Validated Terminal Review of the UNEP-GEF Project

“Leapfrogging Chilean’s markets to more efficient refrigerator and freezers” (GEF ID 9496)

2019 – 2022

UNEP Climate Change Division

Validation date: February 2025

Photos Credits:

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

For further information on this report, please contact:

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Leapfrogging Chilean's markets to more efficient refrigerator and freezers
GEF ID 9496
May 2023

ACKNOWLEDGEMENTS

This Terminal Review was prepared for UNEP by Ignacio Simon.

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

The reviewer would like to thank the project team and in particular Mr. Asher Lessels and Ms. Paula Cobas for their contribution and collaboration throughout the review process. Sincere appreciation is also expressed to the Project Steering Committee who took time to provide inputs and comments to the draft report. The reviewer(s) would also like to thank the Ministry of Energy, Ministry of Environment, Superintendence of Electricity and Fuels, Sodimac, Reciclapp, Regener, CESMEC (Bureau Veritas), SILAB and U4E for their availability and the information they provided for this review, as well as to Janet Wildish and Fabio Fisicaro for their guidance and support for the review.

Special acknowledgements to Maya Hirsch and Karien Volker for their continuous support and availability throughout the review process. The reviewer sincerely appreciates and thanks them for their help and time.

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

BRIEF CONSULTANT BIOGRAPHY

Ignacio Simon is an Economist (UdelaR - Uruguay), MSc in Economics (Erasmus University Rotterdam - Netherlands) and MBA (Universidad Torcuato Di Tella - Argentina). He has been working for more than 12 years in development projects at design, implementation, and closing stages in areas such as sustainable energy, climate change, sustainable mobility and cities, for organizations including the Uruguayan Government, UNDP, GIZ, IDB, and UNEP.

As an enthusiast of advancing inclusion, sustainability and innovation through public policies and businesses, the reviewer is thankful for having the opportunity to review this impactful project.

Review team

Review consultant
Ignacio Simon

ABOUT THE REVIEW

Joint Review: No

Report Language(s): English

Review Type: Terminal Review

Brief Description: This report is a Terminal Review of UNEP/GEF Project *Leapfrogging Chilean's markets to more efficient refrigerator and freezers*, implemented between 2018 and 2022. The project's overall development goal was to support Chile to increase the market share of high energy efficiency domestic refrigerators and freezers by focusing on the development of supporting policies, standards and regulations as well as involving domestic consumers through replacement campaigns, educational and awareness-raising actions. The review sought to assess project performance (in terms of relevance, effectiveness, and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The review has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, the GEF and the relevant agencies of the project participating countries.

Key words: Governance; Climate Change; Energy Efficiency, Climate Change Mitigation, MEPS, Energy Efficiency Labelling.

Primary data collection period: November 2022 – January 2023

Field mission dates: 8/JAN/2023 – 14/JAN/2023 to Santiago, Chile.

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LIST OF ACRONYMS

BSP	Bali Strategic Plan
CRSO	Collection and Recycling Services Organization
EE	Energy Efficiency
FCh	Fundación Chile
GEF	Global Environment Facility
GHG	Greenhouse gasses
GWP	Global Warming Potential
HCFC	Hydrochlorofluorocarbons
ICA	International Copper Association
MEPS	Minimum Efficiency Performance Standard
MTR	Mid Term Review
MTS	Medium-term strategy
MVE	Monitoring, Verification and Enforcement
NDRC	Natural Resources Defense Council
PMT	Project Management Team, same as PMU
PMU	Project Management Unit
PoW	Programme of Work
ProDoc	Project Document
PSC	Project Steering Committee
SDG	Sustainable Development Goals
SE4ALL	Sustainable energy for all
SEC	Superintendence of Electricity and Fuels
tCO2	Metric tons of CO2 emissions
tCO2eq	Metric tons of CO2 equivalent emissions
ToC	Theory of Change
ToR	Terms of Reference
TWG	Project Technical Working Group
TWh	Terawatt-hours
U4E	United for Efficiency
UNDP	United Nations Development Program
UNEP	United Nations Environment Programme
WEEE	Waste Electrical and Electronic Equipment

PROJECT IDENTIFICATION TABLE

Table 1. Project Summary

UNEP Sub-programme:	**Climate Change**	**UNEP Division/Branch:**	**Economy Division, Energy Branch**
Expected Accomplishment(s):	(b) Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies	**Programme of Work Output(s):**	(i) Number of countries supported by UNEP that make progress in adopting and/or implementing low greenhouse gas emission development plans, strategies and/or policies (ii) Climate finance invested by countries or institutions for clean energy, energy efficiency and/or amount of decarbonized assets
SDG(s) and indicator(s)	SDG goal 7: Ensure access to affordable, reliable, sustainable, and modern energy for all. Target 7.3: By 2030, double the global rate of improvement in energy efficiency.		
GEF Core Indicator Targets (identify these for projects approved prior to GEF-7)	6. Greenhouse gas emissions mitigated (metric tons of carbon dioxide equivalent) By 2030: Direct: 547,462 tCO2 Direct Post-project: 3,093,088 tCO2 Total: 3,640,551 tCO2 11. Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment No target set		
Dates of previous project phases:	Inception review report: 15/JAN/2023	**Status of future project phases:**	N/A

FROM THE PROJECT'S PIR REPORT (use latest version):

Project Title:	Leapfrogging Chilean's markets to more efficient refrigerator and freezers		
Executing Agency:	Fundación Chile		
Project partners:	United for Efficiency		
Geographical Scope:	Chile		
Participating Countries:	Chile		
GEF project ID:	9496	**IMIS number*[1]:**	
Focal Area(s):	Climate Change Mitigation	**GEF OP #:**	N/A
GEF Strategic Priority/Objective:	CCM-1: Promote Innovation, Technology Transfer, and Supportive Policies and Strategies	**GEF approval date*:**	18 January 2018
UNEP approval date:	25 May 2018	**Date of first disbursement*:**	19 June 2018
Actual start date[2]:	25 May 2018	**Planned duration:**	36 months
Intended completion date*:		**Actual or Expected completion date:**	30 April 2022
Project Type:	MSP	**GEF Allocation*:**	1,473,762
PPG GEF cost*:		**PPG co-financing*:**	N/A
Expected MSP/FSP Co-financing*:		**Total Cost*:**	8,885,313
Mid-term Review/Evaluation (planned date):	N/A[3]	**Terminal Review (planned date):**	7 May 2023
Mid-term Review/Evaluation (actual date):	N/A	**No. of revisions*:**	2
Date of last Steering Committee meeting:	30 June 2022	**Date of last Revision*:**	12/04/2021
Disbursement as of 30 June 2022*:	1,374,106	**Date of planned financial closure*:**	30/05/2023
Date of planned completion[4]*:		**Actual expenditures reported as of 30 June [year][5]:**	USD 1,421,027
Total co-financing realized as of 31 December 2022	USD 4,236,410	**Actual expenditures entered in IMIS as of 31 December [year]*:**	
Leveraged financing:[6]	N/A		

[1] Fields with an * sign (in yellow) should be filled by the Fund Management Officer
[2] Only if different from first disbursement date, e.g., in cases were a long time elapsed between first disbursement and recruitment of project manager.
[3] GEF Policy states that a MTR for a Medium Size Project is only undertaken at the discretion of the Task Manager.
[4] If there was a "Completion Revision" please use the date of the revision.
[5] Information to be provided by Executing Agency/Project Manager
[6] See above note on co-financing

EXECUTIVE SUMMARY

Project background

1. In Chile, the main growth driver for total GHG emissions in the energy sector is the use of coal and natural gas for electricity generation. According to the U4E assessment for Chile, the potential for annual energy savings and GHG emission reduction from application of minimum energy performance standards (MEPS) in line with international benchmarks can account for 5 TWh or 2.4 million tCO2eq for 2030 specifically, or cumulatively by 21.72 million tCO2eq between 2020-2030. Residential refrigerators represent the second largest end-user sub-sector (after lighting) with significant potential for energy saving and GHG emission reduction.
2. The *Leapfrogging Chilean's markets to more efficient refrigerator and freezers* project supported Chile to increase the market share of high energy efficiency domestic refrigerators and freezers by developing supporting policies, standards and regulations for more stringent energy efficiency MEPS and labelling, as well as by involving domestic consumers through replacement campaigns, educational and awareness-raising actions.
3. The project faced two black swan-type events during its execution: in 2019, massive social protests and unrest in Chile deeply changed the operating context to new social norms and expectations. Then, during 2020 the global pandemic paralyzed significant parts of the economy and ruled out social gatherings, again requiring a complete rethink of many of the project's activities. These events prompted the Project Management Unit (PMU) to request an 11-month extension, which was granted.

This Review

4. The review has centred on the project's design, its results and the processes achieving those results, with the goal of promoting learning and improving from this experience for future projects, as well as evaluating this project's execution, particularly in terms of effectiveness for obtaining planned results and the process towards them. Most importantly, the review process strived for including consideration of the validity of these processes in the view of the stakeholders. To achieve this, the reviewer placed special attention in the collection and analysis of information, aiming to highlight the project's achievements while identifying good practices and lessons learned on both the design and execution of the project.
5. The review covers the 2019 – 2022 implementation period of the project.
6. The tools employed were extensive documentation desk reviews, semi-structured online stakeholder interviews, and a field mission to visit to project stakeholder's facilities and implementation sites. During this visit, the reviewer also interviewed key stakeholders for a second time to cross check and triangulate information as it appeared during the information recollection and analysis process.

Key findings

7. The project shows high alignment to UNEP's Medium-Term Strategy (MTS), Programme of Work (POW) and strategic priorities. It is also aligned to GEF strategic priorities and Chile's national priorities. Strategic alignment is a strength that provided strong technical and political support to the project's activities and results.
8. The project's design was rated as highly satisfactory. Highlights include strategic relevance, results and causality, governance and supervision arrangements,

efficiency, and sustainability. From a design perspective, this project has a very high GHG emission mitigation potential per dollar spent through high replication and scale-up potentials, as establishing minimum efficiency standards and labelling to appliances that represent a significant portion of households' energy consumption can reduce aggregate energy consumption significantly in the long run.

9. The project leaned heavily on pre-existing formal and informal networks and work experience from previous projects, where the executing partner had already worked with the relevant ministries, and government professionals also already had worked with the other stakeholders. For example, the regulatory agency for energy efficiency already had a strong relationship with testing laboratories, and the ministries themselves also have various projects in which they work together other that this one. These strong formal and informal networks allowed the project to execute efficiently while maintaining high participation of all relevant stakeholders, as well as to quickly adapt to the changing and challenging environment to deliver planned outputs and outcomes. The project's activities strengthened some of these relationships as well into the future, particularly through the capacity building activities, which allowed increased trust to be built between regulators, laboratories, and other stakeholders.

10. The outcomes were realistic in their design and are well underway to being achieved in practice. In the project's Theory of Change (TOC), output's drivers and assumptions are identified as well as stakeholders at the different levels. The casual pathways that are present were convincing from outputs to outcomes to impact. During the consultation processes for this review, these pathways were confirmed by stakeholders. The project had some changes in its activities and outputs during implementation (requested and approved through formally established methods) as a result of adaptive management measures reactive to context changes, but those did not affect the underlying strong logic of the project's TOC.

11. Outputs were all achieved and highly regarded by stakeholders, but for one output: output 2.3. This output has considered not completely delivered by some stakeholders, as a complete implementation would need a timespan that far exceeds the implementation period of the project. As a result, one of the recommendations of this review is to sustain the efforts to monitor the installed refrigerator market to accurately measure energy and GHG emissions savings resulting from implementation of the MEPS and energy efficiency labelling from this project.

12. As outputs were delivered, the project's underlying logic is proving strong, and along with assumptions and drivers that held, outcomes were achieved. The review process gathered evidence that indeed all four outcomes are well underway for complete achievement: (i) MEPS and labelling regulations are undergoing their processes for enforcement with strong support from the involved institutions, accelerating the transformation of the market to more energy efficient refrigerators; (ii) actors are complying with improved regulations and regulatory bodies have had their capacities strengthened to allow that compliance, (iii) consumers have had their awareness enhanced on energy efficiency refrigerators through highly impactful communication and replacement campaigns, and (iv) a national framework for environmentally sound management of waste refrigerators is being implemented through a highly ambitious waste electronic and electric equipment (WEEE) decree, also undergoing regulatory processes for final enforcement.

13. As outcomes are being achieved and the project's logic is sound (and validated by stakeholders), achieving the designed impacts of facilitating access to electricity

and mitigating climate change is rated as highly likely. With an effective implementation, MEPS and energy efficiency labelling can have a long-lasting effect in improving energy efficiency of installed equipment in the long run. MEPS and energy efficiency labelling are thus the core of this project and are to start their enforcement soon, but its supporting policies are also in place, strengthening the path towards impact.

Conclusions

14. Outcomes have a low degree of dependency on social and political factors, as most depend on regulations in process of being implemented, and as reported all political parties support energy efficiency measures. Government and private sector stakeholders show strong level of ownership through their respective leadership in advancing implementation of new standards and mechanisms. All stakeholders reported high satisfaction with the outputs as well as their participation in the output's delivery: both the process and their result were considered valid and satisfactory for stakeholders. Adaptive mechanisms in place are working as planned, as changes in social norms were identified and internalized during project execution, resulting in activity redesign, and new regulations are undergoing the required public consultation processes before final approval and enforcement.
15. Preparation and readiness were some of this project's strongest aspects. The en.lighten experience gave public stakeholders a clear roadmap on how to continue the energy efficiency approach for the Chilean case into a different home appliance sector, while counting on U4E technical expertise to leapfrog regulations securely. These public stakeholders also act within a strong institutional setting, particularly in the Latin American context, and showed strong technical capacities, knowledge of the problem and how to tackle it.
16. As mentioned throughout this review, both the Project Management and Supervision showed high responsiveness and adaptability to a uniquely challenging environment, delivering outputs despite deep and sudden context changes that required a complete redesign of activities that were central to this project. UNEP strengthened project implementation through documented close management support and technical support through U4E.
17. Based on the findings from this review, the project demonstrates performance at the highly satisfactory level. The project has demonstrated strong performance in the areas of Strategic Relevance, Quality of Project Design, Effectiveness, Financial Management, Efficiency and Sustainability. Although room for improvement is narrow given the highly satisfactory ratings in all areas of this project, areas that would have benefited from further attention are Monitoring Design and Budgeting, to more accurately measure awareness on energy efficiency, and by providing more precise guidance on gender equity at the design stage, which may have opened more opportunities to further mainstream gender particularly on women as workers in the energy sector. It is important to note that these two areas are nevertheless rated as 'satisfactory' in the review.

Lessons Learned

18. <u>Lesson 1:</u> **Moving capacity building activities to online seminars can be effective and efficient.** As a result of the pandemic, the project had to change capacity building activities from a travelling to a European laboratory to online seminars. This change allowed to reach a wider technical audience within laboratories while saving costs. This capacity building approach is also more flexible and allows easier scheduling with other activities.

19. Lesson 2: **Country readiness and ownership are key foundations for results delivery even through a highly challenging context.** Country stakeholders showed high ownership, driven-ness and pride in the accomplished project results. These national actors also showed technical prowess and knowledge of the subject matter. As a result, choosing projects that are aligned with national strategies increases the chances of successful delivery, as well as investing in capacity building of these stakeholders at the national level.

20. Lesson 3: **Leveraging UNEP's advantage strengthens project delivery**. UNEP's U4E initiative provided strong technical guidance and backstopping for this technically sophisticated project, allowing for it to quickly deliver the technical outputs required. Given the short timeframes of these types of projects, focusing on those that leverage on UNEP's unique advantages increase chances of successful delivery of results.

21. Lesson 4: **Framing the project within a national pipeline strengthens project delivery.** The previous energy efficiency-focused project (en.lighten) build relationships and networks between stakeholders that already shared success before this project started. As these networks are crucial for interinstitutional coordination for results delivery, building new projects upon a pipeline of technically and institutionally related projects increases their chances of successful results.

22. Lesson 5: **Leveraging strong teams already working in the country strengthens project delivery.** Fundación Chile was selected by the government as the executing agency for this project. The agency has strong technical capacities and already works with government stakeholders in other development projects. As a result, identifying and leveraging teams already working in the country increases the chances of successful results.

23. Lesson 6: **Communicating energy efficiency to crisis-struck societies and low-income households requires a different approach.** Increasing installed equipment's energy efficiency frequently requires investing in new equipment. Within our societies, new equipment is often times regarded as a good value in itself. However, within crisis-struck societies, the priorities for consumption may change and other values, such as saving or reducing consumption, may gain importance. In this context, communicating energy efficiency may be more effective if centred in the environmental benefits it provides (aligned with the reducing consumption value) instead of centring in acquiring newer, more technologically advanced equipment.

Recommendations

24. Recommendation 1: **Follow through the promulgation of regulations to achieve impact.** To finally deliver expected outcomes, proposed regulations must effectively enter into force. During the project review, evidence was gathered that this process is following through, but it must reach its promulgation to achieve outcomes.

25. Recommendation 2: **Implement a long-term strategy for Monitoring and verification to measure energy savings from the removal of old-but-operable refrigerators to accurately measure energy and GHG emissions savings in the long run.** As newer more efficient refrigerators replace older ones, GHG emissions will be saved. However, a long term approach in measuring these savings is needed given the long time it might take to replace older equipment.

26. Recommendation 3: **Continue implementing energy efficiency awareness raising campaigns in the future.** Awareness-raising on a population level is difficult and requires constant efforts. The final enforcement of the new MEPS and energy

efficiency labels, after the two-year implementation period considered in the regulation, requires and provides the opportunity to continue communicating on the importance of choosing energy efficient equipment for promoting household energy access and mitigating GHG emissions.

Validation

The report has been subject to an independent validation exercise performed by UNEP's Evaluation Office. The performance ratings for the UNEP/GEF Project Leapfrogging Chilean's markets to more efficient refrigerator and freezers" (GEF ID 9496), set out in the section on summary of project findings and ratings, have been adjusted as a result. The overall project performance is validated at the **Highly Satisfactory** level. Moreover, the Evaluation Office has found the overall quality of the report to be **Satisfactory** (see Annex X).

I. INTRODUCTION

27. This report is a Terminal Review of UNEP/GEF *Leapfrogging Chilean's markets to more efficient refrigerator and freezers* project, implemented between 2018 and 2022, which is also the timeframe covered by this review. The project was part of UNEP's Climate Change sub-program, and was implemented by UNEP's Economy Division, Energy Branch, in Chile. It contributed to UNEP's MTS priority area Climate change: reduction of GHG emissions, under the *mitigation and clean energy* result stream. It leveraged UNEP's work to improve energy efficiency and to reduce energy intensity and demand in the home appliance sector, particularly considering UNEP's U4E initiative, which fully supported a number of activities in this project and showcased UNEP's unique advantage in this area. It also contributed to UNEP's MTS priority area Chemical, waste and air quality consistency by promoting sound management of waste refrigerators, recycling of out-of-use refrigerant gases, recycling of old refrigerators and by reducing the amount of refrigerant gases that are released onto the atmosphere. The project contributes to UNEP's 2018 – 2019 Program of Work Subprogram 1: Climate Change; Subprogram 5: Chemicals, waste and air quality; and Subprogram 6: Resource efficiency.

28. The project's overall development goal was to support Chile to increase the market share of high energy efficiency domestic refrigerators and freezers by focusing on the development of supporting policies, standards and regulations as well as involving domestic consumers through replacement campaigns, educational and awareness-raising actions. It started execution in 2018 and was expected to finish by 2021, although a highly challenging external context (massive countrywide social uprising in 2019 followed by the global pandemic of 2020) prompted the Project's Management to request an 11-month extension, which was granted.

29. It was executed by Fundación Chile, selected by the Energy Ministry (a main stakeholder and implementing partner) as the executing agency for this project. The Superintendency of Electricity and Fuels was also a key stakeholder and implementing partner, as well as the Environment Ministry. Other focal stakeholders include testing laboratories and certification bodies, manufacturers, retailers, and Collection and Recycling Services Organizations (CRSOs). It had a GEF allocation of USD 1,473,762, and total effective co-finance was USD 3,781,358.

30. This review is the project's first, as it did not have a Mid Term Review, in accordance with GEF Policy that a Mid Term Review for a Medium Size Project is only carried out at the discretion of the Task Manager. It seeks to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The review has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, the GEF and the relevant agencies of the project participating countries. Its intended audience are the involved national stakeholders, UNEP, the GEF and the public at large.

31. Overall rating for this project is highly satisfactory. Through a very challenging external context, the Project Management Unit and the Project Steering Committee managed to deliver all expected outputs. These outputs are highly regarded by stakeholders and are well underway to achieve their expected outcomes. Country ownership of these outputs is very high, allowing to follow through outcomes. The project's theory of change logic is strong and is being validated by events as they unfold, making expected impacts highly likely. The project also strengthened formal

and informal networks between stakeholders who share the successes achieved by this project, priming them for promoting new changes in the future.

II. REVIEW METHODS

32. The terminal review has followed the procedures and employed the tools and templates made available by the UNEP Evaluation Office to support the review process. During the inception period of the terminal review process, the reviewer had the generous support of the UNEP evaluation office to understand the expected usage of the tools and templates and the expected results of the terminal review.
33. The review has centred on the project's design, its results and the processes achieving those results, with the goal of promoting learning and improving from this experience for future projects, as well as evaluating this project's execution, particularly in terms of effectiveness for obtaining planned results and the process towards them. Most importantly, the review process strived for including consideration of the validity of these processes in the view of the stakeholders. To achieve this, the reviewer placed special attention in the collection and analysis of information, aiming to highlight the project's achievements while identifying good practices and lessons learned on both the design and execution of the project.
34. The review covers the 2019 – 2022 implementation period of the project.
35. The tools employed were extensive documentation desk reviews, semi-structured online stakeholder interviews, and an on-site mission to visit to project stakeholder's facilities and implementation. During this visit, the reviewer also interviewed key stakeholders for a second time to cross check and triangulate information as it appeared during the information recollection and analysis process.
36. During the review there was continuous interaction with the UNEP team, the project management team, representatives of the Ministry of Energy and the Ministry of Environment, representatives from the Superintendency of Electricity and Fuels (SEC) and other relevant stakeholders as needed, both to assure timely information gathering but also to provide feedback and adjust findings. The first meeting with the project management team and UNEP counterparts took place on November 10th, 2022, where communication channels were established, and initial milestones were agreed.
37. Table 1 describes the initial group of stakeholders interviewed during the review, as agreed with the project management team and UNEP. These interviews were later carried out during December 2022 through online calls. For each stakeholder there was a set of specific questions in addition to the general questions that were asked to all stakeholders, in accordance with each stakeholder's role in the project and their capacities to provide valuable information. Additionally, questions were included to check whether any other stakeholders not present in this list should also be interviewed.

Table 2 Representatives from offices/organisations interviewed during first batch of online interviews

Institution	Interview date
Ministerio Energía	1/DEC/2022
Ministerio Medio Ambiente	20/DEC/2022
Superintendencia de Electricidad y Combustibles	2/DEC/2022
Superintendencia de Electricidad y Combustibles	2/DEC/2022
Superintendencia de Electricidad y Combustibles	2/DEC/2022
Sodimac	8/DEC/2022

Institution	Interview date
Sodimac	8/DEC/2022
Reciclapp	7/DEC/2022
Regener	6/DEC/2022
Samsung	N/A
CESMEC	9/DEC/2022
SILAB	13/DEC/2022
MABE	N/A
Municipalidad Maipú	N/A
Lenor	N/A
Intertek	6/DEC/2022
U4E	21/DEC/2022

38. Although best efforts were made to coordinate the interviews, for interviewees marked as "N/A" in the interview date it was not possible to coordinate an interview successfully. The representativity of stakeholders is sufficient although these interviewees were not included, as there is at least one interview for each type of stakeholder, and in particular, the country project owners and key stakeholders during the whole project were included. Interviewee marked with "*" was added as a result of cross-checking with all stakeholders for other stakeholders to interview not included in the initial list.

39. Given the importance of reaching potentially excluded groups, at inception the review paid particular attention to the project's approach to gender and low-income groups at design stage, resulting in specific review questions for stakeholders on its appropriateness and effectiveness. At implementation stage, the review looked for evidence on measures taken to reach and include these groups, if these were able to empower the exercise of their rights, and to what extent mainstreaming these issues was possible in the specific context of this project.

40. The general questions to be answered during the review are included in Annex XI. Specific questions for specific stakeholders are not included in this annex to protect stakeholders and to honour the promise that the information was shared with the reviewer in a safe environment. Stakeholder interviews were key as information and most importantly, perceptions might not be thoroughly documented and only be available on their memory. The interviews generally lasted about 45 minutes each, were semi-structured, and at the start of each one the reviewer mentioned the confidentiality of their answers. Different perceptions were sought against situations of interest, to triangulate responses and reduce subjectiveness.

41. The review started by reviewing the outputs of the project compared to the planned ones through the project documentation provided by the project management team and UNEP, as well as any documentation provided by the implementing partners or other stakeholders. All the information was reviewed in each delivery in order to ensure that it had been received in its entirety. When documentation gaps were identified, the project management team and UNEP were informed. Both teams responded with completing information in all but one case, when one stakeholder did not provide information on co-finance. This missing information will be highlighted in the co-finance section, and its absence did not imply being unable to review any output but it does mean that co-finance is underreported.

42. 77 documents were considered during the review, the main ones which are listed in Annex III. The main documents are the Project Document, the annual Project

Implementation Reports, revision report and final report. Additionally, documents of project's outputs were considered.

43. After the interviews and on-site visit, a PowerPoint document with preliminary findings and conclusions was shared among stakeholders through UNEP. This intermediation was important to protect stakeholders and maintain their anonymity in case there were any disagreement on the findings. No comments were received from stakeholders.

44. Through the interviews and on-site visit processes, the reviewer took particular attention to guaranteeing safety and anonymity for stakeholders sharing information, as well as informed consent when nominated information was going to be shared. In practice, this meant that at the start of each interview (online or in person), the reviewer informed the interviewee that their answers and the information shared was not going to be reproduced associated to their name, the reviewer's promise of safeguarding the stakeholder's answers confidentiality, as well as asking for consent when gathering information to be shared non-anonymously (for example when taking photos of facilities). Prior informed consent, the reviewer recorded the audio of online interviews for own reference. To protect the stakeholders, these recordings are not included as part of this review. Information was collected according to the UN Standards of Conduct.

45. The on-site visit to project implementation sites in Santiago, Chile, took place between January 9th of 2023 and January 13th of 2023. Table 3 shows the dates when each institution was visited and the participants in each visit. The reviewer gathered the signatures of all participants for each meeting, as seen in Annex XII.

Table 4 On-site visits

Date	Institution	Participants
09/JAN/2023	Fundación Chile	Karien Völker, Maya Hirsch, Ignacio Simon
10/JAN/2023	CESMEC / Bureau Veritas	Cecilia Simon, Alejandro Pearson, Javier Carrasco, José Muñoz, Ignacio Simon
12/JAN/2023	REGENER	José Rojas, Ignacio Simon
12/JAN/2023	Ministerio de Energía	Marcelo Padilla, Ignacio Simon
13/JAN/2023	Superinten-dencia de Electricidad y Combustibles	Cecilia Moya, Ronnie Hernandez, Paulina Silva, Cristian Bazzo, Ignacio Simon
13/JAN/2023	Ministerio de Ambiente	Claudia Guerrero, Ignacio Simon
13/JAN/2023	SILAB	Ruben Gonzalez, Ignacio Simon

46. Field visits were particularly useful to understand the project's interventions and to triangulate information that was gathered previously during online interviews and document desk reviews. There were no language barriers as the reviewer is a Spanish native speaker.

III. THE PROJECT

A. Context

47. Chile's total GHG emissions (2013) were 119 million tCO2eq, increasing 113% since 1990 and 19% since 2010. More than 77% of total GHG emissions in 2013 came from the energy sector (85 million tCO2eq), mainly due to the increase in consumption of coal and natural gas for electricity generation. According to the U4E assessment for Chile[7], the potential for annual energy savings and GHG emission reduction from application of minimum energy performance standards (MEPS) in line with international benchmarks can account for 5 TWh or 2.4 million tCO2eq for 2030 specifically, or cumulatively by 21.72 million tCO2eq between 2020-2030. Residential refrigerators represent the second largest end-user sub-sector (after lighting) with significant potential for energy saving and GHG emission reduction.
48. The refrigerators and freezers available in the Chilean market at project start had an average energy efficiency index of 50 (class A). 82% of the models available were in classes upper A, proving that the market would be able to respond to more stringent labelling regulations. The price difference between A and A++ products was not significant either, resulting in that accelerated replacement of old inefficient refrigerators could also bring additional economic benefits for low-income families and other vulnerable groups.
49. As a result, Energy efficiency (EE) classes in labelling of products could be improved as more efficient models were already available. Significant efficiency gains had been achieved since the first EE labelling was introduced in 2012, but the new improvements in products' efficiency were not reflected in the classification of the old EE label prior to project execution, as its classes were not able to capture and reflect the efficiency gains of newer refrigerators (they would all fit within class A, even though the most efficient models could consume up to 50% less energy than the less efficient class A equipment).
50. Chilean policy makers and regulators lacked the needed technical knowledge and information at the time on costs, benefits and environmental aspects of more efficient refrigeration products as well as refrigerant gases, which were essential to prepare and justify the revision of the MEPS and labelling regulations.
51. The Superintendence of Electricity and Fuels (SEC) is responsible for maintaining the database of certified products (safety and energy efficiency), while testing laboratories and certification bodies verify product compliance with MEPS and provide an EE label. This mechanism requires credible testing from laboratories, with specialized equipment and training, as well as increased capacities at the SEC to oversee and regulate this system.
52. Surveys showed[8] that consumers and retailers needed support in understanding the information provided in the energy label, especially the class level and KWh/month. Consumers were not aware of the benefits of efficient refrigerators over their lifetime. Women, as primary users of refrigerators and often decision-makers regarding household purchases, had not been specifically targeted by previous campaigns.

