

Independent Terminal Evaluation

GEF UNIDO Cleantech Programme for Small and Medium Enterprises (SMEs) in Pakistan

UNIDO ID: 130063
GEF Project ID: 5553



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO INDEPENDENT EVALUATION DIVISION

Independent Evaluation

GEF UNIDO Cleantech Programme for Small and Medium Enterprises (SMEs) in Pakistan

UNIDO ID: 150063
GEF Project ID: 5553



**UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION**

Vienna, March 2019

Distr. GENERAL
ODG/EIO/IED/18/R.17

April 2019

Original: English

This evaluation was managed
by the responsible
UNIDO Project Manager with
quality assurance by the
Independent Evaluation Division

The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Mention of company names and commercial products does not imply the endorsement of UNIDO.

The views and opinions of the team do not necessarily reflect the views of the Governments and of UNIDO.

This document has not been formally edited.

Table of Contents

Acknowledgements	viii
Abbreviations and acronyms	ix
Glossary of evaluation-related terms	x
Map of GEF-UNIDO Cleantech Programme for SMEs in Pakistan	xi
Executive Summary	1
1 Evaluation Objectives, Methodology, Process	5
1.1 Introduction and Background on the Terminal Evaluation	5
1.2 Objectives and Scope of the Terminal Evaluation	5
1.3 Evaluation Methodology	5
1.4 Challenges and Limitations	6
2 Country and Project Background	7
2.1 Country Background	7
2.2 Sector-Specific Issues of Concern to the Project	9
2.3 Project Summary	10
3 Project Assessment	18
3.1 Impact	18
3.2 Project Design	20
3.3 Project Performance	26
3.4 Assessment of Cross-Cutting Performance Criteria	43
3.5 Performance of Partners	47
3.6 Processes affecting achievement of project results	48
3.7 Other Assessments Required for GEF-Funded Projects	51
3.8 Overarching Assessment and Rating Table	52
4 Conclusions, Lessons Learned, Recommendations	55
4.1 Conclusions	55
4.2 Lessons Learned	57
4.3 Recommendations	58
Annex 1. Evaluation Terms of Reference	60
Annex 2. List of Documents Reviewed	91
Annex 3. List of Persons Interviewed	94
Annex 4. Summary of Project Identification and Financial Data	97
Table 1: Summary of Evaluation Ratings	3
Table 2: Financing Inputs by Source (planned), 2013-2016	12
Table 3: Key Stakeholders Planned to be Involved in Project Execution	13
Table 4: Milestones and Key Dates in Project Implementation	14
Table 5: GCIP Pakistan's Results Framework	22
Table 6: Summary of the Project's Success in Meeting its Overall Objective	29
Table 7: Summary of the Project's Success in Producing Outputs under Outcome 1	32

Table 8: Summary of the Project's Success in Producing Outputs under Outcome 2	35
Table 9: Summary of the Project's Success in Producing Outputs under Outcome 3	37
Table 10: Budgeting and Funding for M&E Activities of GCIP Pakistan.....	46
Table 11: Component / Year-Wise Project Expenditures (2014 to March 2018)	49
Table 12: Co-Financing from National Partners (planned, in USD).....	50
Table 13: Component-Wise Contributions of National Partners (actual, in USD).....	50
Table 14: Summary of Findings and Ratings by Evaluation Criteria for the GCIP Pakistan Project	52
Figure 1: Pakistan's Greenhouse Gas Emissions by Sector	8
Figure 2: Project Implementation Arrangement	17
Figure 3: Reconstructed Theory of Change for GCIP Pakistan	25
Figure 4: Catalytic Role of GEF Grant within GCIP Pakistan Project.....	48
Picture 1: GCIP's Geographical Outreach in Pakistan (2013-2017).....	xi
Picture 2: GCIP Pakistan's Planned Replication (2018 onwards)	xi
Picture 3: GCIP Pakistan's Consultative Approach to Building Commitment and Engagement	39
Picture 4: Extensive Efforts Effectively Supported Gender Mainstreaming	44

Acknowledgements

The Evaluation Team comprised of Ms. Joyce Miller, International Evaluation Consultant and Team Leader and Mr. Nisar Ahmad Khan, National Evaluation Consultant, engaged to undertake this independent terminal evaluation of the “GEF UNIDO Cleantech Programme for SMEs in Pakistan” (GCIP Pakistan) would like to acknowledge and thank the partners, counterparts, start-ups, mentors, judges, and other actors who shared their valuable perspectives and provided input to this evaluation.

Thanks, are extended to Evaluation Officer Ms. Thuy Thu Le and the project team in Vienna: Mr. Alois Posekufa Mhlanga and Ms. Daniela Izbal Noguera, Ms. Sunyoung Suh in the GEF Coordination Office, and the implementation team in Islamabad: National Project Coordinator Ms. Shahina Waheed, Mr. M. Hammad Bashir Saeed (Project Technical Expert), Ms. Zikrea Saleah (Communication Focal Point), Mr. M. Faisal Qureshi (Project Assistant, Security Focal Point), and Mr. Saleem Sakindar Khan (Driver).

The insights and perspectives of UNIDO Country Representative Ms. Nadia Aftab and UN Resident Coordinator Mr. Neil Buhne were also highly appreciated as were the very valuable contributions from all other actors interviewed in Islamabad, Karachi, and Lahore during the field mission, which was conducted in Pakistan during 16-20 April 2018.

The Evaluation Team emphasizes its appreciation to all those who provided input into this terminal evaluation of the GCIP’s implementation in Pakistan. The quality of their reflection has allowed for the development of robust findings, lessons learned, and recommendations, which are offered with the aim of guiding and informing the design and implementation of projects within the domain of cleantech innovation, and beyond.

Abbreviations and acronyms

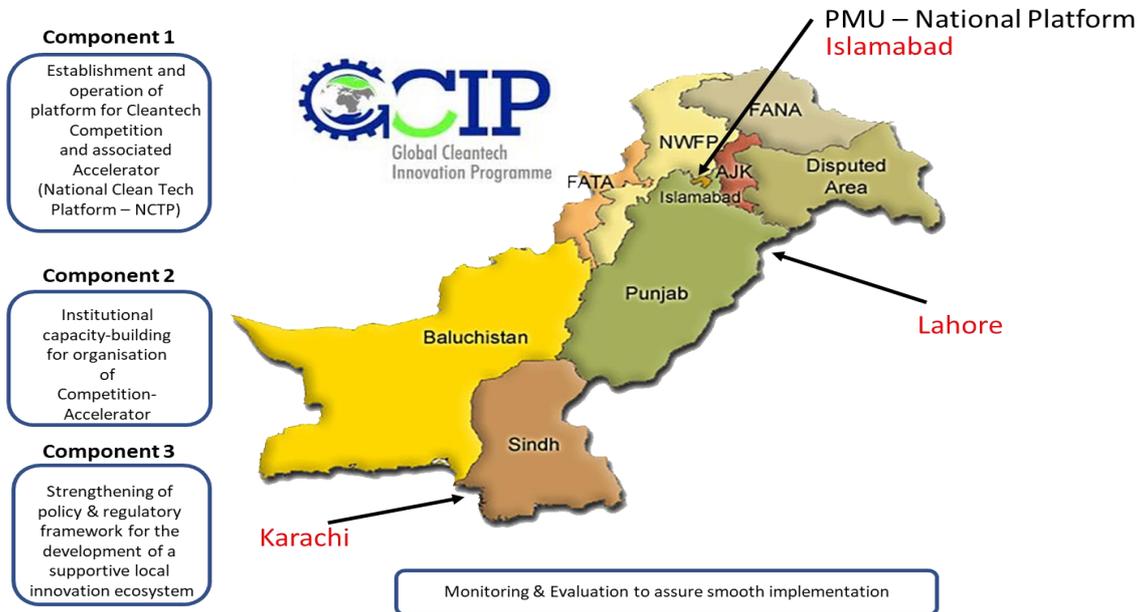
Abbreviations	Meaning
COP	(UN Climate Change) Conference of the Parties
CTO	Cleantech Open (accelerator)
EU	European Union
ICCI	Islamabad Chamber of Commerce & Industry
ICT	Information & Communications Technologies
GCII	Global Cleantech Innovation Index
GCIP	Global Cleantech Innovation Programme
GDP	Gross Domestic Product
GEF	Global Environment Facility
KPK	Khyber Pakhtun Khwa (region of Pakistan)
KPI	Key Performance Indicator
M&E	Monitoring and Evaluation
NIC	National Incubation Centre
ODG/EIO/IED	UNIDO Independent Evaluation Division
PK	Pakistani rupee
PIR	Project Implementation Report
R & D	Research and Development
RBM	Results Based Management
RECP	Resource Efficient Cleaner Production
SDG(s)	Sustainable Development Goal(s)
SME(s)	Small- and Medium-Sized Enterprise(s)
ST&I	Science, Technology, and Innovation (Policy)
TDF	Technology Development Fund
TE	Terminal Evaluation
TOC, RTOC	Theory of Change, Reconstructed Theory of Change
ToR	Terms of Reference
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organisation
USD	US dollar

Glossary of evaluation-related terms

Term	Definition
Baseline	The situation, prior to an intervention, against which progress can be assessed.
Effect	Intended or unintended change directly or indirectly due to an intervention.
Effectiveness	The extent to which the development intervention's objectives were achieved or are expected to be achieved.
Efficiency	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results.
Impact	Positive & negative, intended & non-intended, directly & indirectly, long term effects that represent fundamental durable change in the condition of institutions, people & their environment brought about by the Project.
Indicator	Quantitative or qualitative factors that provide a means to measure the changes caused by an intervention.
Intermediate States	The transitional conditions between the Project's outcomes & impacts which must be achieved in order to deliver the intended impacts.
Lessons learned	Generalizations based on evaluation experiences that abstract from the specific circumstances to broader situations.
Logframe (logical framework approach)	Management tool drawing on results-based management principles used to facilitate the planning, implementation and evaluation of an intervention. It involves identifying strategic elements (activities, outputs, outcomes, impacts) and their causal relationships, indicators, and assumptions that may affect project success or failure.
Outcomes	The likely or achieved short- to medium-term behavioural or systemic effects to which the Project contributes, which help to achieve its impacts.
Outputs	The products, capital goods, and services that an intervention must deliver to achieve its outcomes.
Relevance	The extent to which an intervention's objectives are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donor's policies.
Risks	Factors, normally outside the scope of an intervention, which may affect the achievement of an intervention's objectives.
Sustainability	The continuation of benefits from an intervention, after the development assistance has been completed.
Target groups	Specific entities for whose benefit an intervention is undertaken.

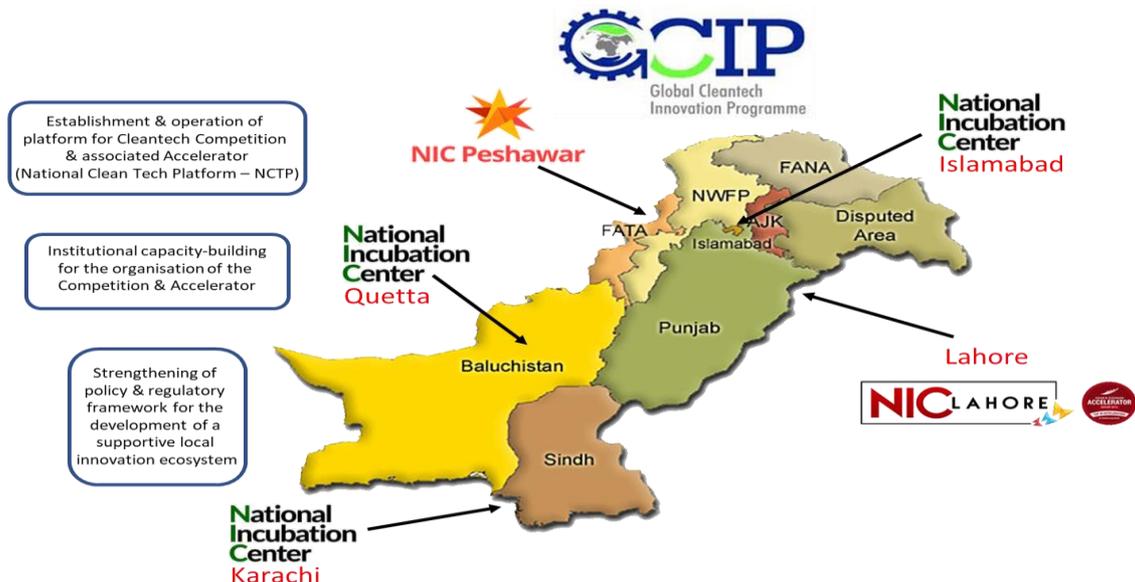
Map of GEF-UNIDO Cleantech Programme for SMEs in Pakistan

Picture 1: GCIP's Geographical Outreach in Pakistan (2013-2017)



Under a Phase II being planned at the time of the Terminal Evaluation (April-May 2018), the GCIP Pakistan team indicated that the Accelerator would possibly subsequently be run jointly with several implementation partners: 1 federal-level National Incubation Centre (NIC) in Islamabad and 4 provincial-level NICs in Lahore, Karachi, Peshawar, and Quetta – under the leadership of the Ministry of Information Technology and Telecom's National Technology Fund IGNITE (₹119)

Picture 2: GCIP Pakistan's Planned Replication (2018 onwards)



Executive Summary

Evaluation Background and Methodology

This document represents the final report of the Terminal Evaluation (TE) of the “Cleantech Programme for SMEs in Pakistan”, initiated by UNIDO in partnership with the Global Environment Facility (GEF) in September 2013, for a 36-month duration, extended to 30 June 2018. The project’s design and performance were assessed in terms of relevance, effectiveness, efficiency, sustainability, and progress-to-impact to meet accountability requirements and to promote learning, feedback, and knowledge sharing to enhance the design and implementation of future projects.

Carried out during April-September 2018 by an independent team, the TE consisted of i) desk review of relevant documentation; ii) assessment of project design, including a reconstruction of its Theory of Change; iii) field mission (Islamabad, Lahore, Karachi); iv) remote consultation with further relevant stakeholders; and v) analysis and development of evidence-based findings and recommendations.

Summary of the Main Evaluation Findings

Impact

The project showed strong performance on progress-to-impact. It incorporated environmental safeguards, supported beneficiaries’ economic performance, and its social inclusiveness was recognized as outstanding. UNIDO’s Pakistan Office was awarded UNIDO’s Inaugural Gender Equality Mobilization (GEM) Award, in part, recognising gender mainstreaming efforts under this project. Its replication potential is confirmed by the successful regular operation of the Competition-Accelerator and scaling up beyond Islamabad, which shows evidence of further impact that the GCIP framework could achieve over time. The establishment of the National Clean Tech Platform (NCTP) with its multi-stakeholder membership is poised to sustain the project’s momentum. Policy Dialogues (Islamabad, Karachi, Lahore), together with a policy review and gap analysis, offer a basis for mainstreaming. Recommendations stemming from this consultative process are being integrated into an Action Plan by GCIP’s host, Pakistan Council for Science and Technology (PCST), custodian of Science, Technology, and Innovation (ST&I) Policy. This shows the project’s potential to influence national laws, policies, and regulation to facilitate cleantech innovation.

Project Design

The GCIP Pakistan project was based on an existing design used to guide all 9 piloting countries, which the Project Management Unit (PMU) executed according to the 3 substantive components, underpinned by continuous monitoring and evaluation to assure its smooth implementation.

Relevance

The project was highly pertinent for international/regional/national priorities and aligned with donor priorities and UNIDO’s mandate. It bridged a gap by providing support to nurture early-stage startups along a path to maturity and formal establishment. GCIP’s establishment in Pakistan subsequently mobilized other ecosystem players to adopt cleantech categories and promote cleantech-based entrepreneurship, which attests to the relevance of the intervention and its scaling up potential.

Effectiveness

Performance on all three of the project's programmed outcomes was achieved/over-achieved. Strengthening of the policy/regulatory framework to facilitate cleantech adoption (Outcome 3) was designed to assure the sustainable operation of the Competition-Accelerator and its role in stimulating the national innovation ecosystem (Outcome 1) and to valorise and leverage the capacities built in the country for mentoring and training (Outcome 2). The project supported the highest number of semi-finalists and finalists across the 9 pilot countries. Significant participation of women as team members and team leaders was observed.

Efficiency

Like other pilot projects operating under the GCIP framework, its timeline for implementation was extended (by 22 months), which meant that its originally allocated resources were stretched to cover a 58-month duration and more services were delivered than initially imagined. Embedded within UNIDO's Field Office, the project benefitted from existing infrastructure and was in close proximity to and easy contact with other relevant actors in Islamabad.

Sustainability of Benefits

The PMU proactively raised the issue of sustainability at an early stage with national counterparts, which led the Project Steering Committee (PSC) to mandate a mapping of relevant organisations and proposal for anchoring and sustaining the project's results and benefits. The project undertook steps to reduce financial risk [Investor Connect, Industry Challenge Award, strengthened engagement of the Islamabad Chamber of Commerce (ICCI)]. The nature of project support, which stimulated cleantech solutions to environmental challenges, reduced environmental risk. The project's extensive advocacy and outreach efforts reduced socio-political risk. Letters of Support from national counterparts, together with the project's recommendations currently being put into an Action Plan to shape ST&I Policy, provide strong elements for assuring the project's institutional framework.

Gender Mainstreaming

This aspect was highlighted in the CEO endorsement, adequately resourced, competently designed, supported by relevant training and tools, competently undertaken to mobilize the interest and engagement of women, and the project's efforts were recognized by a third party as outstanding (as mentioned above). Complementary private sector contribution flowed into the establishment of a Women Business Growth Centre in 2016, thanks to the initiative of the ICCI and USAID support.

Monitoring and Evaluation (M & E)

UNIDO's standard M&E approach was designed, adequately resourced, and implemented. The PMU's monitoring activities were overseen by the PSC, which annually reviewed project progress. UNIDO's headquarters team played a strong role in overseeing and supporting the project, closely monitoring the intervention through regular visits, stakeholder consultations, and progress reporting.

Results-Based Management

The project teams in Vienna and Islamabad maintained focus on progressing activities, outputs, and outcomes according to the project's results framework. Specific attention was paid to recording statistics related to the Competition-Accelerator (e.g. received applications, eligible applications,

semi-finalists, female-led team, mentors, business clinics, technology innovations of startups).

Performance of Partners

UNIDO responsibly carried out its duties, following its tried and tested implementation approach. The supervision and support from the headquarters team empowered the PMU to trial new approaches, which yielded valuable models for replication (Investor Connect, Industry Challenge Award, gender mainstreaming approach). GEF’s contribution played a catalytic role through the GCIP for further development of Pakistan’s innovation ecosystem. While the contributions of some national counterparts did not materialise as expected, by the end of the project, the national host (PCST), together with NPO, PIM, ICCI, were strongly positioned to assure the project’s sustainability.

Other Assessments Required for GEF-Funded Projects

The project more than adequately incorporated environmental, economic, and social safeguards. The expected co-financing materialised and was put to good use in assuring the project’s national ownership and sustainability. Questions regarding the suitability of the CTO platform for the emerging/developing country context and concerns regarding intellectual property; storage, use, and access to gathered data, and the extent of reliance on external support for training inputs beyond the pilot phase point to higher level governance issues that need to be resolved by UNIDO and GEF.

Rating of Project Performance

Overall, the project is rated as “highly satisfactory”. Table 1 provides an overview of the ratings¹.

Table 1: Summary of Evaluation Ratings

Criterion	Rating
A. Impact	HS
B. Project Design	S
➤ Overall Design	S
➤ Logframe	S
C. Project Performance	-
➤ Relevance	HS
➤ Effectiveness	HS
➤ Efficiency	S
➤ Sustainability of Benefits	HL
D. Cross-Cutting performance criteria	-
➤ Gender Mainstreaming	HS
➤ M & E	S
➤ Results-Based Management (RBM)	HS
E. Performance of partners	-
➤ UNIDO	S

¹ According to evaluation criteria and 6-point scale stipulated in the evaluation’s Terms of Reference: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Sustainability of Benefits is rated from Highly Likely (HL) to Highly Unlikely (HU)

Criterion	Rating
➤ National Counterparts	S
➤ Donor	HS
F. Overall assessment	HS

Summary of Recommendations

The following recommendations are offered to UNIDO, the Government of Pakistan, and the GEF:

Recommendation #1: Given the growth and evolution of the innovation landscape in Pakistan and the entry of a multiple players during the project’s implementation, develop an up-to-date mapping of the innovation eco-system (for cleantech, and beyond to other key sectors to identify synergistic effects) that would enable the GCIP, in its next phase, to even more strongly play the envisaged national coordinating role and guide start-ups on their journey to maturity and commercialisation.

Recommendation #2: Operationalise the NCTP set-up and launch a next phase, under national ownership, while maintaining service quality to sustain momentum and effectively leverage the GCIP reputation and achievements thus far.

Recommendation #3: Budget and allocate a full-time resource for communications, advocacy, and training of partner organisations on these aspects to expand outreach and magnify impact

These recommendations are further elaborated in the Report’s final chapter, providing further context and linkages to the lessons learned and conclusions drawn from this assessment.

1 Evaluation Objectives, Methodology, Process

1.1 Introduction and Background on the Terminal Evaluation

1. The “GEF UNIDO Cleantech Programme for SMEs in Pakistan” (hereafter, GCIP Pakistan) project was launched in September 2013 by UNIDO, in collaboration with several government institutions in the role of executing and co-financing partners.
2. Following UNIDO Evaluation Policy and GEF Monitoring & Evaluation Policy, this Terminal Evaluation (TE) was carried out during April-May 2018 by an independent team: Ms. Joyce Miller as team leader/international consultant and Mr. Nisar Khan as the national consultant.

1.2 Objectives and Scope of the Terminal Evaluation

3. Guided by Terms of Reference given by UNIDO (see Annex 1), this evaluation had 3 objectives:
 - Assess project performance in terms of relevance, effectiveness, efficiency, sustainability of benefits, and progress to impact
 - Identify key learning to feed into the design and implementation of forthcoming projects
 - Develop findings, lessons, and recommendations that could be used to enhance the design of new projects and implementation of ongoing projects of UNIDO
4. This TE covers the project’s duration from 26 September 2013 until 30 June 2018, which included a 22-month extension, and the addition of USD 100,000 in UN funds.
5. In terms of scope, the TE assessed the extent to which the project achieved its main purpose (to promote clean energy technology innovation & entrepreneurship amongst Pakistani SMEs). In this light, the evaluation considered the extent to which the Clean Energy Technology Innovation Competition and Entrepreneurship Accelerator Programme (hereafter, Competition-Accelerator) was a suitable instrument for achieving this aim.
6. The evaluation also assessed the likelihood of sustainability of project results. This involved looking into the extent to which the project: i) helped put in place conditions likely to address drivers and overcome barriers to promoting clean energy technology innovation & entrepreneurship in Pakistan; ii) coordinated with other relevant actors to promote clean energy technology innovation and entrepreneurship; iii) yielded direct outcomes that are being utilized, or could expect to be used in the near future, to stimulate and support cleantech startups within a policy framework that fosters a vibrant supportive local innovation ecosystem.

1.3 Evaluation Methodology

7. The TE was carried out by an independent team in accordance with the required guidance² following criteria elaborated in the evaluation’s ToR, which were rated using UNIDO’s 6-point scale, with justifications elaborated through the Report’s main body and findings.
8. The evaluation used a participatory approach where key stakeholders were kept informed and consulted throughout the process. The evaluation team liaised with UNIDO’s Independent

² UNIDO’s 2015 Evaluation Policy, UNIDO’s 2006 Guidelines for the Technical Cooperation Project and Project Cycle, GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations, GEF Monitoring and Evaluation Policy, and GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies.

Evaluation Division on methodological issues and the evaluation's conduct.

9. To assure a robust approach, an evaluation framework was developed, together with envisaged sources of data that could be expected to yield evidence of achieved results and impacts. The project's Theory of Change was reconstructed and improved with feedback from the Evaluation Office and the Project Manager. A qualitative and quantitative approach was used in gathering data, with the aim of developing insights into fundamental strengths and shortfalls as a basis for crystallizing the findings and extracting relevant lessons for organisational learning and operational improvement.
10. Data was collected using multiple means:
 - Desk study and literature review: of key project documentation, including the initial approval request, annual work plans, monitoring reports, Project Steering Committee (PSC) minutes, Project Implementation Reports (PIRs), Annual Monitoring Reports (AMRs), project website, studies & presentations, dissemination materials/media reports, relevant correspondence, and other thematic resource materials. See Annex 2.
 - Field visit: to Islamabad, Lahore, Karachi, which allowed for direct observations and meetings with UNIDO, UNDP, the project's implementing team and co-financing partners, startups, mentors, and judges engaged in project activities, as well as actors not directly involved but which could benefit from the project's results and/or provide future dissemination channels.
 - Remote Interviews: were carried out with UNIDO staff in Vienna headquarters, international consultants involved in the project, as well as experts tapped to provide an external general view of cleantech innovation acceleration and venture capital.
11. The PMU assisted in identifying and arranging meetings with relevant actors (see Annex 3). This consultation of a broad cross-section of implementing partners and relevant stakeholders was used to gather a range of perspectives to deepen understanding, triangulate the data, and allow for evidence-based conclusions and recommendations.
12. Steps were undertaken to enhance stakeholder engagement and the quality of consultation:
 - i) respondents were informed about the TE's aims and guided in their input through a semi-structured protocol;
 - ii) well-formulated, open-ended questions and further probes were used to promote balanced reflection, generate new insights, and yield higher quality data (as opposed to yes/no questions or an 'audit' approach), as it was considered that input to this evaluation required contextualisation, complex description, and explanation;
 - iii) respondents were assured of the anonymity and confidentiality of their input.
13. The quality of data analysis was assured by using a software tool to systematically analyse, code, cross-reference, and comment data gathered through interviews and written input, with a clear trace back to the evidence underpinning the findings.

1.4 Challenges and Limitations

14. While it would have been ideal to have direct input from all actors involved in implementing activities, only a selection of those involved in the project were consulted, given budget & time constraints. These actors were selected with the aim of providing representative perspectives and enabling a balanced assessment of the project's intended outcomes and impacts.
15. Not all evidence regarding outcomes was available at the time this report was prepared. Consequently, the expected outcomes and the extent to which their achievement depended on the delivery of project outcomes were assessed by looking at the project's causal pathways.

2 Country and Project Background

2.1 Country Background

16. Ranked 147th of 188 countries on UNDP's Human Development Index³ (HDI, 2016) and 130th out of 159 countries on its Gender Inequality Index⁴ (GII, 2015), Pakistan is a middle-income developing country, with the 24th largest economy in purchasing power parity. Pakistan has an overall population growth rate of 1.43%, with 207 million inhabitants, 50% of whom are under 24 years old (2017)⁵. In 2017, overall GDP was USD 307 billion with USD 1,640 GDP per capita. Over the past years, GDP continued to grow above 5% annually, reaching 5.79% in 2018, Services, Industry, and Agriculture sectors constitute 60%, 21%, and 19% shares of GDP, respectively⁶.
17. By 2018, overall poverty declined to around 24% (from 29.5% i.e. 55 million people in 2015)⁷. Poverty in rural areas averaged 54.6%, with highest rates in Federally Administered Tribal Areas and Baluchistan (up to 90%) versus 9.3% in the "golden triangle" of Islamabad, Karachi, Lahore. The link between poverty reduction and economic growth has been well-documented⁸.
18. While Pakistan contributes 0.8% to global greenhouse gas (GHG) emissions, its national GHG emissions (mainly from energy and agriculture sectors) grew 87% during 1990-2012⁹; see Figure 1. With its large population and geography, Pakistan is very vulnerable to climate change and has very low technical and financial capacity to adapt to climate change's adverse impacts.

³ The HDI indicates that expanding human choices should be the ultimate criterion to assess development results. Economic growth is a means to that process, not an end in itself. HDI reflects achievements in 3 basic aspects of human development: i) living a long, healthy life; ii) being knowledgeable; iii) enjoying a decent standard of living.

