Independent Terminal Evaluation

GEF-UNIDO Cleantech programme for small and medium enterprises in India

UNIDO Project ID: 120345
GEF Project ID: 4065

UNIDO

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO INDEPENDENT EVALUATION DIVISION
Office of Evaluation and Internal Oversight

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Contents

Acknowledgements

Abbreviations and acronyms

Acronym	Meaning
CTO	Cleantech Open
GCIP	Global Cleantech Innovation Programme
GEF	Global Environment Facility
GHG	Greenhouse Gas
GoI	Government of India
IDEMI	Institute for Design of Electrical Measuring Instruments
M&E	Monitoring and Evaluation
MSME	Ministry of Micro, Small & Medium Enterprises
NRDC	National Research Development Corporation
PMU	Programme Management Unit
RBM	Results Based Management
SME	Small and Medium Enterprise
TOC	Theory of change
TOR	Terms of Reference
UNIDO	United Nations Industrial Development Organization

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 due directly or indirectly 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 and negative, intended and non-intended, directly and indirectly, long term effects produced by a development intervention.
Indicator	Quantitative or qualitative factors that provide a means to measure the changes caused by an intervention.
Lessons learned	Generalizations based on evaluation experiences that abstract from the specific circumstances to broader situations.
Logframe (logical framework approach)	Management tool used to facilitate the planning, implementation and evaluation of an intervention. It involves identifying strategic elements (activities, outputs, outcome, impact) and their causal relationships, indicators, and assumptions that may affect success or failure. Based on RBM (results based management) principles.
Outcome	The likely or achieved (short-term and/or medium-term) effects of an intervention's outputs.
Outputs	The products, capital goods and services which result from an intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.
Relevance	The extent to which the objectives of an intervention 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	The specific individuals or organizations for whose benefit an intervention is undertaken.

Executive summary

The Global Cleantech Innovation Programme India (GCIP India) established a national business accelerator that was centred on an annual competition to identify promising cleantech entrepreneurs and technologies. Participating entrepreneurs received a suite of support including capacity development, tailored mentoring from technical and business specialists, intensive networking opportunities, and broader promotion of their products. Four annual competitions were run in India, with a total of 89 small businesses and entrepreneurs qualifying to compete and hence benefit from the programme's support package.

The programme was financed by the Global Environment Facility (GEF) and was managed by the United Nations Industrial Development Organization (UNIDO) in close collaboration with India's Ministry for Micro, Small & Medium Enterprises (MSME).

This independent terminal evaluation assessed the entire intervention and all its activities, from the programme's inception in May 2013 to its completion in early 2018. The programme's overall performance was reviewed against the standard evaluation criteria of relevance, efficiency, effectiveness, impact and sustainability. The evaluation applied a mixture of qualitative and quantitative methods through a combination of tools including interviews, documentation review, and an online survey. In addition to assessing overall results, the evaluation also aimed to identify recommendations to inform and strengthen any future iterations of the programme.

The evaluation found that the programme was highly relevant to the needs of cleantech innovators working in India, and to the Government of India's national priorities. While programme participants had access to numerous business accelerators within India, GCIP was distinctive: its cleantech focus and its emphasis on marketing, business development and financial modelling – as opposed to technology validation or technical development – was particularly valuable for participants.

GCIP India was also good value for money, with significant efficiencies gained through the extensive pro-bono support secured by the programme. The high-quality inputs provided by external experts represented an impressive contribution, and the approach has established a strong, potentially self-sustaining operational model for any future programme.

The programme was assessed as effective overall, providing entrepreneurs with a valuable package of support that – in turn – has increased the probability that sustainable, commercially viable cleantech businesses with be developed. While the evaluation identified only a limited number of business-related impacts that were directly *attributable* to GCIP India's work (new investments, new markets), there were numerous examples of the programme's *contribution* to business improvements such as stronger financial models and increased confidence. Perhaps most notably, the evaluation found that GCIP India has potentially laid some early foundations for a cleantech innovation ecosystem within India. However, there was only limited progress against the programme's originally planned outcomes on policy strengthening and monitoring systems.

The challenge now is to sustain and strengthen the programme's early results, and to build on the nascent ecosystem that GCIP India has helped to develop. Based on detailed feedback from programme stakeholders and the evaluation's own findings, the following recommendations for strengthening any future programme were identified:

Recommendations

Continue the programme

1. Resources should be identified to continue the programme. However, sufficient capacity to administer the day-to-day logistics of the programme exists within India, so UNIDO's involvement in day-to-day admin should be phased out ultimately. Initially though, UNIDO should take the lead role in designing any successor programme, including addressing this evaluation's recommendations. In the long-term UNIDO should also maintain its association with the programme, potentially becoming a 'knowledge partner' as it moves away from being an implementing partner.

Systematise post-competition engagement with participants

2. Currently, there is no formal engagement between the programme and participating entrepreneurs once a competition round concludes. Any future programme should include plans and allocate resources for the provision of post-competition support to participants. This could improve the sustainability of programme results, including efforts to build a national innovation ecosystem

3. Ongoing contact with alumni would also support longer-term monitoring of results, in turn improving the ability to understand, sustain and strengthen GCIP India's long-run impacts. The programme's monitoring processes should incorporate indicators and tools that support measurement of long-term results.

Broaden and strengthen the mentor pool

4. The current mentor pool is strong and highly valued, but there are critical skill gaps and the programme should recruit specialist expertise in (i) marketing and (ii) investment banking.

5. There is also a need to ensure the consistency and appropriateness of mentor advice and contributions. A systematic approach to the oversight and quality assurance of mentor inputs should be developed.

Build wider networks

6. The peer networks arising through GCIP India were one of the programme's most valued components. However, there were missed opportunities to extend these connections. UNIDO should establish links between GCIP India participants and participants in other GCIP countries, and should explore how to link participants with their wider national and international networks.

Develop a gender sensitive programme design

7. One of the weakest aspects of GCIP India's design and implementation was the absence of gender mainstreaming. A gender analysis should be commissioned in advance of any future programme, which should identify drivers and barriers to participation in the Indian cleantech sector, and should identify principles and activities to improve gender mainstreaming during programme implementation.

1.   Introduction

This report documents the terminal evaluation of the GEF UNIDO Cleantech Programme for Small and Medium Enterprises in India. The report commences with an overview of the programme, followed by a description of the evaluation's methodology. Findings are then presented in detail against the five key evaluation questions and criteria. Building on these findings, the programme's performance is assessed against UNIDO's evaluation rating scales, conclusions are presented, and recommendations are provided for UNIDO and other programme stakeholders.