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[7] https://united4efficiency.org/wp-content/uploads/2022/08/CHL_U4E-Country-Saving-Assessment_Jul-22.pdf

[8] As cited in the ProDoc: The not well understood issue of a refrigerator Class A and different consumption index as a function of volumes and functions seen in the Report Qualitative Study Energy Efficiency Labeling of Refrigerators and Light bulbs Perception of its use, assessment and compression of Information by sales agents and consumers.2010

53. The project supported Chile to increase the market share of high energy efficiency domestic refrigerators and freezers by developing supporting policies, standards and regulations for more stringent energy efficiency MEPS and labelling, as well as involving domestic consumers through replacement campaigns, educational and awareness-raising actions.
54. The project faced two black swan-type of events during its execution: in 2019, massive social protests and unrest deeply changed the operating context to new social norms and expectations. Then, during 2020 the global pandemic paralyzed significant parts of the economy and ruled out social gatherings, again requiring a complete rethink of many of its activities.

B. Objectives and components

55. The project was arranged in 4 components. The framework is summarized in table 6 from the inception report.

Table 5 Project's results framework

Components	Outcomes	Outputs
1. Revising regulatory mechanisms, including minimum energy performance standards (MEPS)	1. Accelerated transformation of the market for Energy Efficient (EE) residential refrigerators/freezers via implementation of advanced MEPS and EE labels in line with international best practices and provision of associated capacity building	1.1: National MEPS and EE Labels for refrigerators updated and implementation plan developed
2. Enhancing monitoring, verification, and enforcement (MVE)	2. Actors comply with improved MVE labeling regulations, testing protocols and measurements methodologies to ensure residential refrigerators/freezers meet improved efficiency levels.	2.1: MVE scheme assessed and improvements documented to ensure products' compliance with EE labels and MEPS 2.2: National laboratories strengthened to verify compliance with updated standards and protocols 2.3: Monitoring and verification procedures and methodology to measure energy savings from the removal of old-but-operable
3.Developing supporting policies	3. Enhanced awareness among consumers (by gender) and market players in Chile to understand, afford, and purchase EE refrigerators/freezers	3.1: Communication campaign developed and its impact evaluated to increase user acceptance and understanding of high efficiency products and updated labeling and MEPS, taking gender-sensitive perspective into account 3.2: Replacement demonstration programmes on energy efficient refrigerators implemented in the residential sector

Components	Outcomes	Outputs
4.Enhancing environmentally sound management	4. Voluntary implementation of the national framework for environmentally sound management of refrigerators/freezers started	4.1: Strategy proposal for a national framework and an environmentally sound management of refrigerators/freezers developed and communicated to local stakeholders 4.2: Awareness raising and communication campaigns to promote collection and recycling of refrigerators conducted 4.3 (Changed output from original project) Supreme Decree on waste of electrical and electronic equipment (WEEE) based on best international practices is proposed for adoption by the Ministry of Environment

C. Stakeholders

56. Table 8 shows the stakeholders for the project organized according to their roles in the refrigerator market as well in the project's execution.

Table 6 Project stakeholders according to their role

Stakeholder	Role in market	Role in project execution
Ministry of Energy	National Ministry, establishes public policies and standards.	Technical counterpart to new MEPS and EE standards label, replacement campaign of old refrigerators, communication campaigns.
SEC	National regulator of safety and labelling. Implements regulations.	MVE improvement, testing protocol adaptation, testing protocols implementations in labs, new labelling implementation, technical counterpart to new MEPS and EE standards.
Ministry of Environment	National Ministry, establishes public policies and standards.	Technical counterpart to new refrigerator and gas waste management regulations.
Retailers	Retail refrigerators, providing product information, logistic services.	Implementing partner for the replacement campaign, communication campaign partner
CRSOs	Collect, recycle and safely process waste refrigerators and gases, subject to government regulations.	Implementing partner in replacement campaign, stakeholder for new regulations.
Laboratories and certification bodies	Measure and test equipment according to government and regulator policies and requirements for market entry of products	Beneficiaries of capacity development, stakeholders in developing new regulations
Manufacturers	Supply refrigerators to the market, implement energy efficiency measures to their equipment, market their products	Stakeholders in developing new regulations
U4E	Promotes energy efficiency in markets	Technical leadership for certain project activities, technical support for the project

Stakeholder	Role in market	Role in project execution
Consumers	Decide and purchase refrigerators in the market. Spend the energy costs during the refrigerator's lifecycle	Stakeholders in developing new regulations. Receptors of communication messages. Lower-income consumers are a focus to alleviate energy poverty. Focus on women as important users of refrigerators and influencers of refrigerator purchase decisions.

D. Project implementation structure and partners

57. This GEF 6 Project was implemented by UNEP, with Fundación Chile (FCh) as the executing agency selected by the government. Within FCh, the Project Management Unit (PMU) coordinated with a Project Steering Committee (PSC) as well as thematic technical working groups. Figure 1 shows the organigram of the project.

58. Key, non-governmental project partners included testing laboratories and certification bodies, which will implement the new MEPS and labelling, CRSOs to safely dispose old refrigerators, manufacturers which will supply more efficient refrigerators, and later in the project and as a result of adaptive management actions (described in chapter V), retailers to facilitate replacement of old refrigerators with new ones by consumers.

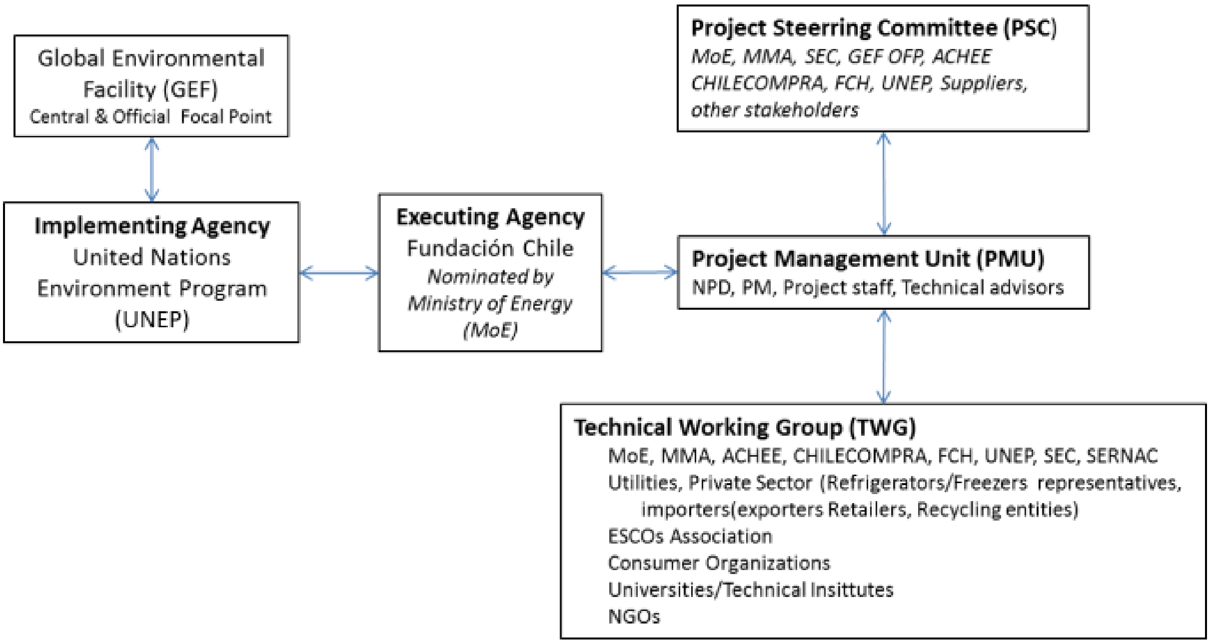


Figure 2: Project Organigram with key project key stakeholders

E. Changes in design during implementation

59. During the final year of execution, the project management requested an 11-month extension to the project as a result of the two black swan-type events: social uprising in 2019 and the global pandemic in 2020. This extension implied a modification of certain budget lines, although within the total budget and without affecting outputs or outcomes. In particular, the strategy to achieve this was: (i) travel expenses were significant reduced as a result of the global pandemic; (ii) capacity building efforts done remotely were significantly less expensive; (iii) the

project extension required increasing the budget for the project management team, although almost 30% of this increase was covered by the executing agency; (iv) the deep involvement of the government agencies allowed to reduce some costs through synergies with other initiatives. Chapter V will elaborate on this.

60. The results framework was changed during execution, as shown in Table 10, but not affecting outcomes. These changes were adaptive management actions in response to changing circumstances thoroughly explained in PIRs and approved through established processes. The review process paid particular attention to how stakeholders perceived these changes, which will be elaborated in chapter V of this document.

Table 7 Changes to the result framework

Result	Original result	Changed result
Activity 2.2.1	Develop an interlaboratory performance test	Adaptation of IEC 62552:2015 standard for the Chilean market
Activity 2.2.2	Improve capacities and facilities for refrigeration safety and efficiency test protocols according to international expert recommendations	Technical support in the implementation of IEC 62552:2015 standard in selected laboratories
Output 4.3	Collection and Recycling Service Organization (CRSO) business model for spent refrigerators developed starting below voluntary scheme, including potential international coordination for the environmentally sound export/import of refrigerators waste/ refrigerant gas proposed/adopted	Supreme Decree on waste of electrical and electronic equipment (WEEE) based on best international practices is proposed for adoption by the Ministry of Environment
Activity 4.3.1	Develop CRSO business model for end-of-life refrigerators able to start below voluntary scheme, including potential international coordination for the environmentally sound export/import of refrigerators waste/ refrigerant gas.	International experience for WEEE within REP Schemes

F. Project financing

61. Highly detailed and organized information was made available to the reviewer at review inception. More detailed financial information was requested by the reviewer, which was provided in time.

62. A project partner (later included in the project as a result of adaptive management measures described in chapter V) incurred in significant costs that should have contributed to the co-financing of this project, as described in the 2022 PIR. However, the partner did not provide a detailed account of those to the PMT. The reviewer requested that information directly to the partner during the interview, but the information was not made available. As a result, co-financing is underreported in table 12, as the exact amount of co-financing provided from this partner is unknown but is certain that existed through its participation in the project and the evidence generated.

Table 8 Expenditure by Outcome/Output

Component/sub-component/output *All figures as USD*	Estimated cost at design	Actual Cost/ expenditure	Expenditure ratio (actual/planned)
Component 1	36,442	35,686	97,9%
Component 2	154,687	127,375	82,3%
Component 3	554,497	542,272	97,8%
Component 4	208,481	226,653	108,7%
Monitoring & evaluation	23,500	29,868	127,1%
Project Management Costs	115,501	123,519	106,9%
U4E	380,654	335,653	88,2%
Total	1,473,762	1,421,027	96,4%

Table 9 Co-financing Table

Co-financing (Type/Source)	UN Environment own Financing (US$1,000)		Government (US$1,000)		Other* (All co-financing sources to be identified) (US$1,000)		Total (US$1,000)		Total Disbursed (US$1,000)
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
– Grants									
– Loans									
– Credits									
– Equity investments									
– In-kind support	50	57	2,802	2,464.047	4,554.551	1,260.310	7,441.551	3,781.357	3,781.358
– Other[9] -									
Totals	50	57	2,802	2,464.047	4,554.551	1,260.310	7,441.551	3,781.357	3,781.358

Table 10 Financial Management

NON-GEF AND GEF PROJECTS			
Financial management components:		**Rating**	**Evidence/ Comments**
1. Adherence to UNEP's policies and procedures:		**HS**	
Any evidence that indicates shortcomings in the project's adherence[10] to UNEP or donor policies, procedures or rules		No	PMT and UNEP provided complete singed documentation on adherence, interviews confirmed procedures
2. Completeness of project financial information[11]:			
Provision of key documents to the reviewer (based on the responses to A-H below)		**HS**	
A.	Co-financing and Project Cost's tables at design (by budget lines)	Yes	Highly detailed tables available per year
B.	Revisions to the budget	Yes	Highly detailed tables per component and per account type, documentation on procedures available
C.	All relevant project legal agreements (e.g. SSFA, PCA, ICA)	Yes	All relevant documents are available and organized

[9] This refers to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.
[10] If the Review raises concerns over adherence with policies or standard procedures, a recommendation maybe given to cover the topic in an upcoming audit, or similar financial oversight exercise.
[11] See also document 'Criterion Rating Description' for reference

NON-GEF AND GEF PROJECTS			
Financial management components:		**Rating**	**Evidence/ Comments**
D.	Proof of fund transfers	Yes	Available and organized
E.	Proof of co-financing (cash and in-kind)	Yes	Proof of co-financing available for all but one cofinance, as reported in 2022 PIR
F.	A summary report on the project's expenditures during the life of the project (by budget lines, project components and/or annual level)	Yes	Highly detailed excel files available per year
G.	Copies of any completed audits and management responses *(where applicable)*	Yes	All documentation related to the audits is available
H.	Any other financial information that was required for this project (list):	No	No other information is considered necessary.
3. Communication between finance and project management staff		**HS**	
Project Manager and/or Task Manager's level of awareness of the project's financial status.		HS	Interviews and documentation show high level of awareness and coordination
Fund Management Officer's knowledge of project progress/status when disbursements are done.		HS	Established and followed standard procedures on reporting eased information transfer
Level of addressing and resolving financial management issues among Fund Management Officer and Project Manager/Task Manager.		HS	Adherence to established standard procedures minimized financial management issues
Contact/communication between by Fund Management Officer, Project Manager/Task Manager during the preparation of financial and progress reports.		HS	All parties reported good communication. Organized, detailed and audited documentation was available on time
Project Manager, Task Manager and Fund Management Officer responsiveness to financial requests during the review process		HS	All requests were responded quickly and completely
Overall rating		HS	**Executing agency and implementing agency proved best-practice approach to financial management, with thorough and audited information and high conformity reported among all parties.**

IV. THEORY OF CHANGE AT REVIEW

63. For TOC reconstruction at review, in an initial stage all documents for outputs and activities were checked for delivery. In a second stage, during interviews, relevant (according to the TOC and stakeholder analysis in the review inception report) stakeholders were asked about their satisfaction with the delivered outputs, if they believed that those outputs would be sufficient to achieve the outcomes as presented in the TOC, the logic behind how those outputs were helping to deliver those outcomes to triangulate TOC logic, if there would be some other output missing to achieve each outcome, and whether they were properly (according to their own criteria) involved and included during output development and delivery.

64. Figure 3 shows the reconstructed TOC at review diagram.

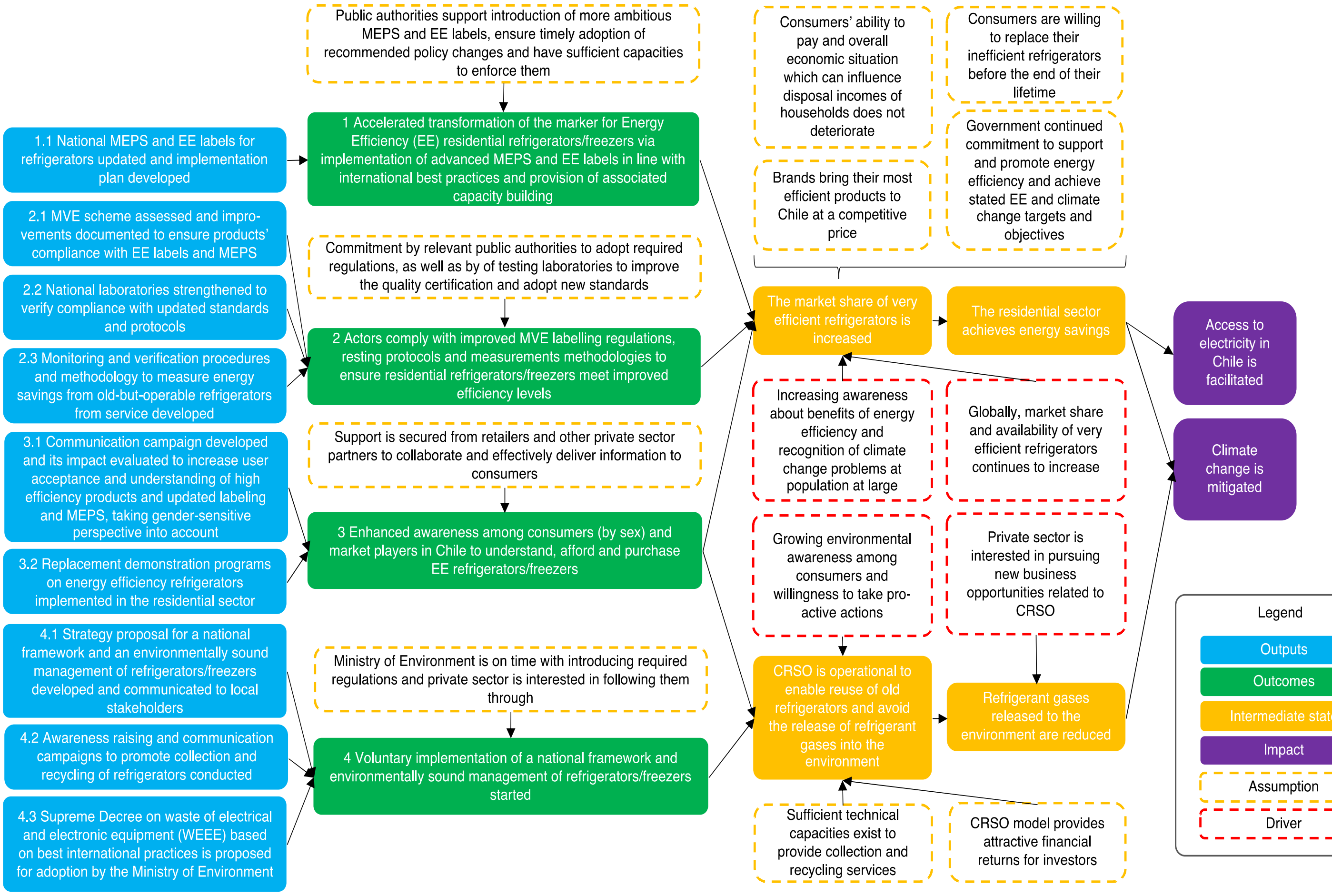


Figure 3 Reconstructed TOC at review diagram

65. The causal pathway for outcome 1 requires output 1, requiring as an assumption that *public authorities support introduction of more ambitious MEPS and EE labels, ensure timely adoption of recommended policy changes and have sufficient capacities to enforce them*. This outcome would result in *increasing market share of efficient refrigerators* and as a result *achieving savings in the residential sector*, that through the drivers of *increasing awareness of EE in the population* and *global availability of efficient refrigerators*, would support the impact *of facilitating access to electricity in Chile* and *mitigating climate change*. As reported by stakeholders, output 1.1 was supported strongly by UNEP's U4E initiative, highlighting UNEP's comparative advantage for implementing this project.

66. Output 1.1 was delivered and stakeholders showed high ownership of the result. Currently there are clear actions that validate the assumption that public authorities support introducing more ambitious MEPS and EE labels, as the MEPS and EE labels developed by the project in output 1.1 are undergoing the public consultancy process required under Chilean legislation before final enforcement. High demand on the replacement campaigns show[12] that the driver of increased awareness by the public at large is valid as well as the assumption that consumers are willing to replace inefficient refrigerators before their lifetime ends, and the already increasing market share and availability of highly efficient refrigerators in Chile shown in data shared by the stakeholders also validate the driver of high availability and market share of efficient refrigerators worldwide and the assumption that manufacturers are willing to offer them in the Chilean market.

67. For the pathway in outcome 1, the assumption that *consumers' ability to pay and overall economic situation which can influence disposal incomes of households does not deteriorate* was put into test as a result of the economic crisis brought about by the COVID-19 pandemic. The PMT, together with relevant stakeholders, implemented a smart adaptive management measure into the replacement programs: eligible new refrigerators would be relatively small in capacity (non-luxury refrigerators). As a result, these refrigerators were affordable to buy and also have very low absolute energy consumption as a result of their increased efficiency and relatively small internal volume to refrigerate. This action secured the assumption and supports the impact of *facilitating access to electricity in Chile*.

68. Outputs 2.1 and 2.2 were delivered to support outcome 2. Although there is documentation supporting output 2.3, some stakeholders reported that this output was not fully completed, commenting that more efforts sustained in a longer period (approximately 10 years according to one stakeholder) would be needed to fully achieve this output, sometimes called as *market monitoring* or *market surveillance* by some stakeholders. Still, all stakeholders agreed that the delivered outputs would be sufficient, and that achievement of outcome 2 is already underway. The assumption of commitment by relevant public stakeholders to adopt the regulations and laboratories improving the quality of certification is valid: during the visit, relevant stakeholders showed how advanced the current regulation adoption process is, and laboratories showed the changes made to their facilities to adopt the new protocols. Both laboratories and relevant public authorities showed high satisfaction with both the outputs and the process of their delivery, promoting ownership. As a result of this outcome being well underway achievement, the intermediary results and impact pathways are also underway. Stakeholders validated these pathways, arising the question on whether output 2.3 was really needed in the immediate term to achieve the outcome and if it was realistic to fully deliver it within the project's timeframe. The evidence suggests that although output 2.3 is important for measuring impact in the long term, it might need more maturation time to deliver impact in the medium term.

[12] According to project data, 8,645 individuals signed up for the replacement program that had 1,600 slots available. All 1,600 replacements were carried out.

Figure 4 Blocks that simulate food inside refrigerators in testing chambers in a testing laboratory in Santiago, Chile, 13/JAN/2023

69. Outcome 3 was reported by stakeholders as one of the strongest parts in this project's delivery: both outputs where achieved, and the PMT used output 4.2 (implemented before output 3) to validate the assumptions needed for successful

achievement of outcome 3. Through output 3.1, the project delivered a continuous communication campaign through topten.cl, google advertisements and social networks to educate on EE and MEPS. Google and social network advertisements reached 471,820 impressions.

Figure 5 Two examples of online advertising implemented

As consumers entered the website, they were informed of the advantages of a more efficient refrigerator and were offered the opportunity to recycle their old one to get a discount in a new, energy efficient refrigerator. Output 3.2 of Replacement demonstration programmes on energy efficient refrigerators in the residential sector were also implemented, with more information on it further ahead in this document.

During the review inception, a potential sequencing concern was raised resulting from the apparent incoherence of implementing a communication campaign for the new EE label *before* the new label was ready and approved. The PMT together with relevant stakeholders took the adaptive management decision of maintaining the graphic design and EE classes' names from the old label, and working to technically update the EE classes according to the new protocols. As a result, the new labels will look the same to consumers when they are enforced, but the underlying EE classes will differ significantly from the current EE label. This change allowed the project to communicate on the importance of taking EE into consideration when purchasing a refrigerator as well as to educate on how to read the label, while working to deliver a new label that will look the same as the previous one, but that will tabulate refrigerators according to the new, more stringent parameters. As a result, this adaptive management action solved the sequencing concern, being able to deliver the intertwined outputs within the project's timeframe. Retailing stakeholders reported an increase in consumer interest in

70. In output 3.1 one of the most important gender-sensitive actions of the project that was implemented, focusing on women as recipients of the awareness raising

campaigns on EE. This is because women are highly influential in the household decision of which refrigerator to choose when buying one, and the opportunity to influence that decision has a small window of opportunity given that after the decision is taken, that household will probably not buy another refrigerator for a long time. Project documentation on the development of the communication campaign shows very interestingly how this was taken into account.

71. The PMT was able to validate assumptions for output 3.2 by testing interest from retailers and other private sector companies through output 4.2 to collaborate in delivering information to consumers, as well as screening CRSO companies searching for those that had the sufficient technical capacities to provide collection and recycling services. According to stakeholders, just one company had the capacities needed to provide the needed recycling services, validating this assumption. Had this one company not existed, this pathway would have needed additional activities and probably additional outputs to be viable in achieving the outcome and impact.

Figure 6 Equipment employed to safely extract and test refrigerant gases from out of use refrigerators in Santiago, Chile, 12/JAN/2023

Figure 7 Out of use refrigerators waiting to be recycled in a facility in Santiago, Chile, 12/JAN/2023

72. For outcome 4, output 4.3 was changed as explained in section E. This change was a result of momentum in the Chilean government at the time of execution to regulate waste treatment in various sectors, and through this change the project was able to support this macro effort by the Chilean government, providing government officials with (as reported by them) valuable information on international experiences in regulating these types of waste. These efforts by the government validate the assumption that the Ministry of Environment is on time with introducing the required regulations, and stakeholders report that the private sector is highly interested in following them through. The new output 4.3 (the decree) has already gone through the regulatory public consultancy process and is now responding to the requests, in order to be finally approved as a decree. This regulation has the advantage over the original output that makes correct refrigerator waste treatment compulsory for the private sector, assuring the assumption that the CRSO model provides attritive returns for CRSO operators invertors. The driver of growing environmental awareness among consumers and willingness to take actions is validated by the very strong interest in the replacement campaign, and some private sector players interviewed also show interest in pursuing new business opportunities related to CRSOs development.
73. In consequence, of the four outcomes are being delivered, and the causal pathway from outcomes to impact was validated by all stakeholders. The TOC had minimum changes from project design to respond to context changes, increasing impact and improving alignment of this project with other local initiatives that are also working for the same impacts.

V. REVIEW FINDINGS

A. Strategic Relevance

Alignment to UNEP's Medium Term Strategy[13] (MTS), Programme of Work (POW) and Strategic Priorities

74. This project is aligned with UNEP's MTS priority area Climate change: reduction of GHG emissions, under the *mitigation and clean energy* result stream. It is also consistent with UNEP's work in improving energy efficiency and reducing energy intensity and demand in the home appliance sector, particularly considering UNEP's U4E initiative, which fully supported a number of activities in this project and showcased UNEP's unique advantage in this area.

75. The project is also aligned with UNEP's MTS priority area Environmental governance: it is consistent with evidence-based and coherent policy direction, as home appliance energy efficiency is an evidence-backed policy. The project also promoted adequate normative frameworks, effective institutions, the engagement of stakeholders and the principles of good governance in an integrated manner: through the very core result of the project, which was to update the normative framework regulating energy efficiency labelling and MEPS, the project also strengthened the involved institutions (both public, such as the SEC, and also private, such as the testing laboratories), engaged with all relevant stakeholders during the process as per the evidence obtained for this review, and deepened governance mechanisms already present in the country, such as the relationship between the SEC, laboratories and manufacturers.

76. The project is aligned with UNEP's MTS priority area Chemical, waste and air quality consistency by promoting sound management of waste refrigerators, recycling of out-of-use refrigerant gases, recycling of old refrigerators and by reducing the amount of refrigerant gases that are released to the atmosphere.

77. Considering UNEP's 2018 – 2019 POW, this project is aligned with Subprogram 1: Climate Change, which provides the objective to the organization of "countries increasingly make the transition to low-emission economic development, and enhance their adaptation and resilience to climate change". Specifically, the project contributes to the expected accomplishment of the secretariat (b) "Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies", to output 3 "Technical support provided to countries to develop tools, plans and policies for low-emission development ", to output 4 "Technical support provided to countries to implement and scale up renewable energy and energy efficiency projects" and to output 9 "Outreach and communication for mitigation".

78. The project also contributes to UNEP's POW Subprogram 5: Chemicals, waste and air quality, particularly to expected accomplishment of the secretariat (b) "Policies and legal and institutional and fiscal strategies and mechanisms for waste prevention and sound management developed or implemented in countries within the framework of relevant multilateral environmental agreements", specifically output (2) "Support to countries to access scientific and technical knowledge necessary to implement and enforce sound management of waste, in accordance

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

with waste-related multilateral environmental agreements", output (3) "Technical guidance on best available techniques, good practices, best environmental practices and risk reduction developed with the academic sector for the sound management of waste", output 4 "Advisory and support services to facilitate policymaking and strategy development towards sound integrated waste management", and output (5) "Outreach products and services provided to Governments, private companies and civil society organizations to increase awareness of waste prevention and sound waste management"

79. Additionally, the project contributes to subprogram 6: Resource efficiency, particularly to the expected accomplishment of the secretariat (a) "Science-based approaches that support the transition to sustainable development through multiple pathways, including inclusive green economy and sustainable trade, and the adoption of sustainable consumption and production patterns at all levels, (b) Public, private and financial sectors increasingly adopt and implement sustainable management frameworks and practices", and (c) "Public and private sectors increasingly aware of and support the adoption of sustainable lifestyles and sustainable consumption patterns". Outputs for contributing for these are (1) "Resource use assessments and related policy options developed and provided to countries to support planning and policymaking, including support for the monitoring and application of Sustainable Development Goal indicators related to the transition to economies with sustainable consumption and production patterns and inclusive outcome", (4) "Economic tools, technical assistance, policy assessments and capacity-building provided to countries and regions to support achievement of Sustainable Development Goals through multiple pathways, policies and action plans", (4) "Tools and methodologies developed and applied by businesses to enhance resource efficiency and innovation for environmental sustainability along value chains and improve reporting practices", and (2) "Outreach and communication campaigns to raise awareness of citizens (particularly young people) on the benefits of shifting to more sustainable consumption and production practices"

80. The alignment with the BSP is given by the project's support to building the capacity of governments to comply with international agreements and obligations at the national level as it supports Chile to achieve its NDC. The project's alignment with the BSP is also supported given its promotion, facilitation and financing of environmentally sound technologies (in this case, energy efficient refrigerators). Finally, the project also supports the strengthening of frameworks for developing coherent international environmental policies for its contribution to successful implementation of U4E promoted initiatives.

