page	Paragraph reference	Response	How addressed
				journalists is not a communication plan.	
26	Comment regarding supporting regulations on tax exemptions (Strategic Question 1, MTR recommendation 6)	36	Table 9	Detail of implementation noted, but the recommendation as it pertains to tax regulations was not addressed.	Amended to reflect detail of workshops. Finding of partial implementation holds.
27	Comment regarding assistance to governments on mass housing (Strategic Question 1, MTR recommendation 7)	36	Table 9	Comments noted, confirming the support to governments. No additional information provided regarding the recommendation to develop a measuring tool to quantify GHG emissions and project impact.	Finding regarding partial implementation holds. Not amended.
28	Comment regarding the value of declarations signed by participants at the end of workshops and events	37	Table 9	Comments seem to confirm the position of the TE, that such instruments capture high level intent and commitment, but are not legally binding. Rwandan Government noted as exception with respect to country-ownership.	Amended to reflect the commitment of the Rwandan Government. The overall finding as it relates to the strategic question holds.
29	Comment regarding 'revamp' of website and incorporation under UN-Habitat website where all documents will be available for review.	47	127	Noted and welcomed.	PMs comments captured in a footnote
30	Additional inputs received re Uganda, Kenya and Tanzania Building Codes	49 & 50	Table 13 (Output 2.1)	Provided copies reviewed and included in evaluation.	Amended to reflect additional inputs
31	Attendance records provided for Kigali EEB workshop to support training provided to at least 20 officials	50	Table 13	Reviewed and amended to reflect additional information	Amended to reflect additional inputs
32	KBRC 5-year Strategic plan (launched September 2018) provided as evidence of institutionalisation	50	131	Strat plan reviewed and information captured as new paragraph 140	Amended to reflect this development. Rating remain

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

No.	Comment received	Page	Paragraph reference	Response	How addressed
					Satisfactory in line with 81 – 99% planned outputs fully delivered.
33	Comment regarding website redevelopment that is in progress.	56	146 (prev 145)	Noted. This does not address the absence of an updated website since 2014. No evidence provided in support of website development. it will be a great pity if these resources are lost.	Amended to reflect this input.
34	Communication plan	56	147	The articles show that communications efforts were made which is commendable. They are not a communication implementation and monitoring plan.	Not amended
35	Green Buildings Award	56	148	Restated to qualify finding	Restated
36	Comment regarding Rating	56	150	Measured against Log frame ratings, the workstream did not meet the 6 stated targets. It is however agreed that the project made a significant impact, have developed excellent resources and will continue to do so provided the information will be available online.	Amended to S
37	Comment regarding rating of component 4	58	155 & 156	Considerations informing the rating clarified with inclusion of paragraph 155.	Paragraph added and rating amended to MU
38	-	61	162	Overall rating of outputs amended to reflect revisions	MS

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

No.	Comment received	Page	Paragraph reference	Response	How addressed
39	-	62	Table 17	Outcomes discussion / summary table amended to reflect additional information made available	
40	Comment regarding consistency of table and rating	65	177	Partial delivery on outcomes noted in the context of diminished support and agility shown	Amended to MS
41	Comment regarding Ugandan and Kenyan building codes	67	180	Discussion here pertains only to Kenya. Presentation of the building code reviewed, but proposed building code itself not available, not yet adopted and no timeline for adoption available. Critical timing with the Big 4 Agenda imminent.	Not amended
42	-	68	183	Amended to reflect earlier revision of ratings	Amended to MS
43	Comment regarding likelihood of an audit being allowed by partner countries	71	194	Noted.	Not amended
44	Comment regarding consistency of rating and commentary with respect to responsiveness to financial requests	71	Table 21	Comment amended	Comment amended
45	Comment with respect to efficiency rating	73	202	Assessment pertaining to efficiency, rather than management practice	Not amended
46	-	75	220	Additional evidence incorporated into new paragraph 220	
47		76	227	Progress and added mitigation against political factors reflected in new paragraph 227 with amended rating	
48	Comment with respect to Kenya and Tanzania building codes	79	238	Conclusions structured according to guidelines, with	Not amended

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

No.	Comment received	Page	Paragraph reference	Response	How addressed
				successes stated first. Please refer later paragraph dealing with Kenya and Tanzania.	
49	Comment regarding ambition of the project and change of government in Kenya	80	245	Change of government discussed in greater detail in section 5.4 and also in the next point (paragraph 237) regarding changed priorities and implementation plans.	Not amended
50	Comment regarding accessing regional institutions	80	245	Inputs not perceived to be relevant to the statement	Not amended
51	Disagreement regarding the findings with respect to MTR recommendations	80	246	Refer to Section 5.1 for analysis of all recommendations. The TE does not comment on whether the recommendations were a focus or not.	Amended to reflect not implemented and partially implemented.
52	Statement regarding governments' responsibility to adopt building codes, being outside the ambit of the project.	80	248	Sphere of responsibility agreed. However, adoption reflects on the likelihood of sustainability of the project and the likelihood of achieving mainstreaming.	Not amended.
53	Three letters provided from the Kenyan government confirming support for the project	80	249	Letters provided to be taken into consideration as part of the sustainability discussion	
54	Statement regarding 8 universities in the region using the handbook with copies of correspondence from Deans requesting copies of the handbook as a training manual.	80	250	The inputs provided confirmation and detail with respect to point (iii) that already captures the academic platform created.	Not amended

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

No.	Comment received	Page	Paragraph reference	Response	How addressed
55	Establishment of the Tanzania and Uganda Green Building Councils highlighted and Tanzania green building council chapter ascribed to the project	80	251	Tanzania GBC confirmed as prospective on the World GBC website. Uganda not shown.	
56	Evidence provided for 2 nd PSC meeting in 2015	81	252	Noted and acknowledged	Amended
57	Objection to finding with regards responsiveness of PM to information requests, citing leave as reason for absence.	81	253	The timelines for the TE was part of the TOR. The date on the email screenshot provided as part of the objection serves to illustrate the point.	Not amended
58	Disagreement with conclusion regarding government ownership	81	256	Not adequately demonstrated. Additional inputs provided were however used with respect to the assessment of socio-political sustainability.	Not amended
59	Inputs regarding co-financing analysis: Express Kenya project. Noting that SWH are indicated among the environmental features	89	Table 25	Express Kenya is not a government entity and therefore not counted towards co-finance.	Not amended
58	Statement provided to say the project is 'ongoing' and that a representative of the Marsabit County attended the Arusha meeting	89	Table 25	Inputs do not elaborate on the status already reflected	Not amended
59	Field reports on housing prototypes in Uganda provided in support of co-finance dated June 2016 and March 2018	90	Table 25	Additional information reviewed and noted	Amended to reflect the additional information.
60	(on Final draft report) The project team is very surprised with such rating. Precisely when we consider, a UN-Habitat independent evaluation has rated this project as successful. Also the evaluator did not mention that the handbook and other documents produced by the project are now being used in several universities of East Africa. https://drive.google.com/open?id=1ANjhs27ustE0BAvEUaMCxq-3M-TQ2nwX	13	28	Overall project ratings are checked by the Evaluation Office and benchmarked against other GEF projects and the ratings performance matrix	Not amended

Annex II. Evaluation itinerary

The evaluation mission was scheduled from 28 July to 4 August 2018. The itinerary for the week is presented below:

Time slot (indicative only)	Sun 29/07	Mon 30/07	Tues 31/07	Regional conference Wed 01/08	Regional conference Thurs 02/08	Regional conference Fri 03/08	Site visits Sat 04/08
07:45 – 08:15	-	-	-	-	-	-	-
09:30 – 10:30	-	Interview: Department of Housing & PSC Member for Kenya	Informal discussions UN Environment	Full day presentation s and 4 interviews: Nairobi City Council;	Full day presentation s and 4 interviews: Previous EEBEA Project Officers for Tanzania and Rwanda	Half day presentation s and 2 interviews: EACREEE and Uganda Martyrs University	Garden City Mall Garden City Residential Phase 1 and 2A Government housing site: EE prototype
11:00 – 12:30	-	Interviews: Kenya Green Building Society		Housing Finance Bank, Uganda;			
15:00 – 16:30	Introduction meeting Evaluation Manager	Interviews: Kenya Building Research Centre & National Construction Authority	Kenya Property Developers Association	Ministry of Works, Uganda; Previous EEBEA Project Officer, Uganda and EEBEA Project Manager			
15:30 – 16:30	Interview: Acting EEBEA PM, Vincent Ndoungtio Kitio	Nairobi, City Council introductory meeting	<i>Airport travel</i>				<i>Airport travel</i>
16:30 – 19:30		-	Flight to Arusha			-	-
20:00 - late	-	-	-			Return Flight to Nairobi	Return flight to JHB

Semi-structured interviews were held during the mission:

Name	Organisation and role	Interview type	Date
Kenya			
Mary Ndungu	PSC Member for Kenya; Ministry of transport infrastructure housing and urban development, State department of public works representing housing	Face-to-face	30 July 2018
Elizabeth Chege	Chairperson, Kenya Green Building Society;	Face-to-face	30 July 2018
Rehema Muniu	CEO Kenya Green Building Society	Face-to-face	30 July 2018
Architect Oliver Okello	Director, Kenya Building Research Centre	Face-to-face	30 July 2018
Ruth Onkangi	National Construction Authority	Face-to-face	30 July 2018
Elizabeth Mwangi Oluoch	Chairperson, Kenya Property Developers Association	Face-to face	31 July 2018
Martha Muthoni	Nairobi City Council	Face-to-face	1 August 2018
Uganda			
Goodman Kazoora	Previously EEBEA Project Officer and Project Manager; EEBEA specialist consultant	Face-to-face	1 August 2018
David Ninyikiriza	Housing Finance Bank	Face-to-face	1 August 2018
Edward Ssimbwa	Ministry of Works	Face-to-face	1 August 2018
Dr. Fred Msemwa	Sustainable Energy Expert, East African Centre for Renewable Energy and Energy Efficiency (EACREEE)	Face-to-face	3 August 2018
Alex Ndibwami	Uganda Martyrs University	Face-to-face	3 August 2018
Tanzania			
Fatma Mohammed	Previously EEBEA Project Officer	Face-to-face	2 August 2018
Rwanda			
Yves Sangwa	Previously EEBEA Project Officer; RWGBC Chairperson	Face-to-face	2 August 2018
UN Environment and UN Habitat			
Leena Darlington & Faith Kabui	UN Environment, Fund Management Officer	Skype	14 August 2018
Rupert (Geordie) Colville & Cicilia Magare	UN Environment Task Manager; Climate Change unit representative	Skype	14 August 2018
Vincent Ndoungtio Kitio	Acting Project Manager; Chief Urban Energy Unit	Face-to-face	29 July 2018

Two informal discussions were also held with Mr. Victor Tsang, Policy Officer: 2030 Agenda for Sustainable Development and UN Environment and Mr. Martin Okun, Economy Division, UN Environment, to obtain a more general understanding of processes and priorities.

In addition to formal interviews listed, several stakeholders presented at the Regional Conference in Arusha held from 1 -3 August 2018, providing an overview of progress, planned

next steps and challenges. Where deemed necessary clarification questions were raised with presenters. A selection of the most relevant presenters is provided:

Name	Organisation and role	Interview type	Date
Charles Otieno Konyango	National Director of Urban Development, Kenya	Presentation	1 August 2018
Amédée Bizimana	University of Burundi, faculty of engineering, Department of Architecture	Presentation	1 August 2018
Dr Mukuki Hante,	Director, Rural and Urban Development, President's Office Regional Administration and Local Government, Tanzania	Presentation	1 August 2018
George Labaso	George Labaso, Barclays Bank, Kenya	Presentation and informal discussion	1 August 2018
Athanase Ndiwokubwayo	Ecole Normale Superieure, Bujumbura-Burundi	Presentation	1 August 2018
Dheeraj Arrobothu	Global Green Growth Institute, Rwanda	Presentation and informal discussion	2 August 2018
Geoffrey Baluku	Mayor, Kasese, Uganda	Presentation	2 August 2018

Annex III. Summary of co-finance and statement of project expenditure

A summary of co-finance was provided by the project 11 October 2018. The table below (Table 25) shows the data provided by the PMU and the evaluation assessment that was possible at the late date in the evaluation. The second table included below (Table 26) shows the additional information provided by the PMU listing projects benefitting from technical assistance with the co-finance linked to each project. Data cells were colored by the evaluator as part of a very preliminary data assessment. This table is subject to further scrutiny.