<http://hdr.undp.org>

⁴ UNDP's GII reflects the loss in human development due to gender inequality on 3 dimensions: reproductive health, empowerment, and economic activity. Source: [Human Development Report 2016: Briefing Note for Pakistan](#)

⁵ Source: Provisional Census date for 2017

⁶ Source: Economic Survey of Pakistan 2018 http://finance.gov.pk/survey_1718.html

⁷ www.pakistantoday.com.pk/2017/08/30/29-5-of-population-living-below-the-poverty-line/

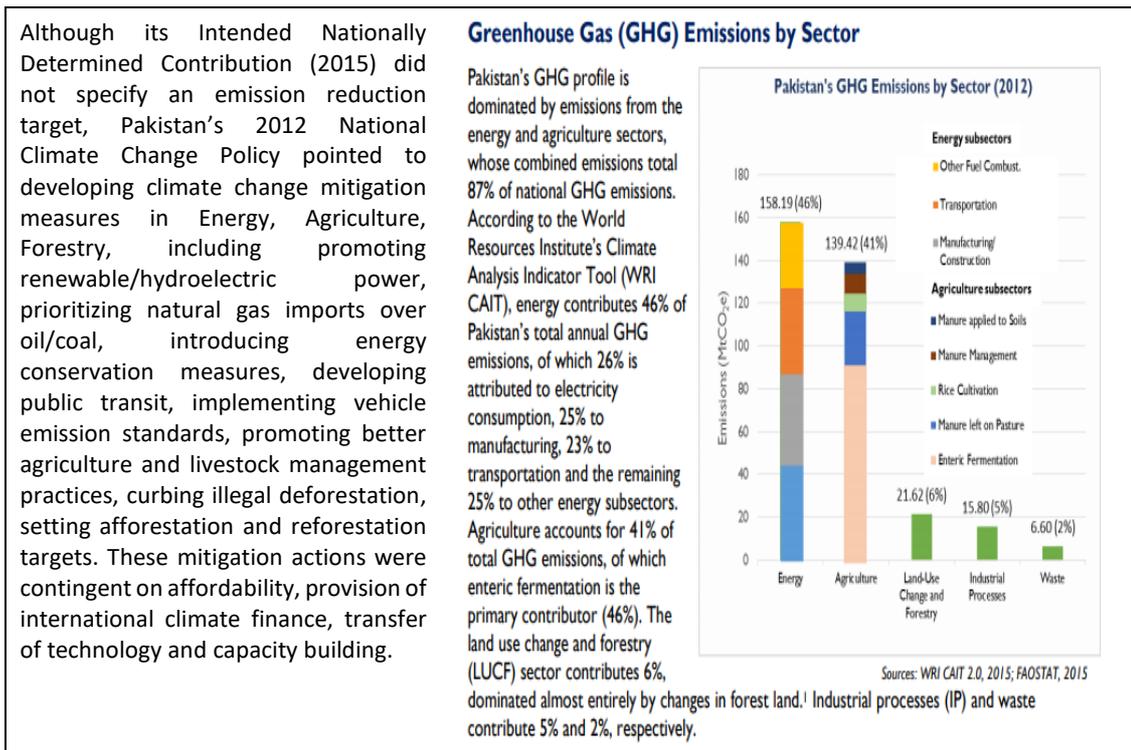
⁸ E.g. [Growth: Building Jobs & Prosperity in Developing Countries](#) (DFID, 2008)

www.dfid.gov.uk/Documents/publications/policy-paper-growth.pdf and "[Relationship between Economic Growth & Poverty Reduction](#)" in [Poverty, Democracy & Development: Issues for Consideration](#), Commonwealth Expert Group, (2004)

<http://dx.doi.org/10.14217/9781848598485-6-en>

⁹ [Greenhouse Gas Emissions in Pakistan Fact Sheet](#), United States Agency for International Development (USAID), 2012

Figure 1: Pakistan's Greenhouse Gas Emissions by Sector



19. Pakistan is a net energy importer and depends heavily on fossil fuel and gas to meet its energy requirements. The cost of energy was reportedly the highest in the region, making Pakistani exports uncompetitive in the international market¹⁰. According to (2018) government estimates electricity generation consists of 1) Thermal (oil/gas/coal); 2) Hydro; 3) Nuclear; 4) Renewables, with respective shares of 64%, 27%, 7%, 2%. Although there has been progress in the renewable sector since 2012, through the addition of small capacities in power generation from solar/wind/biomass, power generation remains mainly thermal-based.
20. This high dependence on fossil fuels generates heavy import bills (although oil price has significantly decreased since 2014) as about 85% of oil and related products are imported. However, burning huge quantities of fossil fuel to meet energy needs has also significantly contributed to environmental degradation in the form of GHG emissions. Moreover, over the past decade, the country has faced the dilemma of a substantial gap between demand and supply of electricity, reaching up to 7,000 megawatts (30% of total demand) in peak summer season. Over the past 5 years, major investment and efforts have been made to increase generation capacity by installing new power project, albeit thermal based.
21. Energy shortages and unreliability have had a negative impact on the industrial sector, especially on small- and -medium enterprise (SME) production, profits, and growth opportunities. To bridge the shortfall, manufacturers have resorted to the use of diesel-fuelled generators, which have added to the cost of operations and generate further GHG emissions.
22. At the time of the project's conception, Innovation and Entrepreneurship were identified as key drivers of growth and competitiveness for Pakistan. Smart entrepreneurs who would take risks to commercialize new ideas generated by the diffusion of science & technology were seen as pivotal actors in this respect. A quick, efficient process to start new businesses, an efficient financial system to support new firms, a strong legal and regulatory environment to

¹⁰ www.icci.com.pk/event/detail/2005 Posted by the ICCI on 24 August 2017

promote innovation & entrepreneurship, and the availability of venture capital for promising startups were identified as key elements for building a conducive environment to foster innovation.¹¹ A respondent interviewed during the field evaluation asserted: “*there are 3 Es that can save Pakistan: Electricity, Education, and Entrepreneurs*”, a powerful summing up statement.

23. The key players related to the regulatory framework for promoting clean technology innovations include: Ministry of Climate Change, Ministry of Water and Power, Ministry of Science and Technology. Since 2016, all three of these Ministries have considerably improved their cleantech-focused mandate from federal to provincial level. Hence, an improved regulatory framework has been observed during the project’s timeframe.

2.2 Sector-Specific Issues of Concern to the Project

24. According to estimates of Pakistan’s Small/Medium Enterprise Development Authority (SMEDA), SMEs contribute 40% to GDP, add 25% to manufacturing value-added, and provide 78% of non-agriculture jobs.¹² SMEDA’s 5-year SME Development Plan (2017) sees the SME sector as the country’s growth engine. There is an urgent need to raise awareness regarding energy efficiency and related environmental issues and the opportunity for innovation and promotion of clean technologies on the part of SMEs, given their important role and large share of the economy.
25. The energy sector was a severe constraint on Pakistan’s economic productivity and contributed to environmental degradation, as outlined above. Studies undertaken by SMEDA and NPO showed enormous improvement potential in several energy-intensive SME clusters (in Karahi, Lahore, Faisalabad, Gujranwala, Wazirabad, Sialkot). Realising the need for reform, the government has put a high priority on promoting clean, efficient energy sources, especially within the industrial sector with a specific emphasis on SMEs.
26. Ranked 113th of 127 countries on the Global Innovation Index (2017), Pakistan descended from its 103rd rank at the time of project inception. This situation suggested there were inadequate resources in public and private sectors to conceptualize/develop/promote innovation in general, and clean energy technology, in particular. The state of the national innovation eco-system in 2013 pointed to an opportunity to foster innovative spirit and a more conducive environment.
27. It is important to highlight that over the years, governmental organizations (e.g. SMEDA, NPO) and international organizations (e.g. ADB, EU, GIZ, JICA, USAID, UNIDO,) have been working to promote clean energy, especially renewable energy in SMEs. In 2011, the Alternative Energy Development Board (AEDB) was established. A comprehensive mid-term renewable energy policy was put in place to develop and promote alternative & renewable energy sources. In 2012, Pakistan instituted a National Science, Technology & Innovation (ST&I) policy to emphasize and provide incentives for clean technologies and energy-efficiency. However, it lacked an Action Plan/implementation strategy, and most importantly, matching resources.
28. Nevertheless, interest in technology innovation has been growing in both public and private sectors. Established in 2007 (funded by mobile/landline telephone operators & internet service providers as mandated by Ministry of Information Technology & Telecom), the National Technology Fund (IGNITE) was to “*transform Pakistan’s agriculture dominated*

¹¹ Drivers of Growth & Competitiveness in Pakistan: A Strategic Framework for Prosperity, Competitiveness Support Fund (2013), a joint initiative of Pakistan’s Ministry of Finance and USAID

¹² Project Document, p4-5

*economy and leap-frog to a service-sector driven, high value-added information & knowledge-based economy that can successfully compete in the global village*¹³. With IGNITE funding, 5 National Incubation Centres (NICs) were created (Islamabad, Lahore, Peshawar in December 2017; Karachi in May 2018; Quetta will be established by LUMS-Lahore University of Management Sciences, itself the NIC based in Lahore, having won the February 2018 bid). These NICs are to stimulate the national innovation eco-system & support the country's "digital agenda". Increasingly, higher education institutions are stepping in to nurture/promote technological innovation through establishing incubation centres & providing support/resources. Respondents indicated *"there's been an explosion of incubators in Pakistan; there are more than 30 in universities alone"*. To date, these incubation facilities mostly cater for innovation in Information & Communication Technologies (ICT), with no specific emphasis or incentives available for cleantech innovation.

29. NICs interviewed in Islamabad and Lahore appeared to have an exceedingly high capability and have attracted a very high level of mentorship capabilities as well as early-stage financing linkages. They have adopted very rigorous selection; for example, the Islamabad incubator indicated that in a typical year, 700 applications are received, from which 20-25 are selected to undergo a 16-week support process, guided by mentors using a set of KPIs. From this, 5 are selected to go through the Jazz accelerator. They focus on identifying promising teams and advancing them towards commercialisation. A private incubator interviewed in Karachi has already run 7 cycles over a 3-year period, supported 138 start-ups, with 87% of them now up and running, reporting: *"this is a very high level. We know that this level will fall as the years progress, as it becomes more difficult for the startups to sustain themselves"*.
30. NICs, private incubators, and the GCIP can certainly co-exist and complement each other. As one illustrative stakeholder reported: *"we're trying to collaborate with other incubation centres. Within this ecosystem, we can work together. This is a new platform in Pakistan. Five years ago, no one would have thought of establishing an incubator in Pakistan. People are coming up. Industry is coming up. Government is looking at it as well. The ecosystem still needs a lot of work. We want to make it stronger and more accessible."* And another view: *"If we all work together, more things will happen"*.

2.3 Project Summary

2.3.1 Project Objective and Structure

31. The project's primary objective was to promote clean technology innovations and clean technology entrepreneurship for SMEs in Pakistan.
32. To achieve this objective, the project was structured into 4 components, which were themselves structured into a further 3 outcomes underpinned by 9 outputs, elaborated in a full logical framework (see Table 5).

2.3.2 Background

33. The project traces its origin to the 2011 UN Climate Change Conference of the Parties (COP) in which "Greening the COP17" was launched in South Africa through GEF-UNIDO support. The project in Pakistan builds on the success and lessons from the design and implementation of that first Cleantech Competition in South Africa for entrepreneurs and SMEs with innovative concepts for renewable energy, energy efficiency, green building

¹³ <https://ignite.org.pk/about-us/introduction.html>

practices.

34. Subsequently, during the COP23 (2014 in Bonn, Germany), GEF and UNIDO collaborated to launch a Global Cleantech Innovation Programme (GCIP) which aimed to foster innovation and entrepreneurship ecosystems through building national capacity, mentoring/training, promoting low carbon technology transfer, and linking innovative enterprises to supportive finance. In this regard, GCIP intervened at an early stage to identify and nurture the most promising cleantech innovators and accelerate the development and commercialization of cleantech solutions with potential to contribute towards protecting the global commons
35. In 2013, individual GCIP country projects were launched in 6 countries: Armenia, India, Malaysia, Pakistan, South Africa, and Turkey. By 2017, Morocco, Thailand, Ukraine joined under subsequent GEF funding cycles. The Project Document envisaged the creation of a network of clean energy entrepreneurs drawn from participating GCIP countries.
36. At project inception, barriers putting a brake on clean technology innovation were identified:
 - Insufficient participation and support by key stakeholders and the public at large
 - Inadequate institutional capacity, policy guidance, and awareness of actors that promote clean energy in the country
 - Lack of an enabling policy and regulatory environment to support innovations in SMEs
 - Lack of trained experts to mentor start-ups and entrepreneurs on cleantech innovation
 - Insufficient information about technology options, best practices, and SME benchmarks
 - Weak linkages between research institutes and industry
 - Limited awareness of financial schemes, requirements and procedures to access finance for clean energy investment projects
 - Limited government financial incentives to support industrial enterprises for the uptake of innovation in clean energy technology
37. On 6 March 2013, Pakistan's GEF Operational Focal Point endorsed the project with a GEF grant of USD 1,369,863, with a further USD 4 millions of co-financing commitments in place (see Table 2). Launched on 26 September 2013 with a 36-month duration (to September 2016), the project aimed to remove, or at least mitigate the above-mentioned barriers, to facilitate the development of an enabling "innovation ecosystem"¹⁴ and encourage SMEs (constituting 95% of Pakistani companies) to contribute towards climate change mitigation and adaptation.

¹⁴ "innovation ecosystem" refers to the culture, enabling policies & leadership, and the availability of appropriate finance, quality human capital, venture-friendly markets, and a range of institutional and infrastructural support. Source: Draft Terms of Reference for the Review of the Global Cleantech Innovation Programme for SMEs, GEF Independent Evaluation Office, January 2018

Table 2: Financing Inputs by Source (planned), 2013-2016

Source of Support	Breakdown by type	Total (USD)
International Donor: GEF	Full cash grant financing	1,369,863
UNIDO (as GEF Agency)	50,000 (grant) 50,000 (in-kind)	(100,000) (included in above)
National Government: Pakistan Council for Science and Technology (PCST)	900,000 (grant) 300,000 (in-kind)	1,200,000
National Government: National Productivity Organisation (NPO)	1,150,000 grant) 350,000 (in-kind)	1,500,000
National Government: Pakistan Institute of Management (PIM)	750,000 grant) 250,000 (in-kind)	1,000,000
Civil Society Organisation	in-kind	200,000
Total of co-financing sources	-	4,000,000
Total Project Financing (USD)	-	5,269,863

38. During implementation, upon review of the project’s progress and impact, and in view of the mobilised funding and commitments, the PSC decided to extend the project until 30 June 2018 which facilitated the operation of GCIP cycles beyond the planned period, designed to minimize the gap between the current project and a projected next phase.

2.3.2.1 Project Components

39. The “Cleantech Programme for SMEs in Pakistan” (i.e. GCIP Pakistan) has 4 components:

- Component 1: National Clean Tech Platform (NCTP) to promote clean technology innovations and competitiveness in SMEs in Pakistan to deliver global environmental benefits
- Component 2: Capacity enhancement initiative for clean technology innovations
- Component 3: Policy and regulatory framework strengthened for scaling up cleantech competition, innovations and acceleration activities across Pakistan
- Component 4: Monitoring and Evaluation Management

2.3.2.2 Partners and Stakeholders

40. Table 3 outlines key stakeholders involved in project execution and their envisaged roles at the outset. These actors were initially identified and engaged in the project based on their ability and interest to benefit from the project’s outcomes and play a role in sustaining its results.

Table 3: Key Stakeholders Planned to be involved in Project Execution

Stakeholder and Mandate	Role in the Project
<p>Pakistan Council for Science and Technology (PCST) / Ministry of Science & Technology Advises government on the development of Science and Technology at national level; involved in policy-making, planning, implementation, and carrying out policy studies; is Secretariat of National Commission of Science & Technology (headed by Prime Minister), which takes the major decisions for the development of Science and Technology policy.</p>	<p>Project Steering Committee (PSC) Chair; as project’s lead national executing agency, was expected to provide technical inputs for project activities</p>
<p>Center on Climate Change and Development (CCCD) A Civil Society Organisation (CSO)</p>	<p>PSC member; as co-lead, was to host National Clean Technology Platform and foster involvement women entrepreneurs and investors</p>
<p>National Productivity Organisation (NPO) / Ministry of Industries & Production Promotes productivity culture in both public and private sector organisations through training, seminars, workshops, consultancy, release of index surveys, qualification certification; promotes a comprehensive understanding of energy and the environment. Administers the prestigious Prime Minister Quality Award (PMQA) and is Liaison Office of the Asian Productivity Organisation (APO), which represents 20 Asian countries with the mandate to promote productivity and quality consciousness.</p>	<p>PSC member; was to participate in the project’s policy component (C3) and assist industries in becoming energy efficient</p>
<p>Small and Medium Enterprise Development Authority (SMEDA) A government policy advisory body with a mission to assist in employment generation and value addition to national income through development of the SME sector, by helping to increase the number, scale, and competitiveness of SMEs through providing an enabling environment and business development services to SMEs and facilitating other stakeholders in addressing their SME development agenda.</p>	<p>PSC member; was to promote the Cleantech competition (C1), participate in mentor programme, and capacity-building activities (C2) and take part in the policy component (C3)</p>
<p>Pakistan Council of Renewable Energy Technologies (PCRET) Coordinates R&D and conducts promotional activities in renewable energy technologies; has its head office in Islamabad with regional offices in provincial capitals of Karachi, Lahore, Peshawar, Quetta. It has working relationships with provincial Agriculture & Social Welfares departments, local government, rural development offices and other organizations working for socio-economic development of rural & semi-urban areas.</p>	<p>PSC member; was to participate in policy component (C3) and promote the clean and renewable energy technologies identified under the project</p>
<p>Pakistan Institute of Management (PIM) / Ministry of Industries and Production Has pioneered executive development in Pakistan and specializes in training & development of managers from</p>	<p>Was to be an executing partner, PSC member, and participate in project’s capacity-building component (C2) and policy</p>

Stakeholder and Mandate	Role in the Project
business and industry. Has campus facilities in Karachi and Lahore, with a co-located training centre at IIU Faisal Masjid Campus in Islamabad	component (C3)
Federation of Pakistan Chambers of Commerce and Industry (FPCCI) Apex body representing Pakistan’s Trade, Industry & Service sectors; voices & advocates their collective opinion, concerns, aspirations; safeguards the interests of the private sector; advises and assists the Government in its efforts to promote exports, encourage foreign investment and stimulate economic activity in the country.	As an actor representative of the broader institution, the Islamabad Chamber of Commerce and Industry participated as a PSC member

41. PCST, NPO, PIM, and Islamabad Chamber of Commerce were key contributors throughout the project. While the CCCD was initially tapped to be a co-lead and was expected to physically host the NCTP, this actor’s contribution did not materialise as expected and its disassociation from the project was endorsed during the 2nd Steering Committee Meeting (January 2015). At the same time, the National University of Sciences and Technology (NUST, Rawalpindi) was invited to join the project and a recommendation was put forward to approach the Higher Education Council (HEC) to sensitize public and private sector universities about the project’s activities and benefits.

2.3.2.3 Milestones in Project Design and Implementation

42. Table 4 documents the key milestones related to project design and implementation.

Table 4: Milestones and Key Dates in Project Implementation

2013	
Project Document signed	12 Aug 2013
GEF Chief Executive Officer endorsement / approval date	6 March 2013
Establishment of Project Management Unit (PMU); appointment of National Project Coordinator (Mr. M. Matloob)	26 Sept 2013
1 st Steering Committee Meeting and official start of project	26 Sept 2013
2014	
Global Cleantech Training Workshop (Vienna)	12 - 15 March 2014
Cleantech Open (CTO) Webinars for Country Coordinators	1 April – 15 May 2014
Call for Applications start of 2014 cycle (1 st Competition)	2 June – 1 July 2014
1 st Round screening/judging of Cleantech 2014 applicants	9 - 11 July 2014
Weekly webinars for Start-Ups	August – October 2014
Strengthening of PMU: appointment of Project Technical Expert (H. Saeed)	1 September 2014
2 nd Round screening/judging of cleantech applicants	15 October 2014
Announcement of finalist teams (2014 cycle)	16 October 2014
Final Jury Evaluation & National award event; 2014 Award Ceremony	16 October 2014
2014 national winner team (2 members) participates in CTO Global Forum, San Francisco	12 - 13 November 2014
2015	
2 nd Steering Committee Meeting	15 Jan 2015
Strengthening of PMU: National Project Coordinator replaced (Dr. S. Waheed), Communications Focal Point (Z. Saleah) & Project Assistant (F. Qureshi) appointed	9 February 2015

Preparation of publicity material	Feb- Mar 2015
Launch of Call for 2015 Competition	1 Mar 2015
Promotion campaign	April - May 2015
Deadline for submission for 2015 call	7 June 2015
Round 1 Judging	9 June 2015
Webinar for Coordinators	April - May 2015
Webinar for Semi-finalists	June - August 2015
National Academy	10-12 Jun 2015
Vienna Energy Forum 2015 (Vienna)	18-20 June 2015
Mentor Match Making (local)	1-15 July 2015
Mentor Match Making (International)	27-31 July 2015
Mentors support the participating SMEs, startups, entrepreneurs	1 Aug to 7 Oct 2015
Business Clinic	31 Aug to 7 Sept
Mock Judging	10 - 22 Sept 2015
Round 2 Judging	12 - 14 Oct 2015
2015 Award Ceremony	14 Oct 2015
Participation of 2015 winners (5 teams) in CTO Open Global Forum, San Francisco	17 - 19 November 2015
2016	
3 rd Steering Committee Meeting	4 Feb 2016
Preparation of publicity material	Feb- 2016
Media Event –Celebrating Success	11 Feb 2016
Launch of Women Business Growth Center	8 March 2016
Launch of Call 2016 Competition	15 Mar 2016
Promotion campaign	March - May-2016
Info sessions/ Seminars - Islamabad region	16-March 2016
Info sessions/ Seminars - Lahore region	April – May 2016
Info sessions/ Seminars – Khyber PakhtunKhwa (KPK) region	April – May 2016
Info sessions/ Seminars - Karachi region	April – May 2016
Deadline for submission for 2016 call	31 May 2016
Round 1 Judging	1-2 June 2016
Declaration of Semi-finalists	3 June 2016
Webinars for Coordinators	April - May 2016
Webinars for Semi-finalists	8 June - 20 Sept2016
Skype Sessions for Semi-finalists	5 Sep - 15 Oct 2016
Special Topic Webinar	21 Sep- 27 Oct 2016
Mentor Match Making (local)	30 June 2016
Mentor Match Making (International)	30 June 2016
Mentors support the participating SMEs, startups, entrepreneurs	1 Aug - 30 Oct 2016
Webinars for Semi-finalists	8 Jun - 20 Sept2016
Skype Sessions for Semi-finalists	5 Sep - 15 Oct 2016
Special Topic Webinar	21 Sep- 27 Oct16
National Academy	4-10-June2016
4 th Steering Committee Meeting / Sustainability Meeting	26 July 2016
Business Clinic	19-27 Oct 2016
Policy Dialogue	1 -24 Nov 2016
Women in Green Industry	15 Oct to Nov 2016
Mock Judging	14-19 Nov 2016
2017	
Round 2 Judging	9 – 11 Jan 2017

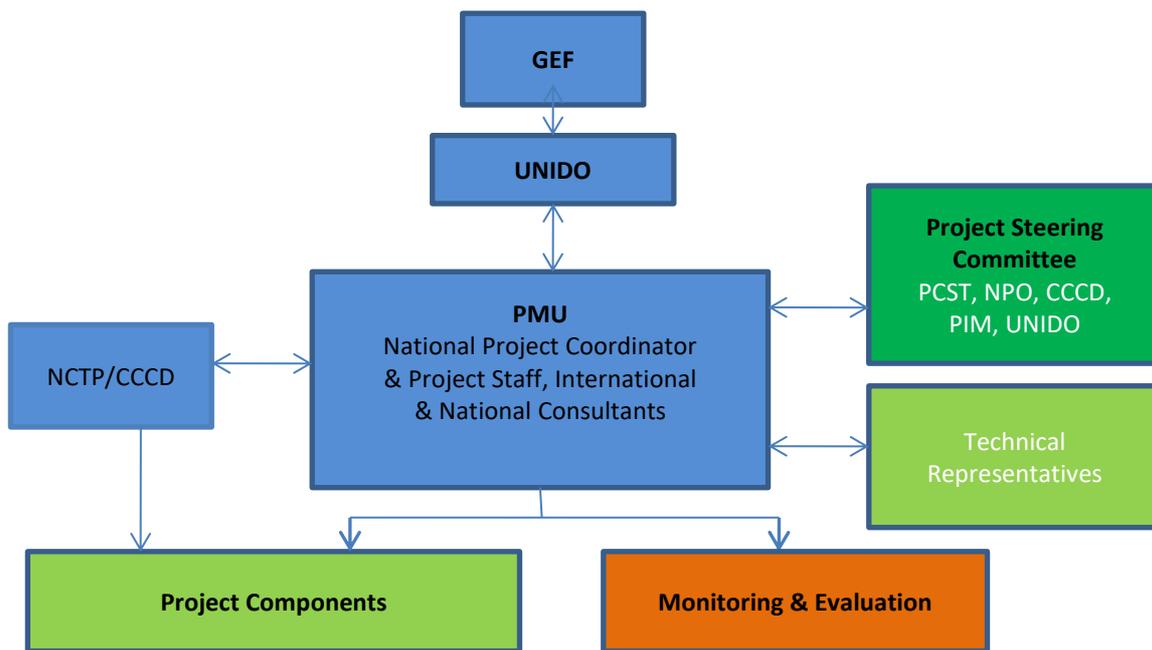
Investor Connect	12 Jan 2017
2016 Award Ceremony	12 Jan 2017
Participation of 2016 winners (5 teams) in CTO Open Global Forum, San Francisco	6 - 10 February 2017
Preparation of publicity material	Feb 2017
Launch of Call 2017 Competition	15-Mar 2017
Promotion campaign	Mar - May 2017
Info sessions/ Seminars - Islamabad region	15-Mar - May 2017
Info sessions/ Seminars - Lahore region	April - May 2017
Info sessions/ Seminars – KPK region	April - May 2017
Info sessions/ Seminars - Karachi region	April - May 2017
Deadline for submission	2 July 2017
Round 1 Judging	5-6 July 2017
Declaration of Semi-finalists	10-Jul 2017
Webinars for Coordinators	April - May 2017
Webinars for Semi-finalists	05 July - 21 Sept 2017
Skype Sessions for Semi-finalists	5-30 Sept 2017
Special Topic Webinar	21 Sep to 27 Oct 2017
Mentor Match Making (Local)	30 Aug 2017
Mentor Match Making (International)	15-16- October-2017
Mentors support the participating SMEs, startups, entrepreneurs	1 Sept to 25 Oct 2017
National Academy	13- 19 July 2017
Business Clinic	3- 11 Oct 2017
Mock Judging	31 Oct to 15 Nov 2017
Round 2 Judging	10- 12 Dec 2017
2017 Award Ceremony	13 Dec 2017
2018	
Participation of 2017 cycle winners (3 teams) in CTO Global Forum in Los Angeles, USA	26 January - 2 February 2018
Field Evaluation mission for Terminal Evaluation	16 - 20 April 2018
Project End	30 June 2018

2.3.2.4 Implementation Arrangements and Project Partners

43. As GEF's implementing agency, UNIDO carried the ultimate responsibility for the project's timely implementation, in collaboration with lead national agency PCST and other executing partners.
44. A Project Steering Committee (PSC) was formed under the chairmanship of PCST with members drawn from UNIDO, PCST, NPO, PCRET, CCCD, PIM and an observer member from the GEF Operational Focal Point Office Climate Change Division; (subsequently, FPCCI, SMEDA, NUST joined and CCCD withdrew). Other observers (academic representatives, experts, etc.) were also occasionally invited to the PSC meetings. As Table 3 shows, the PSC was constituted by actors deemed to most likely benefit from the project and be able to collectively sustain its results. Governed by a ToR for its own operation, the PSC was to provide strategic guidance on project implementation, ensure adequate institutional support from each participating entity, review and endorse annual work plans, and offer advice on corrective actions, as needed.
45. Established in 2013 in the UNIDO Field Office in Islamabad, the Project Management Unit (PMU) was headed by a National Project Coordinator engaged by UNIDO in September 2013,

working under the supervision of the UNIDO Project Manager in collaboration with the national partners. Figure 2 shows the project’s implementation arrangement. Within this constellation, the PMU was responsible for daily management of project activities and M&E, in line with agreed work plans. The PMU carried out extensive outreach/awareness-raising and coordinated all project activities carried out by national/international experts and engaged partners. The PMU was further staffed with a Technical Expert, Communications Focal Point, and Project Assistant, who joined in September 2014 and February 2015, respectively. A new National Project Coordinator took up this role in February 2015, bringing additional strength to the PMU with her academic background as a development economist and professional experience in enterprise development, sustainable livelihoods, and gender responsive industrial value chains.

Figure 2: Project Implementation Arrangement



46. It was envisaged that the project would benefit from the experience and expertise of Cleantech Open (CTO), which manages the world’s largest cleantech accelerator and network. As part of the project’s implementing arrangement, CTO was to provide international expertise to participants and organisers and invite Pakistan’s cleantech programme to join its network.
47. The project was expected to adopt an inter-disciplinary implementation approach involving SMEs, national ministries, provincial governments, partner agencies (e.g. NPO, SMEDA), academia, industrial associations, and autonomous research centres in Pakistan and beyond. The institution eventually selected to run the National Clean Tech Platform (NCTP) created through the project was expected to be the connecting node with similar climate technology centres in developing countries.
48. At international level, the project was expected to closely coordinate with other similar efforts with the aim of sharing its documented best practices and knowledge that could help to enhance SME productivity and at the same time, mitigate climate change.

2.3.2.5 Positioning of the UNIDO Project

49. In 1968, UNIDO established a field office in Pakistan, which is responsible for developing, coordinating, and supporting cooperation between UNIDO, the Pakistani government, academia, private sector, and civil society with respect to sustainable industrial development.
50. GCIP Pakistan was designed to leverage UNIDO's learning from its general experience in supporting SME development and its specific experience in implementing the South Africa 2011 Cleantech competition. Synergies were also foreseen with other relevant parts of UNIDO (e.g. Green Industry Initiative, Eco-Business Partnership Programme in Austria). It was also proposed that the project could benefit from lessons learned from UNIDO's GEF-4 funded project on the development of gasification in SMEs in Pakistan, seen to have potential linkages to the project's activities related to policy, regulatory framework, and capacity-building.
51. GCIP Pakistan was introduced at a time and in a context where the national innovation ecosystem was in a nascent, but growing, phase. By 2015, after the GCIP had run its first annual cycle, there were 20 incubation initiatives underway across the "golden triangle"¹⁵. Through the NCTP, the project was expected to provide a coordination function at a national level, on the capacity-building side, through having a specific focus on women entrepreneurs & participants, and with respect to efforts to support/encourage green growth amongst SMEs.
52. The project was expected to spur innovation culture within Pakistan and its results were expected to provide the experience and inputs for the establishment of a National Innovation Fund that would help in scaling up innovations in the field of green and clean energy technologies in selected SME clusters, which would have high relevance to supporting the objectives of national institutions partnered in the project.¹⁶

3 Project Assessment

3.1 Impact

53. Following UNIDO evaluation policy, three impact dimensions were investigated: safeguarding environment, economic performance, and social inclusiveness. In this respect, the Project Document did identify risks related to climate change as well as potential social and environmental risks that might prevent the project's objectives from being achieved. These risks were evaluated (rated) and suitable mitigation measures were proposed from the outset.
54. Regarding environmental safeguarding: the project contributed to this aspect by supporting the development of cleantech ideas, solutions, and services related to energy efficiency, renewable energy, waste to energy, and water efficiency. The GHG emission reduction of selected beneficiaries was calculated and extrapolated to the overall project (see Footnote 22).
55. Regarding economic performance: project activities were designed to improve the functioning of Pakistani startups, promote SME entrepreneurship, and stimulate the national innovation ecosystem. Positive signals indicative of the project's long-term impact: the PMU reported that *"40% of the cleantech startups supported by the project successfully reached*

¹⁵ See Comparative Study undertaken by the project, which describes these competition/incubation schemes (2015)

¹⁶ Project Document, p. 14

*commercialization during the project's timeframe, which is above the average rate of commercialisation for start-ups*¹⁷. Table 7 indicates that 42% of the teams that entered the Accelerator completed it. Furthermore, the PMU estimated that 4-6 part/full-time jobs were created¹⁸ by each of the participating startups, from which the team inferred that the project had resulted in the creation of 500 "green jobs" thus far.