81. The alignment with S-SC is not applicable at project execution, but may be applicable in the future on lessons learned and best practices for other countries in the region.

Alignment to Donor/GEF/Partners Strategic Priorities

82. The project supports the GEF climate change focal area objective CCM-1 that deals with the promotion, demonstration, deployment, and transfer of innovative low-carbon technologies, particularly in this case through high efficiency refrigerators and freezers technologies.

83. It also supports the strategic objective of developing the enabling conditions, tools, and environment for the sound management of harmful chemicals and wastes, particularly through the new WEEE law but also by demonstrating that it is possible

to safely dispose refrigerators in Chile while also recycling refrigerant gases and refrigerators' materials in the process.

84. As mentioned, this project was part of U4E both during design and implementation. U4E is an initiative led by UNEP, the Global Environment Facility (GEF), the United Nations Development Programme (UNDP), the International Copper Association (ICA), CLASP and the Natural Resources Defense Council (NRDC) to promote energy efficiency in home appliances (among other uses of energy). Previously in Chile, another U4E-supported project called en.lighten promoted energy efficiency lighting. The experience in that project and the formal and informal institutional networks that formed during that project, greatly helped this project to build upon already existing foundations.

85. The project has identified contribution to 2 GEF core indicators, although being a GEF-6 project, it did not have them build in from the start: (i) 6. Greenhouse gas emissions mitigated (metric tons of carbon dioxide equivalent) and (ii) 11. Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment.

Relevance to Global Regional, Sub-regional and National Priorities

86. The project promotes achievement of SDG 7 Affordable and clean energy, by reducing the amount of energy households need to achieve the same or better level of comfort. It is important to note that in this case, affordability and cleanliness of energy is achieved through avoiding energy consumption. The project also promotes achievement of SDG 12 Responsible consumption and production, by reducing the amount of energy consumed.

87. Considering national priorities, the project is aligned with: (i) The national energy 2050 policy, which aims for 100% of main categories of appliances sold in the market to correspond to energy efficient equipment; (ii) the national Energy agenda, which aims to achieve (among other goals) 20% energy savings by 2025 over current consumption; and (iii) the management plan for HCFC phase-out in Chile: which includes the objective of reduction and phase-out of consumption of HCFCs in the refrigeration sector with regulation, as well as public dissemination measures.

Complementarity with Existing Interventions/Coherence

88. The project is highly complementary with a previous project that promoted energy efficient lighting equipment in Chile: en.lighten. Both this project and en.lighten were part of the United for Efficiency (U4E) activities, which supports countries in their transition to the use of energy-efficient lighting, appliances and equipment. This project expanded the en.lighten approach in Chile to the next high impact opportunities: refrigerators. Building on the success of the en.lighten initiative it worked on the foundations set on that project to quickly contact, work with and organize stakeholders

89. The project was also hosted under program SE4ALL Global Project, and follows the consensus recommendations on the policy framework when developing technical guides and training under the Global Leapfrogging Program.

Rating for Strategic Relevance:	**Highly satisfactory**

B. Quality of Project Design

90. At the review inception phase, the project's design quality was evaluated as Highly Satisfactory (score of 5,52 / 6). Highlights included strategic relevance, results and causality, governance and supervision arrangements, efficiency and sustainability.

From a design perspective, this project has a very high GHG emission mitigation potential per dollar spent through high replication and scale-up potentials, as establishing minimum efficiency standards and labelling to appliances that represent a significant portion of households' energy consumption can reduce aggregate energy consumption significantly in the long run.

91. Regarding preparation, the project document contains thorough information on the previous state of MEPS and EE labelling in Chile, its energy context, the problem it arises and the opportunity for improvement. It also details the institutions and mechanisms for enforcing MEPS and EE labelling, the weaknesses that existed at the time of writing in the certification mechanisms, the involved institutions, and proposes outputs to tackle those weaknesses and barriers. It also includes a thorough analysis of all stakeholders directly involved in project activities: government and national standards-setting bodies, energy utilities, testing labs and certification bodies, refrigerators and freezers manufacturers and importers, collectors and recycling companies and individuals, Top-ten Chile, World Wildlife Fund (WWF) Chile, Organization of consumers and users of Chile, Chile sustainable, Environment institute (IDMA), and Other environmental advocates and consumer groups. However, there was no explicit mention of low-income households and women as stakeholders in the stakeholder identification section of the document. It is important to note however that in other parts of the Project Document, lower-income households and women are mentioned as beneficiaries of project activities and that they would be taken into account when designing the communication campaign. Concerns about indigenous peoples were not identified in the project document.

92. Although the project document mentions in various parts that a consultation process took part that helped design the project's outputs and obtain private sector co-financing, a thorough description in the project document of the consultation/participation process itself during project design stage was not included. The prodoc mentions stakeholder consultations at PPG stage when describing changes made to the project and includes endorsement letters of key stakeholders as annexes, providing strong evidence that consultations were made. Additionally, the evaluator had access upon request to emails and documents that proved that consultation processes had taken place with the stakeholders for which there was no endorsement letters annexed.

93. Causality was convincingly described: outputs, outcomes and impact are correctly identified in the TOC. The outputs are realistic, outcome's drivers and assumptions are identified as well as stakeholders at the different levels. The casual pathways that are present were convincing from outputs to outcomes to impact. During the consultation processes for this review, these pathways were confirmed. The project had some changes in its activities and outputs during implementation as a result of adaptive management measures reactive to context changes, but those did not affect the underlying strong logic of the project's TOC, as shown in the reconstructed TOC in this review.

94. A potential weakness in the TOC was that there were no outputs specified to strengthen Collection and Recycling Service Organization (CRSO) operators. Instead, the TOC made the assumption that sufficient technical capacities existed to provide collection and recycling services. Additionally, although the original output 4.3 called for the development of a business model for CRSO, it assumed that the financial returns would be attractive for investors. The review investigated whether these were a problem at implementation stage, confirming that: (i) there was at least one CRSO with sufficient capacities (tested by the project management and shown through the high amount of refrigerant gases this CRSO is able to

capture from out-of-use refrigerators); and (ii) output 4.3 changed to the WEEE law, removing the need for attractive returns for the scheme to make CRSO business models viable. As a result, these concerns during inception were disregarded for the final review.

95. During inception, a potential incoherence in sequencing was identified: output 3.1 was a communications campaign to increase user acceptance and understanding of high efficiency products and updated labelling and MEPS. However, it was impossible that these MEPS and EE labels would be ready in time for the communication campaign, as output 1.1 was to have updated MEPS and EE labels and its implementation plan developed, but not available in the market and enforced by regulatory agencies. As a result, the potential sequencing incoherence is that output 3.1 has to communicate outcome 1, whereas within the project implementation period, only output 1.1 would be delivered. The work plan with deliverables and benchmarks of Annex I of the ProDoc highlights this potential incoherence, as the communication campaign was planned at the same time as the new MEPS and EE labels were to be developed. The review specifically investigated this, finding that the PMU together with relevant stakeholders decided to maintain the design of the energy efficiency label although the underlying technical specifications would change under the new protocols. As a result of this adaptive management actions implemented to handle it, the PMU was able to implement a awareness and communication campaign about the label that would not become outdated once the new standards start being enforced, solving the sequencing incoherence.

96. Governance and supervision arrangements were a strength of this project's design, building upon the stakeholder structures and experience set by the en.lighten project, with clear responsibilities assigned to stakeholders aligned to their respective attributions in Chile. Partnerships are also clearly defined and aligned with the capacities of government and regulatory agencies, testing laboratories and companies.

97. Regarding learning, communication and outreach, the knowledge management approach is thoroughly described in the project document. Communication campaigns are a central part of this project. The ProDoc does not suggest specific strategy, messages and tone for the communications campaign as its development is part of the project's activities, which is logical as these had to be developed specifically for the Chilean case during implementation. Given that there is comparatively less experience in promoting energy efficient home appliances in lower income countries, the experience in Chile can provide valuable lessons for other such countries seeking to implement similar measures, which will be described in the corresponding section of this review. The Chilean government chose an executing agency that is widely regarded by the stakeholders for its prowess creating and managing communications campaigns, resulting that choosing FCh as the executing agency a strong design decision given the specific communications needs of this project.

98. During inception, resource mobilization for private sector partners seemed to be high compared to project total budget. Finally, some of these contributions did not materialize but other, non-expected contributions did. Results were not jeopardized as a result of these changes, in part because of the strong design of this project that leveraged existing institutions, stakeholders and their formal and informal connections.

99. The gender marker score for this project is 2a: gender is well mainstreamed throughout. The project focused on promoting efficiency (activity 3.1.1) though a

technical specification update, and implementing gender sensitive campaigns (activity 3.1.2), but did not provide guidance on the specific messages to communicate other than the core message of efficiency and the call to consider gender. These were to be developed during project execution: the ProDoc mentions a gender consultant to be hired during project implementation that would deliver a study to take into consideration gender and socio-economic aspects of the communication campaign. Gender issues are considered mainly on the consumer side, so as to consider gender differences when shopping for refrigerators. However, the project notes on its background information that there is a significant gender gap in energy sector companies in Chile. The review looked for information on whether this is the case within the companies involved in the project, particularly at testing labs or at CRSO operators, not confirming the gender gap present in the rest of the energy sector in Chile. Considering the economy-wide gender employment gap and the specific one at the energy sector, there may have been an opportunity to train women as technicians for the electric sector, but this is not related to the core impact of the project and not a clear omission at the design stage as a result. Postponing the hiring of the gender consultant to implementation instead of during design may have reduced the gender impact of this project.

100. During the review, the overall Project Design Quality Score was upgraded to 5.64: highly satisfactory as a result of the non-confirmation of the concerns described previously.

Rating for Project Design:	**Highly satisfactory**

C. Nature of the External Context

101. During 2019, an unprecedented social uprising happened in Chile, with massive demonstrations throughout the country. This social uprising centered in access to education, health and other welfare for large portions of the populations that felt excluded. As the massive demonstrations advocated for access to basic rights, it meant a non-receptive environment to the communication campaign to acquire a new (and efficient) refrigerator as many felt that more pressing needs were to be prioritized in the country. The sudden change in the external context required to abort the planned communications campaign that was centered on acquiring a new refrigerator to avoid a backlash.

102. As a result, the core message had to be redesigned considering new social priorities raised from the social uprising. The new communications campaign would now center on the environmental benefits of properly disposing and recycling an inefficient refrigerator, as well as the environmental benefits of energy efficient equipment. Although the change of message may seem subtle, it carries deep implications: the first (aborted) campaign would center on "newness", carrying a message of consumption of new equipment that may have generated a backlash, whereas the new campaign centered on the environment and avoiding consumption of energy. As a result, the PMU and PMC successfully adapted to this first considerable challenge resulting from the external context.

103. Then, in 2020 the COVID-19 pandemic took over the world. In Chile and for this project, it made the planned campaign non-viable: the original replacement campaign, designed as a roadshow with an itinerating showcase of efficient refrigerators, was not possible in a health confinement reality. A second deep change in plans had to be implemented, cancelling the roadshow and converting the campaign to a fully online-retailer implementation, as well as a new logistics plan for at-home recollection of old refrigerators and delivery of new ones in partnership

with a CRSO and a retailer. This new campaign was highlighted by all stakeholders as highly successful and had a very high demand for replacing old refrigerators (measured by sign-ups to the program that far outstripped supply).

104. Particularly the COVID-19 pandemic impacted all activities in the project, both those aimed at capacity building (in-person lessons, travelling, etc. were all banned under the pandemic) and the communication campaign as well, as described. It required a complete redesign of the approach to these activities, resulting in a request for an 11-month project extension, which was granted.

105. From a cost perspective, the impacts of these challenges were successfully minimized by the PMU: the communications campaigns were canceled just before their implementation, avoiding incurring in their costs, and capacity building travelling was substituted with online training that saved costs and allowed for more participants to receive the capacity building.

106. As a result, two highly impactful, highly unlikely events (black swan-type events) occurred during project execution that severely impacted its implementation. The PMU together with the PMC designed and implemented changes that not only eliminated the impacts of these events in the outcomes of the project, but also improved some of its outputs. Some important lessons learned from this project arise from these changes.

Rating for Nature of the external context: Highly unfavourable

D. Effectiveness

Availability of Outputs

107. Output 1.1, National MEPS and EE Labels for refrigerators updated and implementation plan developed, was successfully delivered, consistent with the project's indicators and targets. Stakeholders reported high quality perception, good timeliness, great participation, great adjustment to requirements, proof of implementation underway for EE Labels[14], implementation expected to begin soon for MEPS. UNEP's comparative advantage in outputs such as this one should be considered a recommendation for future projects.

108. Output 2.1, MVE scheme assessed and improvements documented to ensure products' compliance with EE labels and MEPS, was successfully delivered, consistent with the project's indicators and targets. The project delivered the improved labelling and MEPS proposal to public regulators, which they reviewed as high quality. These deliverables were also made available to the reviewer as part of the deliverable documents package. Stakeholders reported high quality perception, commenting on the high usefulness of knowing and exchanging about the experience of other countries and adjustment of alternatives to different contexts, good timing and effective delivery even through a challenging external context.

109. Output 2.2, National laboratories strengthened to verify compliance with updated standards and protocols, was successfully delivered, consistent with the project's indicators and targets. Activities for this output were changed to allow delivery under COVID-19. Recipients of capacity strengthening valued the output very highly. Activity redesign allowed for increased scope of capacity building and

[14] 1. https://energia.gob.cl/consultas-publicas/especificaciones-tecnicas-para-el-diseno-de-la-etiqueta-de-eficiencia-energetica-para-los-aparatos-de-refrigeracion-de-uso-domestico

increased receptiveness to capacity building efforts. The redesigned activities for this output should be considered as a lesson for future similar projects.

Figure 8 Testing lab personnel and the reviewer at a testing laboratory in Santiago, Chile, 11/JAN/2023

110. Output 2.3, Monitoring and verification procedures and methodology to measure energy savings from the removal of old-but-operable refrigerators from service developed, was delivered as shown in project deliverable documents.[15] This was evidenced by an assessment of the project's performance against its indicators and targets, considering the target of *availability* of the Monitoring and Verification Procedures and *Methodology* (emphasis added by reviewer). Some stakeholders reported it was not fully achieved but referring to the monitoring and verification itself and not the availability of the methodology, commenting that significantly increased efforts and time (10+ years according to a relevant and technically highly proficient stakeholder) would be needed to have a representative measurement of energy savings from the removal of old-but-operable refrigerators from service.. This output was undertaken associated to the "refriclaje" campaign, surveying consumers who signed up to the replacement programme about their current

[15] Specifically in file "Refriclaje resultados consolidados etapas 1 y 2.pdf"

refrigerators. As this survey was done between self-selected individuals, it may not be representative of the complete installed base of refrigerators as it is not a randomly selected representative sample of the general population. A market-wide, representative and continuous survey with recurrent waves would be needed to fully achieve this outcome, which is admittedly beyond the scope of a three-year project. The results from output 2.3 where sufficient to calculate the potential emissions reductions from the replacement campaigns, supporting its corresponding outcome.

111. Output 3.1, Communication campaign developed and its impact evaluated to increase user acceptance and understanding of high efficiency products and updated labelling and MEPS, taking gender-sensitive perspective into account, was delivered, consistent with the project's indicators and targets. As there might have been a sequencing concern between this output and the availability of new MEPS and EE labeling, relevant stakeholders decided to maintain the design of the new label the same as the previous one, but changing the specifications contained in each efficiency level. As a result, the campaign will not be outdated as the new labels and MEPS come into force because the label is the same[16]. The campaign has a permanent nature (can currently be accessed as of February 2024) through the topten.cl website, increasing its scope in time.

112. Output 3.2, Replacement demonstration programmes on energy efficient refrigerators implemented in the residential sector, was delivered. This was evidenced by an assessment of the project's performance against its indicators and targets. Activities for this output had to be redesigned to respond to the challenging environment. Stakeholders involved valued the demonstration program highly, and reported that it allowed for learning and capacity building for more massive programs for various stakeholders in the value chain. Demand for refrigerator replacement far outstripped de demo program's scope and budget, showing the high interest among consumers in EE refrigerators as well as in replacing their inefficient-but-functioning ones.

113. Output 4.1, Strategy proposal for a national framework and an environmentally sound management of refrigerators/freezers developed and communicated to local stakeholders, was delivered, consistent with the project's indicators and targets. Relevant stakeholders valued the output as highly useful for developing the new decree on WEEE.

114. Output 4.2, Awareness raising and communication campaigns to promote collection and recycling of refrigerators conducted, was delivered. This was evidenced by an assessment of the project's performance against its indicators and targets. This campaign worked as a test for the demonstration programme, identifying partners with the needed capabilities and developing the coordination arrangements between all relevant actors in the collection and recycling logistics effort. This adaptive management action laid the foundations for a successful demonstration programme, showcasing PMT's strategic management to increase chances of success in future output delivery. This also worked as a confirmation that CRSOs existed in the country with the needed capabilities, as assumed by the ProDoc.

115. Output 4.3, Supreme Decree on waste of electrical and electronic equipment (WEEE) based on best international practices is proposed for adoption by the

[16] Note that the new regulatory label contained in the approved regulation is the same one as the 2013 one: https://www.bcn.cl/leychile/navegar?i=1206603

Ministry of Environment, was delivered. This output was redesigned from the original ProDoc. The new output supports the same outcome as before but it shows increased fit with the approach adopted by the relevant stakeholders as their understanding and knowledge of the challenge deepened, as well as maximizing the opportunity to regulate waste management on this sector and other related sectors. The proposed decree is currently undergoing its final approval process with some extended deadlines from the original plan, as progress can be seen at https://economiacircular.mma.gob.cl/aparatos-electricos-y-electronicos.

116. Particularly as a result of output 2.3 described in paragraph 110, availability of outputs is considered satisfactory. Had this output considered a more representative survey, availability of outputs would have been considered highly satisfactory.

Achievement of Project Outcomes

117. Outcome 1 of Accelerated transformation of the market for EE residential refrigerators/freezers via implementation of advanced MEPS and EE labels in line with international best practices and provision of associated capacity building, is fully achieved. The evidence available to the review is: (i) EE labelling change has been implemented (see https://www.bcn.cl/leychile/navegar?i=1206603), (ii) new MEPS regulation started enforcement by relevant government stakeholders (see https://www.bcn.cl/leychile/navegar?i=1206603), (iii) Stakeholders fully own project's supporting outputs, (iv) Laboratories certification bodies are ready for adopting the new protocol, (v) EE improvement in new refrigerators sold already underway[17] and (vi) Increased consumer awareness on energy efficiency for refrigerators. Although the new regulations are approved, for completing government adoption (and complete delivery from a project perspective), the new MEPS and EE labelling regulations. Please refer to Annex XII for a detailed analysis of indicator achievement for this outcome.

118. Outcome 2 of Actors comply with improved MVE labeling regulations, testing protocols and measurements methodologies to ensure residential refrigerators/freezers meet improved efficiency levels is fully achieved. Evidence available to support this is: (i) Laboratories and certification bodies are ready for adopting new protocol, (ii) Refrigerators suppliers support new labelling and MEPS and are already complying in some new models, as reported by various stakeholders, (iii) Regulatory bodies report to be ready to implement new protocols, (iv) High reported acceptance from all stakeholders on new MEPS and EE regulations. Please refer to Annex XII for a detailed analysis of indicator achievement for this outcome.

119. Outcome 3 of Enhanced awareness among consumers and market players in Chile to understand, afford, and purchase EE refrigerators/freezers, successful replacement model for inefficient refrigerators demonstrated, is fully achieved. Evidence to support this is: (i) Demand for replacement demo program outstripped supply (more than 8,000 sign-ups for replacement for 1,600 slots available), showing increased consumer interest in replacing inefficient refrigerators, (ii) the replacement campaign was successfully delivered and reached its objectives, (iii) Communication campaign had wide reach to raise awareness on EE refrigerators (more than 470,000 impressions, various printed press articles available to the reviewer about the campaign, a primetime news interview on the program spiked

[17] As reported by stakeholders, some manufacturers are already complying with the new EE label.

signups to the replacement campaign), (iv) Regulatory and technical framework agreed and currently under implementation. See also Annex XII.

120. Outcome 4 of Strategy proposal for a national framework and an environmentally sound management of refrigerators/freezers developed and communicated to local stakeholders and implementation began on a voluntary basis, is fully achieved. Evidence to support this is: (i) WEEE decree currently undergoing final approval process[18] and Project's outputs deemed crucial for developing the decree by relevant stakeholders. See also Annex XII.

Achievement of Likelihood of Impact

121. The drivers to support the transition from outputs to project outcomes are all in place, as well as the assumptions for the change process from outputs to outcomes are valid and hold. Although one output may not have been fully achieved yet, it did not prevent the achievement of the related outcome.

122. All project outcomes are fully achieved, and drivers to support the transition from outcomes to intermediary states are in place. Additionally, assumptions for the change process from project outcomes to intermediary states hold.

123. Most intermediary states have been fully achieved, some of them before scheduled. The intermediary state of reduction of refrigerant gases released to the environment is currently partially achieved, and needs the supreme decree on WEEE to be fully approved for full achievement. Assumptions for the change process from intermediary states to impact are holding even though the very challenging external context put some of them into question.

124. As a result, the likelihood of impact of this project is rated as highly likely.

Rating for Effectiveness: Highly satisfactory

E. Financial Management

Adherence to UNEP's Financial Policies and Procedures

125. There is complete evidence available in documents that all accounting years were audited according to relevant policies. Stakeholders report timely approval of cash advancements and correct communications and adherence to standards during project execution.

126. There is available documentary evidence of regular analysis of actual expenditure against budget and workplan. Stakeholders report timely submission of quarterly expenditure report and expenditures are within approved budgets or expected tolerances (10%), or within revised budgets. Additionally, budget revisions were made for expenditure variations above 10%

Completeness of Financial Information

127. There is high level project budget available for secured and unsecured funds available, as well as high level project budget by funding sources available for secured and unsecured funds, disbursement (funds transfer) document from funding sources (GEF) to UNEP available, and a project budget by outcome is available.

[18] The approval process can be followed at rechile.mma.gob.cl and searching for RAEE (the acronym for WEEE in Spanish).

128. The final co-finance report is available, but does not perfectly match final audit report for co-finance for all lines. Some co-finance contributors did not provide full information on their contributions, and as a result the co-finance is underreported.

129. There is a re-approved project budget for project extension available, and audit reports for executing agency are available as well. No management response to audit report exist, but they are not deemed necessary as all audits express opinion of correct reporting according to applicable standards and regulations.

Table 11 Expenditure by Outcome/Output

Component/sub-component/output ***All figures as USD***	**Estimated cost at design**	**Actual Cost/ expenditure**	**Expenditure ratio (actual/planned)**
Component 1	36,442	35,686	97,9%
Component 2	154,687	127,375	82,3%
Component 3	554,497	542,272	97,8%
Component 4	208,481	226,653	108,7%
Monitoring & evaluation	23,500	29,868	127,1%
Project Management Costs	115,501	123,519	106,9%
U4E	380,654	335,653	88,2%
Total	1,473,762	1,421,027	96,4%

Table 12 Co-financing Table

Co-financing (Type/Source)	**UN Environment own Financing (US$1,000)**		**Government (US$1,000)**		**Other* (All co-financing sources to be identified) (US$1,000)**		**Total (US$1,000)**		**Total Disbursed (US$1,000)**
	Planned	**Actual**	**Planned**	**Actual**	**Planned**	**Actual**	**Planned**	**Actual**	
– Grants									
– Loans									
– Credits									
– Equity investments									
– In-kind support	50	57	2,802	2,464.047	4,554.551	1,260.310	7,441.551	3,781.357	3,781.358
– Other[19] -									
Totals	50	57	2,802	2,464.047	4,554.551	1,260.310	7,441.551	3,781.357	3,781.358

Table 13 Financial Management

NON-GEF AND GEF PROJECTS		
Financial management components:	**Rating**	**Evidence/ Comments**
4. Adherence to UNEP's policies and procedures:	**HS**	
Any evidence that indicates shortcomings in the project's adherence[20] to UNEP or donor policies, procedures or rules	No	PMT and UNEP provided complete singed documentation on adherence, interviews confirmed procedures
5. Completeness of project financial information[21]:		

[19] This refers to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.
[20] If the Review raises concerns over adherence with policies or standard procedures, a recommendation maybe given to cover the topic in an upcoming audit, or similar financial oversight exercise.
[21] See also document 'Criterion Rating Description' for reference

NON-GEF AND GEF PROJECTS			
Financial management components:		**Rating**	**Evidence/ Comments**
Provision of key documents to the reviewer (based on the responses to A-H below)		**HS**	
A.	Co-financing and Project Cost's tables at design (by budget lines)	Yes	Highly detailed tables available per year
B.	Revisions to the budget	Yes	Highly detailed tables per component and per account type, documentation on procedures available
C.	All relevant project legal agreements (e.g. SSFA, PCA, ICA)	Yes	All relevant documents are available and organized
D.	Proof of fund transfers	Yes	Available and organized
E.	Proof of co-financing (cash and in-kind)	Yes	Proof of co-financing available for all but one (additional and above planned) cofinance, as reported in 2022 PIR.
F.	A summary report on the project's expenditures during the life of the project (by budget lines, project components and/or annual level)	Yes	Highly detailed excel files available per year
G.	Copies of any completed audits and management responses *(where applicable)*	Yes	All documentation related to the audits is available
H.	Any other financial information that was required for this project (list):	No	No other information is considered necessary.
6. Communication between finance and project management staff		**HS**	
Project Manager and/or Task Manager's level of awareness of the project's financial status.		HS	Interviews and documentation show high level of awareness and coordination
Fund Management Officer's knowledge of project progress/status when disbursements are done.		HS	Established and followed standard procedures on reporting eased information transfer
Level of addressing and resolving financial management issues among Fund Management Officer and Project Manager/Task Manager.		HS	Adherence to established standard procedures minimized financial management issues
Contact/communication between Fund Management Officer, Project Manager/Task Manager during the preparation of financial and progress reports.		HS	All parties reported good communication. Organized, detailed and audited documentation was available on time
Project Manager, Task Manager and Fund Management Officer responsiveness to financial requests during the review process		HS	All requests were responded quickly and completely
Overall rating		HS	**Executing agency and implementing agency proved best-practice approach to financial management, with thorough and audited information and high conformity reported among all parties.**

Communication Between Finance and Project Management Staff

130. During interviews, the project manager showed a strong awareness of financial status and changes to the project. There is documentary and stakeholder-reported evidence that disbursements were made against detailed and consistent quarterly financial and technical progress reports. Stakeholders report regular contact between FMO and PM, and there is documentary and stakeholder-reported evidence on PM and FMO proactivity in resolving financial issues liked to the very challenging operating environment. As a result, there is evidence available on internal coordination that positively affected project implementation, particularly within the very challenging operating environment, which was able to manage the external impacts and achieve planned outcomes.

Rating for Financial Management:	**Highly satisfactory**

F. Efficiency

131. The very challenging environment required a project extension. This extension is deemed as unavoidable as the two black swan-type events (the 2019 social uprising and the 2020 global pandemic) required deep changes in planned activities. However, the project extension does not appear to have increased costs significantly, management or otherwise. The activities themselves were cancelled before they incurred in costs, and some of the redesigned activities (such as substituting travelling with online training) saved costs and allowed to reach a wider audience. This can be a lesson learned for future similar projects on how to implement these capacity building activities. Stakeholders report very high satisfaction with and effectiveness of these redesigned capacity building activities.

132. Redesigned communication and demonstration campaign was effective, as shown by the very significant demand for refrigerator substitution benefits that far outstripped supply. Stakeholders mentioned that the budget for a countrywide communications campaign was limited and that impact would have been limited as well, and as a result PSC was able to secure an interview about the project during an evening news show. This resulted (as reported) in a very significant spike in interest in the replacement campaign, and has implications for the recommendations section in this review.

133. The redesign of the communications campaign did not incur in significant sunken costs as most of them were tied to its execution. As it was cancelled right before its start, these costs were avoided. Additionally, the communications campaign was designed to address the project design sequencing concerns of requiring communicating an output (the new EE labels) that would not be readily enforced during the campaign execution, as it required more time for enforcement in accordance with applicable regulations.