Table 25: Summary of co-finance as provided on 11 October 2018

Information provided by the PMU			Evaluation assessment
Country	Name of the projects	Estimated co-financing ⁸¹	Summary of evidence found
Kenya	Mavoko Village Masterplan- This is a low cost housing project that will be developed over 3 phases. There will be approximately 4,200 housing units within the scheme after completion	500,000	Reference to this development, detailing the three development phases was found: MAVOKO URBAN SECTOR PROFILE, Rapid Urban Sector Profiling for Sustainability (RUSPS). Project designed and implemented by UN-HABITAT and financed by European Commission, Government of Italy, Government of Finland and Government of Belgium. This document is dated May 2006;

⁸¹ It is assumed all numbers indicated are in US Dollars, even when not indicated as such.

Information provided by the PMU			Evaluation assessment
Country	Name of the projects	Estimated co-financing ⁸¹	Summary of evidence found
			<p>A further Masterplan report, funded by JICA, was initiated in 2012 and concluded 2014. https://www.jica.go.jp/english/news/field/2015/c8h0vm0000966zqy-att/c8h0vm0000966zvx.pdf</p> <p>This project appears to mostly pre-date the EEBA project. No further evidence of progress or development status found.</p>
	Mt. Kenya Bottlers – This is an existing office building in Nyeri. The occupants had been complaining of uncomfortable physical working conditions. The EEBA team paid the first visit to the site in November 2013. Recommendations were made and forwarded. Technical advice is on-going.	100,000	<p>An online search indicates Mt. Kenya Bottlers as a business associated with Coca Cola, therefore not relevant as Government co-finance.</p> <p>It is also noted that no evidence of implementation or a commitment to implement was found. This information, alongside the extent of proposed efficiency interventions, would be required to quantify emission reductions.</p>
	Express Kenya- Housing development. This is a project of 900 apartments in high-rise buildings with recreational areas and a shopping mall in Nairobi	500,000	Express Kenya is a NSE-listed logistics firm. No reference can be found to Government funding or participation in this project.
	National Housing Cooperation – Housing project 300 units		Inadequate information.
	<p>Marsabit: design and construction of 100 low carbon buildings for civil servants in Marsabit County.</p> <p>Funding from the Nordic Climate Fund and the Government of Marsabit County.</p>	\$ 1,500,000	<p>Reference to this project was found under the Nordic Climate Fund. It shows both Marsabit County and UN-Habitat as project Partners.</p> <p>Total project cost: EUR 1,086,764 NCF financing: EUR 497,660 Agreement signed: 18 April 2016</p> <p>Of this, NCF leveraged funding ~US\$ 570,000 (Oct 2018 exchange rate) Assuming all other funding will be contributed by Marsabit County, the possible co-finance contribution would be ~US\$ 674,000 (Oct 2018 exchange rate)</p> <p>https://www.ndf.fi/project/climate-resilient-low-cost-buildings-marsabit-county-kenya-ndf-c82-b3</p> <p>No further evidence of progress could be found.</p>
Tanzania	Kigamboni Affordable Housing Scheme: in Dar es Salaam: 220 housing units	\$ 6,000,000	<p>Kigamboni Housing. Evidence of this project was found on NHC website, indicated as a completed project.</p>

Information provided by the PMU			Evaluation assessment
Country	Name of the projects	Estimated co-financing ⁸¹	Summary of evidence found
	Uvumba Satellite City, National Housing Corporation of Tanzania. – Uvumba Satellite City is an urban planning development in Dar es Salaam under the National Housing Corporation of Tanzania that plans to build 10,000 housing units, facilities and all the necessary infrastructure.		<p>Details of the green design aspects and confirmation that the development earned a Green Mark Certificate were found in a presentation made by Mr Issack Peter, from the NHC, in November 2014.</p> <p>http://www.auhf.co.za/wordpress/assets/IsaackPetersm.pdf</p> <p>Uvumba Satellite City, NHC. Only reference found to this project refers to Master Planning of the Uvumba Satellite City by Symbion for the NHC. The description highlights the importance of “Conscious climatic responses that include an abundance of shade, advanced storm water management strategies & efficient water use...”. The status is indicated as “ongoing” and no budget is shown.</p> <p>http://www.symbion-int.com/portfolio_project/nhc-kibada-city/</p>
	National Housing Corporation Head Quarters in Dar es Salaam	\$ 18,000,000	<p>Evidence of this project was found confirming the indicated budget and Green Building Status:</p> <p>https://archello.com/project/nhc-place</p>
Uganda	Kasoli Housing Development Project, Tororo, Uganda Governments houses	1,070,000	<p>Several references to planned low cost housing developments in Tororo found dating from 2003, 2010 and 2013.</p> <p>The most recent articles found were from 2013, indicating an expected cost of 5 billion Uganda Shillings (~USD 1.3 million using an October 2018 exchange rate).</p> <p>No further information or subsequent progress reports could be found. Considering the long historic lead time of this project, the status and prospects remain uncertain pending further details.</p> <p>http://croozefm.com/ghost-beneficiaries-emerge-in-the-kasoli-low-cost-housing-project/</p> <p>https://ugandaradionetwork.com/story/government-launches-low-cost-housing-project-in-tororo-slum</p>
	<ul style="list-style-type: none"> • Designs for prototype housing in MLHUD currently being reviewed. Field visits scheduled for July. • GIZ pilot on EE in buildings commences in July. Pilot studies will be launched on workers house and crested towers. Project can use this as base cases for retrofits. <p>First phase of building commences in July under</p>	300,000	<p>Field reports for 2016 and 2018 provided, describes energy efficiency considerations and inputs of UN-Habitat on planning and prototype development. the 2018 field report concludes that the implemented scope (undefined) was successful and should be extended to include many more prototypes. Funding is not covered in the field report.</p>

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

Information provided by the PMU			Evaluation assessment
Country	Name of the projects	Estimated co-financing ⁸¹	Summary of evidence found
	the JENGA project. The project can take advantage of this to showcase EEB		
	Designs for prototype housing for western Uganda currently being developed and reviewed. Field tests scheduled for May	100,000	As above.
Rwanda	BATSINDA II SUSTAINABLE INTEGRATED NEIGHBORHOOD DEVELOPMENT: Project set as a benchmark for Green City development in Rwanda 609 dwelling units on 10 ha Selected by the Rwanda Environment and Climate Change Fund to be get a grant	300,000	<p>Evidence of this project was found, confirming the development of affordable housing with support from the Rwanda Social Security Board (RSSB).</p> <p>An article published in November 2016 showed a total of 561 units planned for construction within 27 months. It is assumed that the development will comply with the newly adopted building regulations. No indication was given of the investment committed by the RSSB.</p> <p>The FONERWA website confirms: "The project integrates green local building technologies, sustainable drainage infrastructure, peri-urban agriculture and active energy production into a cohesive neighbourhood master plan. The project is intended to set the benchmark for green city development in Rwanda"</p> <p>An article dated April 2018, confirmed that the project was initiated late 2015.</p> <p>https://www.newtimes.co.rw/section/advertorial/866</p> <p>http://www.thedispatchmag.com/2018/04/02/how-rssb-affordable-housing-projects-are-addressing-accommodation-challenges/</p>
		400,000	Inadequate information to verify

Table 26: List of projects and co-finance as provided on 24 October 2018

Project	Partner	Date of technical advice	State of project	Available Document	No of Units	Project size (m2)	Estimated Cost (USD)	Co-financing (USD)	Estimated Energy Saving (MWh/a)	CO ₂ Avoidance (tCO ₂ /MWh/a)
Kenya										
Express Kenya Property development	Express Kenya	November 2014	Built	Yes	1200	16432	1200000	120000	50.28192	21.6212256
Express Kenya Clubhouse	Express Kenya	November 2014	Built	Workshop	n/a	1055.64	100000	10000	106.408512	45.75566016
BIPV Model housing	Strauss Energy	March 2015	Unknown	Yes	1	48.44	24220	2422	0.1482264	0.063737352
National Housing Corporation, Kericho	NHC Kenya	January 2017	Proposal stage	YES	141	3525	705000	70500	10.7865	4.638195
Mariguini Housing Scheme	Ministry of Transport, Infrastructure, Housing and Urban Development	December 2016	Unknown	Yes	2346	12925.79	23460000	2346000	39.5529174	17.00775448
Kibera Housing	Ministry of Transport, Infrastructure, Housing and Urban Development	March 2017	Built	Yes	3610	24239.5	36100000	3610000	74.17287	31.8943341
Climate Resilient Housing	Marsabit County Government	November 2016	Construction commencing Nov 2018	Yes	100	24000	700000	70000	73.44	31.5792
Aberdare Housing	Avanti Architecture	November 2016	Construction on-going	Yes	20	590.92	1000000	100000	59.564736	25.61283648
Fiona House	Avanti Architecture	October 2017	Construction on-going	Yes	4	433.27	200000	20000	1.3258062	0.570096666
Villa Maria	Avanti Architecture	May 2018	Construction on-going	Yes	4	842.345	200000	20000	2.5775757	1.108357551
Soweto Zone A – Kibera housing	Ministry of Transport, Infrastructure, Housing and Urban Development	SFC 2012	Built	Workshop	822	164400	8220000	822000	503.064	216.31752
Komarock Housing	Housing Finance Bank	SFC 2012	Built	Workshop	162	32400	8100000	810000	99.144	42.63192
Mavoko Village Masterplan			Under construction		4200	189195	16000000	1600000	578.9367	248.942781
Mt. Kenya Bottlers headquarters	Mt. Kenya Bottlers	November 2013	Built	Yes	n/a	3760	1188000	118800	11.5056	4.947408

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

Project	Partner	Date of technical advice	State of project	Available Document	No of Units	Project size (m2)	Estimated Cost (USD)	Co-financing (USD)	Estimated Energy Saving (MWh/a)	CO ₂ Avoidance (tCO ₂ /MWh/a)
Chase Bank Headquarters	Lighthouse properties	November 2014	Proposal stage	Workshop	n/a	32394	1500000	150000	99.12564	42.6240252
Hotel complex	Shalin Finland	January 2015	Proposal stage	Workshop	n/a	1419.6	400 000	40000	143.09568	61.5311424
National Housing Corporation Housing	NHC Kenya	May 2015	Unknown	Workshop	300	342618	4000000	400000	1048.41108	450.8167644
ISINYA green city	Cretum Properties	December 2015	Proposal stage	Workshop	2000	400000	22700000	2270000	1224	526.32
Toyota Kisumu and Eldoret	Symbion	December 2015	Proposal stage	Workshop	n/a	3459	2300000	230000	348.6672	149.926896
Uganda										
Protea Hotel	Protea Hotels (U) LTD	January 2015	Construction on-going	Yes	150	4815	7500000	750000	26.72325	15.499485
Kyalulangira Primary School	Studio FH	January 2015	Built	Yes	10	1431	100000	10000	7.94205	4.606389
BMK House	BMK (U) LTD	December 2014	Built	Yes	88	14515	4400000	440000	80.55825	46.723785
Kasoli Housing	Government of Uganda	2013	Built	Yes	250	40000	1000000	100000	112.8	65.424
Uganda Police Public Private Partnership Housing	Uganda Police	October 2016	Construction on-going	Yes	5700	1140000	57000000	5700000	3214.8	1864.584
Ministry of Lands Housing and Urban Development Prototype housing	Ministry of Lands Housing and Urban Development	July 2018	n/a	Yes	1300	65000	50000	5000	183.3	106.314
Rwanda										
Institute of Agriculture, Technology and Education of Kibungo	Institute of Agriculture, Technology and Education of Kibungo	August 2016	Unknown	Yes	n/a	5790	1000000	100000	14.13918	9.897426
Dutureheza housing scheme	Duture Heza Cooperative	October 2016	Unknown	Yes	10	2000	100000	10000	4.884	3.4188