56. Regarding social inclusiveness: the project strongly promoted gender mainstreaming (¶135) with the intention to create more opportunities for women entrepreneurs. The project's approach and achievements were recognized by UNIDO's Office for Gender Equality and Empowerment of Women as a meaningful contribution to the 2030 development agenda¹⁹. The 10% target set for recruiting female trainers, mentors and judges and promoting women entrepreneurs was substantially exceeded. During 2015-2017, women held 25%-40% team leader positions (see Table 7), linked to extensive advocacy & mobilization efforts (24 seminars/workshops/learning sessions) undertaken, the targeted social media strategy, support under its Women in Green Industry initiative, and the introduction of the Most Promising Woman-led Team award from 2015 onwards. The fact that the Islamabad Chamber of Commerce (in 2018) mainstreamed the Women Business Growth Centre created under the project's auspices, into its regular budget scheme and provided renovated premises to accommodate its office and training facilities is seen by the Evaluation Team as providing important legitimacy for the concept of women's inclusion & empowerment and their valuable contribution to business & industrial activities.
57. Although 95% of the participating startups were based in Islamabad/Rawalpindi, Karachi, Lahore/Faisalabad, Peshawar (the country's most developed and industrialized cities), a few startups outside of these urban centres in Punjab and Sindh provinces did participate and made it through to the level of semi-finalist/finalist. This outreach represents a valuable first start and is evidence that the project endeavoured to create a culture of inclusiveness (¶136).
58. Looking to replication, which is another aspect that can be used to assess the project's impact, during the 2014-2017 period, the Competition-Accelerator successfully undertook 4 cycles. The Project Document envisaged that 3 annual cycles would be completed with the allocated resources. The NCTP's formalization in September 2017, after a long process of consultation, suggests that a foundation was in place by project closure to facilitate the continued operation of the Competition-Accelerator, although funding commitments were not yet secured and the foreseen institutional capacity-building to assure the sustainable operation of this mechanism had been repeatedly postponed and had not yet taken place by the time of this evaluation.
59. Since project inception, when a few embryonic activities were in operation, respondents indicated that GCIP played an instrumental role in raising awareness about the significance of cleantech. Furthermore, it was reported that many stakeholders (universities, R&D institutions, chambers of commerce, government bodies, incubation & other startup bodies) have now been sensitized regarding the cleantech's potential to revolutionize the economy. Extensive discussion initiated under the GCIP framework leading to the establishment of the NCTP, which mobilized ecosystem players to focus on promoting cleantech-based entrepreneurship & innovation in their respective areas, is another important sign of the

¹⁷ Commercialisation was defined by the PMU as "the ability to sell a product or idea to any other company/customer successfully and coming up to the customer's satisfaction"

¹⁸ This level of job creation was estimated by taking a sample of startup companies and checking the number of jobs created by them; the resulting average number of jobs created was calculated from this representative sample

¹⁹ In June 2018, the GCIP Pakistan team was selected as an inaugural winner of the Gender Equality Mobilization (GEM) Award which recognizes exceptional staff members and teams who have prioritized gender equality and gender-responsive behaviour in their work, empowering women to fully participate in inclusive and sustainable industrial development

project's replication power.

60. Scaling up, in the sense of “expanding, adapting and sustaining successful policies, programs and project on different places and over time to reach a greater number of people” could be seen, albeit in a limited way, through the above-mentioned efforts to reach beyond Pakistan's industrialised regions (¶156). The Project Document indicated that the Competition-Accelerator was to initially be implemented only in Punjab province and then subsequently expanded to three other provinces. It was not clear to the Evaluation Team if there was a formal expansion beyond the initial four categories considered under the cleantech framework (which the Project Document cautioned should be done carefully, with the aim of maximizing impact). Startups interviewed had innovations related to green buildings (including the GCIP 2017 national winner Modulus), which suggests there was a scaling up of this nature.
61. Furthermore, the project piloted an Industry Challenge Award; this “innovation challenge approach” was extremely valuable. It generated private sector resources that paved the way for award winners to undertake needed customer validation, which set the stage for scaling up the adoption of their innovations. As well, the project piloted a national-level Investor Connect event (inspired by such a mechanism in CTO's Global Forum in Silicon Valley). Run twice in Pakistan, this brought startups into meaningful contact with Industry and investors; 60 serious understandings were developed for follow-up meetings and 80% of investors reported that they intended to follow-up on business opportunities after the session. Such initiatives functioned very effectively to advance startups towards commercialisation (¶155).
62. With respect to mainstreaming, the project did not have an explicit objective to mainstream as it was designed and operationalised as a pilot to assess the value of such an approach for supporting cleantech innovation in Pakistan. Nevertheless, very positive signs were noted with respect to the project's support for strengthening the policy and regulatory environment to favour cleantech adoption in terms of undertaking Policy Dialogues in Islamabad, Karachi, and Lahore and generating a comprehensive policy review, gap analysis, with recommendations, which has been handed over to the PCST to be incorporated into a detailed action plan with the potential to eventually influence national laws, policies, and regulations (¶106).

The overall rating for impact is “highly satisfactory”

3.2 Project Design

3.2.1 Overall Design

63. The project was built on 3 substantive components: 1) Identifying/nurturing emerging cleantech startups using a National Cleantech Platform (NCTP), which was to annually organise a Competition-Accelerator; through this, entrepreneurs could benefit from mentoring & training on business plan development and validation, etc. The most promising startups could participate in a global forum in Silicon Valley facilitating sharing of experience & best practices and connection with potential partners and investors from around the world; 2) Building the capacity of national (industrial) institutions and other partners and undertaking extensive advocacy & outreach to sustain the Competition-Accelerator; 3) Working with relevant actors to strengthen the policy & regulatory framework to favour and scale up cleantech innovation and acceleration activities across Pakistan. With these three design elements in place, the GCIP concept is seen to be an effective approach for promoting a cleantech ecosystem within a country by providing business assistance services to early stage entrepreneurs to support and accelerate these startups towards the commercialization of their innovative ideas, while fostering an environment that facilitates and promotes the adoption of cleantech innovation.

64. The GCIP concept drew legitimacy from the involvement of relevant partners: i) GEF, whose funding/endorsement helped build awareness and support for the cleantech concept; ii) UNIDO, whose expertise (industrial energy efficiency, renewable energy, water management, chemicals management, biotechnology) and support for SMEs in developing and transition economies are well-recognized; iii) CTO, which runs the world's largest cleantech accelerator and has, from 2005 to date, supported 1200 early-stage startups through training, mentoring, and access to USD 1.2 billion in capital, creating over 3'000 clean economy jobs²⁰.
65. Like the design used in other GCIP countries, Pakistan adopted a tripartite structure where UNIDO held the role of lead implementing agency, the Pakistan Council for Science and Technology (PCST), under the supervision of the Ministry of Science and Technology, was the lead national executing partner, with funding from the GEF complemented by co-financing (including substantial in-kind contributions) from several national government institutions. Given its role as the Secretariat of the National Commission on Science and Technology (headed by the Prime Minister) and its remit in advice, planning and implementation in this domain, the PCST is judged to be ideally suited to chair the Project's Steering Committee and assume a key leadership role within the project.
66. A Civil Society Organisation, the Centre on Climate Change & Development (CCCD), was expected to co-lead and physically host the NCTP created under the project's auspices. Although a prominent role for NPO was not specified in the design document, the strengthening of its capacities was to be privileged, as deduced from the results framework.
67. From a design point of view, these aspects would work in favour of developing national ownership of the initiative. The Project Document indicates that the PMU's "*National Project Manager is also the future competition programme manager, and he/she will also act as the local consultant on clean energy technologies promotion*". While the notion of orienting the management of the initiative to an actor strongly linked to UNIDO and the legacy piloted concept may have been conceived as means to provide continuity through a transition, when it comes to implementation, such an approach could potentially detract from developing national ownership in that the leadership space is already occupied by an incumbent. Furthermore, obliging local actors that are expected to assume ownership roles to call on the consultancy of an incumbent is not seen as appropriate. As time passes, the Competition-Accelerator is expected to move from pilot/start-up mode to operational mode. Very different management and leadership skills are needed and appropriate at different stages of development.
68. The project was adequately resourced to pursue its objectives. Risks were identified at the outset; coordination, incentives, and absorptive capacities were assessed as "low risk" and suitable mitigation measures were identified. On the other hand, "lack of interest" was a medium risk. Given the potential negative impact on level and quality of participation in the programme, a major priority was consequently put on communications, advocacy, outreach, and documentation, which are seen to constitute a very appropriate mitigation strategy.
69. The project included a component dedicated to monitoring and evaluation with the aim of ensuring effective project implementation. The design indicates that regular monitoring exercises were to be conducted, tracking tools were to be developed and used, and PIRs were to be elaborated by the PMU. As well, a mid-term and final evaluation were to be carried out. A suitable M&E plan was clearly articulated within the original design document. Allocation for funding M&E activities followed common practice for such a medium-sized project.

²⁰ <https://cleantechopen.org/>

The rating for overall design is “satisfactory”

3.2.2 Logframe and Reconstructed Theory of Change

70. GCIP Pakistan’s design followed the template used by UNIDO for other participating countries. The addition of substantial communications, advocacy, and outreach (with adequate resourcing) as a mitigation measure showed an important adaptation to the setting in Pakistan. The project’s results framework is shown in Table 5.

Table 5: GCIP Pakistan’s Results Framework

Components	Outputs	Outcomes
C1: National Clean Tech Platform (NCTP) to promote clean technology innovations and competitiveness in SMEs in Pakistan to deliver global environmental benefits	1.1 SME associations & national agencies involved in promoting clean technology innovations mobilized & a coordinating platform at national level established 1.2 Annual Cleantech business competitions held across selected SME clusters covering 4 clean energy sectors	O1: A coordinating mechanism/ platform established at national level to promote clean technology innovations and entrepreneurship; clean energy technology innovators identified, coached and supported during & beyond the Cleantech competition
C2: Capacity enhancement initiative for clean technology innovations	2.1 Capacity building of national industrial association to host the Cleantech programme 2.2 Mentor Programme launched and 100+ mentors identified & trained regionally and online 2.3 Extensive advocacy & outreach activities including training programme, seminars, corporate and Public-Private Partnership (PPP) Forums held regionally and online	O2: National institutional capacity built for mentoring and training programmes as part of the competition and accelerator programme
C3: Policy/regulatory framework strengthened for scaling up cleantech competition, innovations and acceleration activities across Pakistan	3.1 Policy & regulatory environment created 3.2 Regional stakeholder meetings held & partnerships developed with leading institutions, agencies & universities across the country	O3: Policy and institutional framework strengthened to promote cleantech innovations in SMEs and support the local innovation ecosystems in the country
C4: Monitoring and Evaluation Management	4.1 Mid-term & final project evaluation conducted 4.2 Documentation of best practices for dissemination	Not specified

71. The results chain is logically sequenced. The Competition-Accelerator was designed to catalyze and mediate the project’s support. This mechanism was expected to dynamize Pakistan’s cleantech innovation ecosystem (Outcome 1); garner/develop supportive institutional capacities through “on-the-job” training (Outcome 2); trigger strengthening of the policy/regulatory framework to facilitate cleantech adoption (Outcome 3) to assure the sustainability of Outcome 1. This mutually-reinforcing set-up shows coherence and design strength.

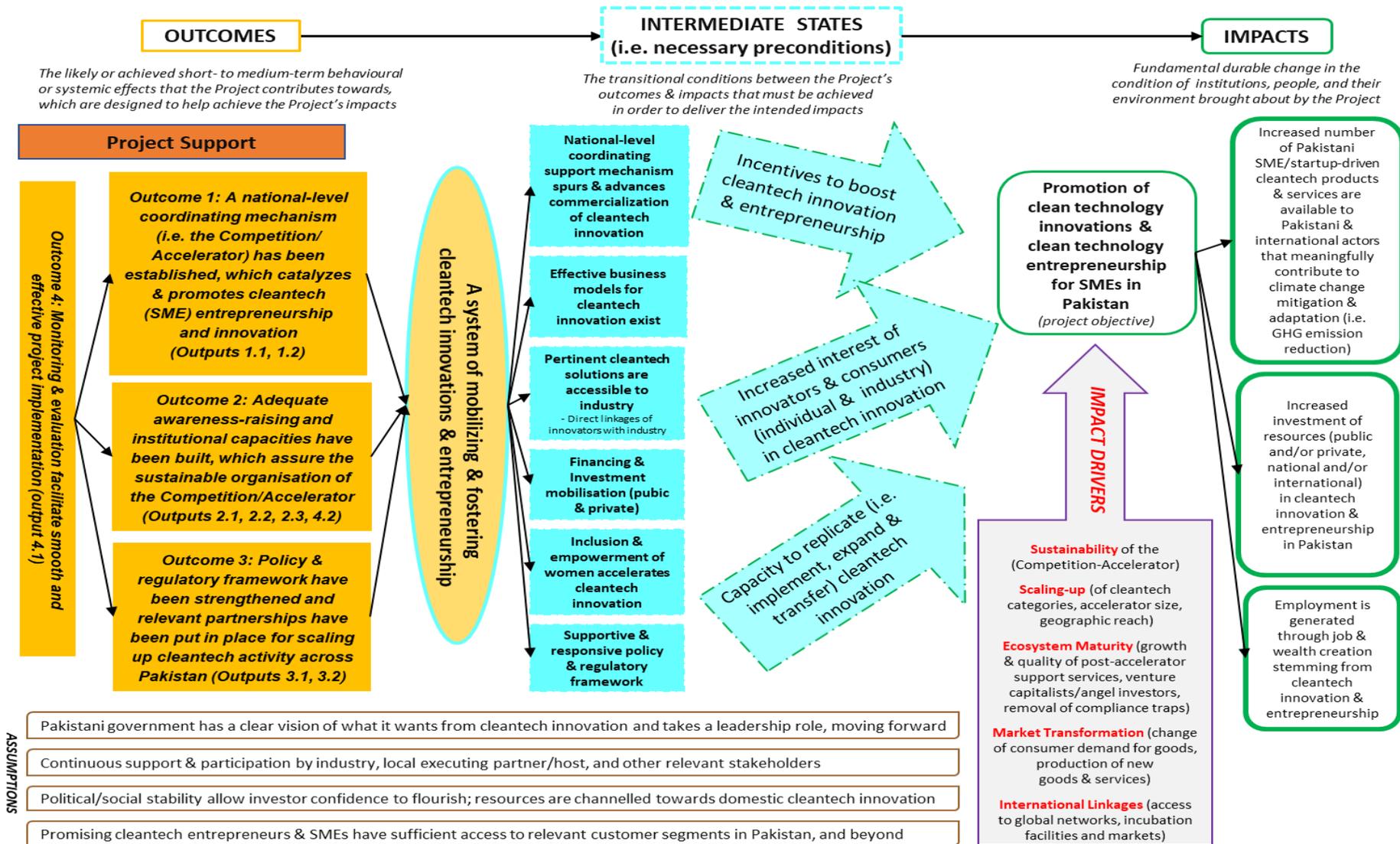
72. Some improvements in formulation were observed (e.g. “annual cleantech business competitions” were mentioned as an output instead of 1-2 without specifying periodicity. The logframe mentioned indicators for outputs, specific targets, means of verification. The formulation of indicators for desired outcomes tended to be quantitative, which facilitates measurement (e.g. “# of shortlisted SMEs connected with funding/partnership opportunities” and “# of innovative businesses created/accredited” could be used to assess/confirm that “[adequate] national institutional capacity [has been] built for mentoring/training programmes as part of the Competition-Accelerator” and that a “coordinating mechanism [has been] established at national level to identify, coach, support clean energy innovators” as a company’s creation and recognition of meeting essential requirements (i.e. accredited) can be linked to participation in the Competition-Accelerator through which a business plan is developed/refined, together with a funding model. However, formulations of other indicators could be improved. For instance, “extent to which policies/regulations are amended or implemented” does not give evidence as to whether relevant aspects have been investigated/changed, nor does it reflect the actual nature of project support in the policy domain.
73. The Project Document indicated that there would be close coordination with other international efforts to share/exchange (¶48); links with other UNIDO and UNDP projects (¶50); and that a selected institution would become a connecting node with similar climate technology centres in development countries (¶47). While these notions represent important catalytic potential, they were not explicitly referenced in the results framework/indicators and no project activities appeared to provide the scope for creating and leveraging such linkages.
74. To deepen understanding of the intervention’s underlying logic, the Evaluation Team reconstructed the project’s Theory of Change (RTOC) and solicited and integrated input from the PMU (Pakistan) and UNIDO Project Manager and Evaluation Manager (Austria) to develop the result shown in Figure 3. In addition to making assumptions and impact drivers explicit, this visualisation demonstrates how the project could be expected to lead to its results by starting with the intended long-term impacts and working back through the necessary preconditions to identify the causal pathways, which, if followed, contribute to the desired end state.
75. In the RTOC, the project’s intended long-term impacts were formulated as: i) Increased # of Pakistani SME/startup-driven cleantech products services are available to Pakistani and international actors that meaningfully contribute to climate change mitigation and adaptation (i.e. GHG emission reduction); ii) Increased investment of resources (public/private, national/international) in cleantech innovation/entrepreneurs in Pakistan; iii) Employment is generated through job and wealth creation stemming from cleantech innovation and entrepreneurship. The project’s stated objective of “Promotion of clean technology innovations & clean technology entrepreneurship for SMEs in Pakistan”, through the Evaluation Team’s eyes, looks more like an intermediate outcome, contributing to the long-term desired impacts.
76. Working backwards, to stimulate the growth of cleantech innovation & entrepreneurship by Pakistani SMEs, there are some necessary preconditions (intermediate states). These have been identified as falling within 3 domains: “incentives to boost”, “increased interest in”, and “capacity to replicate” cleantech innovation. These impact (causal) pathways link the project’s direct outcomes to the intermediate outcome through to the intended long-term impacts.
77. Working back through the “incentives” impact pathway: to boost cleantech innovation and entrepreneurship, outcomes/outputs aimed at establishing a national coordinating mechanism can usefully serve to catalyze cleantech innovation, backed by building

institutional capacities to assure the sustainable organization of the mechanism. The Competition-Accelerator would presumably motivate Pakistani SMEs to strive to regularly create more cleantech innovations. An orientation towards developing pertinent solutions adapted to Pakistani (SME) industry needs would further advance the commercialization of cleantech innovation. Suitable business and financing models must be developed by startups and understood by public and private actors whose resources are invested to sustain their activities. With more cleantech innovation generated by SMEs, the country's industrial sector would be invigorated, with a lower carbon footprint, be more socially/environmentally-friendly, while generating more GDP for the nation.

78. Working back through the "interest" impact pathway: to enhance participation in cleantech innovation, outcomes and outputs related to outreach would raise the profile of cleantech, in general, and the Competition-Accelerator, in particular, thereby enhancing applications. Specific efforts to include/empower women entrepreneurs would tap this underutilized group's potential to accelerate cleantech innovation, given important proven linkages between achieving environmental sustainability, gender equality, and women's empowerment²¹. This aspect reflects a key priority for the GEF (see Footnote 27) and the UN at large (¶134).

²¹ Women Moving Mountains, Gender Training Presentation, GCIP Pakistan

Figure 3: Reconstructed Theory of Change for GCIP Pakistan



79. Working back through the “capacity to replicate” impact pathway: to implement, expand and transfer cleantech innovation, a policy framework that is supportive and responsive to cleantech innovation needs to be in place. In this emerging area, it is difficult to precisely anticipate; therefore, a significant proportion of the project’s support (outcomes & outputs) to the Pakistani government could be expected to take the form of deepening understanding of the cleantech innovation field, identifying priorities for policy and regulatory change to create a facilitating context for the promotion and adoption of cleantech innovation, and developing a responsive approach to compliance problems and/or new issues related to innovation.
80. In analysing these impact pathways, ‘impact drivers’ and ‘assumptions’ were identified. The following ‘impact drivers’ (under the influence of the project, its implementing partners, and relevant stakeholders) are seen to transmit vital catalytic power through the impact pathways and thereby contribute to the project reaching its intended transformative effects:
- **Sustainability** (of the Competition-Accelerator)
 - **Scaling-up** (of cleantech categories, accelerator size, geographic reach)
 - **Ecosystem Maturity** (growth & quality of post-accelerator support services, venture capitalists/angel investors, removal of compliance traps)
 - **Market Transformation** (change of consumer demand for goods, production of new goods and services)
 - **International Linkages** (access to global networks, incubation facilities and markets)
81. While largely beyond the control of the project and relevant stakeholders, the following ‘assumptions’ could positively influence the realisation of the intended impacts:
- The Pakistani government has a clear vision of what it wants from cleantech innovation and takes a leadership role, moving forward
 - Continuous support and participation by industry, local executing partner/host, and other relevant stakeholders
 - Political & social stability allow investor confidence to flourish; resources are channelled towards domestic cleantech innovation
 - Promising cleantech entrepreneurs and SMEs have sufficient access to relevant customer segments in Pakistan, and beyond
82. In sum, the project’s overall design incorporates elements that offer strength; adaptations and improved formulations in the logframe from the originally-provided template have addressed some previously-observed weaknesses. The recognition and resourcing of advocacy and outreach and specific efforts to include/empower women entrepreneurs are an important addition and can be expected to drive the desired long-term impact.

The rating for the logframe is “satisfactory”

The overall rating for project design is “satisfactory”

3.3 Project Performance

3.3.1 Relevance

83. The project’s purpose/objective are fully consistent with global and regional development needs and environmental priorities in so far that the promotion of entrepreneurship, innovation, and clean technology have been identified as vital instruments to deal with

climate change challenges. The project makes a pertinent contribution²² to the 2015 Paris Climate Agreement. The project's emphasis on promoting clean energy technology was aligned with the priority set forth under the 2030 Development Agenda²³ and Sustainable Development Goals (SDGs), which further embody the world's commitment to safeguarding the global commons.

84. The Project Document indicates that this intervention was in line with national policies (e.g. 2001 National Environmental Action Plan; 2007 SME Development Policy; 2012 National Climate Change Policy; 2012 Framework for Economic Growth; 2017 National Research Agenda: Pathway to Shaping the Future), contributing to Pakistan's climate resilient growth by addressing global climate change and national issues of energy security, employment creation, SME competitiveness. The project's aims to promote energy efficiency, renewable energy, waste to energy, water efficiency, and green buildings were aligned with objectives of the country's 2006 Policy for Development of Renewable Energy for Power Generation, 2011 Devolution Plan, 2016 National Energy Efficiency and Conservation Act. The project is aligned with Pakistan's vision²⁴ to achieve security, prosperity & social cohesion through equitable & sustainable socio-economic progress using science, technology, and innovation to drive economic development.
85. The project's relevance to national stakeholders was further confirmed in reviewing the PSC's minutes as well as through Policy Dialogues convened in Islamabad (Oct 2016), Karachi, Lahore (Nov 2016), in which its cross-cutting nature was highlighted. Through the latter, the content of participants' recommendations implied a variety of links and leverage points with the project. A PSC member interviewed remarked, *"the GCIP acted as a catalyst to wake us up to the new challenges that we have to face"*. GCIP Pakistan's support to early-stage startups was reported to be very valuable as in the cleantech domain, support is not easily obtainable before reaching assurances on customer validation. The support provided to such startups under the GCIP framework was intended to nurture them along the path to maturity and formal establishment.
86. The project filled a gap not covered by other mechanisms. Schemes that existed at the time, and those that have since emerged, have a strong focus on ICT (¶28). A respondent explained: *"When the GCIP was established, there was, and still is, a lack of incubators promoting cleantech. In the innovation space, there will be a gravitation towards ideas that are commercially promising. Another priority is social impact: health & education; environment is a lower priority. I've come to realise that it's not just climate change; it's water, clean air, wildlife, forests. We don't think about it because there isn't a feeling that it's immediately affecting us. Cleantech is a relatively unknown concept in Pakistan. What is being done is essential. The UN has the domain expertise. They should work with actors who know what to do in incubation"*.
87. The Project Document identified the problem to be addressed and offered support to overcome barriers. Beneficiaries, who would be enabled by the business assistance services

²² Evidence was drawn from GHG emission reduction study presented at the International Science-Policy Conference on Climate Change (18-20 Dec 2017) published in their Journal <http://sp3c.org.pk/> which demonstrated that 7 GCIP Pakistan projects had a collective direct emission reduction of 196.96 tCO₂e per year This was extrapolated to the 95 active projects, suggesting an annual reduction of 2672 tCO₂. Furthermore, 40% of the total cleantech startups supported by the project successfully reached commercialization during the project's timeframe.

²³ Energy is linked to goals and targets on poverty eradication, sustainable agriculture, food security & nutrition, health & population dynamics, education, gender equality & women's empowerment, water & sanitation, economic growth, sustainable consumption & production, and climate. [Building More Inclusive, Sustainable and Prosperous Societies in Europe and Central Asia: From Vision to Achievement of the Sustainable Development Goals Call for Action from the Regional UN System](#), Regional Advocacy Paper 2017 produced by UNDP & UN Regional Coordination Mechanism

²⁴ National Science, Technology, and Innovation Policy 2012, Pakistan Ministry of Science and Technology, October 2012

provided, saw these as highly pertinent for transforming their cleantech ideas into viable commercial products and services. Start-ups interviewed in Karachi asserted “we found many viable value propositions; the programme helped us find the actual target audience and better understand the business side”, “I got a lot of help from the learning to find customers; this created a snowball effect”, and “through the mentoring, I learned how to come up with an idea and pitch it to convince the market and investors; I went from being a girl to being a businesswoman”.

88. GCIP Pakistan drew on UNIDO’s 20 years of experience in technical cooperation for industry (especially SMEs), its role in supporting technology transfer, its expertise in Resource Efficient Cleaner Production (RECP), the Montreal Protocol, Energy & Environment, which were to be leveraged. The project fed into Pakistan’s One UN Programme II, whose 2016 report highlighted the role of clean technology innovation in relation to SME/start-up development and the contribution to green industrial development and environmental sustainability.²⁵
89. The project is fully aligned with the donor’s focal area priorities (GEF Council’s Revised Strategy for Enhancing Engagement with Private Sector, Modality 3 “SME Competition Pilot: Encouraging Entrepreneurs & Innovators through a Competition/Incubation Pilot”), which provides support to entrepreneurs and innovators seeking to establish commercial ventures in the field of clean technologies aimed at enhancing national competitiveness. Opportunities were also foreseen at the outset for the project to link with and build on GEF activities in Pakistan related to policy, regulatory framework, and capacity-building as well as GEF projects²⁶ of UNDP and UNIDO to promote business models to scale up sustainable energy and enhance industrial energy efficiency in SMEs. Furthermore, the project’s specific focus (matched by adequate resourcing) on inclusion & empowerment of women reflects the GEF’s Policy on Gender Equality²⁷.
90. As the project was highly pertinent to international/regional/national priorities, the needs and interests of its beneficiaries, fully aligned with donor priorities, and well-suited to UNIDO’s mandate, competences, and strategy for inclusive and sustainable industrial development, the project has been assessed as highly relevant.

The rating for relevance is “highly satisfactory”

3.3.2 Effectiveness

91. The Project’s effectiveness was assessed by looking at the extent to which its overall objective, outputs and outcomes targeted in the results framework were already achieved or can be expected to be achieved in the near future, taking into account their relative importance.

Overall Project Objective: Promotion of clean technology innovations and clean technology entrepreneurship for SMEs in Pakistan

92. The project’s stated objective was formulated in terms of “promoting” cleantech innovation & (SME) entrepreneurship. Presumably its actual objective (as shown in Figure 3) was to increase clean (energy) technology innovation and entrepreneurship. Its achievements in this respect are shown in Table 6, against the targets and indicators of the project’s results

²⁵ GCIP Pakistan instantiates Pakistan 1 UN’s Strategic Priority Area 2: Inclusive Economic Growth & Sustainable Livelihoods

²⁶ Specifically: GEF/UNDP’s “Productive Uses of Renewable Energy in Chitral District, Pakistan (PURE-Chitral)”, “Promotion of Energy Efficient Cooking, Heating and Housing Technologies (PEECH)”, and a regional project, “Barrier Removal to the Cost-Effective Development and Implementation of Energy Standards and Labeling Project (BRESL)”.

²⁷ Adopted in October 2017, the GEF Director of the Policy, Partnership, and Operations Unit explained: “by explicitly recognizing that efforts to combat environmental degradation and those to address gender inequality can be mutually supportive, this new Policy will help the GEF to more actively catalyze projects and actions that have the potential to materialize greater environmental impact through gender-responsive approaches and results”

framework.

