Interim Evaluation Report

UNDP-implemented GCF-funded project

De-Risking and Scaling-Up Investment in Energy Efficient Building Retrofits in Armenia

UNDP PIMS: 5684

GCF ID: FP010

FINAL

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Interim Evaluation Team:

Jiří Zeman, Team Leader, International Consultant

Nune Sakanyan, Evaluation Support Assistant

Project country: Armenia

Executing Agency/Accredited Entity: UNDP CO Armenia

Implementing Partner/National Designed Authority: Ministry of Environment (Ministry of Nature Protection), Republic of Armenia

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Interim Evaluation Team

This interim evaluation was performed by Mr. Jiří Zeman, international consultant and a team leader, and Ms. Nune Sakanyan, interim evaluation support assistant.

International consultant:

Jiří Zeman has 30 years of international professional experience in energy efficiency, renewables, climate change and energy utilities gained primarily in Central and Eastern Europe and in Central Asia. He served as a Deputy Director of an energy efficiency consulting organization SEVEn, The Energy Efficiency Center in Prague, the Czech Republic, as a Solution Architect at a Utility Competence Center of Hewlett Packard for Central and Eastern Europe, Middle East and Africa, and since 2009 he works as a freelance consultant. Mr. Zeman has designed energy efficiency and renewable energy policy and legislation, developed for financing and implementation investment-level energy efficiency and renewable energy projects, and evaluated 20+ UNDP-supported projects.

Contact details: Mr. Jiří Zeman
Skalany 38
CZ-511 01 Vyskeř
Czech Republic
Email: jirkazeman@seznam.cz
Tel: +420-776818363

Interim evaluation support assistant:

Ms. Sakanyan, with over 15 years of experience, is an environmental expert and skilled project manager. While working in Yerevan Municipality as Head of International Projects Coordination Unit at the Investment and Development Department, Ms. Sakanyan had a leading role in shaping key energy strategies and policies, programs and initiatives, and monitoring activities. She is the founder of Women in Climate and Energy non-profit organization in Armenia to support sustainable development by supporting women in the climate and energy sectors. Since 2018 she is working as a freelance consultant. Her working experience includes project management, municipal energy planning, elaboration of monitoring tool for municipal energy programs, assessment of RE potential, energy studies, surveys on energy use and climate change awareness, elaboration of financial mechanisms, gender mainstreaming in climate and energy programs, fundraising, capacity building, and public outreach.

Contact details: Ms. Nune Sakanyan
Alikhanyan 3
Yerevan 0019, Armenia
Email: nsakanyan@gmail.com
Tel: +394 99 102221
Tel: +996 (559) 745574

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Abbreviations and Acronyms

AFD	Agence Française de Développement (French Development Agency)
APR	Annual Project Review
AWP	Annual Work Plan
CEO	Chief Executive Officer
CO	Country Office
EBRD	European Bank for Reconstruction and Development
EE	Energy efficiency
EIB	European Investment Bank
EMIS	Energy Management and Information System
EOP	End of Project
EPB	Energy Performance of Buildings
ESCo	Energy Service Company
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse gas
HOA	Home-Owners' Association
IE	Interim Evaluation
IFC	International Finance Corporation
KfW	Kreditanstalt für Wiederaufbau
LPAC	Local Project Appraisal Committee
MAB	Multi-apartment building
mln	million
MoE	Ministry of Environment (formerly Ministry of Nature Protection) of the Republic of Armenia
MoNP	Ministry of Nature Protection (nowadays Ministry of Environment) of the Republic of Armenia
MoTAI	Ministry of Territorial Administration and Infrastructure of the Republic of Armenia
MRV	Monitoring, Reporting, Verification
NGO	Non-Government Organization
NMC	National Mortgage Company
PIMS	Project Information Management System
PIR	Project Implementation Review
PIU	Project Implementation Unit
R2E2	Armenia Renewable Resources and Energy Efficiency Fund
SDG	Sustainable Development Goal
SFH	Single family housing
SPR	Standard Progress Report
ToR	Terms of Reference
UDC	Urban Development Committee under the Government of Republic of Armenia
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

Table 1: Project Information Table

Project title	**De-Risking and Scaling-up Investment in Energy Efficient Building Retrofits in Armenia**
GCF ID number:	FP010
UNDP PIMS	5684
Country	Armenia
National designated authority	Ministry of Environment, Republic of Armenia
Accredited entity	UNDP
Funding agency	GCF
Executing entity	Ministry of Environment, Republic of Armenia
Other project partners	Municipality of Yerevan,
Project size	Small
Structure of financing as per the Funding Proposal	
GCF financing	20 million USD
UNDP own (cash)	0.42 million USD
UNDP parallel	1 million USD
Yerevan Municipality (investment)	8 million USD
Government of Armenia/Ministry of Environment (in kind)	0,4 million USD
European Investment Bank (tentative as of Funding Proposal, included in the Project Document)	86.25 million USD
Total Project costs: as of the Funding Proposal as of the Project Document	 29.82 million USD 116.07 million USD
Funded Activity Agreement signature date	June 7, 2017
Funded Activity Agreement Effectiveness (Project start)	June 30, 2017
Final LPAC approval signature date	June 30, 2017
Project Document signature date	July 7, 2017
Project duration	Six years, June 30, 2017 – June 30, 2023
Interim Evaluation	September 4-30, 2020

1. Executive Summary

1.1 Project Description

The project has been designed to create a favorable market environment and scalable business model, and to mobilize debt-financing with grant component for investment in energy efficiency retrofits of multi-apartment, single family and public buildings in Armenia with a target of 1.39 $MtCO_2$ direct emission reductions over a lifetime of 20 years, and 4.2 $MtCO_2$ of indirect emission savings over the 20-year equipment lifetimes), green job creation and energy poverty reduction. The Project is designed to directly benefit over 200,000 people and catalyze private and public sector investment of approximately US$ 100 million.

The project is structured into four components:

Component 1: Establishment of Building Sector MRV

> Provision of technical assistance to establishment and implementation of energy monitoring, reporting and verification (MRV) systems based on implementation of EMIS for the building sector for various categories of buildings, and knowledge sharing.

Component 2: Policy de-risking

> Provision of technical assistance to: (i) national, sub-national and local authorities to adopt and implement an enabling policy framework for energy efficiency retrofits using UNDP's framework to support policy-makers in selecting public instruments to promote renewable energy investment; (ii) support on-going legislative reform; and (iii) support to building owners, housing associations and energy service companies on legal matters related to energy efficiency.

Component 3: Financial de-risking

> Provision of technical assistance to financial institutions and local banks in developing and implementing financial instruments to finance energy efficiency retrofits in residential and public buildings.

Component 4: Financial Incentives

> Provision of financial incentives (ex-post grants) to low-income households and public building administrators to support their investment in energy efficiency retrofits.

The total Project costs of 116.07 mln USD were designed to be financed with a 20 mln USD GCF grant, 0.42 mln USD UNDP cash co-financing and 1 mln USD parallel co-financing from UNDP, 8 mln USD investment from the Yerevan Municipality, 0.4 mln USD in-kind support from the Government of Armenia/Ministry of Environment, along with the planned 86.25 mln USD[1] parallel co-financing from the EIB sovereign loan to the Government of Armenia.

[1] As per Funding Proposal, Funded Activity Agreement, and Project Document

Table 2: Summary of the Project Budget

Source	**USD**
GCF	20,000,000
Yerevan Municipality	8,000,000
UNDP	1,420,000
Ministry of Environment (former MoNP)	400,000
Sub-Total	**29,820,000**
EIB	86,250,000
Total	**116,070,000**

1.2 Project Progress Summary

The Project delivery is significantly delayed due to several factors: the velvet revolution in the spring of 2018 in Armenia, installation of transitional Government, subsequent parliamentary elections and establishment of a new Government in 2019 and additional changes in governmental administration delayed Governmental decisions and responses. The new Government decided not to sign the originally planned 86 mln USD sovereign loan with EIB, due to fiscal restrictions (high debt to GDP ratio). The Project has implemented adaptive management and identified new sources of co-financing, refocused the Project design, and submitted the Refocus Analysis to the GCF Secretariat on April 17, 2020. GCF response was pending until September 30, 2020, i.e. after the Interim Evaluation Report has been finalized and submitted. Several project deliverables necessary for release of a third tranche of GCF financing were delayed as well (submission of Operational Manuals for residential buildings, Technical review of Outputs 1-3 – Phase II).

Although the Project delivery as per mid-term targets is delayed, the Project team has developed most of the deliverables critical for implementation of Components 1 - 3. Actual roll-out of investment in energy efficiency building retrofits and delivery and monitoring of GHG emission savings was pending GCF approval of the Refocus Analysis as well as the third financial installment, without which the investment component implementation could not have been advanced.

Main mid-term achievements of the Project include:

- Successful implementation of adaptive management and identification of alternative sources of co-financing instead of originally planned 86 mln USD EIB sovereign loan. The newly identified co-financing required for investment in energy efficiency building retrofits includes as per the Refocus analysis 21 mln USD from the State Subvention Program, 27 mln USD sub-sovereign loans from EIB, 5.2 mln USD from communities/municipalities, and 3.1 mln USD in private equity and debt (financed from loans of commercial banks in partnership with the KfW/NMC). Additional sources of co-financing are under negotiations.
- MRV methodology developed and tested in two retrofitted buildings, and then piloted in Stepanavan on a community level. Roadmap for Energy Management Information System (EMIS) and performance-based Terms of Reference for reconstruction of public buildings were developed. Full implementation of MRV/EMIS was pending for Governmental signature of the agreement on the EPIU implementation, GCF approval of the Refocus Analysis and of the third tranche, and financing of actual investment in energy efficiency building retrofits.

- Extensive awareness rising campaign, capacity development trainings of various groups of project stakeholders, and a study tour implemented.
- Draft amendment of the Law on Multi Apartment Buildings Management that can significantly improve capacity and opportunities of multi-apartment buildings to attract, absorb, and repay debt-financing to be used for their energy efficiency retrofits. The Government of RA is committed to improve the Law on Multi Apartment Buildings Management and related Law on Condominiums and to adopt amendments. The law amendment is in a legislative process that was delayed also due to changes in the Government and COVID pandemic. The approval and adoption of law amendment is pending.
- Technical assistance provided to support implementation of energy efficiency retrofits of buildings to Yerevan Municipality as the borrower of sub-sovereign loan from EIB, including energy audits and seismic resistance assessment for 49 kindergartens, and technical designs, cost assessment, tenders, standards of construction quality control for 29 kindergartens and procurement of technical construction supervision.
- Operational Manual for public buildings developed and approved by GCF, financial schemes for financing of energy efficiency retrofits in multi-apartment buildings in Yerevan and in other regions developed, Refocus Analysis and Operational Manuals for residential buildings developed, submitted to GCF for approval.
- Preliminary negotiations and agreements with four local commercial banks – partners of the NMC/KfW scheme – on the proposed financial schemes to be implemented once the Refocus Analysis and Operational Manuals for residential buildings will be approved by GCF.
- After energy efficiency retrofits of MABs in regions became eligible for financing from the State Subvention Program in December 2019 as a result of negotiations between the Project and MoTAI, retrofit technical design documents which meet UNDP-GCF recommended energy efficiency measures were approved and tenders for few dozens of energy efficiency retrofits of MABs were organized, first contracts signed, and reconstruction was launched.

1.3 Interim Evaluation Ratings & Achievement Summary Table

Table 3: Interim Evaluation Ratings and Achievement Summary

Measure	Interim Evaluation Rating[2]	Achievement Description
Project Strategy	HS	The Project strategy addressed key development priorities and challenges in the country. It is based on comprehensive understanding of the local development context. The timing of this type of project is highly appropriate.
Progress Towards Results		

[2] Revised rating as per mid-term achievements replaced the original rating as per expected achievement of EOP targets as per TOR. Note that the rating reflects achievement of mid-term targets as specified in the LogFrame in the Project Document.

Objective: Scale-up investment in EE building retrofits, reduce risks, mobilize private finance and reduce energy poverty	MU[3]	Despite the need to find alternative sources of financing and subsequent delay in building retrofits, the Project has delivered most of expected results in non-investment components critical for project objective achievement. The actual investment in energy efficiency building retrofits is delayed especially in low-income regions outside of Yerevan, also due to pending GCF approval of the third tranche of financing for the Component 4: Financial incentives. Alternative sources of co-financing from both international and domestic sources have been identified and project design has been refocused to include more cost-effective energy efficiency opportunities that will allow to reach original GHG emission targets with reduced investment and newly identified co-financing. Two public buildings and five multi-apartment buildings have been reconstructed with the support of the Project. Several dozens of sub-projects with EIB financing in Yerevan, and 32 (as of December 2020) building retrofits with financing from the State Subvention Program have been launched for implementation. More intensive delivery and EE reconstruction of buildings was pending for the GCF approval of the Refocus Analysis and Operational Manuals with revised financial schemes and approval of the next financial tranche. Due to delayed investment in energy efficiency building retrofits, reaching EOP targets within three remaining years is at risk. Achievement of EOP is feasible, but it will probably require project extension.
Outcome 1: MRV and knowledge management	MS	MRV methodology developed and tested, full implementation of EMIS pending until large-scale roll-out of building retrofits after GCF approval of the Refocus Analysis and release of the next installment. Capacity building and knowledge management (awareness rising) implemented. EOP targets can be reached.
Outcome 2: Policy De-Risking	MS	Key legislation on improvement of effectiveness of housing associations (amendment to the Law on MAB Management) developed and agreed with UDC, as well as building passports/energy performance certificates, and MAB maintenance rules. Final approval of the legislation by the Government is pending. An amendment of the Governmental Decree ensured eligibility of MAB energy efficiency retrofits for funding from the State Subvention Program. Due to lengthy legislative process, only energy efficiency retrofits implemented close to the planned EOP will be able to fully benefit from the amendment of the Law on MAB management. EOP targets can be reached.
Outcome 3: Financial De-Risking	MS	Technical assistance to municipalities and homeowners' associations/project developers, and to financial institutions provided. Access to affordable financing available, including both commercial loans, EIB sub-sovereign loan, and State Subvention Program, although not yet on the planned scale – pending approval of the GCF Refocus Analysis and disbursement of funds for investment component of the Project. EE retrofits of all planned buildings at risk to be fully implemented within three years. Feasible to achieve EOP targets with project extension.
Outcome 4: Financial Incentives	HU	No financial incentives for vulnerable groups/low-income households have been provided so far. GCF approval of disbursement of the funds under Component 4 is critical. There is a good prospect to utilize financial incentives once the GCF third tranche will be released. EOP targets can be reached - subject to availability of GCF funding for EE retrofits.
Project Implementation & Adaptive Management	MS	The Project implemented effective adaptive management and was able to identify alternative sources of external and domestic financing to offset the originally planned co-financing from the sovereign EIB loan that was not signed by the new Government due to high debt to GDP ratio.

[3] Project logframe does not specify project objective targets.

		Project implementation is significantly delayed, due to external factors, Governmental changes, pending approval of the revised legislation on MAB management, delayed submission of deliverables for the next installment, and pending GCF decision on Refocus Analysis.
Sustainability	ML	The Project has been designed to be highly sustainable. A risk to sustainability is a potential lack of financial incentives to support vulnerable groups in sufficient amount also in the long-term. UNDP CO works with other donors to mobilize additional financing including grant components to support vulnerable groups in the long-term. The latest EU financing assistance framework to the Government of Armenia includes funds for energy efficiency investments in building sector.

Ratings scale used (as per IE TOR and in accordance with 2019 UNDP Evaluation Guidelines):
Six point scale: HS – Highly Satisfactory, S – Satisfactory, MS – Moderately Satisfactory, MU – Moderately Unsatisfactory, U – Unsatisfactory, HU – Highly Unsatisfactory
Sustainability rating - 4 point scale: L – Likely, ML - Moderately Likely, MU - Moderately Unlikely, U – Unlikely

1.4 Concise Summary of Conclusions

The “De-Risking and Scaling-up Investment in Energy Efficiency Building Retrofits” project is very complex, challenging and truly innovative. It addresses main development priorities of Armenia, as well as the challenges that prevented large-scale utilization of private and debt-financing in energy efficiency retrofitting of public and residential buildings, and especially of multi-apartment buildings.

Timing for implementation of this type of project was properly selected. There exists already sufficient experience in the country with technical demonstration of energy efficiency building retrofits especially in public sector financed with grant scheme. Domestic financial sector is already sufficiently developed and started recently providing targeted energy efficiency loans also to commercial, public and residential sectors, although not to multi-apartment buildings. Policy and legislative framework has been developed, although not yet fully effective and not fully implemented.

The six-year 116 mln USD project was designed with 20 mln USD GCF grant support, and 86.25 mln USD debt co-financing from EIB.

The whole Project implementation was put at risk, when the new Government reconsidered and refrained from signing the 86 mln USD sovereign loan with EIB, due to fiscal constraints – high debt to GDP ratio.

The Project team implemented effective adaptive management and managed to identify alternative domestic and external sources of financing in a total volume of 56.357 mln USD (65% of originally planned co-financing from the EIB sovereign loan to the Government). Additional co-financing is under negotiation. Due to lower amount of co-financing, the Project team refocused on more cost-effective, but more challenging energy efficiency retrofits in multi-apartment buildings and reduced the number of less cost-effective energy efficiency retrofits in single family houses without compromising the overall Project target of direct GHG emission reductions of 1.39 $MtCO_2$ over a 20-year lifetime.

The velvet revolution in April – May 2018, installation of a transitional Government, parliamentary elections and subsequent establishment of a new Government in 2019 caused significant delays in Governmental decision making. Project implementation was delayed by pending Governmental decisions, adoption of amendment to the Law on MAB management is delayed, the Project team was delayed with submission of Project deliverables (Operational Manuals for residential buildings) needed for GCF approval of the third installment, GCF approval of the submitted Refocus Analysis is pending.

As of mid-term, only two public buildings have been retrofitted and commissioned in Yerevan, and five multi-apartment buildings in Sisian community.

Upon the intervention of the Project team, the State Subvention Program that supports regions except for Yerevan, included energy efficiency eligibility criteria and made its funding available also for energy efficiency retrofits of buildings in regions. In early 2020, tenders have been organized and retrofit contracts signed, and few dozens of retrofit projects are under development. The COVID pandemic and economic uncertainty negatively impacted capacity and availability of some construction companies and their readiness to sign binding contracts for building retrofits.

Due to the above mentioned factors, the Project faces significant risk that it will not be technically feasible to implement such a large amount of energy efficiency building retrofits within remaining three years until the planned end of project (monitoring and evaluation of GHG emission savings requires at least one full winter season, construction requires at least one full summer season, project development, tendering and contracting is also a lengthy process, the capacity of construction companies is limited and it is not expected that all buildings could be retrofitted within one year).

As of mid-term, the Project achieved GHG emission savings of 350 tCO2/year, which is 0.5% of the EOP target.

Despite existing delays, there still is a good chance that end-of-projects targets can be reached, although project extension will be probably needed.

1.5 Lessons Learned

1. Not all identified sources of co-financing can provide binding commitment on co-financing

The State Subvention Programme is funded annually from the state budget, and it has its special line in the state budget. Thus, it is not possible to obtain a binding commitment on the amount of funding in the future. The state budget is prepared and approved annually[4].

Banks cannot provide binding confirmation of loan/debt co-financing until the financing opportunity is evaluated and terms of financial agreement is agreed with and signed by the client/borrower. Provision of loans is a core business of banks, thus they are motivated to offer loans as long as the associated risks are acceptable for the bank. Borrowers from public sector (government, municipalities) are subject to specific financial restrictions that specify maximum debt to GDP/municipal budget ratio. (And similarly banks have their limits in retail banking for debt service to income ratio). GDP and municipal budget depend to a large degree on external factors independent on the will of the Government or municipality. Thus, there may be cases when the financial restrictions would not allow to sign a loan agreement despite the interest of both sides. Thus, binding commitment on loan co-financing cannot be issued until the loan contract between bank and the borrower is signed. Similarly even in case of a signed credit line agreement, the actual disbursement and provision of loans depends on the interest of borrowers, and

[4] The total budget of the State Subvention Program was 1.62 bln AMD (3.4 mln USD) in 2018, 12.95 bln AMD (26.9 mln USD) in 2019, 10 bln AMD (21 mln USD) in 2020, and 7 bln AMD (13.3 mln USD) in 2021.

thus commitment can mean that the volume of a credit line has been made available, rather than the full amount will be lent.

Confirmation from a municipality on long-term co-financing is often more expression of intent rather than a binding commitment that could be effectively enforced, since municipal budgets are being prepared and approved annually as well.

Relatively easiest it is to provide binding commitment for grant financing by the donor.

2. *Delayed approval of the disbursement of the GCF investment grant postpones building retrofits*

Availability of the GCF investment grant is critical for investors in building retrofits and ability of UNDP to make a binding agreement with investors on time-bound co-financing. Without the available GCF co-financing in place, investors (municipalities and apartment/building owners) are reluctant to sign in for actual building retrofits.

The actual situation in countries like Armenia is developing rather quickly. Thus, a six-year project needs to be implemented in a flexible way, i.e. allow for efficient adjustments that would reflect changes in actual country-specific situation and support reaching the project key targets/objectives of GHG emission reductions in energy efficiency building retrofits. On the other hand, GCF has to be assured that its grant will be used in an efficient way and that the project will reach the planned targets.

The process of project implementation strategy revision and approval needs to be more flexible and time-effective.

3. *GCF investment component funding for pilot projects could accelerate project implementation*

Full roll-out of building retrofits benefits from experience gained in early implemented pilot projects. This is especially the case of MABs, where financing arrangements are very complex, involving lots of stakeholders/apartment owners. Provision of GCF investment funding for pilot projects separately and independently from the funding for the large-scale implementation of building retrofits could have accelerated overall project implementation without excessively increasing risks for GCF investment even in case when full co-financing has not yet been secured.

1.6 Recommendation Summary Table

UNDP/Government:

1. *Facilitate adoption of amendment to the Law on MAB Management without further delays*

   There is typically a rather lengthy period between approval of a legislation by the Government, subsequent approval by a Parliament, and effective date when new/amended legislation comes into force. The draft amendment of the Law prepared by the Project addresses the main problems housing associations face when financing MAB reconstruction. Without the amendment effectively in force, delivery of energy efficiency retrofit investment in MABs will be at risk.

The project can take on a pro-active role and actively support the Committee of Urban Development.

UNDP:

2. *Accelerate pending activities/outputs*

   a. *Publish MRV/EMIS data from retrofitted buildings at the new web platform*
   MRV data from retrofitted buildings are available in the project fact sheets, however, they are not easily accessible at the dedicated project web site. Regularly upload available data to keep the web page updated.

   b. *Analyze critical path and accelerate all activities on the critical path*

3. *Strengthen project-level monitoring*

   a. *Organize meetings of the Project Board at least once a year*

   Organize Project Board meetings regularly at least once a year. To avoid any delays due to changes of the Government representation in the Project Board, advocate for and facilitate nomination of their deputies.

   b. *Update logframe targets and specify indicators and targets where missing*

   Specify project objective indicator and target, and targets for Outputs 1.2, 3.1, and 4.1 which were not specified for all relevant output indicators in the Project Document. Incorporate indicator of Total number of buildings retrofitted and square area in m^2 as per GCF recommendations for each building type – public, MAB, SFH. Revise the logframe and have it approved by the Project Board. Consider necessity of using the SDG indicator of "Energy intensity measured in terms of primary energy and GDP" and the indicator "M5.0 Strengthened institutional and regulatory systems", or avoid them.

   c. *Align activity targets achievements in APRs and Quarterly Progress Reports*

   In some cases, there is a difference in achievement rating in APRs (cumulative achievement of project activities) and Quarterly Progress Reports (achievement as per AWP activities) and achievement of relevant outcome and output target as per logframe. See for example APR 2019 rating for activities within Output 1.1 and 1.2 – cumulative rating 20-70%, and rating in quarterly report Q4 2019, where outputs 1.1 and 1.2 are rated as "completed" – but this refers to activities planned as per AWP 2019, rather than for logframe output level targets.

4. *Use required criterion of women share as a priority for selection of investment level projects/buildings*

   This GCF gender criterion is intended rather for the whole program or portfolio of individual investment-level projects (energy efficiency retrofits of individual buildings). If applied for each individual building, investment level projects/buildings where women do not dominate would be excluded from reconstruction. Instead, use this criterion as a *preference* for selection of an individual building for retrofit, and for evaluation of the whole portfolio of sub-projects.

5. *Evaluate the feasibility of meeting the planned end-of-project targets in three years*

   Evaluate capacity of construction companies to deliver all planned energy efficiency building retrofits, and estimate achievable time-bound targets. If necessary, consider request for appropriate extension. However, this should not hamper timely implementation of all other activities.