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
 Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

Project	Partner	Date of technical advice	State of project	Available Document	No of Units	Project size (m2)	Estimated Cost (USD)	Co-financing (USD)	Estimated Energy Saving (MWh/a)	CO ₂ Avoidance (tCO ₂ /MWh/a)
Kigali Vision City	Kigali City Authority	May 2017	Unknown	Yes	4500	900000	15000000	1500000	2197.8	1538.46
Batsinda II Sustainable Neighborhood development	Rwanda Social Security Board	August 2014	Unknown		609	121800	2400000	240000	297.4356	208.20492
Tanzania										
National Housing Corporation headquarters	NHC Tanzania	November 2015	Built	Yes	n/a	13800	18000000	1800000	66.24	35.04096
Energy and Water Utilities Regulatory Authority Headquarters	EWURA Tanzania	November 2015	Unknown	Yes	n/a	21420	10710000	1071000	2306.934	1220.368086
Ushindi Housing	NHC Tanzania	November 2015	Unknown	Yes	88	24680	4400000	440000	118.464	62.667456
Wakulima Housing	NHC Tanzania	November 2015	Built	Yes	136	16128	6800000	680000	77.4144	40.9522176
Kibada Housing	NHC Tanzania	November 2015	Built	Yes	209	38000	19000000	1900000	182.4	96.4896
Kigamboni Housing Scheme	NHC Tanzania	November 2015	Built		193	38600	9650000	965000	185.28	98.01312
Uvumba satellite city	NHC Tanzania	November 2014	On-going		10000	2000000	50000000	5000000	9600	5078.4

Annex IV. List of documents consulted

The documents shared for review as part of the preparation and at the onset of the mission are indicated below:

Document Title		Author(s)	Date effective	Related Component (if applicable)
1	4C12 Signed legal instrument and Pro doc + Annexes	Not specified	5 August 2011	Overall project. Letter of Agreement (LOA) for Full Size Project between UNEP and UN Habitat
2	Annex 1 Pro doc + its annexures	-		Overall project. Description, logframe, schedule & milestones, budget
3	Annex 2 GEF CEO approval letter	-	11 May 2011	Overall project. Milestones and budget
4	Annex 3 Definitions and terms	(page 219 of scanned copy)	5 August 2011	Overall project.
5	Annex 4 Project contact details	(page 221 of scanned copy)	5 August 2011	Overall project. Delegation of duties, roles and responsibilities, contacts
6	Annex 5 Project supervision plan	(page 223 of scanned copy)	5 August 2011	
7	Annex 6 (A + B). Inventory templates	page 225 and 227	5 August 2011	Overall project. Inventory and disposal forms.
8	Annex 7 (A + B). banking and cash flow	page 229, 231 and 232	5 August 2011	Overall project. Templates
9	Annex 8 Half yearly progress report format	page 233	5 August 2011	Overall project. Template for half yearly reporting.
10	Annex 9 Annual PIR format	page 239	5 August 2011	Overall project. Template for annual project implementation review report.
11	Annex 10 Final report format	page 257	5 August 2011	Overall project. Template for final report.
12	Annex 11 Final statement of accounts	page 259	5 August 2011	Overall project. Template for final statement of accounts.
13	Annex 12 Co-financing reporting template	page 263	5 August 2011	Overall project. Template for co-financing reporting
14	E Africa EEB – Final Copy PD-18-05-11	Not indicated	18 May 2011 (file name date)	
15	E Africa EEB GEFTF CEO Endorsement 01-04-22	Not indicated	4 March 2011 (submission)	Overall project. Comprehensive overview of the project requesting approval from the GEF CEO for the EEB in E Africa project
16	Initial budget	Not indicated	No date shown	Breakdown per component/activity, linked to UNEP line items and co-financing
17	Signed LOA	Not indicated	5 August 2011	As above, final signature 5 August

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

Document Title		Author(s)	Date effective	Related Component (if applicable)
18	GFL-4C12-Rev 1 EAB (added budget lines and delay of planned spending. Signed 10 June 2013)	Not indicated	10 June 2013	Overall project.
19	Rev 2 (correct actual start date; record expenditure, re-phase and extend implementation timeline to Dec 2016. Signed 12 November 2015)	Not indicated	12 November 2015	Overall project.
20	Signed copy (further revision, Signed Feb and March 2017)	Not indicated	Feb and March 2017	Overall project.
21	Annual Project Implementation Review reports (PIRs) for fiscal years: <ul style="list-style-type: none"> o FY 14 o FY 15 o FY 16 o FY 17 	Not indicated	As per relevant financial year	Overall project.
22	Mid-term Review of the UNEP/GEF project GFL/2328-2720-4C12	M'Gbra N'Guessan, Review Expert	August 2014	Overall project.
23	Agreements with universities	Not indicated	Various dates	Outcome 1 and 3
24	The National Building (Building Standards) Code for Uganda, 2018	Not indicated	Adopted 14 November 2018	Outcome 2
25	The Energy and Resource Efficiency building Code, A Presentation to Green Building Training	Prof. Robert Rukwaro, University of Nairobi	14 – 16 July 2014	Outcome 2
26	2017/18- 2021/22 Strategic plan for Kenya Building Research Centre (KBRC)	KBRC	September 2018 ⁸²	Outcome 2 and 3
27	A guide to issuance of Building Permits in local Government Authorities, Tanzania (Kiswahili) and an abstract translated into English specific to Energy Efficiency aspects (as provided by the PMU).	Tanzanian Government	unknown	Outcome 2
28	Uganda Ministry of Lands, Housing and Urban Development. Sensitization and promotion of energy efficiency in buildings in the districts/ urban Councils of Mityana,	Mr Jonas Unoba. Senior Housing Officer and Mr Solomon	June 2016	Overall Project

⁸² Publication or launch date suggested by newspaper article dated 4 September, 2018: <https://myleader.co.ke/timeline/cs-james-macharia-presides-over-the-launch-2017-18-2021-22-strategic-plan-for-kenya-building-research-centre-kbrc/>

	Document Title	Author(s)	Date effective	Related Component (if applicable)
	Mubende, Kibaale and Kyenjojo. Field report.	Kagogwe Project Officer, UN-Habitat		
29	Uganda Ministry of Lands, Housing and Urban Development. Dissemination of Prototype House Plans in the districts of Luwero, Nakaseke and Nakasongola, respectively. Field report.	Mr Jonas Unoba. Arch. Harriet Kaahwa, Agira Vincent	March 2018	Overall Project
30				

Annex V. Evaluation bulletin

Annex VI. Other communication and outreach tools

None

Annex VII. Brief CV of the consultant

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

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PERSONAL DETAIL

Date of Birth:	March 14, 1975
Place of Birth:	Port Elizabeth
Nationality:	South African
Marital Status:	Divorced
Health:	Excellent
Language(s):	English, Afrikaans

CAREER OBJECTIVE

To leverage my skills and experience, grow professionally and personally and contribute delivery excellence to environmentally sound and sustainable development

ENERGY AND SUSTAINABILITY PROFESSIONAL

WORK EXPERIENCE

SANEDI *Jul, 2016 – June 2017*
Acting Corporate Planner
A variety of business responsibilities including strategy formulation, planning, reporting, risk management and governance aspects.

Alakriti Consulting *Jun, 2008 - current*
Owner, Principle Consultant
Consulting to various public sector, private sector and international development organisations. Diverse range of strategy, management and business consulting related to sustainability and clean energy solutions.

Deloitte Consulting *Sep, 2007 – Jun, 2008*
Manager
Management Consulting and Programme Management in the Power Sector practice providing services to the electricity sector.

EON Consulting *Aug, 2004 – Aug, 2007*
Senior Consultant
Consulting, project and programme management in the energy sector and predominantly focused on energy efficiency.

Kwezi V3 Engineers *Aug, 2002 – Jul, 2004*
Environmental / Project Engineer
Consulting engineering in the waste management and environmental services division. Delivering innovative solutions and projects from design phase to construction close out.

Eskom TSI *May, 2000 – Jul, 2002*
Engineer
Various projects in the Civil and Building division, Environmental division, Projects division and Business Consulting division.

EDUCATION

University of Stellenbosch *Jan, 1996 – Dec, 1999*
B. Eng (Civil)
Prescribed curriculum encompassing the broad spectrum of civil engineering aspects including transport, structures and civil works and services.

University of Port Elizabeth *Jan, 1993 – Dec, 1995*
B. Bldg. Arts
Pre-requisite qualification for B. Architecture. Wide-ranging curriculum related to building design and construction.

REFERENCES

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Andrew Etzinger
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Daniel Werner
Company: GIZ GIZ Büro Nigeria
Position: Programme Director
Nigerian Energy Support Programme (previously Programme Director Energy and Climate in South Africa)
Area: Abuja, Nigeria
email: daniel.werner@giz.de

Noma Qase
Company: Department of Energy
Position: Director Renewable Energy
Area: Pretoria
Telephone: +27 12 406 7687
Mobile: +27 79 889 9225
email: Noma.Qase@energy.gov.za

Barry Bredenkamp
Company: SANEDI
Position: General Manager: Energy Efficiency
Area: Johannesburg
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AWARDS AND ACHIEVEMENTS

EON Solutions Africa **Top Consultant Award** 2005
Eskom Resources and Strategy **Manager's Award for Excellence** 2002
Full merit scholarship awarded by Eskom 1997

SUPPLEMENTARY TRAINING/COURSES

Business Presentation Group 2008
Presentation skills: Present to Influence

Deloitte Manager Development Learning Continuum 2007
Deloitte Manager Development Program

WITS (Graduate School of Public and Development Management) & MEET 2008
Clean Development Mechanism and Environmental Policy in Energy

CorPro (Accredited by Technicon SA) 2001
Corporate Project Management

PAPERS AND PUBLICATIONS

Conference / Publication	Capacity and Title
WindAc Africa, 2017	Co-author and presenter: The likely size and sustainable development impact of South Africa's wind energy sector, 2050
Energy Efficiency Made Simple Vol II	Author of chapter: Responsible handling of spent mercury bearing lamps and batteries Volume 2, 2009
Annual International Domestic Use of Energy Conference, 2007	Co-author and presenter: A Greener Shade Of Brown: "The Ability Of Communication To Rapidly Reduce Demand" April 2007, and Co-author and presenter: Eskom Approach to Solar Water Heating April 2007
4th International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL'06) (London)	Co-author: Market transformation in South Africa: are we cutting it? June 2006
2005 International Energy Program Evaluation Conference (New York)	Delegate August 2005
Annual International Domestic Use of Energy Conference 2005	Co-author and presenter: The Impact Of Marketing And Communication On Energy Efficiency In The South African Domestic Sector February 2005
WASTECON 2004 International Waste Congress and Exhibition	Author and presenter: Waste Reclamation in the Johannesburg Metro October 2004

Annex VIII. Evaluation TOR (without annexes)

TERMS OF REFERENCE

Terminal Evaluation of the UN Environment/Global Environment Facility project
"Promoting Energy Efficiency in Buildings in East Africa"