2. Overview of the programme

2.1 Summary

2.1.1   The GEF UNIDO Cleantech Programme for Small and Medium Enterprises in India aimed to identify new, affordable and scalable clean technologies through the fostering and strengthening of national innovation and entrepreneurship systems. The programme worked to achieve this by establishing a national accelerator that was centred on an annual competition to identify promising entrepreneurs and technologies. Four broad technology categories were eligible for support through the programme: renewable energy, energy efficiency, water efficiency, and waste-to-energy (latterly, this category was broadened to waste beneficiation).

2.1.2   During the competitive process, participating entrepreneurs received a suite of support including capacity development, tailored mentoring from technical and business specialists, intensive networking opportunities, and broader promotion and exposure of their products. The programme also aimed to strengthen national policy and enabling environments for entrepreneurs and small businesses that are working on innovative clean technologies in India.

2.1.3   Four annual competitions were run in India (2014-2017), with a total of 89 small businesses and entrepreneurs qualifying to compete and hence benefit from the programme's support package. Each year, the top 3-4 placed entrepreneurs in India were also invited to attend and compete in a Global Forum and Cleantech week, hosted by the Cleantech Open (CTO) in California, USA. This forum brought together entrepreneurs from similar accelerators in other GCIP countries, allowing participants to compete for global prizes, and providing further networking opportunities, including exposure to international investors.

2.1.4   The programme was initiated in May 2013 and was originally planned for completion in 2017 after three competition rounds. However, sufficient financial resources remained after the third annual competition, so the programme was expanded for a fourth round / year. The fourth competition concluded in December 2017, with the highest placed India entrepreneurs attending the CTO Global Forum in January 2018. The programme is due to formally close in June 2018.

2.2 Coordination and budget

2.2.1   The programme was implemented by the United Nations Industrial Development Organization (UNIDO), in close collaboration with India's Ministry of Micro, Small & Medium Enterprises (MSME), and funded by the Global Environment Facility (GEF). Cleantech Open (CTO) – a USA-based accelerator programme – served as the programme's 'knowledge partner', providing training materials and running a series of business development-focused webinars for participants. Day-to-day programme coordination and delivery were handled by a UNIDO-based national Programme Management Unit (PMU), comprised of two full-time staff.

2.2.2   In addition to delivery of a fourth annual competition, the expansion of the work in 2017 allowed UNIDO to initiate an exit strategy for the programme, 'handing over' the PMU function and unspent project funds – and hence day-to-day management – to one of MSME's Technology Centres, namely the Institute for Design of Electrical Measuring Instruments (IDEMI). While IDEMI led the logistics and administration of the fourth competition round, the original UNIDO PMU continued to be engaged on a full-time basis to support the implementation of GCIP 2017, to build

IDEMI's capacity to manage the work, and to ensure the efficient transfer of programme systems, procedures and institutional knowledge.

2.2.3   The programme's original budget was USD 4m, including a USD 1m grant from the GEF Trust Fund and USD 3m co-financing, of which USD 2.5m comprised in-kind contributions from MSME. The most notable in-kind contributions from MSME included office space for the PMU, staff time to assist programme delivery, and coordination and hosting of some programme-related events. However, these in-kind contributions were not tracked, and have never been quantified financially.

2.3   Main activities

2.3.1   Figure 1 summarises the main programme activities, and of the 'journey' taken by competition entrants:

Identification of innovators	Promotional activities to create awareness of the programme, and to solicit entries from potential competition participants
Screening process	Based on assessment of application forms, a screening committee develop a shortlist of 20 'semi-finalists'
National workshop	The 20 semi-finalists attend a workshop with mentors and CTO
CTO Webinars	Semi-finalists attend a series of webinars organised by CTO
Business clinics	Facilitated one-to-one interaction between mentors and semi-finalists based on the specific requirements of innovators
Judging round	On the basis of webinars, mentoring sessions, worksheet exercises, investor presentations and pitching, judges shortlist 6 'finalists'
Jury round and investor pitching	The 6 shortlisted finalists present their pitch to a jury and a set of investors, with national winners subsequently identified
Investor Connect	All 20 semi-finalists attend a day of intensive networking with potential investors
Global CTO Forum	National winners participate in global competition and international Investor Connect, held in the USA

Figure 1: Accelerator 'journey' for participants
(adapted from GCIP India promotional brochure, 2016)

2.4   The global programme

2.4.1   The India Cleantech programme is linked to a broader, UNIDO-managed and GEF-funded Global Cleantech Innovation Programme (GCIP), which is being implemented in another eight countries. The strategy and operating model within these other countries is very similar to that applied in India, with a primary focus on establishing periodic competitions accompanied by targeted capacity development and mentoring.

2.4.2   While the nine countries have similar operating models and often promote their work using the global GCIP brand, all of this work was not originally conceived as

a global programme. Rather, individual countries – starting with a small-scale programme in South Africa – initiated the work as independent projects. Initially, UNIDO itself treated and managed the 'programme' as nine standalone projects: the global coordination effort only started later, as needs arose. Clearly, the similarities between each of the nine projects *have* allowed a degree of interaction between countries – most notably through participation in the CTO-led webinars and Global Forum – but all this joint activity has been emergent, and there is no formal, cross-country programmatic approach.

2.5 Programme theory of change

2.5.1   Theories of change (TOCs) are a common management tool expressing the basic rationale behind an intervention. They describe the results an intervention is aiming to achieve, how the intervention works towards those results, and the main assumptions underlying the intervention's approach. In turn, TOCs also support the identification of key elements that should be evaluated. As such, TOCs are frequently used as the starting point for understanding the logic of a programme, developing evaluation approaches, and for identifying evaluation questions.

2.5.2   The following TOC is based on the original India programme document (as submitted by UNIDO to the GEF in 2013), and on a TOC for the global GCIP work, as developed by the GEF's Independent Evaluation Office. The TOC identifies:

- The programme's starting assumptions as to the **barriers to an entrepreneurship ecosystem** in India: essentially the problems that the programme aimed to address;
- The main programme components (the four **output-to-outcome** sets);
- The expected pathway to impact, as articulated through a set of **intermediate states / outcomes**; and
- The **high-level impacts** that the programme ultimately aimed to contribute to.