GCF:

6. *Minimize the delays in internal process and responses*

   The response time from the GCF is often extensive which leads to additional delays in project implementation – such as for the approval of the Refocus Analysis.

7. *Approve GCF projects with confirmed co-financing*

   In this case, the intended EIB co-financing of 86.250 mln USD did not materialize, which lead to the need to find alternative sources of co-financing, refocus the Project, and to subsequent delays in Project implementation. Binding agreement on co-financing required for GCF project approval would eliminate this risk.

GCF/UNDP:

8. *Consider revision of the FAA to reflect revised investment strategy, targets, and co-financing as per Refocus Analysis*

9. *Agree on the scope, structure and content of the GCF-financed UNDP-supported projects' interim evaluation reports before actual interim evaluations are performed.*

2. Introduction

2.1 Purpose of the Interim Evaluation and Objectives

The purpose of the Interim Evaluation is to assess progress towards achievement of project objectives and outcomes as specified in the Project Document, the Funding Proposal, and in the Funded Activity Agreement. The objective is also to reviews the project's strategy and its risks to sustainability, and to assess early signs of project success or failure with the goal of identifying the necessary changes to be made in order to set the project on-track to achieve its intended results.

The Interim Evaluation will also assess the following:

- Implementation and adaptive management
- Risks to sustainability
- Relevance, effectiveness and efficiency of the project;
- Coherence in climate finance delivery with other multilateral entities;
- Gender equity;
- Country ownership of projects and programs;
- Innovativeness in results areas (extent to which interventions may lead to paradigm shift towards low-emission and climate resilient development pathways);
- Replication and scalability – the extent to which the activities can be scaled up in other locations within the country or replicated in other countries (this criterion, which is considered in document GCF/B.05/03 in the context of measuring performance could also be incorporated in independent evaluation); and
- Unexpected results, both positive and negative.
- Risks arising from the current COVID-19 pandemic and impact on the project may also need to be considered in the evaluation.

2.2 Scope and Methodology

The methodology of the Interim Evaluation of the UNDP/GCF project "De-risking and Scaling-up Investment in Energy Efficient Building Retrofits" is based on the GCF Evaluation Policy (September 20, 2019, draft), TOR requirements, and standard UNDP evaluation policies and procedures.

The interim evaluation methodology combines quantitative and qualitative approaches based on review of project documents and reports, and on interviews with project stakeholders. Documents reviewed were provided by UNDP and the project team. Additional information and documents reviewed were obtained from other interviewed stakeholders. Other public documents were downloaded from various internet sites.

Due to international travel restrictions associated with the COVID-19 pandemic, the on-site mission to Armenia was not possible and thus it was replaced with remote on-line interviews with project stakeholders and beneficiaries. The potential limitation of interim evaluation due to unrealized on-site mission was offset by a composition of the evaluation team that included an international evaluator and a national consultant. The national consultant assisted the international consultant and helped to clarify and understand the local development context as well as context during interviews.

The Interim Evaluation assessed:

- Project strategy - project design, results logical framework
- Relevance, effectiveness and efficiency
- Progress towards expected results
- Project implementation and adaptive management - management arrangements, work planning, finance and co-financing, coherence in climate finance delivery with other multilateral entities, project-level monitoring and evaluation systems, stakeholder engagement, social and environmental standards (Safeguards), reporting, and communications
- Sustainability – financial, socio-economic, institutional/governance, environmental
- Country ownership
- Gender equity
- Innovativeness in results areas
- Unexpected results (positive/negative)
- Replication and scalability

The ratings scale used in the IE Report has been specified in the IE ToR based on the 2019 UNDP Evaluation Guidelines[5].

2.3 Structure of the Interim Evaluation Report

The structure of the interim evaluation report follows the structure outlined in the TOR for interim evaluation.

The table of contents provides an overview of the structure of the interim evaluation report.

[5] Available at http://web.undp.org/evaluation/guideline/documents/PDF/UNDP_Evaluation_Guidelines.pdf

3. Project Description and Background Context

3.1 Development Context

The buildings sector is one of major energy consumers in Armenia. According to Armenia's 2010 National GHG Inventory in the National Communication to the UNFCCC, almost 28% of primary energy resources are consumed in buildings, mostly in the residential sector, comprising 20% of the total GHG emissions. Armenia's Third National Communication to the UNFCCC (2015)6 identifies public, residential and commercial buildings among the country's top priorities for climate change mitigation. Improving energy efficiency in buildings has been assigned the highest priority in Armenia's housing, energy and climate strategies, including the country's Intended Nationally Determined Contribution (INDC), Third National Communication to the UNFCCC, and UNFCCC Technology Needs Assessment.

Armenia has high GHG emission reduction potential in the building sector:

- 20-24% of CO_2 emissions in Armenia come from energy use in buildings.
- Over 50% of energy used in buildings can be saved through energy efficiency retrofits.
- 50% of energy used in buildings depends on imported fossil fuels.

Housing in Armenia is 100% privately owned, and it faces specific challenges of energy poverty and under-heating:

- Approximately 32% of Armenian households are energy-poor, where energy poverty is defined as households spending more than 10% of their budgets on energy.
- 45% of apartments in multi-family buildings have indoor temperatures in winter below 19°C (i.e. below established international standards for human occupancy).

Real-cost effectiveness of building-level energy efficiency measures for private investors, owners of housing facilities is low, often with negative net present value (NPV). Combined with unfavorable terms of locally available commercial financing, and low financial capacity of home owners to finance, and to utilize debt financing, investment in energy efficiency retrofits in residential buildings remained rare in Armenia, as of the project design phase. Only some individual energy efficiency measures, such as replacement of windows and efficient LED light bulbs, have been more common. Most of public facilities especially in regions outside of Yerevan face similar financial problems and do not have the financial capacity to finance energy efficiency retrofits with their own budgets.

Multi-apartment buildings (MABs) represent 30% of total housing floor area in Armenia and have more cost-effective energy efficiency potential than single family houses. However, organization of multi-apartment housing owners' associations was so far linked with significant obstacles for debt-financing of building-level energy efficiency retrofits, and thus this potential remained unutilized.

Financial products targeted at building-level retrofits of multi-apartment buildings with multiple owners were not available.

Most of relevant energy efficiency policies and legislation was in place or have been drafted with a support of other development projects, such as the National Programme for Energy Saving and Renewable Energy (2007), the Law of the Republic of Armenia on Energy (2001) and the Law on

[6] http://www.nature-ic.am/wp-content/uploads/2013/10/1.Armenias-TNC_2015_ENG.pdf, p. 21

Energy Saving and Renewable Energy (2004). However, their utilization and practice was not yet sufficiently effective, such as legislation on condominium and management of housing associations.

Improving energy efficiency in the building sector has been assigned a high priority in Armenia's climate, energy and housing strategies. In particular, achieving thermal modernization through energy efficiency retrofits was outlined as a national development priority, particularly for multi-apartment buildings. This is reflected also in provisions of the National Energy Efficiency Programme (2007), the National Security Strategy (2007), the Concept for Ensuring Energy Security (2013) and the Energy Security Strategy Action Plan (2014).

3.2 Barriers that the Project Sought to Address

The Project was designed to address key barriers identified during the project development phase. Key barriers include socio-economic, financial, policy/legislative, institutional, and capacity/awareness barriers. The Project Document specified 12 key problem areas in energy efficiency building retrofits:

1. Insufficient financial resources: many home-owners and public sector entities lack the financial resources necessary to undertake energy efficiency building retrofits without loans. This is a particular challenge in the lower socioeconomic groups, which simultaneously are in most need of loans but also represent the least credit-worthy consumers.

2. Local commercial banks are reluctant to provide loans for energy efficiency renovation to home-owners or public agencies due to perceived high lending risks.

3. Reduced incentives for home-owners and public agencies to look for more energy-efficient solutions due to low energy prices.

4. Low incentives for reducing energy bills: public budgets are managed to prioritize short-term concerns. Ownership and operating structure of public buildings and their expenditures (e.g. energy bills) are often paid out of municipal budgets or, for schools and hospitals, through education or hospital boards.

5. Voluntary building codes: Building energy codes for new residential buildings are only partially enforced while renovated buildings are not required to meet any building energy codes. There is also no standardized rating system for buildings' energy efficiency.

6. Enforcement of energy efficiency requirements (such as building energy performance certificates/passports) is low.

7. Weak capacity in multi-owner apartment buildings: building management and repair, project development, financial planning and management, fund-raising, human resource management, accounting, reporting and customer relations are weak.

8. Inflexible investment decision-making practices: first-cost procurement practices, whereby decisions on retrofit/renovation projects are made on the basis of initial construction costs instead of life-cycle costs, discriminate against efficient building retrofits, which may have higher up-front costs but which have lower operating costs.

9. Low capacities of building sector stakeholders: knowledge and tradition of designing and building energy efficient buildings as well as efficiently operating energy use in buildings is low as there was previously no incentive due to poor enforcement and lack of understanding of the benefits of energy efficiency buildings.

10. Energy efficiency is not fully evaluated and recognized for most people in Armenia. There is a low level of awareness among building owners, the absence of building certification practice the real estate agencies and occupants are not aware on operational costs and potential energy and money saving opportunities. There is also a misinformed perception that full compliance with efficient building codes and energy-efficient buildings would be prohibitively expensive in Armenia.

11. Immature market for energy efficiency products and services: outdated technologies and inefficient materials in use by a large number of construction and maintenance companies.

12. Construction materials are not certified for energy performance.

3.3 Project Description and Strategy

The De-risking and Scaling-up Investment in Energy Efficiency Building Retrofits Project seeks to systematically de-carbonize the existing building stock in Armenia to reduce greenhouse gas (GHG) emissions while achieving sustainable development benefits. To do so, the Project focuses on reducing the overall investment risk profile of energy efficiency retrofits in the building sector – one of the major energy consumers in Armenia. Creating a favorable market environment and scalable business model for investment in energy efficiency retrofits will lead to sizeable energy savings, GHG emissions reductions, green job creation and poverty reduction.

The Project addresses market barriers to energy efficient building renovation via a combination of policy and financial de-risking instruments and targeted financial incentives to key market players. By targeting policy, financial, market, technical and capacity barriers, the Project will significantly reduce the overall investment risk profile of energy efficiency building retrofits to encourage private sector investment and thereby scale-up investment in energy efficiency building retrofits in the country.

The Project is structured into four components each addressing a specific risk area:

1. Building sector monitoring, report and verification (MRV) and knowledge management;
2. Policy de-risking;
3. Financial de-risking; and
4. Financial incentives.

The project objective was defined to scale-up investment in energy efficiency building retrofits in Armenia, and to reduce the overall investment risk profile of energy efficiency building retrofits to encourage private sector investment and to reduce fuel poverty.

The Project was designed to create a favorable market environment and scalable business model for investment in energy efficiency retrofits, leading to sizeable energy savings and accompanying GHG emissions (between 4.4 and 5.2 million tCO_2 over the 20-year lifetime of the investments); green job creation and poverty reduction, and to catalyze additional private and public sector financing of approximately US$ 100 million.

Project outcomes are structured as per four project components. Project outputs specify expected project results.

Summary of project outcomes and outputs:

Outcome 1: Establishment of building sector MRV and knowledge management

Output 1.1: MRV systems for the buildings sector in Armenia established
Output 1.2: Knowledge management and MRV information disseminated

Outcome 2: Policy De-Risking - National, sub-national and local authorities adopt and implement an enabling policy framework for energy efficiency retrofits

Output 2.1: Public instruments for the promotion of investment in energy efficiency selected
Output 2.2: Support provided to on-going legal reform in the field of energy efficiency
Output 2.3: Support provided for the creation of an enabling policy framework for energy efficiency retrofits in multi-owner residential buildings: Legal status of Home-Owner Associations (HOAs), payment enforcement, professional management and consensus levels
Output 2.4: Support provided to building owners / managers / owner associations / ESCOs on legal matters related to energy efficiency retrofit projects
Output 2.5: Exit strategy measures implemented

Outcome 3: Financial de-risking: Access to affordable capital for energy efficiency retrofits provided

Output 3.1: Technical assistance provided to banks and other financial institutions for market facilitation for individual residences
Output 3.2: Technical assistance provided to banks for Home-Owner Association (HOA) market facilitation
Output 3.3: Technical assistance provided to local government to develop energy efficiency retrofit projects for publicly-owned buildings
Output 3.4: Access to affordable capital for energy efficiency retrofits provided
Output 3.5: Marketing platform created

Outcome 4: Financial incentives: Affordability of energy efficiency retrofits for the most vulnerable households ensured through targeted financial incentives to building / apartment owners (directly or via private-sector ESCOs)

Output 4.1: Targeted financial incentives provided to vulnerable groups to help address the affordability gap

3.4 Project Implementation Arrangements

The project implementation is managed by the Project Board. It was designed to include representatives of the Ministry of Nature Protection of RA, Yerevan Municipality, the Ministry of Urban Development of RA, the Ministry of Energy and Natural Resources of RA, UNDP and potential parallel financing partners (EIB).

The GCF project is implemented under the National Implementation Modality (NIM).

The Implementing Partner (UNDP terminology)/Executing Partner (GCF terminology) is the Ministry of Environment (MoE) - formerly known as the Ministry of Nature Protection (MoNP) of the Republic of Armenia (RA), as the national authorized body for UNFCCC implementation in Armenia. MoE is accountable to UNDP for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes and for the effective use of UNDP resources. The following parties assist MoE in successfully delivering project outcomes: MoE's Environmental Project Implementation Unit (EPIU) and the Municipality of Yerevan (through its Project Implementation Unit), as the Responsible Party acting on behalf of MoE. EPIU leads the implementation of Component 1, while the Municipality of Yerevan is responsible for delivering envisaged outputs under Components 2, 3 and 4.

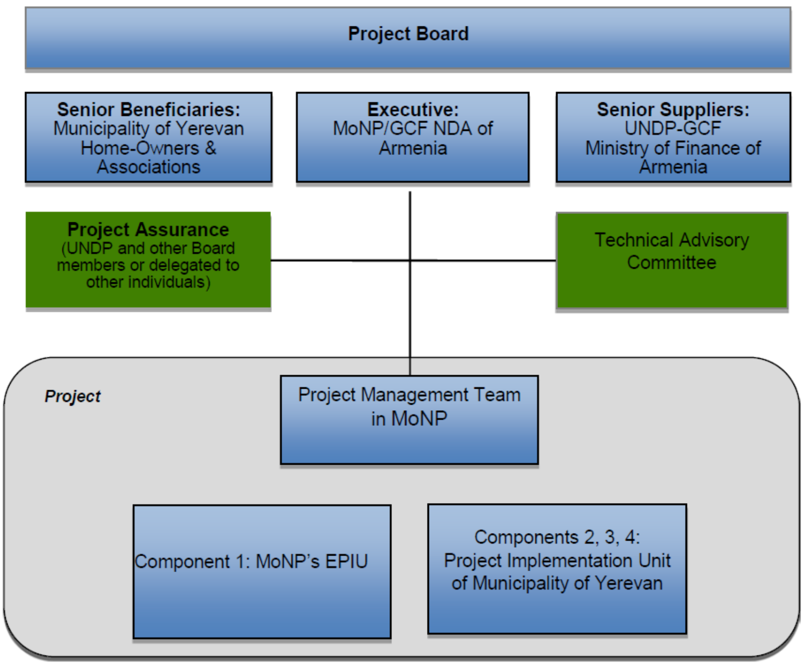
UNDP's overall role as an Accredited Entity is to provide oversight and quality assurance through its Headquarters, regional and Country Office units. This role includes:

(i) Project preparation oversight;
(ii) Project implementation oversight and supervision, including financial management; and
(iii) Project completion and evaluation oversight.

UNDP's responsibilities also include oversight roles in relation to reporting and knowledge-management. The 'project assurance' function of UNDP is to support the Project Board by carrying out objective and independent project oversight and monitoring functions. The 'senior supplier' role of UNDP is to represent the interests of the parties that provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The senior supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project.

Project management arrangements are summarized in Figure 1 below.

Figure 1: Project Management Structure



The daily implementation of the project was designed to be carried out by the UNDP Climate Change Programme Unit coordinated by the MoE (former MoNP).

UNDP serves as the GCF Accredited Entity and its Country Office (UNDP CO) in Armenia and is responsible for the management of the GCF grant, ensuring transparency, appropriate conduct and financial responsibility. The UNDP CO will gradually hand over project management functions to the Project Implementation Unit (PIU) to be established under Yerevan Municipality. UNDP will continue to act as the financial delivery mechanism for the GCF grant and will continue technical assistance and assurance of quality control for the full duration of the project.

The Technical Advisory Committee comprises experts from relevant ministries, governmental agencies and funds, and universities, including: Ministry of Energy and Natural Resources (currently in the structure of the MTAI), the Urban Development Committee, the Ministry of Territorial Administration and Infrastructure, the Ministry of Economy, the Ministry of Environment, the R2E2 Fund, the National Institute for Standards of the Republic of Armenia, and the National University of Architecture and Construction.

3.5 Project Timing and Milestones

The project idea was initiated in 2014 based on an experience from previous UNDP-supported GEF-financed energy efficiency projects in Armenia.

The Project proposal was approved by the UNDP Local Project Appraisal Committee (LPAC) on July 27, 2015.

The Funding Proposal was first submitted to the GCF Secretariat on July 30, 2015. The final version was submitted on June 8, 2016. The Project was designed to last six years, tentatively from September 1, 2016 through August 31, 2022 as per the Funding Proposal.

The GCF UNDP Funded Activity Agreement was signed one year later on June 7, 2017.

The Project Document was signed within one month on July 7, 2017.

The final version of the Project was approved by the LPAC on June 30, 2017.

The project duration as per Project Document is six years, from June 30, 2017 through June 30, 2023.

3.6 Main Stakeholders

Project document specified main project responsible parties and their role in the Project:

- Ministry of Environment (former Ministry of Nature Protection) – Implementing partner, responsible for the overall supervision of the project to ensure synergy with other GHG mitigation policies and measures in the country, Ministry's EPIU will be responsible for Component 1.
- Municipality of Yerevan – major beneficiary and Responsible Party of the Project (Component 2 and 3), Project Implementation Unit
- Municipalities and regional entities – capacity strengthening in the area of land use planning and zoning, particularly regarding the integration of energy efficiency building considerations into local decision making

- State Urban Development Committee (former Ministry of Urban Development) - Recipient of technical assistance to develop and strengthen legislation and secondary legislation
- State Urban Inspectorate – under the State Urban Development Committee - Recipient of technical assistance to develop and strengthen enforcement of legislation and secondary legislation associated
- Ministry of Territorial Administration and Infrastructure (former Ministry of Energy Infrastructure and Natural Resources is currently in the structure of MTAI) - Enforcement of the legal base, methodologies and procedures for the Energy Performance of Buildings certification scheme (passports)
- National Institute of Standards - Development of procedures for licensing of independent verifiers in the sphere of energy efficiency materials certification and labelling.
- Commercial banks - Recipients of technical assistance to develop financial packages for energy efficiency building retrofits. Will provide financing for energy efficiency building retrofits under various investment programs.
- National Mortgage Company - Will provide financing for energy efficiency building retrofits under various investment programs, particularly under loan agreement with KfW.
- ESCOs - Recipients of technical assistance to develop financing packages and to develop a pipeline of bankable energy efficiency retrofit investment opportunities
- Home-owners/managers/condominiums - Provide a down-payment on energy efficiency building retrofits and contribute to development of a pipeline of bankable energy efficiency retrofit investment opportunities.
- energy efficiency retrofit companies - Companies such as engineering design and construction companies, and suppliers of materials will be the ones actually delivering the retrofit projects
- Builders' Union of Armenia and Architects' Union of Armenia - Development of advertising materials, exhibitions, support with publications, lobbying for regulatory documents and standards adoption, awareness-raising.
- Universities - Support lessons learning activities and conduct formal academic teaching.
- NGOs - Awareness-raising activities
- Renewable Resources and Energy Efficiency Fund of Armenia (R2E2 Fund) - The Fund is responsible for financing a number of renewable energy and energy efficiency projects and promoting the development of the energy efficiency market in Armenia.
- European Investment Bank (EIB) - Project partner and a source of co-finance
- World Bank - Coordination with existing project "Armenia Energy Efficiency"
- USAID/Energy Efficiency Project – Exchange of data and analytical studies
- KfW, EBRD, UNECE - Exchange of data, analytical studies and coordinate awareness raising activities

The cooperation with all relevant project stakeholders was found to be effective, and the stakeholders also rated the cooperation with UNDP as effective. R2E2 Fund is an important partner of the project that is expected to take over significant responsibility in implementing energy efficiency retrofits after project termination on the basis of experience built up during project implementation (retrofits of MABs in Yerevan). As of mid-term, the involvement of the R2E2 Fund has been limited, and there is a room for more pro-active partnership with the R2E2 Fund in order to strengthen its ownership as well.

3.7 Project Budget

The project budget consists of 20 mln USD grant provided by the GCF and 0.420 mln USD cash contribution (Track resources) from UNDP. The total cash budget is 20.420 mln USD.

Parallel co-financing includes 1 mln USD funding from UNDP, 8 mln USD cash co-financing from the Municipality of Yerevan, 0.400 mln USD of in-kind co-financing from the Government of Armenia. The project budget was designed with 86.25 mln USD cash co-financing from EIB.

Total project budget was thus designed to be 116.070 mln USD, of which 21.420 mln USD administered by UNDP, and 94.650 mln USD co-financing.

Table 4: Budget summarizes project budget of 20.420 mln USD funded by GCF and UNDP per each of six year project duration.

Table 4: Budget (in thousand USD)

Component	Entity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
1 – MRV	GCF	181	204	143	139	114	109	890
	UNDP	30	44	44	34	24	24	200
	Subtotal 1	*211*	*248*	*187*	*173*	*138*	*133*	*1 090*
2 – Policy De-Risking	GCF	156	208	204	184	110	28	890
	UNDP	-	-	-	-	-	-	-
	Subtotal 2	*156*	*208*	*204*	*184*	*110*	*28*	*890*
3 – Financial De-Risking	GCF	305	676	715	725	685	314	3 420
	UNDP	-	-	-	-	-	-	-
	Subtotal 3	*305*	*676*	*715*	*725*	*685*	*314*	*3 420*
4 – Financial Incentives	GCF	-	400	2 400	3 000	4 300	3 900	14 000
	UNDP	-	-	-	-	-	-	-
	Subtotal 4	-	*400*	*2 400*	*3 000*	*4 300*	*3 900*	*14 000*
Project Management	GCF	87	120	134	143	149	167	800
	UNDP	26,0	38,5	53,5	20,0	20,5	61,5	220
	Subtotal 5	*113,0*	*158,5*	*187,5*	*163,0*	*169,5*	*228,5*	*1 020*
	Total GCF	729	1 608	3 596	4 191	5 358	4 518	**20 000**
	Total UNDP	56,0	82,5	97,5	54,0	44,5	85,5	**420**
	Grand Total	**785,0**	**1 690,5**	**3 693,5**	**4 245,0**	**5 402,5**	**4 603,5**	**20 420**

4. Findings

4.1 Project Strategy

4.1.1 Project Design

The Project design is based on hands-on experience of UNDP and lessons learned in implementing and financing energy efficiency in Armenia gained during implementation of several GEF-financed project in Armenia, including the UNDP/GEF project Improving Energy Efficiency in Buildings.

During the project design period, intensive consultations were held with all relevant local stakeholders, representing government, expert community, banking sector, beneficiaries, and NGOs, as well as with the Local Project Appraisal Committee.

The Project design properly addresses all 12 problems identified, and adequately structures the Project into four components:

1. MRV and knowledge management
2. Policy de-risking
3. Financial de-risking (financial mechanisms)
4. Financial incentives

Although the project design phase was rather lengthy – more than 2.5 years, thanks to the hands-on understanding of local market and local development context, the project design did properly address the needs and opportunities in large-scale roll-out of energy efficiency in buildings in Armenia that are in place also at mid-term of the Project implementation.

One of the most critical success factor of this Project design is a very proper timing of this Project proposal. Should the Project be launched several years earlier or later, its development impact would be lower due to underdeveloped local market, or due to its on-going progress. The project strategy is very relevant also at its mid-term, almost six years after it was initiated, although significant progress and changes occurred both in the government and on the market.