Section 1: PROJECT BACKGROUND AND OVERVIEW

1. Project General Information

Table 1. Project summary

GEF project ID:	3788		
Implementing Agency:	UN Environment	Executing Agency:	UN-Habitat
Sub-programme:	Climate Change	Expected Accomplishment(s):	
UN Environment approval date:	May 2011	Programme of Work Output(s):	
GEF approval date:	May 11, 2011	Project type:	Full-size
GEF Operational Programme #:	5	Focal Area(s):	Climate Change
		GEF Strategic Priority:	CC-Sp1-Building-EE
<i>Expected start date:</i>	July 2011	<i>Actual start date:</i>	December 2011
<i>Planned completion date:</i>	June 2015	<i>Actual completion date:</i>	August 2018
<i>Planned project budget at approval:</i>	US\$ 15,336,288	Actual total expenditures reported as of 30 June 2017	US\$ 2,417,553.85
GEF grant allocation:	US\$ 2,853,000	GEF grant expenditures reported as of 30 June 2017:	US\$ 2,323,072.47
Project Preparation Grant - GEF financing:	US\$ 80,000	Project Preparation Grant - co-financing:	US\$ 100,000
<i>Expected Full-Size Project co-financing:</i>	US\$ 12,483,288	Secured Full-Size Project co-financing:	USD \$ 32,992,626 PIR June 2017 (co-finance realized)
First disbursement:	15 th August 2011	Date of financial closure:	
No. of revisions:	4	Date of last revision:	10 March 2018

No. of Steering Committee meetings:		Date of last/next Steering Committee meeting:	Last: 17 April 2014 (last PIR!)	Next:
Mid-term Review/ Evaluation (planned date):	June 2013	Mid-term Review/ Evaluation (actual date):	June 2014	
Terminal Review (planned date):		Terminal Review (actual date):		
Coverage - Countries:	Kenya, Tanzania, Uganda, Rwanda and Burundi	Coverage - Region:	East Africa	
Dates of previous project phases:	N/A	Status of future project phases:	Ongoing negotiation with Covenant of Mayors (South Africa) and European Commission	

2. Project rationale⁸³

1. East Africa, energy supply is known to be far below demand. Energy used in commercial and residential buildings accounts for a significant percentage of the total national energy consumption. It is estimated that up to 40% of the total electricity generated in the East African region is consumed in buildings alone, with buildings using more energy than the transport and industry sectors. Many modern buildings in Eastern Africa are European replicas irrespective of the differences in climate. Thus, buildings tend to be reliant on artificial means for indoor comfort, i.e. cooling, heating and lighting. Design and construction practices using materials produced with intensive inputs of energy, combined with poor understanding of thermal comfort, passive building principles and energy conscious behavior, have led to tremendous energy wastage.

2. UN Environment, in collaboration with UN-Habitat and the Governments of Kenya, Tanzania, Uganda, Rwanda and Burundi developed the “Promoting Energy Efficiency in Buildings in East Africa (EEBEA) project” to mainstream energy efficiency measures into housing policies, building codes, and building practices in East Africa.

3. Project objectives and components

3. The project is aligned with GEF Operational Program 5: Removal of Barriers to Energy Efficiency and Energy Conservation and is designed to achieve the results presented in Table 2 below

Table 2. Project Results and Indicators

⁸³ Legend: Grey =Info to be added

Result Statement	Indicators
<p>Objective: Mainstream energy efficiency measures into housing policies, building codes, and building practices in East Africa and to achieve considerable avoidance of GHG emissions as a result of improved buildings and building practices.</p>	<ul style="list-style-type: none"> • 20% reduction in total energy consumption and GHG emissions in the building sectors in the partner countries by 2035 compared to 2010. • All housing units in the region as part of governmental mass housing programs are energy efficient. • New or existing large institutional or commercial buildings are adopting Energy Efficient (EE) technologies, like for instance Solar Water Heating (SWH) systems or EE ACs. • Conventional WH systems are being phased out and replaced by SWH systems. • Health benefits realized through reduction of emissions and improved in-door living condition. • Access to affordable energy service improved. • Lower energy costs for households living in the energy efficient buildings. • Increased energy security in the region.
<p>Outcome 1: Reliable Energy Consumption Benchmarks in the Building sector available for East Africa</p>	<ul style="list-style-type: none"> • All partner countries (Kenya, Tanzania, Uganda, Rwanda and Burundi) and at least two building sub-sectors in these countries having a common energy use measurement system (e.g.; kWh/m².year) established
<p>Outcome 2: Strengthened capacities in developing Energy Efficient building regulations and standards (Building Codes and Municipal Bylaws).</p>	<ul style="list-style-type: none"> • Increased number of mandatory Energy Efficient Building (EEB) regulations and standards adopted in the region. • Increased number of housing projects that apply EEB measures. • Increased number of building permits for EE retrofitting
<p>Outcome 3: Increased awareness of energy efficiency best practices in buildings and capacities built of professionals and line ministries staffs</p>	<ul style="list-style-type: none"> • Increased awareness of EE in general and EEB especially, on the side of the general public, the public sector and the private sector. • East African Green Buildings Award established. • Increasing number of submitted and approved building permits that are EE

	compliant, based on the respective municipal records
<p>Outcome 4:</p> <p>Strengthened Financial Framework in each partner country for the implementation of EEB measures.</p>	<ul style="list-style-type: none"> • Attractive credit lines with low interest rate for financing EEB investments are available in the region. • Appropriate financial incentives set by governments for investments in EEB are available in the region.
<p>Outcome 5:</p> <p>Accelerated Implementation of pilot projects for demonstration purposes</p>	<ul style="list-style-type: none"> • Number of demonstration projects on EEB implemented in each of the partner countries (Kenya, Uganda, Tanzania, Rwanda and Burundi) by the end of the project.

4. Executing Arrangements

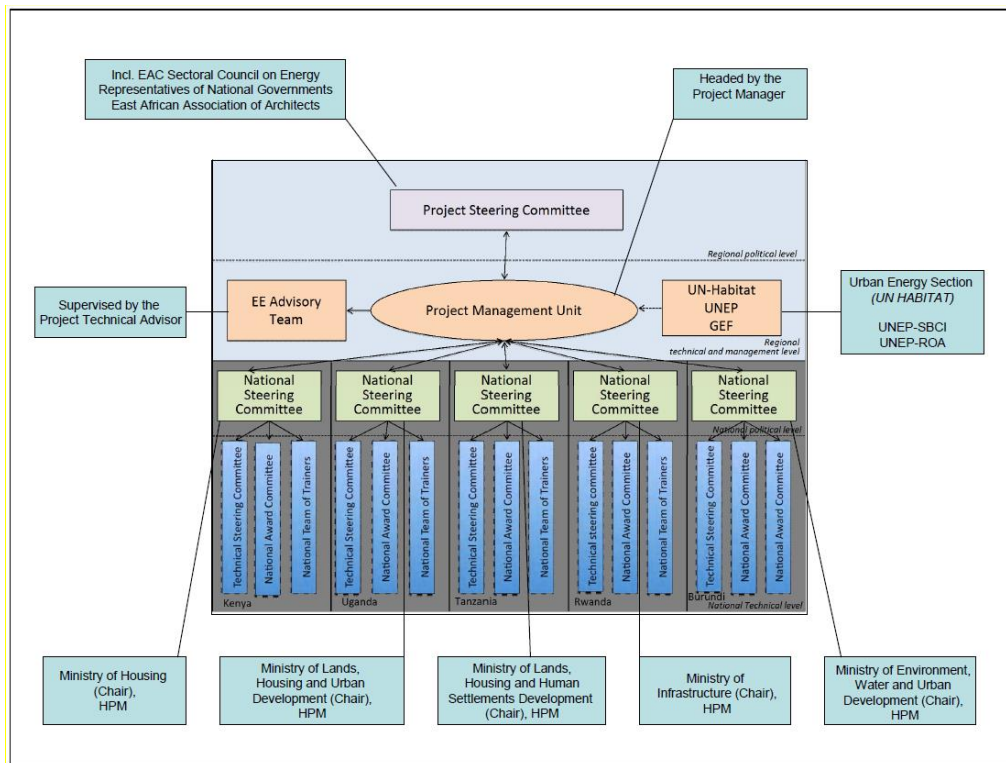
5. The project was implemented by UN Environment’s Climate Mitigation Unit, Energy & Climate Branch, within the Economy Division in closer coordination with the UN Environment Regional Office for Africa. UN Habitat Urban Energy Unit served as the Executing Partner. Both, Implementing and Executing Agencies are based in Nairobi.

6. The implementation architecture is shaped by complementary political and technical approaches. The Project Steering Committee (PSC), was composed of senior representatives from national governments of the partner countries; EAC Sectoral Council on Energy and the East African Association of Architects was the highest political body providing strategic guidance to the overall intervention.

7. On the technical side, the day-to-day execution of the project was carried out by a Project Management Unit (PMU) situated at UN Habitat Headquarters in Nairobi and comprising a Project Manager, a Project Technical Advisor and an Administrative Assistant. Consultants and technical experts engaged by the project formed the Energy Efficiency Advisory and were supervised by the PMU. UN Environment and UN Habitat supervised the PMU.

8. The political and technical architecture was replicated at national level as shown in Figure 1 below.

Figure 1 Executing Arrangements (source Project Document)



5. Project Cost and Financing

9. The project estimated total cost was 15,336,288 US\$. 19% of it, 2,853,000 US\$ contributed by the GEF trust fund. Partners in kind contributions are presented in Table 3 below while Table 4 presents the cost of each of the anticipated project results.

Table 3: Project Cost

	US\$	%
Cost to the GEF Trust Fund	2,853,000	19
In-kind Co-financing		
Burundi	1,250,000	8
Kenya	5,063,288	33
Tanzania	2,050,000	13
Uganda	2,220,000	14
Rwanda	1,300,000	9

UN-HABITAT	400,000	3
UNEP-ROA	200,000	1
Sub-total	12,483,288	82
Total	15,336,288	100

Table 4 Cost of Anticipated Results

Project Outcomes	(in US\$)	
	GEF Project financing	Co-financing
1. Reliable Energy Consumption Benchmarks in the Building Sector available for East Africa	300,000	600,000
2. Strengthened Capacities in developing Energy Efficiency building regulations and standards (Building Codes and Municipal Bylaws)	780,000	1,200,000
3. Increased awareness of energy efficiency best practices in buildings and capacity built of professionals and line ministry staff	653,000	1,400,000
4. Increased awareness of energy efficiency best practices in buildings and capacity built of professionals and line ministry staff	200,000	1,800,000
Accelerated Implementation of pilot projects for demonstration purposes	635,000	6,983,288
Project Management Costs (PMC)	285,000	500,000
Total Planned	2,853,000	12,483,288

6. Implementation Issues

10. The project intervened in a highly dynamic environment and was affected by a series of disruptions. Scheduled to be implemented from July 2011 to June 2015 (48 months), it was officially launched in March 2012 and the first project manager was hired in April 2012. Thus, implementation started effectively in June 2012. Along its lifespan, the project was forced to change the project manager three times. Unanticipated problems -including the flow of co-finance- affected the delivery of outputs leading

to four project revisions. Implementation was extended to August 31, 2018. A Mid Term Review was conducted between June and September 2014.

Section 2. OBJECTIVE AND SCOPE OF THE EVALUATION

7. Key Evaluation principles

11. Evaluation findings and judgements should be based on **sound evidence and analysis**, clearly documented in the evaluation 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.

12. **The “Why?” Question.** As this is a terminal evaluation and a follow-up project is likely [or similar interventions are envisaged for the future], particular attention should be given to learning from the experience. Therefore, the “Why?” question should be at the front of the consultants’ minds all through the evaluation exercise and is supported by the use of a theory of change approach. This means that the consultants 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. This should provide the basis for the lessons that can be drawn from the project.

13. **Baselines and counterfactuals.** In attempting to attribute any outcomes and impacts to the project intervention, the evaluators should consider the difference between *what has happened with, and what would have happened without, the project*. This implies that there should be consideration of the baseline conditions, trends and counterfactuals in relation to the intended project outcomes and impacts. It also means that there should be plausible evidence to attribute such outcomes and impacts to the actions of the project. Sometimes, adequate information on baseline conditions, trends or counterfactuals is lacking. In such cases this should be clearly highlighted by the evaluators, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgements about project performance.

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

8. Objective of the Evaluation

15. In line with the UN Environment Evaluation Policy⁸⁴ and the UN Environment Programme Manual⁸⁵, the Terminal Evaluation (TE) is undertaken at completion of the project to assess project performance (in

⁸⁴ <http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationPolicy/tabid/3050/language/en-US/Default.aspx>

⁸⁵ http://www.unep.org/QAS/Documents/UNEP_Programme_Manual_May_2013.pdf. This manual is under revision.

terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation 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 UN Environment, UN Habitat and the Governments of Kenya, Tanzania, Uganda, Rwanda and Burundi. Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation.