4

IMPACTS

Adoption of innovative technologies and job and wealth creation in economy

Energy Savings and GHG emission reduction

INTERMEDIATE STATES / OUTCOMES

Innovative technologies brought to market

GHG emission reductions delivered by technologies can be measured

Cleantech entrepreneurs secure increased investment

Incentives (economic, political, social) for emission reductions are sustained or improved

Innovative technologies and viable business models identified

Regular cleantech competition continues to be delivered

Policy and regulatory environment is conducive for cleantech investment and adoption

OUTCOMES

Clean energy technology innovators identified and supported and becoming clean tech entrepreneurs

Adequate strengthened institutional capacity for successful organization of cleantech competitions and acceleration programs during and beyond the project

Strengthened policy and regulatory framework to facilitate promotion of clean energy technologies, innovation and entrepreneurship

Adequate monitoring and evaluation mechanisms are in place, facilitating smooth and successful project implementation and sound impact

OUTPUTS

National Cleantech competition and accelerator program

Capacity development of National Institutions

Relevant policy and regulatory frameworks identified and strengthened

Monitoring and evaluation systems developed

Lack of an enabling regulatory environment

Limited access to finance

Lack of public awareness

Shortage of entrepreneurial skills

Lack of coordination amongst sectoral players on market intelligence research

Barriers to Entrepreneurship Ecosystem

Figure 2: India Cleantech Theory of Change
(adapted from TOC originally developed by GEF Independent Evaluation Office for the Global GCIP)

3. Evaluation methodology

3.1 Evaluation purpose, objectives, scope and audience

3.1.1 The overarching purpose of the evaluation was **to help UNIDO improve performance and results of future programmes and projects**. To achieve this – and as is standard for many evaluations – the evaluation had an **accountability** objective (identifying results) and a **learning** objective (improving actions).

3.1.2 The India Cleantech programme had a results framework that established the expected outcomes and outputs, and indicators that were used to track progress against those results. This terminal evaluation aimed to assess progress towards those expected results and – where available – identify any unanticipated results.

> **Evaluation Objective 1 (accountability / results):**
> Assess the programme performance in terms of relevance, effectiveness, efficiency, sustainability and progress to impact.

3.1.3 While understanding progress towards results was essential for accountability purposes, the assessment of progress was then used as a foundation for **learning** what had worked well (and why) and what hadn't worked so well (and why). To address this objective the evaluation assessed the broader India Cleantech strategy and processes, exploring elements such as planning and coordination. This assessment then helped the evaluation to develop an understanding of the programme's overall performance.

> **Evaluation Objective 2 (learning / improvement):**
> Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing projects by UNIDO.

3.1.4 The evaluation **scope** covered the entire intervention and all its activities, from the programme's inception in May 2013, to its completion in early 2018.

3.1.5 The primary target **audiences** for the evaluation are:

- **UNIDO management**, particularly those with direct responsibility for the design and implementation of the Cleantech programme, for management of the UNIDO India country programme, and for the development of UNIDO's global GCIP activities;
- The programme's national **implementing partners**, particularly MSME and IDEMI;
- The **Country Programme evaluation team** that are concurrently undertaking an evaluation of UNIDO's work in India during the period 2013-2017; and
- The **GEF Independent Evaluation Office**, who are concurrently undertaking a separate review of the global GCIP programme that was designed and is being implemented by UNIDO (more detail on these latter two evaluations are presented below).

3.2 Concurrent evaluations

3.2.1 Prior to outlining the evaluation's approach in detail, it is important to note that this terminal evaluation of the India Cleantech project was undertaken in parallel with two closely related exercises, namely:

- UNIDO's India Country Programme Evaluation
- The GEF Independent Evaluation Office's Review of the Global GCIP

3.2.2 Considerable synergies were gained from the parallel delivery of these three exercises. This terminal evaluation of the India Cleantech programme will be an important data source for both of the other evaluations. But the India Cleantech evaluation was *also* strengthened by the other exercises. Firstly, the work on the Country Programme Evaluation informed a broader contextual understanding of UNIDO's strategy in India, and the Cleantech programme's position within that strategy. Secondly, the GEF Independent Evaluation Office's review – particularly their development of a TOC for the Global GCIP and the implementation of a participant survey – represented crucial additional inputs for this evaluation.

3.2.3 With that context established, the following section describes the India Cleantech evaluation's main methodological components and considerations.

3.3 UNIDO and GEF evaluation requirements

3.3.1 In addition to the evaluation purpose, objectives and theory of change, the terminal evaluation was also guided by the evaluation policies and requirements of both UNIDO and the GEF. Detailed GEF guidelines are only in place for terminal evaluations of full-size GEF projects[1] but those guidelines are nevertheless equally relevant to – and useful for – terminal evaluations of medium-sized GEF projects, such as the India Cleantech programme. As a GEF Agency, UNIDO's approach to terminal evaluations of GEF projects is tightly aligned to the GEF's overarching evaluation guidelines. Consequently, this evaluation adhered to those guidelines, including the application of UNIDO and GEF's rating scales for project implementation / execution, outcomes, sustainability, and M&E.

3.4 Evaluation framework

3.4.1 The evaluation purpose and objectives, the theory of change, and the evaluative requirements of both UNIDO and the GEF all provided the basis for the **evaluation framework**, which in turn underpinned and guided the whole methodological approach. The framework was structured against the standard **OECD-DAC criteria**[2] agreed for the evaluation (relevance, efficiency, effectiveness, impact, sustainability) and identified **key evaluation questions**, supported by more detailed **sub-questions**. The full framework is presented in annex 1, but figure 3 presents the five key evaluation questions:

Figure 3: Key evaluation questions

1. **Relevance:** How relevant was the programme to the needs and priorities of the participating individuals and institutions?
2. **Efficiency:** How efficient was programme delivery?
3. **Effectiveness:** To what extent did the programme achieve its planned outputs and outcomes?
4. **Impact:** What direct and indirect impact did the programme deliver?
5. **Sustainability:** to what extent are the programme's results likely to be sustained in the long term?

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[1] *Guidelines for GEF Agencies in Conducting Terminal Evaluation for Full-sized Projects,* GEF IEO, April 2017

[2] http://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm

3.5 Tools

3.5.1 Guided by the evaluation framework, the following common evaluation tools were applied to gather and analyse qualitative and quantitative information:

- **Interviews:** 34 individuals were interviewed, primarily conducted through face-to-face during meetings in Mumbai and New Delhi, with some additional interviews held via Skype.