134. The project leaned heavily on pre-existing formal and informal networks and work experience from previous en.lighten project and other projects, were the executing partner already worked with the relevant ministries, and government professionals also already had worked with the other stakeholders. For example, the regulatory agency for energy efficiency already had a strong relationship with testing laboratories, and the ministries themselves also have various projects in which they work together other that this one. These strong formal and informal networks allowed the project to execute efficiently while allowing participation of all relevant stakeholders, as well as quickly adapting to the changing and challenging environment to deliver planned outputs and outcomes. The project's activities strengthened some of these links as well into the future, particularly through the

capacity building activities, which allowed increased trust between regulators, laboratories, and other stakeholders.

135. The highly technical work that the project required was backed by strong capacities from UNEP's U4E, the executing agency's, and the selected consultants', which are widely regarded by stakeholders as highly helpful and technically proficient. The project had knowledgeable government and private counterparts which showed high ownership (and pride) of the outputs during interviews, increasing probability of high-quality products adjusted to their requirements.

136. Various stakeholders reported on the PMU's management prowess in following consultancies and on-time delivery, as well as in maintaining effective communication between parties for the products' quality assurance.

Rating for Efficiency: **Highly satisfactory**

G. Monitoring and Reporting

Monitoring Design and Budgeting

137. M&E budget and workplan covers standard practice with industry-average funds. However, there were no specific funds allocated for a survey to respond to indicator 7 on consumer awareness of EE labelling. GEF core indicator on the number of beneficiaries disaggregated by gender also had no specific funds, although as a GEF-6 project, GEF core indicators were not part of the original design. As such, Monitoring design and budgeting is reviewed as satisfactory.

Monitoring of Project Implementation

138. Planned M&E activities were carried out and relevant documents were delivered. No delays in delivering these were reported and indicators all achieved their designed end-of-project levels.

139. Indicator for outcome 2, "time taken to get a certification for new products to be placed on the market" (indicator 5), was not deemed as relevant for stakeholders as a proxy for measuring actors compliance with regulations. However, both public and private stakeholders reported that actors are eager to comply with improved MVE labelling regulations and testing protocols. As a result, the indicator does not seem to reflect outcome achievement, as international testing is not seen as a way to reduce the time it takes to get a certification for a new product, because the testing must be done within the new (project-developed) Chilean protocol, and the time it takes to carry out that test is fixed in the protocol (it requires a number of days for stable measurement of internal and external temperatures of the refrigerators). International testing could reduce this time if national laboratories were at capacity and there was a queue, but stakeholders do not report that is currently the case. The site visit showed some idling capacity at two testing laboratories, corroborating reported evidence.

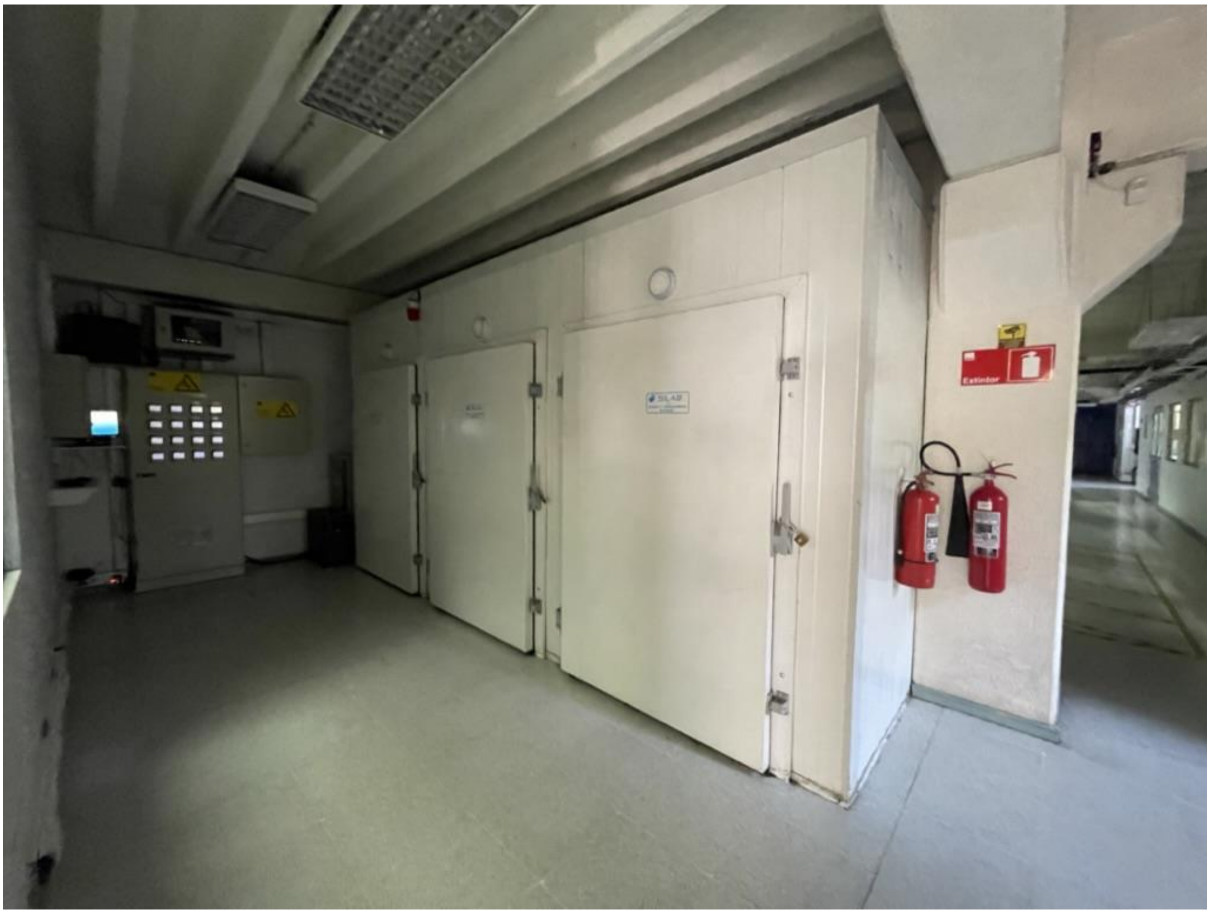


Figure 9 refrigerator testing chambers at an equipment testing laboratory in Santiago, January 13th 2023

140. A specific survey for the indicator on how much consumers understand EE labelling was not carried out, as it was not planned in the project's activities. The survey that was in fact carried out was a question within a survey for interested consumers in changing their refrigerators, exposing the result to self-selection bias, as it is asking already-aware consumers on their awareness on energy efficiency. As a result, monitoring of project implementation is considered satisfactory.

Project Reporting

141. The project shows complete reporting documentation and there is evidence of its in-time delivery. For all activities involving stakeholders, there are tables available showing gender disaggregated attendance or reach. This results in a satisfactory rating in this dimension.

Rating for Monitoring and Reporting:	Satisfactory

H. Sustainability

Socio-political Sustainability

142. Outcomes have a low degree of dependency on social and political factors, as most depend on regulations in process of being implemented, and as reported all political parties support energy efficiency measures. Outcome 3 (awareness of consumers in Chile to understand, afford and purchase EE refrigerators) could need new efforts in the future as these messages may need frequent reinforcement to

stay present in the collective mindset. The final promulgation of the decrees and other regulations for the new EE labels and MEPS could provide the implementing partner with opportunities to communicate these messages again.

143. Government and private sector stakeholders show strong level of ownership through their respective leadership in advancing implementation of new standards and mechanisms. All stakeholders reported high satisfaction with the outputs as well as their participation in the output's delivery: both the process and their result were considered valid and satisfactory for stakeholders.

144. Adaptive mechanisms in place are working as planned, as changes in social norms were identified and internalized during project execution, resulting in activity redesign, and new regulations are undergoing the required public consultation processes before final approval and enforcement.

Financial Sustainability

145. Regulatory project outcomes have a high dependency on financial flows to persist, but this funding is covered for already in Chilean budget in normal functioning of its institutions, particularly in funding for the ministries and the SEC. As a result, these outcomes have no dependency on *additional* funding to baseline institutional funding, resulting in high financial sustainability of the outputs.

146. Additional funding may be needed in the future to sustain consumer awareness on energy efficiency labels and MEPS. However, an exit strategy has been initiated, particularly through the partnership with manufacturers and the retailer, both which have corporate mandates to promote sustainability and both which also see energy efficiency labelling as an opportunity to increase their competitive advantage, making them a multiplier of the communications campaigns.

Institutional Sustainability

147. All regulation proposals have been delivered according to the project's design or approved changes, and there is public evidence available that they are undergoing the process of approval (public consultation processes).

148. Capacity of both public and private stakeholders are reported (and perceived by themselves and their counterparts) as enhanced and show continuous support for project outcomes. Stakeholders also report enhanced trust between each other and eagerness to continue working in advancing their common goals in the future.

149. Institutions have strong coordination linkages in place between stakeholders, and show strong leadership in the approval processes of regulations, demonstrating that the institutional component of the exit strategy has been initiated successfully.

150. As a result, no additional support is expected to be needed, as all relevant stakeholders own and are leading their respective parts in implementing the proposed changes.

Rating for Sustainability: **Highly satisfactory**

I. Factors Affecting Performance and Cross-Cutting Issues

Preparation and Readiness

151. Preparation and readiness were some of this project's strongest aspects. The en.lighten experience gave public stakeholders a clear roadmap on how to continue

the energy efficiency approach for the Chilean case into a different home appliance sector, while counting on the U4E technical expertise to leapfrog regulations securely. These public stakeholders also act within a strong institutional setting, particularly in the Latin American context, and showed strong technical capacities and knowledge of the problem and how to tackle it.

152. The project exploited pre-existing informal and formal networks (for example between the Ministry of Energy and the SEC, or between the SEC and testing laboratories) to secure participation and information exchange.

153. Safeguard advisor to the prodoc recommended considering changing the gases of older refrigerators to alternatives with less GWP. However, relevant stakeholders considered this a high-risk alternative as the change has a high probability of releasing the old, high GWP gases to the atmosphere, backing the project's final approach.

Quality of Project Management and Supervision

154. FCh has deep connections to the local stakeholders and is a widely considered as a trusted third-party, not associated to the private nor public sector, providing it with credibility to lead and coordinate the project's outputs delivery while doing so with no conflicts of interest.

155. As mentioned throughout this review, both the Project Management and Supervision showed high responsiveness and adaptability to a uniquely challenging environment, delivering outputs despite deep and sudden context changes that required a complete redesign of activities that were central to this project. UNEP strengthened project implementation through documented close management support and technical support through U4E.

Stakeholders Participation and Cooperation

156. As mentioned throughout this review, stakeholder participation, cooperation and ultimately ownership of the project's outputs and outcomes has been a highlight of this project. Interviews emphasized whether participation was considered adequate by the stakeholders themselves, with all responses reaffirming participation was carefully considered in this project. During the interviews, stakeholders were also asked if each of them identified another stakeholder that should have been included during the project execution, but no missing stakeholders were identified.

Responsiveness to Human Rights and Gender Equality

157. The prodoc proposed hiring a gender consultant during project execution to study the possibilities of further mainstreaming gender and adopting gender-sensitive or responsive measures. However, no evidence was found that the gender consultant was hired. Stakeholders reported identifying and implementing all the opportunities available for this project to mainstream gender.

158. Gender was a focus in the communications campaign, especially as the opportunity to influence a refrigerator purchase has a small window of opportunity (people keep their refrigerators for a very long time) and women are a very relevant decision maker of that purchase in households.

159. Reportedly according to stakeholder interviews, the gender gap seen in the energy sector at large in Chile was not as present in the specific relevant organizations for this project, and stakeholders did not visualize opportunities where gender could have been further considered during project execution.

Indigenous peoples were not identified as a possible stakeholder either at design or at execution stage.

160. The very nature of this project, centered in updating an energy efficiency testing protocol, may carry few opportunities to mainstream gender in this case. However, the prodoc itself did not identify measures other than those in the communications campaigns. A recommendation for future projects to assure gender responsiveness could be to incorporate gender specialists at the design stage, in order to guide project management on the opportunities to mainstream gender in projects.

Environmental and Social Safeguards

161. A potential social risk identified in the ProDoc's safeguards was that new energy efficient refrigerators could not be affordable to lower-income people, diminishing the energy-poverty alleviating aspect of this project. To address this risk, PSC chose lower-end refrigerator models as eligible in the replacement demo program to mitigate the affordability risk and support effective energy poverty relief through the replacement of inefficient refrigerators. Additionally, lower-end refrigerators are smaller, effectively reducing energy consumption and supporting energy poverty relief, as well as not inducing fresh food stockpiling that can generate food waste. This is an important lesson learned through the implementation of this project that can be valuable for future similar projects. Another action recommended by the safeguards advisor was considering replacing the refrigerant gases of old refrigerators with gases that had less GWP instead of replacing the entire refrigerator. The reviewer consulted about this with stakeholders, who reported this alternative would not be recommended as replacing gases in a non-controlled environment (people's homes) would have greater risk of releasing the old gases into the atmosphere than recycling refrigerators in specialized facilities.

Country Ownership and Driven-ness

162. During interviews, country ownership and driven-ness appeared as a highlight, connected with the excellent preparation and readiness for this project. Stakeholders reported that the idea for the project came from national stakeholders, which can be verified through the coherence of this project with relevant national policies, strategies and agendas. These stakeholders also had the experience in working in a similar project previously (en.lighten), which set the institutional connections foundations for this project. Stakeholders reported high satisfaction and pride of the obtained outputs, highlighting country ownership. They also reported strong political backing for the project, which can be verified with the advancement of the processes towards final promulgation of the proposed regulatory changes even though there was a government change during project implementation.

Communication and Public Awareness

163. Communication and Public Awareness are another high point of this project. FCh has extensive experience in managing communication and awareness-raising campaigns and was able to quickly reformulate the campaigns in response to the changing and challenging external context. Stakeholders reported a considerable increase in public awareness after an interview with PSC was aired during an evening news show, highlighting the limits of other approaches to communication campaigns. A valuable lesson learned from this is that communication and awareness- raising campaigns for projects that require a change of attitudes in

consumers require using wide-reaching tools such as mainstream media (TV in this case). As a result, these campaigns must be designed considering all available communication instruments to maximize reach within the limited resources available in projects.

Rating for Factors Affecting Performance and Cross-Cutting Issues: Highly satisfactory

VI. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

164. The project supported Chile to increase the market share of high energy efficiency domestic refrigerators and freezers by developing supporting policies, standards and regulations as well as involving domestic consumers through replacement campaigns, educational and awareness-raising actions. Before the project started, the refrigerator market in Chile already showed signs of being able to supply more efficient equipment at no incremental cost, and Chile had experience in implementing MEPS and EE labels in refrigerators, as well as in upgrading energy efficiency protocols and MEPS though a UNEP project and with UNEP's U4E technical support.

165. It was arranged in 4 components: (i) Revising regulatory mechanisms, including minimum energy performance standards (MEPS), (ii) Enhancing monitoring, verification, and enforcement (MVE), (iii) Developing supporting policies (focused on communication and consumer engagement), and (iv) Enhancing environmentally sound management. The 4 outcomes associated to each component were: (i) Accelerated transformation of the market for Energy Efficient (EE) residential refrigerators/freezers via implementation of advanced MEPS and EE labels in line with international best practices and provision of associated capacity building, (ii) Actors comply with improved MVE labelling regulations, testing protocols and measurements methodologies to ensure residential refrigerators/freezers meet improved efficiency levels, (iii) Enhanced awareness among consumers (by gender) and market players in Chile to understand, afford, and purchase EE refrigerators/freezers and (iv) Voluntary implementation of the national framework for environmentally sound management of refrigerators/freezers started.

166. The main stakeholders in this project were the Ministry of Energy, as the leading energy policy developer in the country, the Superintendency of Electricity and Fuels (SEC for its acronym in Spanish) as the market supervisor and regulator, the Ministry of Environment as the leading environmental policy developer in the country, refrigerator manufacturers and retailers, energy efficiency testing laboratories and certification bodies, collection and recycling services organizations to remove and safely recycle and dispose out-of-use refrigerators, UNEP's U4E initiative, and consumers as the centre of refrigerator purchasing decisions and users. Fundación Chile (FCh) was selected as the executing agency by the government. Within FCh, the Project Management Unit (PMU) coordinated with a Project Steering Committee (PSC) as well as thematic technical working groups, with stakeholder representatives.

167. The project faced two black swan-type of events during its execution. In 2019, massive social protests and unrest deeply changed the operating context to new social norms and expectations, impacting the planned communication campaign's approach. Then, during 2020 the global pandemic paralyzed significant parts of the economy and ruled out social gatherings, impacting both the project's consumer-facing and laboratory-aimed activities. These highly significant events implied delays in execution as activities had to be deeply redesigned to be viable in the new context, which was also highly uncertain, prompting a request for an 11-month extension by the PMU, which was granted. This extension implied a modification of certain budget lines, although within the total budget and without affecting outputs or outcomes. In particular, the strategy to achieve this was: (i) travel expenses were significant reduced as a result of the global pandemic; (ii) capacity building efforts

done remotely were significantly less expensive; (iii) the project extension required increasing the budget for the project management team, although almost 30% of this increase was covered by the executing agency; (iv) the deep involvement of the government agencies allowed to reduce some costs through synergies with other initiatives.

168. The PMU, together with the PSC, undertook several adaptive management measures during implementation as a result of context changes but also to seize opportunities as they appeared.

169. Capacity building for laboratories was modified from an original plan of travelling to another country to understand implementation, to online training. This change allowed to reach a much wider audience within laboratories and certification bodies, not only increasing the number of technicians that received the capacity building but also allowing more instances of networking and relationship building. Laboratory technicians interviewed during this review regarded the capacity building highly and explicitly mentioned they would be interested in participating in future similar activities. Connected to this, activity 2.2.1 (interlaboratory testing) and 2.2.2 (improving capacities and facilities) was changed to adaptation of IEC 62552:2015 protocol and providing technical support to laboratories for its implementation. Stakeholders reported these changes increased trust between the project and its stakeholders as well as in-between them. As a result, pre-existing formal and informal networks were strengthened from this change.

170. Output 4.2 of creating a Collection and Recycling Service Organization (CRSO) business model for spent refrigerators was changed to proposing a Supreme Decree on waste electronic and electrical equipment (WEEE). This change seized the opportunity of the Environment Ministry already working broadly in WEEE regulation, providing the chance of regulating refrigerator recycling and disposal within that broader framework. The project provided capacity building connections for ministry technicians and other relevant stakeholders to know and understand the alternative approaches to the subject and their specific technical implications, helping them devise the best approach for the Chilean case. Stakeholders regard these activities highly, and the decree is currently undergoing the formal process towards final approval and implementation. Connected to this, activity 4.3.1 provided stakeholders with knowledge on how these schemes were implemented in other countries, allowing them to implement best practice approaches.

171. The social unrest of 2019 required halting the launch of the project's first communication campaign which had the core message of acquiring a brand-new refrigerator. This message was considered as not aligned with the Chilean society's concerns around inclusion, equity and perceived social injustice, and was redesigned towards a message with energy efficiency and the environment at its core. Although it may seem like a subtle change, the campaign was very well received (according to the campaign's measured metrics) and avoided potential backlashes that were happening at the time in Chile. This campaign was used by PMU to test and verify the capabilities of CRSOs, confirming the assumption of the project's TOC that there would be CRSOs operating in the country with the required capabilities to safely capture and recycle refrigerators and most importantly, their refrigerant gases. It also allowed for a first exercise of the "inverse logistic" effort of removing old refrigerators from consumer's houses within a pandemic context.

172. The project's design had planned a communication campaign for raising awareness on the importance and how to understand the energy efficiency labels in refrigerators. This communication campaign however was to be implemented at the same time as the new energy efficiency labels and MEPS would be being developed,

raising a sequencing concern in the project's planned activities: communicating a label that would quickly become outdated by the project's very own activities. To respond to this challenge, the PMU with the PSC, which included the relevant government stakeholders, decided to maintain the previous label graphic design while updating its underlying energy efficiency protocols and classes definitions. Through this approach, the project was able to communicate on how to understand the energy efficiency label regardless of the testing protocol underlying it.

173. The most ambitious refrigerator recollection and exchange campaign (called "refriclaje" as a portmanteau of refrigerator and recycling in Spanish) had to be completely redesigned to be viable in a pandemic context. Originally planned as a road show in partnership with local governments, the new campaign would be executed online in partnership with retailers and manufacturers, involving the CRSOs already screened for the inverse logistics and for recycling old refrigerators. Given the social turmoil context, the PMU took particular care in showing that the discounts for new refrigerators in exchange for old refrigerators were real and substantial. For this campaign, there was a risk that the new energy efficient refrigerators would not be affordable, eliminating their potential associated energy-poverty alleviation through reduced energy consumption. To mitigate this risk, the PSC decided that only relatively smaller new refrigerators would be eligible for the campaign, assuring that they would be affordable as well as that their absolute energy consumption would be low. This campaign is regarded as highly successful, shown by the sign-up registries where demand far outstripped supply.

174. CRSOs, the retailer and government agencies all agreed on the success this experience had in showing viability of the scheme and in raising awareness in both properly disposing refrigerators and the savings new energy efficient equipment can provide. Stakeholders mentioned this campaign was boosted by its appearance in an evening news TV show, shedding light on the fact that mainstream communication campaigns such as this require either deep funding and/or clever actions to reach a wide audience.

175. There is evidence that the project delivered all planned outputs and outcomes are well underway to be achieved. The logic of the intervention is sound and validated by all stakeholders, making achieving the project's planned impact highly likely. Assumptions, drivers, intermediary outcomes and their connection to impacts was validated during the review as was planned in the project's original TOC. For this review, the TOC was reconstructed with slight modifications to account for project changes during execution.

176. However, output 2.3 (Monitoring and verification procedures and methodology to measure energy savings from the removal of old-but-operable) was mentioned as stakeholders as not completely achieved. Relevant stakeholders mentioned that fully achieving this output would require continuous efforts under an extended timespan that would be out of reach for a 3-year project, and that not fully achieving the output in the short term does not jeopardize its associated output.

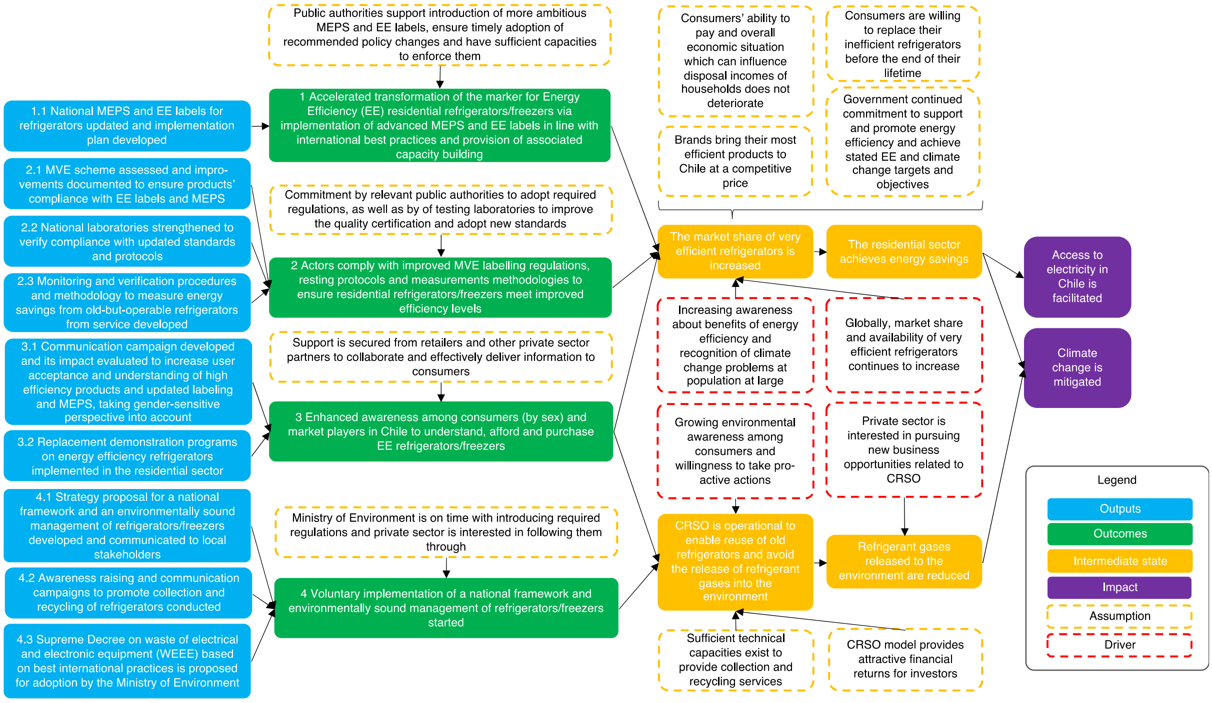


Figure 10 Reconstructed TOC at review diagram

177. All the required and planned financial information and procedures are thoroughly documented and available, and comply with UNEP's and best-practice standards. Stakeholders reported sound and transparent financial management for the project with continuous communication and on-time changes to respond to the challenging context.

178. Strategic relevance for this project is very high for UNEP, the donor and Chile. This strategic relevance is intertwined with the country's readiness, as the project responds to the country's priorities and roadmap, and UNEP was able to leverage its unique advantage through the U4E initiative to support and accelerate the country's roadmap. An important lesson arising from this is that when country initiatives align with UNEPs strategy, commons goals are shared, and each stakeholder's strengths can be leveraged to achieve outcomes an impact. Thus, it is crucial to prioritize projects that arise from country roadmaps that are at the same time aligned with UNEP's strategy. The project also builds upon the foundations set by a previous UNEP project in the country focusing in energy efficient lighting, which was mentioned by various stakeholders as very important in building the formal and informal networks required for this project as well as shared trust in achieving common goals. A valuable lessons from this is that investing time and resources in developing a country-specific pipeline of projects according to shared goals between the country and UNEP and that exploit each one's strengths can have long term impact on project effectiveness, as shared success strengthen bonds for tackling increasingly difficult challenges.

179. The project's quality of design score was increased from the review's inception to the final review, rated as highly satisfactory. Particular highlights are country readiness, strategic relevance and TOC logic. Most importantly, execution validated the TOC and is well underway to achieve planned impacts. Although there is triangulated evidence available (some of it upon request) that stakeholder consultation processes were thoroughly implemented during project design, these are not as deeply documented as suggested in review tools. Similarly, although

there is ample evidence that human rights considerations were well-thought-out, these are not as thoroughly documented in the prodoc itself either.

180. Gender is well mainstreamed for this project, particularly considering women as both household decision makers and also the most affected by energy poverty. The project's document also called for hiring a gender consultant during project execution to explore further opportunities to mainstream gender and implement gender sensitive or responsible measures. The review was not able to find evidence that this consultant was hired, but stakeholders expressed doubts in whether there were any opportunities to further implement gender-responsive measures in the specific context of this project, centred in updating energy-efficiency protocols. As mainstreaming gender and developing gender-responsive measures can be a highly technical and challenging task for a project such as this one, a recommendation for future projects is to have the input of gender professionals during project design, helping project implementors to understand how to incorporate these measures from the project's start.

181. Finally, the likelihood of impact of this project is rated as highly likely. The drivers to support the transition from outputs to project outcomes are all in place, as well as the assumptions for the change process from outputs to outcomes are valid and hold. Although one output may not have been fully achieved yet, it did not prevent the achievement of the related outcome. All project outcomes are on track to be fully achieved, and drivers to support the transition from outcomes to intermediary states are in place. Additionally, assumptions for the change process from project outcomes to intermediary states hold.

B. Summary of project findings and ratings

182. The table below provides a summary of the ratings and finding discussed in Chapter V. Overall, the project demonstrates a rating of highly satisfactory.

UNEP Evaluation Office Validation of Performance Ratings:

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

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

– That what is being assessed is the contents of the report and the extent to which it makes a consistent and justifiable case for the performance ratings it records.

- That the consultant has, within the report, presented all the evidence that was made available to them.

- That the Review has been based on a robust Theory of Change, reconstructed where necessary, which reflects UNEP's definitions at all levels of results.

- That the project team and key stakeholders have already reviewed a draft version of the report and provided substantive comments and made factual corrections to the Review Consultant, who has responded to them. The Evaluation Office assumes, therefore, that it has received the Final (revised) version of the report.

In this instance the Evaluation Office finds that the overall project performance rating is validated at the '**Highly Satisfactory**' level.