9. Key Strategic Questions

16. In addition to the evaluation criteria outlined in Section 10 below, the evaluation will address the **strategic questions** listed below. These are questions of interest to UN Environment and to which the project is believed to be able to make a substantive contribution:

- (a) To what extent and how did the findings and recommendations from the Mid Term Review inform project implementation?
- (b) Under 'Country Ownership and Driven-ness', to what extent are Senior officers in the Line Ministries in Kenya, Tanzania, Uganda, Rwanda and Burundi aware of the project and what key innovations do they associate with the intervention?
- (c) To what extent and how did the project promote learning and cross fertilization among project countries and what actions were anticipated for scaling up project results into other Eastern African countries?
- (d) To what extent were the mix of knowledge and expertise made available by the project appropriate to steer the intervention in Kenya, Tanzania, Uganda, Rwanda and Burundi?

10. Evaluation Criteria

17. All evaluation criteria will be rated on a six-point scale. Sections A-I below, outline the scope of the criteria and a link to a table for recording the ratings is provided in Annex 1). A weightings table will be provided in excel format (link provided in Annex 1) to support the determination of an overall project rating. The set of evaluation 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 delivery 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. The evaluation consultants can propose other evaluation criteria as deemed appropriate.

A. Strategic Relevance

18. The evaluation will assess, in line with the OECD/DAC definition of relevance, 'the extent to which the activity is suited to the priorities and policies of the target group, recipient and donor'. The evaluation will include an assessment of the project's relevance in relation to UN Environment's mandate and its alignment with UN Environment'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 UN Environment Medium Term Strategy⁸⁶ (MTS) and Programme of Work (POW)*

⁸⁶ UN Environment's Medium Term Strategy (MTS) is a document that guides UN Environment's programme planning over a four-year period. It identifies UN Environment's thematic priorities, known as Sub-programmes (SP), and sets out the desired outcomes, known as Expected Accomplishments (EAs), of the Sub-programmes.

19. The evaluation 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.

ii. *Alignment to UN Environment / Donor/GEF Strategic Priorities*

20. Donor, including GEF, strategic priorities will vary across interventions. UN Environment strategic priorities include the Bali Strategic Plan for Technology Support and Capacity Building⁸⁷ (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. GEF priorities are specified in published programming priorities and focal area strategies.

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

21. The evaluation will assess 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. Examples may include: national or sub-national development plans, poverty reduction strategies or Nationally Appropriate Mitigation Action (NAMA) plans or regional agreements etc.

iv. *Complementarity with Existing Interventions*

22. An assessment will be made of how well the project, either at design stage or during the project mobilization, took account of ongoing and planned initiatives (under the same sub-programme, other UN Environment sub-programmes, or being implemented by other agencies) that address similar needs of the same target groups. The evaluation 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 UN Development Assistance Frameworks or One UN programming. Linkages with other interventions should be described and instances where UN Environment's comparative advantage has been particularly well applied should be highlighted.

Factors affecting this criterion may include:

- Stakeholders' participation and cooperation
- Responsiveness to human rights and gender equity
- Country ownership and driven-ness

B. Quality of Project Design

23. The quality of project design is assessed using an agreed template during the evaluation inception phase, ratings are attributed to identified criteria and an overall Project Design Quality rating is established (www.unep.org/evaluation). This overall Project Design Quality rating is entered in the final evaluation ratings table as item B. In the Main Evaluation Report a summary of the project's strengths and weaknesses at design stage is included, while the complete Project Design Quality template is annexed in the Inception Report.

Factors affecting this criterion may include (at the design stage):

⁸⁷ <http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf>

- Stakeholders participation and cooperation
- Responsiveness to human rights and gender equity

C. Nature of External Context

24. At evaluation inception stage a rating is established for the project's external operating context (considering the prevalence of conflict, natural disasters and political upheaval). This rating is entered in the final evaluation 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 Evaluation Consultant and Evaluation Manager together. A justification for such an increase must be given.

D. Effectiveness

i. Delivery of Outputs

25. The evaluation will assess the project's success in producing the programmed outputs (*products, capital goods and services resulting from the intervention*) and 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 TOC. In such cases a table should be provided showing the original and the reformulation of the outputs for transparency. The delivery 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 delivery. The evaluation will briefly explain the reasons behind the success or shortcomings of the project in delivering its programmed outputs and meeting expected quality standards.

Factors affecting this criterion may include:

- Preparation and readiness
- Quality of project management and supervision⁸⁸

ii. Achievement of Direct Outcomes

26. The achievement of direct outcomes (short and medium-term effects of the intervention's outputs; a change of behaviour resulting from the use/application of outputs, which is not under the direct control of the intervention's direct actors) is assessed as performance against the direct outcomes as defined in the reconstructed⁸⁹ Theory of Change. These are the first-level outcomes expected to be achieved as an immediate result of project outputs. As in 1, above, a table can be used where substantive amendments to the formulation of direct outcomes is necessary. The evaluation should report evidence of attribution

⁸⁸ In some cases 'project management and supervision' will refer to the supervision and guidance provided by UN Environment 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 UN Environment.

⁸⁹ UN Environment staff are currently required to submit a Theory of Change with all submitted project designs. The level of 'reconstruction' needed during an evaluation 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 evaluation.

between UN Environment's intervention and the direct outcomes. In cases of normative work or where several actors are collaborating to achieve common outcomes, evidence of the nature and magnitude of UN Environment's 'substantive contribution' should be included and/or 'credible association' established between project efforts and the direct outcomes realised.

Factors affecting this criterion may include:

- Quality of project management and supervision
- Stakeholders' participation and cooperation
- Responsiveness to human rights and gender equity
- Communication and public awareness

iii. Likelihood of Impact

27. Based on the articulation of longer-term effects in the reconstructed TOC (*i.e. from direct outcomes, via intermediate states, to impact*), the evaluation 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 term impacts. The Evaluation Office's approach to the use of TOC in project evaluations is outlined in a guidance note available on the EO website, web.unep.org/evaluation and is supported by an excel-based flow chart, 'Likelihood of Impact Assessment Decision Tree'. Essentially the approach follows a 'likelihood tree' from direct 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.

28. The evaluation will also consider the likelihood that the intervention may lead, or contribute to, unintended negative effects. Some of these potential negative effects may have been identified in the project design as risks or as part of the analysis of Environmental, Social and Economic Safeguards.⁹⁰

29. The evaluation will consider the extent to which the project has played a catalytic role or has promoted scaling up and/or replication⁹¹ as part of its Theory of Change and as factors that are likely to contribute to longer term impact.

30. Ultimately UN Environment 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-term or broad-based changes. However, the evaluation will assess the likelihood of the project to make a substantive contribution to the high-level changes represented by UN Environment's Expected Accomplishments, the Sustainable Development Goals⁹² and/or the high level results prioritised by the funding partner.

Factors affecting this criterion may include:

- Quality of Project Management and Supervision (including adaptive management)
- Stakeholders participation and cooperation
- Responsiveness to human rights and gender equity
- Country ownership and driven-ness

⁹⁰ Further information on Environmental, Social and Economic Safeguards (ESES) can be found at <http://www.unep.org/about/eses>

⁹¹ Scaling up refers to approaches being adopted on a much larger scale, but in a very similar context. Scaling up is often the longer term objective of pilot initiatives. Replication refers to approaches being repeated or lessons being explicitly applied in new/different contexts e.g. other geographic areas, different target group etc. Effective replication typically requires some form of revision or adaptation to the new context. It is possible to replicate at either the same or a different scale.

⁹² A list of relevant SDGs is available on the EO website www.unep.org/evaluation

- Communication and public awareness

E. Financial Management

31. Financial management will be assessed under two themes: *completeness* of financial information and *communication* between financial and project management staff. The evaluation will establish the actual spend across the life of the project of funds secured from all donors. This expenditure will be reported, where possible, at output level and will be compared with the approved budget. The evaluation will assess the level of communication between the Project/Task 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. The evaluation will verify the application of proper financial management standards and adherence to UN Environment'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.

Factors affecting this criterion may include:

- Preparation and readiness
- Quality of project management and supervision

F. Efficiency

32. In keeping with the OECD/DAC definition of efficiency the evaluation 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. Focussing 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 evaluation 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 evaluation 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.

33. The evaluation will give special attention to efforts by the project teams to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. to increase project efficiency. The evaluation will also consider the extent to which the management of the project minimised UN Environment's environmental footprint.

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

Factors affecting this criterion may include:

- Preparation and readiness (e.g. timeliness)
- Quality of project management and supervision
- Stakeholders participation and cooperation

G. Monitoring and Reporting

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

i. Monitoring Design and Budgeting

36. Each project should be supported by a sound monitoring plan that is designed to track progress against SMART⁹³ indicators towards the delivery of the projects outputs and achievement of direct outcomes, including at a level disaggregated by gender, vulnerability or marginalisation. The evaluation 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 if applicable.

ii. Monitoring of Project Implementation

37. The evaluation will assess whether the monitoring system was operational and facilitated the timely tracking of results and progress towards projects objectives throughout the project implementation period. This should include monitoring the representation and participation of disaggregated groups in project activities. It will also consider how information generated by the monitoring system during project implementation was used to adapt and improve project execution, achievement of outcomes and ensure sustainability. The evaluation should confirm that funds allocated for monitoring were used to support this activity.

iii. Project Reporting

38. GEF projects are required to report regularly. Reports will be supplied by the project team (e.g. the Project Implementation Reviews and Tracking Tool). The review will assess the extent to which both UN Environment and donor reporting commitments have been fulfilled.

Factors affecting this criterion may include:

- Quality of project management and supervision
- Responsiveness to human rights and gender equity (e.g disaggregated indicators and data)

H. Sustainability

39. Sustainability is understood as the probability of direct outcomes being maintained and developed after the close of the intervention. The evaluation will identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of achieved direct outcomes (ie. '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

⁹³ SMART refers to indicators that are specific, measurable, assignable, realistic and time-specific.

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

40. The evaluation will assess the extent to which social or political factors support the continuation and further development of project direct 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 evaluation will consider whether individual capacity development efforts are likely to be sustained.

ii. Financial Sustainability

41. Some direct 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 direct 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 resource management approach. The evaluation 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 direct outcomes of a project 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

42. The evaluation 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 evaluation will consider whether institutional capacity development efforts are likely to be sustained.

Factors affecting this criterion may include:

- Stakeholders participation and cooperation
- Responsiveness to human rights and gender equity (e.g. where interventions are not inclusive, their sustainability may be undermined)
- Communication and public awareness
- Country ownership and driven-ness

I. Factors and Processes Affecting Project Performance

43. *(These factors are rated in the ratings table, but are discussed within the Main Evaluation Report as cross-cutting themes as appropriate under the other evaluation criteria, above)*

i. Preparation and Readiness

44. This criterion focuses on the inception or mobilisation stage of the project (ie. the time between project approval and first disbursement). The evaluation 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 evaluation 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

45. In some cases 'project management and supervision' will refer to the supervision and guidance provided by UN Environment 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 and supervision provided by UN Environment.

46. The evaluation 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.); communication and collaboration with UN Environment 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

47. Here the term 'stakeholder' should be considered in a broad sense, encompassing all project partners, duty bearers with a role in delivering project outputs and target users of project outputs and any other collaborating agents external to UN Environment. 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 Equity

48. The evaluation 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 evaluation will assess to what extent the intervention adheres to UN Environment's Policy and Strategy for Gender Equality and the Environment.