The Project directly addressed country priority of energy efficiency in buildings, as specified in various Armenia's housing, energy and climate strategies and related legislation, including Intended Nationally Determined Contribution (INDC), Third National Communication to the UNFCCC, UNFCCC Technology Needs Assessment, Law on Energy Savings and Renewable Energy, National Program on Renewable Energy and Energy Efficiency, National Energy Efficiency Action Plan, and supported by adopted technical regulations on "Mandatory consideration of energy efficiency in construction/reconstruction under the state funded activities", and new building code (SNiP) "Thermal Protection of Buildings". The country ownership has been even strengthened after the Velvet revolution in 2018, when the new government, with the support from the Project, included energy efficiency criteria into its financial mechanism – the State Subvention Program.

The Project design targeted 6 000 single family houses to be retrofitted, 290 multi apartment buildings, 23 large public buildings and 150 small public buildings. It is not clear from the Project Document how and why this share of single family houses, multi apartment buildings and public buildings was selected. The LPAC recommended to decrease the share of targeted single family houses and focus more on multi apartment buildings. Selected structure of buildings was not the least-cost option, since specific investment costs per ton of CO_2 saved is higher in single family houses than in multi apartment buildings[7].

Gender equality considerations are incorporated into the Project Document design and FAA, they are based on conducted gender assessment, and are reflected in the approved project-level gender action plan for creating opportunities for gender mainstreaming in capacity building, financing and employment.

A major impact on the designed Project had the fact that the planned co-financing from the EIB of 86.25 mln USD did not materialize due to the fact that the debt to GDP ratio reached critical levels[8], and due to limited fiscal space the new Government did not sign the sovereign loan with EIB, i.e. did not provide state guarantees for the loan. The Project Management Team identified alternative sources of financing and proposed additional project adjustments, without compromising the GHG emission reduction targets. These project adjustments are summarized in the Refocus Analysis submitted to the GCF Secretariat on April 17, 2020. The GCF decision was pending until September 2020.

4.1.2 Results Framework/LogFrame

Project Results Framework includes SDG indicator, UNDP Strategic Plan indicators, GCF core indicators, as well as project outcome and output level indicators. The logframe does not have specific project objective indicator and target defined. For evaluation of the project objective, target of the core GCF indicator of GHG emission reductions was used. For each indicator baseline, mid-term and end-of-project targets have been specified, as well as means of verification and assumptions – with three exceptions (see below). Specified LogFrame indicators and targets are SMART – Specific, Measurable, Attainable, Relevant, and Time-bound - with exceptions described below.

- The SDG indicator “Energy intensity measured in terms of primary energy and GDP” has no mid-term and EOP target specified. The targets should be enumerated. However, this indicator seems to be too widely defined. Other factors independent of the Project, such as growth of the economy, energy efficiency measures implemented in other sectors, fuel switch, etc. might have higher impact on this indicator than implementation of this Project. Thus, this indicator is not necessarily relevant and could be avoided.
- Mid-term target of 100,000 tCO2/year is wrong. The EOP target is 1.39 MtCO2/20 years, which is 69,500 tCO2/year. The mid-term target is higher than EOP target. Mid-term targets of Component 3 and 4 (in terms of volume of loans provided and number of vulnerable beneficiaries with retrofitted housing) is defined as 20% of EOP target. Thus the mid-term GHG emission target should be about 20% of the EOP target, which is 13,900 tCO2/year. The mid-term target should have been thus probably 10,000 tCO2/year instead of 100,000 tCO2/year.
- Enumeration of targets of the outcome M5.0 Strengthened institutional and regulatory systems based on the World Bank RISE indicators for building sector seems to be based on an “objective” methodology. The RISE methodology utilizes 23 indicators, however, some of them

[7] Funding Proposal, Table in Chapter E.1 Impact Potential, paragraph 102, own calculation
[8] Public and publicly guaranteed (PPG) debt to GDP in Armenia: 2016 – 56.7%, 2017 - 58.9%, 2018 - 55.7%, 2019 – 53.5%, 2020 IMF projection – 66.3%, Source: International Monetary Fund, December 11, 2020, https://www.imf.org/en/News/Articles/2020/12/11/pr20371-armenia-imf-execboard-completes-3rd-review-under-sba-and-approves-us-36-9m-disbursement, for 2016: IMF Country Report No. 19/154, June 2019, https://www.imf.org/~/media/Files/Publications/CR/2019/1ARMEA2019005.ashx

are not relevant, and some other relevant issues are not addressed. All indicators have the same weight. The actual meaning of the score is not easy to understand without studying the methodology used. The actual enumeration of the score is partially arbitrary/subjective and partially not relevant. Thus this indicator could be avoided.

- Output 2.1 indicator “UNDP’s framework to support policy-makers in selecting public instruments to promote energy efficiency investment in developing countries used, adapted as necessary” is rather vague, and the relevant target “Number of public instruments selected: 3” refers to a relatively simple decision of selection of number of public instruments, rather than specifying which instruments need to be developed/updated and implemented. The target is formally SMART, but it has no quality reference.
- Output 1.2 has three indicators. However mid-term and EOP targets are specified only for the first of them. The other two indicators “Number of men and women users of project website”, and “Number of women's group involved” have no baseline and targets defined.
- Output 3.1 has two indicators but targets are specified only for one indicator.
- Output 4.1 has three indicators, however, baseline and mid-term and EOP targets are defined only for the first of them. Two indicators, “Number of female-headed households who received funding” and “Number of beneficiaries (disaggregated by sex and age) in the female-headed households”, have no baseline nor mid-term and EOP targets specified.

Project targets are clearly described, and although very challenging and demanding, they are feasible to be achieved as defined in the Project Document. Description of planned activities under each project output specifies in detail expected results for each project output and outcome. However, with the delay in implementation of the Project, partly due to delays on the side of the Government and GCF as well, multiple mid-term targets have not been achieved.

There is a significant synergy between several projects implemented in parallel in Armenia, including the Yerevan/EIB Energy Efficiency Project, and the NMC/KfW project. The GCF project supported and catalyzed development of energy efficiency debt-financing products of local commercial banks, and implementation of energy efficiency building retrofits within the Yerevan/EIB project.

Gender aspects and sex-disaggregated indicators are included in the logframe. However, for effective progress monitoring, specific targets need to be defined as well – see comments on Output 4.1 indicator above.

4.2 Relevance, Effectiveness and Efficiency

The Project design addressed very adequately properly identified country needs and priorities and actual development problems and implementation challenges. It is worth to highlight also a very proper timing of this project. At the project design phase, Armenia has already gained some practical technical experience with demonstrating energy efficiency in buildings, some energy efficiency has been implemented with grant financing in public buildings, and with private capital on an individual apartment level retrofits. Key energy efficiency regulations have been developed or updated, such as Law on Energy Efficiency, and energy performance of buildings (SNiP) regulation. However, there was practically no experience with mobilizing debt-financing for investment in energy efficiency building retrofits. Thus, wider roll-out of energy efficiency retrofits in buildings has been limited to available grants only, and large-scale implementation of building level energy efficiency retrofits has not materialized yet, due to lack of affordable financing. The planned financing includes also grant component specifically designed to support low-income households.

The project design is very complex and challenging. It is also one of the first projects of this type supported by GCF. Project outcomes, outputs and planned activities are realistic and feasible and adequate to achieve planned targets - with assumptions used, ie. primarily mobilizing co-financing for debt financing, and sufficient budget for financial incentives, including special support for low-income households.

The Project design is based on a theory of change summarized in Annex 17 of the Project Document. Designed project intervention is logic and coherent and does not require to be up-dated as of Project mid-term.

The structure of the Project with its four components/outcomes and subsequent specific outputs and activities is very clear and transparent. It is easy to understand its link to the broader paradigm shift objective – the shift to low-emission sustainable development pathway.

The delivery of several key planned achievements is significantly delayed primarily due to several external factors: Government, COVID, and GCF. The velvet revolution spring 2018, nomination of transitional Government until Parliamentary elections and installation of a new Government in 2019 effectively delayed any Governmental decision. The new Government did not sign the sovereign loan agreement with EIB of 86 mln USD because of the high debt to GDP ratio. The Project implemented effective adaptive management and found alternative source of co-financing, and adjusted some activities – mainly shift from main focus on single family houses towards targeting more multi apartment buildings. The Project submitted Refocus Analysis to GCF for approval, however, the decision is pending and the Project was forced to put on hold several activities. The COVID pandemic also caused some delays from March to mid-2020. Several reconstruction tenders and contracts had to be postponed, due to general lockdown of economy. Frequent changes in the government also caused some delays in several project activities.

The project is very relevant to actual situation in Armenia and its specific development phase. Project relevance is rated Relevant[9].

Progress towards results is discussed in detail in Chapter 4.3 Progress towards Results.

The Project Document identified in total 19 risks related to both project management and implementation, and properly described in the UNDP risk log their impact and probability and mitigation measures/countermeasures. The major risk (with the highest rated probability and impact is a financial risk “lack of interest to co-finance energy efficiency retrofits in building sector”. All project assumptions and risks identified are realistic.

The Project uses standard monitoring and evaluation tools and reporting. However, some Project monitoring activities have been delayed. The last Project Board meeting was organized on September 18, 2018. No Project Board was held in 2019. Due to changes in governmental representatives in the Project Board, it was planned for early 2020, and then delayed again due to COVID restrictions. Quarterly Progress Reports for Q1 and Q2 of 2020 were drafted, however not approved yet.

Progress reports describe in detail activities performed and evaluate achievements vis-à-vis clearly defined outcomes and outputs and their time-bound targets. Some inconsistency was identified in reporting. Annual Performance Report (APR) for the year 2019 reports cumulative implementation progress which is not consistent with progress reported for 2019 in Standard Progress Reports (SPR) of Q4/2019. Cumulative implementation progress of individual activities in outputs 1.1 through 2.4 is rated

[9] Two scale ratting is used as per 2019 UNDP Evaluation Guidelines (Relevant/Not Relevant).

in APR 2019 between 10 – 80%, however, in SPR Q4/2019 the status of these outputs is rated "Completed" for Q1-Q4 of 2019.

UNDP governance role is implemented effectively. High level UNDP CO management are regularly updated on project progress and participate in top-level meetings with key project partners, primarily from the Government and donor community. Reporting to GCF and ad hoc negotiations with GCF as well as monitoring of project progress is supported by the UNDP Regional Technical Advisor based in Bangkok.

The Project has implemented exceptionally effective adaptive management – especially related to the need to find alternative source of co-financing, after the government did not sign the EIB sovereign loan. The Project is implemented in a very flexible way, adjusting to most effective opportunities and implementation specifics that emerge on the market, or to a new situation caused by external factors. This type of such a complex 6-year project requires such flexible approach, since the conditions in the country and on the market are developing rather quickly.

At the mid-term of planned project implementation period, interim evaluators consider the project strategy to continue to be appropriately chosen. No alternative strategy that would be more effective in achieving project objectives is known.

As of mid-term, the delivery of Project results is significantly delayed, especially in implemented energy efficiency retrofits of buildings and thus in GHG emission reductions as well. Since alternative sources of financing have been identified that will replace the originally planned EIB sovereign loan to the Government, the end-of-project results are still feasible to achieve, although probably project extension will be needed.

Project effectiveness is thus rated Moderately Unsatisfactory[10].

Project financing, including disbursement, is discussed in detail Chapter 4.4.3: Finance and Co-Finance. Actual financial disbursement reflects delayed implementation and specifically delayed investment in energy efficiency building retrofits. Timely delivery is unsatisfactory.

For GCF financing, the emission reduction costs in retrofitted 2 pilot public buildings and 5 multi-apartment buildings are 18.3 USD/tCO_2, which is slightly higher than the EOP target level of 14.4 USD/tCO_2. Cost-effectiveness is satisfactory.

Project efficiency is rated Moderately Unsatisfactory.

4.3 Progress towards Results

4.3.1 Progress towards Outcomes Analysis

Two kindergartens in Yerevan and 5 multi-apartment buildings in Sisian community have been retrofitted and commissioned in 12/2017, 8/2018, and 12/2019. Total number of beneficiaries is 2,775, energy savings are 40%, 76%, and 19%, with total annual GHG emission savings of 350 tCO_2/year

Project implementation is significantly delayed due to the fact that the government did not sign the loan agreement with EIB. The Project managed to secure alternative sources of financing and slightly

[10] Six scale rating used as per 2019 UNDP Evaluation Guidelines.

adjusted several project activities accordingly, including increasing the number of multi-apartment buildings to be retrofitted, and decrease of targeted single family houses, without compromising the project objective of GHG emission reductions, which remains unchanged. The Refocus Analysis was drafted and submitted to GCF, as well as the Technical Review – Phase II. As of Interim Evaluation performed in September 2020, the decision of GCF is pending.

Due to the fact that the third installment from the GCF was not approved yet, pending on the approval of the Refocus Analysis, the project implementation was slowed down. In the draft Q1-Q2 2020 Standard Progress Report the Project team thus defined new 2020 targets to replace mid-term targets that better reflect the current situation. However, since the quarterly progress reports for Q1-Q2 2020 were not yet approved, these new 2020 targets were not evaluated in this Interim Evaluation. The Interim Evaluation report evaluates achievement of mid-term targets and progress towards EOP targets, as specified in the Project Document.

The following matrix summarizes mid-term level assessment, mid-term target achievement rating, and justification for rating. The color of achievement rating in green - indicates mid-term target achieved, in yellow - indicates mid-term targets were not fully achieved, in red - mid-term targets not achieved.

Table 5: Progress towards Results Matrix

Fund-level impacts

Expected Result	Indicator	Baseline	Level in 1st PIR (self-reported)	Target		Mid-term Level & Assessment	Achievement Rating	Justification for Rating
				Mid-term (if applicable)	Final			
M3.0 Reduced emissions from buildings, cities, industries and appliances	GCF core indicator: Tonnes of carbon dioxide equivalent (tCO_2eq) reduced or avoided as a result of Fund-funded projects / programmes	0		100,000 tCO_2-eq/year[11]	Direct: 1.39 Mt over 20-year lifetimes of the buildings Indirect: additional 4.2 to 4.4 Mt of savings over the 20-year lifetimes of buildings	350 tCO2/y	U	Two kindergartens and five multi-apartment buildings retrofitted
	GCF core indicator: Cost per tCO_2eq, defined as total investment cost / expected lifetime emission reductions	0		-	US$ 14 / tCO_2e for GCF for direct emission savings, and between US$ 3.4-3.6 / tCO_2e for GCF for the		N/A	Not evaluated. No mid-term target specified.

[11] Mid-term target of 100,000 tCO2/year is wrong. The EOP target is 1.39 MtCO2/20 years, which is 69,500 tCO2/year. The mid-term target is higher than EOP target. Mid-term targets of Component 3 and 4 (in terms of volume of loans and number of vulnerable beneficiaries with retrofitted housing) is defined as 20% of EOP target. Thus the mid-term GHG emission target should be about 20% of the EOP target, which is 13,900 tCO2/year. The mid-term target should have been thus probably 10,000 tCO2/year instead of 100,000 tCO2/year.

					market transformation.			
	GCF core indicator: Volume of finance leveraged by the project and as a result of the Fund’s financing, disaggregated by public and private sources	0		-	US$ 100 million, of which US$ 20m is from public sources and US$ 80m is from private sources		N/A	Not evaluated. No mid-term target specified.

Expected Result	Indicator	Baseline	Level in 1st PIR (self-reported) APR 2019	Target		Mid-term Level & Assessment[12]	Achievement Rating[13]	Justification for Rating
				Mid-term (if applicable)	Final			
Project outcomes	**Outcomes that contribute to Fund-level impacts**							
M5.0 Strengthened institutional and regulatory systems	5.1 Institutional and regulatory systems that improve incentives for low-emission planning and development and their effective implementation	34	44 (APR 2019)	64	91	48	MS	Own RISE evaluation.
M7.0 Lower energy intensity of buildings, cities, industries and appliances	7.1 Energy intensity / improved efficiency of buildings, cities,	Residential buildings: 185 kWh / m^2		Reduced by 50%	Reduced by 50%	Actual savings 19% in five residential buildings, and 40%	MS	Two pilot public buildings and five multi-

[12] Colour code this column only
[13] Use the 6 point Progress Towards Results Rating Scale: HS, S, MS, MU, U, HU

	industries and appliances as a result of Fund support	Public buildings: 200 kWh / m^2				and 76% in two public buildings. Weighted average savings: 30%		apartment buildings (roof insulation).
1. Robust MRV for the building sector established *(Output 1 – Establishment of building sector MRV and knowledge management)*	Establishment of a web-based, publicly-accessible MRV database	No MRV in place		Website established and fully web-accessible	5,000 website hits per year	Web site established and accessible, although without MRV/EMIS data yet.	MS	Data on MRV not accessible on the website (for piloted buildings).
2. National, sub-national and local authorities adopt and implement an enabling policy framework for energy efficiency retrofits *(Output 2 – Policy de-risking)*	see M5.0 above	34		64	91	48 (RISE score evaluation) MTR target not reached in: certifying compliance, EE incentives/mandates, mandatory updates of building codes.	MS	Revision of Law on MAB management developed, but not approved
3. Access to affordable capital for energy efficiency retrofits provided *(Output 3 – Financial de-risking)*	Value of loans for building renovation provided	0		US$ 20m	US$ 100m	USD 14m from the Yerevan/EIB project - signed 21 mln USD from the State Subvention Program over the project duration – in disbursement since 2020, highly probable in next years as well 20 mln EUR KfW/NMC loans available for EE retrofits as well – in disburcement	HS	TA to Yerevan provided, Statement of Intent signed with NMC/KfW

4. Affordability of energy efficiency retrofits for most vulnerable households ensured through targeted financial incentives to building / apartment owners / ESCOs *(Output 4 – Financial incentives)*	Number of vulnerable beneficiaries (lowest quintile of household income) with improved building energy efficiency	0		10,000	50,000	87 vulnerable households	U	Results of 5 MAB retrofits in Sisian. Pending GCF approval of Refocus Analysis and disbursement of the 3rd tranche.
1.1 MRV systems for the buildings sector in Armenia established	Development and coverage of MRV system and database	NA	MRV 65% EMIS 50% SPR Q4/2019 – "completed" SPR Q1-2/2020 Partially delayed	Developed and in use for renovated buildings: full coverage of buildings retrofitted in this project	Developed and in use for renovated buildings: full coverage of buildings retrofitted in this project	MRV methodology developed and tested in two buildings in Yerevan since 2018, MRV roadmap, ToR developed, technical capacity 2 trainings and a study tour delivered, draft agreement with MoE EPIU, not signed yet EMIS piloted in Stepanavan and tested in 2 buildings in Yerevan	MS	MRV developed, not yet fully implemented, piloted in Stepanavan and tested Yerevan Agreement with EPIU to be signed
1.2 Knowledge management and MRV information disseminated	Existence and implementation of a plan for sharing lessons learned	NA	Activities implementation: 50/70/75/20% SPR Q4/2019 – "completed" SPR Q1-2/2020	Created and implemented	Number of beneficiaries: 250.000	Awareness raising plans for 2017-2019 developed and implemented, special information website created (www.mershenq.am) with a link to a project facebook page, web site with project information available at www.nature-ic.am.	HS	Plan and platform created In addition to that: TA to government and series of

			Completed			Trainings for 900 participants, 100 community and HOA reps, delivered. Estimated number of beneficiaries informed is 50,000, of which 65% is women.		trainings delivered. Awareness rising info campaing in Yerevan (LED screens, scrollers, bus stops)
	Number of men and women users of project website						-	
	Number of women's group involved						-	
2.1 Public instruments for the promotion of investment in energy efficiency selected	UNDP's framework to support policy-makers in selecting public instruments to promote energy efficiency investment in developing countries used, adapted as necessary	Framework not used for energy efficiency in Armenia	80% SPR Q4/2019 and SPR Q1-2/2020 – "completed"	Number of public instruments selected: 3	Number of public instruments selected: 3	Building Passport formats in public buildings and MABs, MABs operation and management rules developed	MS	Two public instruments selected
2.2 Support provided to on-going legal reform in the field of energy efficiency	Binding legislation on building codes and adequate secondary legislation adopted	Level 3. Policies proposed and consultation ongoing[14]	10/40/15% SPR Q4/2019 and SPR Q1-2/2020 – "completed	Level 4. Strong policy adopted	Level 5. Strong policy adopted and institutional capacity strengthened	MAB operation and management rules and building passport formats developed and agreed with Urban Development Committee	MU	To be submitted to the government for adoptions

[14] See note below the table for an explanation of the baseline and targets.

2.3 Support provided for the creation of an enabling policy framework for energy efficiency retrofits in multi-owner residential buildings	Adequate secondary legislation – providing a clear and effective set of functional models and a standard set of rules for multi-owner building management bodies to undertake energy efficiency retrofits – developed, introduced and enforced	Secondary legislation lacking	30% SPR Q4/2019 and SPR Q1-2/2020 – "completed"	Level 6. Sub-sector plans reflect key policy targets	Level 7. Regulatory framework developed	Recommendations for "MAB Management" and " Condominium" laws amendment Building passport and MAB O&M rules developed and agreed with Urban Development Committee.	S	Secondary legislation developed.
2.4 Support provided to building owners / managers / owner associations / ESCOs on legal matters related to energy efficiency retrofit projects	Business models for repayment of energy efficiency investments implemented	Level 1. No business models for repayment of energy efficiency investments in buildings in place	20% SPR Q4/2019 SPR Q1-2/2020 – "completed"	Level 3. Strong proposal defined with buy-in from stakeholders confirmed	Level 5. Financial mechanism in operation with evidence of stability	Operational manual and financial scheme developed for MAB and SFH. Social and economic surveys in 3 selected MAB pilots carried out to assess the engagement of targeted groups.	HS	Financial scheme developed and agreed with stakeholders
2.5 Exit strategy measures implemented	Additional exit strategy measures designed and implemented	N/A	0% SPR Q1-2/2020 "Completed"	Additional exit strategy measures designed	Additional exit strategy measures implemented	Exit strategy drafted.	HS	Planned for Q3 2020
3.1 Technical assistance provided to banks and other financial institutions	Capacity of banks to develop and market products for energy efficiency retrofits in individual houses	Banks do not have the capacity to develop and market products for energy efficiency retrofits in	10% SPR Q1-2/2020 "Completed"	2 Armenian banks have the capacity to develop and market products for energy efficiency retrofits in	4 Armenian banks have the capacity to develop and market products for energy efficiency retrofits in individual houses	Statement of Intent (SoI) signed between UNDP, KfW and National Mortgage Company (NMC) to facilitate access to affordable capital for EE building retrofits for residential buildings. TA was provided to NMC as well as residential building	S	Local banks and credit institutions offer financial products for EE retrofits in SFH – with support of NMC/KfW

		individual houses		individual houses		developers (who are using loan resources of KfW). Cooperation opportunities discussed with 4 Armenian banks, which are engaged in KfW-NMC program. Operational manual for SFH developed.		and have sufficient EE capacity. 4 banks expressed interest in participation in GCF project.
	Number of men and women professionals trained on appraising investments and developing energy efficiency projects							
3.2 Technical assistance for HOA market facilitation provided to banks	Capacity of banks to develop and market products for energy efficiency retrofits in multi-owner residential buildings	Banks do not have the capacity to develop and market products for energy efficiency retrofits in multi-owner residential buildings	20% SPR Q1-2/2020 “Completed”	2 Armenian banks have the capacity to develop and market products for energy efficiency retrofits in multi-owner residential buildings	4 Armenian banks have the capacity to develop and market products for energy efficiency retrofits in multi-owner residential buildings	Operational manual for MAB developed. MAB financial scheme to be piloted with NMC/KfW financing. Financial products and structuring financing for implementation of EE retrofit projects in pilot MABs discussed with local banks.	S	Although banks do have already experience and capacity in EE financing, experience with development of specific financing for EE retrofits in MAB is not yet in place.
3.3 Technical assistance provided to local government to develop energy efficiency retrofit projects for publicly-owned buildings	Capacity of local government to develop energy efficiency retrofit projects for publicly-owned buildings	Local government does not have the capacity to develop energy efficiency retrofit	30% SPR Q4/2019 – partially delayed	50% of local planning department employees believe local government has the capacity to develop energy	80% of local planning department employees believe local government has the capacity to develop energy efficiency retrofit	Operational manual for public buildings developed. The survey was not conducted. Based on the discussions with local governments, the communities involved in GCF/State Subvention	S	Technical assistance provided to Yerevan for EE retrofit designs for 26 and new

		projects for publicly-owned buildings		efficiency retrofit projects for publicly-owned buildings	projects for publicly-owned buildings	Program activities obtain enough capacity and knowledge to develop EE projects in public and residential buildings. Yerevan municipality has technical capacity for implementation of EIB EE loan project in 46 kindergartens and received additional TA from the Project		design of 3 kindergartens
3.4 Access to affordable capital for energy efficiency retrofits provided	Amount and number of loans for building renovation provided	No lending provided	35/10% SPR Q1-2/2020 – "completed"	$20 million	$86.25 million	60 mln USD provided by local commercial banks to the residents under AFD, KfW/ GGF project, HfH financing facilities. 14 mln USD per Financial agreement signed between Municipality of Yerevan and EIB.).	MS	Funding implemented in cooperation with other on-going projects, TA assistance provided
3.5 Marketing platform created	Marketing materials developed and platform created	No marketing materials exist	25% SPR Q1-2/2020 – "completed"	Marketing materials created and disseminated to at least 5,000 stakeholders	Marketing materials created and disseminated to at least 25,000 stakeholders	Marketing materials were prepared. (Estimated number of informed residents through awareness campaign is around 50,000.)	MS	Marketing plan implementation initiated.
4.1 Targeted financial incentives provided to vulnerable groups to help address the affordability gap	Financial mechanism to provide targeted financial incentives in place and incentives provided	No incentives in place		Incentives provided to 15,000 beneficiaries	Incentives provided to 50,000 beneficiaries	No incentives provided.	HU	Pending GCF approval of Refocus Analysis and release of the 3rd tranche.