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation	EOU Validated Rating
Strategic Relevance	**Highly aligned to UNEP's, GEF's, global and national environmental priorities.**	**HS**	**The rating is validated.**	**HS**
1. Alignment to UNEP MTS, POW and Strategic Priorities	Aligned with UNEP's MTS priority area climate change, Reduction of GHG emissions, MTS priority area Environmental governance, MTS priority area Chemical, waste and air quality consistency, and BSP. Fully aligned with UNEP's U4E initiative.	HS	The rating is validated.	HS
2. Alignment to Donor/GEF/Partner's strategic priorities	The project supports the GEF climate change focal area objective CCM-1 that deals with the promotion, demonstration, deployment, and transfer of innovative low-carbon technologies, supports the strategic objective of developing the enabling conditions, tools, and environment for the sound management of harmful chemicals and wastes.	HS	The rating is validated.	HS
3. Relevance to global, regional, sub-regional and national environmental priorities	Promotes achievement of SDG 7 Affordable and clean energy, and SDG 12 Responsible consumption and production. Nationally, its aligned with (i) The national energy 2050 policy, (ii) the national Energy agenda, (iii) the management plan for HCFC phase-out in Chile.	HS	The rating is validated.	HS
4. Complementarity with relevant existing interventions/coherence	Highly complementary with a previous project that promoted energy efficient lighting equipment in Chile: en.lighten, both a part of U4E. Hosted under program SE4ALL Global Project.	HS	The rating is validated.	HS
Quality of Project Design	**Strong causality logic validated by stakeholders, assumptions and drivers hold, gender mainstreamed.**	**HS**	**The rating is validated.**	**HS**
Nature of External Context	**Two black swan-type events happened during project implementation: the 2019 social uprising in Chile, and the 2020 global pandemic.**	**HU**	**The rating is revised from HU to U** in line with guidance contained in the UNEP Criterion Description matrix. Whereas the communications campaign for the project was hampered by civil unrest and the COVID-19 pandemic, other project activities were not significantly affected.	**U**
Effectiveness	**High effectiveness on output delivery, outcome achievement and likelihood of impact.**	**HS**	**The rating is validated.**	**HS**

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation	EOU Validated Rating
1. Availability of outputs	All outputs delivered, deemed as high quality by stakeholders, who show high ownership of them. One output may need continued support from the government to be fully achieved given the needed maturation timeframe.	S	The rating is validated.	S
2. Achievement of project outcomes	Evidence available that outcomes are achieved: regulations are going through the public consultation processes, stakeholders report accordance and compliance with planned outputs, and awareness among consumers has been raised.	HS	The rating is validated.	HS
3. Likelihood of impact	Drivers to support the transition from outputs to project outcomes are all in place, project outcomes are on track to be fully achieved, and drivers to support the transition from outcomes to intermediary states are in place. Assumptions for the change process from intermediary states to impact are holding even though the very challenging external context put some of them into question.	HL	The rating is validated.	HL
Financial Management	**Executing agency and implementing agency proved best-practice approach to financial management, with thorough and audited information and high conformity reported among all parties.**	**HS**	**The rating is validated.**	**HS**
1. Adherence to UNEP's financial policies and procedures	Complete evidence available in documents that all accounting years were audited according to relevant policies. Stakeholders report timely approval of cash advancements and correct communications and adherence to standards during project execution	**HS**	The rating is validated.	HS
2. Completeness of project financial information	High level project budget available for secured and unsecured funds available, as well as high level project budget by funding sources available for secured and unsecured funds, disbursement (funds transfer) document from funding sources (GEF) to UNEP available, and a project budget by outcome is available. Some co-finance contributors did not provide full information on their contributions, and as a result the co-finance may be underreported. A re-approved project budget for project extension is available, and audit reports for executing agency are available as well.	HS	The rating is revised from HS to S in line with guidance provided in the EOU criteria description matrix. Evidence provided in the review report (paragraph 128) indicates incomplete and contradictory information on co-finance.	S

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation	EOU Validated Rating
3. Communication between finance and project management staff	Documentary and stakeholder-reported evidence that disbursements were made against detailed and consistent quarterly financial and technical progress reports. Stakeholders report regular contact between FMO and PM, and there is documentary and stakeholder-reported evidence on PM and FMO proactivity in resolving financial issues liked to the very challenging operating environment.	HS	The rating is validated.	HS
Efficiency	Very challenging environment required a project extension, deemed as unavoidable as the two black swan-type events (the 2019 social uprising and the 2020 global pandemic) required deep changes in planned activities. This does not appear to have increased costs significantly, management or otherwise. The project leaned heavily on pre-existing formal and informal networks and work experience from previous en.lighten project and other projects. The highly technical work that the project required was backed by strong capacities from UNEP's U4E, the executing agency, and the selected consultants, which are widely regarded by stakeholders as highly helpful and technically proficient. The project had a knowledgeable government and private counterparts which showed high ownership (and pride) of the outputs during interviews.	**HS**	**The rating is revised from HS to S** considering that there was a no cost extension to the duration of the project.	**S**
Monitoring and Reporting		**S**	**The rating is validated.**	**S**
1. Monitoring design and budgeting	M&E budget and workplan covers standard practice with industry-average funds. no specific funds allocated for a survey to respond to indicator 7 on consumer awareness of EE labelling. GEF core indicator on the number of beneficiaries disaggregated by gender also had no specific funds, although as a GEF-6 project, GEF core indicators were not part of the original design	S	The rating is validated.	S
2. Monitoring of project implementation	Planned M&E activities were carried out and relevant documents were delivered. No delays in delivering these were reported.	S	The rating is validated.	S

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation	EOU Validated Rating
3. Project reporting	The project shows complete reporting documentation and there is evidence of its in-time delivery. For all activities involving stakeholders, there are tables available showing gender disaggregated attendance or reach.	S	The rating is validated.	S
Sustainability	**All relevant stakeholders own and are leading their respective parts in implementing the proposed changes to achieve outcomes. Outcomes technical nature and political consensus around them reduces political exposure.**	**HS**	**The rating is validated.** The ratings for this criterion are corrected, to reflect the correct terminology, from "Highly Satisfactory" to "Highly Likely".	**HL**
1. Socio-political sustainability	Outcomes have a low degree of dependency on social and political factors, as most depend on regulations in process of being implemented, and as reported all political parties support energy efficiency measures. Government and private sector stakeholders show strong level of ownership through their respective leadership in advancing implementation of new standards and mechanisms. Adaptive mechanisms in place are working as planned, as changes in social norms were identified and internalized during project execution, resulting in activity redesign, and new regulations are undergoing the required public consultation processes before final approval and enforcement.	HS	The rating is validated.	HL
2. Financial sustainability	Regulatory project outcomes have a high dependency on financial flows to persist, but this funding is covered for already in Chilean budget in normal functioning of its institutions, particularly in funding for the ministries and the SEC. As a result, these outcomes have no dependency on *additional* funding to baseline institutional funding, resulting in high financial sustainability of the outputs. Additional funding may be needed in the future to sustain consumer awareness on energy efficiency labels and MEPS. However, an exit strategy has been initiated, particularly through the partnership with manufacturers and the retailer, both which have corporate mandates to promote sustainability and both which also see energy efficiency labelling as an opportunity to increase their competitive advantage.	HS	The rating is validated.	HL

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation	EOU Validated Rating
3. Institutional sustainability	All regulation proposals have been delivered according to the project's design or approved changes, and there is public evidence available that they are undergoing the process of approval (public consultancies). Capacity of both public and private stakeholders are reported (and perceived by themselves and their counterparts) as enhanced and show continuous support for project outcomes. Stakeholders also report enhanced trust between each other and eagerness to continue working in advancing their common goals in the future.	HS	The rating is validated.	HL
Factors Affecting Performance			**The EOU awards a rating based on its Weighted Ratings Table**	**HS**
1. Preparation and readiness	One of this project's strongest aspects: en.lighten experience gave public stakeholders a clear roadmap on how to continue the energy efficiency approach for the Chilean case into a different home appliance sector. Public stakeholders act within a strong institutional setting and showed strong technical capacities and knowledge of the problem and how to tackle it.	Not Rated	The EOU assesses this factor as HS based on the continuity demonstrated from en.lighten and the connectivity with U4E.	HS
2. Quality of project management and supervision	Widely trusted executing agency with extensive experience in development projects showed prowess in managing the project through notoriously tumultuous times. UNEP implementation provided strong formal management support (evidenced by thoroughly complete and in time formal documentation and reported by stakeholders), as well as technical support through U4E.	HS	The rating is validated. The EOU notes that references to project management and execution appear throughout the report but also relies, implicitly, on the strong performance of the project to justify the rating.	HS
2.1 UNEP/Implementing Agency:	Project Management and Supervision showed high responsiveness and adaptability to a uniquely challenging environment, delivering outputs despite deep and sudden context changes that required a complete redesign of activities that were central to this project. . UNEP strengthened project implementation through documented close management support and technical support through U4E.	HS	The rating is validated.	HS

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation	EOU Validated Rating
2.2 Partners/Executing Agency:	FCh has deep connections to the local stakeholders and is a widely considered as a trusted third-party, not associated to the private nor public sector, providing it with credibility to lead and coordinate the project's outputs delivery while doing so transparently.	HS	The rating is validated. Para 97 refers to the strong role of the Partner	HS
3. Stakeholders' participation and cooperation	Stakeholder participation, cooperation and ultimately ownership of the project's outputs and outcomes has been a highlight of this project, as shown consistently during interviews.	HS	The rating is validated. Section IV describes the roles played by stakeholders in the causal pathways.	HS
4. Responsiveness to human rights and gender equality	The very nature of this project, centered in updating an energy efficiency testing protocol, may carry few opportunities to mainstream gender in this case other than the already implemented by the project in the communications campaigns. However, the opportunities to transform gender relations through the project could have been further explored.	S	The rating is adjusted. The EOU notes in para 157 that the project design anticipated the recruitment of a gender specialist and no justification is given for this not happening. In para 159 the report appears to suggest that the project did not take measures to address the gender gap in Chile.	MS
5. Environmental and social safeguards	Environmental and social safeguards correctly managed risks.	HS	The rating is revised from HS to MS. The report does not provide information on the availability and appropriateness of a safeguards management plan, review of the risk ratings, project efforts in monitoring the safeguarding issues and responses taken (if any) and reporting.	MS
6. Country ownership and driven-ness	Country ownership and driven-ness appeared as a highlight, connected with the excellent preparation and readiness for this project	HS	The rating is validated.	HS
7. Communication and public awareness	FCh has extensive experience in managing communication and awareness-raising campaigns and was able to quickly reformulate the campaigns in response to the changing and challenging external context. Campaigns were highly regarded by stakeholders during interviews.	HS	The rating is validated.	HS

Criterion	Summary assessment	Rating	Justification for any ratings' changes due to validation	EOU Validated Rating
Overall Project Performance Rating	**A very well-designed and prepared project aligned with national and supranational priorities, that was executed and implemented efficiently and effectively even though a uniquely challenging context happened. Planned impacts are expected to be achieved.**	**HS**	**The overall rating is validated.**	**HS**

C. Lessons learned

Lesson Learned #1:	**Moving capacity building activities to online seminars can be effective and efficient**
Context/comment:	As a result of the pandemic, the project had to change capacity building activities from a travelling to a European laboratory to online seminars. This change allowed to reach a wider technical audience within laboratories while saving costs. This capacity building approach is also more flexible and allows better scheduling with other activities.

Lesson Learned #2:	**Country readiness and ownership are key foundations for results delivery even through a highly challenging context**
Context/comment:	Country stakeholders showed high ownership, driven-ness and pride in the accomplished project results. These national actors also showed technical prowess and knowledge of the subject matter. As a result, choosing projects that are aligned with national strategies increases the chances of successful delivery, as well as investing in capacity building of these stakeholders at the national level.

Lesson Learned #3:	**Leveraging UNEP's advantage strengthens project delivery**
Context/comment:	UNEP's U4E initiative provided strong technical guidance and backstopping for this technically sophisticated project, allowing for it to quickly deliver the technical outputs required. Given the short timeframes of these types of projects, focusing on those that leverage on UNEP's unique advantages increase chances of successful delivery of results.

Lesson Learned #4:	**Framing the project within a national pipeline strengthens project delivery**
Context/comment:	The previous energy efficiency-focused project (en.lighten) build relationships and networks between stakeholders that already shared success before this project started. As these networks are crucial for interinstitutional coordination for results delivery, building new projects upon a pipeline of technically and institutionally related projects increases their chances of successful results.

Lesson Learned #5:	**Leveraging strong teams already working in the country strengthens project delivery**
Context/comment:	FCh was selected by the government as the executing agency for this project. The agency has strong technical capacities and already works with government stakeholders in other development projects. As a result, identifying and leveraging teams already working in the country increases the chances of successful results.

Lesson Learned #6:	**Communicating energy efficiency to crisis-struck societies and low-income households requires a different approach**
Context/comment:	Increasing installed equipment's energy efficiency frequently requires investing in new equipment. Within our societies, new equipment is many times regarded as a good value in itself. However, within crisis-struck societies, the priorities for consumption may change and other values, such as saving or reducing consumption, may gain importance. In this context, communicating energy efficiency may be more effective if centred in the environmental benefits it provides (aligned with the reducing consumption value) instead of centring in acquiring newer, more technological equipment.

D. Recommendations

Recommendation #1:	**Follow through the promulgation of regulations to achieve impact.**
Challenge/problem to be addressed by the recommendation:	To finally deliver expected outcomes, proposed regulations must effectively enter into force. During the project review, evidence was gathered that this process is following through, but it must reach its promulgation to achieve outcomes.
Priority Level:	Critical
Type of Recommendation	Partners
Responsibility:	UNEP project staff should pass on the recommendation to the relevant third party in an effective or substantive manner
Proposed implementation time-frame:	Within 2023

183. Cross-reference(s) to rationale and supporting discussions:

- Section V paragraph 143

Recommendation #2:	**Implement a long-term strategy for Monitoring and verification to measure energy savings from the removal of old-but-operable refrigerators to accurately measure energy and GHG emissions savings in the long run.**
Challenge/problem to be addressed by the recommendation:	Output 2.3 would need more time and resources sustained within that timeframe (outside project's boundaries) to be fully achieved.
Priority Level:	Medium level
Type of Recommendation	Partners
Responsibility:	UNEP project staff should pass on the recommendation to the relevant third party in an effective or substantive manner
Proposed implementation time-frame:	Starting in 2023, sustained for the number of years deemed necessary for the Ministries to achieve complete output delivery.

184. Cross-reference(s) to rationale and supporting discussions:

- Section IV paragraph 68

Recommendation #3:	**Continue implementing energy efficiency awareness raising campaigns into the future.**
Challenge/problem to be addressed by the recommendation:	Awareness-raising on a population level is difficult and requires constant efforts. The final enforcement of the new MEPS and energy efficiency labels, after the two-year implementation period considered in the regulation, requires and provides the opportunity to continue communicating on the importance of choosing energy efficient equipment for promoting household energy access and mitigating GHG emissions.
Priority Level:	Medium level
Type of Recommendation	Project level
Responsibility:	Partners
Proposed implementation time-frame:	Immediate for projects at the design stage in the project pipeline.

185. Cross-reference(s) to rationale and supporting discussions:

- Section VI paragraph 173

Recommendation #4:	**Consult gender specialists on gender responsiveness at project design stage**
Challenge/problem to be addressed by the recommendation:	Difficulty in finding opportunities to mainstream gender within an energy efficiency testing protocol project other that women as consumers, particularly during project implementation.
Priority Level:	Low level
Type of Recommendation	Project level
Responsibility:	UNEP
Proposed implementation time-frame:	Immediate for projects at the design stage in the project pipeline.

186. Cross-reference(s) to rationale and supporting discussions:

- Section V paragraph 99

ANNEX I. RESPONSE TO STAKEHOLDER COMMENTS

Table 5: Response to stakeholder comments received but not (fully) accepted by the reviewers, where appropriate

Page Ref	Stakeholder comment	Evaluator Response
	Xxx	Xxx

ANNEX II. REVIEW FRAMEWORK/MATRIX

No	Review criteria	Sub Questions	Indicators / Means of verification	Data sources
	A. Strategic Relevance			
I	Alignment with UNEP's Medium-Term Strategy (MTS), Programme of work (PoW) and strategic priorities	- Is the project aligned with UNEP's MTS, PoW under which the project was approved? - Is the project aligned with the Bali Strategic Plan for Technology Support and Capacity builing (BSP) and South-South Cooperation (S-SC)? - Is the project aligned with UNEP's U4E?	- Degree of alignment with UNEP's MTS and PoW - Degree of alignment with UNEP's BSP and S-SC	- UNEP's MTS and PoW -ProDoc - Interviews with UNEP's project supervisors - Interview with U4E personnel - Interviews with FCh, ministry staff and other project partners
Ii	Alignment to Donor/GEF/Partner strategic priorities	- Is the project aligned with GEF's climate change focal area objectives? - Is the project aligned with national priorities?	- Degree of alignment with GEF's climate change focal area objectives - Degree of alignment with country policies	- GEF documentation -ProDoc - PIRs - Interviews with UNEP's project supervisors - Interview with U4E personnel - Interviews with FCh, ministry staff and other project partners
Iii	Relevance to Global, Regional, Sub-regional and National Environmental Priorities	- Does the project respond to the strated environmental concerns and needs of the country? - Is the project aligned with SDGs? - Is the project aligned with the National Energy Policy and agenda? - Is the project aligned with the management plan for HCFC phase-out in Chile?	- Aligned SGDs (if any) - Alignment with the national energy policy and agenda - Alignment with the management plan for HCFC phase-out in Chile	- UN SDGs publications - National Energy Policy -ProDoc - PIRs - Interviews with UNEP's project supervisors - Interview with U4E personnel - Interviews with FCh, ministry staff and other project partners
iv	Complementarity with Relevant Existing Interventions/Coherence	- Is the project complementary to previous projects in the country? - Is the project aligned with existing global initiatives?	- Existence in the country of previous projects or initiatives aligned with this project . Existence of global initiatives aligned with the project	-en.lighten project document - U4E documentation -SE4ALL documentation -ProDoc - PIRs - Interviews with UNEP's project supervisors - Interview with U4E personnel - Interviews with FCh, ministry staff and other project partners
	B. Quality of project design			

I	Relevance and logic of the project Objectives, Activities, Outputs and Outcomes	In accordance to the agreed question template during the inception phase	- Results of overall project design quality rating	- ProDoc - Stakeholder interviews - Proofs of deliverables - Project review inception report - Project review document - PIRs
	C. Nature of external context			
i	Aspects related to external operating context	- Did the project face a challenging operational environment that could affect its execution? Including social upheaval, sanitary crisis or risk of natural disaster	- Project revisions - Project extensions	- Internet and news research - Interviews with government officials - Interviews with project's core team and executing agency staff - Interviews with other project stakeholders - PIRs - Project extension document - ProDoc - Half-year progress reports
	D. Effectiveness			
i	Availability of outputs	- Were the planned outputs available by the end of the project? - Were these outputs of the expected quality? - Do stakeholders show ownership of these outputs?	- Deliverables documentation - Ownership of deliverables by government officials	- Interviews with government officials - Interviews with project's core team and executing agency staff - Interviews with other project stakeholders - PIRs - Project extension document - ProDoc - Half-year progress reports
Ii	Achievement of project outcomes	- Is there evidence that output availability is influencing expected outcomes?	- Availability of legislation or other forms of government adoption of outputs	- Interviews with government officials - Interviews with project's core team and executing agency staff - Interviews with other project stakeholders - PIRs - Project extension document - ProDoc - Half-year progress reports
Iii	Likelihood of impact	- Has the design-stage theory of change stood validation regarding	- Market share of high-efficiency refrigerators	- Interviews with government officials

		drivers and transition from outputs to outcomes? - Have assumptions been valid? - Has the project management and supervision been sound? Has adaptive management been implemented? - Have stakeholders been part of the project's execution? - Has responsiveness to human rights and gender equity been implemented?		- Interviews with project's core team and executing agency staff - Interviews with other project stakeholders - PIRs - Project extension document - ProDoc - Half-year progress reports
	E. Financial Management			
i	Adherence to UNEP's financial policies and procedures	- Have UNEP's financial policies and procedures been adhere to?	- Alignment of project reports with UNEP's templates - Completeness of reports - Alignment of project expenditures with the approved budget at the time	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners that received project support
Ii	Completeness of project financial information	- Is project financial information complete compared to requirements? - Is the information available enough to know how funds have been used with sufficient detail?	- Alignment of project reports with UNEP's templates - Completeness of reports	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners that received project support
Iii	Communication between finance and project management staff	- is there evidence of incomplete or insufficient communication between project management staff and financial staff that could result in execution shortfalls?	- Alignment of project reports with UNEP's templates - Completeness of reports - Timely reporting	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh

				- Interviews with UNEP officials - Interviews with government officials - Interviews with project partners that received project support
	F. Efficiency			
I	Grade of results delivery from the given resources, constrained ti the operating environment	- Have results been delivered? - have they been delivered within the expected budget and timeframe? - Could the project's extension have been avoided? - Did de extension affected output delivery or cost-effectiveness? - Have there been any time-saving measures implemented? - Have pre-existing institutions, agreements, partnerships been leveraged to increase project efficiency?	- Results evaluation by partners - Number of project extensions - Approved budget alignment	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners that received project support
	G. Monitoring and Reporting			
I	Monitoring design and budgeting	- Are the M&E budget and workplan sufficient to effectively monitor the project against SMART indicators? - Can project indicators be effectively measured with available funds and planned deliverables? - Are indicators gender-disaggregated were possible?	- Assessment of M&E plan - PIR completeness	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners
Ii	Monitoring of project implementation	- Has the monitoring system been operational? - Has the monitoring system been implemented according to its workplan? - Has progress against core indicators been assessed?	- Comparison of available M&E documentation compared to M&E workplan and budget	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners

Iii	Project reporting	- Have UNEPs and GEF's reporting requirements been fulfilled? - Has the reporting been delivered on time?	- Availability of all required reporting documents - Completeness of reporting document - Reported quality of reporting documents according to UNEP	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners
	H. Sustainability			
I	Socio-political sustainability	- Are outcomes dependant on social and political factors? - Are parts of society politically against project outcomes? - Is there ownership of the project's results in the government and other project partners? - Can mechanisms proposed by the project be sustained after it finishes?	- Outcome stability assessment - Officially adopted regulations - Government institutions implementing project-proposed initiatives	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners
Ii	Financial sustainability	- Have there been institutional changes to sustain the project outputs turn into outcomes? - Is additional non-governmental funding required to sustain outputs? - Can mechanisms proposed by the project be sustained after it finishes? - Do private sector actors show ownership of outputs to drive them into outcomes?	- Institutions and regulations assessment after project's end - Existence of private sector initiatives that drive outcomes after project's end	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners
Iii	Institutional sustainability	- Have regulations been adopted? - Does the government and private sector partners have the capacities to implement those regulations?	- Regulations adopted - Reported capacities to implement those regulations	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials

				- Interviews with project partners
	I- Factors affecting project performance and cross-cutting issues			
I	Preparation and readiness	- Had relevant stakeholders been identified and involved during project design? - Had any relevant issue been overlooked during project design that required a project redesign during execution?	- Completeness of the partner ecosystem identified at design stage - Relevance of project's design to required changes	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners
Ii	Quality of project management and supervision	- How has been the management quality of the implementing partner? - Did management implement any adaptive-management measures? - How did management redesign the project to respond to a changing environment? - Did any high impact risks materialized during project execution? How did management respond to them? - Has UNEP provided sound technical backstopping to the project?	- Results delivery - Budget adherence - Need of project revisions / changes - Evidence of adaptive management	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners
Iii	Stakeholders' participation and cooperation	- Have all relevant stakeholders in the country been included during project execution? - Has any stakeholder reported about other stakeholders that should have been involved in the project but were not?	- Relevance of stakeholders identified and involved in project design - Existence of new stakeholders identified and involved in project execution - Output adoption by stakeholders	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners
Iv	Responsiveness to human rights and gender equality	- Has the project considered responsiveness to human rights? - Was the gender analysis at design stage adequate? - Were any additional gender-related issues	- Existence of human rights and gender stakeholders involved in project execution - Stakeholders' satisfaction with the project's gender approach - Existence of possible gender interventions	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh

		discovered during project execution? - Has the project promoted gender equality?	related to the project that were not present in the project's design or revisions	- Interviews with UNEP officials - Interviews with government officials - Interviews with project partners
v	Environmental and social safeguards	- Were UNEP's requirements to review, monitor and reporting of risks fulfilled? - Was the project's environmental footprint minimized? - Was the CEO-stage safeguards plan relevant? Was it implemented?	- Risk ratings in PIRs - Evidence of safeguards responses	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners
Vi	Country ownership and driven-ness	- Were government agencies engaged during the project? - Do these agencies show momentum to drive the project's outputs into outcomes? - Do government officials show ownership in the project's deliverables?	- Project outputs that result in regulations or other forms of official adoption - Existence of public policies aligned with project's objectives	- ProDoc - Project budget - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners
vii	Communication and public awareness	- Has learning and experience from the project been effectively communicated to stakeholders and the civil society at large been effectively communicated? - Have these communication efforts influenced behaviours? - Have they met the differentiated needs of gendered or marginalised groups? - Were any feedback channels implemented? - Has the project website been a driver of knowledge sharing for the project?	- Communication campaigns indicators - Website (topten.cl) visits -	- ProDoc - Project budget - Communication campaigns reports - Expenditure reports and cash advance requests - Project revisions - PIRs - Interviews with FCh - Interviews with UNEP officials - Interviews with government officials - Interviews with project partners

ANNEX III. PEOPLE CONSULTED DURING THE REVIEW

Table 6: People consulted during the Review

Organisation	Name	Position	Gender
Ministerio Energía	Marcelo Padilla	Energy Efficiency Division Professional	Male
Ministerio Medio Ambiente	Claudia Guerrero	Legislative implementation and Circular Economy Professional	Female
Superintendencia de Electricidad y Combustibles	Ronnie Hernández	Jefe Departamento Productos en Superintendencia de Electricidad y Combustibles	Male
Superintendencia de Electricidad y Combustibles	Cecilia Moya	Profesional	Female
Superintendencia de Electricidad y Combustibles	Paulina Silva	Profesional	Female
Superintendencia de Electricidad y Combustibles	Cristian Bazza	Profesional	Male
Fundación Chile	Karien Volker	Energy Efficiency Program Director	Female
Fundación Chile	Maya Hirsch	Sustainability leader	Female
Sodimac	Paulina Vidal	Business Manager Home appliances	Female
Sodimac	Pablo Urbina	Sustainability vice manager	Male
Reciclapp	Cristian Lara	Entrepreneur	Male
Regener	José Luis Rojas	Chief Executive Officer	Male
CESMEC	Cecilia Simon	Division Chief	Female
CESMEC	José Muñoz	Sampling officer	Male
CESMEC	Javier Carrasco	Laboratory inspector	Male
CESMEC	Alejandro Pearson	Laboratory inspector	Male
SILAB	Luis Soto	Laboratory chief	Male
SILAB	Ruben González	Technical Division Chief	Male
Intertek	Johanna Ariza	Buisness Manager	Female
U4E	Roberto Borjabad	U4E LAC Regional coordinator	Male

ANNEX IV. KEY DOCUMENTS CONSULTED

Project planning and reporting documents

- Project Document (CEO Approval Request)
- Project Implementation Report 2019
- Project Implementation Report 2020
- Project Implementation Report 2021
- Project Implementation Report 2022
- Half yearly progress report 2018
- Half yearly progress report 2019
- Half yearly progress report 2020
- Half yearly progress report 2021
- Final Report

Project outputs work package 1

- Antecedentes para la elaboración de análisis económicos de metas de recolección y valorización para el producto prioritario "Aparatos Eléctricos y Electrónicos" contenidos en la ley 20.920
- Análisis de la gestión medioambientalmente responsable de refrigeradores y congeladores de uso doméstico en Chile
- Análisis de la gestión ambientalmente responsable de refrigeradores y congeladores de uso doméstico
  en Chile MEPS & Etiquetas Recomendaciones para Chile y Experiencia internacional
- ESPECIFICACIONES TÉCNICAS PARA EL DISEÑO DE LA ETIQUETA DE EFICIENCIA ENERGÉTICA PARA LOS APARATOS DE REFRIGERACIÓN DE USO DOMÉSTICO
- Documento de género y energía

Project outputs work package 2

- Vigilancia de Mercado (MVE) y Métodos de Ensayo para Refrigeradores en Chile
- Technical committee monutes July 2021
- Technical committee monutes September 2021
- Technical norm Implementation report CESMEC
- Technical norm Implementation report SICAL
- Tabla probabilidades de temperatura y humedad relativa para refrigeradores domésticos con calentadores anti-condensación controlados automáticamente por el ambiente (IEC 62552:2015+AMD1:2020)
- Miquel Pitarch agenda april 2019
- Miquel Pitarch agenda August 2019
- Technical workshop minutes 17/DEC/2020
- Laboratories training program
- Recomendaciones para el diseño de un programa de recambio de refrigeradores en Chile Experiencias internacionales

Project outputs work package 3

- Refriclaje campaign: advertising samples
- Refriclaje campaign: ToR tender retailer
- Refriclaje campaign: final disposition certificates for retired refrigerators
- Refriclaje campaign: detailed data on each refrigerator changed
- Refriclaje campaign: web campaign data
- Refriclaje campaign: out of use refrigerator retirement report RECICLAPP
- Refriclaje campaign: press reports
- Refriclaje campaign: implementation reports
- Refriclaje campaign: detailed signups data
- Refriclaje campaign: TV campaign

Project outputs work package 4

- Vigilancia de Mercado (MVE) y Métodos de Ensayo para Refrigeradores en Chile
- Antecedentes para la elaboración de análisis económico de metas de recolección y valorización para el producto prioritario "Aparatos Eléctricos y Electrónicos" contenido en la Ley 20.920
- Marco operativo para establecer un sistema de gestión de RAEE en Chile
- Tips uso eficiente refrigeradores y congeladores
- Caracterización del proceso de manejo de RAEE en Chile
- Situación actual de recolección y valorización RAEE y RdB
- Best international practice for implementation of EPR for WEEE
- International Practices for EPR declaration systems for WEEE
- Identify International measures to incentivize reuse of WEEE
- International measures to reduce WEEE generation and its dangerousness
- Replacement programs workshop presentations and assistant list

Reference documents

- GEF Tracking Tool
- Project Cooperation Agreement
- Expenditure report 2018
- Expenditure report 2019
- Expenditure report 2020
- Expenditure report 2021
- Expenditure report 2022
- Final Inventory report
- Audit report 2018
- Audit report 2019
- Audit report 2020

- Audit report 2021
- Audit report 2022
- Final co-finance report
- Rev 1 Approved Budget
- Rev 2 Approved Budget
- Rev 2.1 Approved budget
- Financial summary sheet
- Inception workshop report
- Project Steering Committee Minutes April 2019
- Project Steering Committee Minutes January 2020
- Project Steering Committee Minutes January 2021
- Project Steering Committee Minutes June 2021
- Project Steering Committee Minutes June 2022

ANNEX V. PROJECT BUDGET AND EXPENDITURES

I. Table 8: Expenditure by Outcome/Output

Component/sub-component/output ***All figures as USD***	**Estimated cost at design**	**Actual Cost/ expenditure**	**Expenditure ratio (actual/planned)**
Component 1	36,442	35,686	97,9%
Component 2	154,687	127,375	82,3%
Component 3	554,497	542,272	97,8%
Component 4	208,481	226,653	108,7%
Monitoring & evaluation	23,500	29,868	127,1%
Project Management Costs	115,501	123,519	106,9%
U4E	380,654	335,653	88,2%
Total	1,473,762	1,421,027	96,4%

ANNEX VI. BRIEF CV OF THE REVIEWER

Ignacio Simon

Curriculum vitae

Montevideo, Uruguay, 09/08/1984
ignaciosimon@gmail.com
(+598) 98 885 799
www.linkedin.com/in/ec-ignacio-simon

Extract

MBA, MSc. in urban and transport economics, and Economist, with 12+ years of work in public policies, development projects, international cooperation, climate change, energy transition, sustainable cities and mobility. Enthusiast of business and public policies that drive sustainability, innovation and inclusion forwards. Experience in project preparation, appraisal, and management, including technical advisory experience to governments.