49. In particular the evaluation will consider to what extent project design, implementation and monitoring have taken into consideration: (i) possible gender inequalities in access to, and the control over, natural resources; (ii) specific vulnerabilities of women and children to environmental degradation or disasters; and (iii) the role of women in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation.

v. Country Ownership and Driven-ness

50. The evaluation 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, ie. either a) moving forwards from outputs to direct outcomes or b) moving forward from direct outcomes towards intermediate states. The evaluation 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. 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. This ownership should adequately represent the needs of interest of all gendered and marginalised groups.

vi. Communication and Public Awareness

51. The evaluation 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 evaluation 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 evaluation will comment on the sustainability of the communication channel under either socio-political, institutional or financial sustainability, as appropriate.

Section 3. EVALUATION APPROACH, METHODS AND DELIVERABLES

52. The Terminal Evaluation will be an in-depth evaluation using a participatory approach whereby key stakeholders are kept informed and consulted throughout the evaluation process. Both quantitative and qualitative evaluation 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 evaluation implementation phase in order to increase their (and other stakeholder) ownership of the evaluation 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.)

53. The findings of the evaluation will be based on the following:

(a) A **desk review** of:

- Relevant background documentation
- 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;
- Project reports such as six-monthly progress and financial reports, progress reports from collaborating partners, meeting minutes, relevant correspondence and including the Project Implementation Reviews and Tracking Tool etc.;
- Project outputs
- Mid-Term Review or Mid-Term Evaluation of the project;
- Evaluations/reviews of similar projects.

(b) **Interviews** (individual or in group) with:

- UN Environment Task Manager (TM); Mr Geordie Colville
- Project management team; Vincent Kitio, Chief, Urban Energy Unit, acting Project Manager

- UN Environment Fund Management Officer (FMO); Leena Darlington, Faith Karuga
 - Climate Change Sub-Programme Coordinator; Mr Niklas Hagelberg
 - Project partners, including representatives from the line ministries of the project countries; members of the PSC and NSCs (list to be defined)
 - Relevant resource persons: Mr Andre Dzikus, UN Habitat, Head of Branch
- (c) **Surveys** [to be defined during inception]
- (d) **Field visits** will include Nairobi, Kampala and Kigali
- (e) **Other data collection tools** [to be defined during inception]

11. Evaluation Deliverables and Review Procedures

56. The evaluation consultant will prepare:

- **Inception Report:** (see Annex 1 for links to all templates, tables and guidance notes) containing an assessment of project design quality, a draft reconstructed Theory of Change of the project, project stakeholder analysis, evaluation framework and a tentative evaluation 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 Evaluation Report:** (see links in Annex 1) containing an executive summary that can act as a stand alone document; detailed analysis of the evaluation findings organised by evaluation criteria and supported with evidence; lessons learned and recommendations and an annotated ratings table.
- **Evaluation Bulletin:** a 2-page summary of key evaluation findings for wider dissemination through the EOU website.

55. **Review of the draft evaluation report.** The evaluation consultant will submit a draft report to the Evaluation Manager and revise the draft in response to their comments and suggestions. Once a draft of adequate quality has been peer-reviewed and accepted, the Evaluation Manager will share the cleared draft report with the Project Manager, who will alert the Evaluation Manager in case the report contains any blatant factual errors. The Evaluation Manager will then forward revised draft report (corrected by the evaluation consultant where necessary) 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 Evaluation Manager for consolidation. The Evaluation Manager will provide all comments to the evaluation team for consideration in preparing the final report, along with guidance on areas of contradiction or issues requiring an institutional response.

56. Based on a careful review of the evidence collated by the evaluation consultant and the internal consistency of the report, the Evaluation Manager will provide an assessment of the ratings in the final evaluation report. Where there are differences of opinion between the evaluator and the Evaluation Manager on project ratings, both viewpoints will be clearly presented in the final report. The Evaluation Office ratings will be considered the final ratings for the project.

57. The Evaluation Manager will prepare a **quality assessment** of the first and final drafts of the main evaluation report, which acts as a tool for providing structured feedback to the evaluation consultants.

The quality of the report will be assessed and rated against the criteria specified in template listed in Annex 1 and this assessment will be appended to the Final Evaluation Report.

58. At the end of the evaluation process, the Evaluation Office will prepare a **Recommendations Implementation Plan** in the format of a table, to be completed and updated at regular intervals by the Task Manager. The Evaluation Office will track compliance against this plan on a six-monthly basis.

12. The Evaluation Consultant

59. For this evaluation, the evaluation team will consist of one Consultant who will work under the overall responsibility of the Evaluation Office represented by an Evaluation Manager Mr Francisco Alarcon in consultation with the UN Environment Task Manager Mr Geordie Colville, Fund Management Officer Leena Darlington and the Sub-programme Coordinator of the UN Environment Climate Change Sub-programme, Mr Niklas Hagelberg. The consultant will liaise with the Evaluation Manager on any procedural and methodological matters related to the evaluation. It is, however, the consultants' individual responsibility 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 UN Environment Task Manager and project team will, where possible, provide logistical support (introductions, meetings etc.) allowing the consultants to conduct the evaluation as efficiently and independently as possible.

60. The consultant will be hired for six months spread over the period 01 April 2018 to 31 September 2018 and should have: an advanced university degree in engineering, environmental sciences, urban planning or other relevant political or social sciences area; a minimum of 15 years of technical / evaluation experience, including of evaluating large, regional or global programmes and using a Theory of Change approach; expert knowledge in Energy Efficiency in Buildings; broad understanding of local governance in Eastern Africa; along with excellent writing skills in English is required; leadership experience and, where possible, knowledge of the UN system, specifically of the work of UN Environment.

61. The consultant will be responsible, in close consultation with the Evaluation Office of UN Environment, for overall management of the evaluation and timely delivery of its outputs, described above in Section 11 Evaluation Deliverables, above. The consultant will ensure that all evaluation criteria and questions are adequately covered.

62. In close consultation with the Evaluation Manager, the Evaluation Consultant will be responsible for the overall management of the evaluation and timely delivery of its outputs, data collection and analysis and report-writing. More specifically:

63. Inception phase of the evaluation, including:

- preliminary desk review and introductory interviews with project staff;
- draft the reconstructed Theory of Change of the project;
- prepare the evaluation framework;
- develop the desk review and interview protocols;
- draft the survey protocols (if relevant);
- develop and present criteria for country and/or site selection for the evaluation mission;

- plan the evaluation schedule;
- prepare the Inception Report, incorporating comments until approved by the Evaluation Manager

64. Data collection and analysis phase of the evaluation, including:

- conduct further desk review and in-depth interviews with project implementing and executing agencies, project partners and project stakeholders;
- (where appropriate and agreed) conduct an evaluation mission(s) to selected countries, visit the project locations, interview project partners and stakeholders, including a good representation of local communities. Ensure independence of the evaluation and confidentiality of evaluation interviews.
- regularly report back to the Evaluation Manager on progress and inform of any possible problems or issues encountered and;
- keep the Project/Task Manager informed of the evaluation progress and engage the Project/Task Manager in discussions on emerging findings throughout the evaluation process.

65. Reporting phase, including:

- draft the Main Evaluation Report, ensuring that the evaluation report is complete, coherent and consistent with the Evaluation Manager guidelines both in substance and style;
- liaise with the Evaluation Manager on comments received and finalize the Main Evaluation Report, ensuring that comments are taken into account until approved by the Evaluation Manager
- prepare a Response to Comments annex for the main report, listing those comments not accepted by the Evaluation Consultant and indicating the reason for the rejection; and
- prepare a 2-page summary of the key evaluation findings and lessons;

66. Managing relations, including:

- maintain a positive relationship with evaluation stakeholders, ensuring that the evaluation process is as participatory as possible but at the same time maintains its independence;
- communicate in a timely manner with the Evaluation Manager on any issues requiring its attention and intervention.

13. Schedule of the evaluation

67. The table below presents the tentative schedule for the evaluation.

Table 5. Tentative schedule for the evaluation

Milestone	Tentative Dates
Kick off meeting via Skype	Mid May 2018
Desk Review – (home based)	End May 2018
Inception Report	Early June 2018
Data collection and analysis, desk-based interviews and surveys	Mid June 2018
Evaluation Mission – 1 week (Nairobi, Kigali and Kampala)	End June 2018
Powerpoint/presentation on preliminary findings and recommendations	Early July 2018
Draft report to Evaluation Manager (and Peer Reviewer)	Mid July 2018
Draft Report shared with UN Environment Project Manager and team	End July 2018
Draft Report shared with wider group of stakeholders	Early August 2018
Final Report	Mid-August 2018
Final Report shared with all respondents	End August 2018

14. Contractual Arrangements

67. Evaluation Consultants will be selected and recruited by the Evaluation Office of UN Environment under an individual Special Service Agreement (SSA) on a “fees only” basis (see below). By signing the service contract with UN Environment/UNON, the consultant(s) certify 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.

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

69. Schedule of Payment for the Evaluation Consultant

Deliverable	Percentage Payment
Approved Inception Report (<i>as per annex document 7</i>)	30%
Approved Draft Main Evaluation Report (<i>as per annex document 13</i>)	30%
Approved Final Main Evaluation Report	40%

70. Fees only contracts: Air tickets will be purchased by UN Environment 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 Evaluation Manager and on the production of acceptable receipts. Terminal expenses and residual DSA entitlements (25%) will be paid after mission completion.

71. The consultants may be provided with access to UN Environment's Programme Information Management System (PIMS) 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 evaluation report.

72. In case the consultants are not able to provide the deliverables in accordance with these guidelines, and in line with the expected quality standards by the UN Environment Evaluation Office, payment may be withheld at the discretion of the Director of the Evaluation Office until the consultants have improved the deliverables to meet UN Environment's quality standards.

73. If the consultant(s) fail to submit a satisfactory final product to UN Environment in a timely manner, i.e. before the end date of their contract, the Evaluation Office reserves the right to employ additional human resources to finalize the report, and to reduce the consultants' fees by an amount equal to the additional costs borne by the Evaluation Office to bring the report up to standard.

Annex IX. Draft Arusha Declaration

A draft copy of the Arusha Declaration is included here. Inputs captured from participants at the conclusion of the Regional Conference are not yet reflected in this draft. A copy of the final version has not been received.

ARUSHA DECLARATION ON ENERGY AND RESOURCE EFFICIENCY IN BUILDINGS IN EAST AFRICA

Preamble

Cities consume 78 per cent of the World's energy and produce more than half of all greenhouse gases and other emissions. Energy used in buildings alone is estimated at 40-50% of the total national electricity consumption. It is in fact estimated that over 50 per cent of the total energy generated in developing countries is used in urban buildings alone, consuming more energy than the transport or the industrial sectors. Further, the building sector, accounts for about 40% of greenhouse gas emission worldwide, contributing significantly to adverse climate change. This calls for solutions towards sustainable development with adequate focus on how Cities grow and are managed. Rational use of renewable energy in Cities and reducing energy wastage in buildings contributes to climate change mitigation and adaptation that translates into huge economic, environmental and social development gains;

Given the political goodwill, partnerships and collaborations in embracing innovation in the region, there is increased uptake of sustainable building design which is enabled by the existence of technical capacity, enforcement strategies and compliance levels in technical institutions of higher learning and Government Agencies including Counties and Municipalities which undertakes capacity buildings;

In enhancing capacity building, over 10 Universities (Schools of Architecture) in the region have integrated sustainable building practices in their teaching curriculum;

All the five (5) Countries have adopted regulatory frameworks that encourage adoption of green building principles including green procurement and mandatory use of solar hot water systems and rain water harvesting specifically in Kenya, Rwanda and Tanzania;

A number of banking institutions in the region are already putting in place sustainability in their day-to-day operations including plans for green mortgage products with discounted interest rates for green products such as PV systems, Solar hot water systems and energy efficient appliances as well as incentivised finance like green bonds, particularly in Kenya and Rwanda;

We also recognize the growing presence of the Green Building Councils in the four (4) Countries that are making ground breaking advancements including Kenya, Rwanda, Tanzania and

Uganda. These are Civil Society Organizations which are part of the World Green Building Council whose main mandate is to promote sustainability in construction within the region and beyond;