- **Desk review:** A comprehensive literature review considered all relevant documentation such as India Cleantech material (including project documents, progress reports, promotional material, management meeting minutes and financial data), outputs generated by participants, and relevant external documentation (e.g. UNIDO GCIP material, reviews of other GCIP interventions).

- **Online survey:** The above-noted GEF Independent Evaluation Office Review of the Global GCIP undertook a survey of all GCIP participants within three targeted countries, including India. All 89 participants on the India Cleantech programme were contacted, generating 24 responses (response rate of 27%). Not all questions were directly relevant to this evaluation, but the relevant results are presented in annex 2, with survey findings referenced throughout the main report.

3.6 Key informants

3.6.1 The following groups represented the main programme stakeholders, so were the main 'targets' for interview during the evaluation:

- **India Cleantech PMU**: Day-to-day programme management and development;

- **MSME**: UNIDO's main delivery partner;

- **UNIDO Management:** India and HQ-based personnel that oversaw both India Cleantech's implementation, and the implementation of GCIP more broadly;

- **Competition participants:** Entrepreneurs that participated in the national competitions, and hence received support through the project;

- **Mentors, competition judges, and jury members:** Individuals that provided tailored support to participants, and individuals that assessed participant entries (there is a degree of crossover between these two groups); and

- **Investors:** Individuals that participated in programme networking events, advised participants, and/or provided investment for participants.

3.7 Analysis and reporting

3.7.1 Data analysis and the development of emerging findings were undertaken collectively by the evaluation team. As far as possible, emerging findings were derived through triangulation of data from multiple sources and tools, helping to ensure the robustness and internal validity of the assessment. Emerging findings were discussed and validated with India Cleantech stakeholders through two debriefings in New Delhi (one with the PMU and UNIDO India, one with MSME) and one debriefing in Vienna (UNIDO HQ stakeholders, including staff overseeing GCIP interventions in other countries).

3.7.2 Report preparation (including development of UNIDO and GEF evaluation ratings) was also be undertaken collectively, but with the initial report drafting led by the evaluation team leader. The draft report was submitted to UNIDO's Independent Evaluation Division, who circulated to key stakeholders and managed the commenting

process. The evaluation team then considered stakeholder comments, adjusting the draft report where appropriate, then submitted a final version to the UNIDO Independent Evaluation Division. The Independent Evaluation Division quality assured the final report and solicited UNIDO's management response for inclusion in the final product.

3.8 Evaluation team

3.8.1 The evaluation team comprised one independent international team leader and one independent national consultant, both contracted by UNIDO for this specific evaluation. The team received logistical support (interview scheduling, transportation) from the Project Management Unit in New Delhi, and from IDEMI in Mumbai.

3.9 Limitations

3.9.1 The evaluation collected and analysed quantitative and qualitative data. As with many evaluations, a considerable amount of this (particularly qualitative data) was based on individual perceptions and opinions. To mitigate any subjective bias, findings were – as far as possible – triangulated across sources, and across tools (interviews, desk review, survey). Where potentially important findings were identified but it was not possible to triangulate (e.g. data/finding provided by a single source) this is explicitly noted within the evaluation report.

3.9.2 With only 24 respondents and a 27% response rate, quantitative survey results cannot be defined as statistically significant. Nevertheless, the quantitative *and* qualitative survey results were well aligned with – and representative of – the findings and key points gathered during the evaluation's interviews and desk review.

4. Findings

4.1 Relevance

EVALUATION QUESTION 1:
How relevant was the programme to the needs and priorities of the participating individuals and institutions?

SUMMARY OF FINDINGS
The evaluation found that the programme was highly relevant to the needs of cleantech innovators working in India, and to the Government of India's national priorities. While programme participants had access to numerous business incubators and accelerators within India, GCIP was seen as distinctive from these other initiatives. The programme's emphasis on market research, business development and financial modelling – as opposed to technology validation or technical development – was particularly valuable for participants. GCIP India's thematic focus on cleantech and its support for businesses with capital-intensive, high start-up costs also addressed a gap evident across comparable initiatives. However, the programme's training material and webinars were sometimes overly generic, with limited relevance to the Indian context.

Highly relevant to participant needs

4.1.1   The original programme document outlined the high-level problems that drove the intervention's concept and design. The central issue was identified as India's burgeoning industrial sector, the carbon intensity of that sector, and the relatively slow uptake of energy efficient solutions, particularly amongst smaller businesses. As a response to this, the programme document focused on the Government of India's (GoI's) ambition to build a national innovation ecosystem for developing low carbon technologies capable of bringing cheaper (domestically manufactured, non-imported) solutions to the Indian market. These original high-level drivers continue to be very relevant, and the programme has actually *increased* in relevance since its inception in 2013. The GoI's late-2014 launch of both Make In India (promoting domestic manufacturing) and Swachh Bharat Abhiyan (a campaign for a cleaner environment) provided further justification for a programme focused on generating nationally-developed clean technology solutions.

4.1.2   The specific response implemented through the programme was also found to be highly relevant to the needs of programme participants. While there are numerous business incubators and accelerators within India, none of these were directly aimed at cleantech innovators, particularly those businesses working on capital-intensive products with high start-up costs (a common characteristic for clean energy-related technologies). Some participants had never considered engaging with business incubators before, but GCIP India's cleantech 'hook' drew them in, and they subsequently accessed support from additional (albeit non-cleantech focused) business incubators / accelerators.

4.1.3   Even more relevant than GCIP India's thematic focus on cleantech was the programme's emphasis on the non-technological aspects of business development. Many participants openly acknowledged that they entered the programme with only limited appreciation of the commercial and financial aspects of their business. Participants often came from an engineering and/or academic background and were invariably focused (often *solely* focused) on technology, product design and proof-of-concept. By insisting that competition participants engage in training, mentoring and

webinars on 'softer' aspects such as business model development, market segmentation, and financial projections, GCIP India helped participants to recognise and address critical barriers to the commercialisation of their products. For many participants, the fact that they only identified such barriers as a *direct result* of their participation in the programme represented a clear indicator of the work's relevance to their needs, even if such needs were only appreciated retrospectively.