Education

Master in Business Administration (MBA) – Di Tella Business School Distinction — March 2022
Universidad Torcuato Di Tella, Buenos Aires, Argentina

Master of Science (MSc.) in Urban, Port and Transport Economics — September 2012
Erasmus University Rotterdam, Netherlands

BSc. in Economics — December 2010
Universidad de la República, Montevideo, Uruguay

Relevant experience

Climate change senior consultant — November 2022 – Current job
Climate Change Division (CCS) – Inter-American Development Bank – Montevideo, Uruguay and Asunción, Paraguay

- Country context and climate change policy analysis for discovery of new assistance opportunities and development of new initiatives.
- Stakeholder engagement to support the countries' policy development and delivery to advance local climate change mitigation and adaptation initiatives.
- MDB's climate change common framework application in operations for assuring their Paris Alignment.
- Operations' climate change chapter development for CC alignment and estimating their Climate Finance.
- Design and supervision of consultancies and technical assistances.
- Liaison with internal IDB teams to support unified product delivery.
- Support in country and institutional strategy development.

Climate change GEF projects developer — November 2022 – May 2023
Economy Division – United Nations Environment Program

- Project Implementation Form (PIF) development for GEF 8 Project Low Emission Community Energy, including managing stakeholders engagement, developing and implementing workshops with local stakeholders for project creation, writing the PIF and correcting according to UNDP and GEF feedback.

Project sub coordinator — May 2021 – May 2022
National Urban Mobility Policy (NUMP) Project Uruguay – GIZ and Environment, Economics and Finance, Industry, Energy and Mining, Transport and Public Works, Housing and Land Planning Ministries – Montevideo, Uruguay

- Project manager: short and long term activity and budget project planning.
- Coordination of the Project Working Group, integrated by mobility, cities and climate change consultants from the Ministries. Assignment and supervision of product delivery.
- Development of participatory processes and interinstitutional coordination, identifying and engaging with relevant public, private, academic and civil society stakeholders for policy inclusion. Planning and facilitating workshops to gain insights and inputs for the policy.
- Writing of the National Sustainable Urban Mobility Policy, including inputs form participatory processes and technical consultancies. Development of the strategic planning for the Policy, designing its balanced scorecard and monitoring and evaluation framework.
- Institutional advocacy for supporting the products developed in the Project, both with the Ministries and GIZ.
- Compliance with implementing agency protocols (GIZ) and reporting to the donor (EU).
- Supervision of consultancies, publishing the Electromobility Guide for Uruguay and Uruguayan Sustainable Urban Mobility Planning Guide

Economics technical specialist — August 2018 – November 2022
MOVÉS Project – UNDP and Environment, Industry, Energy and Mining, Housing and Land Planning Ministries – Montevideo, Uruguay

- Optimal business model development and total cost of ownership calculations to accelerate substitution of combustion fleets with electric alternatives, both in public transport and urban freight cargo markets.
- Identification of key drivers and barriers to EV adoption to develop policy reform.
- Participation in the design and implementation of the new e-bus purchase subsidy policy, analyzing costs, features, regulation and processes to drive adoption and ridership. Application of a gender organizational diagnosis methodology to public transport operators in connection with the new subsidy to mainstream gender in the technological change.
- Design and implementation of data exchange framework with bus operators to supervise fleet functioning, writing of annual e-bus operation reports.
- Support in the design and implementation of new policies for accelerating e-mobility adoption such as investment law reform to include EVs and its infrastructure, or new tax structures for purchasing and operating EVs.
- Establishment of partnerships with banks and insurance companies to deliver new financing products for EV adoption.
- Development of new tools for users and companies to accelerate adoption of electric mobility and to foster sustainable habits, such as the corporate mobility toolkit or the free e-vehicle test program.
- Annual activity and budget planning for the project. Compliance and reporting to UNDP and GEF.
- Design and supervision of consultancies and technical assistances, including the economic incentives in transport study.
- Representation of the Project and its activities at industry events

Microeconomics lecturer — May 2015 – August 2018
Universidad Católica del Uruguay – Montevideo, Uruguay
- Lecturer for the Microeconomics course.
- Planning and lecturing of lessons both in English and Spanish.
- Support and evaluation of national and international (exchange) students.

Head of Monitoring and Evaluation Unit — September 2012 – August 2015
Interior Development Fund (FDI) Program, Planning and Budgeting Office, Uruguayan Presidency – Montevideo, Uruguay
- Appraisal of investment projects both from the private and social perspectives. Interdisciplinary work with engineers and architects in project proposals, financial planning and approval.
- Development of new appraisal operations and project proposal templates to homogenize evaluation criteria.
- Handling and supervision of the projects database: approximately 200 infrastructure investment projects per year in all departments outside Montevideo, for an annual value of USD 40.000.000.
- Design and implementation of new data processes to accelerate their availability, reducing program execution data availability delay from 40 days to 1 day.
- Design and writing of new monthly and annual execution public reports, including newly developed risk and execution KPIs.
- Applied research for redesigning the FDI Program, exploiting new georeferenced data to improve focalization.

Student research assistant — February 2012 – July 2012
Erasmus University Rotterdam, School of Economics, Port Economics Department – Rotterdam, Netherlands
- Setup and control of databases for academic research.
- Literature research.
- Assistance to academic research production.

Economics analyst — February 2010 – March 2011
National Aquatic Resources Directorate, Livestock, Agriculture and Fisheries Ministry – Montevideo, Uruguay
- Public and internal statistical reports production, including market, production and environmental aspects of fishery activity.
- Design, surveying, processing and final report production of the Fisheries Activity Survey 2010.

Additional courses

- **Transport Oriented urban Development**, Lincoln Institute for Land Policy, Boston, United States (remote) — 2020
- **Sustainable Transport Project preparation**, CEPAL, SLoCaT, TUMI, Chile — 2018
- **Seminar on the planning and construction of ports and channels,** Tianjin TEDA Group Co., Ltd., China — 2017
- **Political Economics focus: application in design and implementation of complex reforms,** AUCI AECID, Uruguay. — 2016
- **A new approach to strategic development: enhancing competitiveness in global value chains**, Duke University and OPP, Uruguay — 2014
- **User oriented statistical communications**, Fundación CEDDET, INE España and FIAPP, Spain (remote) — 2014
- **Project preparation and evaluation course**, CEPAL, OPP, Uruguay — 2013

Languages

- **Spanish**: native speaker
- **English**: C2 (bilingual)
- **Portuguese**: B1

ANNEX VII. REVIEW TORS (WITHOUT ANNEXES)

TERMS OF REFERENCE

Terminal Review of the UNEP/GEF projects

"Leapfrogging Chilean's markets to more efficient refrigerator and freezers", GEFID: 9496

Section 1: PROJECT BACKGROUND AND OVERVIEW

1. Project General Information

Table 1. Project summary

UNEP Sub-programme:	**Climate change**	**UNEP Division/Branch:**	**Economy Division, Energy Branch**
Expected Accomplishment(s):	(b) Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies	**Programme of Work Output(s):**	(i) Number of countries supported by UNEP that make progress in adopting and/or implementing low greenhouse gas emission development plans, strategies and/or policies (ii) Climate finance invested by countries or institutions for clean energy, energy efficiency and/or amount of decarbonized assets
SDG(s) and indicator(s)	SDG goal 7: Ensure access to affordable, reliable, sustainable, and modern energy for all. Target 7.3: By 2030, double the global rate of improvement in energy efficiency.		
GEF Core Indicator Targets (identify these for projects approved prior to GEF-7[22])	**N/A**		
Dates of previous project phases:	**N/A**	**Status of future project phases:**	**N/A**

FROM THE PROJECT'S PIR REPORT (use latest version) :

Project Title:	Leapfrogging Chilean's markets to more efficient refrigerator and freezers
Executing Agency:	Fundación Chile
Project partners:	Ministry of Energy, United for Efficiency

[22] This does not apply to Enabling Activities

Geographical Scope:	National

Participating Countries:	Chile

GEF project ID:	9496	**UMOJA number*[23]:**	SB-010317
Focal Area(s):	Climate change mitigation	**GEF OP #:**	N/A
GEF Strategic Priority/Objective:	CCM-1: Promote Innovation, Technology Transfer, and Supportive Policies and Strategies	**GEF approval date*:**	18 January 2018
UNEP approval date:	25 May 2018	**Date of first disbursement*:**	19 June 2018
Actual start date[24]:	25 May 2018	**Planned duration:**	3 years
Intended completion date*:	31/05/2021	**Actual or Expected completion date:**	30/4/2022
Project Type:	MSP	**GEF Allocation*:**	1,473,762
PPG GEF cost*:	Not found	**PPG co-financing*:**	N/A
Expected MSP/FSP Co-financing*:	7,411,551	**Total Cost*:**	8,885,313
Mid-term Review/eval. (planned date):	N/A	**Terminal Evaluation (planned date):**	30/11/2022
Mid-term Review/eval. (actual date):	N/A	**No. of revisions*:**	2
Date of last Steering Committee meeting:	TBC	**Date of last Revision*:**	12/04/2021
Disbursement as of 30 June 2022*:	1,374,106	**Date of planned financial closure*:**	30/4/2023
Date of planned completion[25]*:	30/4/2023	**Actual expenditures reported as of 30 June 2022[26]:**	1,421,027
Total co-financing realized as of 31 December [year]:	4,236,410	**Actual expenditures entered in UMOJA as of 30 June 2022:**	1,421,027
Leveraged financing:[27]	N/A		

2. Project Rationale

Chile's total GHG emissions (2013) amounted to 119 million tCO2eq, an increase by 113% since 1990 and by 19% since 2010.[28] More than 77% of total GHG emissions in 2013 came from the energy

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

[24] Only if different from first disbursement date, e.g., in cases were a long time elapsed between first disbursement and recruitment of project manager.

[25] If there was a "Completion Revision" please use the date of the revision.

[26] Information to be provided by Executing Agency/Task Manager

[27] See above note on co-financing

[28] Segundo Informe Bienal de Actualización de Chile sobre Cambio Climático Ante la Convención Marco de las Naciones Unidas sobre Cambio Climático 2016. ISBN: 978-956-7204-55-7

sector (85 million tCO2eq), this represents an increase by 156% since 1990 and 22.5% since 2010. This is mainly due to the increase in energy consumption, including the consumption of coal and natural gas for electricity generation and consumption of liquid fuels, mostly diesel and gasoline, for road transportation. Energy Industries (electricity and heat production) were the leading source of GHG emissions with 45.3%, followed by 28.9% from Transport (mainly road transportation), 16.8% from Manufacturing industries and construction, and 8.0% derives from other sectors (mainly Residential).

According to U4E Savings assessment for Chile[29], potential for annual energy saving and GHG emission reduction from application of minimum energy performance standards in line with international benchmarks will account for 5 TWh or 2.4 million tCO2eq for 2030 specifically or cumulatively by 21.72 million tCO2eq between 2020-2030. Residential refrigerators represent the second largest, after lighting[30], end-user sub-sector with significant potential for energy saving and GHG emission reduction (See **Error! Reference source not found.**).

Potential energy saving and GHG emission reduction in Chile from application of MEPS consistent with international benchmarks[31]

Equipment/Appliance Type	Energy savings (TWh) in 2030	Avoided CO2 emissions (million tonnes) in 2030	Cumulative CO2 emission reductions, 2020-2030 (million tonnes)
Lighting	2.1	1.0	9.33
Residential refrigerators	**1.3**	**0.6**	**3.41**
Room air conditioners	0.5	0.2	2.78
Distribution transformers	0.4	0.2	2.42
Industrial electric motors	0.7	0.4	3.78

Chile´s Intended Nationally Determined Contributions (INDC) was submitted to the UNFCCC in 2015. INDC set the following Carbon Intensity Targets comparing with 2007 baseline level:

- Unconditional target: to reduce national CO2 emissions per Gross Domestic Product by 30% by 2030, and
- Conditional target (subject to receipt of international assistance): to reduce national CO2 emissions per GDP by 35% to 45% by 2030.

3. Project Results Framework

The project is supporting Chile to increase the market share of high energy efficiency domestic refrigerators and freezers. It aims to achieve this by focusing on the development of supporting

29 http://united4efficiency.org/wp-content/uploads/2015/11/U4E-Savings-Assessment_CHL.pdf
[30] EE opportunities in lighting sector are being addressed by the project "Delivering the transition to energy efficient lighting in Chile" (GEF Project ID: 5150 under execution 2016-2019)
[31] http://united4efficiency.org/wp-content/uploads/2015/11/U4E-Savings-Assessment_CHL.pdf

policies, standards and regulations as well as involving domestic consumers through replacement campaigns, and educational and sensitizing actions.

Fundación Chile executes the program in Chile in collaboration with the Ministry of Energy, Ministry of Environment and the Superintendency for Electricity and Fuels (SEC). Furthermore, national and international private sector actors are involved as project partners: including certification bodies, testing laboratories and domestic refrigerators and freezers producers. All project partners have an active role in supporting the development of governmental guidelines and incorporating specific actions directly into their working guidelines and services.

The project activities are arranged into four components:

Component 1: Revising regulatory mechanisms, including minimum energy performance standards (MEPS) and Energy Efficiency Labels;

Component 2: Enhancing monitoring, verification, and enforcement (MVE), mainly through the adoption of the testing protocol IEC 62552:2015 (specifies the essential characteristics of household refrigerating appliances, cooled by internal natural convection or forced air circulation, and establishes test methods for checking the characteristics);

Component 3: Developing supporting policies, involving a communication campaign and a replacement demonstration program;

Component 4: Enhancing environmentally sound management, expected to result in a Supreme Decree for the environmentally sound management of waste electrical and electronic equipment (WEEE).

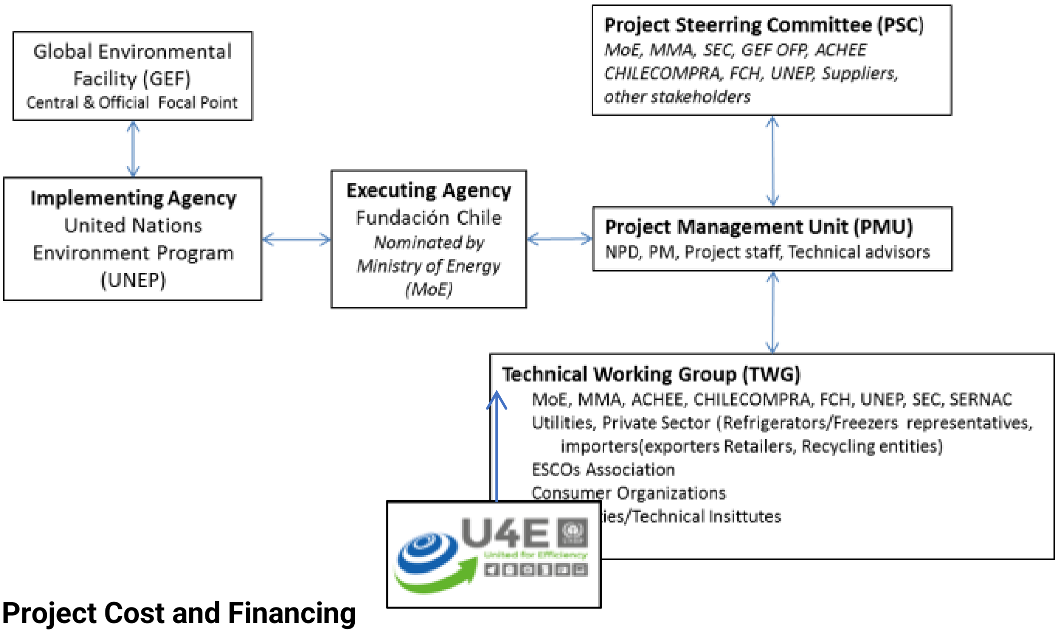
Further information may be found in the project CEO document.

4. Executing Arrangements

Institutional arrangement for project implementation

1. The project is a Child Project below umbrella project leaded by SE4ALL and U4E, UN Environment will be responsible of general coordination and transferring knowledge of this and other Child Projects.

2. The project will be executed by Fundación Chile nominated by the Ministry of Energy and the Implementing GEF Agency will be UN Environment. The initiative will follow the institutional structure as described in Annex H: Project Implementation Arrangements. The national Project Steering Committee (PSC) will be composed of the National Ministry of Energy and the Ministry of Environment, UN Environment, Superintendence of Electricity and Fuels, private suppliers, GEF Operational Focal Point, International project partners including international organizations, global manufacturers, and utilities will support the project to achieve its objectives.



5. Project Cost and Financing

Project Objective: Accelerating transformation of Chile's markets to more energy efficient (EE) residential refrigerators/freezers thereby achieving reduction of GHG emissions and contributing to improved energy access and energy security.						
Project Components/ Programs	**Financing Type[32]**	**Project Outcomes**	**Project Outputs**	**Trust Fund**	**(in $)** GEF Project Financing	**Confirmed Co-financing**
1. Revising regulatory mechanisms, including minimum energy performance standards (MEPS)	TA	1. Accelerated transformation of the market for Energy Efficient (EE) residential refrigerators/freezers via implementation of advanced MEPS and EE labels in line with international best practices and provision of associated capacity building	1.1: National MEPS and EE Labels for refrigerators updated and implementation plan developed	GEFTF	106,334	1,572,551
2. Enhancing monitoring, verification, and enforcement (MVE)	TA	2. Actors comply with improved MVE labeling regulations, testing protocols and measurements methodologies to ensure residential refrigerators/freezers meet improved efficiency levels.	2.1: MVE scheme assessed and improvements documented to ensure products' compliance with EE labels and MEPS 2.2: National laboratories strengthened to verify compliance with updated standards and protocols	GEFTF	283,853	823,000

[32] Financing type can be either investment or technical assistance

			2.3: Monitoring and verification procedures and methodology to measure energy savings from the removal of old-but-operable refrigerators from service developed			
3.Developing supporting policies	TA	3. Enhanced awareness among consumers (by gender) and market players in Chile to understand, afford, and purchase EE refrigerators/freezers	3.1: Communication campaign developed and its impact evaluated to increase user acceptance and understanding of high efficiency products and updated labeling and MEPS, taking gender-sensitive perspective into account	GEFTF	446,341	1,806,000
	INV		3.2: Replacement demonstration programmes on energy efficient refrigerators implemented in the residential sector	GEFTF	160,000	1,822,000
4.Enhancing environmentally sound management	TA	4. Voluntary implementation of the national framework for environmentally sound management of refrigerators/freezers started	4.1: Strategy proposal for a national framework and an environmentally sound management of refrigerators/freezers developed and communicated to local stakeholders 4.2: Awareness raising and communication campaigns to promote collection and recycling of refrigerators conducted 4.3: Collection and Recycling Service Organization (CRSO) business model for spent refrigerators developed starting below voluntary scheme, including potential international coordination for the environmentally sound export/import	GEFTF	351,299	1,283,000

			of refrigerators waste/ refrigerant gas proposed/adopted			
			Subtotal	GEFTF	1,347,827	7,306,551
			Project Management Cost (PMC)[33]	GEFTF	125,935	105,000
			Total project costs	GEFTF	1,473,762	7,411,551

6. Implementation Issues

Major risks during the project existed because of the national social outbursts and international health situation and the uncertainty both generated. The project adjusted to the "new" reality and developed new executing arrangements to keep the project on track independently of future lockdown scenarios. These adjustments minimized project risks. As for the country's adoption of recommended policies, there is a strong involvement and commitment from the fuel and electricity authority, as well as line ministries, leading to the expectation that most policies will come into effect in 2022.

The 2019 social crisis in Chile compromised the purchase power of the population and created a potentially hostile environment for the replacement campaigns, an effect that was further magnified by the pandemic. Even tough an important economic contraction has accompanied the country in 2019 and part of 2020, a rebound effect has been reported in the first semester of 2021. As reported by projects partners, consumption of home appliances has raised considerably during the last months of 2020 and the first half of 2021. Moreover, the grant element in the replacement campaign (funded by the project and with co-finance from the producers) will allow for a very convenient final price for consumers. The project developed the replacement campaign with the commitment of different producers which have shown high interest in participating in initiatives concerning energy efficiency and environmentally friendly sound management.

Section 2. OBJECTIVE AND SCOPE OF THE REVIEW

7. Objective of the Review

1. In line with the UNEP Evaluation Policy[34] and the UNEP Programme Manual[35], the Terminal Review (TR) is undertaken at operational completion of the project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The Review has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UNEP and Fundación Chile, U4E and the Ministry of Environment. Therefore, the Review will identify lessons of operational relevance for future project formulation and implementation.

8. Key Review principles

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

[33] For GEF Project Financing up to $2 million, PMC could be up to10% of the subtotal; above $2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

[34] https://www.unenvironment.org/about-un-environment/evaluation-office/policies-and-strategies

[35] https://wecollaborate.unep.org

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

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

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

9. Key Strategic Questions

5. In addition to the review criteria outlined in Section 10 below, the Review will address the **strategic questions**[36] listed below(no more than 3 questions are recommended). These are questions of interest to UNEP and to which the project is believed to be able to make a substantive contribution. Also included are five questions that are required when reporting in the GEF Portal and these must be addressed in the TR:

6. Q1: What changes were made to adapt to the effects of social and political changes in Chile and how did any changes affect the project's performance?

7. Q2: What changes were made to adapt to the effects of COVID-19 and how did any changes affect the project's performance?

8. Address the questions required for the GEF Portal in the appropriate parts of the report and provide a **summary of the findings in the Conclusions section of the report**:

9.

a) Under Monitoring and Reporting/Monitoring of Project Implementation:

10. What was the performance at the project's-completion against Core Indicator Targets? *(For projects approved prior to GEF-7, these indicators will be identified retrospectively and comments on performance provided[37]).*

b) Under Factors Affecting Performance/Stakeholder Participation and Cooperation:

[36] The strategic questions should not duplicate questions that will be addressed under the standard review criteria described in section 10.

[37] This does not apply to Enabling Activities

11. What were the progress, challenges and outcomes regarding engagement of stakeholders in the project/program as evolved from the time of the MTR? *(This should be based on the description included in the Stakeholder Engagement Plan or equivalent documentation submitted at CEO Endorsement/Approval)*

c) Under Factors Affecting Performance/Responsiveness to Human Rights and Gender Equality:
What were the completed gender-responsive measures and, if applicable, actual gender result areas? *(This should be based on the documentation at CEO Endorsement/Approval, including gender-sensitive indicators contained in the project results framework or gender action plan or equivalent)*

d) Under Factors Affecting Performance/Environmental and Social Safeguards:
What was the progress made in the implementation of the management measures against the Safeguards Plan submitted at CEO Approval? The risk classifications reported in the latest PIR report should be verified and the findings of the effectiveness of any measures or lessons learned taken to address identified risks assessed. *(Any supporting documents gathered by the Consultant during this Review should be shared with the Task Manager for uploading in the GEF Portal)*

e) Under Factors Affecting Performance/Communication and Public Awareness:
What were the challenges and outcomes regarding the project's completed Knowledge Management Approach, including: Knowledge and Learning Deliverables (e.g. website/platform development); Knowledge Products/Events; Communication Strategy; Lessons Learned and Good Practice; Adaptive Management Actions? *(This should be based on the documentation approved at CEO Endorsement/Approval)*

10. Review Criteria

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

13. Annex 1 of these Terms of Reference provides a table with a list of various tools, templates and guidelines that can help Review Consultant(s) to follow a thorough review process that meets all of UNEP's needs.

A. Strategic Relevance

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

i. *Alignment to the UNEP's Medium-Term Strategy[38] (MTS), Programme of Work (POW) and Strategic Priorities*

The Review should assess the project's alignment with the MTS and POW under which the project was approved and include, in its narrative, reflections on the scale and scope of any contributions made to the planned results reflected in the relevant MTS and POW. UNEP strategic priorities include the Bali Strategic Plan for Technology Support and Capacity Building[39] (BSP) and South-South

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

[39] http://www.unep.fr/ozonaction/about/bsp.htm

Cooperation (S-SC). The BSP relates to the capacity of governments to: comply with international agreements and obligations at the national level; promote, facilitate and finance environmentally sound technologies and to strengthen frameworks for developing coherent international environmental policies. S-SC is regarded as the exchange of resources, technology and knowledge between developing countries.

ii. Alignment to Donor/GEF/Partner Strategic Priorities

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

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

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

iv. *Complementarity with Relevant Existing Interventions/Coherence*[40]

An assessment will be made of how well the project, either at design stage or during the project inception or mobilization[41], took account of ongoing and planned initiatives (under the same sub-programme, other UNEP sub-programmes, or being implemented by other agencies within the same country, sector or institution) that address similar needs of the same target groups. The Review will consider if the project team, in collaboration with Regional Offices and Sub-Programme Coordinators, made efforts to ensure their own intervention was complementary to other interventions, optimized any synergies and avoided duplication of effort. Examples may include work within UNDAFs or One UN programming. Linkages with other interventions should be described and instances where UNEP's comparative advantage has been particularly well applied should be highlighted.

Factors affecting this criterion may include:

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

B. Quality of Project Design

14. The quality of project design is assessed using an agreed template during the review inception phase. Ratings are attributed to identified criteria and an overall Project Design Quality rating is established. The complete Project Design Quality template should be annexed in the Review Inception Report. Later, the overall Project Design Quality rating[42] should be entered in the final review ratings table (as item B) in the Main Review Report and a summary of the project's strengths and weaknesses at design stage should be included within the body of the Main Review Report.

[40] This sub-category is consistent with the new criterion of 'Coherence' introduced by the OECD-DAC in 2019.

[41] A project's inception or mobilization period is understood as the time between project approval and first disbursement. Complementarity during project implementation is considered under Efficiency, see below.

[42] In some instances, based on data collected during the review process, the assessment of the project's design quality may change from Inception Report to Main Review Report.

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

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

C. Nature of External Context

15. At review inception stage a rating is established for the project's external operating context (considering the prevalence of conflict, natural disasters and political upheaval[43]). This rating is entered in the final review ratings table as item C. Where a project has been rated as facing either an *Unfavourable* or *Highly Unfavourable* external operating context, and/or a negative external event has occurred during project implementation, the ratings for Effectiveness, Efficiency and/or Sustainability may be increased at the discretion of the Review Consultant and Task Manager together. A justification for such an increase must be given.