To address the adverse climate issues and promote the sustainable building design agenda in the urban space of East Africa, UN-Habitat conducted a three-day workshop for senior Government Officials, Municipal Managers, Experts, Professionals Academia and CSOs. The workshop was held on 1st to 3rd, August 2018, at Ngurdoto Mountain Lodge, Arusha, Tanzania;

As a result of this workshop, with the contributions of all the participants led by the Mr. Tixon Nzunda, Ag. Permanent Secretary, President's Office – Regional Administration and Local Government, Tanzania, the following declaration was written;

The Declaration

We, representatives of the following over Thirty (30) Institutions responsible for policies, regulations, professional development, enablers and financing of green buildings in East African countries of Kenya, Uganda, Tanzania, Rwanda and Burundi, meeting in Arusha, Tanzania, from 1st to 3rd August, 2018 to discuss the integration of Energy and Resource Efficiency in Buildings in East Africa, and also strategies adopted towards sustainability in promotion of energy and resource efficiency in buildings including energy security, greenhouse gas emissions and promotion of future climate-change-resilient built environments by East Africa Community member Countries, County Governments', Local Authorities, Research Institutions, Academia, Private Sector Organizations including NGOs and Civil Society Organizations in the region;

Acknowledging the participation and valuable contribution of United Nations Human Settlements Program (UN-HABITAT) in collaboration with UN-Environment (UNEP) and its regional program on Promoting Energy Efficiency in Buildings in East Africa that is funded by the Global Environment Facility (GEF) to mainstream energy efficiency in building codes, practices and building finance and the invited delegates to the conference;

Recalling the statements during this workshop of the Chief Guest, Mr. Tixon Nzunda, Ag. Permanent Secretary, the President's Office – Regional Administration and Local Government, Tanzania calling for political goodwill and development of systems, rules and procedures across the region to achieve transformation;

Also recalling all the Sustainable Development Goals (SDGs) with particular focus on SDG 7 (Energy), 11 (Sustainable Cities and Communities) and 13 (climate change);

Also recalling the New Urban Agenda adopted in Quito, 2016;

Mindful of the Paris Agreement (COP21) and its 1.5 degree centigrade goal to mitigate climate change through emission reductions;

Acknowledging the existence of legal framework in majority of the Countries in the region notably Uganda, Rwanda and Kenya;

Mindful of the existence of technical resources and publications by UN-Habitat, government institutions, research organizations and academia to lead integration of the sustainability principles in the building approval processes, dissemination and teaching of sustainable architecture that include but not limited to climatic design, proper orientation, natural lighting, sun shading, natural ventilation, resource efficient materials, resource efficient building services, waste management, water efficiency, etc.;

Mindful of the existence of the Covenant of Mayors and its significance contribution against adverse climate change effects in our Cities through access to clean energy;

Mindful of the existence of Building Efficiency Accelerator a public-private collaborative program that speeds the development and implementation of building efficiency policies and practices in cities, counties, municipalities and other local authorities;

Mindful that in the course of events on the ground, it is imperatively needed to shift the approach to focus on emerging small towns and potential villages experiencing the dynamics of urbanization;

Recognizing the need for UN-Habitat and UNEP to enhance collaboration with Ministries responsible for Urban Development, Housing, Building Construction, Regional Administration and Local Government;

Recognizing this workshop consensus on the need for mind-set transformation, enhanced sensitization and continued professional capacity development towards prosumer concept support;

Call upon:

Governments

1. To Create enabling environment to support the implementation of sustainable design practices in the built environment and smart city development initiatives;
2. To facilitate continuous review and enactment of green building policies, regulations and standards towards integrating sustainability in the built environment;

3. To mainstream green building principles and strategies / checklist in the approval process for granting development building permits;
4. To establish incentive mechanisms to promote the design and construction of sustainable design projects;
5. To include Sustainable Building Design requirements in all Public procurement and tendering documents;
6. To liaise with UN-Habitat and other development partners to assist in orderly planning of emerging small towns and villages;
7. To integrate harmonious and sustainable development to enhance rural-urban linkages;
8. Coordinate capacity development for individuals, institutions and communities on green building concepts;
9. To Adopt and celebrate World Green Building Week which is an annual event that motivates and empowers delivery of greener buildings;
10. To collaborate with the Green Building Councils in respective countries and utilize opportunities that exist therein;
11. To jointly present with Green Building Councils at the Buildings day of the Conference of Parties efforts towards achieving the Nationally Determined Contribution targets.
12. To recognize and award outstanding green building champions, research, curriculum and projects.

County Governments / Local Authorities:

1. To strengthen the capacity of approving Authorities by involving experts in Sustainable Building Design in the approval process of development permits.
2. To join the Covenant of Mayors to drive the Climate Change Actions and promote universal access to modern energy in Cities and Municipalities within the region
3. To create enabling framework for development and mainstreaming of Sustainable Energy Access and Climate Action Plan (SEACAP) in the County Integrated Development Plan (CIDP) and other City/Municipality Development Plans;
4. To participate in the Building Efficiency Accelerator and adopt sustainable building practices;

5. To collaborate with the Green Building Councils in respective countries and utilize opportunities that exist therein
6. To recognize and award green building best practices.
7. To develop a building efficiency action plan by the next World Green Building Week 2019
8. To Adopt and celebrate World Green Building Week which is an annual event that motivates and empowers delivery of greener buildings.

Private Sector / Civil Society Organization / Financial Sector / Property Developers

1. Shift focus towards transformation of consumers and support for the private sector;
2. Create green mortgages and other sustainable finance products;
3. To join the green building councils as they are membership based organisations;
4. Ensure sustainability as core of operations and not only as Corporate Social Responsibility;
5. Undertake grass root sensitization to citizens and communities;
6. Set targets on building efficiency throughout their operations;
7. Adopt energy efficiency and renewable energy technology as key agenda item in all discussions;

Accreditation, Professional and Regulatory Bodies:

1. Integrate green building concepts in the continuous professional development programmes
2. Integrate in the design and monitor implementation of
3. Integrate green building concept in the curriculum for professional registrations
4. Integrate green building material standards across the agencies
5. Encourage the Government to facilitate creation of professional body in Burundi

Research and Institutions of Higher Learning of the East African Countries to:

1. To conduct energy audit in Buildings in the region and recommend action to be undertaken where compliance is deficient;

2. Spearhead research on sustainable buildings and context specific solutions to guide the uptake of sustainable buildings in the region;
3. Mainstream sustainable building practices in teaching/ training of future built environment professionals in the region
4. Integrate sustainability and green building practices in all sectors of studies beyond built environment studies
5. To link research findings with professional practice
6. Continuously update the sustainability curriculum with emerging trends and advancements in climate mitigation and adaptation.
7. To Adopt and celebrate World Green Building Week which is an annual event that motivates and empowers delivery of greener buildings.
8. To collaborate with the Green Building Councils and other International Organizations in respective countries and utilize opportunities that exist therein.
9. Professional Club

UN-Habitat and Other Development Partners

1. To continue providing technical assistance in sustainable neighbourhood planning, housing (affordable housing) and basic services with particular focus on climate, energy and resource efficiency;
2. To organize a regional conference on a Covenant of Mayor for Sub-Saharan Africa to sensitize and invite more local authorities to commit to the Global Covenant of Mayors for Climate and Energy.

Arusha, Tanzania, 3rd August, 2018

Annex 1: List of Institutions;

We, representatives of the following Institutions:

Kenya;

1. State Department for Housing and Urban Development
2. Kenya Building Research Centre

3. Council of Governors
4. County Government of Homa Bay
5. County Government of Makueni
6. County Government of Marsabit
7. Nairobi City County
8. County Government of Kajiado
9. University of Nairobi
10. Kenya Green Building Society
11. Barclays Bank of Kenya

Tanzania;

1. The President's Office – Regional Administration and Local Government, Tanzania
2. Arusha City Council
3. Regional Administration of Arusha
4. Rural and Urban Development
5. University of Dares Salaam
6. Watumishi Housing Company

Uganda;

1. Ministry of Works and Transport
2. Kasese Municipal Council
3. Uganda Martyrs University
4. Mortgage Association of Uganda

Rwanda;

1. University of Rwanda
2. Rwanda Green Building Organization

3. Global Green Growth Institute (Rwanda Programme)

Burundi;

1. Ministry of Public Works
2. Burundi National University
3. Ecole Nationale Superieure

Regional and International Institutions

1. East Africa Centre for Renewable Energy and Energy Efficiency (EACREEE)
2. UN-Environment
3. UN-Habitat

Annex X. Quality assessment of the evaluation report

Quality Assessment of the Evaluation Report

Evaluation Title:

Promoting Energy Efficiency in Buildings in East Africa (EEBA) GEF PROJECT ID: 3788

All UN Environment evaluations are subject to a quality assessment by the Evaluation Office. This is an assessment of the quality of the evaluation product (i.e. evaluation report) and is dependent on more than just the consultant's efforts and skills. Nevertheless, the quality assessment is used as a tool for providing structured feedback to evaluation consultants, especially at draft report stage. This guidance is provided to support consistency in assessment across different Evaluation Managers and to make the assessment process as transparent as possible.

	UN Environment Evaluation Office Comments	Final Report Rating
Substantive Report Quality Criteria		
<p>Quality of the Executive Summary:</p> <p>The Summary should be able to stand alone as an accurate summary of the main evaluation product. It should include a concise overview of the evaluation object; clear summary of the evaluation objectives and scope; overall evaluation rating of the project and key features of performance (strengths and weaknesses) against exceptional criteria (plus reference to where the evaluation ratings table can be found within the report); summary of the main findings of the exercise, including a synthesis of main conclusions (which include a summary response to key strategic evaluation questions), lessons learned and recommendations.</p>	<p>Final report:</p> <p>A good executive summary highlights all the key issues and findings</p>	6
<p>I. Introduction</p> <p>A brief introduction should be given identifying, where possible and relevant, the following: institutional context of the project (sub-programme, Division, regions/countries where implemented) and coverage of the evaluation; date of PRC approval and project document signature); results frameworks to which it contributes (e.g. Expected Accomplishment in POW); project duration and start/end dates; number of project phases (where appropriate); implementing partners; total secured budget and whether the</p>	<p>Final report:</p> <p>A comprehensive introductory section</p>	6

	UN Environment Evaluation Office Comments	Final Report Rating
<p>project has been evaluated in the past (e.g. mid-term, part of a synthesis evaluation, evaluated by another agency etc.)</p> <p>Consider the extent to which the introduction includes a concise statement of the purpose of the evaluation and the key intended audience for the findings?</p>		
<p>II. Evaluation Methods</p> <p>This section should include a description of how the <i>TOC at Evaluation</i>⁹⁴ was designed (who was involved etc.) and applied to the context of the project?</p> <p>A data collection section should include: a description of evaluation methods and information sources used, including the number and type of respondents; justification for methods used (e.g. qualitative/ quantitative; electronic/face-to-face); any selection criteria used to identify respondents, case studies or sites/countries visited; strategies used to increase stakeholder engagement and consultation; details of how data were verified (e.g. triangulation, review by stakeholders etc.).</p> <p>Methods to ensure that potentially excluded groups (excluded by gender, vulnerability or marginalisation) are reached and their experiences captured effectively, should be made explicit in this section.</p> <p>The methods used to analyse data (e.g. scoring; coding; thematic analysis etc.) should be described.</p>	<p>Final report:</p> <p>Methods are well-described</p>	5
<p>III. The Project</p> <p>This section should include:</p> <ul style="list-style-type: none"> • <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). • <i>Objectives and components:</i> Summary of the project's results hierarchy as stated in the ProDoc (or as officially revised) • <i>Stakeholders:</i> Description of groups of targeted stakeholders organised according to relevant common characteristics • <i>Project implementation structure and partners:</i> A description of the implementation structure with diagram and a list of key project partners 	<p>Final report:</p> <p>The report provides a thorough description of the project</p>	6

⁹⁴ During the Inception Phase of the evaluation process a *TOC at Design* is created based on the information contained in the approved project documents (these may include either logical framework or a *TOC* or narrative descriptions). During the evaluation process this *TOC* is revised based on changes made during project intervention and becomes the *TOC at Evaluation*.