	Number of female-headed households who received funding							Not evaluated - no targets specified. No incentive provided.
	Number of beneficiaries (disaggregated by sex and age) in the female-headed households							Not evaluated - no targets specified. No incentive provided.

Although the Project delivery is delayed due to need to "refocus" the project after the 86 mln USD EIB loan did not materialize, the Project has reached significant progress that is not fully reflected in evaluation of mid-term achievements as per logframe targets.

Following is a summary of main project activities performed and delivered structured by each project output (output description is abbreviated):

Output 1.1: MRV system established

MRV/EMIS methodology, including calculation and validation of weather normalized energy and GHG savings has been developed and tested in 2 pilot buildings in Yerevan (kindergarten #160 and Erebuni Youth center #3 during two heating seasons (2018-2019 and 2019-2020). Stepanavan is piloting the EMIS system on a municipal level. Environmental Project Implementation Unit (EPIU) of the Ministry of Environment (MoE) should be responsible for implementation of the Component 1. Although the Responsible Party Agreement between UNDP and MoE EPIU has not been signed yet, the Project team developed within this Output energy passports for three types of MABs, organized a study tour to Serbia and Bosnia and Herzegovina for local professionals including EPIU and organized trainings for EPIU on MRV in 2018, and on Energy Management Information Systems (EMIS) in 2019. The Project purchased a vehicle for the EPIU for conducting periodic monitoring and data collection.

Output 1.2: Knowledge management and MRV information disseminated

Extensive awareness raising activities have been implemented according to the developed plan, including national and international events, movie on pilot project in Erebuni, outdoor advertisement in Yerevan, four brochures and one leaflet on energy efficiency job opportunities, capacity development activities attended by about 900 participants. More than 100 community and HoA representatives and building owners participated in meetings on energy efficiency retrofitting opportunities for MABs in different regions. The Project website is operational within the www.nature-ic.am site. A dedicated new web site www.mershenq.am was established, although not yet fully operational.

Output 2.1: Public instruments to support energy efficiency investment selected

Two public instruments have been selected and agreed with the Urban Development Committee (UDC), namely an amendment to the Law on multi-apartment building management and a format of a building passport/energy performance certificate.

Output 2.2: Support to legal energy efficiency reform

Operation and maintenance rules for MABs were developed, scope of technical assistance for an implementation of the Technical Regulation for Energy Saving and energy efficiency in newly constructed and retrofitted MABs by using State funds was agreed with the Urban Development Committee, and it will include: (i) development of Methodology for calculating Energy Performance of Buildings and establishment of minimum Energy Performance Requirements; (ii) energy performance requirements for Building Engineering Systems; (iii) Compliance Assessment; (iv) issuance of Energy Performance Certificates and Energy Audit of Buildings.

Output 2.3: Enabling policy framework for energy efficiency retrofits of MABs

Amendment to the Law "On Multi-Apartment Building's Management" and Law "On Condominium" was developed. The Project has provided support to the Inter-Agency Working Group under the Ministry of Justice, which was established by the order of the Prime Minister.

Output 2.4: Support to building owners - legal and energy efficiency

International workshop "Management and Financing of energy efficiency in Multi-Apartment Buildings" organized and implemented in Armenia. Financial scheme for MAB retrofits was developed. Social and economic surveys in selected 3 MAB pilots carried out to address the engagement of targeted groups in a pilot phase of energy efficiency retrofits. Technical assistance and legal advice was provided to housing associations and municipalities on preparation of technical design, tender documents, procurement process, construction supervision, quality control. Operational Manuals (OMs) for MABs, single family houses, and public buildings were developed. Operational Manuals are detailed enough for direct implementation, and specific for each type of building, in case of MABs also based on their location in Yerevan and other regions that reflects the site-specific income level. Operational Manuals were developed based on consultations with stakeholders that ensure effective implementation of building retrofits. The level of a financial incentive, grant to be provided, depends on energy savings achieved, quality assurance of retrofit, type of building, and income level in Yerevan and regions. The level of financial incentives is deemed to be appropriate to motivate building owners for investment in energy efficiency building retrofits. Operational manuals provide a good guidance for effective implementation of retrofits.

Output 2.5: Exit strategy measures

Exit strategy was developed and submitted to a reviewer after the draft IE Report has been submitted. It includes specific exit strategy for each project component, combining phasing down, phasing out and phasing over approaches. The developed exit strategy seems to be reasonably appropriate for each project component. It represents a general outline that is planned to be further elaborated and to include more specific information, such as available post-project funding sources etc. Effective implementation of energy efficiency is a long-term process that requires pro-active local stakeholders with sufficient technical and financial expertise, as well as funding for financial incentives. Suitable key local stakeholders have been identified, including the R2E2 Fund that is planned to have a crucial role in project implementation. Effective liaison with R2E2 Fund and its active involvement before the project end will be crucial, as well as identification of available post-project funding.

Output 3.1: Technical assistance to banks

Statement of Intent (SoI) was signed between UNDP, KfW and National Mortgage Company (NMC) to facilitate access to affordable capital for energy efficiency building retrofits for residential buildings. Technical assistance was provided to the NMC as well as residential building owners that utilize loans provided by the NMC/KfW/local banks. Cooperation opportunities discussed with four Armenian banks that utilize NMC/KfW energy efficiency financing. Technical assistance has been provided to the State Subvention Program, including preliminary selection of buildings, shortlisting of selected MABs, preparation of ToR for design, QA for design. Developed Operational Manual include information on financial incentives, Scope of Work (SoW) for energy efficiency retrofits; implementation arrangements; lending procedures; verification of investments; financial management; risk management; role of the Responsible Party; planned awareness activities; monitoring and reporting requirements; typical breakdown of costs of retrofits; templates of forms, agreements.

Output 3.2: Technical assistance on MAB financing to banks

Cooperation modalities and structure of financing was preliminarily agreed with commercial banks under the NMC/KfW program for pilot MAB retrofits and single-family houses retrofits.

Output 3.3: Technical assistance to municipalities on energy efficiency in public buildings

The Project provided technical assistance to municipality of Yerevan for the implementation of Yerevan Energy Efficiency Project (under the sub-sovereign EIB loan to Yerevan). Energy Audits for 46 kindergartens in Yerevan were developed, ToR for the Technical Supervision Services was agreed with Yerevan

Municipality. Design packages with energy efficiency measures for 29 kindergartens were developed, reviewed by independent design experts, and submitted to the Yerevan Municipality. Energy audits and technical design were developed for two public buildings (agro-technological high school and Muratsan Central Military Hospital.

Output 3.4: Access to affordable capital for energy efficiency retrofits provided

The State Subvention Program has a budget of 21 mln USD, of which about 39% is allocated for energy efficiency retrofits. energy efficiency retrofits of five buildings supported with the MoTAI State Subvention Program were completed Sisian in 2019. Yerevan municipality allocated 1.9 mln USD for MAB retrofits in 2020. 16 mln USD is committed for the implementation of Yerevan Energy Efficiency Project in public buildings, implementation is in progress.

Output 3.5: Marketing platform created

3,500 stakeholders were addressed in the awareness raising campaign in 2017-2019. Implementation of a Marketing plan has launched, advertisement in social media is ongoing. Due to COVID-19, marketing activities in the regions are postponed.

Output 4.1: Financial assistance to vulnerable groups provided

No financial incentives for low-income households was provided yet from the GCF funding.

4.3.1.1 Risks associated with COVID pandemic and impact on project implementation

In Q2 of 2020, Armenia faced high numbers of COVID-positive cases. This had significant and immediate impact on businesses and their economic activities. Due to lockdown combined with the overall uncertainty regarding future development, some municipalities witnessed low interest in tenders for energy efficiency reconstructions, and construction slowed down. As of September 2020, the situation in Armenia has improved again.

However, there is a risk of next waves of COVID pandemic which might result in additional drop-in economic activities and delays in energy efficiency building reconstructions[15].

Due to high and ongoing uncertainties, there is no final analysis available of COVID impact on future public budgets, yet. There is a risk that public budgets might decrease which might negatively impact capacity of public entities to co-finance energy efficiency building retrofits. However, energy efficiency is high on top of the priorities of the government. The 2020 was declared a Year of Energy Efficiency. And there are no signals that this should change in the future. The Ministry of Environment indicated that the governmental strategy in overcoming economic impact of the COVID crisis is in creation of green jobs and continuous support to energy efficiency investment.

The COVID pandemic and associated economic uncertainty may have negative impact also on individual investors – apartment owners, and their willingness to sign for a loan for energy efficiency retrofits.

The pandemic, lockdown, related economic uncertainty led also to reduced interest of potential bidders to participate in tenders for energy efficiency building retrofits, and their ability to deliver buildings retrofits in time, due to lack or risk of lack of available workforce.

[15] In October and November 2020 Armenia witnessed the second and more intensive wave of COVID.

There are two main expected COVID impacts: reduced ability and willingness to invest to energy efficiency due to potential public budget cuts, and risk of reduced income of families, and in the short-term reduced capacity of companies to implement energy efficiency retrofits and building reconstructions due to lack of available workforce. Other potential COVID impacts are less significant for project implementation. Early GCF financial disbursement for the investment component is thus critical in order to be able to demonstrate benefits of energy efficiency retrofits and motivate public and private investors to invest in energy efficiency.

4.3.2 Remaining Challenges and Barriers to Achieving the Project Objective

Main barriers are linked with financing of energy efficiency retrofits of multi-apartment buildings especially in the regions, where the income level in general is lower than in Yerevan, and the share of low-income households is higher. Although, there exist already good examples of debt-financing used and loans for MAB energy efficiency reconstruction repaid in Armenia, these cases are still very rare.

The main challenge of the Project is to demonstrate that the proposed financial scheme for MABs is feasible and beneficial for all apartment owners. Successful demonstrations of financial schemes can then raise additional interest of other MAB owners.

Thus, critical for successful implementation of the Project is implementation of following key steps without further delays:

- Early adoption by the Government of an amendment to the Law on MAB Management and its effective enforcement that will improve effectiveness of Housing Associations
- GCF approval of the Refocus Analysis and Operational Manuals with financing schemes and provision of next installments so that the Project can implement proposed financial schemes, provide financial incentives for low-income households in MABs, and start full roll-out of energy efficiency building retrofits
- Final agreements with commercial banks on financial scheme and incentives to be provided for low-income households.

The main uncertainty is whether the proposed financial scheme and financial incentives will be sufficiently credible and attractive for apartment owners to become interested in implementation of energy efficiency building retrofits and to use debt-financing. This is not only a case of financial analysis and economic arguments, and of effectiveness of housing associations and law enforcement, but it also requires new pro-active attitude and willingness of apartment owners, strong pro-active managers of housing associations, and their ability to effectively negotiate with apartment owners.

There is a risk that the remaining three years of project implementation will not provide sufficient time for full implementation of the Project – in terms of number of buildings to be retrofitted. MRV/EMIS can report reliable data at least after one winter period after buildings reconstruction. Actual building reconstruction will last at least one summer season. Tendering, project preparation, reaching agreement with apartment owners is a lengthy process as well. One cannot expect that the capacity of construction companies is high enough to implement energy efficiency retrofits in all planned buildings within one or two years.

4.4 Project Implementation and Adaptive Management

4.4.1 Project Implementation Management Arrangements

The project management is being implemented according to an outline specified in the Project Document, and it is in principle effective. It focuses on project objectives and results and it has implemented effective adaptive management when needed. However, some activities and delivery of mid-term results by project team have been delayed. These include an agreement with EPIU for implementation of MRV/EMIS that was submitted to EPIU in mid-2020 and is pending for signature, Project Board meeting was not organized in 2019, quarterly progress report for Q1 in 2020 was drafted with some delay. Although these delays are not critical for achievement of EOP targets, the project team should avoid any unnecessary delays.

Responsibilities of various project stakeholders are clearly specified as well as reporting lines.

Decision making is transparent but sometimes delayed. Project Board meetings should take place at least once a year, or even more frequently, if needed. The risk of frequent changes in government, including changes of representatives nominated to participate in the Project Board should be mitigated so that they would not negatively impact effectiveness of the Project Board. [16]

Both executing and implementing agencies should focus on timely delivery of the project, including all individual activities. The new government and representatives of ministries have energy efficiency on top of their agenda and are very pro-active, and the UNDP project team has established a good working relation with them.

Quality of UNDP support is rated highly by all stakeholders, despite the delayed financing available for investment in energy efficiency retrofits.

Implementation management arrangements are fully adequate for effective and timely delivery or results. However, further delays need to be avoided.

4.4.2 Work Planning

The major critical factor that caused project implementation delay – the need to find alternative sources of co-financing instead of the originally planned 80 mln USD EIB sovereign loan – has been proactively addressed by the Project team and alternative sources of co-financing identified and project implementation adjusted accordingly. As of the Interim Evaluation, the final approval of GCF and release of the third financial installment is pending.

The work planning is results-based: it is based on outcome, output and activity level targets specified in the Project Document. In cases where external action is needed, such as adoption of the legislation that is a sovereign responsibility of the Government (and Parliament), the Project team focuses on pro-active support provided to responsible agencies. This pro-active support to project stakeholders should continue and be strengthened especially in cases of any further delays.

The project team utilizes results framework matrix for project planning, evaluation and reporting. Due to delayed project implementation, the team adopted new 2020 targets in its Q1 and Q2 2020 Quarterly Progress Reports to better reflect the actual implementation status and activities to be performed in 2020. However, these targets were not officially approved as a replacement of the mid-term targets and thus they serve as additional, secondary targets for more detailed evaluation of project delivery in 2020.

[16] Consider for example doubling the representation of Governmental agencies in the Project Board that would include executive and deputy representatives for example.

4.4.3 Finance and Co-Finance

The Table 6 shows project expenditures as reported in Combined Delivery Reports for each donor and each year or project implementation and a remaining balance.

Table 6: Project Expenditures as per CDRs as of September 14, 2020 (in USD)

#	Project Components	Donor	2017	2018	2019	2020 as of 14 Sept'20	Total	Balance
1	Establishment of building sector MRV and knowledge management	GCF	0,00	55 602,54	28 921,50	14 923,76	**99 447,80**	790 552,20
		UNDP/04000	40 999,98[17]	1 799,21	16 469,38	9 909,73	**69 178,30**	130 821,70
	SUB-TOTAL		**40 999,98**	**57 401,75**	**45 390,88**	**24 833,49**	**168 626,10**	**921 373,90**
2	Policy de-risking	GCF	36 713,06	40 280,89	133 001,09	32 230,47	**242 225,51**	**847 774,49**
	SUB-TOTAL		**36 713,06**	**40 280,89**	**133 001,09**	**32 230,47**	**242 225,51**	**1 899 970,09**
3	Financial de-risking	GCF	176 713,00	132 008,64	605 565,09	332 673,28	**1 246 960,01**	2 173 039,99
		GOV	355 885,36	545 686,26	6 558,77	0,00	**908 130,39**	0,00
		UNDP/30084	0,00	9 915,48	0,00	0,00	**9 915,48**	0,00
	SUB-TOTAL		**532 598,36**	**687 610,38**	**612 123,86**	**332 673,28**	**2 165 005,88**	**2 173 039,99**
4	Financial incentives	GCF	0,00	0,00	0,00	0,00	**0,00**	**14 000 000,00**
	SUB-TOTAL		**0,00**	**0,00**	**0,00**	**0,00**	**0,00**	**16 173 039,99**
5	Project management	GCF	30 653,32	62 722,87	40 764,17	20 143,97	**154 284,33**	645 715,67
		UNDP/04000	0,00	22 880,44	18 982,69	9 963,18	**51 826,31**	168 173,69
	SUB-TOTAL		**30 653,32**	**85 603,31**	**59 746,86**	**30 107,15**	**206 110,64**	**813 889,36**
	TOTAL	**GCF**	**244 079,38**	**290 614,94**	**808 251,85**	**399 971,48**	**1 742 917,65**	**18 257 082,35**
	TOTAL	**UNDP/04000**	**40 999,98**	**24 679,65**	**35 452,07**	**19 872,91**	**121 004,61**	**298 995,39**
		UNDP/30084	**0,00**	**9 915,48**	**0,00**	**0,00**	**9 915,48**	**0,00**
	TOTAL	**GOV**	**355 885,36**	**545 686,26**	**6 558,77**	**0,00**	**908 130,39**	**0,00**
	Dep. Exp. Owned - ITC (Act. 5)	**GCF**	**28,16**	**450,46**	**675,74**	**3 998,16**	**5 152,52**	**0,00**
	Dep. Exp. Owned - Vehicle (Act. 1)	**GCF**	**0,00**	**1 506,94**	**2 583,33**	**1 722,24**	**5 812,51**	**0,00**
	PROJECT TOTAL		**640 992,88**	**872 853,73**	**853 521,76**	**425 564,79**	**2 792 933,16**	**18 556 077,74**

GCF provided its financing in two tranches: the first tranche of 729 000 USD was received on September 11, 2017, the second tranche of 1 608 000 USD was received on May 6, 2019. The total GCF funding provided as of September 2020 is 2 337 000 USD.

[17] Project preparatory phase.

Project expenditures charged to the GCF budget reached 1 742 918 USD, which is 8.7% of the total GCF budget (11% in Component 1, 27% in Component 2, 36% in Component 3, 0% in Component 4, and 19% in Project Management).

Financial management, including planning, reporting, and controls, is performed with due care and it is transparent. No fund allocations and budget reviews have been implemented.

Co-financing is shown in Table 7: Financial Planning Co-financing on the following page.

Table 7: Financial Planning Co-financing

Co-financing (Type/Source)	UNDP own Financing (mill US$)		Government (mill US$)		Other Sources (mill US$)		Total Financing (mill US$)		Total Disbursement (mill US$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Grants *Revised*	0.420 0.420	0.131 0.131	0 *24.311*	0.908	0 *14.471*		0.420 *39.202*	1.039	0.420 *39.202*	1.039
Credits *Revised*					94.250 *49.503*		94.250 *49.503*		94.250 *49.503*	
In-kind support			0.400	tbd			0.400		0.400	
Other	1.000	tbd					1.000		1.000	
Total *Revised*	1.420 1.420	0.131 0.131	0.400 *24.711*	0.908	94,250 *63.974*		96.070 *90.105*	1.039	96.070 *90.105*	1.039

Original co-financing planned in the Project Document included:

- UNDP cash: 420,000 USD
- UNDP parallel: 1,000,000 USD
- Yerevan cash: 8,000,000 USD
- Government (in-kind): 400,000 USD
- EIB (cash): 86,250,000 USD

Total co-financing of the Project was designed to be 96,070,000 USD.

After the sovereign EIB loan was not signed by the Government, new sources of co-financing were identified. The total value of confirmed and intended co-financing is 66.177 mln USD, of which for investment is 64.357 mln USD as per Refocus Analysis, Schedule 2, July 10, 2020. The planned co-financing combined with the GCF investment component grant of 14 mln USD fully covers the revised volume of total investment is 78.357 mln USD as per the Refocus Analysis of July 2020.

Summary of financing for the retrofit investment as identified in the Refocus Analysis illustrates Table 8. UNDP and governmental (MNP) project co-financing, which was not planned for investment, remains unchanged and it is not shown in the Table 8 Financing for Investment.

Table 8: Summary of Financing for Investment as per Refocus Analysis

Source	Amount in USD	Status
Co-financing for investment		
Municipality of Yerevan	8,000,000	Signed, in disbursement
State Subvention Program	20,983,200	In disbursement, estimated amount
Communities/Municipalities	5,245,800	In disbursement, estimated amount
Private equity/debt	3,128,000	In disbursement with KfW/NMC preferential loans, estimated amount
EIB sub-sovereign loans	27,000,000[18]	7.7 mln USD EIB credit line signed and in disbursement (without E5P grant) Remaining required 19.3 mln USD of 20.9 mln USD EIB intended, subject to feasibility analysis
Total co-financing for investment	**64.357.000**	
GCF grant for investment	14,000,000	

[18] Exchange of 1.1 USD/EUR was used, although in January 2021 the exchange rate is higher.

Total financing for investment	**78.357.000**	
Total investment for retrofits	78.357.000	

Table 3 of the Refocus Analysis and the corresponding amount of co-financing in the Table 8 above indicate required volume of co-financing to cover the estimated investment for energy efficiency building retrofits, but not necessarily the whole volume of identified co-financing.

Table 9 summarizes updated review of identified co-financing for investment per source of financing.

Table 9: Confirmed and Intended Co-Financing for Investment

Source of co-financing	**Amount in USD**	**Status**	**Probability**
Municipality of Yerevan	8 mln	Confirmed, signed on 22/7/2015	Confirmed, signed, in disbursement
EIB loan Yerevan Energy Efficiency in Public Buildings (kindergartens)	7.7 mln	Confirmed, signed on 01/12/2017 (7 mln EUR)	Confirmed, signed, in disbursement
EU - E5P grant Yerevan Energy Efficiency in Public Buildings (kindergartens)	5.5 mln	Confirmed and signed (5 mln EUR – up to 10 mln EUR grant)	Confirmed, signed, in disbursement
EIB loan Yerevan Energy Efficiency in Public Buildings (kindergartens) extension	13.2 mln[19]	Intended, subject to EIB feasibility study. 12 mln EUR as of January 2021 (formerly planned 7 mln EUR)	Intended, interest declared by both sides, subject to feasibility
EU – E5P grant Yerevan Energy Efficiency in Public Buildings (kindergartens) extension	6.6 mln	Intended 6 mln EUR To be combined with EIB loan for kindergartens	Intended, linked with the EIB loan
EIB loan Armenia Energy Efficiency in Public Buildings (universities)	13.2 mln	Intended, subject to EIB feasibility study (12 mln EUR)	Intended, interest declared by both sides, subject to feasibility
EU – E5P (Eastern Europe Energy Efficiency and Environment Partnership) grant Armenia Energy Efficiency in Public Buildings (universities)	5.5 mln	Intended (5 mln EUR) To be combined with EIB loan for universities.	Intended, linked with the EIB loan

[19] The amount of the intended second phase of the EIB loan for the Municipality of Yerevan has increased from EUR 7 mln to EUR 12 mln as of January 2021.

KfW/NMC - commercial banks	Estimated 6 mln USD in 2020 for EE. 3 mln USD disbursed for EE by mid 2020.	Confirmed and signed in December 2019 with the Central Bank (20 mln EUR Housing Finance Phase V preferential credit line, primarily designed for mortgages, newly eligible also for EE retrofits). No cap on share of EE financing, subject to demand. Compare with 3.128 mln USD private equity/debt in the Refocus Analysis	In disbursement, KfW credit line signed, amount estimated
AFD/NMC 2020 (French Development Agency)	7.7 mln	Intended, inception phase, subject to feasibility analysis (7 mln EUR)	Intended, subject to feasibility analysis
State Subvention Programme	21 mln USD estimated by EOP Estimated annual financing of 7 mln USD for EE retrofits over 3 years by EOP.	In disbursement, confirmed on an annual basis, newly extended to EE, expected to continue. 6.89 mln USD confirmed for EE financing in 2020, of which 1.14 mln USD disbursement started in 2020, and 5.75 mln USD scheduled for 2021.	In disbursement, amount estimated
EU Annual Action Programme in 2019	4 mln USD for EE in buildings (total 9 mln EUR)	Confirmed for 2019	Confirmed for 2019
Communities/ municipalities	5.246	In disbursement, ad hoc.	In disbursement, amount estimated

Note: Probability is highlighted in green for confirmed co-financing, in blue for co-financing in disbursement where the total amount cannot be confirmed and is estimated, and in yellow for intended co-financing, subject to feasibility analysis and final agreement.