D. Effectiveness

i. Availability of Outputs[44]

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

Factors affecting this criterion may include:

- Preparation and readiness
- Quality of project management and supervision[45]

ii. Achievement of Project Outcomes[46]

17. The achievement of project outcomes is assessed as performance against the outcomes as defined in the reconstructed[47] Theory of Change. These are outcomes that are intended to be achieved by the end of the project timeframe and within the project's resource envelope. Emphasis is placed on the achievement of project outcomes that are most important for attaining intermediate states. As with outputs, a table can be used to show where substantive amendments to the formulation of project outcomes is necessary to allow for an assessment of performance. The Review should report evidence of attribution between UNEP's intervention and the project outcomes. In cases of normative work or where several actors are collaborating to achieve common

[43] Note that 'political upheaval' does not include regular national election cycles, but unanticipated unrest or prolonged disruption. The potential delays or changes in political support that are often associated with the regular national election cycle should be part of the project's design and addressed through adaptive management of the project team. From March 2020 this should include the effects of COVID-19.
[44] Outputs are the availability (for intended beneficiaries/users) of new products and services and/or gains in knowledge, abilities and awareness of individuals or within institutions (UNEP, 2019).
[45] For GEF funded projects 'project management and supervision' will refer to the project management performance of the Executing Agency and the technical backstopping provided by UNEP, as Implementing Agency.
[46] Outcomes are the use (i.e. uptake, adoption, application) of an output by intended beneficiaries, observed as changes in institutions or behavior, attitude or condition (UNEP, 2019)
[47] UNEP staff are currently required to submit a Theory of Change with all submitted project designs. The level of 'reconstruction' needed during a review will depend on the quality of this initial TOC, the time that has lapsed between project design and implementation (which may be related to securing and disbursing funds) and the level of any changes made to the project design. In the case of projects pre-dating 2013 the intervention logic is often represented in a logical framework and a TOC will need to be constructed in the inception stage of the review.

outcomes, evidence of the nature and magnitude of UNEP's 'substantive contribution' should be included and/or 'credible association' established between project efforts and the project outcomes realised.

Factors affecting this criterion may include:

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

iii. Likelihood of Impact

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

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

20. The Review will consider the extent to which the project has played a catalytic role[48] or has promoted scaling up and/or replication as part of its Theory of Change (either explicitly as in a project with a demonstration component or implicitly as expressed in the drivers required to move to outcome levels) and as factors that are likely to contribute to greater or long lasting impact.

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

Factors affecting this criterion may include:

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

E. Financial Management

Financial management will be assessed under three themes: *adherence* to UNEP's financial policies and procedures, *completeness* of financial information and *communication* between financial and

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

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

Factors affecting this criterion may include:

- Preparation and readiness
- Quality of project management and supervision

F. Efficiency

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

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

24. The Review will give special attention to efforts made by the project teams during project implementation to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities[49] with other initiatives, programmes and projects etc. to increase project efficiency.

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

Factors affecting this criterion may include:

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

G. Monitoring and Reporting

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

i. Monitoring Design and Budgeting

27. Each project should be supported by a sound monitoring plan that is designed to track progress against SMART[50] results towards the achievement of the project's outputs and outcomes, including at a level disaggregated by gender, marginalisation or vulnerability, including those living with disabilities. In particular,

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[49] Complementarity with other interventions during project design, inception or mobilization is considered under Strategic Relevance above.

[50] SMART refers to results that are specific, measurable, achievable, relevant and time-oriented. Indicators help to make results measurable.

the Review will assess the relevance and appropriateness of the project indicators as well as the methods used for tracking progress against them as part of conscious results-based management. The Review will assess the quality of the design of the monitoring plan as well as the funds allocated for its implementation. The adequacy of resources for Mid-Term and Terminal Evaluation/Review should be discussed, where applicable.

ii. Monitoring of Project Implementation

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

The performance at project completion against Core Indicator Targets should be reviewed. For projects approved prior to GEF-7, these indicators will be identified retrospectively and comments on performance provided.

iii. Project Reporting

29. UNEP has a centralised project information management system (Anubis) in which project managers upload six-monthly progress reports against agreed project milestones. This information will be provided to the Review Consultant(s) by the Task Manager. Some projects have additional requirements to report regularly to funding partners, which will be supplied by the project team (e.g. the Project Implementation Reviews and Tracking Tool for GEF-funded projects). The Review will assess the extent to which both UNEP and GEF reporting commitments have been fulfilled. Consideration will be given as to whether reporting has been carried out with respect to the effects of the initiative on disaggregated groups.

Factors affecting this criterion may include:

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

H. Sustainability

30. Sustainability[51] is understood as the probability of the benefits derived from the achievement of project outcomes being maintained and developed after the close of the intervention. The Review will identify and assess the key conditions or factors that are likely to undermine or contribute to the endurance of achieved project outcomes (i.e. 'assumptions' and 'drivers'). Some factors of sustainability may be embedded in the project design and implementation approaches while others may be contextual circumstances or conditions that evolve over the life of the intervention. Where applicable an assessment of bio-physical factors that may affect the sustainability of direct outcomes may also be included.

i. Socio-political Sustainability

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

ii. Financial Sustainability

32. Some project outcomes, once achieved, do not require further financial inputs, e.g. the adoption of a revised policy. However, in order to derive a benefit from this outcome further management action may still be needed e.g. to undertake actions to enforce the policy. Other project outcomes may be dependent on a

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

continuous flow of action that needs to be resourced for them to be maintained, e.g. continuation of a new natural resource management approach. The Review will assess the extent to which project outcomes are dependent on future funding for the benefits they bring to be sustained. Secured future funding is only relevant to financial sustainability where the project outcomes have been extended into a future project phase. Even where future funding has been secured, the question still remains as to whether the project outcomes are financially sustainable.

iii. Institutional Sustainability

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

Factors affecting this criterion may include:

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

I. Factors Affecting Project Performance and Cross-Cutting Issues

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

i. Preparation and Readiness

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

ii. Quality of Project Management and Supervision

35. For GEF funded projects 'project management and supervision' may refer to the project management performance of the Executing Agency and the technical backstopping and supervision provided by UNEP as Implementing Agency. The performance of parties playing different roles should be discussed and a rating provided for both types of supervision (UNEP/Implementing Agency; Partner/Executing Agency) and the overall rating for this sub-category established as a simple average of the two.

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

iii. Stakeholder Participation and Cooperation

37. Here the term 'stakeholder' should be considered in a broad sense, encompassing all project partners, duty bearers with a role in delivering project outputs, target users of project outputs and any other collaborating agents external to UNEP and the executing partner(s). The assessment will consider the quality and effectiveness of all forms of communication and consultation with stakeholders throughout the project life and the support

given to maximise collaboration and coherence between various stakeholders, including sharing plans, pooling resources and exchanging learning and expertise. The inclusion and participation of all differentiated groups, including gender groups should be considered.

38. The progress, challenges and outcomes regarding engagement of stakeholders in the project/program occurring since the MTR should be reviewed. This should be based on the description included in the Stakeholder Engagement Plan or equivalent documentation submitted at CEO Endorsement/Approval.

iv. Responsiveness to Human Rights and Gender Equality

39. The Review will ascertain to what extent the project has applied the UN Common Understanding on the human rights-based approach (HRBA) and the UN Declaration on the Rights of Indigenous People. Within this human rights context the Review will assess to what extent the intervention adheres to UNEP's Policy and Strategy for Gender Equality and the Environment[52].

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

41. The completed gender-responsive measures and, if applicable, actual gender result areas should be reviewed. This should be based on the documentation at CEO Endorsement/Approval, including gender-sensitive indicators contained in the project results framework or gender action plan or equivalent.

v. Environmental and Social Safeguards

UNEP projects address environmental and social safeguards primarily through the process of environmental and social screening at the project approval stage, risk assessment and management (avoidance, minimization, mitigation or, in exceptional cases, offsetting) of potential environmental and social risks and impacts associated with project and programme activities. The Review will confirm whether UNEP requirements[53] were met to: *review* risk ratings on a regular basis; *monitor* project implementation for possible safeguard issues; *respond* (where relevant) to safeguard issues through risk avoidance, minimization, mitigation or offsetting and r*eport* on the implementation of safeguard management measures taken. UNEP requirements for proposed projects to be screened for any safeguarding issues; for sound environmental and social risk assessments to be conducted and initial risk ratings to be assigned are reviewed above under Quality of Project Design).

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

Implementation of the management measures against the Safeguards Plan submitted at CEO Approval should be reviewed, the risk classifications verified and the findings of the effectiveness of any measures or lessons learned taken to address identified risks assessed. Any supporting documents gathered by the Consultant should be shared with the Task Manager.

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

[53] For the review of project concepts and proposals, the Safeguard Risk Identification Form (SRIF) was introduced in 2019 and replaced the Environmental, Social and Economic Review note (ESERN), which had been in place since 2016. In GEF projects safeguards have been considered in project designs since 2011.

vi. Country Ownership and Driven-ness

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

vii. Communication and Public Awareness

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

The project's completed Knowledge Management Approach, including: Knowledge and Learning Deliverables (e.g. website/platform development); Knowledge Products/Events; Communication Strategy; Lessons Learned and Good Practice; Adaptive Management Actions should be reviewed. This should be based on the documentation approved at CEO Endorsement/Approval.

Section 3. REVIEW APPROACH, METHODS AND DELIVERABLES

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

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

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

- Relevant background documentation, inter alia;
- Project design documents (including minutes of the project design review meeting at approval); Annual Work Plans and Budgets or equivalent, revisions to the project (Project Document Supplement), the logical framework and its budget;
- Project reports such as six-monthly progress and financial reports, progress reports from collaborating partners, meeting minutes, relevant correspondence and including the Project Implementation Reviews and Tracking Tool etc.;
- Project deliverables (e.g. publications, assessments etc): (to be shared separately)
- Mid-Term Review or Mid-Term Evaluation of the project;
- Evaluations/Reviews of similar projects.

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

- UNEP Task Manager (TM);
- Project Manager (PM)
- Project management team;

- UNEP Fund Management Officer (FMO);
- Portfolio Manager and Sub-Programme Coordinator, where appropriate;
- Project partners, including co-financing partners. A list will be developed by the executing agency and shared with the evalutor;
- Relevant resource persons;
- Representatives from civil society and specialist groups (such as women's, farmers and trade associations etc).

(c) **Surveys** – to be determined as required
(d) **Field visits** – one mission to the country will be undertaken
(e) **Other data collection tools** – to be determined as required

11. Review Deliverables and Review Procedures

46. The Review Consultant will prepare:

- **Inception Report:** (see Annex 1 for a list of all templates, tables and guidance notes) containing an assessment of project design quality, a draft reconstructed Theory of Change of the project, project stakeholder analysis, review framework and a tentative review schedule.
- **Preliminary Findings Note:** typically in the form of a PowerPoint presentation, the sharing of preliminary findings is intended to support the participation of the project team, act as a means to ensure all information sources have been accessed and provide an opportunity to verify emerging findings.
- **Draft and Final Review Report:** containing an executive summary that can act as a stand-alone document; detailed analysis of the review findings organised by review criteria and supported with evidence; lessons learned and recommendations and an annotated ratings table.

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

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

49. The final version of the Terminal Review report will be assessed for its quality by the UNEP Evaluation Office using a standard template and this assessment will be annexed to the final Terminal Review report.

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

12. The Review Consultant

51. The Review Consultant will work under the overall responsibility of the Task Manager, Asher Lessels, in consultation with the Fund Management Officer, Fatma Twahir, the Head of Unit/Branch, Mark Radka, the Portfolio Managers, Geordie Colville and Ruth Coutto, and the Sub-programme Coordinators of the Climate Change Sub-programme, Niklas Hagelberg.

52. The Review Consultant will liaise with the Task Manager on any procedural and methodological matters related to the Review. It is, however, the consultant's individual responsibility (where applicable) to arrange for their visas and immunizations as well as to plan meetings with stakeholders, organize online surveys, obtain documentary evidence and any other logistical matters related to the assignment. The UNEP Task Manager and

project team will, where possible, provide logistical support (introductions, meetings etc.) allowing the consultants to conduct the Review as efficiently and independently as possible.

The Review Consultant will be hired over a period of 6 months Q4 2022 to Q1 2023 and should have the following: a university degree in environmental sciences, international development, energy, climate, economics or other relevant area is required and an advanced degree in the same areas is desirable; a minimum of 5 years of technical / evaluation experience is required, preferably including evaluating large, regional or global programmes and using a Theory of Change approach; and a good/broad understanding of energy is desired. English and French are the working languages of the United Nations Secretariat. For this consultancy, fluency in oral and written English and Spanish is a requirement. Working knowledge of the UN system and specifically the work of UNEP is an added advantage. The work will be home-based with possible field visits.

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

13. Schedule of the Review

54. The table below presents the tentative schedule for the Review.

Table 3. Tentative schedule for the Review

Milestone	Tentative Dates
Inception Report	15/01/2023
Review Mission	December 2022 or January 2023
E-based interviews, surveys etc.	December 2022 – February 2023
PowerPoint/presentation on preliminary findings and recommendations	March 2023
Draft Review Report to Task Manager (and Project Manager)	March 2023
Draft Review Report shared with wider group of stakeholders	April 2023
Final Review Report	April 2023
Final Review Report shared with all respondents	May 2023

14. Contractual Arrangements

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

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

57. Schedule of Payment:

Deliverable	Percentage Payment
Approved Inception Report (*as per Annex I document #9)*	30%
Approved Final Main Review Report	70%

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

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

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

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

ANNEX VIII. GEF PORTAL INPUTS *(for GEF funded projects)*

The following table contains text to be uploaded to the GEF Portal. **It will be drawn from the Review Report, either as copied or summarised text.** In each case, references should be provided for the paragraphs and pages of the report from which the responses have been copied or summarised.

Table X: GEF portal inputs

Question: What was the performance at the project's completion against Core Indicator Targets? (For projects approved prior to GEF-7[54], these indicators will be identified retrospectively and comments on performance provided[55]).
Response: *(Might be drawn from Monitoring and Reporting section)* (Paragraph 138) Planned M&E activities were carried out and relevant documents were delivered. No delays in delivering these were reported and indicators all achieved their designed end-of-project levels. Indicator 5 was not deemed relevant to show results and impact, which was in fact achieved for outcome 2 (paragraph 139). 141. The project shows complete reporting documentation and there is evidence of its in-time delivery. For all activities involving stakeholders, there are tables available showing gender disaggregated attendance or reach. This results in a satisfactory rating in this dimension (paragraph 141).
Question: What were the progress, challenges and outcomes regarding engagement of stakeholders in the project/program as evolved from the time of the MTR? *(This should be based on the description included in the Stakeholder Engagement Plan or equivalent documentation submitted at CEO Endorsement/Approval)*
Response: *(Might be drawn from Factors Affecting Performance section)* (paragraph 151 -152). Preparation and readiness were some of this project's strongest aspects. The en.lighten experience gave public stakeholders a clear roadmap on how to continue the energy efficiency approach for the Chilean case into a different home appliance sector, while counting on the U4E technical expertise to leapfrog regulations securely. These public stakeholders also act within a strong institutional setting, particularly in the Latin American context, and showed strong technical capacities and knowledge of the problem and how to tackle it. 152. The project exploited pre-existing informal and formal networks (for example between the Ministry of Energy and the SEC, or between the SEC and testing laboratories) to secure participation and information exchange.
Question: What were the completed gender-responsive measures and, if applicable, actual gender result areas? *(This should be based on the documentation at CEO Endorsement/Approval, including gender-sensitive indicators contained in the project results framework or gender action plan or equivalent)*
Response: *(Might be drawn from Factors Affecting Performance section)* (Paragrpah 158). Gender was a focus in the communications campaign, especially as the opportunity to influence a refrigerator purchase has a small window of opportunity (people keep their refrigerators for a very long time) and women are a very relevant decision maker of that

[54] The GEF is currently operating under the seventh replenishment period of the GEF Trust Fund covering the period July 1, 2018 to June 30, 2022. The GEF Portal Reporting Guide for FY20 Reporting Process indicates that GEF-6 projects that have yet to map existing indicators to GEF-7 Core Indicators need to do so at MTR stage or (if already there) at the time of the TE. .(i.e. not GEF projects approved before GEF-6)
[55] This is not applicable for Enabling Activities

purchase in households. Reportedly according to stakeholder interviews, the gender gap seen in the energy sector at large in Chile was not as present in the specific relevant organizations for this project that received capacity building from the project, and stakeholders did not visualize opportunities where gender could have been further considered during project execution. The reviewer was able to interview women that received capacity building and who occupy decision-making positions in both the private and public sector organizations engaged, supporting reports.
Question: What was the progress made in the implementation of the management measures against the Safeguards Plan submitted at CEO Approval? The risk classifications reported in the latest PIR report should be verified and the findings of the effectiveness of any measures or lessons learned taken to address identified risks assessed. *(Any supporting documents gathered by the Consultant during this review should be shared with the Task Manager for uploading in the GEF Portal)*
Response: *(Might be drawn from Factors Affecting Performance section)* (Paragraph 161). A potential social risk identified in the ProDoc's safeguards was that new energy efficient refrigerators could not be affordable to lower-income people, diminishing the energy-poverty alleviating aspect of this project. To address this risk, PSC chose lower-end refrigerator models as eligible in the replacement demo program to mitigate the affordability risk and support effective energy poverty relief through the replacement of inefficient refrigerators. Additionally, lower-end refrigerators are smaller, effectively reducing energy consumption and supporting energy poverty relief, as well as not inducing fresh food stockpiling that can generate food waste. This is an important lesson learned through the implementation of this project that can be valuable for future similar projects. Another action recommended by the safeguards advisor was considering replacing the refrigerant gases of old refrigerators with gases that had less GWP instead of replacing the entire refrigerator. The reviewer consulted about this with stakeholders, who reported this alternative would not be recommended as replacing gases in a non-controlled environment (people's homes) would have greater risk of releasing the old gases into the atmosphere than recycling refrigerators in specialized facilities
Question: What were the challenges and outcomes regarding the project's completed Knowledge Management Approach, including: Knowledge and Learning Deliverables (e.g. website/platform development); Knowledge Products/Events; Communication Strategy; Lessons Learned and Good Practice; Adaptive Management Actions? *(This should be based on the documentation approved at CEO Endorsement/Approval)*
Response: *(Might be drawn from Factors Affecting Performance section)* (Paragraph 163). Communication and Public Awareness are another high point of this project. FCh has extensive experience in managing communication and awareness-raising campaigns and was able to quickly reformulate the campaigns in response to the changing and challenging external context. Stakeholders reported a considerable increase in public awareness after an interview with PSC was aired during an evening news show, highlighting the limits of other approaches to communication campaigns. A valuable lesson learned from this is that communication and awareness- raising campaigns for projects that require a change of attitudes in consumers require using wide-reaching tools such as mainstream media (TV in this case). As a result, these campaigns must be designed considering all available communication instruments to maximize reach within the limited resources available in projects
Question: What are the main findings of the evaluation?
Response: (Paragraph 167). The project faced two black swan-type of events during its execution. In 2019, massive social protests and unrest deeply changed the operating context to new social

norms and expectations, impacting the planned communication campaign's approach. Then, during 2020 the global pandemic paralyzed significant parts of the economy and ruled out social gatherings, impacting both the project's consumer-facing and laboratory-aimed activities. These highly significant events implied delays in execution as activities had to be deeply redesigned to be viable in the new context. 168. The PMU, together with the PSC, undertook several adaptive management measures during implementation as a result of context changes but also to seize opportunities as they appeared. (Paragraph 175). There is evidence that the project delivered all planned outputs and outcomes. The logic of the intervention is sound and validated by all stakeholders, making achieving the project's planned impact highly likely. Assumptions, drivers, intermediary outcomes and their connection to impacts was validated during the review as was planned in the project's original TOC.

ANNEX IX. IMPLEMENTATION PLAN OF RECOMMENDATIONS

Project Title and Reference No.: **GEF 9496 Leapfrogging Chilean's markets to more efficient refrigerators and freezers**

Contact Person (TM/PM): Asher Lessels

	PLANS			
RECOMMENDATIONS	**ACCEPTED (YES/ NO/ PARTIALLY)**	**WHAT WILL BE DONE?**	**EXPECTED COMPLETION DATE**	**REPONSIBLE OFFICER/ UNIT/ DIVISION/ AGENCY**
Follow through the promulgation of regulations to achieve impact	Yes	Contact the Ministry of Environment to follow up on promulgation of proposed regulations	DEC/2025	CCMU
Implement a long-term strategy for Monitoring and verification to measure energy savings from the removal of old-but-operable refrigerators to accurately measure energy and GHG emissions savings in the long run	Partially	Work with CRSOs to measure the number of refrigerators being safely removed from the market	DEC/2025	Ministry
Continue implementing energy efficiency awareness raising campaigns into the future	Partially	Seek funds to continue implementing energy efficiency awareness campaigns into the future	N/A	Fundación Chile
Consult gender specialists on gender responsiveness at project design stage	Yes	Contact the gender specialist at UNEP at design stage for future projects	DEC/2023	CCMU

ANNEX X. QUALITY ASSESSMENT OF THE REVIEW REPORT

Review Title: Validated Terminal Review of the UNEP-GEF Project "Leapfrogging Chilean's markets to more efficient refrigerator and freezers" (GEF ID 9496) 2019 – 2022.

Consultant: Ignacio Simon

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

	UNEP Evaluation Office Comments	Final Review Report Rating
Report Quality Criteria		
Quality of the Executive Summary Purpose: acts as a stand-alone and accurate summary of the main review product, especially for senior management. To include: • concise overview of the review object • clear summary of the review objectives and scope • overall review rating of the project and key features of performance (strengths and weaknesses) against exceptional criteria • reference to where the review ratings table can be found within the report • summary response to key strategic review questions • summary of the main findings of the exercise/synthesis of main conclusions • summary of lessons learned and recommendations.	Final report *(coverage/omissions):* The executive summary includes all the expected elements except for reference to where the review ratings table can be found. Final report *(strengths/weaknesses)*: The executive summary could have been strengthened by including a clear summary of the review objectives, reference to where the review ratings table can be found within the report, and by including a summary response to key strategic review questions.	5
Quality of the 'Introduction' Section Purpose: introduces/situates the evaluand in its institutional context, establishes its main parameters (time, value, results, geography) and the purpose of the review itself. To include: • institutional context of the project (sub-programme, Division, Branch etc) • date of PRC approval, project duration and start/end dates • number of project phases (where appropriate) • results frameworks to which it contributes (e.g. POW Direct Outcome) • coverage of the review (regions/countries where implemented) • implementing and funding partners • total secured budget • whether the project has been reviewed/evaluated in the past (e.g. mid-term, external agency etc.) • concise statement of the purpose of the review and the key intended audience for the findings.	Final report *(coverage/omissions):* All required elements are addressed in the introduction section except for the date of PRC approval.	6
Quality of the 'Review Methods' Section Purpose: provides reader with clear and comprehensive description of review methods, demonstrates the credibility of the findings and performance ratings. To include:	Final report *(coverage/omissions):* The review methods cover most of the elements (data collection methods and information source, number and type of respondents, inclusion, and data verification). Final report *(strengths/weaknesses):*	3

<table>
<tr><th></th><th>UNEP Evaluation Office Comments</th><th>Final Review Report Rating</th></tr>
<tr><td>description of review data collection methods and information sources
justification for methods used (e.g. qualitative/ quantitative; electronic/face-to-face)
number and type of respondents (see table template)
selection criteria used to identify respondents, case studies or sites/countries visited
strategies used to increase stakeholder engagement and consultation
methods to include the voices/experiences of different and potentially excluded groups (e.g. vulnerable, gender, marginalised etc)
details of how data were verified (e.g. triangulation, review by stakeholders etc.)
methods used to analyse data (scoring, coding, thematic analysis etc)
review limitations (e.g. low/ imbalanced response rates across different groups; gaps in documentation; language barriers etc)
ethics and human rights issues should be highlighted including: how anonymity and confidentiality were protected. Is there an ethics statement? E.g. 'Throughout the review process and in the compilation of the Final Review Report efforts have been made to represent the views of both mainstream and more marginalised groups. All efforts to provide respondents with anonymity have been made.</td><td>The methods section neither describes the review approach nor does it provide the rationale for each of the review methods used and how respondents and field visit sites were selected. The report also doesn't describe how the data collected was analysed. Also missing are the strategies used to increase stakeholder engagement, measures taken to reach marginalised groups, limitations to the review and possible mitigation actions.</td><td></td></tr>
<tr><td>Quality of the 'Project' Section
<u>Purpose:</u> describes and <u>verifies</u> key dimensions of the evaluand relevant to assessing its performance.

To include:
Context: overview of the main issue that the project is trying to address, its root causes and consequences on the environment and human well-being (i.e. synopsis of the problem and situational analyses)
Results framework: summary of the project's results hierarchy as stated in the ProDoc (or as officially revised)
Stakeholders: description of groups of targeted stakeholders organised according to relevant common characteristics
Project implementation structure and partners: description of the implementation structure with diagram and a list of key project partners
Changes in design during implementation: any key events that affected the project's scope or parameters should be described in brief in chronological order
Project financing: completed tables of: (a) budget at design and expenditure by components (b) planned and actual sources of funding/co-financing</td><td>Final report (coverage/omissions):
All components of the project section are covered in the report.

Final report (strengths/weaknesses):
In terms of the project financing, the reviewer could have provided a summary analysis of Table 13. Financial management rather than putting the table without any analysis or explanation.</td><td>6</td></tr>
</table>

<table>
<tr><th></th><th>UNEP Evaluation Office Comments</th><th>Final Review Report Rating</th></tr>
<tr><td>Quality of the Theory of Change
<u>Purpose:</u> to set out the TOC at Review in diagrammatic and narrative forms to support consistent project performance; to articulate the causal pathways with drivers and assumptions and justify any reconstruction necessary to assess the project's performance.
To include:
description of how the TOC at Review[56] was designed (who was involved etc)
confirmation/reconstruction of results in accordance with UNEP definitions
articulation of causal pathways
identification of drivers and assumptions
identification of key actors in the change process
summary of the reconstruction/results re-formulation in tabular form. The two results hierarchies (original/formal revision and reconstructed) should be presented as a two-column table to show clearly that, although wording and placement may have changed, the results 'goal posts' have not been 'moved'. This table may have initially been presented in the Inception Report and should appear somewhere in the Main Review report.</td><td>Final report (coverage/omissions):
The ToC at review is presented logically and includes most of the key the ingredients (results statements, causal pathways, assumptions, drivers) of a ToC. Stakeholders were also involved in the review of the ToC including validation. The ToC at review is presented in both text and diagrammatic forms including the ToC review process.

Final report (strengths/weaknesses):
Changes in ToC are not tabulated as expected and the phrasing of some of the results statements (e.g. Outcome 1, 4 and all the intermediate states) could have been improved to include the actors involved in the change process.</td><td>4</td></tr>
<tr><td>Quality of Key Findings within the Report

<u>Presentation of evidence:</u> nature of evidence should be clear (interview, document, survey, observation, online resources etc) and evidence should be explicitly triangulated unless noted as having a single source.

<u>Consistency within the report:</u> all parts of the report should form consistent support for findings and performance ratings, which should be in line with UNEP's Criteria Ratings Matrix.

<u>Findings Statements (where applicable):</u> The frame of reference for a finding should be an individual review criterion or a strategic question from the TOR. A finding should go beyond description and uses analysis to provide insights that aid learning specific to the evaluand. In some cases a findings statement may articulate a key element that has determined the performance rating of a criterion. Findings will frequently provide insight into 'how' and/or 'why' questions.</td><td>Final report (coverage/omissions):
The findings section covers most of the expected subsections in the report by presenting analysis results, and relevant evidence.

Final report (strengths/weaknesses):
The report included findings based on evidence and are consistent throughout the report. However, the finding sections could have been strengthened by including clear references to the sources of evidence and insights into 'how' and 'why'. The report frequently uses broad terms such as 'documentary evidence' and 'evidence' without specifying the exact documents, reports, or sources being referenced. The analysis of the causal pathways strengthens the findings.</td><td>5</td></tr>
<tr><td>Quality of 'Strategic Relevance' Section
<u>Purpose:</u> to present evidence and analysis of project strategic relevance with respect to UNEP, partner and geographic policies and strategies at the time of project approval.
To include:
Assessment of the evaluand's relevance vis-à-vis:</td><td>Final report (coverage/omissions):
The strategic relevance section covers all elements of the section in the report.</td><td>6</td></tr>
</table>

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

	UNEP Evaluation Office Comments	Final Review Report Rating
• Alignment to the UNEP Medium Term Strategy (MTS), Programme of Work (POW) and Strategic Priorities • Alignment to Donor/GEF/Partners Strategic Priorities • Relevance to Regional, Sub-regional and National Environmental Priorities • Complementarity with Existing Interventions: complementarity of the project at design (or during inception/mobilisation[57]), with other interventions addressing the needs of the same target groups.		
Quality of the 'Quality of Project Design' Section Purpose: to present a summary of the strengths and weaknesses of the project design, on the basis that the detailed assessment was presented in the Inception Report.	Final report *(coverage/omissions):* The quality of project design section describes the strengths and weaknesses of the project design. However, the table summarising the analysis of the quality of project design in missing. Final report *(strengths/weaknesses):* A summary of the strengths and weaknesses of some components in the project design such as sustainability, logical framework, monitoring, efficiency, risk identification and social safeguards are not included and could have been beneficial.	5
Quality of the 'Nature of the External Context' Section Purpose: to describe and recognise, when appropriate, key external features of the project's implementing context that limited the project's performance (e.g. conflict, natural disaster, political upheaval[58]), and how they affected performance. While additional details of the implementing context may be informative, this section should clearly record whether or not a major and unexpected disrupting event took place during the project's life in the implementing sites.	Final report *(coverage/omissions):* The report presents a good analysis of the external context highlighting unexpected events that affected project implementation their impacts and mitigation measures put in place by the project..	6
Quality of 'Effectiveness' Section **(i) Availability of Outputs:** Purpose: to present a well-reasoned, complete and evidence-based assessment of the outputs made available to the intended beneficiaries. To include: • a convincing, evidence-supported and clear presentation of the outputs made available by the project compared to its approved plans and budget • assessment of the nature and scale of outputs versus the project indicators and targets	Final report *(coverage/omissions):* The section covers all outputs in the project result frameworks including an analysis of whether the outputs were delivered or not. Final report *(strengths/weaknesses):* The delivery of the outputs against the indicators and targets is asserted, although details are not presented. The report would also have benefited from inclusion of an analysis on any negative or positive effects of the project on disadvantaged groups.	5

[57] A project's inception or mobilization period is understood as the time between project approval and first disbursement. Complementarity during project implementation is considered under Efficiency, see below.