Table 6: Summary of the Project's Success in Meeting its Overall Objective

Promotion of clean technology innovations and clean technology entrepreneurship for SMEs in Pakistan		
Indicators	Target	Assessment and Status as at 31 March 2018
# of SMEs to pursue innovations in clean technologies Successful cleantech programmes organized after project completion	NCTP established to support SMEs, thus identifying promising clean technology startups in the country	Achieved NCTP's establishment was formalized in Sept 2017, with partners and stakeholders seen as relevant for supporting SMEs and entrepreneurs on advancing with cleantech innovation. This sets an important infrastructure to support continued successful cleantech programmes following project closure, although the funding and commitments to assure continuation were not in place at the time of the evaluation (discussions are linked to next GEF funding cycle, with positive signs)
Additional investment into clean technology innovations due to increased interest in the cleantech programme	An investment strategy has been prepared SMEs are trained and connected with funding partners and investors USD 5 million invested in clean technology innovations	Over-Achieved Private sector engagement is set to increase through expansion of the Industry Challenge Award concept, continuation of Investor Connect events, which will be taken over by the Islamabad Chamber of Commerce under its own cost, identification of angel & investor capital and channelling of national technology funds towards cleantech innovators Under the project, 249 startups (i.e. semi-finalists) were trained & connected with funding partners & investors. USD 19.787 million was invested in GCIP innovations, through various sources, during project implementation
# of SMEs as members of the national platform (sex-disaggregated data will be collected)	At least 300 SME members	Over-Achieved The NCTP covers all of Pakistan through a diverse range of associated and provincial level organizations, with the following confirmed membership: SMEs = 328 Startups= 164 Public Sector Organizations = 9 Academic Institutions = 12 Total Members = 513
Tons of GHG emissions directly and indirectly avoided.	Indirect emission reductions in the range of 452,000 tCO2 equal to about	Over-Achieved Based on a study of 7 presumably illustrative cleantech innovations supported under the project (4 from each category and 3

	904,000 tCO2 over the period 2013-2023	<p>winners/semi-finalist), direct/indirect GHG emission reduction was calculated by the PMU as:</p> <p>Total direct emissions reduction over a 10-year period (2013-2023) estimated to be 776,571.93 tCO2</p> <table border="1" data-bbox="847 421 1326 667"> <tr> <td>Total for 7 selected innovations</td> <td>196,25 tCO2</td> </tr> <tr> <td>Average for these 7</td> <td>28.13571429</td> </tr> <tr> <td>Total for 95 innovations</td> <td>2672.892857</td> </tr> </table> <p>Total indirect emissions reduction over a 10-year period (2013-2023) estimated to be 1,009,543.50 tCO2. See: http://sustainability.ppg.com/environment/missions.aspx</p>	Total for 7 selected innovations	196,25 tCO2	Average for these 7	28.13571429	Total for 95 innovations	2672.892857
Total for 7 selected innovations	196,25 tCO2							
Average for these 7	28.13571429							
Total for 95 innovations	2672.892857							

93. The project’s performance on its overall objective, as assessed by the targets and indicators outlined above show impressive results and justify a “highly satisfactory” rating on effectiveness. The assessment of the project’s effectiveness was undertaken at a more granular level by reviewing the achievements of the 3 outcomes, underpinned by their 9 outputs, which supported the project pursuing its main objective, as follows:

Outcome 1: A coordinating mechanism/platform established at national level to promote clean technology innovations and entrepreneurship; clean energy technology innovators identified, coached and supported during & beyond the Cleantech competition

94. Table 7 details the status of the programmed outputs aimed at achieving this outcome, together with an overall assessment of their achievement.

95. Outcome 1 was designed to promote Pakistan’s innovation ecosystem by assisting in identification/early stage nurturing of the most promising innovative clean (energy) technologies and facilitating global networking with mentors and potential business partners abroad. Although a notion regarding “coordination” was incorporated in the formulation of the outcome (stemming from the original project document template), the way in which the GCIP was expected to play this function on the Pakistani landscape was not clear from the Project Document. The PMU team interpreted the “coordination” mentioned in the results framework to be that the mechanism should lead to creating/accreditation of innovative businesses. In this light, the PMU reported that “249 accredited businesses were facilitated through project support”, The PMU indicated that “accreditation” means businesses that have been through “customer validation” and/or “3rd party validation” during GCIP Accelerator. Using this definition, the project’s performance on this Outcome has been assessed as highly effective, looking to the comparative performance of other GCIP implementing countries.

96. It was initially envisaged that the coordinating mechanism/platform would be hosted within a Civil Society Organisation. By the time that the project was finally gaining momentum in 2015, the particular organisation that had been identified had not come forward with the expected competences and the PSC endorsed its removal from the project. In the intervening period, the PMU embarked on a long consultation process which finally resulted in the formal

endorsement of the NCTP in September 2017. While some momentum was lost in terms of building the foundation for hand-over to local ownership during the timeframe of the project, the fact that such extensive consultations were subsequently carried out is seen to be very positive in terms of identifying and engaging the relevant actors.

97. The project ran 4 annual cycles, exceeding its planned target (of 3). The project reached the highest number of applicants (1,379) and cultivated the highest number of semi-finalists (249), compared to other GCIP participating countries. The Evaluation Team understood that a significantly higher number of applications were initiated at the start of each annual cycle but a large number of these failed to reach completion. As a mitigation effort to enhance applicant numbers and assure successful application, the project began using “infotainers” February 2017 who worked like mentors to assist people in the application process and share information within their institutions”.
98. Major attrition at this early stage of the process was attributed to an insufficiently adapted platform for the emerging/developing country context. Insufficient description of the innovative idea within the online application form resulted in disqualification by CTO, which owns and operates the GCIP platform, before Round 1 judging in the respective country. According to one of the seminal researchers in the innovation space, *“innovation is always a numbers game; the more of it you do, the better your chances of reaping a fat payoff”*²⁸ GCIP Pakistan’s efforts to seriously increase the volume of applications to the Competition was surely a factor in reaching a higher level of input entering the Accelerator. The question could be asked as to whether achieving an even higher rate of applicants at the outset could have channelled even further candidates into the process.

²⁸ *The Why, What, and How of Management Innovation*, Gary Hamel, Harvard Business Review, February 2006

Table 7: Summary of the Project's Success in Producing Outputs under Outcome 1

Outcome 1: A coordinating mechanism/platform established at national level to promote clean tech innovations & entrepreneurship; clean (energy) tech innovators identified, coached, supported during/beyond Cleantech competition		
Indicators (Target)		Assessment and Status as at 31 March 2018
1) # of innovative businesses created/accredited		Over-Achieved The PMU reported that “249 active innovative businesses were created under the project”. Compared to what was achieved in other GCIP countries, this result is impressive.
2) # of prizes for innovators with great impact on women entrepreneurial development and job creation		Achieved Through 4 annual cycles: 19 awards for winners (national winners, runners-up, Most Promising Woman Led Business) were made, driving meaningful impact on entrepreneurial development & job creation for women. This included 5 women award winners: 3 Most Promising Woman Led Business awards and 2 runners-up. Remaining 14 awards winning teams also had an overall 30% participation rate for female team members, which built their entrepreneurial capacity and created/enhanced their employment opportunities
Programmed Outputs	Indicators (Target)	Assessment and Status as at 31 March 2018
1.1 SME associations & national agencies involved in promoting clean technology innovations mobilized & a coordinating platform at national level established	NCTP established # of entries (100+ per Competition) # of semi-finalists (40-50) # of finalists (10-15)	Achieved NCTP was established in September 2017. Its structure, strategy, and member organizations have been documented. Importantly, the following governance has been agreed: <ul style="list-style-type: none"> • Advisory Body – PCST, NPO, PIM, ICCI • Current chair with ICCI (January - June 2018) • Chair rotation on 6-month basis NCTP Member Clusters include: <ul style="list-style-type: none"> • Public Sector Institutions • Academic /Research Institutions • Chambers of Commerce and Industrial associations • Incubation Center / Accelerator Programmes / Startup Support Bodies • Financial institutions • Media Organizations • International linkages

		<ul style="list-style-type: none"> • Relevant SMEs • GCIP Alumni /Mentors/ Judges • Other relevant stakeholders 																																				
1.2 Annual Cleantech business competitions held across selected SME clusters covering 4 clean energy sectors	<p>Annual cycles held (3)</p> <p>Target of 10% women participants</p>	<p>Over-Achieved</p> <p>Four annual cycles (2014, 2015, 2016, 2017) were successfully completed with Pakistan achieving the highest number of applicants as well as semi-finalists, compared to all other countries.</p> <p>Applications were submitted via the CTO online portal. Incomplete applications were disqualified. Round 1 judging by an external panel of judges took place for all eligible applications, following standard criteria as shared by the CTO related to the judging approach, key criteria, and standards. All applications were filtered by applying the same criteria in all four cycles of the GCIP calls in Pakistan. The complete table as verified from the CTO and project record is as follows:</p> <table border="1"> <thead> <tr> <th>Annual Cycle</th> <th>Total # of applications started but not completed</th> <th>Attrition of applications (due to non-completion or deemed ineligible)</th> <th>Total # of applications deemed eligible to enter the Competition</th> <th>Semi-finalists selected (# with female team leader that emerged from Competition)</th> <th>Teams that finished Accelerator (# with female team leader)</th> </tr> </thead> <tbody> <tr> <td>2014</td> <td>81</td> <td>33%</td> <td>54</td> <td>28 (2, i.e. 7 %)</td> <td>19 (0%)</td> </tr> <tr> <td>2015</td> <td>451</td> <td>61.5%</td> <td>174</td> <td>55 (12, i.e. 22%)</td> <td>27 (7, i.e. 26%)</td> </tr> <tr> <td>2016</td> <td>592</td> <td>47%</td> <td>314</td> <td>82 (23, i.e. 28%)</td> <td>33 (11, i.e. 33%)</td> </tr> <tr> <td>2017</td> <td>511</td> <td>46%</td> <td>275</td> <td>84 (25, i.e. 30%)</td> <td>26 (10, i.e. 38%)</td> </tr> <tr> <td>Total</td> <td>1635</td> <td>47%</td> <td>818</td> <td>249</td> <td>105</td> </tr> </tbody> </table>	Annual Cycle	Total # of applications started but not completed	Attrition of applications (due to non-completion or deemed ineligible)	Total # of applications deemed eligible to enter the Competition	Semi-finalists selected (# with female team leader that emerged from Competition)	Teams that finished Accelerator (# with female team leader)	2014	81	33%	54	28 (2, i.e. 7 %)	19 (0%)	2015	451	61.5%	174	55 (12, i.e. 22%)	27 (7, i.e. 26%)	2016	592	47%	314	82 (23, i.e. 28%)	33 (11, i.e. 33%)	2017	511	46%	275	84 (25, i.e. 30%)	26 (10, i.e. 38%)	Total	1635	47%	818	249	105
Annual Cycle	Total # of applications started but not completed	Attrition of applications (due to non-completion or deemed ineligible)	Total # of applications deemed eligible to enter the Competition	Semi-finalists selected (# with female team leader that emerged from Competition)	Teams that finished Accelerator (# with female team leader)																																	
2014	81	33%	54	28 (2, i.e. 7 %)	19 (0%)																																	
2015	451	61.5%	174	55 (12, i.e. 22%)	27 (7, i.e. 26%)																																	
2016	592	47%	314	82 (23, i.e. 28%)	33 (11, i.e. 33%)																																	
2017	511	46%	275	84 (25, i.e. 30%)	26 (10, i.e. 38%)																																	
Total	1635	47%	818	249	105																																	

Outcome 2: National institutional capacity built for mentoring and training programmes as part of the competition and accelerator programme

99. Table 8 details the status of the programmed outputs aimed at achieving this outcome, together with an overall assessment of their achievement.
100. Outcome 2 was designed to identify, engage, and build relevant institutional capacities to facilitate the Competition-Accelerator's sustainable organisation. In this respect, capacities in PCST, NPO, PIM, and ICCI (engaged from the outset as executing/co-financing partners) and individuals in their networks who could perform the important roles of mentors and judges were capacitated "on-the-job". The project engaged the leadership, executives, and technical staff of partners in promotional activities, advocacy campaigns, judging sessions, academies, business clinics, Investor Connect, award ceremonies, and through online CTO webinars in the roles of chair, team leader, speaker, panellist, co-organizer, facilitator, mentor. The PMU reported that these actors would be able to organise GCIP events as NCTP lead members.
101. A mentor programme, supported by materials and guidelines provided by CTO, was developed and carried out regionally and online. The PMU reported that this initiative exceeded the programmed capacity-building targets, for overall mentor capacities as well as for inclusion of women. This is an excellent achievement. Mentors in Islamabad, Karachi, and Lahore interviewed for this evaluation appeared highly motivated and experienced their participation positively. Moving forward, there were requests to enrich and extend the training for mentors: *"we don't need to be told how to mentor, but on what to mentor"*. Requests to provide criteria, rubrics, and methods for supporting innovators were received, together with a recommendation to review the criteria for selecting mentors and judges: *"the programme needs to involve more mentors with a business background"* to support startups in commercialising their ideas.
102. Looking to other beneficiary viewpoints, i.e. startups themselves, the Evaluation Team heard very positive feedback. For instance, GCIP was described as *"better than what a lot of business schools have to offer. The depth of focus on the business plan forced me to think about things that were really important in a way that I didn't have the tools to do before"*. Participation in the Vienna Energy Forum and CTO Global Forum was unanimously described as very valuable. These fora provided opportunities to *"get some international experience"*, *"learn what investors might look for"*, and *"learn about other ecosystems"*. Furthermore, *"once an entrepreneur gets 2-3 of these types of international exposure, that gives more maturity"*.
103. Incubators interviewed in Islamabad, Karachi, Lahore indicated that the quality of the startups that emerged from the GCIP Accelerator was comparatively high. This is taken as an indicator of the effectiveness of national capacity-building carried out and GCIP's content/structure. The latter was characterised by participants as well as competing incubators as extremely valuable.
104. The impressive results achieved in bringing participants to the GCIP framework is clearly linked to the investment in advocacy and outreach (¶182), the networking of the project and its partners (¶100), and the engagement of the PMU team and its supervisory support (¶172).

Table 8: Summary of the Project's Success in Producing Outputs under Outcome 2

Outcome 2: National institutional capacity built for mentoring and training programmes as part of the competition and accelerator programme		
Indicators (Target)		Assessment and Status as at 31 March 2018
1) # of human and financial resources of PCST, NPO and other counterparts with built capacity		<p>Achieved</p> <p><u>Human Resources</u> PCST – 4 (Chairman and Technical Staff Members) NPO – 7 (CEO and Technical Staff Members) PIM – 6 (Director and Technical Staff Members) ICCI – 20 (President, Executive Committee, Technical Staff Members)</p> <p><u>Financial Resources</u> were available per commitments</p>
2) Wide platform of all stakeholders operationalized		<p>Achieved</p> <p>The NCTP that was formalized in September 2017; this represents a culmination of efforts to identify most vibrant & relevant institutions and actors (through extensive advocacy, awareness raising, promotion, capacity building) and engage them in a framework to support cleantech startups. This wide platform is set to be operationalized in a sustainable manner as per agreed structure and strategy after the project's phase closure in June 2018.</p>
Outputs	Indicators (Target)	Status as at 31 March 2018
2.1 Capacity building of national industrial association to host the Cleantech programme	# of PCST and NPO staff trained to be able to organize the competition and the accelerator programme	<p>Achieved</p> <p>Staff from PCST, NPO, ICCI, PIM were trained for this purpose: PCST – 4 (Chair and Technical Staff Members) NPO – 6 (CEO and Technical Staff Members) ICCI – 20 (President, Executive Committee, Technical Staff Members) PIM – 6 (Director and Technical Staff Members)</p>
2.2 Mentor Programme launched and	Training workshops and mentoring sessions organized (at least 10 training workshops)	<p>Over-Achieved</p> <p>282 mentors identified from within partners and other stakeholder organizations and</p>

100+ mentors identified & trained regionally and online	& mentoring sessions organised over 3 years [target of 10% women participants] and 100+ mentors identified & trained)	engaged in a comprehensive mentor training programme (including material development e.g. mentor guidelines) that built up valuable capacities in the national ecosystem Target for 10% women substantially exceeded, thanks to mentor training program undertaken under Women in Green Industry initiative where 165 women were trained in 3 regions. Furthermore ICCI & PIM were trained on how to mentor start-ups run by women in a gender-sensitive manner
2.3 Extensive advocacy and outreach activities including training programme, seminars, corporate and PPP Forums held regionally and online	# of regional workshops or training courses organized # of shortlisted SMEs connected with funding and partnership opportunities.	<p>Over-Achieved</p> <p>In total, 160 advocacy & outreach activities were conducted (averaging 40 activities per year for 4 years) including seminars, workshops, PPP forums, focus group discussions, corporate meetings</p> <p>To mobilize engagement of women: 24 exclusive advocacy/awareness activities were conducted – 8 per region (seminars/workshops/learning sessions)</p> <p>For online advocacy/awareness: a social media strategy was prepared; a campaign conducted to access women-focused groups, technology groups, academic groups, professional associations, accelerators, incubators, SME support organizations, Chambers of Commerce</p> <p>12 comprehensive training programmes were conducted for innovators (3 programmes/year/region) over 4 years, with the help of external technical experts and mentors working on a voluntary basis</p> <p>For linking SMEs to funding: 249 alumni companies were connected to investors through Investor Connect events organized in 2016 and 2017 along with other linkage opportunities to mobilize funds in future.</p>

Outcome 3: Policy and institutional framework strengthened to promote cleantech innovations in SMEs and support the local innovation ecosystems in the country

105. Outcome 3 was designed to strengthen the policy/regulatory framework to facilitate cleantech adoption, which would assure the sustainability of Outcome 1 and valorise Outcome 2. Table 9 details the status of the programmed outputs aimed at achieving this outcome, together with an overall assessment of their achievement.
106. The PMU reported that it brought all pertinent players to the same table and initiated debate through regional policy dialogues to identify relevant policy gaps. As these gatherings simultaneously functioned to sensitize these actors about the need for further improvement and effective implementation of existing policies, this approach is judged to be very effective. Furthermore, these exercises had the result of developing a wide range of partnerships with lead policy-making and implementation bodies which will be valuable for the GCIP as potential future collaborators as the initiative moves forward.
107. It is understood that now, in the final project phase, the PCST, PMU, and other stakeholders are working to incorporate these recommendations into ST&I Policy’s Action Plan. It would not be feasible to expect changes to current policy and the regulatory framework to take effect during the project’s timeframe, particularly as the GCIP was carried out as a pilot and the insights were brought forward near to its upcoming closure. Nevertheless, the diligence and quality with which the policy review was carried out and the way it was done, through consultation which involved diverse, relevant stakeholders is very valuable for sustaining the project’s results. As the PCST’s efforts move forward, under the leadership of its new Director, it is expected that the GCIP’s contributions will have high impact in terms of bridging policy disconnects.

Table 9: Summary of the Project's Success in Producing Outputs under Outcome 3

Outcome 3: Policy and institutional framework strengthened to promote cleantech innovations in SMEs and support the local innovation ecosystems in the country		
Indicators (Target)		Assessment and Status as at 31 March 2018
1) Extent to which these policies and regulations are amended or implemented		<p>Achieved</p> <p>Under project support, the key policy that promotes science & technology in Pakistan through innovation and entrepreneurship development (2012 “National Policy on Science, Technology and Innovation”) was reviewed to identify gaps and improvement areas. Regional-level recommendations were collected from a diverse pool of experts & institutions through Policy Dialogues (Islamabad, Karachi, Lahore). The final recommendations were handed over to PCST, as custodian of ST&I policy.</p> <p>The recommendations are being incorporated into ST&I policy’s Action Plan, in collaboration with PCST. Once finalized, this ST&I Action Plan will be the roadmap for advancing science & technology (including clean technology) in Pakistan.</p>
Outputs	Indicators (Target)	Status as at 31 March 2018
3.1 Policy & regulatory	New policies and regulations	<p>Achieved</p> <p>A study was carried out and published, which provides an</p>

Outcome 3: Policy and institutional framework strengthened to promote cleantech innovations in SMEs and support the local innovation ecosystems in the country		
environment created	developed to create a conducive policy environment for cleantech implementation	important analysis of the 6 most relevant policies and related legislation and identification of the ‘National Policy on Science Technology and Innovations (ST&I) 2012’ as the key policy for driving the advancement of cleantech innovation in Pakistan. Importantly, this study recommended to proactively implement existing ST&I policy (with improvements) rather than formulate further dormant policies. PMU and PCST are incorporating recommendations in the policy action plan for implementation.
3.2 Regional stakeholder meetings held & partnerships developed with leading agencies, institutions, universities	Regional stakeholder meetings held and partnerships developed	Achieved In-depth meetings with key players and a series of Policy Dialogues were conducted which provided an opportunity for wide stakeholder consultation (key for subsequently building ownership and sustainability of the project’s benefits). These initiatives gathered feedback and actionable recommendations from public and private sector institutions for improving the quality of current policies (particularly ST&I policy) and the regulatory environment. The compiled recommendations were handed over to PCST for further action.

108. Summing up the evidence, the project’s performance out all three of its programmed outcomes has been achieved or over-achieved, which led to a ranking of “highly satisfactory”.

The rating for project effectiveness is “highly satisfactory”

3.3.3 Efficiency

109. The notion of efficiency was integrated into the project concept in that the GCIP was to be coordinated with other related projects/initiatives to create synergies and avoid overlap. Furthermore, the project was to link with other GEF projects in Pakistan (¶73) for promoting business models with the aim of increasing penetration, scaling up sustainable energy, and promoting industrial energy efficiency in SMEs through energy management standard, system optimization, technology incubation.²⁹ The extent to which this coordination did, in fact, materialize with the corresponding efficiencies, is not evident from the project reporting. However, the Evaluation Team has given the PMU the benefit of the doubt on this, given the team’s working culture demonstrated a spirit of collaboration & interest in achieving synergies.

110. The project was granted a 22-month extension, upon the decision of UNIDO and the PSC. This extension may have been related to delays experienced in the initial stage related to understanding the concept, establishing/staffing the PMU, and getting the approach off the ground. From the February 2015 replacement of the National Project Manager and the PMU’s strengthening with further personnel (see Table 4), momentum increased. Although the project exceeded its planned timespan, allocated resources were stretched over 58 months. Together with USD 100’000 in added UN funds with the extension, the project resources were used to deliver more services than initially imagined, as evidenced by the over-achievement

²⁹ Project Document, p18

of targets described in Section 0

111. The PMU was embedded within UNIDO's existing Field Office. This provided efficiencies in terms of access to infrastructure and facilitated easy contact with other relevant actors in Islamabad. Efficiencies were also gained from the voluntary contributions of mentors & judges involved in the project, as well as the added contributions made by teams in the PMU and collaborating partners, which can be attributed to the implementation approach (¶172).

The rating for project efficiency is "satisfactory"

3.3.4 Sustainability of Benefits

112. The need to sustain the intervention following the project's official closure (June 2018) was raised early, through a Consultative Session" (26 July 2016), which aimed to identify & discuss options for developing a sustainability strategy: *"the idea was to bring all stakeholders on one table to streamline the thought process in such a way that individual efforts contribute to a common goal in a complementing way, which ensures promotion of cleantech innovation in Pakistan through national institutions"*³⁰. In the Evaluation Team's eyes, such a proactive approach sowed the seeds for sustaining the project's benefits, as the issue was brought to all relevant stakeholders who could play a future role in and benefit from the initiative.
113. This consultative approach (see Picture 3) was evident during the evaluation mission itself in that the PMU brought together 30+ representatives from all stakeholder groups (see Annex 3) to provide input into the evaluation, share ideas, and build commitment for moving forward.

Picture 3: GCIP Pakistan's Consultative Approach to Building Commitment and Engagement



Stakeholder Consultation meeting convened by the PMU, 19 April 2018, Islamabad



Consultative Session on "Sustainability of GCIP in Pakistan", convened by PMU, 26 July 2016, Islamabad

114. Following the 16 July 2016 Consultative Session, the PMU mandated a study³¹, which mapped relevant organisations and proposed a model with hub and partner organisations, together with recommendations and an Implementation Plan. Having such a comprehensive basis to work from is viewed as a very positive element for developing a strategy for local anchoring.

3.3.4.1 Financial Risks

115. Commercialization is the biggest hurdle facing entrepreneurs. This barrier is related to the way that potential clients & investors assess innovative ideas and the level of an initiative's maturity. Assessing the likely availability of resources following project closure involves

³⁰ Minutes of Consultative Session – Sustainability of GCIP in Pakistan, 26 July 2016, Serena Hotel, Islamabad

³¹ GCIP for SMEs and Startups in Pakistan: Developing Sustainability Strategy for the GCIP Project and Implementation Plan, Majid Shabbir (National Expert), carried out during 1 July 2016 – 30 November 2016

various factors: availability & effective channelling of public support; private investors/venture capitalists/angel investors (domestic/international), their willingness to invest in cleantech innovation.

116. To address such barriers, in collaboration with ICCI, the PMU arranged 2 Investor Connect events “*attended by investors of diverse nature, who got trained and sensitized for cleantech appetite*”. The 2016 session was the first ever such effort to connect investors with innovators in Pakistan’s cleantech sector. This initiative raised interest of other stakeholders to follow the same approach, spurring a continuous improvement of the domestic venture capital funding landscape. Two major public-sector funds (IGNITE, TDF) have since started funding cleantech-based innovations. Furthermore, TDF added cleantech as a main area of innovation in its 2018 call for awards. There is every reason to believe that Pakistan’s entrepreneurial culture is picking up and the country can expect to experience the growth and commercialisation of cleantech innovations. GCIP Pakistan has surely played a contributing role in this development.
117. The Technology Development Fund (TDF) indicated that it privileges GCIP awardees as they are “*seen to have higher chances to receive TDF grants due to having been mentioned and knowing how to do a business plan*”. This is seen as an indicator of GCIP’s value, impact, financial sustainability. The TDF signed a Letter of Intent with GCIP Pakistan with respect to its Social Integration Outreach Programme whose current theme is climate change, environment, and pollution.
118. The project successfully piloted an Industry Challenge Award during the GCIP 2017 cycle, outsourcing 2 awards to the private sector (USD 10,000 each, provided by Power 99 and Bitsym). As well as reducing the project’s financial risk, in the eyes of the Evaluation Team, this approach provides a valuable model for other GCIP implementing countries to replicate.
119. Under the upcoming phase that was in the process of being approved at the time of the TE (¶120), the PMU indicated that some awards will continue to be funded by the private sector. Moreover, it has already been agreed that the Accelerator will be run jointly with implementation partners [1 federal (Islamabad), 4 provincial National Incubation Centres (Lahore, Karachi, Peshawar, Quetta)] under the leadership of the Ministry of Information Technology & Telecom’s National Technology Fund IGNITE. See Picture 2. As these are the biggest incubation centres connected with the largest technology fund of Pakistan’s public sector, this agreement puts solid elements in place for financial sustainability of the initiative and presumably the startups supported under its umbrella.
120. The Phase II proposal developed during Feb-March 2018 was already shared with the GEF Focal Ministry (MoCC). According to the PIR 2018, under the GEF Cycle 6, USD 1 million has already been approved by GEF Pakistan. The Project Document was being approved by the GEF Secretariat at the time of the TE. Such support significantly reduces the financial risk of the project’s continuation.

The rating for financial risks is “highly likely”

3.3.4.2 Socio-Political Risks

121. As highlighted in the project’s RTOC, political and social stability play a critical role in allowing investor confidence to flourish and resources to be channelled towards domestic cleantech innovation (¶81). While largely beyond the control of the Project, its implementing partners, and other key stakeholders, socio-political stability has a direct link to positively influencing the realisation of the project’s intended impacts.
122. The project’s extensive advocacy and outreach (¶82 and see Table 8) have played a positive

role in generating interest on the part of the general public and the private sector which is seen as an important driver for reduced socio-political risk.

123. Various stakeholders explicitly stated that they are ready to integrate their support programmes with GCIP Pakistan, which would help the project to attain its goals with respect to the above-mentioned socio-political aspects (¶124). Amongst those interviewed for this evaluation, genuine interest was expressed in participation and offers of support and collaboration were put forward. For instance, Karachi's The Nest I/O President indicated, *"we would love to collaborate with GCIP. We believe that cleantech is an important area. We have already spread the word across our community to promote awareness of GCIP, to help them increase their level of applications. We could use GCIP mentors to provide support to our startups."*

Furthermore, the Higher Education Council (HEC) indicated that, moving forward, the GCIP project could play a catalytic role in relation to HEC's mandate to develop ORICs³² staff on university campuses across Pakistan. It is understood that the 30 existing incubators are not following a standard curriculum. The Evaluation Team heard interest on the part of HEC for the GCIP to be linked to these incubators. Such interest and the expression of tangible ways in which the project's benefits can be sustained are very valuable.

The rating for socio-political risks is "highly likely"

3.3.4.3 Institutional Framework and Government Risks

124. The strategy documents of Pakistani government institutions (¶84) stress the importance of sustainable economic growth, which requires solid regional development, better functioning SMEs, and less dependence on imported fossil-based energy. GCIP Pakistan offers effective solutions on these three fronts, which is also recognized by the participating entities (¶89).
125. On the policy side: the project's efforts have generated recommendations, now in the hands of the PSCT, which is the national custodian of Pakistan's ST&I Policy (¶107). The fact that the PMU is currently working together with PCST's leadership to integrate these recommendations into ST&I Policy's Action Plan, presumably going in the direction of strengthening the policy & regulatory environment to facilitate cleantech adoption, is an exceedingly positive signal regarding the sustainability of results. Furthermore, as already noted, the process by which this input was generated created partnerships with lead policy-making and implementation bodies deemed valuable for the GCIP initiative as it moves forward (¶106).
126. While collaboration with the PCST fluctuated over the years, the April 2018 arrival of a new Director General has immediately reinvigorated the PCST's engagement. The fact that this individual was the GEF Focal Point at the time of project approval, who personally approved the project, and conveyed a relatively in-depth understanding of the project and the significance of its contribution to Pakistan during interviews conducted for this evaluation suggests that the project is on a very solid ground for sustaining its results.
127. The Project Document did not actually mention an exit strategy and it is understood that such an aspect may not have been a formal requirement at the time of the design of this project (presumably in 2012). Good practice has evolved over the years to put more attention on this aspect from the outset. UNIDO's Evaluation Manual indicates that an exit strategy, planned

³² Offices of Research, Innovation and Commercialization (ORICs) were established under the HEC's auspices, with an objective to develop, improve, and manage the University research programme and to link research activities directly to the educational, social, and economic priorities of the University and the broader community. The aim is to turn invention (pure knowledge) into innovation (products, production processes) that can ultimately impact the welfare of community at large <http://hec.gov.pk/english/services/universities/ORICs/Pages/default.aspx>

together with UNIDO, or arrangements for continued funding of certain activities is a key aspect for assuring the probability and continuation of benefits following project closure.