The State Subvention Programme selected 110 buildings for energy efficiency retrofits in 2020 and agreed for financing of 6.89 mln USD from the State Subvention Programme. 32 buildings are in the construction phase, 78 buildings were postponed and transferred for 2021 financing (54 tenders failed due to lack of bidders, 24 buildings postponed due to climatic conditions). The total budget of the State Subvention Program was 1.62 bln AMD (3.4 mln USD) in 2018, 12.95 bln AMD (26.9 mln USD) in 2019, 10 bln AMD (21 mln USD) in 2020, and 7 bln AMD (13.3 mln USD) in 2021.

Total confirmed co-financing (including co-financing in disbursement) for energy efficiency building retrofits is 57.4 mln USD[20], of which 32.2 mln USD is estimated amount (total amount by EOP cannot be confirmed). Total intended co-financing is 46.2 mln USD. Combined confirmed and intended co-financing is 103.6 mln USD.

With the GCF investment grant, confirmed financing is 71.4 mln USD, and combined confirmed and intended financing is 117.6 mln USD. The revised total investment as per Refocus Analysis is estimated to be 78.4 mln USD. Confirmed financing represents 91% of total investment. Confirmed and intended financing represent 150% of investment in energy efficiency building retrofits.

4.4.4 Coherence in Climate Finance Delivery with Other Multilateral Entities

The need to find new sources of co-financing actually led to increase coherence in climate finance delivery with other multilateral entities, as well as with domestic sources of financing, including governmental and municipal funds. Subject to GCF approval of the Refocus Analysis, the Project will utilize partnership with and co-financing of the National Mortgage Company and its program financed by the KfW, new program of Municipality of Yerevan funded by the sub-sovereign loan of EIB, and the State Subvention Program.

Since the actual investment to building energy efficiency retrofits is still at the very early phase, the contribution to the paradigm shift objective – shift to low emission sustainable development pathway is limited.

4.4.5 Project-Level Monitoring and Evaluation Systems

The Project utilizes standard UNDP and GCF monitoring, evaluation and reporting systems and tools, including quarterly and annual Standard Progress Reports, Annual Performance Reports, CDRs, Technical Reviews, ATLAS risk log, UNDP gender marker, and others.

The project performance is regularly monitored by UNDP CO executives, including Resident Representative.

Monitoring tools provide appropriate information for evidence-based decisions. Timely delivery of project monitoring reports is essential, as well as regular meetings of the Project Board. Project Board meetings should be organized at least once a year.

Monitoring includes performance and delivery of other project partners, but they are not directly involved in drafting the monitoring reports, which is the responsibility of the Project team.

[20] With estimated 21 mln USD financing from the State Subvention Programme over next 3 years until the planned end of project.

Monitoring and evaluation have its dedicated budget specified in the Project Document with resources that are sufficient to implement project level monitoring and evaluation in a good quality, including interim and final external evaluations, and independent technical reviews.

New logframe indicators (number and m2 of retrofitted buildings) for Output 4 have been proposed in 2018 based on recommendation of the GCF Secretariat to monitor project results in public sector buildings.

UNDP Indicator from the Strategic Plan 2014-2017 under Output IRRF 1.5 “Number of new development partnerships with funding for improved energy efficiency and/or sustainable energy solutions targeting underserved communities/groups and women” has been merged with GCF Indicator “Value of loan financing for building retrofits” under Project Outcome 3 “Access to affordable capital for energy efficiency retrofits provided” to avoid redundancy and also because UNDP Strategic Plan expired in 2018 and the IRRF 1.5 indicator no longer exists in UNDP reporting framework.

4.4.6 Stakeholder Engagement

The Project has developed effective partnerships with stakeholders directly involved in project implementation, as well as with other relevant stakeholders.

Armenia benefited from acceleration of investment in energy efficiency projects over last few years, and significant practical and specific experience has been already developed and gained by various local stakeholders, including R2E2 Fund, some municipalities, few housing associations, commercial banks, other international donors and financial institutions active in the country. The Project provides targeted technical assistance to project partners, but it also benefits from specific experience of these partners as well.

Local and governmental governments have demonstrated their effective support to Project objectives by significant increase of their financial contribution to project implementation – as summarized in the Refocus Analysis.

Participation and especially public awareness is a strong element of this project. Extensive public awareness campaign has been implemented already, and additional more specific activities are planned when developing actual energy efficiency retrofit investment projects.

4.4.7 Social and Environmental Standards (Safeguards)

GCF’s safeguards requirements are met by applying UNDP’s Social and Environmental Standards. The project has completed the UNDP social and environmental screening procedure (SESP). The social and environmental risk category for this project has remained the same: Low. As categorized the project activity on elimination of policy, financial, market and technical barriers to create an enabling environment for investments in energy-efficient building retrofits, include activities that have no risks of adverse social or environmental impacts. Implementation of activities of environmental and social safeguards are presented in Annual Performance Reports. Indicated SESP risks data are regularly updated in the Project Risk Log in Standard Progress Reports.

Measures toward elimination of risk of discrimination against women in relation to access to opportunities and benefits have been implemented since 2018, including involvement of gender expert, development of guidelines and recommendations for data collection and analysis, gender mainstreaming in procurement processes, creating employment opportunities and developing professional capacities etc. However, lack of representation of women in decision making processes is still an issue, which project mitigates by involving women leaders (for instance heads of HOAs). This is a step-by step process, considering strong influence of traditional gender roles in Armenia.

Though construction works have been only particularly implemented so far, the “Risk 2: Retrofit works and failure of structural elements from building retrofits may pose safety risks to communities” was addressed by developing Guideline on Environmental Impact Assessment for the construction companies, requiring insurance from the contractors, including safety measures in Operational Manuals. The risk is relevant considering the increase of the share of MABs among beneficiaries based on project refocusing.

Activities toward mitigation of the “Risk 3: Duty-bearers do not have the capacity to meet their obligations, such as in collecting baseline data for the EMIS and in managing energy efficiency building retrofit financing projects” included both capacity building for establishing MRV, data collection, analysis and legislative reforms to develop building codes, energy auditing, energy certification and labelling for existing buildings. Deficient data, management system and low human capacity and other resources endanger proper MRV system, for which the estimated probability is recommended to be reassessed.

The Project engaged stakeholders through capacity building activities, consultations regarding various components of the project and technical support. However, communication and inclusion of all stakeholders regarding operational manuals of MABs is crucial. Project collaboration with stakeholders should continue considering the needs of vulnerable groups, clear identification of responsibilities of stakeholders and resolving potential conflicts during implementation.

Generation of waste from building reconstructions is addressed by considering environmental waste management protocols for pilot projects and development of a guideline on Environmental Impact Assessment for the construction companies.

Refocus of the project will lead to greater reduction in energy consumption of the building sector and associated GHG emissions, as well as waste generation from building retrofits.

4.4.8 Reporting

Adaptive management has been consulted with key Project Board members, and formalized in the Refocus Analysis report. The Refocus Analysis has been submitted to GCF for approval. It was not formally submitted to the Project Board yet, since it is planned to be organized after the GCF decision.

Reporting to GCF is of a good quality. Submitted APRs have been accepted by GCF.

Adaptive management included discussions with existing project stakeholders (government, municipalities, State Subvention Program) as well as with potential new project stakeholders (commercial banks, NMC, KfW, …). Proposed changes are documented and summarized in the Refocus Analysis. However, they were not yet implemented, since the approval of GCF is pending.

APR reports to GCF are submitted in due time. Some internal reporting (Q1/2020 progress report) witnessed delays. There have been found some discrepancy in evaluation of progress in APR vis-à-vis relevant quarterly reports. (Such as cumulative progress reported at 50% in APR, versus status of activities planned for 2019 is "completed", despite the budget was only partially utilized. See component 1 for example). Reporting requirements are defined by report templates, and are strictly followed.

4.4.9 Communications

Project communication with key stakeholders is regular, with other stakeholders the communication is organized as needed, and it is in general sufficiently effective. Specific attention require pending activities to be performed by other parties, such as the legislative process regarding the amendment to the Law on Multi Apartment Buildings Management. Communication with R2E2 fund could be strengthened, perhaps also on an informal basis.

External communication via web page, Facebook platform, and outreach and public awareness campaign have been implemented. The new dedicated web page was designed primarily to share project results – achieved savings using the EMIS data after building retrofits. Since these data are not yet available, the web site provides basically just a link to project Facebook pages with new project information.

At the mid-term, the Project, due to delayed implementation, reached GHG emission reductions of 350 tCO_2/year. This is only 0.5% of the EOP target. Thus reporting on project results in terms of contribution to sustainable development and global environmental benefits would be premature. For project progress and achievement summary, please see Chapter 1.5: Concise Summary of Conclusions.

4.4.10 Refocus Analysis[21]

The potential parallel EIB financing of 86.25 mln USD identified in the Funding Proposal has not materialized because the Government of Armenia has not signed the sovereign loan due to high debt-to-GDP ratio. The UNDP-GCF Project Team identified alternative sources of financing and revised the building retrofit investment strategy. The Refocus Analysis was developed in January to April 2020 and submitted to GCF for approval. The Refocus Analysis updated the investment strategy, i.e. the number of buildings per building type to be retrofitted, and sources of financing to be utilized for energy efficiency building retrofits. The GHG emission reduction target has not been changed.

[21] This Chapter has been added in the revision of January 2021 to address questions of the GCF regarding the Refocus Analysis.

The Refocus Analysis used updated assumptions on retrofit costs and GHG savings. In the Funding Proposal, assumptions were based on energy audits of four buildings, in the Refocus Analysis utilized data from already available energy audits of 46 kindergartens, 96 multi-apartment buildings and results from one retrofitted multi-apartment building. Thus, the assumptions used in the Refocus Analysis are considered to be more realistic than those used in the Funding Proposal.

The revised investment strategy as per Refocus Analysis focuses on more cost-effective building retrofits and thus cost-effectiveness of the whole project has increased. With reduced investment, the revised building retrofits have been designed to achieve the same amount of GHG emission savings as per Funding Proposal.

The number of public buildings to be retrofitted increased by 27%, number of MABs to be retrofitted increased by 24%, and number of single-family houses decreased by 97%. It is more cost-effective to implement energy efficiency in public buildings and MABs than in single-family houses. Thus, this cost-effective restructuring of the investment (i.e. of the structure of buildings to be retrofitted) increased efficiency and allows to reach the same GHG emission reduction target with lower investment costs.

The Refocus Analysis identified new sources of co-financing. The Table 3 of the Refocus Analysis summarizes required co-financing per building type for the estimated investment of 78.131 mln USD. Additional information on the full amount of identified co-financing and its status is provided in the text of the Refocus Analysis but it is not summarized in a specific table. The summary is provided for information in Chapter 4.4.3 Finance and Co-Finance of this report.

The newly identified sources of co-financing are either confirmed, financing agreements signed and financing already under disbursement, or planned/intended. Total confirmed co-financing for investment in energy efficiency building retrofits is 57.4 mln USD, and total intended co-financing is 46.2 mln USD. Combined confirmed and intended new external co-financing is 103.6 mln USD. The confirmed co-financing from Municipality of Yerevan, UNDP and Ministry of Nature Protection of 9.82 mln USD as per Funding Proposal, of which 8 mln USD for investment by Municipality of Yerevan, remains unchanged. The revised total investment as per Refocus Analysis, Schedule 2, July 2020 is 78.4 mln USD. The share of confirmed financing for investment on total investment including the GCF investment component and without intended financing is 91%, significantly higher than 64% as of the Funding Proposal.

For more details on newly identified external sources of co-financing see Chapter 4.4.3 and Table 9.

Response to the GCF comment on climate impact calculation:

> Climate impact calculations, i.e. GHG emission reductions, are shown in detail and in fully transparent way in the Project Document, Annex 18, page 204. The Funding Proposal refers to Annex D of the Project Document for the methodology (probably in an earlier version of the Project Document). All calculations in the Annex 18 of the Project Document are fully traceable, with all formulas used in calculation shown in tables as well. Input data are from energy audits of four buildings.

It is not clear what "inclusion of relatively new buildings" as per GCF comments refers to. The project has been designed to retrofit existing buildings that need energy efficiency improvements, not to retrofit new or "relatively new" buildings.

The Refocus Analysis proposed revision of targets based on revised structure of types of buildings to be retrofitted. The costs of building retrofits have been updated, and more buildings with lower costs to GHG savings ratio have been included (buildings with more cost-effective energy efficiency measures). And the number of single-family houses that represent the most costly GHG savings opportunity was significantly reduced.

As explained in the Refocus Analysis, page 5, the term "New" in Tables S.2, S.3, and Tables 4 and 7 refers to new, adjusted targets as per specific building types, not to new buildings.

4.4.11 GCF Investment Criteria

GCF investment criteria specified in the Funding Proposal in six areas include:

- Impact Potential
- Paradigm shift potential
- Sustainable development potential
- Needs of the recipient
- Country Ownership
- Efficiency and Effectiveness

Mitigation Impact Potential

The Refocus Analysis used updated assumptions on costs of retrofits and GHG emission reductions per typical representative of building type. These updated assumptions are based on results of energy audits of 46 kindergartens and 96 MABs that applied for full refurbishment under the State Subvention Programme in 2020, as well as on monitoring of results of the pilot building in Yerevan that was retrofitted in 2014. Thus, these assumptions are considered to be more realistic than the original ones that were based on energy audits of four buildings. This new information and input data from 142 energy audits and monitoring data from a pilot building were not available during the development phase when the Funding Proposal has been prepared.

The Refocus Analysis did not change the targets of key impact potential indicators of GHG emission savings of 1.39 mln tCO_{2eq} – lifetime, and 69 kt tCO_{2eq} – annual. Expected number of direct and indirect beneficiaries has slightly increased from 210,000 to 225,620. Other relevant indicators have not been changed.

For details on achievements and rating see Chapter 4.3 Progress towards Results

Paradigm Shift Potential

Paradigm shift potential, including potential for scaling up and replication, contribution to the creation of an enabling environment, contribution to regulatory framework and policies, and potential for knowledge and learning, remain unchanged as per Refocus Analysis.

The mid-term target of 100 kt CO_{2eq}/year reduced as stated in the Funding Proposal is wrong, it is higher than the end-of-project target expressed in a lifetime GHG emission reductions. Mid-term targets in components 3 and 4 are about 20% of the end-of-project targets. Thus the mid-term target of GHG emission reductions should be also about 20% of the end-of-project target. 20% of the EOP target is 14 ktCO_{2eq}/year.

For details on achievements see Chapter 4.9 Replication and Scalability and Chapter 4.3 Progress towards Results.

Sustainable Development Potential

Environmental, social and economic co-benefits, including gender-sensitive development impact as defined in the Funding Proposal have not changed as per Refocus Analysis with two exceptions that are proportional to reduced number of retrofitted households. Reduction of energy poverty that will observe 5,000 households as per Funding Proposal will decrease as per Refocus Analysis to 4,000 households. Female headed households impacted by the project will decrease from 6,000 to 4,855 as per Refocus Analysis.

(The GCF key impact potential indicator/core indicator of total number of beneficiaries will increase from 210,200 beneficiaries to 225,620, due to higher number of retrofitted public buildings.)

For details on achievements see Chapter 4.5 Sustainability and Chapter 4.10 Gender Equity.

Needs of the Recipient

The proposed revisions in the Refocus Analysis adequately respond to financial, economic, social and institutional needs as specified in the Funding Proposal.

Country Ownership

The proposed revisions as per the Refocus Analysis have no negative impact on country ownership. Extension of the State Subvention Program to energy efficiency retrofits and actual provision of state financing for building retrofits actually demonstrated strengthened country ownership.

For evaluation of country ownership see Chapter 4.6 Country Ownership.

Existence of a national climate strategy and coherence with existing plans and policies, including NAMAs, NAPAs and NAPs – remains unchanged as per Refocus Analysis.

For evaluation of capacity of accredited entities and executing entities to deliver see Chapter 4.4.1.

For evaluation of engagement with civil society organizations and other relevant stakeholders see Chapter 4.4.6.

Efficiency and Effectiveness

For evaluation of cost-effectiveness and efficiency see Chapter 4.2 Relevance, Effectiveness and Efficiency.

The target of the key performance indicator "Estimated cost per tonne of CO2eq (total investment cost/expected lifetime direct emission reductions)" was enumerated to be 22 USD/tCO2eq in the Funding Proposal. However, it does not include the total investment costs of 114.8 mln USD (as of Funding Proposal) as required by its definition, but confirmed financing including GCF grant of total 29.82 mln USD only (not including the planned 86.25 mln USD EIB loan). Estimated cost per tonne of CO_{2eq} should have been 82.6 USD/tCO2eq according to the definition of this indicator (total investment cost/expected lifetime direct emission reductions, i.e. 114.8 mln USD/1.39 mln tCO_{2eq}).

Co-financing, leveraging, and mobilized long-term investments includes two key performance indicators. Co-financing ratio (total amount of the Fund's investment versus confirmed co-financing) has a target of 2:1 (=2), and leveraging ratio (total amount of the Fund's investment versus expected volume of finance to be leveraged) has target of 1:5 (=0.2). The co-financing and leveraging ratio should be lower than the target as it was defined (the lower value, the higher co-financing). Co-financing ratio is 14:57.4 = 0.24 (significantly lower than 2), and the leveraging ratio is 14:103.6 = 0.135, significantly lower than required 0.2.

Mobilized long-term investments (over a 10-year period after project completion) cannot be evaluated until 10 years after project completion.

Financial viability: average level of grant from GCF and economic and financial rate of return have been specified as key performance indicator for each type of buildings. As of mid-term, these indicators cannot be evaluated since energy savings have not been monitored over a heating season yet.

Application of best practices – specification of energy efficiency measures to be implemented is adequate and measures are affordable, and balances costs and performance.

Key efficiency and effectiveness indicators

Key efficiency and effectiveness indicator has been defined in the Funding Proposal as an Estimated cost per tonne CO_{2eq} (total investment cost/expected lifetime direct emission reductions).

In the Section E.6.5 of the Funding Proposal, for the calculation of costs of GHG emission savings only confirmed financing (including GCF grant) of 29.82 mln USD is used, rather than the total investment needed for buildings energy efficiency retrofits of 114.8 mln USD, as per Project Document. Total lifetime GHG emission reductions are estimated at 1,389,677 tCO2eq. Thus the full cost per tCO_{2eq} should be 82.6 USD/tCO_{2eq}, rather than 22 USD/tCO_{2eq} as indicated in the Funding Proposal, Section E.6.5. Thus also the target of key performance indicator "Estimated cost per tonne CO_{2eq} (total investment cost/expected lifetime direct emission reductions)" should have been 82.6 USD/tCO_{2eq}, rather than 22 USD/tCO_{2eq} as indicated in Section E.6.1, paragraph 163 of the Funding Proposal. The correct target of 82.6 USD/tCO_{2eq} is still within the range of GHG emission reduction costs of 82-3,452 USD/tCO_{2eq} of 7 projects used as a benchmark (with an exception of the Compact Fluorescent Lamps project in Ecuador). As per revised and more cost-effective investment strategy in the Refocus Analysis, the same amount of GHG emission reductions is designed to be reached with lower investment, thus the estimated cost per tonne of CO_{2eq} will be adequately lower as well.

4.5 Sustainability

Risks identified in the Project Document were verified in the Project Inception Report and utilized in the UNDP risk log. These risks and their rating are appropriate.

The main Project risk is associated with financing of energy efficiency retrofits in multi-apartment buildings with high share of vulnerable households.

Additional major risk arose after the velvet revolution in Armenia in 2018 and subsequent change of the Government, when the new government did not sign the EIB sovereign loan of 86 mln USD, due to high debt to GDP ratio.

The Project adopted effective adaptive management and identified new sources of co-financing to replace the originally planned EIB sovereign loan.

4.5.1 Financial Risks to Sustainability

Major financial risk to sustainability is the risk that necessary grant funding to support especially vulnerable households, after the GCF assistance will end, will not be mobilized in a sufficient amount.

The new government fully supports the project objective and actually significantly increased its financial support and made funding from the State Subvention Program eligible for energy efficiency retrofits. Additional budgetary funding is available for support of vulnerable households.

In addition to this, UNDP CO is working towards mobilizing additional financial support with grant components to provide further assistance for vulnerable households in a longer time period as well.

It is worth to say that there is also exceptional solidarity among MAB owners in Armenia. In few MABs that have been already retrofitted, several well-off neighbors financially supported low-income families and paid for them the necessary installment/down-payment for the reconstruction. Although this is not a systematic solution, it is a very effective and nice demonstration of human solidarity.

The impact of the COVID pandemic on the economic performance of the country, personal incomes and public budgets for the next year is not yet known, due to high uncertainties. Although there is a risk of economic decline and budget cuts, the strategy of the Government response will be, according to the Ministry of Environment, to support creation of green jobs and continuous support to energy efficiency, including building retrofits.

After the interim evaluation, in September 2020 the military conflict with Azerbaijan over Nagorno-Karabakh broke out. The truce agreement of November 10, 2020 resulted in political protests in Armenia and increased political instability, which may result in early elections. However, it is premature to assess how, and if this will affect commitment of the Government of Armenia to support energy efficiency retrofits in buildings. Unexpected expenditures related with the conflict will most probably result in additional pressure on public budgets.

The likelihood of some decrease of available own capital for financing energy efficiency retrofits is rated high (with pro-active measures implemented by the Government, the rating would be medium).

The likelihood that debt-financing will not be available in the long-term is rated low.

The likelihood that grant financing to support vulnerable groups when investing in energy efficiency retrofit of their housing is rated medium.

Financial sustainability is rated Moderately Likely[22].

(Note: There is no evidence yet, that the financial conditions and commitment of the Government of Armenia to support energy efficiency retrofits will deteriorate).

4.5.2 Socio-Economic Risks to Sustainability

The risk that the new government will not support the project objectives in the future is low. There are intimations that green jobs and energy efficiency investment will be part of the governmental strategic response in addressing potential economic decline caused due to the COVID pandemic.

The same applies to all interviewed project stakeholders: they all are expecting energy efficiency retrofits in buildings to continue.

There is a risk that the take-off and investment in multi-apartment buildings retrofits will be slow at the beginning, until the new financial scheme utilizing debt-financing and financial support to vulnerable households will be fully demonstrated across the country. However, once good examples will be demonstrated, we estimate that the interest in energy efficiency retrofits of multi-apartment buildings will rise accordingly – subject to availability of targeted financial support to low-income households.

The Project has implemented public awareness campaigns, and it will continue to do so with lessons learned and real results of concrete retrofitted buildings. *Exempla trahunt* – as the Latin proverb says. Experience from other countries suggests that informal spread of the word among community members where first energy efficiency retrofits have been demonstrated is often more effective than professional public awareness campaigns. Thus it is important to roll-out first demonstration projects across the whole country.

Combined socio-economic risks for energy efficiency retrofits of MABs, public buildings and single family houses are rated low to medium. Socio-economic sustainability is rated Moderately Likely.

4.5.3 Institutional Framework and Governance Risks to Sustainability

Adoption of the revised MAB management legislation is pending, although the Government expressed that it is committed to adopt new, more effective legislation. However, there are examples of successful

[22] Four scale rating for sustainability is used as per 2019 UNDP Evaluation Guidelines (Likely, Moderately Likely, Moderately Unlikely, unlikely).

financing and repayment of MAB energy efficiency retrofits already even under the current legislation. The legislative process is rather lengthy, thus the first implemented projects are not expected to benefit from the revised legislation.

The Project will implement its standard mechanism for monitoring accountability, transparency, quality of construction, and will facilitate the share of technical and financial knowledge and lessons learned.

Thus, the institutional framework and governance risks are rated low, and sustainability is rated Likely.

4.5.4 Environmental Risks to Sustainability

Environmental risks associated with energy efficiency retrofits of buildings are low.

Energy efficiency retrofits may have negative impact on the quality of indoor environment when old windows are replace with new air-tight windows without appropriate ventilation – especially in schools, and kitchens. Windows with micro ventilation, and/or specific information on how to use new windows and ventilate rooms need to be provided.

The Project plans to develop Environmental Impact Assessment guidelines for construction companies to be contracted for energy efficiency building retrofits.

Environmental sustainability is rated Likely.

Overall project sustainability is rated Moderately Likely.

4.6 Country Ownership

The country ownership is exceptionally strong. Although there are some delays at the governmental side due to continuous changes in the staffing of governmental agencies after the new Government was installed, the Government demonstrated its full commitment towards project objective and effective ownership by making funding from the State Subvention Program eligible for energy efficiency building retrofits. About 39% of the State Subvention Program funding have been allocated for energy efficiency investment already.