4.1.4   Survey results provide some indication of the *comparative* relevance of GCIP India's support elements to participants. Respondents were asked to rank eight of the programme's components according to how beneficial they were to their business:

Q: Please rank the following components of GCIP from most to least beneficial to your enterprise

	Ranking Order
Opportunities to showcase technology	1st
Training for business plan development	2nd
Mentorship on business development	3rd
Connection with an investor network	4th
Connection with potential business partners	5th
Technical advice through sector experts	6th
Increased capacity of supporting government institutions	7th
Improving the policy and regulatory environment for business operations	8th

Figure 4: Survey results on relevance

Training resources sometimes had limited relevance

4.1.5   The programme's training resources (worksheets, webinars) were developed by GCIP India's USA-based knowledge partner, Cleantech Open (CTO). These centrally produced, generic resources were applied by UNIDO across the various country-level GCIP programmes; for example, webinars were often hosted on a joint basis, with participants from several countries in attendance. This was undoubtedly an efficient, cost-effective approach, and GCIP India stakeholders – from the PMU, to mentors, to participants – generally assessed the training resources to be of high quality.

4.1.6   But the generic nature of the material also reduced the relevance of the resources to the India context. Several programme stakeholders felt that the resources could have been significantly strengthened with a degree of contextualisation, incorporating – for example – guidance relating to the Indian regulatory environment, India-specific export market considerations, and signposts to relevant in-country resources.

Potential to increase relevance through Hindi language material

4.1.7   Further contextualisation could also have been achieved by developing non-English language promotional material. While a majority of interviewees felt that English language material was sufficient for the Indian context, several stakeholders identified the lack of promotional material in Hindi as a missed opportunity to broaden the outreach and increase the relevance of the programme.

Highly relevant to GEF operational modalities and focal area objectives

4.1.8 The original programme document highlighted GCIP India's alignment with the GEF Focal Area of Climate Change, and in particular Objective 1, "*promote the demonstration, deployment, and transfer of innovative low-carbon technologies*": the eventual programme was clearly of high relevance to this objective. But GCIP India was also relevant to other GEF Climate Change objectives:

- **Objective 2:** "*Promote market transformation for energy efficiency in industry and the building sector*"
- **Objective 3:** "*Promote investment in renewable energy technologies*"
- **Objective 4:** "*Promote energy efficiency, low-carbon transport and urban systems*"

4.1.9 The implemented programme was also fully aligned with – and deeply relevant to – the GEF's operational modalities for Public Private Partnership Programs. The GEF's guidance on eligible projects in this arena[3] could almost be a description of GCIP India itself: "*provide support for entrepreneurs and innovators seeking to establish a commercial venture…by specifically encouraging SMEs to expand in green and clean technologies to secure national competitiveness in a global 21st century economy*".

4.1.10 However, the original programme document also suggested that GCIP India's *main* channel for contributing to GEF objectives would be through policy-related outcomes and outputs, specifically GEF Outcome 1.2 ("*Enabling policy environment and mechanisms created for technology transfer*") and GEF Output 1.2 ("*National policies for the deployment and commercialization of innovative low-carbon technologies adopted*"). While these GEF outcomes and outputs were still *relevant* to GCIP India, they were certainly not the *most* relevant. As discussed in the 'Effectiveness' findings section below, GCIP India's eventual work on policy was very limited: the original projection of GCIP India as a policy-oriented programme does not reflect the programme's *actual* relevance and contribution to GEF objectives.

4.2 Efficiency

EVALUATION QUESTION 2:
How efficient was programme delivery?

SUMMARY OF FINDINGS
The evaluation found that the programme was good value for money, particularly considering the expansion of the competition from three to four years. The overall operational model was sound, although roles and responsibilities could have been clearer during the final year of implementation. Significant efficiencies were gained from the extensive pro-bono support secured by the programme. The high-quality inputs provided by mentors, judges, juries and investors represented an impressive contribution, and the approach has established a strong, potentially self-sustaining operational model for any future programme. While in-kind co-financing was provided, the value of these inputs was never quantified, largely due to the absence of valuation methodologies from either UNIDO or the GEF. It is unlikely that these in-kind contributions approached the projected values as estimated within the original programme document.

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[3] *Operational Modalities for Public Private Partnership Programs*, GEF/C.42/Inf.08, 2012

Appropriate operating model supported efficient programme delivery

4.2.1   The programme's approach of managing the annual competition through a centralised but small (two-person) PMU was a logical, efficient solution. Programme administration was relatively straightforward, with essentially the same process repeated on an annual basis. Having a stable, small team with familiarity of previous years' competition rounds was conducive to increased efficiencies and strengthened processes year-on-year. The stability and size of the team also greatly supported relationship and network building across the Indian cleantech sector.

4.2.2   While using a small PMU was certainly efficient, the model was also risky: the great majority of the programme's institutional knowledge essentially resided within only two project staff. Efforts were made (and continue to be made) to codify the PMU's processes and tacit knowledge. But the risks were to an extent illustrated during the 2017 handover of the PMU from UNIDO to IDEMI. Despite close interaction between the 'old' UNIDO PMU and the 'new' IDEMI PMU, some procedural errors arose, largely due to a lack of codified processes, roles and responsibilities. While none of the oversights affected the external (highly positive) perception of the programme, internal tensions did arise during the handover process: had clearer roles, responsibilities and processes been in place, this handover process would probably have been more efficient.

High cost-effectiveness achieved through a virtuous circle of support

4.2.3   GCIP India's extensive leveraging of pro-bono support represented a highly cost-effective approach. Virtually all of the programme's India-based external expertise – screening committees, mentors, judges, juries, investors – were secured on a pro-bono basis[4]. Moreover, this approach did not compromise quality: the inputs and expertise provided were highly valued by the great majority of participants.

4.2.4   Experts consistently identified two reasons behind their willingness to provide free support. Firstly, they had invariably gone through the same start-up experiences as competition participants and wanted to "*give something back*" to GCIP India's early-stage entrepreneurs. But they also routinely acknowledged that the incentive to participate was not purely altruistic: working on GCIP India helped them to identify potential business partners, new networks and investment opportunities that they would not otherwise have been exposed to. Indeed, the evaluation identified several business relationships that arose solely and directly as a result of (e.g.) a mentor or judge meeting an entrepreneur during the programme's competitive process.

4.2.5   Aside from the immediate efficiency and cost-effectiveness benefits for GCIP India, the approach has also established a strong, potentially self-sustaining operational model for any future programme. The evaluation identified several finalists and semi-finalists that – unprompted – expressed a desire to eventually provide GCIP India with their support, whether as a mentor, judge or other 'expert' role. There are already precedents for this, as a number of participants in GCIP India's early rounds (2014, 2015) have subsequently served as mentors and judges in later competition rounds. It is likely that the pro-bono model could therefore continue to be applied for any future programme, drawing on both existing expertise and the 'new' expertise being developed through the programme itself.