128. The notion of an exit strategy can be implicitly pursued to the extent that a project works with institutional structures that would retain the knowledge & skills developed under the project, together with the idea of mainstreaming cleantech innovation within existing policies and regulations (as opposed to creating new policies & instruments). Relevant national institutions have indeed been associated with and engaged in GCIP Pakistan. While the role of the CCCD was backgrounded, that of the NPO and PIM came into the foreground. It is understood that the project worked with different chambers of commerce at regional level, out of which the ICCI came to play a far stronger role than expected (Industry Challenge Award ¶118, Investor Connect ¶116, Women Business Growth Centre ¶138). The Evaluation Team was informed that the ICCI shared another linkage with the GCIP given similar mandate for supporting youth/startups for innovation and entrepreneurship together with access to finance.
129. The PMU has done an excellent job in involving relevant actors in on-the-job training, enabling them to organise GCIP events as NCTP advisory board and members (¶100). The NCTP structure has been put in place with a bi-annual rotating advisory body chair, relevant actors have been engaged (¶96), and the momentum is there. The PMU team indicated that the NCTP was conceived to *“create a conducive environment through coordination and bridging gaps for facilitating cleantech innovators”* and further described as *“designed, strategized, and run in a vibrant manner under facilitation of PMU”* mainly by four partners (PCST, NPO, PIM, ICCI) whose capacities were built under project support. The NCTP appears to still depend on the PMU to a large extent in that structural linkages (¶67) were built into the very design of the project. This carries upside potential [facilitating continuity during transition, maintaining quality/reputation] and downside risk [maintaining dependence on UNIDO, potential brake on moving to full local ownership, resourcing implications].
130. Discussion during the TE’s debriefing session on 20 April 2018 (Islamabad), showed evidence of strong commitment from all participating actors parties (UNIDO/PMU, PIM, PCST, an invited observer from the National Commission for Human Development) and interest to contribute and take on an even stronger role, moving forward. The ICCI, NPO, Higher Education Council, and IGNITE each provided the project with Letters of Support (dated Feb 2018) for *“Accelerating Cleantech Innovation and Entrepreneurship in SMEs and Startups in Pakistan”*. Each confirmed their interest to be included as an execution partner (presumably with co-financing attached) in the next phase of the project, which was currently being planned at the time of the TE.
131. As a proposal was under preparation for the upcoming GEF funding cycle and a Concept Document had been prepared, it seems fairly certain that an arrangement will be put in place for continuing activities under the NCTP framework, which will assure the continuation and likelihood of benefits once the project reaches the end of the current phase in June 2018.

The rating for institutional framework and government risks is “highly likely”

3.3.4.4 Environmental Risks

132. The project’s support is aimed at achieving global environmental benefits, including improvements in resource efficiency and the reduction of waste and GHG emissions. The cleantech solutions being developed by the involved startups to improve water sanitation, and agricultural productivity are recognized and valued by relevant government institutions.
133. The government’s recently published strategy documents emphasize the importance of energy efficiency, environmentally-friendly technologies, and (SME) entrepreneurship, which all point to supporting the project in delivering positive outcomes on the environmental front.

The rating for environmental risks is “highly likely”

The overall rating for sustainability of benefits is “highly likely”

3.4 Assessment of Cross-Cutting Performance Criteria

3.4.1 Gender Mainstreaming

The extent to which UNIDO interventions have contributed to better gender equality and gender-related dimensions were considered in the intervention.

134. The UN has a mandate to address human rights/gender equality to promote social justice and equality³³. Gender equality enhances economic growth, household poverty reduction and human development³⁴. One respondent summarized the challenge: *“women are held back for various reasons: cultural (families won’t allow them to leave home), security issues, distance from place of work, transport is not available. Safety at work is a concern. Many more women are becoming part of the economy. Pakistan is not going to grow as an economy until women are driving economic activity. We can create safe spaces for women and men in Pakistan. When a woman becomes economically empowered, she spends money on the family’s development: educating children, healthcare, improving the home. So investing in women entrepreneurship has a big impact. Women are important agents of change that have not been sufficiently tapped in our country.”*
135. Gender mainstreaming was addressed in project design through the expressed intention to engage women entrepreneurs, associations and gender focal points to participate in all project activities. The Evaluation Team uncovered evidence that the project undertook deliberate and extensive efforts to mobilize interest and engage women, over-achieving its 10% target by a wide margin (see Table 7). Monitoring activities tracked and aggregated data about participation of women in semi-finalist/finalist teams. Data showed the number of women in team leader positions within eligible applications to the Competition as well as their success in reaching alumni status (₹156). In this light, over the 2014-2017 period, women figured in 25-40% alumni team leader positions. In 2017, 40% (i.e. 10 out of 26) startup teams that completed the Accelerator had a female team leader. Putting this figure in context, it is understood that up to 40% of the finalists within the GCIP process in Pakistan and up to 60% of the winners in 2016 were women-owned startups.
136. The PMU received training from UNIDO on its gender mainstreaming strategy and subsequently carried out gender sensitisation sessions for all project partners. Such awareness-raising/capacity-building are seen as giving the PMU and its collaborating partners the tools/strategies through which gender could be mainstreamed in project implementation.
137. The project’s achievements exceeded those in other GCIP pilot countries. Gender mainstreaming was linked the project’s CEO endorsement, which provided high-level institutional backing/priority, with adequate resourcing for outreach/advocacy, which were very competently leveraged. For instance, the nation-wide Women in Green Industry Campaign launched in 2016 (which had strong ownership) provided valuable training and encouraged Pakistani women to establish their own cleantech startups, especially focussing on waste (re)utilisation. A Most Promising Woman-Led Business Award was established in 2015, given to 3 young female innovators (Lahore, Karachi) during 3 GCIP cycles (2015-2017), later sponsored to attend the CTO Global Forum in Silicon Valley (see Picture 3). In 2017, 30% of finalist teams were women led; they pitched their ideas to investors during Investor

³³ Guidance Document: Integrating Human Rights and Gender Equality in Evaluations, UN Evaluation Group, Aug 2014, p19

³⁴ UNDP’s Human Development Index (HDI) 2016, p42. Also, refer to Footnote 1

Connect 2017. The Evaluation Team congratulates the project team for maintaining a dedicated focus on the inclusion & empowerment of women; this approach is highlighted as an area for replication by other projects in future³⁵, in the GCIP context and beyond.

Picture 4: Extensive Efforts Effectively Supported Gender Mainstreaming



Leaving no-one behind in developing sustainable entrepreneurship in Pakistan



2015-Launch-of-Women-Business-Led-Growth-Centre, housed-in-Islamabad-Chamber-of-Commerce



Most-Promising-Woman-Led-Business-Award-presented-under-GCIP-2017



Gender-Mainstreaming-Training was-carried-out-in-2016-for-the-team

138. Inspired by its GCIP participation and the opportunity to take up leadership of the gender mainstreaming agenda, the ICCI established a Women Business Growth Centre in 2016, which includes an incubation facility for women startups. This initiative leverages support offered by USAID to promote business startups and improve economic empowerment of women³⁶. This turn of events is seen as an indication of the catalytic power of GCIP Pakistan.

The rating for gender mainstreaming is “highly satisfactory”

3.4.2 M & E System

3.4.2.1 M & E Design

139. The Project Document envisaged that M&E would be conducted in accordance with established UNIDO and GEF policies and procedures. The project’s Logical Framework

³⁵ GCIP Pakistan’s gender mainstreaming actions were abundant: Targets were set (e.g. exclusive seminars for women-100% women participation desired; overall participation of women in all seminars-at least 30%); engaging women-focused institutions (e.g. women chambers, women universities, etc.); inclusion of “women role models & winners” in promotion, seminars & sharing their videos; .launch of “Women in Cleantech Campaign” (“Change Agents” identified in relevant institutions [each trained to organize a group of 20 interested women around him\her to provide support for submitting applications through the online CTO portal]); training of women to become volunteers, mentors, judges; development of targeted GCIP promotional material (<https://issuu.com/unidopakistan>); “Women in Cleantech” campaign via social media; inspiring messages launched via social media to mobilize women applicants; success stories of “Women in Cleantech” in social media; Skype sessions with interested women applicants; strong encouragement for the addition of at least 1 active female member in each participating team; women team leaders as presenters of final judging rounds; identification of women-focused sub sectors in relevant industrial sectors; groups of women connected with relevant GCIP categories and annual Calls for Awards; high profile women trained as policy experts; documentation of women success stories; sharing of these success stories through social media; female winners participated in print & electronic media; women entrepreneurs were invited to participate in the ‘International Women Day -2018’ event organized by Islamabad Chamber of Commerce and Industry through the Women Business Growth Centre platform: see www.youtube.com/watch?v=bitZ7KecWuU

³⁶ www.icci.com.pk/event/detail/2005

provided performance and impact indicators along with their corresponding means of verification. These formed the basis for the development of the project's M&E Plan. Implementation of the M&E Plan was to be undertaken by the PMU under the PSC's guidance. The M&E procedure consisted of a project inception report, progress reporting, PIRs, final project report, and reporting to the GEF. It was also envisaged that mid-term and terminal evaluations would be respectively carried out mid-course and 4 months after the project's operational completion. These mechanisms were to facilitate reflection; promote discussion regarding content, scope, and resourcing; stimulate recalibration where needed; and gauge the project's progress-to-impact and achievements.

3.4.2.2 M & E Implementation

140. At the highest level, the project progress was overseen and reviewed by the PSC. Project progress was reviewed in PSC meetings; corrective measures were suggested to streamline implementation. The PMU monitored the project's interventions and results through internal review meetings and compilation of annual Project Implementation Reports (PIRs).
141. PIRs covering the fiscal periods of July 2014 to June 2015 (PIR 2015), July 2015 to June 2016 (PIR 2016), July 2016 to June 2017 (PIR 2017), July 2017 to March 2018 (PIR 2108) were made available to the Evaluation Team. It is confirmed that these were prepared in line with the GEF project progress reporting system and were submitted to GEF on annual basis for years 2015, 2016, 2017, in line with the GEF project progress reporting system. The Evaluation Team benefited from the availability of the most recent PIR until March 2018, together with a highly structured and well-organised documentation linked to envisaged project outputs and outcomes, which greatly facilitated the terminal evaluation.
142. The PMU included self-ratings (with justifications) in the PIRs and highlighted risks and potential mitigation measures. The PIRs catered to GEF requirements and were only shared with GEF. Progress was shared with executing partners in annual PSC meetings. It is presumed that other stakeholders were updated about the project's progress using suitable means.
143. In addition to this tracking, PSC meetings were also designed to function as an M&E device, providing supervision and strategic guidance according to national imperatives/market needs. PSC meetings took place annually. Meeting Minutes for 26 September 2013, 15 January 2015, and 4 February 2016 were available to the Evaluation Team. As well, a consolidating meeting took place on 26 July 2016, where discussion about the sustainability of GCIP Pakistan was launched. No PSC meeting appears to have been convened since that point. The debriefing session that took place on 20 April 2018 in relation to the TE appeared to play a complementary role to the PSC (¶130) and was observed to reinvigorate discussion and provided a forum for the new leadership of the PCST to strengthen its commitment to the GCIP, moving forward.
144. UNIDO HQ team was also regularly engaged in oversight and quality assurance of project and closely monitored the intervention through regular field visits, stakeholder consultations, and progress reporting. It is important to highlight that PMU has made commendable efforts in well- documenting all project activities, events, trainings, workshops etc. Overall, these documents were well-structured and presented, and many of these were duly shared with relevant stakeholders. Given the limited M&E resources and absence of dedicated M&E expertise in the PMU, its efforts to develop/implement M&E mechanisms and collect, analyse, and report data related to project outcomes and impacts indicators was adequate. With higher resources allocated to M&E, this effort could be commensurately enhanced.
145. GEF and UNIDO evaluation procedures encourage medium-sized projects to undertake a mid-term review but it is not obliged. A mid-term review was not conducted; the project

management consequently missed out gaining insights on interim progress and recommendations to inform the roll-out. The project’s terminal evaluation was mandated by UNIDO’s Evaluation Office to independently assess the project’s performance in terms of relevance, effectiveness, efficiency, sustainability and progress to impact and to provide lessons learned and recommendations to inform the development of any next phase of the project and other such future initiatives.

3.4.2.3 Budgeting and Funding for M&E Activities

146. A detailed budget was planned and allocated for M&E activities, which included continuous monitoring of project execution and tracking progress towards milestones. The overall budget of USD 100,000 was allocated for M&E activities, by combining USD 50,000 cash contribution from the GEF and USD 50,000 co-financing (presumably in-kind contributions). This budget and its allocation appear to be slightly inadequate (see Table 10). It is not clear whether the mid-term review was not carried out because of insufficient budgeting and whether these funds not used for the mid-term evaluation were channelled into other support activities.

Table 10: Budgeting and Funding for M&E Activities of GCIP Pakistan

M&E Activity Categories	Feeds Into	Time Frame	GEF Budget (USD)	UNIDO (USD)	Co-financing (in-kind, USD)	Responsible Parties
Measurement GEF Tracking Tool specific indicators	Mid-term Review and Terminal Evaluation Reports	At project mid-term and completion	20,000	30,000	20,000	<ul style="list-style-type: none"> • Project execution partner/PMU submit inputs for consolidation and approval by project steering committee (PSC); • PSC submits final inputs/reports to UNIDO PM
Periodic progress reports and monitoring of project impact indicators (as per LogFrame)	Project management; Semi-annual progress report; Annual GEF PIR	Semi-annually				
Midterm review/evaluation	Project management; PSC	At project mid-term	10,000	5,000	10,000	UNIDO PM and PMU
Independent terminal evaluation	Terminal Evaluation Review (TER) conducted by UNIDO ODG/EVA	Project completion (at least one month prior to the end of the project and no later than six months after project completion)	20,000	15,000	20,000	Independent evaluator for submission to UNIDO PM

Source: GCIP Monitoring & Evaluation Plan, 2013

The rating for M & E implementation is “satisfactory”

3.4.3 Results-based Management (RBM)

147. The project was formally approved on 9 Sept 2013, the 1st PSC meeting took place very shortly afterwards on 26 Sept 2013, then the PMU was constituted. The project was remarkably able to launch its first cycle in the first half of 2014 and made a good start on building the GCIP’s reputation on the national landscape and attracting applications. This momentum and focus on progressively achieving, even over-achieving its planned targets, and working solidly towards the envisaged outcomes was witnessed throughout project implementation (see Table 4).

148. With the strengthening of the PMU in February 2015, the project really took off as the available resources (financial and human) could be strategically leveraged and were very capably supported, supervised, and guided by dedicated staff in UNIDO headquarters.

149. The project’s results framework was the basis for developing the annual work plan (including key activities, milestones, targets), the M&E system, and PIR structure, all of which support the project in results-based management. The M&E system tracked progress on activities, outputs, targets, and outcomes according to the results framework. Information was collected

on specific indicators throughout the implementation period. Specific attention was paid to recording statistics related to the Competition-Accelerator (e.g. received applications, eligible applications, semi-finalists, female-led team, mentors, business clinics, technology innovations of startups).

The rating for RBM is “highly satisfactory”

3.5 Performance of Partners

3.5.1 UNIDO

150. As GEF’s implementing agency, UNIDO held ultimate responsibility for the project’s timely implementation, delivery of planned outputs, and monitoring of expected outcomes. UNIDO was also accountable to the GEF grant and other funding resources provided by the Pakistan government and the private sector. UNIDO contributed the project design and oversaw its implementation, monitoring, reporting, and evaluation. It is judged that UNIDO has undertaken its responsibility in a serious manner and has satisfactorily carried out these duties.
151. The participation and reputation of UNIDO was highly valued by all stakeholders. Many of the respondents interviewed for this evaluation remarked on the importance of UNIDO’s association with this project and expressed strong wishes for its continuation. In Pakistan, there was a significantly high name recognition for UNIDO (and all of its positive association); respondents frequently referred to the project as “the UNIDO project”, rather than the GCIP.
152. UNIDO’s headquarters team was regularly engaged in oversight and closely monitored the intervention through regular field visits, stakeholder consultations, and progress reporting. It was noted that the headquarters’ supervisory approach was particularly supportive, exhibiting a great deal of openness and receptivity to the suggestions and insights of the implementing team on the ground, who felt empowered and were able to pilot new approaches, which have subsequently offered valuable models for the overall programme (gender mainstreaming ¶1137; Investor Connect ¶1116; industry challenge award ¶1118).
153. Technical backstopping was conducted by experts identified/engaged by UNIDO and included in their ToR. In Pakistan, it was reported that the support offered by CTO “has been good in 2015 & 2016 but somehow, the level of engagement decreased in 2017”. Administrative hiccups have created growing frustration; this was brought to the attention of the PMU during the evaluation.
154. Cleantech innovation is a new domain for UNIDO. The GCIP has certainly enabled the agency to build up its experience in this area. The appointment of an overall GCIP Coordinator in 2017, who happened to also be the headquarters Project Manager for GCIP Pakistan and was in mid-2018 promoted to Unit Chief, can be expected to facilitate sharing of experience and lessons learned in Pakistan (refer to valuable models cited in ¶152) across other GCIP implementing countries.

The rating for UNIDO’s performance is “satisfactory”

3.5.2 National Counterparts

155. Several government entities took up the invitation of UNIDO to join GCIP as partners and co-financers (¶1167), which also involved becoming members of the PSC. All those identified to take part were seen as relevant, able to benefit from the project’s activities and outcomes, and identified as having a key role to play in anchoring the sustainability of its benefits and results.

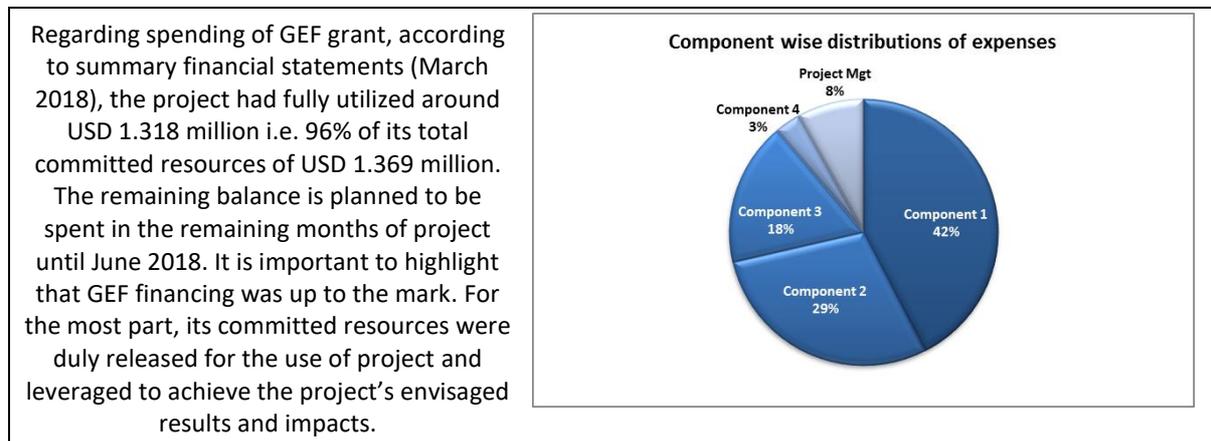
156. While the CCCD was initially tapped to be co-lead and was expected to physically host the NCTP (¶165), this actor’s contribution did not materialise as expected. While this may have slowed the project’s momentum until 2015, it was observed that other partners (NPO, PIM) came more into the foreground (¶128). Subsequently, the ICCI took an even stronger role than initially envisaged (¶130, ¶138). The fluctuation in leadership on the part of the PCST (¶126) may also have slowed down the project’s ability to strengthen national ownership, although the arrival of a very engaged, committed Director General in May 2018 has justifiably renewed optimism on the part of the PMU and other co-financing partners regarding the leadership role that the PCST could play, moving forward.

The rating for National Counterparts’ performance is “satisfactory”

3.5.3 Donor

157. The GEF Operational Focal Point (in MoCC) endorsed the Project Identification Form, triggering a GEF grant of USD 1,369 million. The Evaluation Team confirmed that the timely disbursement of project funds well-supported the envisaged activities and outcomes. Project supervision from the GEF side functioned adequately. The annual PIRs prepared for the GEF were accepted.

Figure 4: Catalytic Role of GEF Grant within GCIP Pakistan Project



158. The GEF’s financial contribution and support through the GCIP for nurturing technology and entrepreneurship was highly appreciated by all stakeholders concerned and perceived to be highly relevant assistance to bridge gaps in resources and capabilities for innovation and acting as a catalytic force for further development of the local innovation ecosystem.

The rating for the donor is “highly satisfactory”

3.6 Processes affecting achievement of project results

3.6.1 Preparation and readiness / quality at entry

159. The project was developed based on lessons learned from the design & implementation of the 1st South Africa Clean Technology competition for green entrepreneurs and SMEs implemented by UNIDO, with GEF support, in 2011 under the “Greening the COP17 programme” (¶133).

160. As GCIP Pakistan was launched at the same time as other similar country projects, it was unlikely that directly applicable lessons beyond the South Africa experience were available to inform its design & implementation. The extent to which lessons learned from past projects implemented by UNIDO or the involved Pakistani actors were incorporated into the project’s design is not clear. No mention of this was made in the original design document. However,

the Evaluation Team did observe an improvement in some formulations in the project’s results framework compared to another GCIP country (i.e. Armenia, Turkey) implemented in the same period.

3.6.2 Financial Planning

161. The project was launched with GEF funding, together with in-kind and cash contributions from UNIDO and co-financing partners in Pakistan (¶137). The original overall financial plan summary and its breakdown by outcomes, as planned and as implemented, are contained in Annex 4. As UNIDO’s was the GEF’s implementing agency for the project, it was accountable for the GEF grant and other funding resources provided by the Pakistani government and private sector.
162. At project start, co-financing partners signed commitment letters totalling USD XXXX (see Annex 4 for details). The planned level of resources and in-kind contributions were judged to be fully adequate to implement the project and support its envisaged outcomes.

Table 11: Component / Year-Wise Project Expenditures (2014 to March 2018)

Component	2014	2015	2016	2017	2018 (March)	Total (in USD)
Component 1	133,487.97	212,706.01	185,992.92	26,730.06	0	558,916.96
Component 2	61,087.34	92,751.80	75,853.25	155,412.80	-2,855.88	382,249.31
Component 3	0	54,405.24	14,066.43	150,870.67	11,119.16	230,461.50
M & E	0	0	0	0	41,189.10	41,189.10
Project Management	8,816.72	16,462.14	16,377.91	15,797.96	48,193.69	105,648.42
Total	203,392.03	376,325.19	292,290.51	348,811.49	97,646.07	1,318,465.29

163. Analysis suggests that allocations were made based on annual work plans and budgets, which were duly approved by the PSC. Overall, the Evaluation Team has concluded that funds flows were smooth and projected financial resources and inputs were managed and spent in an efficient, transparent, and accountable manner, using UNIDO standard financial management and tendering/ procurement systems and procedures, keeping in view the best value for money.
164. Component-wise expenditures detail show that activities under Component 1 consumed around 42% of total resources, followed by Component 2 at 29%, Component 3 at 18%, project management 8% and Component 4 (M&E), only 3%. Comparison of the component-wise planned allocation versus actual expenses indicates that the bulk of expenses were made according to provided allocations, with little variation. Year-wise analysis suggests that project expenditures grew steadily since 2014 and were at their highest during 2015-2017, then gradually dropped in 2018. This evolution of spending matches the expected project management cycle; it shows solid experience & discipline in bringing this intervention from inception through its initial phase, hovering on the edge of launching the planned next phase.
165. The project stretched the resources originally allocated for a 36-month span to effectively cover a 58-month duration, delivering significantly more services than initially imagined (¶110).

3.6.3 Effect of Co-Financing on Project Outcomes and Sustainability

166. At the time of project endorsement, several national government stakeholders committed to contribute through co-financing, primarily through participation in the PSC and in-kind

transfers. Conceptually, this created a larger pool of potential support for delivering the project's outcomes, which could generate efficiencies and develop national ownership.

167. According to the Project document, the project's total estimated budgetary resources were **USD 5.369 million**, which included **USD 1.369 million** as GEF grant and a large co-financing share of **USD 4 million** from UNIDO and government partners (see Table 12).

Table 12: Co-Financing from National Partners (planned, in USD)

	PCST	NPO	PIM	CCCD	UNIDO	Grand Total
In-kind	300,000	350,000	250,000	200,000	50,000	1,150,000
Grant	900,000	1,150,000	750,000	0	50,000	2,850,000
Total	1,200,000	1,500,000	1,000,000	200,000	100,000	4,000,000

Source: Project Document

168. It is important to highlight that most co-financing was in the form of grant support, which refers to parallel finance allocated by partners for initiatives that contributed to project objectives, directly or indirectly. Discussions with project partners suggested that as such, it was difficult to estimate the exact numbers for in-kind contributions. However, the PMU made a diligent effort to estimate in-kind contributions and parallel finance from partners (see Table 13).

Table 13: Component-Wise Contributions of National Partners (actual, in USD)

Component	PCST	NPO	PIM	Total
Component 1 – In-kind	93,750	138,000	131,250	363,000
Component 1 – Grant	281,250	462,000	393,750	1,137,000
Component 2 – In-kind	116,000	165,600	104,000	385,600
Component 2 – Grant	348,000	554,400	312,000	1,214,400
Component 3- In-kind	90,250	44,275	27,500	162,025
Component 3- Grant	270,750	148,225	82,500	501,475
M & E – In-kind	0	0	12,500	12,500
Component 4 – Grant	0	0	37,500	37,500
Total	1,200,000	1,512,500	1,101,000	3,813,500

169. In view of the above calculations, it is promising to note that local partners handsomely contributed in co-financing the project, mostly in the form of parallel financing and in-kind support. NPO contributed the most, followed by PCST and PIM. Co-finance from CCCD understandably did not materialize as it was backgrounded from the project (¶141). Discussions with partners and estimation by the project team suggest that these contributions were mainly made in activities like outreach & communication, technical expertise, access to scientific network, research support, training, industry challenge award, coordination with government, support for the Women Business Growth Centre and for event logistics/venue/refreshment, etc.

3.6.4 Implementation approach

170. The implementation approach followed a tried and tested path: the project was managed/supervised by UNIDO headquarters staff in Vienna. The PMU was housed within the premises of UNIDO's Field Office in Islamabad, which provided synergies with respect to infrastructure and proximity to collaborating partners and other relevant actors. This proximity was especially important for facilitating ongoing exchange and on-the-job training

of national staff to develop their capacities to successfully support ongoing organisation of the Competition-Accelerator.

171. The PMU established the planning and M&E system to assure the project's effective functioning. A results-based management approach was used, as already described and positively assessed (¶149, ¶149). Workplans and timelines were endorsed by the PSC during its annual meeting.
172. The competence and dedication of the PMU team, together with the supervision and support from UNIDO headquarters, are recognized as important contributors to the project's impact. The PMU's efforts were highly appreciated, and its contributions were broadly acknowledged by those interviewed. The team did an excellent job in identifying, involving, and managing relevant stakeholders. Substantial outreach and dissemination activities were conducted (¶145). This achievement has very been positively assessed and identified as an important contributor to the achieved results (¶104, ¶122). The PMU head put major effort into developing a "family culture", which was seen to facilitate regular information-sharing/consultation and strengthen contribution. Misunderstandings nevertheless emerged (rooted in insufficient mutual understanding of criteria and processes linked to the Competition-Accelerator;), which affected the timely disbursement of prize money. This created disappointment (e.g. from bundling Silicon Valley trip costs into the prize money amount), complaints, and in some cases, added to the vulnerability for some startups that were depending on such funds to advance their innovations.
173. The PMU did an excellent job in project management and knowledge management; their approach is a model to be shared with other GCIP implementing countries. The designation of GCIP Project Manager for Pakistan to the role of overall UNIDO GCIP Coordinator in 2014 is seen as factor that strengthened the sustainability of the project's results as this provided an institutional mechanism to promote sharing of experience, lessons learned, and valuable models piloted under the GCIP framework. The Evaluation Team was informed that many of the documents produced in relation to GCIP Pakistan have already been shared with other GCIP countries as best practices and to promote cross-country learning. It is understood that the GCIP Coordination Team has collected information and shared statistics with other countries on a regular basis since its creation, which strengthened knowledge across the pilot countries.
174. Regarding knowledge management: the Evaluation Team came to understand that CTO collected information and shared this through webinars organized for the PMUs and innovators throughout every year of the GCIP operation in the pilot countries. Nevertheless, questions were raised in Pakistan (as well as in other countries assessed by the Evaluation Team Leader) regarding the storage, use, and access to information collected by CTO, which controlled the application process and the GCIP platform.

3.7 Other Assessments Required for GEF-Funded Projects

175. **Need for follow-up:** no instances of financial mismanagement that require a follow-up were detected. However, the extent to which the project has relied on CTO's platform (obliged by the project design) raises concerns and requires review. Evidence gathered in Pakistan indicates that the platform is inadequately adapted to the context of emerging/developing countries and entrepreneurs and has consequently filtered out a large number of applications (despite GCIP Pakistan's mitigation activities to engage "infotainers"; other countries, like South Africa, have used "application mentors" to address the same challenge). It has been observed that the project's capacity-building activities have been heavily dependent on virtually a single individual (business academy, training workshop, distance coaching), who

has successfully patented the training concept (De Bary Model), with so far insufficient development of capacity within the country to carry this forward autonomously, despite having completed four annual cycles in most of the pilot countries. This arrangement represents a significant risk (and cost for yet again bringing in international experts), moving forward. Intellectual property and data/platform ownership issues urgently need to be resolved to assure sustainability of the project’s results. The issues highlighted here are not restricted to the country-level implementation in Pakistan; they point to a higher-level governance issue to be resolved by UNIDO and the GEF.

176. **Materialization of co-financing:** A large portion of support (USD 4 million) was expected in the form of co-financing provided by UNIDO and government partners (see Table 12). As far as the PMU’s calculations can attest (see **Error! Reference source not found.**) an amount of USD 3,813,500 materialised, which is an excellent result on its own merit, and also when put in context to the (lower) achievements of other GCIP pilot countries. Adding in the planned contribution of USD 100’000 (cash and in-kind), this brings the actual level to virtually the planned level. An excellent achievement indeed.

177. **Environmental and social safeguards:** This intervention more than adequately incorporated environmental, economic and social safeguards (¶154, ¶155, ¶156).