The Project is directly aligned with relevant national development plans and international climate change commitments, including Intended Nationally Determined Contribution (INDC), Third National Communication to the UNFCCC, UNFCCC Technology Needs Assessment, National Program on Renewable Energy and Energy Efficiency, National Energy Efficiency Action Plan, and regulations on “Mandatory consideration of energy efficiency in construction/reconstruction under the state funded activities”.

All relevant governmental agencies and municipalities are directly involved in project consultations. Deputy Minister of Environment representing National Designed Authority is regularly updated on Project implementation progress and challenges, and represents main communication channel with the Government.

The Project is directly aligned with a Sustainable Development Goal (7): Ensure access to affordable, reliable, sustainable, and modern energy for all, UNDAF Outcome 7/Country Programme Outcome 4 (13), CPAP output 4.4 Low carbon and green economy become priority for the Government, supported by relevant regulatory framework and activities, and with GCF Results Management Framework/Performance Measurement Framework indicators, and Accredited Entity indicators.

The Project was designed to develop and implement innovative, country specific financial schemes for large scale investment in energy efficiency building retrofits, and to improve enabling regulatory framework. The core of the Project is focused on developing sustainable local capacities in energy efficiency building retrofit project development, financing, and monitoring, as well as in development and implementation of the enabling regulatory framework. Implementation of this Project is at its very early phase especially in terms of number of buildings retrofitted. Once fully implemented, the gained experience will strengthen long-term sustainability.

4.7 Innovativeness in Results Area

This Project is truly innovative especially in its part focused on utilization of debt-financing for energy efficiency retrofits of multi-apartment buildings in a country where residential stock was fully privatized, but housing associations are rather weak due to historical experience that the responsibility for building maintenance lies with a third-party/state, and where housing associations face additional challenge of high share of energy poverty of low-income households. This Project was designed to mobilize large scale debt-financing for financing and implementation of energy efficiency retrofits in hundreds of buildings, including MABs, and it is probably the first project of this kind being implemented in the region of the former ex-Soviet countries. The Project also mobilized external and domestic sources of financing for this type of energy efficiency retrofits.

Experience from this Project and lessons learned will thus be disseminated across the country, but should be shared also with other countries in the region.

4.8 Unexpected Results

The main unexpected challenge the Project faced was the fact that the major planned source of co-financing (86 mln USD sovereign loan from EIB) did not materialize, due to the fact that the Government was not in a position to guarantee additional external loan.

In response to it, the Project managed to mobilize additional new sources of co-financing from both external and domestic sources, including the EIB sub-sovereign loan, public funds from the State Subvention Program and communities, and private equity and debt financing. This was also supported by installation of the new Government after the velvet revolution in 2018, which declared energy efficiency one of their top priorities. As a result, country ownership has been strengthened.

The need to refocus the Project resulted in implementation delays. These delays were even prolonged due to slow response from GCF in some cases, and frequent changes in staffing of governmental agencies. Thus, full completion of the Project within next three years, as planned, is at risk.

4.9 Replication and Scalability

As discussed above, this project – once implemented – will serve as a source of experience and lessons learned for other countries in the region. Its design is perfectly suited for replication and scalability both within the country and abroad. Hands-on experience of local stakeholders with financing and implementation of energy efficiency building retrofits and their strengthened capacity gained during project implementation is by definition sustainable and suitable for replication. Availability of grant component and especially subsidies for low-income households are critical for full roll-out of debt-financing and potential replication and scalability.

Long project preparatory phase (three years) increases the risk that the domestic (economic/fiscal) situation will not evolve as planned, which actually had a negative impact on availability of planned external co-financing in this case. The Project preparatory phase should be shortened, and GCF processes more time-efficient.

4.10 Gender Equity

Gender equality considerations are incorporated into the Project design and FAA, they are based on conducted gender assessment, and reflected in the approved project-level gender action plan for creating opportunities for gender mainstreaming in capacity building, financing and employment.

Gender mainstreaming is well considered also at the level of the logical framework totaling three outputs and 5 indicators (Indicators for Output 1.2. Knowledge management and MRV information disseminated are related to gender issues: (i) Number of men and women users of project website; and (ii) Number of women's group involved; Indicator for Output 3.1 Technical assistance provided to banks and other financial institutions: (i) Number of men and women professionals trained on appraising investments and developing energy efficiency projects; Indicators for Output 4.1 Targeted financial incentives provided to vulnerable groups to help address the affordability gap: (i) Number of female-headed households who received funding (ii) Number of beneficiaries (disaggregated by sex and age) in the female-headed households).

Number of direct beneficiaries mentioned in FAA and project document targets 6,000 women-headed households from 30,000 people living in single-family individual buildings and 52,200 in multi-family apartment buildings; and at least 90,000 women (70%) from 23,000 users of large public buildings and 105,000 users of small public buildings. According to Refocus analysis the expected number of beneficiaries is estimated to rise to 225,000, but estimations regarding sex of beneficiaries is not targeted.

During the project period forms, summary tables and guidance[23] were developed for regular collecting of sex-disaggregated data, gender-indicator data collection, assessment and reporting in line with the

[23] "Summary Table of Personnel by Gender" for the package of required bidding and reporting documents for the Project sub-contractors' completion; "Recommendations and Guidance related to the gender-indicator collection, assessment and reporting in line with the Project's components"; The methodology for gender specific data collection and targeted actions in beneficiary communities and selection of type of public and residential buildings; "Table on Beneficiaries" and "Table for Meeting participants" template etc.

Project's components. Financial resources were allocated since 2019, for which the budget was 7,100 USD.

To ensure gender balanced employment in accordance with the Gender Action Plan employment opportunities were created for women by elaborating and partly including gender-oriented requirements in the bidding and reporting documents in connection with the Project. The Project team also liaised with the Ministry of Labor and Social Affairs (MLSA) and construction companies for data collection and support. In 2019, among 21 companies contacted for conducting energy efficiency retrofit activities the share of employed women was 43.1%, compared to it, in 2018 the share of employed women was 20%. Six media companies, contracted by the Project in 2019, reported 34 employed persons, of which 20 or 58.8% were women.

The results of activities towards "Ensure users' outreach, information campaign, and development of communication and dissemination strategy includes women" objective (in accordance with the Gender Action Plan) indicated 20% women participation in organized professional trainings in 2018 and around 30% in 2019. Taking into account the low capacities of partner ministries, local administrations, companies and NGO's in addressing gender issues it is worth to mention that the Project organized in 2019 training workshop on "Introduction to Methodology and Tools for Gender Analysis and Planning in Climate Change area at the national, sectorial and project levels" for Project stakeholders. Nevertheless, the information regarding participants for any event is being analyzed manually, as attendance sheets do not include a separate column to monitor gender of participants.

More than 73% of staff in 2 public buildings retrofitted by the Project in 2018 are women, and 69.2% of children that benefitted from the Project are girls. Project factsheets and infographics, and pilot projects' information has been disseminated among around 1,100 direct beneficiaries of which 68.7% are women. The Project has collected sex-disaggregated data from the energy efficiency retrofits in 5 MABs in Sisian community. In total, 427 residents benefitted from the Project, of which 290 (or 67.9%) are females. Based on the Gender equality case study, key conclusions in elaborated Operational Manual for public buildings indicated 50% threshold of women occupants as an eligibility criterion for each investment project/building. Although in Operational Manual for MABs retrofits key indicators include number of individual beneficiaries by gender, it is recommended to collect information also by male/female-headed household indicator, as indicated in the FAA and project documentation. It is also recommended to include gender considerations in the "Monitoring and Reporting" part based on Gender Assessment recommendations.

The results of the objective of Output 2 "Active women participation in developing new energy efficiency building codes and standards, and in developing energy efficiency projects" for 2019 is 15% women participation in official meetings (10% in 2018). No results are indicated for two remaining outputs of Gender Action plan.

In conducted "Social Vulnerability Assessment of Population: Main Approaches, Criteria and System of Indicators. 2018" the criteria for selecting the beneficiary-families for the financial assistance under the Component 4, and sources for collecting data are determined, but those criteria are neither sex-disaggregated nor applicable especially for women. During interviews with financial institutions, it was noted the possibility of consideration of gender issues, also sex-disaggregated data collection etc.

Share of women among project staff is 28.1%, while in Project Board only the Co-Chair is a woman, which compile 12.5% of all members.

5. Conclusions, Lessons Learned and Recommendations

5.1 Conclusions

The “De-Risking and Scaling-up Investment in Energy Efficiency Building Retrofits” project is very complex, challenging and truly innovative. It addresses main development priorities of Armenia, as well as the challenges that prevented large-scale utilization of private and debt-financing in energy efficiency retrofitting of public and residential buildings, and especially of multi-apartment buildings.

Timing for implementation of this type of project was properly selected. There exists already sufficient experience in the country with technical demonstration of energy efficiency building retrofits especially in public sector financed with grant scheme. Domestic financial sector is already sufficiently developed and started recently providing targeted energy efficiency loans also to commercial, public and residential sectors, although not to multi-apartment buildings. Policy and legislative framework has been developed, although not yet fully effective and not fully implemented.

The six-year 116 mln USD project was designed with 20 mln USD GCF grant support, and 86.25 mln USD debt co-financing from EIB.

The whole Project implementation was put at risk, when the new Government reconsidered and refrained from signing the 86 mln USD sovereign loan with EIB, due to fiscal constraints – high debt to GDP ratio.

The Project team implemented effective adaptive management and managed to identify alternative domestic and external sources of financing in a total volume of 56.357 mln USD (65% of originally planned co-financing from the EIB sovereign loan to the Government). Additional co-financing is under negotiation. Due to lower amount of co-financing, the Project team refocused on more cost-effective, but more challenging energy efficiency retrofits in multi-apartment buildings and reduced the number of less cost-effective energy efficiency retrofits in single family houses without compromising the overall Project target of direct GHG emission reductions of 1.39 $MtCO_2$ over a 20-year lifetime.

The velvet revolution in April – May 2018, installation of a transitional Government, parliamentary elections and subsequent establishment of a new Government in 2019 caused significant delays in Governmental decision making. Project implementation was delayed by pending Governmental decisions, adoption of amendment to the Law on MAB management is delayed, the Project team was delayed with submission of Project deliverables (Operational Manuals for residential buildings) needed for GCF approval of the third installment, GCF approval of the submitted Refocus Analysis is pending.

As of mid-term, only two public buildings have been retrofitted and commissioned in Yerevan, and five multi-apartment buildings in Sisian community.

Upon the intervention of the Project team, the State Subvention Program that supports regions except for Yerevan, included energy efficiency eligibility criteria and made its funding available also for energy efficiency retrofits of buildings in regions. In early 2020, tenders have been organized and retrofit contracts signed, and few dozens of retrofit projects are under development. The COVID pandemic and economic uncertainty negatively impacted capacity and availability of some construction companies and their readiness to sign binding contracts for building retrofits.

Due to the above mentioned factors, the Project faces significant risk that it will not be technically feasible to implement such a large amount of energy efficiency building retrofits within remaining three years until the planned end of project (monitoring and evaluation of GHG emission savings requires at least one full winter season, construction requires at least one full summer season, project development, tendering and contracting is also a lengthy process, the capacity of construction companies is limited and it is not expected that all buildings could be retrofitted within one year).

As of mid-term, the Project achieved GHG emission savings of 350 tCO2/year, which is 0.5% of the EOP target.

Despite existing delays, there still is a good chance that end-of-projects targets can be reached, although project extension will be probably needed.

Interim Evaluation ratings and achievements are summarized in Table 10.

Table 10: Interim Evaluation Ratings and Achievement Summary

Measure	Interim Evaluation Rating[24]	Achievement Description
Project Strategy	HS	The Project strategy addressed key development priorities and challenges in the country. It is based on comprehensive understanding of the local development context. The timing of this type of project is highly appropriate.
Progress Towards Results		
Objective: Scale-up investment in EE building retrofits, reduce risks, mobilize private finance and reduce energy poverty	MU[25]	Despite the need to find alternative sources of financing and subsequent delay in project delivery, the Project has delivered significant results critical for project objective achievement, although not yet fully materialized due to delayed investment. Alternative sources of co-financing from both international and domestic sources have been identified and project design has been refocused to include more cost-effective energy efficiency opportunities that will allow to reach original GHG emission targets with reduced newly identified co-financing. Two public buildings and five multi-apartment buildings have been reconstructed with the support of the Project. Several dozens of sub-projects with EIB financing, and 32 building retrofits have been launched for implementation. More intensive delivery and EE reconstruction of buildings is pending for the GCF approval of the Refocus Analysis and Operational Manuals with revised financial schemes and approval of the next financial tranche. Due to delayed investment in energy

[24] Revised rating as per mid-term achievements replaced the original rating as per expected achievement of EOP targets as per TOR. Note that the rating reflects achievement of mid-term targets as specified in the LogFrame in the Project Document.
[25] Project logframe does not specify project objective targets.

		efficiency building retrofits, reaching EOP targets within three remaining years is at risk. Achievement of EOP is feasible, but it will probably require project extension.
Outcome 1: MRV and knowledge management	MS	MRV methodology developed and tested, full implementation of EMIS pending until large-scale roll-out of building retrofits after GCF approval of the Refocus Analysis and release of the next installment. Capacity building and knowledge management (awareness rising) implemented. EOP targets can be reached.
Outcome 2: Policy De-Risking	MS	Key legislation on improvement of effectiveness of housing associations (amendment to the Law on MAB Management) developed and agreed with UDC, as well as building passports/energy performance certificates, and MAB maintenance rules. Final approval of the legislation by the Government is pending. An amendment of the Governmental Decree ensured eligibility of MAB energy efficiency retrofits for funding from the State Subvention Program. Due to lengthy legislative process, only energy efficiency retrofits implemented close to the planned EOP will be able to fully benefit from the amendment of the Law on MAB management. EOP targets can be reached.
Outcome 3: Financial De-Risking	MS	Technical assistance to municipalities and home owners' associations/project developers, and to financial institutions provided. Access to affordable financing available, including both commercial loans, EIB sub-sovereign loan, and State Subvention Program, although not yet on the planned scale – pending approval of the GCF Refocus Analysis and disbursement of funds for investment component of the Project. EE retrofits of all planned buildings at risk to be fully implemented within three years. Feasible to achieve EOP targets with project extension.
Outcome 4: Financial Incentives	HU	No financial incentives for vulnerable groups/low-income households have been provided so far. GCF approval of disbursement of the funds under Component 4 is critical. There is a good prospect to utilize financial incentives once the GCF third tranche will be released. EOP targets can be reached - subject to availability of GCF funding for EE retrofits.
Project Implementation & Adaptive Management	MS	The Project implemented effective adaptive management and was able to identify alternative sources of external and domestic financing to offset the originally planned co-financing from the sovereign EIB loan that was not signed by the new Government due to high debt to GDP ratio. Project implementation is significantly delayed, due to external factors, Governmental changes, pending approval of the revised legislation on MAB management, delayed submission of deliverables for the next installment, and pending GCF decision on Refocus Analysis.
Sustainability	ML	The Project has been designed to be highly sustainable. A risk to sustainability is a potential lack of financial incentives to support vulnerable groups in sufficient amount also in the long-term. UNDP CO works with other donors to mobilize additional financing including grant components to support vulnerable groups in the long-term. The latest EU financing assistance framework to the Government of Armenia includes funds for energy efficiency investments in building sector.

Ratings scale used (as per ToR and 2019 UNDP Evaluation Guidelines):
Six point scale: HS – Highly Satisfactory, S – Satisfactory, MS – Moderately Satisfactory, MU – Moderately Unsatisfactory, U – Unsatisfactory, HU – Highly Unsatisfactory
Sustainability rating - 4 point scale: L – Likely, ML - Moderately Likely, MU - Moderately Unlikely, U – Unlikely

5.2 Lessons Learned

1. *Not all identified sources of co-financing can provide binding commitment on co-financing*

The State Subvention Programme is funded annually from the state budget, and it has its special line in the state budget. Thus, it is not possible to obtain a binding commitment on the amount of funding in the future. The state budget is prepared and approved annually[26].

Banks cannot provide binding confirmation of loan/debt co-financing until the financing opportunity is evaluated and terms of financial agreement is agreed with and signed by the client/borrower. Provision of loans is a core business of banks, thus they are motivated to offer loans as long as the associated risks are acceptable for the bank. Borrowers from public sector (government, municipalities) are subject to specific financial restrictions that specify maximum debt to GDP/municipal budget ratio. (And similarly banks have their limits in retail banking for debt service to income ratio). GDP and municipal budget depend to a large degree on external factors independent on the will of the Government or municipality. Thus, there may be cases when the financial restrictions would not allow to sign a loan agreement despite the interest of both sides. Thus, binding commitment on loan co-financing cannot be issued until the loan contract between bank and the borrower is signed. Similarly even in case of a signed credit line agreement, the actual disbursement and provision of loans depends on the interest of borrowers, and thus commitment can mean that the volume of a credit line has been made available, rather than the full amount will be lent.

Confirmation from a municipality on long-term co-financing is often more expression of intent rather than a binding commitment that could be effectively enforced, since municipal budgets are being prepared and approved annually as well.

Relatively easiest it is to provide binding commitment for grant financing by the donor.

2. *Delayed approval of the disbursement of the GCF investment grant postpones building retrofits*

Availability of the GCF investment grant is critical for investors in building retrofits and ability of UNDP to make a binding agreement with investors on time-bound co-financing. Without the available GCF co-financing in place, investors (municipalities and apartment/building owners) are reluctant to sign in for actual building retrofits.

The actual situation in countries like Armenia is developing rather quickly. Thus, a six-year project needs to be implemented in a flexible way, i.e. allow for efficient adjustments that would reflect changes in actual country-specific situation and support reaching the project key targets/objectives of GHG emission reductions in energy efficiency building retrofits. On the other hand, GCF has to be assured that its grant will be used in an efficient way and that the project will reach the planned targets.

[26] The total budget of the State Subvention Program was 1.62 bln AMD (3.4 mln USD) in 2018, 12.95 bln AMD (26.9 mln USD) in 2019, 10 bln AMD (21 mln USD) in 2020, and 7 bln AMD (13.3 mln USD) in 2021.

The process of project implementation strategy revision and approval needs to be more flexible and time-effective.

3. *GCF investment component funding for pilot projects could accelerate project implementation*

Full roll-out of building retrofits benefits from experience gained in early implemented pilot projects. This is especially the case of MABs, where financing arrangements are very complex, involving lots of stakeholders/apartment owners. Provision of GCF investment funding for pilot projects separately and independently from the funding for the large-scale implementation of building retrofits could have accelerated overall project implementation without excessively increasing risks for GCF investment even in case when full co-financing has not yet been secured.

5.3 Recommendations

UNDP/Government:

1. *Facilitate adoption of amendment to the Law on MAB Management without further delays*

   There is typically a rather lengthy period between approval of a legislation by the Government, subsequent approval by a Parliament, and effective date when new/amended legislation comes into force. The draft amendment of the Law prepared by the Project addresses the main problems housing associations face when financing MAB reconstruction. Without the amendment effectively in force, delivery of energy efficiency retrofit investment in MABs will be at risk. The project can take on a pro-active role and actively support the Committee of Urban Development.

UNDP:

2. *Accelerate pending activities/outputs*

   a. *Publish MRV/EMIS data from retrofitted buildings at the new web platform*

      MRV data from retrofitted buildings are available in the project fact sheets, however, they are not easily accessible at the dedicated project web site. Regularly upload available data to keep the web page updated.

   b. *Analyze critical path and accelerate all activities on the critical path*

3. *Strengthen project-level monitoring*

   a. *Organize meetings of the Project Board at least once a year*

Organize Project Board meetings regularly at least once a year. To avoid any delays due to changes of the Government representation in the Project Board, advocate for and facilitate nomination of their deputies.

b. *Update logframe targets and specify indicators and targets where missing*

Specify project objective indicator and target, and targets for Outputs 1.2, 3.1, and 4.1 which were not specified for all relevant output indicators in the Project Document. Incorporate indicator of Total number of buildings retrofitted and square area in m^2 as per GCF recommendations for each building type – public, MAB, SFH. Revise the logframe and have it approved by the Project Board. Consider necessity of using the SDG indicator of "Energy intensity measured in terms of primary energy and GDP" and the indicator "M5.0 Strengthened institutional and regulatory systems", or avoid them.

c. *Align activity targets achievements in APRs and Quarterly Progress Reports*

In some cases, there is a difference in achievement rating in APRs (cumulative achievement of project activities) and Quarterly Progress Reports (achievement as per AWP activities) and achievement of relevant outcome and output target as per logframe. See for example APR 2019 rating for activities within Output 1.1 and 1.2 – cumulative rating 20-70%, and rating in quarterly report Q4 2019, where outputs 1.1 and 1.2 are rated as "completed" – but this refers to activities planned as per AWP 2019, rather than for logframe output level targets.

4. *Use required criterion of women share as a priority for selection of investment level projects/buildings*

This GCF gender criterion is intended rather for the whole program or portfolio of individual investment-level projects (energy efficiency retrofits of individual buildings). If applied for each individual building, investment level projects/buildings where women do not dominate would be excluded from reconstruction. Instead, use this criterion as a *preference* for selection of an individual building for retrofit, and for evaluation of the whole portfolio of sub-projects.

5. *Evaluate the feasibility of meeting the planned end-of-project targets in three years*

Evaluate capacity of construction companies to deliver all planned energy efficiency building retrofits, and estimate achievable time-bound targets. If necessary, consider request for appropriate extension. However, this should not hamper timely implementation of all other activities.

GCF:

6. *Minimize the delays in internal process and responses*

The response time from the GCF is often extensive which leads to additional delays in project implementation – such as for the approval of the Refocus Analysis.

7. *Approve GCF projects with confirmed co-financing*

   In this case, the intended EIB co-financing of 86.250 mln USD did not materialize, which lead to the need to find alternative sources of co-financing, refocus the Project, and to subsequent delays in Project implementation. Binding agreement on co-financing required for GCF project approval would eliminate this risk.

GCF/UNDP:

8. *Consider revision of the FAA to reflect revised investment strategy, targets, and co-financing as per Refocus Analysis*

9. *Agree on the scope, structure and content of the GCF-financed UNDP-supported projects' interim evaluation reports before actual interim evaluations are performed.*

5.4 Corrective Actions for the Design, Implementation, Monitoring and Evaluation of the Project

The Project team developed corrective actions for design and implementation of the Project – see Refocus Analysis submitted to be GCF for approval for details.

Corrective actions on Project monitoring and evaluation are included in Recommendation 2: Strengthen project-level monitoring:

a) Organize meetings of the Project Board at least once a year
b) Update logframe targets, where missing, incorporate additional indicators following the Refocus analysis
c) Align activity targets achievements in APRs and Quarterly Progress Reports

5.5 Actions to Follow Up or Reinforce Initial Benefits from the Project

Actions to reinforce initially planned project benefits are described in the Refocus Analysis. They include identification of alternative sources of co-financing, and more balanced focus on all types of buildings. (Increased number of: MABs to be retrofitted from 290 to 359, and public buildings from 173 to 220. And decreased number of single-family houses to be retrofitted from 6000 to 200).

5.6 Proposals for Future Directions Underlining Main Objectives

The Project strategy specified in the Project Document with adjustments proposed in the Refocus Analysis represent adequate trajectory of actions to meet the Project objective.

6. Annexes

6.1 Interim Evaluation ToR

United Nations Development Programme

Job Title:	International Consultant for Interim Evaluation of the UNDP-supported GCF-financed project
Project title:	De-risking and Scaling-up Investment in Energy Efficient Building Retrofits
Contract Modality:	Individual Contract (IC)
Duration:	5 weeks (22 consultancy days)
Start date	01 September 2020
Duty station:	Yerevan, Armenia (home based)

Interim Evaluation Terms of Reference for UNDP-supported GCF-financed project

1. INTRODUCTION

This is the Terms of Reference (ToR) for the Interim Evaluation of the UNDP-supported GCF-financed project titled *"De-risking and Scaling-up Investment in Energy Efficient Building Retrofits"* (PIMS#5684) implemented through the *United Nations Development Programme (UNDP)*, which is to be undertaken in *2020*. The project started on the *6/30/2017* and is in its *3rd* year of implementation. This ToR sets out the expectations for this Interim Evaluation.*The ToR considers COVID-19 country context, situation and details of impact on project implementation.*

2. PROJECT BACKGROUND INFORMATION

Objective and Brief Description: The Project objective is to use an integrated suite of interventions to systematically decarbonise the existing building stock to realise both energy savings and sustainable development benefits. The project will create a favourable market environment and scalable business model for investment in energy efficiency retrofits, leading to sizeable energy savings and accompanying GHG emission reductions (directly, 1.4 million tCO2 over the 20-year lifetime of the investments; including additional indirect savings, a total of between 4.2-4.4 tCO2eq). It will also catalyse additional private and public sector financing of approximately US$ 100 million.
The project has four components as indicated below:
Component 1: Establishment of Building Sector MRV: Provision of technical assistance to establish and implement energy measurement, reporting and verification (MRV) systems for the building sector for various categories of buildings.
Component 2: Policy de-risking: Provision of technical assistance to: (i) national, sub-national and local authorities to adopt and implement an enabling policy framework for EE retrofits using UNDP's framework to support policy-makers in selecting public instruments to promote renewable energy investment; (ii)support on-going legislative reform; and (iii) building owners, associations and energy service companies on legal matters related to energy efficiency.
Component 3: Financial de-risking: Provision of technical assistance to banks, financial institutions and local banks in developing and implementing financial instruments to finance EE retrofits in private and public owned buildings.
Component 4: Financial Incentives: Provision of financial incentives (ex-post capital grants) to low-income households and public building administrators to invest in EE retrofits.