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[4] In the latter years of the project a small honorarium was paid to members of the Screening Committee.

No quantification of co-financing

4.2.6   The programme's core operational costs were financed through a USD 1m grant from the GEF Trust Fund. On balance, the evaluation found that – for an innovative pilot programme such as GCIP India – this investment was good value for money. The level and quality of pro-bono support that this leveraged (as detailed above) and the fact that the grant financed four annual competitions as opposed to the originally planned three rounds suggest a cost-effective approach.

4.2.7   The original programme document also indicated that a further USD 3m of co-financing would be secured, USD 2.5m of which would comprise in-kind contributions from the GoI. Significant in-kind contributions from MSME were indeed provided, most notably the time of MSME personnel (including Development Commissioners and Joint Development Commissioners), office space for the PMU, and hosting of several programme-related events. However, the value of these contributions was never quantified. The lack of quantification is understandable: the programme was never required to routinely report in-kind contributions and – in any case – neither UNIDO nor the GEF provided methodologies for establishing the value of such inputs. Nevertheless, given that in-kind contributions made up such a large proportion of the originally stated programme budget, the lack of data represents a significant monitoring gap. Moreover – and notwithstanding the acknowledged value and importance of MSME's in-kind contributions – it is highly unlikely that the GoI's inputs approached the originally projected value of USD 2.5m.

4.3   Effectiveness

EVALUATION QUESTION 3:
To what extent did the programme achieve its planned outputs and outcomes?

SUMMARY OF FINDINGS
The evaluation found that the programme largely achieved its two main outcomes on entrepreneur development and institutional capacity building. However, there was only limited progress against the other two planned outcomes on policy strengthening and M&E systems. Overall though, the programme was assessed as effective, providing entrepreneurs with a valuable package of support that frequently contributed to the development of more robust business models and increased confidence amongst participants. From the entrepreneurs' perspective the most effective aspects were the business (as opposed to technical) focus of the programme, the mentoring inputs, and the establishment of broader professional networks. However, entrepreneurs also identified ways in which these elements could be further strengthened within any future programme.

4.3.1   To assess effectiveness, the evaluation considered each of the four outcome areas, as articulated within the programme's theory of change (figure 2 above). The following section presents findings against each outcome area, although there is considerably more analysis against the first two outcomes (entrepreneur development and institutional capacity building) given that the programme undertook the majority of its work against these two areas, and indeed the majority of funding (over 81%) was budgeted for delivery of these two outcome areas.

Well-structured, systematic programme of support provided

OUTCOME AREA 1	OUTCOME AREA 2	OUTCOME AREA 3	OUTCOME AREA 4
Clean energy technology innovators identified and supported and becoming clean tech entrepreneurs	Adequate strengthened institutional capacity for successful organization of cleantech competitions and acceleration programs during and beyond the project	Strengthened policy and regulatory framework to facilitate promotion of clean energy technologies, innovation and entrepreneurship	Adequate monitoring and evaluation mechanisms are in place, facilitating smooth and successful project implementation and sound impact

4.3.2 The evaluation found that GCIP India delivered a valued and effective programme of support. Competition participants were near unanimous in their positive assessment of the support package's effectiveness, in particular the emphasis placed on business and commercial considerations, rather than technical validation or other technological aspects. Many felt that one of GCIP India's key strengths was its systematic approach, enabling participants to explore *all* elements of their business and business model in a highly structured way. Semi-finalists and finalists appreciated that their full engagement with the capacity development components (worksheets, webinars) was a *pre-requisite* to their participation in the competition. They welcomed the fact that the process essentially 'forced' them to analyse and develop aspects of their business that – for many – they had not previously considered in any depth.

4.3.3 Prior to considering the main elements of GCIP India's support in more detail, evaluation survey results provide some initial insight into the comparative effectiveness of each element. Participants were asked to assess the quality of GCIP India's core inputs:

Q: How would you rate the quality of the services you received?

	Very poor	Poor	Acceptable	Good	Very good	Excellent	Weighted Average Score (out of 10)[5]
Training for business plan development	0%	5%	5%	35%	20%	35%	7.50
Connection with an investor network	22%	13%	17%	9%	39%	0%	4.61
Technical advice through sector experts	23%	23%	23%	18%	9%	5%	3.64
Mentorship on business development	5%	19%	19%	19%	10%	29%	5.90

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[5] Weighted Average Score is calculated by first assigning numeric values to response choices (Very poor = 0, Excellent = 10), then calculating (weighting) the overall average according to the number/frequency of responses to each choice. An overall score above 5.00 is therefore positive, above 7.50 is highly positive.

		Very poor	Poor	Acceptable	Good	Very good	Excellent		Weighted Average Score (out of 10)[5]
Opportunities to showcase technology		13%	8%	13%	29%	13%	25%		5.92
Connection with potential business partners		13%	17%	35%	30%	4%	0%		3.91

Figure 5: Survey results on effectiveness

4.3.4 The results underline the value of the business development training, the mentorship, and the exposure afforded by the competition. However, the results also suggest limitations with the programme's networking activities, including with investors. The main elements of GCIP India's support are now discussed in turn.

Mentoring process was highly valued, but mentor pool could be stronger

4.3.5 Mentoring was an integral part of the GCIP India capacity development package and – in the main – was viewed by participants as an effective and valuable input. Many participants particularly valued how mentors' experience and insight allowed entrepreneurs to 'leapfrog' potentially critical mistakes. Also appreciated was the one-to-one nature of the interaction: within comparable business incubators, entrepreneurs often had to 'share' mentors with several other businesses during joint sessions. Clearly, one-to-one sessions allowed for tailored advice, and was more conducive to the development of closer, longer-term relationships between mentor and mentees.

4.3.6 There was less consensus around the effectiveness of GCIP India's approach to identifying and allocating the most appropriate mentors for each participant. While most participants and mentors were supportive of the 'forced' matchmaking approach (whereby GCIP India dictated which mentor should work with which mentee), a reasonable proportion of evaluation interviewees expressed concerns around the analytical process underlying the matchmaking. Some felt that the process should have been based on a more in-depth review of entrepreneurs' gaps and needs. At the same time, all participants commended the fact that – in addition to their allocated mentor – they were able to approach and seek advice (albeit less intensive) from other mentors within the GCIP India pool.