3.8 Overarching Assessment and Rating Table

The overall rating for project performance is “highly satisfactory”

178. The intervention was judged to be highly pertinent for international/regional/national priorities. It addressed target group needs and was fully aligned with donor priorities and UNIDO’s mandate. The project incorporated strong environmental, economic, and social safeguards; showed evidence of progress-to-impact during its implementation; and put in place key elements to assure the sustainability of its results and benefits. The prioritization on gender mainstreaming, supported by relevant training/tools, adequate resourcing, a strategy for advocacy and outreach, and competent implementation, enabled the project to excel on this dimension of social inclusiveness. The project’s achievements on expected outcomes exceeded the set targets, leading to high ratings on effectiveness. Innovations trialled in Pakistan have yielded valuable models that could be usefully shared in other pilot countries, and beyond.

179. Table 14 provides an overall summary of the evaluation findings, justifications, and ratings³⁷.

Table 14: Summary of Findings and Ratings by Evaluation Criteria for the GCIP Pakistan Project

Criterion	Summarized Assessment of the Findings	Section	Rating
A. Impact	The project strongly incorporated environmental, economic, and social safeguards. Evidence of progress-to-impact was observed in terms of replication, scaling up, and mainstreaming. The initiatives undertaken for gender-mainstreaming and private sector engagement (through the Industry Challenge Award and Investor Connect) significantly enhanced the project’s impact.	3.1	HS
B. Project Design	The overall project design incorporates elements that offer coherence and strength	3.2	S

³⁷ Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Sustainability of Benefits is rated from Highly Likely (HL) to Highly Unlikely (HU)

Criterion	Summarized Assessment of the Findings	Section	Rating
Overall design	The approach was conceptually sound, well-resourced, with a legitimate governance structure. The inclusion and empowerment of women reflected priorities and policies of the donor and UN. Improvements in formulation and indicators would strengthen the overall design.	0	S
Logframe	The Competition-Accelerator served as a backbone to leverage the outcomes. Improvements in formulations addressed some previously observed weaknesses in the provided template; however, notions representing important catalytic potential were not explicitly referenced and no project activities appeared to provide the scope for creating and leveraging such linkages.	0	S
C. Project Performance	The project has high strategic relevance and over-achieved, for the most part, on the outcomes underpinning its effectiveness. A strong suite of elements has been put in place to assure the continuation of long-term benefits and resilience	3.3	
Relevance	Highly pertinent for international, regional, national priorities, target group needs; consistent with donor priorities and policy; fully suitable for UNIDO's mandate and competence.	0	HS
Effectiveness	The Competition-Accelerator achievements were more than expected in terms of applications, NCTP establishment & membership, identification & engagement of mentors, and # of startups supported & connected to potential future financial support. On the policy side, the compiled recommendations from a comprehensive review conducted in a way that generated potential for local anchoring and future partnerships are currently being integrated into an Action Plan of the country's key driving policy for science & technology advancement through innovation & entrepreneurship, which is the hands of one of the GCIP's key executing/co-financing partners.	0	HS
Efficiency	Although the originally planned timeframe was exceeded (like most GCIP pilots), the project made adequate use of allocated resources to deliver over the initially envisaged achievements.	0	S
Sustainability of Benefits	Proactively raising/addressing sustainability through a consultative approach, the project put in place key elements to reduce financial risk, buttress the institutional framework, build needed capacities, and it carried out valuable advocacy/outreach to generate interest & momentum.	0	HL
D. Cross-Cutting Performance Criteria		3.4	-
Gender mainstreaming	The project did an outstanding job on this dimension of social inclusiveness, starting from its inclusion in the CEO endorsement of the project and provision of adequate resourcing. The PMU had relevant training to address	0	HS

Criterion	Summarized Assessment of the Findings	Section	Rating
	gender mainstreaming and then ran training to sensitize its collaborating partners. Targets were set and tracked for recruitment of women trainers, mentors, judges, team leaders in participating startups. Extensive advocacy, communication & outreach supported to reach and even exceed the established targets. The Most Promising Woman-Lead Business Award, inspiration of ICCI to set up the Women Business Growth Centre in its own facilities in Islamabad complete with its own incubation facility for women startups show a recognition of the power that this untapped group in Pakistani society can play in the cleantech innovation field, and beyond.		
M & E	UNIDO's M&E approach was suitably designed, resourced, and implemented. Monitoring activities undertaken by the PMU were used to gauge progress and recalibrate direction. The way in which the Evaluation Team was supported in undertaking the TE and provided with well-organised, full documentation was taken as an positive indicator for knowledge management.	0	S
Results-based Management	The PMU maintained focus on progressing activities, outputs, and outcomes according to the project's results framework. The early momentum that was established continued throughout.	0	HS
E. Performance of Partners		3.5	-
UNIDO	UNIDO has undertaken its implementation role and duties in a responsible manner. The agency's participation was highly valued by all stakeholders.	0	S
National Counterparts	Relevant actors joined as partners & co-financers and become PSC members. While the co-host institution did not materialise, other partners stepped in and the PCST leadership role gained strength very close to project closure, providing optimism for sustaining results in future	0	S
Donor	GEF's contribution through the GCIP to bridge gaps in resources and capabilities for innovation was highly relevant and appreciated. The timely disbursement of project funds very effectively supported envisaged activities and outcomes. Genuine interest in understanding and leveraging the results of this pilot was observed.	0	HS
F. Overall assessment	The project was highly pertinent for international/regional/national priorities, addressed target group needs, aligned with donor priorities and UNIDO's mandate. It strongly incorporated environmental, economic, and social safeguards; showed evidence of progress-to-impact; and put in place the key elements to assure the sustainability of its results. The prioritization on gender mainstreaming, supported by relevant training/tools, adequate resourcing, an effective advocacy and outreach strategy, and competent implementation,	¶178	HS

Criterion	Summarized Assessment of the Findings	Section	Rating
	underpinned its excellent performance on this dimension of social inclusiveness. Its expected outcomes exceeded the set targets used to gauge effectiveness. The gender mainstreaming approach and innovations trialed in Pakistan (Investor Connect, Industry Award Challenge) offer valuable models for replication. Suitable financial management and M&E were put in place.		

4 Conclusions, Lessons Learned, Recommendations

4.1 Conclusions

180. Looking at the project’s overall **progress-to-impact**, the gathered evidence confirms that the intervention contained environmental safeguards [project activities enhanced environmental protection by supporting the development of cleantech ideas, solutions, and services (¶154)]; supported economic performance improvements [project activities boosted the functioning of Pakistani startups, promoted SME entrepreneurship, and meaningfully stimulated the national innovation ecosystem (¶155)]; and was very sensitive to social inclusiveness [major attention was put on gender mainstreaming which was recognized by UNIDO as outstanding (see Footnote 19), creating opportunities for women entrepreneurs and youth, and first steps to reach out beyond Pakistan’s main industrial centres were undertaken (¶156)].
181. The project demonstrated solid **replication** potential. The successful regular operation of the Competition-Accelerator through 4 cycles (¶197) and formal establishment of the NCTP, following extensive consultation (¶196), as a facilitating structure for this, moving forward (¶158), suggests that this aspect of the intervention is now well-anchored. Evidence suggests that it has moved from pilot to operational mode and is presumably capable of functioning in an ongoing manner to identify, coach, and support cleantech innovators in Pakistan. The project is credited with building awareness of cleantech’s potential to revolutionize the economy. GCIP activities have mobilized other ecosystem players to adopt cleantech categories and promote cleantech-based entrepreneurship. Initial **scaling up** was observed [(enlarged scope of categories for inclusion in cleantech, geographical outreach beyond Pakistan’s industrialised regions (¶160)] and shows positive promise of the future impact such an initiative could achieve over time. Policy Dialogues undertaken in Islamabad, Karachi, and Lahore, together with a comprehensive policy review and gap analysis (¶106), offer a basis for **mainstreaming**. As recommendations stemming out of this wide consultative process are currently being integrated by the custodian of Science, Technology, and Innovation Policy into an Action Plan show the project’s potential to eventually influence national laws, policies, and regulation to facilitate cleantech innovation (¶162).
182. Performance on all three of the project’s programmed outcomes was achieved/over-achieved. Outcome 3 was designed to strengthen the policy/regulatory framework to facilitate cleantech adoption, which would assure the sustainability of Outcome 1 and valorise Outcome 2. Evidence of the project’s **effectiveness** lies in its support of 249 startups, comparatively higher than other GCIP participating countries (¶195). The advocacy and outreach activities conceived and carried out are impressive (¶104) and a testament to the commitment and energy level of the PMU team and collaborating partners (¶172). The

possibility to carry these out relied on the fact that this element was visibly built into the programme design (¶168), adequately resourced (¶182), and competently staffed (¶172). Moving forward, the challenge will be for other actors who step in to maintain the quality and reputation that has now been established by the GCIP in the communications area. This will be of key importance for leveraging the GCIP's strategic role and coordinating function within the national innovation ecosystem.

183. Regarding **design**: project components were based on a proven concept with design strength (¶10), which was supported by the legitimacy (¶164) and resources (¶168) associated with a constellation of relevant partners (¶165). The extent to which it would be suitable for the GCIP to adopt a national-level coordination role in Pakistan, which may have been intended in the original design document (¶172), needs further reflection and discussion with a wide body of stakeholders in the country, informed by an up-to-date mapping of the landscape. Another aspect included in project design that needs further reflection relates to the assertion that the PMU's *"national project manager is also the future competition programme manager and he/she will also act as the local consultant on clean energy technologies promotion"* (¶167). To what extent does the administrative and management skillset related to running a Competition-Accelerator in operational mode naturally coincide with being an expert on clean energy technology promotion? There seems to be an assumption that an individual (project manager) who has spent 4-5 years taking a project from inception to completion would have gathered sufficient technical knowledge to then serve as a technical advisor on that subject matter. To what extent can one observe, in the real world, the co-habitation of these two disparate skillsets in a single individual? To what extent does such an assumption serve the project?
184. The project was **highly relevant** for international/regional/national priorities (¶83, ¶84, ¶85), target group needs (¶87), aligned with UNIDO's mandate (¶88) and donor priorities (¶89). It bridged a gap not covered by other mechanisms: its support was available to nurture early-stage startups along a path to maturity and formal establishment (¶86). The substantive aspects used to structure the project (¶63) and the actors used to anchor it within the country (¶44, ¶65) are coherent and contributed to the strategic relevance and effectiveness (¶93) of the intervention.
185. The project's **efficiency** was judged to be satisfactory. Like other pilot projects operating under the GCIP framework, its timeline for implementation was extended (by 22 months), which meant that its originally allocated resources were stretched to cover a 58-month duration and delivering more services than initially imagined (¶110). Embedded within UNIDO's Field Office, the project benefitted from existing infrastructure and was in close proximity to and easy contact with other relevant actors in Islamabad (¶111).
186. The project team proactively raised the issue of **sustainability of the project's results and benefits** at an early stage (¶112), which is viewed very positively, particularly in that this led to a mandate to map out relevant organisations and proposal for local anchoring and sustaining the project's results and benefits (¶114). Initiatives like the domestic Investor Connect (¶116) and Industry Challenge Award (¶118) piloted under the GCIP Pakistan framework provided valuable support for the startups and **reduced financial risk** (¶116). The project's extensive advocacy and outreach efforts also **reduced socio-political risk**. The fact that the project's support is aimed at stimulating cleantech solutions to important global/regional/national challenges, aligned with the corresponding policy levels, reduced environmental risk (¶132, ¶133). Letters of Support from key partners (¶130) and indications of interest received during the evaluation (¶123), together with the project's recommendations currently being put into an Action Plan to shape ST&I Policy (¶125) provide strong elements for assuring the project's **institutional framework**.

187. The project prioritized **gender mainstreaming**, highlighting this aspect in the CEO endorsement, adequately resourcing activities, competently designing and undertaking measures to mobilize interest and engage women (¶135), and inspiring complementary private sector contribution from the ICCI, which leveraged USAID support to establish a Women Business Growth Centre (¶138). This demonstrates the project's **catalytic potential**. Its achievements exceeded those in other GCIP pilot countries.
188. **UNIDO** adequately carried out its role for the project's implementation, delivery of planned outputs, and monitored expected outcomes in a responsible manner (¶150). The project followed UNIDO's tried and tested **implementation approach**: it was managed by UNIDO headquarters staff, with planning and M&E carried out by the PMU housed within UNIDO's Field Office, with technical backstopping conducted by experts identified by UNIDO. The supervision and support from the headquarters team empowered the PMU team to pilot new approaches, which is credited with yielding valuable models for the overall programme related to gender mainstreaming; Investor Connect and Industry Challenge award (¶152). UNIDO's association with the project provided a valued boost for attracting the involvement of relevant government actors, targeted beneficiaries (startups), and mentors engaged in supporting their development. Technical backstopping arrangements with CTO have led to unintended effects related to intellectual property and governance that need to be addressed by UNIDO and the GEF (¶153).
189. The donor's performance was highly satisfactory. The contribution from the **GEF** and its timely disbursement of funds served to bridge gaps in resources, capabilities and played a catalytic role through the GCIP for further development of the local innovation ecosystem in Pakistan.
190. Relevant **national counterparts** were identified and engaged as in executing and co-financing roles, which contributed to the project's activities and outcomes. While some contributions did not materialise as expected, others strengthened their roles and by the end of the phase, the national host (PCST) working together with NPO, PIM, and ICCI were strongly positioned to assure the sustainability of the project's results and benefits.

4.2 Lessons Learned

191. In the spirit of promoting organisational learning, key lessons have been distilled from the project's experience, which are seen to be relevant for future programme formulation and implementation by UNIDO and other main project partners.

Lesson #1: By adopting a strategic approach to gender mainstreaming, a project can better engage overlooked groups and leverage previously untapped resources and contributions.

192. The mainstreaming of gender was addressed at the level of project design through the deliberate intention to engage women entrepreneurs, associations, and gender focal points in all project activities (¶135). Equipped with high-level endorsement (¶137), relevant training and adequate resourcing, the PMU and its collaborating partners had the tools and strategies to mainstream this aspect into project implementation, which served to enhance the project's impact. The project's focus on social inclusiveness inspired other actors to take action (ICCI's creation of Women Business Growth Centre in its own premises in Islamabad, ¶138). Achievements were tracked and recognized by a third party (¶156). The project's approach is seen as a model to be shared with other GCIP pilot countries. It shows a recognition of the power that this untapped group (in Pakistani society) can play in the cleantech innovation field, and beyond.

Lesson #2: The importance and function of a mid-term review seems to be insufficiently understood. While not obliged for medium-size projects, a mid-term review provides a timely opportunity to reflect

in a structured manner, gain insights on interim progress, and recalibrate direction, where needed.

193. GEF and UNIDO evaluation procedures encourage medium-sized projects to undertake a mid-term review; it was included in the project's design, budgeted, and foreseen as an important M&E device (¶146). The PMU could not provide an explanation for why such a review was not undertaken. Taking opportunities to step back and engaged in structured reflection can help to identify blind spots. For instance, could an early misstep in identifying a civil society organisation as the co-leading executing partner (¶41), which was also expected to host the NCTP, have been identified earlier and could further momentum have been gained in transferring the NCTP to local ownership (¶96) before the end of the current phase?

4.3 Recommendations

194. Based on the TE's conclusions and lessons learned, some recommendations are offered with the aim of sustaining the project's results and reaching impact:

Recommendation #1: Given the growth and evolution of the innovation landscape in Pakistan and the entry of multiple players during the project's implementation, develop an up-to-date mapping of the innovation eco-system (for cleantech, and beyond to other key sectors to identify synergistic effects) that would enable the GCIP, in its next phase, to even more strongly play the envisaged national coordinating role and guide startups on their journey to maturity and commercialisation.

195. The GCIP Competition-Accelerator offers extremely valuable support for startups. All those that participated vouched for its value and could benefit from the process (¶102). Due to its built-in funnelling, however, many startups were filtered out of the process (see Table 7), without having an obvious route to continue their development. With a more comprehensive view of the landscape in place, the GCIP could play a role in sorting applications into different levels and channelling these to different organisations and initiatives that would be able to offer suitable support, with the core group that could benefit most from the GCIP Accelerator (i.e. those with products/services that have reached technical validation) proceeding through this mechanism which focusses primarily on developing the business model and business plan for the startup to establish an accredited business and reach commercialisation.

Recommendation #2: Operationalise the NCTP set-up and launch a next phase, under national ownership, while maintaining service quality, to sustain momentum and effectively leverage the GCIP reputation and achievements thus far.

196. A structure for the National Clean Tech Platform (NCTP) was formalized in September 2017, following a broad and lengthy consultation process, to ensure that a foundation was put in place by project closure to facilitate the continued operation of the Competition-Accelerator (¶96). This structure stemmed from a study mandated by the PSC which resulted in the proposal of a hub and spoke approach (¶114). A governance structure has already been put in place with rotating leadership and several member clusters have been identified and presumably engaged (see Table 7). The Competition-Accelerator had already moved from pilot mode to operational mode under the timespan of the project (¶181). Given the growth and evolution of the innovation landscape in Pakistan, there is no time to lose (¶28).

197. To benefit from the positive association and achievements of the GCIP in Pakistan this far, and to assure continued momentum, it is recommended to get immediately in place:

- partnership agreements with relevant national actors specifying roles and responsibilities
- funding commitments to cover the PMU's core operations and full-time communication resources (¶198)
- agreements for use of the CTO platform (and the storage, use, and access to collected

data, ¶175) as an interim measure until a national platform can be built or a common platform is developed for all GCIP affiliated countries (current pilot countries and future expansion)

Recommendation #3: Budget and allocate a full-time resource for communications, advocacy, and training of partner organisations on these aspects to expand outreach and magnify impact.

198. The approach and activities related to communications, in general, and gender mainstreaming, in particular, are recognized as key drivers of the project's impact (¶182). The project's impressive results in bringing participants to the GCIP framework is linked to the investment in advocacy and outreach (¶182), the networking of the project and its partners (¶100), and the engagement of the PMU team and its supervisory support (¶172). It is understood that the core of activities was delivered using a shared resource and benefitted significantly from UNIDO's expertise in this domain. To build understanding of the value of such an approach amongst collaborating partners, to whom various roles and activities would be delegated in the proposed hub and spoke system, and to assist them in reaching the quality now associated with the GCIP, as the premier cleantech innovation support, it will be important to assure the needed resourcing and competency.

Annex 1. Evaluation Terms of Reference



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE

Independent Terminal Evaluation

[Title]

UNIDO SAP ID: 130063

GEF Project ID: 5553

March 2018

Contents

- I. Project Background and Context
 - 1. Project factsheet
 - 2. Project context
 - 3. Project objective
 - 4. Project implementation arrangements
 - 5. Main findings of the Mid-term review (MTR)
 - 6. Budget information
- II. Scope and purpose of the evaluation
- III. Evaluation approach and methodology
 - 1. Data collection methods
 - 2. Evaluation key questions and criteria
 - 3. Rating system
- IV. Evaluation process
- V. Time schedule and deliverables
- VI. Evaluation team composition
- VII. Reporting
- VIII. Quality assurance

Annex 1: Project Results Framework

Annex 2: Detailed questions to assess evaluation criteria

Annex 3: Job descriptions

Annex 4- Outline of an in-depth project evaluation report

Annex 5: Checklist on evaluation report quality

Annex 6: Guidance on integrating gender in evaluations of UNIDO projects and Projects

Table 1. Financing plan summary

Table 2. Financing plan summary - Outcome breakdown

Table 3. Co-Financing source breakdown

Table 4. UNIDO budget execution

Table 5. Project evaluation criteria

Table 6. Project rating criteria

I. Project Background and Context

1. Project factsheet³⁸

Project title	[Title]
SAP ID	[Status]
GEF Project ID	5553
Region	Asia and the Pacific
Country	[Keywords]
Project donor(s)	GEF
Project implementation start date	[Publish Date]
Expected duration	36 months
Expected implementation end date	30 June 2018
GEF Focal Areas and Operational Project	Climate Change
Other executing Partners	Pakistan Council for Science and Technology (PCST), in cooperation with National Productivity Organization (NPO), Centre for Climate Change and Development (CCCD), Pakistan Council of Renewable Energy Technologies (PCRET), Pakistan Institute of Management (PIM) and Punjab Power Development Board (PPDB)
Executing partners	UNIDO
UNIDO RBM code	GC32 (Clean energy access)
Donor funding	1,369,863
Project GEF CEO endorsement / approval date	9/9/2013
UNIDO input (in kind, USD)	In kind 50,000; Cash 50,000
Co-financing at CEO Endorsement, as applicable	PCST: 900,000 (Grant); 300,000 (in-kind) NPO: 1,150,000 (Grant); 350,000 (in-Kind) PIM: 750,000 (Grant); 250,000 (in-kind) CCCD: 200,000 (in-kind)
Total project cost (USD)	3,000,000
Mid-term review date	None
Planned terminal evaluation date	March-April 2018

(Source: Project document)

2. Project context

In 2011, the Government of South Africa, with the support of the Global Environmental Facility (GEF) and the United Nations Industrial Development Organization (UNIDO), successfully implemented the 'Greening the COP17' project. One of the four components of the project focused on the design and implementation of the first South Africa Clean Technology Competition (2011 SA Cleantech) for green entrepreneurs and small and medium-size enterprises (SMEs) with innovative ideas and concepts in the areas of energy efficiency, renewable energy and green building practices. This competition was a great success and it uniquely drew the interest of policy makers, private sector etc. on the interlinked issues of employment, green growth, and the role of science and innovations.

For 2013, around 10 countries, including Malaysia, India, Armenia, South Africa, Turkey, Pakistan, Brazil, Thailand and the Russian Federation were identified to work together with UNIDO in developing this type of project to seek GEF funding. The flagship programme has the potential to create an

³⁸ Data to be validated by the Consultant

extensive network of clean energy entrepreneurs originating from countries participating in this global programme. In March 2013, the GEF Operational Focal Point of Pakistan endorsed the GEF UNIDO Cleantech Programme for SMEs in Pakistan.

Pakistan's contribution to total global greenhouse gas emissions is 0.8%. However, Pakistan is among the countries most vulnerable to climate change and has a very low technical and financial capacity to adapt to the adverse impacts of climate change (CC). Pakistan has a population of over 180 million and has exhibited a continuously high rate of population growth. When measured by population size it has moved from the thirteenth largest country in 1950 to the sixth largest country in 2011. According to World Bank projections it will become the fifth largest country by 2050.

According to the New Growth Framework, Pakistan's economic strategy document adopted by the Planning Commission of Pakistan, the small and medium-sized enterprise (SME) sector plays a vital role in Pakistan's economy. SMEs contribute to about 30% of GDP, Rs.400 billion to exports, and generate 25% of exported manufactured goods. Pakistan's SME sector recorded an impressive growth of 14.7% during 1987/88 - 1996/97 when the estimated value of its output increased from Rs. 19,683 million to Rs. 67,541 million. Meanwhile, the number of Small and Household Manufacturing Industries recorded growth of 5.8% in the same period. Therefore, the use of natural resources, water, and energy are bound to increase with the growth of the SME sector.

There is a general concern about the inefficiency of energy usage and environment degradation in industry. At the ground level SMEs and the large firms need to be made aware of their role in environmental degradation in Pakistan. There is a strong case for putting in place policy-guided mechanisms for raising awareness of entrepreneurs and effective management of the environmental consequences of the operations of SMEs. Moreover, the barriers to the national innovation and acceleration programmes for clean energy technologies in SMEs in Pakistan include the following:

- The institutions promoting clean energy in the country require institutional capacity enhancement and policy guidance initiatives to accelerate their efforts;
- There is a lack of an enabling policy and regulatory environment to support innovations in SMEs;
- There is a lack of trained experts for mentoring start-ups and entrepreneurs involved in Cleantech innovations;
- There is a lack of information about technology options, best practices, and benchmarks within SMEs, and linkages between research institutes and industry remain weak;
- There is limited awareness of financial schemes, requirements and procedures to access financing for clean energy investment projects and limited government financial incentives to support industrial enterprises on the uptake of innovation in clean energy technology;
- The lack of adequate institutional capacity and awareness leads to less participation and support by key stakeholders and the public.

3. Project objective

The project aimed at promoting clean energy technology innovations and entrepreneurship in selected SMEs in Pakistan through cleantech innovation platform and entrepreneurship acceleration programme.

The Promotion of clean energy technology innovations and entrepreneurship in Pakistan through Clean Energy Innovation and Entrepreneurship Acceleration Programme was envisaged through the following four components and related expected outcomes:

Component 1 – National Platform to promote clean technology innovations and competitiveness of SMEs and business models that can deliver global environmental benefits.

Expected Outcomes:

1.1. A coordination mechanism/platform established at the national level to promote clean technology innovations and entrepreneurship; clean energy technology innovators identified,

coached and supported during and beyond the Cleantech competition.

Component 2 – Capacity enhancement initiative for clean technology innovations.

Expected Outcomes:

2.1. National institutional capacity built for mentoring and training programmes as part of the competition and accelerator programme.

Component 3 – Policy and regulatory framework strengthened for scaling up of Cleantech competition, innovations and acceleration activities across Pakistan.

Expected Outcomes:

3.1. Policies and institutional framework strengthened to promote Cleantech innovations in SMEs and support the local innovation ecosystems in the country.

Component 4 - Monitoring and Evaluation Management.

Expected Outcomes:

4.1. Adequate monitoring of all project indicators together with regular evaluations to ensure successful project implementation

The Project is further structured into a total of 9 outputs. The full logical framework is included as annex 1.

4. Project implementation arrangements

The project has a Project Steering Committee (PSC), which is chaired by the PCST and co- chaired by NPO. Their role is to provide strategic guidance on project implementation.

A Project Management Unit (PMU) under NPO will be established at UNIDO Field Office and will be responsible for the daily management of the project.

NCTP/CCCD is supported by the PMU in executing the co-lead role in implementation of the project. Moreover, NCTP is supported by the Government of Pakistan and project stakeholders.

The key stakeholders involved in the project include PCST, NPO, SMEDA, CCCD, PIM, and PPDB. The project is being implemented in close cooperation with CCCD and private sector through chambers of commerce and industry (CCIs). The roles of the key executing partners are as follows:

Stakeholder and mandate	Envisaged role in the project
PCST	Pakistan Council for Science and Technology (PCST) is lead national executing agency to provide technical inputs for the project activities.
CCCD	Center on Climate Change and Development (CCCD) is the CSO member of the PSC and co-lead implementation counterpart of the project. The NCTP was to be established at CCCD premises as agreed by the government and private partners. CCCD would support the efforts to involve women entrepreneurs and investors in the programme.
NPO	Inscribed in the Ministry of Industries, the NPO is meant to be a member of the PSC. As such it is meant to participate in the policy component and assist industries in becoming energy efficient.
SMEDA	Small and Medium Enterprise Development Authority is meant to be a member of the PSC and participate in the policy component and promotion of Cleantech completion, mentor programme, and capacity building activities.

Stakeholder and mandate	Envisaged role in the project
PCRET	Pakistan Council of Renewable Energy Technologies (PCRET) is meant to be a member of the PSC and participate in the policy component. PCRET would promote the clean and renewable energy technologies identified under the project.
PIM	Pakistan Institute of Management (PIM), under the Ministry of Industries, is meant to be an executing partner and member of the PSC. PIM will participate in the policy and capacity building component of the project.
FCCI	A representative of the chamber of commerce and industry (to be selected during the implementation phase) is meant to be a member of the PSC.

5. Budget information

Table 15. Financing plan summary

USD	Project Preparation	Project ³⁹	Total (USD)
Financing (GEF / others)	0	1,369,893	1,369,893.00
Co-financing (Cash and In-kind)	0	4,000,000	4,000,000
Total (USD)	0.00	5,369,893.00	5,369,893.00

Source: Project document / progress report

Table 16. Financing plan summary - Outcome breakdown⁴⁰

Project outcomes	Donor (GEF/ other) (USD)	Co-Financing (USD)	Total (USD)
1. A coordination mechanism/platform established at the national level to promote clean technology innovations and entrepreneurship; clean energy technology innovators identified, coached and supported during and beyond the Cleantech. competition	557,467	1,500,000	2,057,467.00
2. National institutional capacity build for mentoring and training programmes as part of the competition and accelerator programme	393,000	1,600,000	1,993,000.00
3. Policies and institutional framework strengthened to promote Cleantech innovations in SMEs and support the local innovation ecosystems in the country	244,863	550,000	794,863.00

³⁹ Includes project management cost

⁴⁰ Source: Project document.

Project outcomes	Donor (GEF/other) (USD)	Co-Financing (USD)	Total (USD)
4. Adequate monitoring of all project indicators together with regular evaluations to ensure successful project implementation	50,000	50,000	100,000.00
Total (USD)	1,245,330.00	3,700,000.00	4,945,330.00

Source: Project document

Table 17. Co-Financing source breakdown

Name of Co-financier (source)	Classification	Type	Total Amount (USD)
UNIDO	Implementing Agency	In kind	50,000
		Grant	50,000
PCS	National Government	Grant	900,000
PCST	National Government	In-kind	300,000
NPO	National Government	Grant	1,150,000
NPO	National Government	In kind	350,000
PIM	National Government	Grant	750,000
PIM	National Government	In-kind	250,000
CCCD	CSO	In kind	200,000
Total Co-financing (USD)			4,000,000.00

Source : Project document

Table 18. UNIDO budget execution (Grants 2000002470 and 2000003449)

Item of Expenditure	2014	2015	2016	2017	2018	Total Expenditure (USD)
Contractual Services	83,840	182,519	104,360	109,974	1,771	482,463
Equipment	5,553					5,553
International Meetings		18,466	148	33,205	20,908	72,727
Local travel	33,659	44,573	25,924	56,662	1,348	162,165
Nat. Consult./Staff	54,945	99,090	115,605	83,815	23,798	377,253
Other Direct Costs	3,677	5,779	67,262	32,413		109,131
Premises	12,900	12,464	17,062	22,728		65,154
Staff & Intern Consultants	8,817	13,435	46,310	10,781		79,342
Train/Fellowship/Study				1,297		1,297
Grand Total	203,392	376,325	376,670	350,874	47,825	1,355,086*

Source: SAP database as of 22 January 2018

* The amount is higher than the GEF grant because of extra funds from UNDP Pakistan.