Location: Republic of Armenia

Project Duration: 6 years, 2017-2023

Total Budget: USD 116,070,0001, including GCF grant USD 20,000,000; UNDP (cash) USD 420,000; UNDP (parallel) USD 1,000,000; Government (Ministry of Environment) USD 400,000; Yerevan Municipality USD 8,000,000; EIB 86,250,000.

Partners: Project is implemented by UNDP under coordination of the Ministry of Environment of the Republic of Armenia (RA). The main beneficiary of the Project is the Yerevan Municipality.

Funds: The Project is funded by the GCF and co-financed by the Government of the RA and UNDP.

Citing the necessity to contain the further spread of a potentially deadly COVID-19, the RA Government declared a state of emergency on 16 March 2020, introducing a range of limitations for Armenian citizens and prohibiting entry into the country for foreigners. The emergency situation will last until at least *12 August 2020* with travel restrictions (more details are available here: https://www.gov.am/en/covid-travel-restrictions/).

In regards to the GCF funded Project, the impact of the COVID-19 is as follows:

1. Project has planned trainings, workshops and events as well as awareness raising events, which are either postponed or shifted to online mode. All the site visits, as well as in person meetings and round tables with financial institutions, construction/ESCO companies and other stakeholders planned for this period are cancelled, the ones linked to the upcoming construction activities are at risk. As currently the project is mainly dealing with technical revisions of documents submitted by construction companies and communities and field works are not active, the movement restrictions are manageable. The existing and well established online solutions allow partial mitigation of the negative effects of the halted activities, and the substantial part of the non-field related works is ensured by virtual communication through emails, zoom, skype, WebEx meetings.

2. Because of the travel restrictions the Project is undergoing planned Independent Technical Review (as per the FAA condition) using online platforms to conduct interviews with stakeholders, partners and

beneficiaries. This remote modality is decreasing efficiency and increasing time needed to complete the review, however, it is considered the only way for now.

3. According to official data the construction activities during quarter 1-2, 2020 contracted by 51% compared to the previous year's same month. At the same time the government is considering capital investments in infrastructure as the main driver of the post covid recovery and is planning to allocate substantial budgetary contributions to the construction sector, which is expected to create favorable conditions for the Project implementation.

3. There is no impact on the Co-financing commitments, although disbursement schedules for co-financing may be re-adjusted in line with the impacted schedule for implementation of the Funded Activities due to COVID-19. Securing of co-financing by the MAB households and private sector may potentially be impacted due to the ovarall worsening of socio-economic conditions.

3. OBJECTIVES OF THE INTERIM EVALUATION

The Interim Evaluation will assess progress towards the achievement of the project objectives and outcomes as specified in the Project Document, and assess early signs of project success or failure with the goal of identifying the necessary changes to be made in order to set the project on-track to achieve its intended results. The Interim Evaluation will also review the project's strategy and its risks to sustainability.

The project is impacted by COVID-19 and the impact may also have to be taken into account in the Interim Evaluation.

The Interim Evaluation team will assess implementation of the project and its alignment with Funded Activity Agreement (FAA) obligations and progress towards the achievement of the project objectives and outcomes as specified in the Project Document. The Interim Evaluation will also assess the following:

- Implementation and adaptive management
- Risks to sustainability
- Relevance, effectiveness and efficiency of the project;
- Coherence in climate finance delivery with other multilateral entities;
- Gender equity;
- Country ownership of projects and programmes;
- Innovativeness in results areas (extent to which interventions may lead to paradigm shift towards low-emission and climate resilient development pathways);
- Replication and scalability – the extent to which the activities can be scaled up in other locations within the country or replicated in other countries (this criterion, which is considered in document GCF/B.05/03 in the context of measuring performance could also be incorporated in independent evaluation); and
- Unexpected results, both positive and negative.
- Risks arising from the current COVID-19 pandemic and impact on the project may also need to be considered in the evaluation.

4. INTERIM EVALUATION APPROACH & METHODOLOGY

The methodology will combine quantitative and qualitative approaches. The Evaluator will collect hard data from the desk review process and verify them with soft data from interviews. The Evaluation will be based on the findings and factual statements identified from review of relevant documents and interviews. Due to emergency situation in Armenia and travel restrictions during COVID-19 pandemic, in country mission will be replaced with virtual interviews with stakeholders, including the target beneficiaries, government officials (both at the national and municipal levels). Participation of stakeholders in the Evaluation should be maintained at all the times, reflecting opinions, expectations and vision about the contribution of the project towards the achievement of its objectives. Additionally, National Consultant will be recruited in support to the International Consultant. In the time of COVID-19 pandemic, the National Consultant will support with certain field visits, e.g. visit the retrofitted buildings.

Data Collection Methods[27]:

Desk Review

The Evaluator will review the following documents before conducting any interviews: project documentation, progress reports, work plans, mission reports, monitoring data, workshop reports, UNDP's data etc.

The Interim Evaluation team must provide evidence-based information that is credible, reliable and useful.

The Interim Evaluation team will review all relevant sources of information including documents prepared during the preparation phase (i.e. baseline Funding proposal submitted to the GCF, the Project Document, project reports including Annual Performance Reports, Quarterly Progress Reports, UNDP Environmental & Social Safeguard Policy, project budget revisions, records of surveys conducted, national strategic and legal documents, stakeholder maps, and any other materials that the team considers useful for this evidence-based review).

Interview with project stakeholders and beneficiaries

The Interim Evaluation team is expected to follow a collaborative and participatory approach[28] ensuring close engagement with the Project Team, Implementing Partner, NDA focal point, government counterparts, the UNDP Country Office, Regional Technical Advisers, and other principal stakeholders and beneficiaries.

The review team will conduct interviews with key project stakeholders as identified in the UNDP-GCF Project Document.

Engagement of stakeholders is vital to a successful Interim Evaluation. Stakeholder involvement should include (where possible) surveys/questionnaires, focus groups, interviews with stakeholders who have project responsibilities, including but not limited to executing agencies, senior officials and task team/component leaders, key experts and consultants in the subject area, Project Steering Committee, project stakeholders, local government, CSOs, project beneficiaries, etc. Additionally, the Interim Evaluation team is expected to conduct online interviews and meetings with stakeholders via virtual communication tools, eg. Zoom. And the National Consultant is expected to conduct field missions to project sites in retrofitted public and residential buildings in Armenia, exact locations to be decided in consultation with the project team. Data collection will be used to validate evidence of results and assessments (including but not limited to: assessment of Theory of Change, activities delivery, and results/changes occurred).

The final Interim Evaluation report should describe the full evaluation approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the review. The final report must also describe any limitations encountered by the Interim Evaluation team during the evaluation process, including limitations of the methodology, data collection methods, and any potential influence of limitation on how findings may be interpreted, and conclusions drawn. Limitations include, among others: language barriers, inaccessible project sites, issues with access to data or verification of data sources, issues with availability of interviewees, methodological

[27] All data collected and analysed should be sex-disaggregated.

[28] For ideas on innovative and participatory Monitoring and Evaluation strategies and techniques, see UNDP Discussion Paper: Innovations in Monitoring & Evaluating Results, 05 Nov 2013.

limitations to collecting more extensive or more representative qualitative or quantitative evaluation data, deviations from planned data collection and analysis set out in the ToR and Inception Report, etc. Efforts made to mitigate the limitations should also be included in the Interim Evaluation report.

As of 11 March 2020, The World Health Organization (WHO) declared COVID-19 a global pandemic as the new coronavirus rapidly spread to all regions of the world. From 16 March 2020, Armenian Government announced the emergency situation and travel in the country is also restricted.

5. DETAILED SCOPE OF THE INTERIM EVALUATION

The Interim Evaluation team will assess the following four categories of project progress.

i. Project Strategy

<u>Project design</u>:

- Review the problem addressed by the project and the underlying assumptions. Review the effect of any incorrect assumptions or changes to the context to achieving the project results as outlined in the Project Document.
- Review the relevance of the project strategy and assess whether it provides the most effective route towards expected/intended results. Were lessons from other relevant projects properly incorporated into the project design?
- Review how the project addresses country priorities. Review country ownership. Was the project concept in line with the national sector development priorities and plans of the country (or of participating countries in the case of multi-country projects)?
- Review decision-making processes: were perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process, taken into account during project design processes?
- Review the extent to which relevant gender issues were raised in the project design. See Annex 9 of *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects* for further guidelines.
- If there are major areas of concern, recommend areas for improvement.

<u>Results Framework/Logframe</u>:

- Undertake a critical analysis of the project's logframe indicators and targets, assess how "SMART" the midterm and end-of-project targets are (Specific, Measurable, Attainable, Relevant, Time-bound), and suggest specific amendments/revisions to the targets and indicators as necessary.
- Are the project's objectives and outcomes or components clear, practical, and feasible within its time frame?
- Examine if progress so far has led to, or could in the future catalyse beneficial development effects (i.e. income generation, gender equality and women's empowerment, improved governance, etc.) that should be included in the project results framework and monitored on an annual basis.
- Ensure broader development and gender aspects of the project are being monitored effectively. Develop and recommend SMART 'development' indicators, including sex-disaggregated indicators and indicators that capture development benefits.

ii. Relevance, Effectiveness and Efficiency

- Was the context, problem, needs and priorities well analysed and reviewed during project initiation?
- Are the planned project objectives and outcomes relevant and realistic to the situation on the ground?

- Is the project Theory of Change (ToC) and intervention logic coherent and realistic? Does the ToC and intervention logic hold or does it need to be adjusted?
- Do outputs link to intended outcomes which link to broader paradigm shift objectives of the project?
- Are the planned inputs and strategies identified realistic, appropriate and adequate to achieve the results? Were they sequenced sufficiently to efficiently deliver the expected results?
- Are the outputs being achieved in a timely manner? Is this achievement supportive of the ToC and pathways identified?
- What and how much progress has been made towards achieving the overall outputs and outcomes of the project (including contributing factors and constraints)?
- To what extent is the project able to demonstrate changes against the baseline (assessment in approved Funding Proposal) for the GCF investment criteria (including contributing factors and constraints)?
- How realistic are the risks and assumptions of the project?
- How did the project deal with issues and risks in implementation?
- To what extent did the project's M&E data and mechanism(s) contribute to achieving project results?
- Have project resources been utilized in the most economical, effective and equitable ways possible (considering value for money; absorption rate; commitments versus disbursements and projected commitments; co-financing; etc.)?
- Are the project's governance mechanisms functioning efficiently?
- To what extent did the design of the project help or hinder achieving its own goals?
- Were there clear objectives, ToC and strategy? How were these used in performance management and progress reporting?
- Were there clear baselines indicators and/or benchmark for performance measurements? How were these used in project management? To what extent and how the project applies adaptive management?
- What, if any, alternative strategies would have been more effective in achieving the project objectives?

iii. Progress Towards Results

<u>Progress Towards Outcomes and Outputs Analysis</u>:

- Review the logframe indicators against progress made towards the end-of-project targets using the Progress Towards Results Matrix and colour code progress in a "traffic light system" based on the level of progress achieved; assign a rating on progress for each outcome; make recommendations from the areas marked as "Not on target to be achieved" (red).

Table. Progress Towards Results Matrix (Achievement of outcomes against End-of-project Targets)

Project Strategy	Indicator[29]	Baseline Level[30]	Level in 1st PIR (self-reported)	Midterm Target[31]	End-of-project Target	Midterm Level & Assessment[32]	Achievement Rating[33]	Justification for Rating
Fund Level Impact:	Indicator:							
Outcome 1:	Indicator:							
	Indicator:							
Output	Indicator:							
Output	Indicator:							
Outcome 2:	Indicator:							
	Indicator:							

[29] Populate with data from the Logframe and scorecards
[30] Populate with data from the Project Document
[31] If available
[32] Colour code this column only
[33] Use the 6 point Progress Towards Results Rating Scale: HS, S, MS, MU, U, HU

Output	Indicator:							
Output	Indicator:							
Etc.								

Indicator Assessment Key

Green= Achieved	Yellow= On target to be achieved	Red= Not on target to be achieved

In addition to the progress towards outcomes and outputs analysis:

- Identify remaining barriers to achieving the project objective in the remainder of the project.
- By reviewing the aspects of the project that have already been successful, identify ways in which the project can further expand these benefits.
- Review risks arising from the current COVID-19 pandemic and impact on the project implementation

iv. Project Implementation and Adaptive Management

Management Arrangements:

- Review overall effectiveness of project management as outlined in the Project Document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement.
- Review the quality of execution of the Executing Agency/Implementing Partner(s) and recommend areas for improvement.
- Review the quality of support provided by UNDP and recommend areas for improvement.

Work Planning:

- Review any delays in project start-up and implementation, identify the causes and examine if they have been resolved.
- Are work-planning processes results-based? If not, suggest ways to re-orientate work planning to focus on results?
- Examine the use of the project's results framework/ logframe as a management tool and review any changes made to it since project start.

Finance and co-finance:

- Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions.
- Review the changes to fund allocations as a result of budget revisions and assess the appropriateness and relevance of such revisions.
- Does the project have the appropriate financial controls, including reporting and planning, that allow management to make informed decisions regarding the budget and allow for timely flow of funds?
- Informed by the co-financing monitoring table to be filled out, provide commentary on co-financing: is co-financing being used strategically to help the objectives of the project? Is the Project Team meeting with all co-financing partners regularly in order to align financing priorities and annual work plans?
- Assess factors that contributed to low/high expenditure rate

Coherence in climate finance delivery with other multilateral entities

- Who are the partners of the project and how strategic are they in terms of capacities and commitment?

- Is there coherence and complementarity by the project with other actors for local other climate change interventions?
- To what extent has the project complimented other on-going local level initiatives (by stakeholders, donors, governments) on climate change adaptation or mitigation efforts?
- How has the project contributed to achieving stronger and more coherent integration of shift to low emission sustainable development pathways and/or increased climate resilient sustainable development (GCF RMF/PMF Paradigm Shift objectives)? Please provide concrete examples and make specific suggestions on how to enhance these roles going forward.

Project-level Monitoring and Evaluation Systems:

- Review the monitoring tools currently being used: Do they provide the necessary information? Do they involve key partners? Are they aligned or mainstreamed with national systems? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required? How could they be made more participatory and inclusive?
- Examine the financial management of the project monitoring and evaluation budget. Are sufficient resources being allocated to monitoring and evaluation? Are these resources being allocated effectively?

Stakeholder Engagement:

- Project management: Has the project developed and leveraged the necessary and appropriate partnerships with direct and tangential stakeholders?
- Participation and country-driven processes: Do local and national government stakeholders support the objectives of the project? Do they continue to have an active role in project decision-making that supports efficient and effective project implementation?
- Participation and public awareness: To what extent has stakeholder involvement and public awareness contributed to the progress towards achievement of project objectives?

Social and Environmental Standards (Safeguards)

- Validate the risks identified in the project's most current SESP/ESIA, and those risks' ratings; are any revisions needed?
- Summarize and assess the revisions made since Board Approval (if any) to:
  - The project's overall safeguards risk categorization.
  - The identified types of risks 34 (in the SESP).
  - The individual risk ratings (in the SESP).

- Describe and assess progress made in the implementation of the project's social and environmental management measures as outlined in the SESP submitted at the Funding Proposal stage (and prepared during implementation, if any), including any revisions to those measures. Such management measures might include Environmental and Social Management Plans (ESMPs) or other management plans, though can also include aspects of a project's design; refer to Question 6 in the SESP template for a summary of the identified management measures.

A given project should be assessed against the version of UNDP's safeguards policy that was in effect at the time of the project's approval.

[34] Risks are to be labeled with both the UNDP SES Principles and Standards, and the GEF's "types of risks and potential impacts": Climate Change and Disaster; Disadvantaged or Vulnerable Individuals or Groups; Disability Inclusion; Adverse Gender-Related impact, including Gender-based Violence and Sexual Exploitation; Biodiversity Conservation and the Sustainable Management of Living Natural Resources; Restrictions on Land Use and Involuntary Resettlement; Indigenous Peoples; Cultural Heritage; Resource Efficiency and Pollution Prevention; Labor and Working Conditions; Community Health, Safety and Security.

Reporting:

- Assess how adaptive management changes have been reported by the project management and shared with the Project Board.
- Assess how well the Project Team and partners undertake and fulfil GCF reporting requirements (i.e. how have they addressed poorly-rated APRs, if applicable?)
- Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.
- Assess the efficiency, timeliness, and adequacy of reporting requirements.

Communications:

- Review internal project communication with stakeholders: Is communication regular and effective? Are there key stakeholders left out of communication? Are there feedback mechanisms when communication is received? Does this communication with stakeholders contribute to their awareness of project outcomes and activities and investment in the sustainability of project results?
- Review external project communication: Are proper means of communication established or being established to express the project progress and intended impact to the public (is there a web presence, for example? Or did the project implement appropriate outreach and public awareness campaigns?)
- For reporting purposes, write one half-page paragraph that summarizes the project's progress towards results in terms of contribution to sustainable development benefits, as well as global environmental benefits.

v. Sustainability

- Validate whether the risks identified in the Project Document, APRs and the ATLAS Risk Management Module are the most important and whether the risk ratings applied are appropriate and up to date. If not, explain why.
- In addition, assess the following risks to sustainability:

Financial risks to sustainability:

- What is the likelihood of financial and economic resources not being available once the GCF assistance ends (consider potential resources can be from multiple sources, such as the public and private sectors, income generating activities, and other funding that will be adequate financial resources for sustaining project's outcomes)?

Socio-economic risks to sustainability:

- Are there any social or political risks that may jeopardize sustainability of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project? Are lessons learned being documented by the Project Team on a continual basis and shared/ transferred to appropriate parties who could learn from the project and potentially replicate and/or scale it in the future?

Institutional Framework and Governance risks to sustainability:

- Do the legal frameworks, policies, governance structures and processes pose risks that may jeopardize sustenance of project benefits? While assessing this parameter, also consider if the required systems/ mechanisms for accountability, transparency, and technical knowledge transfer are in place.

Environmental risks to sustainability:

- Are there any environmental risks that may jeopardize sustenance of project outcomes?

vi. Country Ownership

- To what extent is the project aligned with national development plans, national plans of action on climate change, or sub-national policy as well as projects and priorities of the national partners?
- How well is country ownership reflected in the project governance, coordination and consultation mechanisms or other consultations?
- To what extent are country level systems for project management or M&E utilized in the project?
- What level and types of involvement for all Is the project as implemented responsive to local challenges and relevant/appropriate/strategic in relation to SDG indicators, National indicators, GCF RMF/PMF indicators, AE indicators, or other goals?
- Were the modes of deliveries of the outputs appropriate to build essential/necessary capacities, promote national ownership and ensure sustainability of the result achieved?

vii. Gender equity

- Does the project only rely on sex-disaggregated data per population statistics?
- Are financial resources/project activities explicitly allocated to enable women to benefit from project interventions?
- Does the project account in activities and planning for local gender dynamics and how project interventions affect women as beneficiaries?
- Do women as beneficiaries know their rights and/or benefits from project activities/interventions?
- How do the results for women compare to those for men?
- Is the decision-making process transparent and inclusive of both women and men?
- To what extent are female stakeholders or beneficiaries satisfied with the project gender equality results?
- Did the project sufficiently address cross cutting issues including gender?
- How does the project incorporate gender in its governance or staffing?

viii. Innovativeness in results areas

- What role has the project played in the provision of "thought leadership," "innovation," or "unlocked additional climate finance" for climate change adaptation/mitigation in the project and country context? Please provide concrete examples and make specific suggestions on how to enhance these roles going forward.

ix. Unexpected results, both positive and negative

- What has been the project's ability to adapt and evolve based on continuous lessons learned and the changing development landscape? Please account for factors both within the AE/EE and external.
- Can any unintended or unexpected positive or negative effects be observed as a consequence of the project's interventions?
- What factors have contributed to the unintended outcomes, outputs, activities, results?

x. Replication and Scalability

- What are project lessons learned, failures/lost opportunities to date? What might have been done better or differently?
- How effective were the exit strategies and approaches to phase out assistance provided by the project including contributing factors and constraints?
- What factors of the project achievements are contingent on specific local context or enabling environment factors?
- Are the actions and results from project interventions likely to be sustained, ideally through ownership by the local partners and stakeholders?
- What are the key factors that will require attention in order to improve prospects of sustainability, scalability or replication of project outcomes/outputs/results?

Conclusions & Recommendations

The Interim Evaluation team will include a section of the report setting out the evaluation's evidence-based conclusions, in light of the findings. Explain whether the project will be able to achieve planned development objective and outcomes by the end of implementation.

Recommendations should be succinct suggestions for critical intervention that are specific, measurable, achievable, and relevant. A recommendation table should be put in the report's executive summary.

The Interim Evaluation team should make no more than 15 recommendations total.

Ratings

The Interim Evaluation team will include its ratings of the project's results and brief descriptions of the associated achievements in an *Interim Evaluation Ratings and Achievement Summary Table* in the Executive Summary of the Interim Evaluation report. See Annex E for ratings scales. No rating on Project Strategy and no overall project rating is required.

Table. Interim Evaluation Ratings & Achievement Summary Table for (*"De-risking and Scaling-up Investment in Energy Efficient Building Retrofits"*)

Measure	Interim Evaluation Rating	Achievement Description
Project Strategy	N/A	
Progress Towards Results	Objective Achievement Rating: (rate 6 pt. scale)	
	Outcome 1 Achievement Rating: (rate 6 pt. scale)	
	Outcome 2 Achievement Rating: (rate 6 pt. scale)	
	Outcome 3 Achievement Rating: (rate 6 pt. scale)	

	Etc.	
Project Implementation & Adaptive Management	(rate 6 pt. scale)	
Sustainability	(rate 4 pt. scale)	

6. TIMEFRAME

The total duration of the Interim Evaluation will be approximately *(22)* working days over a time period of *(5)* **weeks**, and shall not exceed five months from when the consultant(s) are hired. The tentative Interim Evaluation timeframe is as follows:

ACTIVITY	NUMBER OF WORKING DAYS	COMPLETION DATE
Document review and preparing Interim Evaluation Inception Report	*3*	*03 September 2020*
Interim Evaluation virtual meetings and interviews with stakeholders.	*10*	*17 September 2020*
Presentation of initial findings- last day of the Interim Evaluation at the end of the virtual interviews/meetings period	*1*	*18 September 2020*
Preparing draft report (due within 3 weeks of the presentation of initial findings)	*5*	*25 September 2020*
Finalization of Interim Evaluation report/ Incorporating audit trail from feedback on draft report (due within 1 week of receiving UNDP comments on the draft)	*3*	*30 September 2020*

Options for site visits should be provided in the Inception Report.

7. MIDTERM REVIEW DELIVERABLES

#	Deliverable	Description	Timing	Responsibilities
1	**Interim Evaluation Inception Report**	Interim Evaluation team clarifies objectives and methods of the evaluation	No later than 2 weeks before the virtual mission	Interim Evaluation team submits to the Commissioning Unit and project management
2	**Presentation**	Initial Findings	End of virtual interviews/meetings	Interim Evaluation Team presents to project management and the Commissioning Unit
3	**Draft Interim Evaluation Report**	Full report (using guidelines on content outlined in Annex B) with annexes	Within 2 weeks of the virtual mission	Sent to the Commissioning Unit, reviewed by RTA, Project Coordinating Unit, NDA focal point
4	**Final Interim Evaluation Report***	Revised report with audit trail detailing how all received comments have (and have not) been addressed in the final report	Within 1 week of receiving UNDP comments on draft	Sent to the Commissioning Unit

*The final Interim Evaluation report must be in English. If applicable, the Commissioning Unit may choose to arrange for a translation of the report into a language more widely shared by national stakeholders.

8. INTERIM EVALUATION ARRANGEMENTS

The principal responsibility for managing this Interim Evaluation resides with the Commissioning Unit. The Commissioning Unit for this project's Interim Evaluation is the UNDP Country Office.