4.3.7 Notwithstanding the generally positive assessment of the mentoring approach's value and effectiveness, most evaluation respondents – both participants *and mentors* – felt that the mentor pool's skill base could have been broader. The most commonly cited concern was the lack of marketing expertise within the existing pool. Robust market segmentation and customer focus were identified as the most frequent gaps within participants' business models and – while many mentors had invariably dealt with these issues – this was not the *direct* specialisation for any of GCIP India's mentors. A number of interviewees also felt that the mentor pool could benefit from investment banking expertise, given that – ultimately – a central long-term goal for virtually all participants was to secure investment for their business. In summary, many interviewees felt that the relatively technical (cleantech) focus of the mentor pool skill base was sometimes at odds with GCIP India's broader principle of emphasising business development, rather than technology validation.

4.3.8 Notably, some mentors identified opportunities for strengthening *their own* advice and contributions to GCIP India. The programme's inputs did not go substantially beyond the initial establishment of links between mentors and mentees.

A number of mentors expressed concerns that this was *too* light touch an approach, with little or no oversight from GCIP India of the advice and inputs that mentors were providing. Some mentors identified a need for stronger benchmarking and quality assurance of advisory inputs, whether through joint briefings to the whole mentor pool, and/or through group meetings of the entire mentor pool in advance of critical programme events.

Strong networking component, but some missed opportunities

4.3.9 In addition to capacity development and mentoring, the third element of programme support that was most commonly identified by interviewees as valuable and effective was the networking opportunities afforded by GCIP India.

4.3.10 Firstly, participants greatly valued the immediate network that arose amongst each year's cohort of entrepreneurs. The process was conducive to the development of peer-to-peer connections, participants were able to learn from each other, and there was consensus that the networks would be long-lasting: to paraphrase one participant, "*we're not competing, it's a family*". The likelihood of network sustainability has been further strengthened through the use of WhatsApp groups, which participants have continued to use to keep in touch, discuss problems, and learn from each other.

4.3.11 The programme and its participants also benefitted from the broader networks that could be accessed through GCIP India's experts: the screening committees, mentors, judges and juries sometimes established links between competition participants and their own contacts / networks. As noted above, there was mutual benefit here: GCIP India participants gained from the expert input, but the experts were also exposed to business and investment opportunities that they would not otherwise have identified.

4.3.12 However, GCIP India stakeholders also identified significant potential for strengthening the programme's networking component. Investor Connect – which brought all semi-finalists together with India-based investors – was not judged to be particularly effective by most participants. Many semi-finalists and mentors felt that the selected investors were not appropriate for their businesses, products, or cleantech more generally. Some suggested that this was largely a function of the domestic investment environment in India more generally, which was not seen as particularly 'cleantech-friendly'. GCIP India finalists attending the CTO Global Forum benefited from more exposure to international investors but again, the actual *effectiveness* of this event – in terms of investment secured or even interest generated – was limited. Consequently, a number of GCIP India stakeholders suggested that the general concept of using 'curated' networking as a means to secure investment (whether domestic or international) was perhaps not the most effective or appropriate approach for tackling this specific business challenge.

4.3.13 Participants also felt that there were missed opportunities to establish networks beyond India, whether with the eight other GCIP 'sister' countries, or through UNIDO's broader international networks. Participant motivations here were not necessarily to identify new markets: most participants tended to be just as interested in making connections with like-minded entrepreneurs and further extending the peer-to-peer exchange that they had established through the GCIP India competition and cohort.

Maintaining emphasis on programme's process, rather than competition

4.3.14 Finally on this outcome, programme stakeholders were generally supportive of the overarching concept of building the whole intervention around a competition. The

approach served as a useful marketing 'hook', helping to generate interest and participation. In any case, the great majority of participants fully appreciated that GCIP India's primary rationale was capacity development and business strengthening, rather than the actual competition. However – and even though they gained capacity-related benefits – a handful of participants were somewhat demoralised when they 'lost' the competition. Some mentors suggested that discrete, post-competition support should have been provided in these (rare) incidents, providing – for example – motivational inputs, and re-emphasising the value gained through participation.

OUTCOME AREA 1	OUTCOME AREA 2	OUTCOME AREA 3	OUTCOME AREA 4
Clean energy technology innovators identified and supported and becoming clean tech entrepreneurs	Adequate strengthened institutional capacity for successful organization of cleantech competitions and acceleration programs during and beyond the project	Strengthened policy and regulatory framework to facilitate promotion of clean energy technologies, innovation and entrepreneurship	Adequate monitoring and evaluation mechanisms are in place, facilitating smooth and successful project implementation and sound impact

Quality of delivery has continually improved, administrative capacity in place

4.3.15 There was consensus amongst participants and experts (mentors, judges, etc.) that GCIP India's day-to-day management was robust, efficient and effective, and had improved with each passing year. Significantly, this positive trend applied to the competition's final year, i.e. during the period of the PMU's handover from UNIDO to IDEMI.

4.3.16 Despite this positive assessment by external stakeholders, the actual 'behind-the-scenes' handover process was intensive and – at points – tensions arose between the old and new PMU. As noted above, a lack of codified processes, roles and responsibilities resulted in some procedural errors. The overall exit strategy was also somewhat rushed, particularly when considering that the programme ran for four years and – through outcome area 2 – a handover of the competition's management was always central to programme design. Partly as a function of the rushed handover in the final months of the programme, concerns remain within UNIDO as to the capacity of the new PMU to undertake even basic programme administration (promotion, managing competition process, organising logistics). However, other stakeholders do not share these concerns and – in the view of the evaluation team – IDEMI are well-positioned to manage such day-to-day (non-technical) administration of any future programme.

Support may still be required to manage mentor pool and build networks

4.3.17 At the same time, several stakeholders (internal and external) expressed concerns around IDEMI's capacity for identifying and managing a mentor pool with a broad, business-focused skill base. As is evident through other evaluation findings, participants gained most value from mentors when advice was focused on the 'softer' business, commercial and financial aspects of entrepreneurship, rather than technical

or technological considerations. Moreover, GCIP India stakeholders felt that marketing and investment banking were the key gaps within the current mentor pool. Given IDEMI's highly technical focus and experience, it was not clear that they were the best placed organisation to address the gaps identified within the mentor pool. Similarly, some stakeholders expressed reservations about IDEMI's capacity for identifying and building networks with entrepreneurs beyond India, and with international investors (another two areas for improvement identified by GCIP India stakeholders).