	UN Environment Evaluation Office Comments	Final Report Rating
<ul style="list-style-type: none"> • <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 • <i>Project financing:</i> Completed tables of: (a) budget at design and expenditure by components (b) planned and actual sources of funding/co-financing 		
<p>IV. Theory of Change</p> <p>The TOC at Evaluation should be presented clearly in both diagrammatic and narrative forms. Clear articulation of each major causal pathway is expected, (starting from outputs to long term impact), including explanations of all drivers and assumptions as well as the expected roles of key actors.</p> <p>Where the project results as stated in the project design documents (or formal revisions of the project design) are not an accurate reflection of the project's intentions or do not follow OECD/DAC definitions of different results levels, project results may need to be re-phrased or reformulated. In such cases, a summary of the project's results hierarchy should be presented for: a) the results as stated in the approved/revised Prodoc logframe/TOC and b) as formulated in the TOC at Evaluation. <i>The two results hierarchies 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></p>	<p>Final report:</p> <p>TOC clearly presented in narrative and diagrammatic forms, conforms to DAC definitions</p> <p>It is structured similarly to a results framework so causal pathways could have been better identified</p>	5
<p>V. Key Findings</p> <p>A. Strategic relevance:</p> <p>This section should include an assessment of the project's relevance in relation to UN Environment's mandate and its alignment with UN Environment's policies and strategies at the time of project approval. An assessment of the complementarity of the project with other interventions addressing the needs of the same target groups should be included. Consider the extent to which all four elements have been addressed:</p> <ul style="list-style-type: none"> v. Alignment to the UN Environment Medium Term Strategy (MTS) and Programme of Work (POW) vi. Alignment to UN Environment/ Donor/GEF Strategic Priorities vii. Relevance to Regional, Sub-regional and National Environmental Priorities viii. Complementarity with Existing Interventions 	<p>Final report:</p>	
<p>B. Quality of Project Design</p>	<p>Final report:</p> <p>Well summarized</p>	6

	UN Environment Evaluation Office Comments	Final Report Rating
To what extent are the strength and weaknesses of the project design effectively <u>summarized</u> ?		
<p>C. Nature of the External Context</p> <p>For projects where this is appropriate, key <u>external</u> features of the project's implementing context that limited the project's performance (e.g. conflict, natural disaster, political upheaval), and how they affected performance, should be described.</p>	<p>Final report:</p> <p>Satisfactorily described</p>	5
<p>D. Effectiveness</p> <p>(i) Outputs and Direct Outcomes: How well does the report present a well-reasoned, complete and evidence-based assessment of the a) delivery of outputs, and b) achievement of direct outcomes? How convincing is the discussion of attribution and contribution, as well as the constraints to attributing effects to the intervention.</p> <p>The effects of the intervention on differentiated groups, including those with specific needs due to gender, vulnerability or marginalisation, should be discussed explicitly.</p>	<p>Final report:</p> <p>The discussion of delivery of outputs is detailed. The discussion of the achievement of outcomes is well-evidenced.</p>	6
<p>(ii) Likelihood of Impact: How well does the report present an integrated analysis, guided by the causal pathways represented by the TOC, of all evidence relating to likelihood of impact? How well are change processes explained and the roles of key actors, as well as drivers and assumptions, explicitly discussed? Any unintended negative effects of the project should be discussed under Effectiveness, especially negative effects on disadvantaged groups.</p>	<p>Final report:</p> <p>Discussion is grounded in a solid understanding of the TOC and is well evidenced</p>	6
<p>E. Financial Management</p> <p>This section should contain an integrated analysis of all dimensions evaluated under financial management and include a completed 'financial management' table.</p> <p>Consider how well the report addresses the following:</p> <ul style="list-style-type: none"> • <i>completeness</i> of financial information, including the actual project costs (total and per activity) and actual co-financing used • <i>communication</i> between financial and project management staff 	<p>Final report:</p> <p>All aspects are considered and discussed, as far as UN Environment financial systems allow.</p>	5

	UN Environment Evaluation Office Comments	Final Report Rating
<p>F. Efficiency</p> <p>To what extent, and how well, does the report present a well-reasoned, complete and evidence-based assessment of efficiency under the primary categories of cost-effectiveness and timeliness including:</p> <ul style="list-style-type: none"> • Implications of delays and no cost extensions • Time-saving measures put in place to maximise results within the secured budget and agreed project timeframe • Discussion of making use of/building on pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. • The extent to which the management of the project minimised UN Environment’s environmental footprint. 	<p>Final report:</p> <p>Detailed discussion that makes the determination of the rating clear.</p>	6
<p>G. Monitoring and Reporting</p> <p>How well does the report assess:</p> <ul style="list-style-type: none"> • Monitoring design and budgeting (<i>including SMART indicators, resources for MTE/R etc.</i>) • Monitoring of project implementation (<i>including use of monitoring data for adaptive management</i>) • Project reporting (<i>e.g. PIMS and donor report</i>) 	<p>Final report:</p> <p>All sections adequately discussed.</p>	5
<p>H. Sustainability</p> <p>How well does the evaluation identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of achieved direct outcomes including:</p> <ul style="list-style-type: none"> • Socio-political Sustainability • Financial Sustainability • Institutional Sustainability 	<p>Final report:</p> <p>Well-evidenced and linked to likelihood of impact discussion.</p>	6
<p>I. Factors Affecting Performance</p> <p>These factors are <u>not</u> discussed in stand-alone sections but are integrated in criteria A-H as appropriate. Note that these are described in the Evaluation Criteria Ratings Matrix. To what extent, and how well, does the evaluation report cover the following cross-cutting themes:</p> <ul style="list-style-type: none"> • Preparation and readiness • Quality of project management and supervision⁹⁵ 	<p>Final report:</p> <p>Well-prepared and discussed.</p>	6

⁹⁵ In some cases ‘project management and supervision’ will refer to the supervision and guidance provided by UN Environment 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 UN Environment.

	UN Environment Evaluation Office Comments	Final Report Rating
<ul style="list-style-type: none"> Stakeholder participation and co-operation Responsiveness to human rights and gender equity Country ownership and driven-ness Communication and public awareness 		
<p>VI. Conclusions and Recommendations</p> <p>i. Quality of the conclusions: The key strategic questions should be clearly and succinctly addressed within the conclusions section.</p> <p>It is expected that the conclusions will highlight the main strengths and weaknesses of the project, and connect them in a compelling story line. Human rights and gender dimensions of the intervention (e.g. how these dimensions were considered, addressed or impacted on) should be discussed explicitly. Conclusions, as well as lessons and recommendations, should be consistent with the evidence presented in the main body of the report.</p>	<p>Final report:</p> <p>Well-prepared and discussed.</p>	6
<p>ii. Quality and utility of the lessons: Both positive and negative lessons are expected and duplication with recommendations should be avoided. Based on explicit evaluation findings, lessons should be rooted in real project experiences or derived from problems encountered and mistakes made that should be avoided in the future. Lessons must have the potential for wider application and use and should briefly describe the context from which they are derived and those contexts in which they may be useful.</p>	<p>Final report:</p> <p>Good quality lessons</p>	6
<p>iii Quality and utility of the recommendations:</p> <p>To what extent are the recommendations 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? They should be feasible to implement within the timeframe and resources available (including local capacities) and specific in terms of who would do what and when.</p> <p>At least one recommendation relating to strengthening the human rights and gender dimensions of UN Environment interventions, should be given.</p> <p>Recommendations should represent a measurable performance target in order that the Evaluation Office can monitor and assess compliance with the recommendations.</p>	<p>Final report:</p> <p>Relevant recommendations</p>	6
<p>VII. Report Structure and Presentation Quality</p>		
<p>i) Structure and completeness of the report: To what extent does the report follow the Evaluation Office guidelines? Are all requested Annexes included and complete?</p>	<p>Final report:</p> <p>Fully complete.</p>	6

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

	UN Environment Evaluation Office Comments	Final Report Rating
ii) Quality of writing and formatting: 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? Do visual aids, such as maps and graphs convey key information? Does the report follow Evaluation Office formatting guidelines?	Final report: Very well written	6
OVERALL REPORT QUALITY RATING	Highly Satisfactory	5.7

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 evaluation report is calculated by taking the mean score of all rated quality criteria.

At the end of the evaluation, compliance of the evaluation process against the agreed standard procedures is assessed, based on the table below. *All questions with negative compliance must be explained further in the table below.*

Evaluation Process Quality Criteria	Compliance	
	Yes	No
Independence:		
1. Were the Terms of Reference drafted and finalised by the Evaluation Office?		
2. Were possible conflicts of interest of proposed Evaluation Consultant(s) appraised and addressed in the final selection?		
3. Was the final selection of the Evaluation Consultant(s) made by the Evaluation Office?		
4. Was the evaluator contracted directly by the Evaluation Office?		
5. Was the Evaluation Consultant given direct access to identified external stakeholders in order to adequately present and discuss the findings, as appropriate?		
6. Did the Evaluation Consultant raise any concerns about being unable to work freely and without interference or undue pressure from project staff or the Evaluation Office?		
7. If Yes to Q6: Were these concerns resolved to the mutual satisfaction of both the Evaluation Consultant and the Evaluation Manager?		
Financial Management:		
8. Was the evaluation budget approved at project design available for the evaluation?		
9. Was the final evaluation budget agreed and approved by the Evaluation Office?		
10. Were the agreed evaluation funds readily available to support the payment of the evaluation contract throughout the payment process?		
Timeliness:		
11. If a Terminal Evaluation: Was the evaluation initiated within the period of six months before or after project operational completion? Or, if a Mid Term Evaluation: Was the evaluation initiated within a six-month period prior to the project's mid-point?		
12. Were all deadlines set in the Terms of Reference respected, as far as unforeseen circumstances allowed?		
13. Was the inception report delivered and reviewed/approved prior to commencing any travel?		
Project's engagement and support:		
14. Did the project team, Sub-Programme Coordinator and identified project stakeholders provide comments on the evaluation Terms of Reference?		
15. Did the project make available all required/requested documents?		
16. Did the project make all financial information (and audit reports if applicable) available in a timely manner and to an acceptable level of completeness?		
17. Was adequate support provided by the project to the evaluator(s) in planning and conducting evaluation missions?		
18. Was close communication between the Evaluation Consultant, Evaluation Office and project team maintained throughout the evaluation?		

Terminal Evaluation of the GEF-Financed Project supported by UN Environment
 Promoting Energy Efficiency in Buildings in East Africa (EEBA, GEF ID 3788)

19. Were evaluation findings, lessons and recommendations adequately discussed with the project team for ownership to be established?		
20. Did the project team, Sub-Programme Coordinator and any identified project stakeholders provide comments on the draft evaluation report?		
Quality assurance:		
21. Were the evaluation Terms of Reference, including the key evaluation questions, peer-reviewed?		
22. Was the TOC in the inception report peer-reviewed?		
23. Was the quality of the draft/cleared report checked by the Evaluation Manager and Peer Reviewer prior to dissemination to stakeholders for comments?		
24. Did the Evaluation Office complete an assessment of the quality of both the draft and final reports?		
Transparency:		
25. Was the draft evaluation report sent directly by the Evaluation Consultant to the Evaluation Office?		
26. Did the Evaluation Manager disseminate (or authorize dissemination) of the cleared draft report to the project team, Sub-Programme Coordinator and other key internal personnel (including the Reference Group where appropriate) to solicit formal comments?		
27. Did the Evaluation Manager disseminate (or authorize dissemination) appropriate drafts of the report to identified external stakeholders, including key partners and funders, to solicit formal comments?		
28. Were all stakeholder comments to the draft evaluation report sent directly to the Evaluation Office?		
29. Did the Evaluation Consultant(s) respond adequately to all factual corrections and comments?		
30. Did the Evaluation Office share substantive comments and Evaluation Consultant responses with those who commented, as appropriate?		

Provide comments / explanations / mitigating circumstances below for any non-compliant process issues.

<u>Process Criterion Number</u>	<u>Evaluation Office Comments</u>