II. Scope and purpose of the evaluation

The purpose of the evaluation is to independently assess the project to help UNIDO improve performance and results of ongoing and future programmes and projects. The terminal evaluation (TE) will cover the whole duration of the project from its starting date in to the estimated completion date in 6/30/2018 **Error! Reference source not found.**

The evaluation has two specific objectives:

- (i) Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability and progress to impact;
- (ii) Develop a series of findings, lessons and recommendations to feed into the development of the next phase of the Global CleanTech Innovation Programme which will expand its geographical and thematic coverage as well as the services provided.
- (ii) Develop general series of findings, lessons and recommendations for enhancing design of new and implementation of ongoing and future projects by UNIDO.

III. Evaluation approach and methodology

The TE will be conducted in accordance with the UNIDO Evaluation Policy⁴¹ and the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle⁴². In addition, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies will be applied.

The evaluation will be carried out as an independent in-depth evaluation using a participatory approach whereby all key parties associated with the project will be informed and consulted throughout the evaluation. The evaluation team leader will liaise with the UNIDO Independent Evaluation Division on the conduct of the evaluation and methodological issues.

The evaluation will use a theory of change approach and mixed methods to collect data and information from a range of sources and informants. It will pay attention to triangulating the data and information collected before forming its assessment. This is essential to ensure an evidence-based and credible evaluation, with robust analytical underpinning.

The theory of change will identify causal and transformational pathways from the project outputs to outcomes and longer-term impacts, and drivers as well as barriers to achieve them. The learning from this analysis will be useful to feed into the design of the future projects so that the management team can effectively manage them based on results.

1. Data collection methods

Following are the main instruments for data collection:

- (a) **Desk and literature review** of documents related to the project, including but not limited to:
 - The original project document, monitoring reports (such as progress and financial reports, mid-term review report, output reports, back-to-office mission report(s), end-of-contract report(s) and relevant correspondence.
 - Notes from the meetings of committees involved in the project.
- (b) **Stakeholder consultations** will be conducted through structured and semi-structured interviews and focus group discussion. Key stakeholders to be interviewed include:
 - UNIDO Management and staff involved in the project; and
 - Representatives of donors and counterparts.

⁴¹ UNIDO. (2015). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1)

⁴² UNIDO. (2006). Director-General's Administrative Instruction No. 17/Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle (DGAI.17/Rev.1, 24 August 2006)

- (c) **Field visit** to project sites in Pakistan.

2. Evaluation key questions and criteria

The key evaluation questions are the following:

- (a) What are the key drivers and barriers to achieve the long term objectives? To what extent has the project helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long term objectives?
- (b) How well has the project performed? Has the project done the right things? Has the project done things right, with good value for money?
- (c) What have been the project's key results (outputs, outcome and impact)? To what extent have the expected results been achieved or are likely to be achieved? To what extent the achieved results will sustain after the completion of the project?
- (d) What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?

The evaluation will assess the likelihood of sustainability of the project results after the project completion. The assessment will identify key risks (e.g. in terms of financial, socio-political, institutional and environmental risks) and explain how these risks may affect the continuation of results after the project ends. **Error! Reference source not found.** below provides the key evaluation criteria to be assessed by the evaluation. The details questions to assess each evaluation criterion are in annex 2.

Table 19. Project evaluation criteria

#	Evaluation criteria	Mandatory rating
A	Impact	Yes
B	Project design	Yes
• 1	• Overall design	Yes
• 2	• Logframe	Yes
C	Project performance	Yes
1	• Relevance	Yes
2	• Effectiveness	Yes
3	• Efficiency	Yes
4	• Sustainability of benefits	Yes
D	Cross-cutting performance criteria	
1	• Gender mainstreaming	Yes
2	• M&E: ✓ M&E design ✓ M&E implementation	Yes
3	• Results-based Management (RBM)	Yes
E	Performance of partners	
1	• UNIDO	Yes
2	• National counterparts	Yes
3	• Donor	Yes
F	Overall assessment	Yes

3. Rating system

In line with the practice adopted by many development agencies, the UNIDO Independent Evaluation Division uses a six-point rating system, where 6 is the highest score (highly satisfactory) and 1 is the lowest (highly unsatisfactory) as per **Error! Reference source not found.**

Table 20. Project rating criteria

Score		Definition	Category
6	Highly satisfactory	Level of achievement clearly exceeds expectations and there is no shortcoming.	SATISFACTORY
5	Satisfactory	Level of achievement meets expectations (indicatively, over 80-95 per cent) and there is no or minor shortcoming.	
4	Moderately satisfactory	Level of achievement more or less meets expectations (indicatively, 60 to 80 per cent) and there are some shortcomings.	
3	Moderately unsatisfactory	Level of achievement is somewhat lower than expected (indicatively, less than 60 per cent) and there are significant shortcomings.	UNSATISFACTORY
2	Unsatisfactory	Level of achievement is substantially lower than expected and there are major shortcomings.	
1	Highly unsatisfactory	Level of achievement is negligible and there are severe shortcomings.	

IV. Evaluation process

The evaluation will be implemented in five phases which are not strictly sequential, but in many cases iterative, conducted in parallel and partly overlapping:

- i. Inception phase: The evaluation team will prepare the inception report providing details on the methodology for the evaluation and include an evaluation matrix with specific issues for the evaluation; the specific site visits will be determined during the inception phase, taking into consideration the findings and recommendations of the mid-term review, if there is any.
- ii. Desk review and data analysis;
- iii. Interviews, survey and literature review;
- iv. Country visits;
- v. Data analysis and report writing.

V. Time schedule and deliverables

The evaluation will be conducted from March to June 2018. The evaluation field mission is tentatively planned 2nd-6th April, 2018. At the end of the field mission, there will be a presentation of the preliminary findings for all stakeholders involved in this project in . Main timelines are provided in **Error! Reference source not found.**

After the evaluation field mission, the evaluation team leader will visit UNIDO HQ for debriefing and presentation of the preliminary findings of the terminal evaluation. The draft TE report will be submitted 4 to 6 weeks after the end of the mission. The draft TE report is to be shared with the UNIDO PM, UNIDO Independent Evaluation Division, the UNIDO GEF Coordinator and GEF OFP and other stakeholders for receipt of comments. The ET leader is expected to revise the draft TE report based on the comments received, edit the language and form and submit the final version of the TE report in accordance with UNIDO Independent Evaluation Division standards.

Table 21. Tentative timelines

Timelines	Tasks
20 March – 14 April 2018	Desk review and writing of inception report
Before 13 April 2018	Skype interview with the project manager and team at UNIDO HQ
16-20 April 2018	Field visit in Pakistan

Timelines	Tasks
20 April – 20 May 2018 Week 28 May 2018	Preparation of first draft evaluation report Debriefing in Vienna (tentative to be agreed with the project manager and team leader)
20 May – 11 June 2018	Internal peer review of the report by the UNIDO Independent Evaluation Division and other stakeholder comments to draft evaluation report
30 June 2018	Final evaluation report

VI. Evaluation team composition

The evaluation team will be composed of one international evaluation consultant acting as the team leader and one national evaluation consultant. The evaluation team members will possess relevant strong experience and skills on evaluation management and conduct together with expertise and experience in innovative clean energy technologies. Both consultants will be contracted by UNIDO.

The tasks of each team member are specified in the job descriptions annexed to these terms of reference. The ET is required to provide information relevant for follow-up studies, including terminal evaluation verification on request to the GEF partnership up to three years after completion of the terminal evaluation.

According to UNIDO Evaluation Policy, members of the evaluation team must not have been directly involved in the design and/or implementation of the project under evaluation.

The UNIDO Project Manager and the project team in Pakistan will support the evaluation team. The UNIDO GEF Coordinator and GEF OFP(s) will be briefed on the evaluation and provide support to its conduct. GEF OFP(s) will, where applicable and feasible, also be briefed and debriefed at the start and end of the evaluation mission.

An evaluation manager from UNIDO Independent Evaluation Division will provide technical backstopping to the evaluation team and ensure the quality of the evaluation. The UNIDO Project Manager and national project teams will act as resourced persons and provide support to the evaluation team and the evaluation manager.

VII. Reporting

Inception report

This Terms of Reference (ToR) provides some information on the evaluation methodology, but this should not be regarded as exhaustive. After reviewing the project documentation and initial interviews with the project manager, the International Evaluation Consultant will prepare, in collaboration with the national consultant, a short inception report that will operationalize the ToR relating to the evaluation questions and provide information on what type of and how the evidence will be collected (methodology). It will be discussed with and approved by the responsible UNIDO Independent Evaluation Division Evaluation Manager.

The Inception Report will focus on the following elements: preliminary project theory of change; elaboration of evaluation methodology including quantitative and qualitative approaches through an evaluation framework (“evaluation matrix”); division of work between the International Evaluation Consultant and national consultant; mission plan, including places to be visited, people to be interviewed and possible surveys to be conducted and a debriefing and reporting timetable⁴³.

Evaluation report format and review procedures

⁴³ The evaluator will be provided with a Guide on how to prepare an evaluation inception report prepared by the UNIDO Independent Evaluation Division.

The draft report will be delivered to the Independent Evaluation Division (the suggested report outline is in Annex 4) and circulated to UNIDO staff and national stakeholders associated with the project for factual validation and comments. Any comments or responses, or feedback on any errors of fact to the draft report provided by the stakeholders will be sent to the Independent Evaluation Division for collation and onward transmission to the project evaluation team who will be advised of any necessary revisions. On the basis of this feedback, and taking into consideration the comments received, the evaluation team will prepare the final version of the terminal evaluation report.

The ET will present its preliminary findings to the local stakeholders at the end of the field visit and take into account their feed-back in preparing the evaluation report. A presentation of preliminary findings will take place at UNIDO HQ after the field mission.

The TE report should be brief, to the point and easy to understand. It must explain the purpose of the evaluation, exactly what was evaluated, and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should provide information on when the evaluation took place, the places visited, who was involved and be presented in a way that makes the information accessible and comprehensible. The report should include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

Findings, conclusions and recommendations should be presented in a complete, logical and balanced manner. The evaluation report shall be written in English and follow the outline given in Annex 1.

VIII. Quality assurance

All UNIDO evaluations are subject to quality assessments by UNIDO Independent Evaluation Division. Quality assurance and control is exercised in different ways throughout the evaluation process (briefing of consultants on methodology and process of UNIDO Independent Evaluation Division, providing inputs regarding findings, lessons learned and recommendations from other UNIDO evaluations, review of inception report and evaluation report).

The quality of the evaluation report will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality, attached as Annex 4. The applied evaluation quality assessment criteria are used as a tool to provide structured feedback. UNIDO Independent Evaluation Division should ensure that the evaluation report is useful for UNIDO in terms of organizational learning (recommendations and lessons learned) and is compliant with UNIDO's evaluation policy and these terms of reference. The draft and final evaluation report are reviewed by UNIDO Independent Evaluation Division, which will submit the final report to the GEF Evaluation Office and circulate it within UNIDO together with a management response sheet

Annex 1: Project Results Framework

Result	Indicators	Baseline	Target	Means of Verification	Assumption and Risks
Objective					
Promotion of clean technology innovations and clean technology entrepreneurship for SMEs in Pakistan	<p>Number of SMEs to pursue innovations in clean technologies; Successful Cleantech (CT) programmes organized after project completion;</p> <p>Additional investment into clean technology innovations due to increased interest in the CT programme;</p> <p>Number of SMEs as members of the national platform (sex-disaggregated data will be collected);</p>	<p>No clean technology innovations support system;</p> <p>Minimal investment in clean technology innovations;</p> <p>Negative attendance from the SME sector;</p> <p>No indirect CO₂eq emission reductions related to clean</p>	<p>NCTP established to support SMEs, thus identifying promising clean technologies start-ups in the country;</p> <p>An investment strategy prepared; SMEs are trained and connected with funding partners and investors;</p> <p>US\$5 million invested in clean technology innovations;</p> <p>At least 300 SMEs as members of the national platform;</p> <p>Indirect emission reductions in the range of 452,000t</p>	<p>Project progress reports; mid-term review and final project evaluation report; the GEF Tracking Tools.</p> <p>Database and records maintained during and after project completion.</p>	<p>SMEs remain important in Pakistan's economy;</p> <p>SMEs are committed to the Cleantech approach;</p> <p>Government of Pakistan takes interest in Cleantech approach.</p>

Result	Indicators	Baseline	Target	Means of Verification	Assumption and Risks
	Tons of GHG emissions directly and indirectly avoided.	technology innovations.	CO2 eq to approximately 904,000 t CO2 eq over the period 2013-2023.		
Outcome 1					
A coordination mechanism/platform established at the national level to promote clean technology innovations and entrepreneurship; clean energy technology innovators identified, coached and supported during and beyond the Cleantech competition	Number of innovative businesses created/accredited; Number of prizes for innovators with great impact on women entrepreneurial development and job creation.	No record of experience in innovative CT in Pakistan; As of yet, no Cleantech projects have taken place in Pakistan, and thus no prizes have been issued.	Establishment of the platform to coordinate at least 10 newly accredited innovative businesses per year; 4 prizes per competition (headed by female and male) with the option to increase based on individual circumstances.	Project progress reports; mid-term review and final project evaluation report; Feedback from participating and non-participating enterprises and other stakeholders through survey and interview.	Continuous support and participation by government, R&D institutions and SMEs; Sufficient commitment and participation by the experts, mentors.
Outputs					
1.1 SMEs associations and national agencies involved in promoting clean technology innovations mobilized and a coordinating	Number of National Cleantech Platform (NCTP) established; Number of entries, number of semi-finalists and finalists etc.	No NCTP in place; As the CT competitions are yet to be established, the baseline of entrants	1 NCTP established; Approximately 100 entrants per competition (target of 10% women	Monitoring and Project progress report; mid-term review and final project evaluation report.	Continuous support from government and national agencies; Commitment from project partners and committed

Result	Indicators	Baseline	Target	Means of Verification	Assumption and Risks
platform at the national level established 1.2 Annual Cleantech business competitions held across selected SME clusters covering four clean energy sectors		and finalists is zero.	participants).		participation of entrepreneurs.
Outcome 2					
National institutional capacity build for mentoring and training programmes as part of the competition and accelerator programme	Number of human and financial resources of PCST, NPO and other counterparts with built capacity; Wide platform of all stakeholders operationalized.	No institutional capacity to conduct training and competitions on CT.	The conducted trainings and competitions show positive result; Trained PCST and NPO staff are able to assist in the CT mentoring and training programmes.	Project progress reports; mid-term review and final project evaluation report; Feedback from entrepreneurs being mentored.	Continuous support and participation by industry and other partners; Sufficient commitment and participation by the experts, mentors.
Outputs					
2.1 Capacity building of national industrial association to host the Cleantech	Number of PCST and NPO staff trained to be able to organize the competition and the accelerator programme;	PCST and NPO staff have not received any training on the organization of the CT programme;	10 PCST and NPO staff received training on competition organization (with at least 10% being	Project progress reports; mid-term review and final project evaluation report.	Continuous support from government; Continuous support and participation by relevant

Result	Indicators	Baseline	Target	Means of Verification	Assumption and Risks
programme			women);		stakeholders.
2.2 Mentor Program launched and 100+ mentors identified and trained regionally and online	Training workshops and mentoring sessions organized;	As the CT accelerator programme is yet to be established, the baseline of accompany workshop is zero;	At least 10 training workshops and mentoring sessions organized over 3 years (target of 10% women participants);		
2.3 Extensive advocacy and outreach activities including training programme, seminars, corporate and PPP Forums held regionally and online	Number of regional workshops or training courses organized; Number of shortlisted SMEs connected with funding and partnership opportunities.	There are currently no CT regional workshops present in Pakistan; Presently, there is lack of awareness on such initiatives present.	2 regional workshops or training courses organized (target of 10% women participants); At least 20 of shortlisted SMEs connected with funding and partnership opportunities.		
Outcome 3					
Policy and institutional framework strengthened to promote cleantech innovations in SMEs and support the local innovation	Extent to which these policies and regulations are amended or implemented.	A score between 0 and 4 will be given to assess these policies; baseline is currently zero.	A score between 0 and 4 will be given to assess these policies; target is 4.	Project progress reports; mid-term review and final project evaluation report.	Continuous support and participation by industry and other partners.

Annex 2: Detailed questions to assess evaluation criteria

The evaluation team will assess the project performance guided by the questions below.

#	Evaluation criteria
A	<p>Progress to impact</p> <ul style="list-style-type: none"> ✓ <u>Mainstreaming</u>: To what extent information, lessons or specific results of the project are incorporated into broader stakeholder mandates and initiatives such as laws, policies, regulations and project? ✓ <u>Replication</u>: To what extent the project's specific results (e.g. methodology, technology, lessons, etc.) are reproduced or adopted ✓ <u>Scaling-up</u>: To what extent the project's initiatives and results are implemented at larger geographical scale? ✓ What difference has the project made to the beneficiaries? ✓ What is the change attributable to the project? To what extent? ✓ What are the social, economic, environmental and other effects, either short-, medium- or long-term, on a micro- or macro-level? ✓ What effects are intended or unintended, positive or negative? <p>The three UNIDO impact dimensions are:</p> <ul style="list-style-type: none"> ✓ <u>Safeguarding environment</u>: To what extent the project contributes to changes in the status of environment. ✓ <u>Economic performance</u>: To what extent the project contributes to changes in the economic performance (e.g. finances, income, costs saving, expenditure) of individuals, groups and entities? ✓ <u>Social inclusiveness</u>: To what extent the project contributes to changes in capacity and capability of individuals, groups and entities in society, such as employment, education, and training?
B	<p>Project design</p>
1	<ul style="list-style-type: none"> • <u>Overall design</u> ✓ The project design was adequate to address the problems at hand? ✓ Is the project consistent with the Country's priorities, in the work plan of the lead national counterpart? Does it meet the needs of the target group? Is it consistent with UNIDO's Inclusive and Sustainable Industrial Development? Does it adequately reflect lessons learnt from past projects? Is it in line with the donor's priorities and policies? ✓ Is the applied project approach sound and appropriate? Is the design technically feasible and based on best practices? Does UNIDO have in-house technical expertise and experience for this type of intervention? ✓ To what extent the project design (in terms of funding, institutional arrangement, implementation arrangements...) as foreseen in the project document still valid and relevant? ✓ Does the project document include a M&E plan? Does the M&E plan specify what, who and how frequent monitoring, review, evaluations and data collection will take place? Does it allocate budget for each exercise? Is the M&E budget adequately allocated and consistent with the logframe (especially indicators and sources of verification)? ✓ Were there any changes in project design and/or expected results after start of implementation. ✓ Did the project establish a baseline (initial conditions)? Was the evaluation able to estimate the baseline conditions so that results can be determined? ✓ Risk management: Are critical risks related to financial, social-political, institutional, environmental and implementation aspects identified with specific risk ratings? Are their mitigation measures identified? Where possible, are the mitigation measures included in project activities/outputs and monitored under the M&E plan?
2	<ul style="list-style-type: none"> • <u>Logframe</u> ✓ Expected results: Is the expected result-chain (impact, outcomes and outputs) clear and logical? Does impact describe a desired long-term benefit to a society or community (not as a mean or process), do outcomes describe change in target group's behaviour/performance or system/institutional performance, do outputs describe deliverables that project will produce to

#	<u>Evaluation criteria</u>
	<p>achieve outcomes? Are the expected results realistic, measurable and not a reformulation or summary of lower level results? Do outputs plus assumptions lead to outcomes, do outcomes plus assumptions lead to impact? Can all outputs be delivered by the project, are outcomes outside UNIDO's control but within its influence?</p> <ul style="list-style-type: none"> ✓ Indicators: Do indicators describe and specify expected results (impact, outcomes and outputs) in terms of quantity, quality and time? Do indicators change at each level of results and independent from indicators at higher and lower levels? Do indicators not restate expected results and not cause them? Are indicators necessary and sufficient and do they provide enough triangulation (cross-checking)? Are they indicators sex-disaggregated, if applicable? ✓ Sources of verification: Are the sources of verification/data able to verify status of indicators, are they cost-effective and reliable? Are the sources of verification/data able to verify status of output and outcome indicators before project completion?
C	Project performance
1	<ul style="list-style-type: none"> • <u>Relevance</u> ✓ How does the project fulfil the urgent target group needs? ✓ To what extent is the project aligned with the development priorities of the country (national poverty reduction strategy, sector development strategy)? ✓ How does project reflect donor policies and priorities? ✓ Is the project a technically adequate solution to the development problem? Does it eliminate the cause of the problem? ✓ To what extent does the project correspond to UNIDO's comparative advantages? ✓ Are the original project objectives (expected results) still valid and pertinent to the target groups? If not, have they been revised? Are the revised objectives still valid in today's context?
2	<ul style="list-style-type: none"> • <u>Effectiveness</u> ✓ What are the main results (mainly outputs and outcomes) of the project? What have been the quantifiable results of the project? ✓ To what extent did the project achieve their objectives (outputs and outcomes), against the original/revised target(s)? ✓ What are the reasons for the achievement/non-achievement of the project objectives? ✓ What is the quality of the results? How do the stakeholders perceive them? What is the feedback of the beneficiaries and the stakeholders on the project effectiveness? ✓ To what extent is the identified progress result of the project rather than external factors? ✓ What can be done to make the project more effective? ✓ Were the right target groups reached?
3	<ul style="list-style-type: none"> • <u>Efficiency</u> ✓ How economically are the project resources/inputs (concerning funding, expertise, time...) being used to produce results? ✓ To what extent were expected results achieved within the original budget? If no, please explain why. ✓ Are the results being achieved at an acceptable cost? Would alternative approaches accomplish the same results at less cost? ✓ What measures have been taken during planning and implementation to ensure that resources are efficiently used? Were the project expenditures in line with budgets? ✓ To what extent did the expected co-financing materialize, in cash or in-kind, grants or loan? Was co-financing administered by the project management or by some other organization? Did short fall in co-financing or materialization of greater than expected co-financing affected project results? ✓ Could more have been achieved with the same input? ✓ Could the same have been achieved with less input? ✓ How timely was the project in producing outputs and outcomes? Comment on the delay or acceleration of the project's implementation period. ✓ To what extent were the project's activities in line with the schedule of activities as defined by the Project Team and annual Work Plans? ✓ Have the inputs from the donor, UNIDO and Government/counterpart been provided as planned, and were they adequate to meet the requirements?

#	<u>Evaluation criteria</u>
4	<ul style="list-style-type: none"> • <u>Sustainability of benefits</u> ✓ Will the project results and benefits be sustained after the end of donor funding? ✓ Does the project have an exit strategy? <i>Financial risks:</i> ✓ What is the likelihood of financial and economic resources not being available once the project ends? <i>Socio-political risks:</i> ✓ Are there any social or political risks that may jeopardize the sustainability of project outcomes? ✓ What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? ✓ Do the various key stakeholders see that it is in their interest that project benefits continue to flow? ✓ Is there sufficient public/stakeholder awareness in support of the project's long-term objectives? <i>Institutional framework and governance risks:</i> ✓ Do the legal frameworks, policies, and governance structures and processes within which the project operates pose risks that may jeopardize the sustainability of project benefits? ✓ Are requisite systems for accountability and transparency and required technical know-how in place? <i>Environmental risks:</i> ✓ Are there any environmental risks that may jeopardize the sustainability of project outcomes? ✓ Are there any project outputs or higher-level results that are likely to have adverse environmental impacts, which, in turn, might affect the sustainability of project benefits?
D	Cross-cutting performance criteria
1	<ul style="list-style-type: none"> • <u>Gender mainstreaming</u> ✓ Did the project design adequately consider the gender dimensions in its interventions? Was the gender marker assigned correctly at entry? ✓ Was a gender analysis included in a baseline study or needs assessment (if any)? Were there gender-related project indicators? ✓ Are women/gender-focused groups, associations or gender units in partner organizations consulted/ included in the project? ✓ How gender-balanced was the composition of the project management team, the Steering Committee, experts and consultants and the beneficiaries? ✓ Do the results affect women and men differently? If so, why and how? How are the results likely to affect gender relations (e.g., division of labour, decision-making authority)? ✓ To what extent were socioeconomic benefits delivered by the project at the national and local levels, including consideration of gender dimensions?
2	<ul style="list-style-type: none"> • <u>M&E:</u> ✓ M&E design <ul style="list-style-type: none"> ○ Was the M&E plan at the point of project approval practical and sufficient? ○ Did it include baseline data and specify clear targets and appropriate indicators to track environmental, gender, and socio-economic results? ○ Did it include a proper M&E methodological approach; specify practical organization and logistics of the M&E activities including schedule and responsibilities for data collection; ○ Did it include budget adequate funds for M&E activities? ✓ M&E implementation <ul style="list-style-type: none"> ○ How was the information from M&E system used during the project implementation? Was an M&E system in place and did it facilitate timely tracking of progress toward project results by collecting information on selected indicators continually throughout the project implementation period? Did project team and manager make decisions and corrective actions based on analysis from M&E system and based on results achieved? ○ Are annual/progress project reports complete and accurate?

#	Evaluation criteria
	<ul style="list-style-type: none"> ○ Was the information provided by the M&E system used to improve performance and adapt to changing needs? Was information on project performance and results achievement being presented to the Project Steering Committee to make decisions and corrective actions? Do the Project team and managers and PSC regularly ask for performance and results information? ○ Are monitoring and self-evaluation carried out effectively, based on indicators for outputs, outcomes and impact in the logframe? Do performance monitoring and reviews take place regularly? ○ Were resources for M&E sufficient? ○ How has the logframe been used for Monitoring and Evaluation purposes (developing M&E plan, setting M&E system, determining baseline and targets, annual implementation review by the Project Steering Committee...) to monitor progress towards expected outputs and outcomes? ○ How well have risks outlined the project document and in the logframe been monitored and managed? How often have risks been reviewed and updated? Has a risk management mechanism been put in place?
3	<ul style="list-style-type: none"> ● <u>Project management</u> ✓ Review overall effectiveness of project management as outlined in the Project Document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement. ✓ Review whether the national management and overall coordination mechanisms have been efficient and effective? Did each partner have assigned roles and responsibilities from the beginning? Did each partner fulfil its role and responsibilities (e.g. providing strategic support, monitoring and reviewing performance, allocating funds, providing technical support, following up agreed/corrective actions)? ✓ The UNIDO HQ-based management, coordination, monitoring, quality control and technical inputs have been efficient, timely and effective (e.g. problems identified timely and accurately; quality support provided timely and effectively; right staffing levels, continuity, skill mix and frequency of field visits)?
E	Performance of partners
1	<ul style="list-style-type: none"> ● <u>UNIDO</u> ✓ Design ○ Mobilization of adequate technical expertise for project design ○ Inclusiveness of project design (with national counterparts) ○ Previous evaluative evidence shaping project design ○ Planning for M&E and ensuring sufficient M&E budget ✓ Implementation ○ Timely recruitment of project staff ○ Appropriate use of funds, procurement and contracting of goods and services ○ Project modifications following changes in context or after the Mid-Term Review ○ Follow-up to address implementation bottlenecks ○ Role of UNIDO country presence (if applicable) supporting the project ○ Engagement in policy dialogue to ensure up-scaling of innovations ○ Coordination function ○ Exit strategy, planned together with the government
2	<ul style="list-style-type: none"> ● <u>National counterparts</u> ✓ Design ○ Responsiveness to UNIDO's invitation for engagement in designing the project ✓ Implementation ○ Ownership of the project ○ Support to the project, based on actions and policies ○ Counterpart funding ○ Internal government coordination

#	<u>Evaluation criteria</u>
	<ul style="list-style-type: none"> ○ Exit strategy, planned together with UNIDO, or arrangements for continued funding of certain activities ○ Facilitation of the participation of Non-Governmental Organizations (NGOs), civil society and the private sector where appropriate ○ Suitable procurement procedures for timely project implementation ○ Engagement with UNIDO in policy dialogue to promote the up-scaling or replication of innovations
3	<ul style="list-style-type: none"> • <u>Donor</u> ✓ Timely disbursement of project funds ✓ Feedback to progress reports, including Mid-Term Evaluation ✓ Support by the donor's country presence (if applicable) supporting the project for example through engagement in policy dialogue
F	<p>Overall project achievement</p> <ul style="list-style-type: none"> ✓ Overarching assessment of the project, drawing upon the analysis made under Project performance and Progress to Impact criteria above but not an average of ratings.

Annex 3: Job descriptions



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	International evaluation consultant, team leader
Main Duty Station and Location:	Home-based
Missions:	Missions to Vienna, Austria and Pakistan
Start of Contract (EOD):	20 March 2018
End of Contract (COB):	30 May 2018
Number of Working Days:	24 working days spread over the above-mentioned period

1. ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division (ODG/EVQ/IEV) is responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides factual information about result and practices that feed into the programmatic and strategic decision-making processes. Independent evaluations provide evidence-based information that is credible, reliable and useful, enabling the timely incorporation of findings, recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. ODG/EVQ/IEV is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

2. PROJECT CONTEXT

Detailed background information of the project can be found the terms of reference (TOR) for the terminal evaluation.