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

	UNEP Evaluation Office Comments	Final Review Report Rating
• assessment of the timeliness, quality and utility of outputs to intended beneficiaries • identification of positive or negative effects of the project on disadvantaged groups, including those with specific needs due to gender, vulnerability or marginalisation (e.g. through disability).		
ii) Achievement of Project Outcomes: Purpose: to present a well-reasoned, complete and evidence-based assessment of the uptake, adoption and/or implementation of outputs by the intended beneficiaries. This may include behaviour changes at an individual or collective level. To include: • a convincing and evidence-supported analysis of the uptake of outputs by intended beneficiaries • assessment of the nature, depth and scale of outcomes versus the project indicators and targets • discussion of the contribution, credible association and/or attribution of outcome level changes to the work of the project itself • any constraints to attributing effects to the projects' work • identification of positive or negative effects of the project on disadvantaged groups, including those with specific needs due to gender, vulnerability or marginalisation (e.g. through disability).	Final report *(coverage/omissions):* The review provides an analysis of the achievement of project outcomes presenting relevant evidence and describes the contribution of various outputs. Final report *(strengths/weaknesses):* The analysis is supported by Annex XII, in which the performance against indicators has been verified.	5
(iii) Likelihood of Impact: Purpose: to present an integrated analysis, guided by the causal pathways represented by the TOC, of all evidence relating to likelihood of impact, including an assessment of the extent to which drivers and assumptions necessary for change to happen, were seen to be holding. To include: • an explanation of how causal pathways emerged and change processes can be shown • an explanation of the roles played by key actors and change agents • explicit discussion of how drivers and assumptions played out • identification of any unintended negative effects of the project, especially on disadvantaged groups, including those with specific needs due to gender, vulnerability or marginalisation (e.g. through disability).	Final report *(coverage/omissions):* This section of the report provides a brief description of the likelihood of impact. Final report *(strengths/weaknesses):* Beyond the summative statements on likelihood of impact, there is no analysis to back the conclusions i.e. the report doesn't interrogate the underlying theory of change in terms of the causal pathways neither does it test the assumptions and drivers that underpin the intervention logic. The actors are missing from the analysis as are the unintended negative effects of the project on disadvantaged groups.	4
Quality of 'Financial Management' Section Purpose: to present an integrated analysis of all dimensions evaluated under financial management and include a completed 'financial management' table (may be annexed). Consider how well the report addresses the following: • *adherence* to UNEP's financial policies and procedures • *completeness* of financial information, including the actual project costs (total and per activity) and actual co-financing used	Final report *(coverage/omissions):* All the expected sections are covered in the report. Final report *(strengths/weaknesses):* The review report could have explicitly mentioned the documentary evidence used for the analysis of budget and expenditure to strengthen credibility and reliability. In addition, the review could have explicitly stated whether the results of the audit confirm the adherence or	4

	UNEP Evaluation Office Comments	Final Review Report Rating
• *communication* between financial and project management staff	non-adherence of the project to UNEP's financial policies and procedures. Regarding co-financing, the report states that the co-financing is *'underreported'*. Examples of effective communication between financial and project management staff such as tools, systems or channels used would have strengthened this section of the report.	
Quality of 'Efficiency' Section Purpose: to present an integrated analysis of all dimensions evaluated under efficiency (i.e. the primary categories of cost-effectiveness and timeliness). To include: • time-saving measures put in place to maximise results within the secured budget and agreed project timeframe • discussion of making use, during project implementation, of/building on pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. • implications of any delays and no cost extensions • the extent to which the management of the project minimised UNEP's environmental footprint.	Final report *(coverage/omissions):* The section is well written covering the adaptation of the project activities due to the unprecedented events including implication of delays, partnerships, use of pre-existing formal and informal networks. Final report *(strengths/weaknesses):* Time-saving measures, cost-effectiveness, and the extent of UNEP environmental footprint through the project management are not described in the section.	4
Quality of 'Monitoring and Reporting' Section Purpose: to present well-reasoned, complete and evidence-based assessment of the evaluand's monitoring and reporting. Consider how well the report addresses the following: • quality of the monitoring design and budgeting *(including SMART results with measurable indicators, resources for MTE/R etc.)* • quality of monitoring of project implementation *(including use of monitoring data for adaptive management)* • quality of project reporting *(e.g. PIMS and donor reports)*	Final report *(coverage/omissions):* The section covers all components of the monitoring and reporting sections and identifies gaps, such as the budget was not planned for monitoring some indicators. Also, the review states that the M&E activities were carried out in a timely manner. Final report *(strengths/weaknesses):* The focus of the sub section on monitoring and design was on budget availability and therefore an opportunity to assess other aspects such as availability of a monitoring plan, appropriateness of performance indicators used, data collection methods and frequency and examples of how the monitoring data and information were used for adaptive management of the project was missed. To strengthen the section, the review should have also addressed the quality of monitoring and reporting, including examples of how the monitoring data and information were used for adaptive management of the project.	4
Quality of 'Sustainability' Section Purpose: to present an integrated analysis of all dimensions evaluated under sustainability (i.e. the endurance of benefits achieved at outcome level). Consider how well the report addresses the following: • socio-political sustainability	Final report *(coverage/omissions):* All expected sections are covered by the report. Final report *(strengths/weaknesses):* The section presents a good assessment of sustainability from three dimensions	5

	UNEP Evaluation Office Comments	Final Review Report Rating
• financial sustainability • institutional sustainability	i.e. socio-political, financial and institutional sustainability. Whereas, the review reported high-level of sustainability, endurance of benefits achieved at the outcome level would be uncertain as most of the outcomes were partially achieved. On financial sustainability the report mentions that existing government budget allocation would the project outcomes of a regulatory nature. The review would have benefited from an analysis of the adequacy of the existing financial resources for this kind of work. The analysis of the institutional sustainability on the other hand is devoid of the actors involved and clear specific roles and responsibilities of partners in the exit strategy.	
Quality of Factors Affecting Performance Section Purpose: These factors are not always discussed in stand-alone sections and may be integrated in the other performance criteria as appropriate. However, if not addressed substantively in this section, a cross reference must be given to where the topic is addressed and that entry must be sufficient to justify the performance rating for these factors. Consider how well the review report, either in this section or in cross-referenced sections, covers the following cross-cutting themes: • preparation and readiness • quality of project management and supervision[59] • stakeholder participation and co-operation • responsiveness to human rights and gender equality • environmental and social safeguards • country ownership and driven-ness • communication and public awareness	Final report *(coverage/omissions):* All expected sections are included in the report. Final report *(strengths/weaknesses):* In terms of preparation and readiness, the expectation for this section of the report is an assessment of whether appropriate measures were taken to either address weaknesses in the project design or respond to changes that took place between project approval, the securing of funds and project mobilisation. In particular, the review report should have reviewed the nature and quality of engagement with stakeholder groups by the project team, partner capacity and development of partnership agreements as well as initial staffing and financing arrangements. This sub criterion is also not rated. For quality of project management and supervision, the review report provides very brief summative statements on the performance of UNEP and the executing agency. The expectation in section is an analysis of the project management (executing agency, Project Management Unit, Technical working group) and supervision (steering committee, implementing agency) arrangements.	4

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

	UNEP Evaluation Office Comments	Final Review Report Rating
	The section on safeguards could have benefited from an analysis of the availability and appropriateness of the management plan, review of the risk ratings, project efforts in monitoring the safeguarding issues and responses taken (if any) and reporting.	
Quality of the Conclusions Section **(i) Conclusions Narrative:** Purpose: to present summative statements reflecting on prominent aspects of the performance of the evaluand as a whole, they should be derived from the synthesized analysis of evidence gathered during the review process. To include: • compelling narrative providing an integrated summary of the strengths and weakness in overall performance (achievements and limitations) of the project • clear and succinct response to the key strategic questions • human rights and gender dimensions of the intervention should be discussed explicitly (e.g. how these dimensions were considered, addressed or impacted on)	Final report *(coverage/omissions):* The section covers all expected components of the conclusion. Final report *(strengths/weaknesses):* The conclusions section of the report presents a summary of the evaluation findings highlighting both strengths and weaknesses in overall performance. The report does not address the two strategic questions explicitly. Paragraphs (Para 164 -166) summarising the project description and project stakeholders could have been excluded as these aren't findings.	5
ii) Utility of the Lessons: Purpose: to present both positive and negative lessons that have potential for wider application and use (replication and generalization) Consider how well the lessons achieve the following: • are rooted in real project experiences (i.e. derived from explicit review findings or from problems encountered and mistakes made that should be avoided in the future) • briefly describe the context from which they are derived and those contexts in which they may be useful • do not duplicate recommendations	Final report *(coverage/omissions):* This section presents lessons learned from actual project experiences and reviews findings including the link between lessons and the context. The report also includes both positive and negative lessons that have potential for wider application and use.	5
(iii) Utility and Actionability of the Recommendations: Purpose: to present proposals for specific action to be taken by identified people/position-holders to resolve concrete problems affecting the project or the sustainability of its results. Consider how well the lessons achieve the following: • are feasible to implement within the timeframe and resources available (including local capacities) and specific in terms of who would do what and when • include at least one recommendation relating to strengthening the human rights and gender dimensions of UNEP interventions • represent a measurable performance target in order that the UNEP Unit/Branch can monitor and assess compliance with the recommendations. NOTES: **(i)** In cases where the recommendation is addressed to a third party, compliance can only be monitored and assessed where a contractual/legal agreement remains in	Final report *(coverage/omissions):* The report presents a section with recommendations in the prescribed format. Final report *(strengths/weaknesses):* Overall, this section proposes clear recommendations to address challenges encountered in project implementation and those that would affect sustainability of project results. However, the recommendations could have been strengthened by more specific time frames and assignment of responsibilities for their implementation i.e., by mentioning the specific unit in UNEP and the specific partners.	4

	UNEP Evaluation Office Comments	Final Review Report Rating
place. Without such an agreement, the recommendation should be formulated to say that UNEP project staff should pass on the recommendation to the relevant third party in an effective or substantive manner. The effective transmission by UNEP of the recommendation will then be monitored for compliance. **(ii)** Where a new project phase is already under discussion or in preparation with the same third party, a recommendation can be made to address the issue in the next phase.		
Quality of Report Structure and Presentation **(i) Structure and completeness of the report:** To what extent does the report follow the UNEP Evaluation Office structure and formatting guidelines? Are all requested Annexes included and complete?	Final report *(coverage/omissions):* The report in presented using the evaluation structure with most of the expected sections included. Final report *(strengths/weaknesses):* The report would have benefitted from a clear statement of whether a TOC was included in the design and, if so, the inclusion of a table to summarise changes made to the Theory of Change. The following would have strengthened the report: the review itinerary, the rating for Preparation and readiness under factors affecting performance and responses to key strategic questions. For avoidance of doubt, an explanation such as no comments remain pending could have been added to Annex 1: Response to Stakeholder Comments rather than leaving it blank.	5
(ii) Writing and formatting: Consider whether the report is well written (clear English language and grammar) with language that is adequate in quality and tone for an official document? Do visual aids, such as maps and graphs convey key information?	Final report *(coverage/omissions):* The report is well written in clear English language and grammar. Final report *(strengths/weaknesses):* Overall, the report is professionally written in quality and tone for an official document. Some tables, and figures (mostly photos) were used in the report including ToC diagram. However, in some instances (Paragraph 32) present rather than past tense is used.	5
OVERALL REPORT QUALITY RATING	**Moderately Satisfactory**	**4.7**

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

ANNEX XI. GENERAL QUESTIONS TO BE ANSWERED DURING THE REVIEW

Relevance

1. Does the project align with the priorities of your institution?
2. Does the project fit with national and local environment priorities?
3. Did the project's concept come from local and/or national stakeholders?
4. Were those stakeholders sufficiently involved during project development?
5. Has this project been relevant and effective? Would it need to be changed to be more relevant and effective?
6. How did the project governance, oversight and accountability worked?

Effectiveness

7. Is the project's impact likely to be met?
8. Which factors supported or hindered the project's success?
9. Are there any risks or barriers that remain to achieve the project's impact?
10. Have the assumptions and drivers for impact established in the TOC held true?
11. Has the sequence of actions planned at the design stage been effective for outcome delivery or did it need to be redesigned?
12. Do stakeholders perceive the outcomes of the project have been achieved?
13. Have gender, inclusion and other cross-cutting issues been properly taken into consideration in the project's design and implementation?

Efficiency

14. Are budgets and expenditures in line with international standards?
15. Has the project design been efficient for achieving planned results?
16. Has the project delivery been delayed? Why? Has it affected its cost-effectiveness?
17. What was the effective co-financing contribution from other stakeholders to project implementation?
18. Did the project mobilized additional resources towards its impact?

Results

19. Have all the outputs been delivered? Did they contribute to the outcomes and impact?
20. Are the outcomes likely to be achieved? Are they effectively contributing to the impact?
21. Are the impacts likely to be achieved? Which is their likely scale?

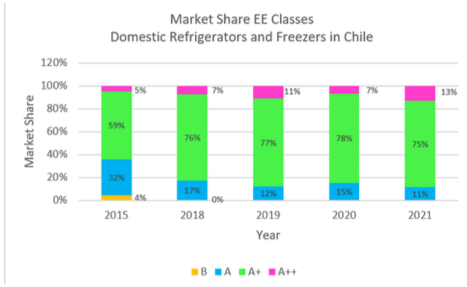
Sustainability

22. Are project results dependent on continued economic support? If so, will those resources be available to sustain the project results after closure?
23. Have the relevant stakeholders taken ownership of the results? Are they interested in maintaining them?
24. Do relevant stakeholders have the necessary capabilities to maintain those results?
25. Are the results exposed to socio-political risks or other institutional, environmental or governance risks?

Gender

26. How did the project include gender equality and women's empowerment at the design stage?
27. How did the project include gender equality and women's empowerment at the implementation stage?

ANNEX XII – OUTCOME INDICATORS AND ACHIEVEMENT EVALUATION

Project objectives and outcomes	Indicator	Baseline level	End-of-project target	Summary by EA of indicator level and target as of June 30th 2022[60]	Endorsed / verified by reviewer
Objective: Accelerating transformation of Chile's markets to more energy efficient (EE) residential refrigerators/freezers thereby achieving reduction of GHG[61] emissions and contributing to improved energy access and energy security.	Increase in market share of more energy efficient refrigerators/freezers	Market share in 2015: A++ = IEE < 30 = 5% A+ = 30 ≤ IEE < 42 = 39% A = 42 ≤ IEE < 55 = 44% B = 42 ≤ IEE < 55 = 9% C = 75 ≤ IEE < 90 = 3%	Market share in 2025: A = IEE < 15 = 50% B = 15 ≤ IEE < 22 = 40% C = 22 ≤ IEE < 30 = 10% D = 30 ≤ IEE < 42 = 0% E = 42 ≤ IEE < 55 = 0%	Market share analysis of 2018: S A++ = IEE < 30 = 7% A+ = 30 ≤ IEE < 42 = 76% A = 42 ≤ IEE < 55 = 17% Market share analysis of 2019 A++ = IEE < 30 = 11% A+ = 30 ≤ IEE < 42 = 77% A = 42 ≤ IEE < 55 = 12% Market share analysis of 2020 A++ = IEE < 30 = 7% A+ = 30 ≤ IEE < 42 = 78% A = 42 ≤ IEE < 55 = 15% Market share analysis of 2021 A++ = IEE < 30 = 13% A+ = 30 ≤ IEE < 42 = 75% A = 42 ≤ IEE < 55 = 11% 	Yes. The indicator was almost achieved by 2021. SEC officials (entity in charge of appliance import approval and regulatory compliance) reported on interviews in 2022 achievement of the indicator.

[60] Final information from last project PIR
[61] GHG: Green House Gases

<table>
<tr>
<td></td>
<td>Reduction of GHG emissions (direct project-related impact estimated based on GEF-STAP methodology)</td>
<td>N/A</td>
<td>547,462 tCO_2e[62]</td>
<td>The original emission reduction estimate considers energy savings up to 2030 (i.e. +10 years after originally planned closure date). The calculation was updated to reflect actual project performance (delays in execution, actual expected date for MEP implementation, actual size of the pilot). Comparing the total direct emission reductions occurring by the end of the 10-year post-project timeframe, the project will achieve 3,285,180 tCO_2, which is 9.8% less than originally expected.
<table>
<tr><th>Element</th><th>Original assumption / result</th><th>Revised assumption / result</th></tr>
<tr><td>Project period</td><td>01/2018 – 12/2020
(36 months)</td><td>05/2018 – 04/2022
(47 months)</td></tr>
<tr><td>Period considered in the calculation</td><td>10 years after project closure
(2021 – 2030)</td><td>10 years after project closure
(2023 – 2032)</td></tr>
<tr><td>MEP enforcement</td><td>2020</td><td>2023</td></tr>
<tr><td>Pilot size (replacement campaign)</td><td>1,600 refrigerators (assumed)</td><td>1,600 refrigerators (actual, ex-post values)</td></tr>
<tr><td>Direct GHG Emission Savings (tCO_2)</td><td>547,462</td><td>1,180</td></tr>
<tr><td>Direct Post-project GHG Emission Savings (tCO_2)</td><td>3,093,088</td><td>3,284,000</td></tr>
<tr><td>Total Direct (including Post-project) GHG Emission Savings (tCO_2)</td><td>3,640,551</td><td>3,285,180
(-9.8%)</td></tr>
</table>
Note that the original calculation assumed that the MEP would be instantly enforced since the very beginning of 2020, and hence, efficient refrigerators would be sold and generating emissions already during the entirety of the project's last year (2020). The life-time savings from these refrigerators sold in 2020 are what the original estimate in the prodoc presented as "direct emission savings" (547,462 tCO_2), with the remaining reductions (i.e. from refrigerators sold after project completion) referred to as "direct post- project". The actual MEP, however, will only enter into force in 2023, i.e. after the project's technical completion. Hence, the emission reduction pathway will be slightly delayed.</td>
<td>Yes. Although there is a delay in implementation of the MEPS and EE labelling, in 2025 the regulation has been implemented[63].</td>
</tr>
</table>

[62] tCO2e: Tons of Carbon Dioxide Equivalent Emissions
[63] https://www.bcn.cl/leychile/navegar?i=1206603

<table>
<tr>
<td>Outcome 1: Accelerated transformation of the market for EE residential refrigerators/freezers via implementation of advanced MEPS[64] and EE labels in line with international best practices and provision of associated capacity building</td>
<td>Status and level of new MEPS</td>
<td>MEPS currently allow only A-class products (IEE < 55)</td>
<td>New MEPS (IEE< 30) officially adopted</td>
<td>The proposal of new performance standards (MEPS) for the national market has been concluded and presented to the Ministry of Energy and SEC. The recommended option for Chile made by U4E (Scenario 2) has been adopted by the Ministry of Energy and will be implemented in Chile. The implementation action plan is being coordinated between the public and private sector and must be in line with the implementation of the new testing protocol IEC 62552:2015 (planned for the second semester of 2022), since IEE standards differ between actual and future testing protocol.</td>
<td>Yes. The consultation period for the regulation was concluded in 2024[65] and the regulation is expected to be implemented in the first months of 2025, after the new EE labelling has been adopted[66]</td>
</tr>
<tr>
<td></td>
<td>Status and level of new EE labels for residential refrigerators/freezers</td>
<td>Energy label exists with the following classes:
A++ = IEE < 30
A+ = 30 ≤ IEE < 42
A = 42 ≤ IEE < 55
because B to G-class products has been phase out of the market by the producers and importers</td>
<td>New energy label adopted with the following classes:
A = IEE < 15
B = 15 ≤ IEE < 22
C = 22 ≤ IEE < 30
D = 30 ≤ IEE < 42
E = 42 ≤ IEE < 55</td>
<td>The proposal of a new energy label for refrigerators/freezers has been concluded and adopted by the Ministry of Energy. The recommendations have been socialized with the Ministry of Energy, SEC, stakeholders and main project partners. The Ministry of Energy and SEC are coordinating a gradual adoption process for the national market.
<table>
<tr><td>Label</td><td>IEE actual</td><td>IEE targeted</td><td>IEE proposed and adopted

(new testing protocol)</td><td>Approximated equivalent of IEE proposed and adopted considering former IEE standards*</td></tr>
<tr><td>A++</td><td>IEE < 30</td><td></td><td></td><td></td></tr>
<tr><td>A+</td><td>30 ≤ IEE < 42</td><td></td><td></td><td></td></tr>
<tr><td>A</td><td>42 ≤ IEE < 55</td><td>IEE < 15</td><td>IEE < 54</td><td>IEE < 17</td></tr>
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</td>
<td>Yes. The new EE labelling has been adopted[67]</td>
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[64] MEPS: Minimum Energy Performance Standards
[65] https://energia.gob.cl/consultas-publicas/informe-tecnico-para-la-actualizacion-del-estandar-minimo-de-eficiencia-energetica-refrigeradores-domesticos
[66] https://www.bcn.cl/leychile/navegar?i=1206603
[67] https://www.bcn.cl/leychile/navegar?i=1206603

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<tr><td>B</td><td></td><td>15 ≤ IEE < 22</td><td>54 < IEE ≤ 64</td><td>17 < IEE ≤ 19</td></tr>
<tr><td>C</td><td></td><td>22 ≤ IEE < 30</td><td>64 < IEE ≤ 76</td><td>19 < IEE ≤ 23</td></tr>
<tr><td>D</td><td></td><td>30 ≤ IEE < 42</td><td>76 < IEE ≤ 90</td><td>23 < IEE ≤ 27</td></tr>
<tr><td>E</td><td></td><td>42 ≤ IEE < 55</td><td>90 < IEE ≤ 106</td><td>27 < IEE ≤ 32</td></tr>
<tr><td>F</td><td></td><td></td><td>106 < IEE ≤ 125</td><td>32 < IEE ≤ 38</td></tr>
<tr><td>G</td><td></td><td></td><td>125 ≤ IEE</td><td>38 ≤ IEE</td></tr>
<tr><td colspan="5">*Consideration must be made that the new recommended testing protocol IEC62552:2015 has a different measuring method than the actual one. This results in different EEI ranges.

These conversions are approximated and based on the European model. The final IEE standards for the Chilean Market will depend on the testing protocols included in the implementation of the IEC 62552:2015 which is on development at the present (June 2021).</td></tr>
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<td>Outcome 2:

Actors comply with improved MVE labelling regulations, testing protocols and measurements methodologies to ensure residential refrigerators/freezers meet improved efficiency levels.</td>
<td>Time taken to get a certification for new products to be placed on the market</td>
<td>3 to 6 months</td>
<td>Less than 3 months.</td>
<td>The ongoing implementation process of the new testing protocol IEC 62552:2015 will allow the recognition of international certification processes in the country and/or specific tests which comply with national standards. This is expected to reduce the certification time and costs for products in the national market considering that Chile is a refrigerators and freezers import country with no domestic production. The actualized testing protocol will be enacted officially by the second semester of 2022 with a gradually phased implementation process.</td>
<td>Yes. The new testing protocol has been adopted [68] In stakeholder interviews, the indicator was not deemed as relevant as a proxy for measuring actors compliance with regulations. Stakeholders proposed instead the rapid adoption of the best standards in available refrigerators, shown by indicator 1. Stakeholders</td>
</tr>
</table>

[68] https://www.bcn.cl/leychile/navegar?i=1206603

					also mentioned excess capacity in testing laboratories and low cost of implementing test protocol as a more important driver of adoption than the ability to use foreign testing capacity.
	Number of laboratories trained in the new protocol IEC 62552:2015 that are able to perform tests in their own dependencies.	Revised baseline: 0 (laboratories in Chile use currently the Energy Efficiency Testing Protocol IEC 62552:2015	At least 2 laboratories are trained in the new testing protocol IEC 62552:2015 and are able to use the new testing protocol in their own dependencies	During March and April 2022, 2 laboratories (**CESMEC** and **SILAB**) were deeply trained in the new testing protocol by the international laboratory REGENT, implementing in their dependencies the required software and hardware to run all tests required by the actualized protocol and be able to compare results between them and the training laboratory (Annex 12 and 13). Several other activities have been developed to socialize and train national actors within the new IEC 62552:2015 testing protocol throughout the project. Certification bodies, testing laboratories, producers and governmental actors have been involved in different training instances, site visits and technical roundtables to understand, suggest and comment on the proposed specific tests and standards to be implemented in Chile within the new testing protocol. During June 2021 a final draft on the details of the IEC 62552:2015 developed by the SEC and Ministry of Energy with technical support and guidance of an international consultant of the project was socialized with all involved actors to receive suggestions and comments. More than 57 actors representing the certification department of different stakeholders participated actively and have been involved since 2019 in activities towards understanding and incorporating the new protocol into their working guidelines.	Yes. The reviewer visited both labs during the TR mission. Stakeholders in both labs expressed complete satisfaction on the training received and stated their full ability to comply with the new protocol. SEC officials (laboratory regulators) cross-verified this.
Outcome 3: Enhanced awareness among consumers (by gender) and market players in Chile to understand, afford, and purchase EE refrigerators/freezers	Increase in the % of consumers (by gender) who understand the EE labelling for refrigerators, including % of those who make their consumer decisions based on EE label	As of 2016: 50% of consumers are aware about EE labels and 70% of those make their consumer decision based on information in the label	By 2025[69]: 80% of consumers are aware about EE labels and 80% of those make their consumer decision based on information in the label	For the registration in the Refriclaje campaign, interested consumers had to respond to a questionnaire in which one of the questions was: "Do you understand the information given in the EE Label of a refrigerator" for which **83% understands the information given and they search for a refrigerator that has at least class A**. Another 6% of the total registered persons understands the EE label but it does not affect their purchasing decision. 10% states that they do not understand the information given by the EE label (Annex 27).	Yes. Although the project did not foresee a specific survey to measure this indicator, and the reported indicator may have a degree of self-selection bias (consumers surveyed could already be interested in energy efficiency to some degree as they were sampled from the refrigerator substitution

[69] The baseline (2016) was constructed with information from the survey "Attitudes towards the Environment" conducted on a yearly basis by the "Universidad Andrés Bello". However, the specific information consulted differs from one year to another, emphasizing on actual topics towards environmental issues. Information on understanding EE labelling and it´s incidence on consumption decisions has not been collected since 2016 by this source. The projects´ executing agency is evaluating alternative sources to report this outcome that can show consistency with older and actual data such as to outline real improvements in these matters.

					campaign), the quick increase in market share of efficient appliances, together with evidence reported by retailer stakeholders on the behaviour patterns of consumers (consumers would ask about EE as a first or second question when shopping for a refrigerator), backs the reported value of the indicator.
Outcome 4: Voluntary implementation of the national framework for environmentally sound management of refrigerators/freezers started	Number of companies involved in the Collection and Recycling Service Organization (CRSO) business model for refrigerators	There is not any work group about CRSO business model for refrigerators.	5 main companies involved in the CRSO business model.	The Clean Production Agreement (APL in Spanish) between the Santiago Chamber of Commerce (CCS) and the Sustainability Agency, has been signed by **16 stakeholders (producers, retail, business associations, municipalities)** representing an important market share. The main objective of the clean production agreement is the creation of a CRSO. The project has collaborated continuously with the CCS within the Clean Production Agreement in accomplishing many common targets (environmentally friendly sound management, communication, and awareness activities).	Yes. The APLs are a solid tool in the Chilean context and provide a strong backing to the reported indicator.
	Supreme Decree on WEEE Management within Law 20.920 (REP Law) is drafted and incorporates best international practices.	Supreme Decree on WEEE is not elaborated	WEEE Supreme Decree is drafted incorporating best international practices on implementation methods, declaration system, incentives to reuse WEEE and reduce its generation.	The Supreme Decree on WEEE within Law 20.920 (REP Law) was drafted considering specific technical input developed by the project. The input provided by the project established the relevance of a rational sound management for appliances containing refrigerant gases, which led to the incorporation of specific targets for heat exchanger appliances (such as refrigerators) within the WEEE Supreme Decree. The Supreme Decree underwent the public consultancy process during the first semester of 2022 and at the present the Ministry of Environment is analysing the comments and suggestions made by relevant actors and defining which will be considered in the official version. The final enactment of the Supreme Decree is set for the second semester of 2022. In the following an overview of the studies developed by the project which contributed to this indicator is presented: 1. Electric and Electronical Equipment (EEE) included in the EPR Scheme and declaration system (Annex 5)	Yes. The project delivered the draft supreme decree. Implementation has been delayed as a result of extended public consultations, which are ongoing[70].

[70] https://economiacircular.mma.gob.cl/aparatos-electricos-y-electronicos/

				2. Limitations to hazardous contents in WEEE products (Annex 6) 3. Gradualism in the recollection of WEEE in Chile (Annex 7) 4. Preparation for the reuse of WEEE (Annex 8)	