The Project Team will be responsible for liaising with the Interim Evaluation team to provide all relevant documents, set up stakeholder interviews.

9. TEAM COMPOSITION

A team of two independent consultants will conduct the Interim Evaluation - one team leader (with experience and exposure to projects and evaluations in other regions globally) and one National Consultant, from the country of the project. The consultants cannot have participated in the project preparation, formulation, and/or implementation (including the writing of the Project Document) and should not have a conflict of interest with project's related activities.

The selection of consultants will be aimed at maximizing the overall "team" qualities in the following areas:

Education

- A Master's degree in (*Economics, Energy, Environment, Climate Change)*, or other closely related field.

Experience

- Recent experience with result-based management evaluation methodologies;
- Experience applying SMART indicators and reconstructing or validating baseline scenarios;
- Competence in adaptive management, as applied to (*Energy Efficiency/Climate Change finance/Energy Efficiency in Buildings*);
- Experience in evaluating projects in similar sector and with similar complexity;
- Experience working in (EIS countries, especially in South Caucasus Regions);
- Work experience in relevant technical areas for at least 10 years;
- Knowledge of and/or experience with UNDP-GCF;
- Demonstrated understanding of issues related to gender and climate change mitigation; experience in gender sensitive evaluation and analysis.
- Excellent communication skills;
- Demonstrable analytical skills;
- Project evaluation/review experiences within United Nations system will be considered an asset;
- Experience with implementing evaluations remotely will be considered an asset.

10. ETHICS

This Interim Evaluation will be conducted in accordance with the principles outlined in the UNEG 'Ethical Guidelines for Evaluation'. The Interim Evaluation team must safeguard the rights and confidentiality of information providers, interviewees and stakeholders through measures to ensure compliance with legal and other relevant codes governing collection of data and reporting on data. The Interim Evaluation team must also ensure security of collected information before and after the Interim Evaluation and protocols to ensure anonymity and confidentiality of sources of information where that is expected. The information, knowledge and data gathered in the Interim Evaluation process must also be solely used for the Interim Evaluation and not for other uses without the express authorization of UNDP and partners.

11. PAYMENT MODALITIES AND SPECIFICATIONS

- 20% payment upon satisfactory delivery of the final Interim Evaluation Inception Report and approval by the Commissioning Unit
- 40% payment upon satisfactory delivery of the draft Interim Evaluation report
- 40% payment upon satisfactory delivery of the final Interim Evaluation report and approval by the Commissioning Unit, Regional Technical Advisor (RTA) and Principal Technical Advisor (PTA) – via signatures on the Interim Evaluation Report Clearance form) and completed Audit Trail

12. APPLICATION PROCESS[35]

Recommended Presentation of Proposal:

a) **CV shall include Education/Qualification, Processional Certification, Employment Records /Experience**
b) **Brief description of approach to work/technical proposal** of why the individual considers him/herself as the most suitable for the assignment, and a proposed methodology on how they will approach and complete the assignment; (max 1 page)

Criteria for Evaluation of Proposal: Only those applications which are responsive and compliant will be evaluated. Offers will be evaluated according to the Combined Scoring method – where the educational background and experience on similar assignments will be weighted at 70% and the price proposal will weigh as 30% of the total scoring. The applicant receiving the Highest Combined Score that has also accepted UNDP's General Terms and Conditions will be awarded the contract.

[35] Engagement of the consultants should be done in line with guidelines for hiring consultants in the POPP: https://info.undp.org/global/popp/Pages/default.aspx

ToR ANNEX A: List of Documents to be reviewed by the Interim Evaluation Team

1. Funding Proposal
2. Funding Activity Agreement
3. GCF Refocusing Note
4. independent Technical Review Report
5. UNDP Project Document
6. UNDP Environmental and Social Screening results
7. Project Inception Report
8. All Annual Performance Reports (APRs)
9. Monitoring and Standard Progress reports
10. Mission reports
11. Financial and Administration guidelines used by Project Team
12. The following documents will also be available:
13. Project operational guidelines, manuals and systems
14. UNDP country/countries programme document(s)
15. Minutes of the Project Board Meetings and other meetings (i.e. Project Appraisal Committee meetings)
16. Project site location maps
17. Evaluation reports, including Independent Country Programme Evaluation and UNDAF evaluation
18. Results Framework Reporting of the UNDP Results Oriented Analysis Report

ToR ANNEX B: Guidelines on Contents for the Interim Evaluation Report[36]

i. Basic Report Information *(for opening page or title page)*
- Title of UNDP-supported GCF-financed project
- UNDP PIMS# and GCF project ID#
- Interim Evaluation time frame and date of report
- Region and countries included in the project
- Executing Agency/Implementing Partner and other project partners
- Interim Evaluation team members
- Acknowledgements

ii. Table of Contents

iii. Acronyms and Abbreviations

1. Executive Summary *(3-5 pages)*
- Project Information Table
- Project Description (brief)
- Project Progress Summary (between 200-500 words)
- Interim Evaluation Ratings & Achievement Summary Table
- Concise summary of conclusions
- Recommendation Summary Table

2. Introduction *(2-3 pages)*
- Purpose of the Interim Evaluation and objectives
- Scope & Methodology: principles of design and execution of the Interim Evaluation, Interim Evaluation approach and data collection methods, limitations
- Structure of the Interim Evaluation report

3. Project Description and Background Context *(3-5 pages)*
- Development context: environmental, socio-economic, institutional, and policy factors relevant to the project objective and scope
- Problems that the project sought to address: threats and barriers targeted
- Project Description and Strategy: objective, outcomes and expected results, description of field sites (if any)

[36] The Report length should not exceed *40* pages in total (not including annexes).

- Project Implementation Arrangements: short description of the Project Board, key implementing partner arrangements, etc.
- Project timing and milestones
- Main stakeholders: summary list

4. Findings *(12-14 pages)*

4.1 Project Strategy
- Project Design
- Results Framework/Logframe

4.2 Relevance

4.3 Effectiveness and Efficiency

4.4 Progress Towards Results
- Progress towards outcomes analysis
- Remaining barriers to achieving the project objective

4.5 Project Implementation and Adaptive Management
- Management Arrangements
- Work planning
- Finance and co-finance
- Coherence in climate finance delivery with other multilateral entities
- Project-level monitoring and evaluation systems
- Stakeholder engagement
- Social and Environmental Standards (Safeguards)
- Reporting
- Communications

4.6 Sustainability
- Financial risks to sustainability
- Socio-economic to sustainability
- Institutional framework and governance risks to sustainability
- Environmental risks to sustainability

4.7 Country Ownership

4.8 Innovativeness in results areas

4.9 Unexpected results, both positive and negative

4.10 Replication and Scalability

4.11 Gender Equity

5. Conclusions and Recommendations *(4-6 pages)*

5.1 Conclusions
- Comprehensive and balanced statements (that are evidence-based and connected to the Interim Evaluation's findings) which highlight the strengths, weaknesses and results of the project

5.2 Recommendations
- Corrective actions for the design, implementation, monitoring and evaluation of the project
- Actions to follow up or reinforce initial benefits from the project
- Proposals for future directions underlining main objectives

6. Annexes
- Interim Evaluation ToR (excluding ToR annexes)
- Interim Evaluation evaluative matrix (evaluation criteria with key questions, indicators, sources of data, and methodology)
- Example Questionnaire or Interview Guide used for data collection
- Ratings Scales
- List of persons interviewed

- List of documents reviewed
- Co-financing table (if not previously included in the body of the report)
- Signed UNEG Code of Conduct form
- Signed Interim Evaluation Report Clearance form
- *Annexed in a separate file:* Audit trail from received comments on draft Interim Evaluation report

ToR ANNEX C: Interim Evaluation Evaluative Matrix Template

This Interim Evaluation Evaluative Matrix must be fully completed/amended by the consultant and included in the Inception Report and as an Annex to the Interim Evaluation report.

Evaluative Questions	Indicators	Sources	Methodology
Project Strategy: To what extent is the project strategy relevant to country priorities, country ownership, and the best route towards expected results?			
(include evaluative question(s))	(i.e. relationships established, level of coherence between project design and implementation approach, specific activities conducted, quality of risk mitigation strategies, etc.)	(i.e. project documents, national policies or strategies, websites, project staff, project partners, data collected throughout the evaluation, etc.)	(i.e. document analysis, data analysis, interviews with project staff, interviews with stakeholders, etc.)
Progress Towards Results: To what extent have the expected outcomes and objectives of the project been achieved thus far?			
Project Implementation and Adaptive Management: Has the project been implemented efficiently, cost-effectively, and been able to adapt to any changing conditions thus far? To what extent are project-level monitoring and evaluation systems, reporting, and project communications supporting the project's implementation? How is the impact of COVID-19 addressed?			

Sustainability: To what extent are there financial, institutional, socio-economic, and/or environmental risks to sustaining long-term project results?			

ToR ANNEX D: UNEG Code of Conduct for Evaluators/Interim Evaluation Consultants[37]

Evaluators/Consultants:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study limitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.
8. Must ensure that independence of judgement is maintained and that evaluation findings and recommendations are independently presented.
9. Must confirm that they have not been involved in designing, executing or advising on the project being evaluated.

Interim Evaluation Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of Consultant: ____

Name of Consultancy Organization (where relevant): ______________________________

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at ______________________________ *(Place)* on ______________________ *(Date)*

Signature: ____________________________

[37] http://www.unevaluation.org/document/detail/100

ToR ANNEX E: Interim Evaluation Ratings

Ratings for Progress Towards Results: (one rating for each outcome and for the objective)		
6	Highly Satisfactory (HS)	The objective/outcome is expected to achieve or exceed all its end-of-project targets, without major shortcomings. The progress towards the objective/outcome can be presented as "good practice".
5	Satisfactory (S)	The objective/outcome is expected to achieve most of its end-of-project targets, with only minor shortcomings.
4	Moderately Satisfactory (MS)	The objective/outcome is expected to achieve most of its end-of-project targets but with significant shortcomings.
3	Moderately Unsatisfactory (HU)	The objective/outcome is expected to achieve its end-of-project targets with major shortcomings.
2	Unsatisfactory (U)	The objective/outcome is expected not to achieve most of its end-of-project targets.
1	Highly Unsatisfactory (HU)	The objective/outcome has failed to achieve its midterm targets, and is not expected to achieve any of its end-of-project targets.

Ratings for Project Implementation & Adaptive Management: (one overall rating)		
6	Highly Satisfactory (HS)	Implementation of all seven components – management arrangements, work planning, finance and co-finance, project-level monitoring and evaluation systems, stakeholder engagement, reporting, and communications – is leading to efficient and effective project implementation and adaptive management. The project can be presented as "good practice".
5	Satisfactory (S)	Implementation of most of the seven components is leading to efficient and effective project implementation and adaptive management except for only few that are subject to remedial action.
4	Moderately Satisfactory (MS)	Implementation of some of the seven components is leading to efficient and effective project implementation and adaptive management, with some components requiring remedial action.
3	Moderately Unsatisfactory (MU)	Implementation of some of the seven components is not leading to efficient and effective project implementation and adaptive, with most components requiring remedial action.
2	Unsatisfactory (U)	Implementation of most of the seven components is not leading to efficient and effective project implementation and adaptive management.
1	Highly Unsatisfactory (HU)	Implementation of none of the seven components is leading to efficient and effective project implementation and adaptive management.

Ratings for Sustainability: (one overall rating)		
4	Likely (L)	Negligible risks to sustainability, with key outcomes on track to be achieved by the project's closure and expected to continue into the foreseeable future
3	Moderately Likely (ML)	Moderate risks, but expectations that at least some outcomes will be sustained due to the progress towards results on outcomes at the Midterm Review

2	Moderately Unlikely (MU)	Significant risk that key outcomes will not carry on after project closure, although some outputs and activities should carry on
1	Unlikely (U)	Severe risks that project outcomes as well as key outputs will not be sustained

ToR ANNEX F: Interim Evaluation Report Clearance Form

(to be completed and signed by the Commissioning Unit, RTA and PTA included in the final report)

Interim Evaluation Report Reviewed and Cleared By:

Commissioning Unit

Name: ____

Signature: ____ Date: ______________________________

Regional Technical Advisor (Nature, Climate and Energy)

Name: ____

Signature: ____ Date: ______________________________

Principal Technical Advisor (Nature, Climate and Energy)

Name: ____

Signature: ____ Date: ______________________________

ToR ANNEX G: Audit Trail Template

Note: The following is a template for the Interim Evaluation Team to show how the received comments on the draft Interim Evaluation report have (or have not) been incorporated into the final report. This audit trail should be listed as an annex in the final report but not attached to the report file.

To the comments received on (*date*) from the Interim Evaluation of (*"De-risking and Scaling-up Investment in Energy Efficient Building Retrofits" UNDP-GCF Project)* (UNDP Project ID-*PIMS #5684)*

The following comments were provided in track changes to the draft Interim Evaluation report; they are referenced by institution ("Author" column) and track change comment number ("#" column):

Author	#	Para No./ comment location	Comment/Feedback on the draft report	Interim Evaluation team response and actions taken

6.2 Interim Evaluation Evaluative Matrix

Evaluative Criteria Questions	Indicators	Sources	Methodology
Project Strategy:			
• To what extent is the project strategy relevant to country priorities, country ownership, and the best route towards expected results? • How was country ownership demonstrated?	• Country targets and priorities • Domestic/governmental co-financing planned/actual	• Document review • Interviews with stakeholders	• Document review • Interviews with stakeholders • Own situation analysis
Progress towards results:			
• To what extent have the expected outcomes and objectives of the project been achieved thus far? • What has the Project delivered so far? What are the achievements – reported, and actual as of mid-term? • How did the project implementation support achievement of the main objectives? • Is the Project in line with local, regional and national priorities? • To what extent have the expected outcomes and objectives of the project been achieved?	• As per Logframe	• APRs, SPRs, project deliverables • Document review • Interviews with stakeholders	• Document review • Interviews with stakeholders • Own situation analysis
Project Implementation and Adaptive Management:			
• Has the project been implemented efficiently, cost-effectively, and been able to adapt to any changing conditions thus far? • To what extent are project-level monitoring and evaluation systems, reporting, and project communications supporting the project's implementation? • How is the impact of COVID-19 addressed? • How did the Project support its partners? • What are the main challenges the Project faced?	• Effectiveness of partnership cooperation • Quality of project level monitoring • Prospects to reach EOP targets • Risk specification and ratings	• APR, SPR, minutes from the PB meetings, project materials/deliverables, Refocus analysis • Document review • Interviews with stakeholders	• Document review and analysis • Interview with stakeholders • Own situation analysis

• How did the Project respond? • Were any changes in project design implemented? • What are the risks and prospects to reach EOP targets? • What are the current and potential impacts of the COVID pandemic on the intended project results?			
Sustainability:			
• To what extent are there financial, institutional, social-economic, and/or environmental risks to sustaining long-term project results?	• Financial risks • Institutional risks • Social-economic risks • Environmental risks	• Interviews with stakeholders	• Interview with stakeholders • Own situation analysis

6.3 Example Questionnaire or Interview Guide Used for Data Collection

Specific lists of questions were developed for each interview. These questions included for example:

- What was your cooperation with the UNDP/GCF project “De-Risking and Scaling-up Investment in Energy Efficiency Building Retrofits”? What specific support did the UNDP/GCF Project provide to your organization?
- What is your experience with project implementation and performance of project partners – what should be strengthened in the next phase? What are the weaknesses?
- Do you expect the revised legislation on MAB to be approved by the government, or are there any constraints?
- Will COVID perhaps change governmental priorities and shift from energy efficiency to other investment priorities?
- How will “Multi-apartment building management rules” and “Building passports” be used? Will they apply to retrofitted buildings supported by the UNDP/GCF Project only, or will they be mandatory for all (multi-apartment) buildings retrofits/all buildings?
- Law on Multi apartment buildings management and Law on condominiums was planned to be amended/updated? Do you know the current status? Do you know when will a new amended/revised version be adopted? Is there any controversial issue?
- What do you expect to be the main challenge of the UNDP/GCF project implementation?
- Was the EIB sovereign loan opportunity fully canceled, or is there any intention of the EIB to follow this opportunity and perhaps to provide sub-sovereign loan later on?
- What main risks did you see in this GCF project?
- What are your activities and experience in energy efficiency lending?
- What is your experience in the retail sector – collection rate, collateral requirements, …?
- What impact do you think the COVID pandemic will have on the Project implementation?
- Is there any specific need for training?
- What energy efficiency measures were implemented?
- What was your experience from cooperation with the Project? What support did you receive?
- What are the main challenges HOA faces?
- Is there any additional need for support from the Project?
- Tenders – what was the response from construction companies?
- What impact will COVID pandemic have on municipal budgets?
- What is your opinion on the Project – design, implementation, main challenges?
- Are there prospects for cooperation? What specifically?
- Prospects for cooperation?
- How big is your condominium, how many buildings, apartments?
- What are main challenges in your HOA?
- What is the structure of owners? Are there empty apartments? How many low-income owners are there that could have difficulties to repay a loan? What was the collection rate, any problems with late payments?
- Have some owners implemented some energy efficiency measures individually before this project?
- How effective was cooperation with the UNDP Project?
- How feasible was the financing scheme?
- What are the main risks? – financial affordability? Others risk? Is there a need to change legislation?

- Do you participate in a policy dialogue?
- What is the potential to attract additional financing for energy efficiency?
- What is the budget of the State Subvention Program? How much of it is dedicated for energy efficiency?
- How did UNDP project support your activities?
- What support does your organization offers for energy efficiency in buildings: Public, MAB, SFH?
- What is the trend in financing provided for energy efficiency retrofits? Any impact of COVID on GDP decrease?
- Was there any impact of the velvet revolution on governmental changes and on the governmental funding available?
- How big is the demand for these energy efficiency retrofits?
- Is there any special financial support for vulnerable/low-income families?
- Major risks in implementing and financing energy efficiency in buildings? What needs to be done to facilitate financing?
- What are the main problems to be solved?
- Do apartment owners pay service and maintenance fee to HOA?
- Can those who cannot pay one-time share on investment pay higher monthly fee instead?
- How energy data are collected when energy is metered individually? In reconstruction contract – access to invoices?

6.4 Ratings Scales

Ratings for Progress Towards Results: (one rating for each outcome and for the objective)		
6	Highly Satisfactory (HS)	The objective/outcome is expected to achieve or exceed all its end-of-project targets, without major shortcomings. The progress towards the objective/outcome can be presented as “good practice”.
5	Satisfactory (S)	The objective/outcome is expected to achieve most of its end-of-project targets, with only minor shortcomings.
4	Moderately Satisfactory (MS)	The objective/outcome is expected to achieve most of its end-of-project targets but with significant shortcomings.
3	Moderately Unsatisfactory (HU)	The objective/outcome is expected to achieve its end-of-project targets with major shortcomings.
2	Unsatisfactory (U)	The objective/outcome is expected not to achieve most of its end-of-project targets.
1	Highly Unsatisfactory (HU)	The objective/outcome has failed to achieve its mid-term targets, and is not expected to achieve any of its end-of-project targets.

Ratings for Project Implementation & Adaptive Management: (one overall rating)		
6	Highly Satisfactory (HS)	Implementation of all seven components – management arrangements, work planning, finance and co-finance, project-level monitoring and evaluation systems, stakeholder engagement, reporting, and communications – is leading to efficient and effective project implementation and adaptive management. The project can be presented as “good practice”.

5	Satisfactory (S)	Implementation of most of the seven components is leading to efficient and effective project implementation and adaptive management except for only few that are subject to remedial action.
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Ratings for Sustainability: (one overall rating)		
4	Likely (L)	Negligible risks to sustainability, with key outcomes on track to be achieved by the project's closure and expected to continue into the foreseeable future
3	Moderately Likely (ML)	Moderate risks, but expectations that at least some outcomes will be sustained due to the progress towards results on outcomes at the Mid-term Review
2	Moderately Unlikely (MU)	Significant risk that key outcomes will not carry on after project closure, although some outputs and activities should carry on
1	Unlikely (U)	Severe risks that project outcomes as well as key outputs will not be sustained

6.5 List of Persons Interviewed

Organization	**Name**	**Position**
Project Team	Mr. Vahram Jalalyan	Project Manager
	Ms. Astghik Mirzakhanyan	Expert on Social Vulnerability Assessment
UNDP Country Office Armenia	Mr. Dmitry Mariyasin	Resident Representative
	Ms. Diana Harutyunyan	Climate Change Programme Coordinator
UNDP Regional HUB, Bangkok	Ms. Milou Beerepoot	Regional Technical advisor
Ministry of Environment	Ms. Irina Ghaplanyan	Deputy Minister, Project National Director
Ministry of Territorial Development and Infrastructure	Ms. Narine Avetyan	Head, Territorial Infrastructure Development
	Mr. Vahagn Atayan	Head, Department of energy efficiency and normatives
Urban Development Committee	Ms. Nune Petrosyan	Deputy Chairperson
Vanadzor municipality/community	Ms. Lilya Davdyan	Head of development programs, external relations and information technology department of Vanadzor Community
R2E2 Fund	Mr. Karen Asatryan	Director
European Investment Bank (EIB)	Ms. Barbora Zemanová	Project Manager
	Mr. Alexander Bakhtamyan	Technical Assistance Specialist (Armenia and Georgia), Public Sector East Division, Lending Operations in Neighboring Countries
National Mortgage Company Refinancing UCO (NMC)	Mr. Edmond Vardumyan	Director
German-Armenian Fund (GAF)	Ms. Gayane Khachatryan	Director

Armswissbank	Mr. Ara Makaryan	Head of Projects Financing Division “Armswissbank” CJSC
ACBA-Credit Agricole Bank	Mr. Suren Hovhannisyan	Head of SME Department, “ACBA-Credit Agricole Bank” CJSC
	Ms. Eliza Hayrapetyan	Head of Retail Business Planning and Management Department, “ACBA-Credit Agricole Bank” CJSC
Condominiums	Ms. Hasmik Ghazaryan	Head of “Gevorg Chaush” Condominium
	Ms. Shushanik Kalantaryan	Head of “Argishti” Condominium
Energy efficiency consulting companies	Mr. Levon Barkhudaryan	“Avenue Consulting” LLC, Expert of the contractor company

6.6 List of Documents Reviewed

19. Funding Proposal
20. Funding Activity Agreement
21. UNDP Project Document
22. GCF Evaluation Policy
23. UNDP Environmental and Social Screening results
24. Refocus Analysis
25. Independent Technical Review Reports
26. Project Inception Report
27. Annual Performance Reports (APRs)
28. Monitoring Action and Quarterly and Annual Standard Progress Reports (SPRs)
29. Mission reports
30. Financial and Administration guidelines used by the Project Team
31. Project operational guidelines, manuals and systems
32. UNDP country/countries programme document(s)
33. Minutes of the Project Board Meetings and LPAC meetings
34. Project site location maps
35. Evaluation reports, including Independent Country Programme Evaluation and UNDAF evaluation
36. Results Framework Reporting of the UNDP Results Oriented Analysis Report
37. Combined Delivery Reports
38. Draft Operational Manuals: Multi-Apartment Buildings: Yerevan, Non-Yerevan MABs in Communities, Single Family Houses, Public Sector Buildings
39. Analytical report on Law on MAB Management and its amendment (in Armenian only)
40. Amendment to Law on MAB Management (in Armenian only)
41. Gender Action Plan and Assessment
42. Exit Strategy - draft

6.7 Co-financing table

The co-financing table is included in the text of the Interim Evaluation Report. See Table 7: Financial Planning Co-financing in the Chapter 4.4.3 Finance and Co-Finance.

6.8 Signed UNEG Code of Conduct Form

Evaluators/Consultants:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study limitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.
8. Must ensure that independence of judgement is maintained and that evaluation findings and recommendations are independently presented.
9. Must confirm that they have not been involved in designing, executing or advising on the project being evaluated.

Evaluation Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System

Name of Consultants: Jiří Zeman, Nune Sakanyan

Name of Consultancy Organization (where relevant): ________________________

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at *Skalany and Yerevan* on September 7, 2020

Signature: ________________________

6.9 Signed Interim Evaluation Report Clearance Form

Interim Evaluation Report Reviewed and Cleared By:

Commissioning Unit

Name: Mihaela Stojkoska

Signature: ______________________ Date: 29 March 2021

Regional Technical Advisor (Nature, Climate and Energy)

Name: Milou Beerepoot

Signature: Milou Beerepoot Date: 29 March 2021

Principal Technical Advisor (Nature, Climate and Energy)

Name: Oliver Waissbein

Signature: Oliver Waissbein Date: 29 March 2021

6.10 Audit Trail from Received Comments on Draft Interim Evaluation Report

Annexed in a separate file.