3. DUTIES AND RESPONSIBILITIES

• MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
1. Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data); determine key data to collect in the field and adjust the key data collection instrument if needed	<ul style="list-style-type: none"> Adjust table of evaluation questions, depending on country specific context; Draft list of stakeholders to interview during the field missions 	4 days	Home-based
2. Prepare an inception report which streamlines the specific questions to address the key issues in the TOR, specific methods that will be used and data to collect in the field visits, detailed evaluation methodology confirmed, draft theory of change, and tentative agenda for field work.	<ul style="list-style-type: none"> Draft theory of change and Evaluation framework to submit to the Evaluation Manager for clearance 	2 days	Home based
3. Briefing with the UNIDO Independent Evaluation Division, project managers and other key stakeholders at UNIDO HQ. Conduct skype interviews with key selected stakeholders participating in the project (e.g. participants in the Global Cleantech	<ul style="list-style-type: none"> Detailed evaluation schedule with tentative mission agenda (incl. list of stakeholders to interview and site visits); mission planning; 	1 day	Through skype

• MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
Innovation Programme (GCIP), mentors, judges...) through skype, as necessary	<ul style="list-style-type: none"> • Division of evaluation tasks with the National Consultant. • Key feedback from beneficiaries and stakeholders 	2 days	
3. Conduct field mission to Pakistan in 2018 ⁴⁴ .	<ul style="list-style-type: none"> • Conduct meetings with relevant project stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and clarifications; • Agreement with the National Consultant on the structure and content of the evaluation report and the distribution of writing tasks; • Evaluation presentation of the evaluation's preliminary findings, conclusions and recommendations to stakeholders in the country, including the GEF OFP, at the end of the mission. 	7 days	Pakistan (specific project site to be identified later)
4. Present overall findings and recommendations to the stakeholders at UNIDO HQ	<ul style="list-style-type: none"> • After field mission(s): Presentation slides, feedback from stakeholders obtained and discussed 	1 day	Vienna, Austria
5. Prepare the evaluation report, with inputs from the National Consultant, according to the TOR; Coordinate the inputs from the National Consultant and combine with her/his own inputs into the draft evaluation report. Share the evaluation report with UNIDO HQ and national stakeholders for feedback and comments.	<ul style="list-style-type: none"> • Draft evaluation report. 	6 days	Home-based
6. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and edit the language and form of the final version according to UNIDO standards.	<ul style="list-style-type: none"> • Final evaluation report. 	1 days	Home-based
	TOTAL	24 days	

REQUIRED COMPETENCIES

Core values:

1. Integrity

Managerial competencies (as applicable):

1. Strategy and direction

⁴⁴ The exact mission dates will be decided in agreement with the Consultant, UNIDO HQ, and the country counterparts.

2. Professionalism
3. Respect for diversity

2. Managing people and performance
3. Judgement and decision making
4. Conflict resolution

Core competencies:

1. Results orientation and accountability
2. Planning and organizing
3. Communication and trust
4. Team orientation
5. Client orientation
6. Organizational development and innovation

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education:

Advanced degree in environment, energy, engineering, development studies or related areas

Technical and functional experience:

- Minimum of 15 years' experience in environmental/energy project management and/or evaluation (of development projects)
- Knowledge about GEF operational programs and strategies and about relevant GEF policies such as those on project life cycle, M&E, incremental costs, and fiduciary standards
- Experience in the evaluation of GEF projects and knowledge of UNIDO activities an asset
- Knowledge about multilateral technical cooperation and the UN, international development priorities and frameworks
- Working experience in developing countries

Languages:

Fluency in written and spoken English is required.

All reports and related documents must be in English and presented in electronic format.

Absence of conflict of interest:

According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the UNIDO Independent Evaluation Division.



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	National evaluation consultant
Main Duty Station and Location:	Home-based
Mission/s to:	Travel to potential sites within India
Start of Contract:	20 March 2018
End of Contract:	15 May 2018
Number of Working Days:	15 days spread over the above-mentioned period

ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division is responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides factual information about result and practices that feed into the programmatic and strategic decision-making processes. Evaluation is an assessment, as systematic and impartial as possible, of a programme, a project or a theme. Independent evaluations provide evidence-based information that is credible, reliable and useful, enabling the timely incorporation of findings, recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. The UNIDO Independent Evaluation Division is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

PROJECT CONTEXT

The national evaluation consultant will evaluate the projects according to the terms of reference (TOR) under the leadership of the team leader (international evaluation consultant). S/he will perform the following tasks:

MAIN DUTIES	Concrete/measurable outputs to be achieved	Expected duration	Location
Desk review Review and analyze project documentation and relevant country background information; in cooperation with the team leader, determine key data to collect in the field and prepare key instruments in English (questionnaires, logic models); If need be, recommend adjustments to the evaluation framework and Theory of Change in order to ensure their understanding in the local context.	Evaluation questions, questionnaires/interview guide, logic models adjusted to ensure understanding in the national context; A stakeholder mapping, in coordination with the project team.	3 days	Home-based
Coordinate the evaluation mission agenda, ensuring and setting up the required meetings with project partners and government counterparts, and organize and lead site visits, in close cooperation with project staff in the field.	<ul style="list-style-type: none"> Detailed evaluation schedule. List of stakeholders to interview during the field missions. 	1 day	Home-based
Coordinate and conduct the field mission with the team leader in cooperation with the Project Management Unit, where required;	<ul style="list-style-type: none"> Presentations of the evaluation's initial findings, draft 	6 days (including travel)	In India

MAIN DUTIES	Concrete/measurable outputs to be achieved	Expected duration	Location
Consult with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks. Conduct the translation for the Team Leader, when needed.	conclusions and recommendations to stakeholders in the country at the end of the mission. • Agreement with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks.	days)	
Prepare inputs and analysis to the evaluation report according to TOR and as agreed with the Team Leader. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and proof read the final version.	Draft evaluation report prepared.	5 days	Home-based
TOTAL		15 days	

REQUIRED COMPETENCIES

Core values:

1. Integrity
2. Professionalism
3. Respect for diversity

Core competencies:

1. Results orientation and accountability
2. Planning and organizing
3. Communication and trust
4. Team orientation
5. Client orientation
6. Organizational development and innovation

Managerial competencies (as applicable):

1. Strategy and direction
2. Managing people and performance
3. Judgement and decision making
4. Conflict resolution

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education: Advanced university degree in environmental science, engineering or other relevant discipline like developmental studies with a specialization in industrial energy efficiency and/or climate change.

Technical and functional experience:

- Exposure to the needs, conditions and problems in developing countries.
- Familiarity with the institutional context of the project is desirable.
- Experience in the field of environment and energy, including evaluation of development cooperation in developing countries is an asset

Languages: Fluency in written and spoken English and Urdu is required.

Absence of conflict of interest:

According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the UNIDO Independent Evaluation Division.

Annex 4- Outline of an in-depth project evaluation report

Executive summary (maximum 5 pages)

- Evaluation purpose and methodology
- Key findings
- Conclusions and recommendations
- Project ratings
- Tabular overview of key findings – conclusions – recommendations

1. Introduction

- 1.1. Evaluation objectives and scope
- 1.2. Overview of the Project Context
- 1.3. Overview of the Project
- 1.4. Theory of Change
- 1.5. Evaluation Methodology
- 1.6. Limitations of the Evaluation

2. Project's contribution to Development Results - Effectiveness and Impact

- 2.1. Project's achieved results and overall effectiveness
- 2.2. Progress towards impact
 - 2.2.1. Behavioural change
 - 2.2.1.1. Economically competitive - Advancing economic competitiveness
 - 2.2.1.2. Environmentally sound – Safeguarding environment
 - 2.2.1.3. Socially inclusive – Creating shared prosperity
 - 2.2.2. Broader adoption
 - 2.2.2.1. Mainstreaming
 - 2.2.2.2. Replication
 - 2.2.2.3. Scaling-up

3. Project's quality and performance

- 3.1. Design
- 3.2. Relevance
- 3.3. Efficiency
- 3.4. Sustainability
- 3.5. Gender mainstreaming

4. Performance of Partners

- 4.1. UNIDO
- 4.2. National counterparts
- 4.3. Donor

5. Factors facilitating or limiting the achievement of results

- 5.1. Monitoring & evaluation
- 5.2. Results-Based Management
- 5.3. Other factors
- 5.4. Overarching assessment and rating table

6. Conclusions, recommendations and lessons learned

- 6.1. Conclusions
- 6.2. Recommendations
- 6.3. Lessons learned
- 6.4. Good practices

Annexes (to be put online separately later)

- Evaluation Terms of Reference
- Evaluation framework
- List of documentation reviewed
- List of stakeholders consulted
- Project logframe/Theory of Change
- Primary data collection instruments: evaluation survey/questionnaire
- Statistical data from evaluation survey/questionnaire analysis

Annex 5: Checklist on evaluation report quality

Project Title:

UNIDO SAP ID:

Evaluation team:

Quality review done by:

Date:

Report quality criteria	UNIDO Independent Evaluation Division assessment notes	Rating
a. Was the report well-structured and properly written? (Clear language, correct grammar, clear and logical structure)		
b. Was the evaluation objective clearly stated and the methodology appropriately defined?		
c. Did the report present an assessment of relevant outcomes and achievement of project objectives?		
d. Was the report consistent with the ToR and was the evidence complete and convincing?		
e. Did the report present a sound assessment of sustainability of outcomes or did it explain why this is not (yet) possible? (Including assessment of assumptions, risks and impact drivers)		
f. Did the evidence presented support the lessons and recommendations? Are these directly based on findings?		
g. Did the report include the actual project costs (total, per activity, per source)?		
h. Did the report include an assessment of the quality of both the M&E plan at entry and the system used during the implementation? Was the M&E sufficiently budgeted for during preparation and properly funded during implementation?		
i. Quality of the lessons: were lessons readily applicable in other contexts? Did they suggest prescriptive action?		
j. Quality of the recommendations: did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can these be immediately implemented with current resources?		
k. Are the main cross-cutting issues, such as gender, human rights and environment, appropriately covered?		
l. Was the report delivered in a timely manner? (Observance of deadlines)		

Rating system for quality of evaluation reports

A rating scale of 1-6 is used for each criterion: Highly satisfactory = 6, Satisfactory = 5, Moderately satisfactory = 4, Moderately unsatisfactory = 3, Unsatisfactory = 2, Highly unsatisfactory = 1, and unable to assess = 0.

Annex 6: Guidance on integrating gender in evaluations of UNIDO projects and Projects

A. Introduction

Gender equality is internationally recognized as a goal of development and is fundamental to sustainable growth and poverty reduction. The UNIDO Policy on gender equality and the empowerment of women and its addendum, issued respectively in April 2009 and May 2010 (UNIDO/DGB(M).110 and UNIDO/DGB(M).110/Add.1), provides the overall guidelines for establishing a gender mainstreaming strategy and action plans to guide the process of addressing gender issues in the Organization's industrial development interventions.

According to the UNIDO Policy on gender equality and the empowerment of women:

Gender equality refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not suggest that women and men become 'the same' but that women's and men's rights, responsibilities and opportunities do not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. It is therefore not a 'women's issue'. On the contrary, it concerns and should fully engage both men and women and is a precondition for, and an indicator of sustainable people-centred development.

Empowerment of women signifies women gaining power and control over their own lives. It involves awareness-raising, building of self-confidence, expansion of choices, increased access to and control over resources and actions to transform the structures and institutions which reinforce and perpetuate gender discriminations and inequality.

Gender parity signifies equal numbers of men and women at all levels of an institution or organization, particularly at senior and decision-making levels.

The UNIDO projects/projects can be divided into two categories: 1) those where promotion of gender equality is one of the key aspects of the project/project; and 2) those where there is limited or no attempted integration of gender. Evaluation managers/evaluators should select relevant questions depending on the type of interventions.

B. Gender responsive evaluation questions

The questions below will help evaluation managers/evaluators to mainstream gender issues in their evaluations.

B.1. Design

- Is the project/project in line with the UNIDO and national policies on gender equality and the empowerment of women?
- Were gender issues identified at the design stage?
- Did the project/project design adequately consider the gender dimensions in its interventions? If so, how?
- Were adequate resources (e.g., funds, staff time, methodology, experts) allocated to address gender concerns?
- To what extent were the needs and priorities of women, girls, boys and men reflected in the design?
- Was a gender analysis included in a baseline study or needs assessment (if any)?
- If the project/project is people-centered, were target beneficiaries clearly identified and disaggregated by sex, age, race, ethnicity and socio-economic group?
- If the project/project promotes gender equality and/or women's empowerment, was gender equality reflected in its objective/s? To what extent are output/outcome indicators gender disaggregated?
-

B.2. Implementation management

- Did project monitoring and self-evaluation collect and analyze gender disaggregated data?
- Were decisions and recommendations based on the analyses? If so, how?
- Were gender concerns reflected in the criteria to select beneficiaries? If so, how?
- How gender-balanced was the composition of the project management team, the Steering Committee, experts and consultants and the beneficiaries?
- If the project/project promotes gender equality and/or women's empowerment, did the project/project monitor, assess and report on its gender related objective/s?
-

B.3. Results

- Have women and men benefited equally from the project's interventions? Do the results affect women and men differently? If so, why and how? How are the results likely to affect gender relations (e.g., division of labour, decision making authority)?
- In the case of a project/project with gender related objective/s, to what extent has the project/project achieved the objective/s? To what extent has the project/project reduced gender disparities and enhanced women's empowerment?

Annex 2. List of Documents Reviewed

Project Documents and Other Relevant Documentation

Request for MSP Approval Project Document MSP Request
Partner Co-financing Document
Annual Project Implementation Report (PIR), UNIDO/PMU, 2015
Annual Project Implementation Report (PIR), UNIDO/PMU, 2016
Annual Project Implementation Report (PIR), UNIDO/PMU, 2017
Annual Project Implementation Report (PIR), UNIDO/PMU, 2018
Annual Project Work Plan 2017
Monitoring & Evaluation Plan
1st Project Steering Committee Meeting Minutes, 26 September 2013 in Islamabad
2nd Project Steering Committee Meeting Minutes, 15 January 2015 in Islamabad
3rd Project Steering Committee Meeting Minutes, 4 February 2016 in Islamabad
4th Project Steering Committee Meeting Minutes, 26 July 2016 in Islamabad

Component 1

Output 1.1

NCTP Concept, Structure and Strategy
List of NCTP members with roles and responsibility
Innovative businesses support/created
Awards given in each cycle with women-led team award
Industry Challenge Award – Concept, Strategy, Winners

Output 1.2

Total applicants, semi-finalists, finalists, winners 2014-2017
National Academy Reports 2015-2017
Business Clinic Reports 2015-2017
Final Award Ceremony Reports 2014-2017
Winner Profiles 2014-2017
Winner Current Status Report
Post Competition Services Report

Component 2

Output 2.1

List of capacity building sessions and number of participants from NPO and PCST
Consultative session on sustainability for partners and other stakeholders report
Study on GCIP sustainability strategy in Pakistan
Comparison of different incubation programmes in Pakistan

Output 2.2

GCIP Mentor programme, mentor training guidelines
Presentation of Mentor Training
Categories of Mentors
List of International Mentors
List of National Mentors
Women in Green Industry Report

Output 2.3

Communication and Outreach Strategy
Extensive advocacy/promotion campaign, GCIP outreach reports 2014-2017
Advocacy/awareness-raising campaign for women Report (regional level)
Launch of advocacy campaign and Women Business Growth Centre in ICCI report
Final Report: Women in Green Industry Component
Presentation on Gender Mainstreaming in Cleantech

Gender Mainstreaming Strategy for GCIP Pakistan, 2017
Women Moving Mountains – Gender Training Presentation
List of chamber, trade and industrial associations approached for promotion

Component 3

Output 3.1

Presentation on Policy Review and Framework
Study on Policy Review and Framework
Report on Analysis of National ST&I Policy with relevance and adequacy for cleantech innovation

Output 3.2

Policy Dialogues in Islamabad, Lahore, Karachi
Partnership with leading academic/research institutions
List of stakeholders: Policy Dialogue with PCST and other partners
List of Regional Stakeholders for policy collaboration

Media Material

Pictorial Activity Briefs 2014-2017
Success Stories
Press Releases
Interview and Electronic Media Coverage (national and international)
Project videos and Documentaries
Digital Library
GCIP Call for Awards Promotional Material
Gender Mainstreaming documents

Studies and Presentations

Presentation: Gender Mainstreaming Strategies in GCIP Pakistan, 2017
Presentation: Launch of GCIP Call for Awards
Presentation: Mentor Training
Presentation: Business Model Canvas
Presentation: Policy Review of Cleantech Innovations
Report: Analysis of ST&+ Policy with Recommendations
GCIP Achievements in Sind and Punjab
GHG Emission of GCIP Innovations Report
Booklet: Promoting Cleantech Innovations, Fostering Innovation
Booklet: GCIP Pakistan
Booklet: GCIP Success Stories
Study on Policy Review and Framework
Study on Sustainability Strategy of GCIP Pakistan
List of number of GCIP SMEs/Startups with continued cleantech innovations after June 2018
Mentor Guidelines

New Initiatives

Most Promising Women Led Award
Investor Connect Reports 2016-2017
Women in Green Industry
Industry Challenge Award Report

Gender Mainstreaming / Women Empowerment Activities

Gender Mainstreaming Hour
GCIP Pakistan Marked International Women's Day
Publications
Awards Ceremony 2015-2017
Advocacy/Awareness Campaign Supporting Women in Green Industry
TV Programmes with Most Promising Women Led Award Holders

News packages and reports
Most Promising Women Led Award holders 2015-2017
Launch of Business Growth Centre for Women in collaboration with ICCI
Gender Training and Retreat
Publications on Women in Cleantech and Green Industry

Summary of Achievements

Modality of implementing GCIP Pakistan after its completion
Investment Strategy for GCIP Innovators
List of Startups/SMEs linked with funding partners and investors
List of Startups/SMEs received funding with amount received
List of members of National Platform
Estimation of GHG emissions reduction by GCIP innovations

Contextual and Thematic Materials Consulted

Pakistan Climate Public Expenditure and Institutional Review (CPEIR), UNDP, 2015
One UN Program in Pakistan (2009 -2012)
One UN Pakistan Annual Report 2016
Building More Inclusive, Sustainable and Prosperous Societies in Europe and Central Asia: From Vision to Achievement of the Sustainable Development Goals Call for Action from the Regional UN System, UN Development Group Europe and Central Asia, UN Regional Coordination Mechanism
Global Environmental Facility Pakistan, GEF Cell, Pakistan Ministry of Environment, Clean Tech Open www.cleantechopen.org/
Global Cleantech Innovation Index 2017, Chris Sworder, Cleantech Group; Louisiana Salge and Henri Van Soest, Cleantech Group; published on behalf of Cleantech Group, UNIDO, WWF, Asian Development Bank, Swedish Energy Agency, Tillväxtverket (Swedish Agency for Economic and Regional Growth), June 2017
Global Entrepreneurship Monitor Report 2016-2017, Global Entrepreneurship Research Association, London Business School, 2 April 2017
www.unido.org/news/new-report-investigates-innovation-ecosystem-cleantech-startups-eight-countries-12-November-2017
Swiss Federal Office of Energy Cleantech www.bfe.admin.ch/cleantech/06765/index.html?lang=en
The GEF UNIDO Global Cleantech Programmes for SMEs: Fostering Clean Technology Innovation in Emerging and Developing Countries, GEF Secretariat, 2011
GCIP Global Programme brochures (English) for 2014, 2015, UNIDO, GEF, Cleantech Open
GCIP Global webinar schedule (2014-2017)
GCIP Global Side Event agenda Vienna Energy Forum 2015
GCIP Global Side Event Concept Note Vienna Energy Forum 2017

Guidance Documents Consulted

Evaluation Manual (draft), UNIDO Independent Evaluation Division, August 2017
Evaluation Report Format Guidance, UNIDO Independent Evaluation Division, September 2017
Integrating Human Rights and Gender Equality in Evaluations – Guidance Document (United Nations Evaluation Group, August 2014)
Introduction to Theory of Change / Impact Pathways, the ROTI Method and the ROTI Results Score Sheet (UNEP, last updated December 2015)
Likelihood of Impact Assessment Decision Tree (UNEP, last revised 23 January 2017)
Independent Terminal Evaluation Report: GEF UNIDO Cleantech Programme for SMEs in Turkey, Dr. Joyce Miller and Umit Ozlale, May 2017

Annex 3. List of Persons Interviewed

Related to UN Agencies

Name	Organisation	Location
Alois MHLANGA	UNIDO Headquarters Project Manager	Vienna, Austria
Daniela IZABAL NOGUEDA	UNIDO Consultant, Department of Energy	Vienna, Austria
Sunyoung SUH	UNIDO GEF Coordination Unit	Vienna, Austria
Nadia AFTAB	UNIDO Country Representative	Islamabad, Pakistan
Shahina WAHEED	UNIDO Regional Field Office, National Project Coordinator, GCIP Pakistan	Islamabad, Pakistan
Hammad Bashir SAEED	UNIDO Regional Field Office, Project Technical Expert, GCIP Pakistan	Islamabad, Pakistan
Zikrea SALEAH	UNIDO Regional Field Office, Communication Focal Person	Islamabad, Pakistan
Neil BUHNE	UN Resident Coordinator	Islamabad, Pakistan

Related to National and Partner Agencies

Name	Organisation	Location
Muhammad Khalid SIDDIQ	Ministry of Science and Technology, Pakistan Council for Science and Technology, Director	Islamabad, Pakistan
Muhammad Aslam TAHIR	Ministry of Science and Technology, Pakistan Council for Science and Technology	Islamabad, Pakistan
Saima NASIR	Ministry of Science and Technology, Pakistan Council for Science and Technology, GCIP Judge	Islamabad, Pakistan
Abdul Ghaffar KHATTAK	Ministry of Industries and Production, National Productivity Organization (NPO), Chief Executive Officer	Islamabad, Pakistan
Jamshed KHATTAK	Ministry of Industries and Production, National Productivity Organization (NPO), GCIP Judge	Islamabad, Pakistan
Aftab KHAN	Ministry of Industries and Production, National Productivity Organization (NPO), GCIP Judge	Islamabad, Pakistan
Mohammad Abid HUSSAIN	Ministry of Industries and Production, Pakistan Institute of Management (PIM) Executive Director	Karachi, Pakistan
Noshaba AWAIS	Higher Education Commission, Research and Development Division, Director	Islamabad, Pakistan
Farhan JAMIL	Higher Education Commission, Research and Development Division, Assistant Director	Islamabad, Pakistan
Tariq Aziz CHAUDHRY	Higher Education Commission, Technology Development Fund, Match Making Manager	Islamabad, Pakistan
Ghulam SARWAR	Higher Education Commission, Technology Development Fund, Project/Field Coordinator	Islamabad, Pakistan
Malik Sohail HUSSAIN	Federation of Pakistan Chambers of Commerce and Industry (FPCCI), Chairman	Islamabad, Pakistan
Majid SHABBIR	Islamabad Chamber of Commerce and Industry, Secretary General, GCIP Judge	Islamabad, Pakistan
Sheikh Amir WAHEED	Islamabad Chamber of Commerce and Industry, President	Islamabad, Pakistan

Private Sector Sponsors, Startups, Mentors, Trainers, Judges

Name	Organisation	Location
Fakhira NAJIB	Power 99 Foundation, Chief Executive	Islamabad, Pakistan
Najib AHMAD	Power 99 FM, CEO	Islamabad, Pakistan
Saad Bin QAISAR	Bitsym, Chairman and CEO; GCIP Winner	Islamabad, Pakistan
Mr. HASSAN	Bitsym; GCIP Winner	Islamabad, Pakistan
Saba ALVI	Albi Corporation Pvt. Ltd., CEO	Islamabad, Pakistan
M. HASSAM-UD-DIN	Hempo, GCIP Winner	Islamabad, Pakistan
Nabeel SIDDIQUI	Modulus-Tech, CEO & Co-Founder, GCIP Winner	Karachi, Pakistan
Talha Sohail SIDDIQUI	Siddiqui Group of Industries, Director	Islamabad, Pakistan
Nadeem SIDDIQUI	Renewable Energy Expert, GCIP Judge	Islamabad, Pakistan
Zeenat AYESHA	Pappasallis, Owner	Islamabad, Pakistan
Zillay MARIAM	RDF Indhen, Business Development Head	Lahore, Pakistan
Ashifa PARACHA	Brand Engagement, CEO	Karachi, Pakistan
Usman AKHTAR	Hydro Power Pakistan, GCIP Finalist	Islamabad, Pakistan
Aamir Khan SHINWARI	Crean, GCIP Winner	Islamabad, Pakistan
Syed Muhammad ALI	Crean, GCIP Winner	Islamabad, Pakistan
Irum RAJA	Crean, GCIP Winner	Islamabad, Pakistan
Ms. DURESHAWAR	Crean, GCIP Winner	Islamabad, Pakistan
Amir RASHEED	FAMBZZ, GCIP Finalist	Islamabad, Pakistan
Tayyaba SHAFaq	FAMBZZ, GCIP Finalist	Islamabad, Pakistan
Muhammad REHAN	Team A, GCIP Semi-Finalist	Islamabad, Pakistan
Ghazi ABDUALLAH	Augnerd, GCIP Semi-Finalist	Islamabad, Pakistan
Hira KHAN	Self-Driving Car, GCIP Semi-Finalist	Islamabad, Pakistan
Junaid QAZI	Step Robotics, GCIP Semi-Finalist	Islamabad, Pakistan
M. Saad MASUD	Spray Engineering Devices (SED), Chief Executive Officer	Karachi, Pakistan
Anila FATIMA	Alisverish Enterprises Pvt. Ltd., Chief Executive & Director	Islamabad, Pakistan
Mian Sajid HAMEED	Warison, Director	Lahore, Pakistan
Muhammad Shakeel MUNIR	SAS Enterprises, Lepak Mining Company Pvt. Ltd., Executive Director	Islamabad, Pakistan
Faisal BASHIR	Tawanai Gasifier, Chief Executive	Gujranwala, Pakistan
Muhammad Safeer JAFREY	Agri Education Pakistan (AEPak), President & Founder	Islamabad, Pakistan
Muhemmed AHMED	ALM Consulting, CEO; GCIP Mentor	Islamabad, Pakistan
Atif Ahmad KHAN	Arch Associates, Principal Consultant	Karachi, Pakistan
Alina RANA	British Council, GCIP Mentor	Islamabad, Pakistan
Amina SADAF	GCIP Trainer	Islamabad, Pakistan
Bilal FAROOQ	Consulting 360, GCIP Mentor	Islamabad, Pakistan
Afzal KAMBOH	Pakistan Council of Renewable Energy Technologies (PCRET), GCIP Judge	Islamabad, Pakistan
Nadeem ZAKIR	PCRET, GCIP Judge	Islamabad, Pakistan
Fahd JAVED	National University of Sciences and Technology (NUST), GCIP Mentor	Islamabad, Pakistan
Imran JATTALA	Hult Prize, GCIP Judge	Islamabad, Pakistan
Meenah TARIQ	Invest2innovate, GCIP Judge	Islamabad, Pakistan
Zeeshan KHALID	United Industries, GCIP Judge	Islamabad, Pakistan

Other Ecosystem Actors

Name	Organisation	Location
Jehan ARA	The NEST i/o, P@sha's Tech Incubator, The Big Bird	Karachi, Pakistan
Yusuf HUSSAIN	Ministry of Information Technology & Telecom, National Technology Fund IGNITE, CEO	Islamabad, Pakistan
Faisal Jalil SHERJAN	National Incubation Centre (NIC) Lahore, Director	Lahore, Pakistan
Kashif JOSEPH	National Incubation Center (NIC) Islamabad, Manager IT & Facility	Islamabad, Pakistan
Bilal MIRZA	University of Central Punjab, Director, Office of Research Innovation and Commercialization (ORIC)	Lahore, Pakistan
Mobashir Ahmed BHATTI	National Commission for Human Development (NCHD) Member	Islamabad, Pakistan
Ambreen Asif QURESHI	Dadabhoy Institute of Higher Education, Director	Islamabad, Pakistan
Ayesha BILAL	PRIME, GCIP Policy Consultant	Islamabad, Pakistan

Annex 4. Summary of Project Identification and Financial Data

Project Factsheet

Milestone	Expected date	Actual date
Project CEO endorsement/approval date	6 March 2013	?
Project implementation start date (PAD issuance date)	?	26 September 2013
Original expected implementation end date (indicated in CEO endorsement/ approval document)	26 September 2016	?
Revised expected implementation end date	30 June 2018	30 June 2018 (anticipated)
Terminal evaluation completion	30 June 2018	30 June 2018

Financing plan summary

	Project Preparation	Project	Total (USD)
Financing (GEF)	Not Applicable Single Step MSP	990,000	990,000
Co-financing (cash and in-kind)	20,000 (UNIDO in-kind)	2,950,000	2,950,000
Total (USD)	1,520,000	3,940,000	3,940,000

Source: Project Document

Indicative Co-financing for the project by source and by name, (USD)

Sources of Co-financing	Name of Co-financer	Type of Co-financing	Amount (USD)
GEF Agency	UNIDO	Grant	50,000
GEF Agency	UNIDO	In-kind	50,000
National Government	PCST ⁴⁵	Grant	900,000
National Government	PCST	In-kind	300,000
National Government	NPO ⁴⁶	Grant	1,150,000
National Government	NPO	In-kind	350,000
National Government	PIM ⁴⁷	Grant	750,000
National Government	PIM	In-kind	250,000
Civil Society Organisation	CCCD ⁴⁸	In-kind	200,000
Total Co-financing			4,000,000

⁴⁵PCST - Pakistan Council for Science and Technology

⁴⁶NPO - National Productivity Organization

⁴⁷PIM - Pakistan Institute of Management

⁴⁸CCCD - Center for Climate Change and Development

Financing Plan Summary at Project Conception – Breakdown by Outcome, in USD

Project Outcome	Donor (GEF)	Co-Financing	Total (USD)
O1. National Clean Tech Platform (NCTP) to promote clean technology innovations and competitiveness in SMEs in Pakistan to deliver global environmental benefits	557,467	1,500,000	2'057,467
O2. Capacity enhancement initiative for clean technology innovations	393,000	1,570,000	1,963,000
O3. Policy and regulatory framework strengthened for scaling up cleantech competition, innovations and acceleration activities across Pakistan	244,863	550,000	794,863
Project Management)	124,533	300,000	424,533
Monitoring and Evaluation Management	50,000	80,000	130,000
Total	1,369,863	4,000,000	5,369,863

Source: Project Document

Year and Component-Wise Expenditures, Breakdown by Outcome, 2014 until March 2018

Component	2014	2015	2016	2017	2018 (March)	Total (USD)
Component 1	133,487.97	212,706.01	185,992.92	26,730.06	0	558,916.96
Component 2	61,087.34	92,751.80	75,853.25	155,412.80	-2,855.88	382,249.31
Component 3	0	54,405.24	14,066.43	150,870.67	11,119.16	230,461.50
M & E	0	0	0	0	41,189.10	41,189.10
Project Management	8,816.72	16,462.14	16,377.91	15,797.96	48,193.69	105,648.42
Total	203,392.03	376,325.19	292,290.51	348,811.49	97,646.07	1,318,465.29

Source: PMU, May 2018