The UNIDO brand adds considerable value to the programme

4.3.18 Another aspect of the exit strategy and handover process was of concern to some stakeholders: the risk that any future GCIP programme would 'lose' the UNIDO brand. Several participants explicitly noted that the UNIDO badge brought considerable value and cachet to the competition. Some companies stated that the association was a clear selling point for their business and product, suggesting that their customers associated the brand with respectability, quality and international recognition. These stakeholders indicated that – without the visible UNIDO association – the attractiveness and value of the competition would be reduced.

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Limited evidence of policy strengthening

4.3.19 The original programme document placed considerable emphasis on this third outcome area, which aimed to identify and strengthen policy and regulations relating to innovative cleantech in India. As noted above, this outcome area was also projected to be the primary channel through which the programme would contribute to the GEF Climate Change Focal Area, and to broader GEF objectives.

4.3.20 However, no direct, structured policy work was undertaken by the programme. The lack of policy work is understandable, given the relatively innovative, pilot-based nature of the programme, the very limited resources, and the challenges within any country of influencing national policy (particularly when a programme is relatively low profile and very low budget, as with GCIP India). The programme document's stated policy objectives were clearly over-ambitious and unrealistic. The document also oversold the linkages between GCIP India and the GEF's policy-related outcomes and outputs, yet there were far more substantial links between GCIP India and *other* GEF objectives; moreover GCIP India eventually made clearer contributions to these other GEF objectives (e.g. "*Promote investment in renewable energy technologies*", "*Promote energy efficiency, low-carbon transport and urban systems*").

4.3.21 Despite the original programme document's flaws and the absence of structured policy work, the programme did undertake some activity that engaged – and hence potentially influenced – policymakers in India. Several programme workshops were well attended by policy-level staff, most notably a workshop on Innovation Ecosystems in early 2016, and the programme's first Terminal Workshop in 2017. Perhaps most significantly, GCIP India retained (and continues to retain) a relatively high profile within MSME, and the initial hosting of the PMU within MSME premises certainly helped to raise the visibility, awareness and support for the programme within relevant policy circles.

4.3.22 The programme's 'GCIP Journal' publication[6] also contained a significant amount of policy-related lessons, learning and ideas, largely derived from the experience of programme participants, mentors and judges. While this contains an admirable amount of potentially influential material and represents a comprehensive record of the programme's work, the document is lengthy, and is not in a format that is well-targeted at policymakers. Again though, the Journal was not originally designed or intended as a policy influencing document.

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Insufficient M&E systems in place for measuring long-term results

4.3.23 The final programme component and outcome area envisaged the development of monitoring and evaluation (M&E) mechanisms capable of supporting real-time learning that, in turn, would inform and improve day-to-day implementation. To this end, the PMU established the databases that were a prerequisite for efficient and effective programme management, compiling details relating to GCIP India applicants, participant progress through the competition, 'expert' profiles, and so on. These systems clearly supported programme implementation and progress reporting.

4.3.24 However, systems were not established for the longer-term monitoring of – for example – outcomes and impacts realised by competition participants. A degree of informal, ad-hoc monitoring is undertaken by the PMU, simply by virtue of staying in touch with some competition participants. However, this approach is not systematic or formalised and – consequently – does not provide a sufficient basis for measuring any longer-term results being achieved by participants. The absence of such systems is partly a function of the lack of formal post-competition support provided through the programme (discussed below in more detail): GCIP India's design did not cater for any longer-term support, so there is no in-built *requirement* for the PMU to maintain contact with – or monitor the progress of – participants.

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[6] *GCIP India 2013-2017: Stories and Lessons, a GCIP Journal*, (2017), UNIDO / GCIP India

4.3.25 Strictly speaking then, the existing M&E systems are in line with those planned for within the original programme document. However, this original plan, the resources allocated to outcome area 4 (only USD 20k, or 2%, of a USD 910k grant), and the systems subsequently developed for GCIP India were insufficient for measuring and understanding the actual contribution of the programme beyond any of the accelerator process's *immediate* results. This should be considered a significant gap, particularly if the programme is to continue in any form. The absence of such systems also compromises the ability of UNIDO to fully understand, sustain and strengthen the long-run contributions of their work in India.

Monitoring and reporting positive *and* negative results

4.3.26 While some monitoring and learning activity was undertaken (most notably through the above-noted 'GCIP Journal') some stakeholders raised concerns about the programme's tendency to report exclusively on the 'good news' stories arising through GCIP India. These stakeholders felt that – for transparency purposes and for even *more* valuable learning – an equal degree of monitoring, analysis and reporting resources should be dedicated to the 'bad news' stories. In particular, the failure of GCIP India's 2016 winner – and the lack of GCIP India's analysis and reporting on the reasons behind this business's failure – were seen as a missed opportunity from which to learn and strengthen the programme.

4.4 Progress to Impact

EVALUATION QUESTION 4:
What direct and indirect impact did the programme deliver?

SUMMARY OF FINDINGS
The evaluation identified only a limited number of business-related impacts that were directly *attributable* to GCIP India's work (new investments, new markets), but numerous examples of the programme's *contribution* to business improvements such as stronger financial models and increased confidence. Perhaps most notably, the evaluation found that GCIP India has laid some early foundations for a cleantech innovation ecosystem within India. The programme's anticipated pathway (as described within the theory of change) to higher-level impacts such as GHG reductions and wealth creation was found to be realistic, with some tangible progress already made along this pathway.

Some examples of business-level impacts, attributable to the programme

4.4.1 The evaluation identified only a limited number of business-level impacts that could be directly attributed to GCIP India's interventions. Representative discrete impacts included:

- A participant that secured a USD 250,000 investment through a connection established directly through GCIP India

- A participant that secured a USD 50,000 loan through a connection established directly through GCIP India

- Following targeted advice from UNIDO, one participant launched their product within a completely new – and eventually important – domestic market

Numerous examples of programme's contribution to business-level impacts

4.4.2   But instead of direct, attributable impacts, participants invariably preferred to characterise GCIP India's inputs as providing a *contribution* to improvements in their business, working alongside multiple other inputs. This equally applied to participants that *had* identified impacts *attributable* to GCIP India: so even if a participant had (e.g.) secured an investment solely as a result of GCIP India, they tended to place *more* weight on the *broader contribution* that the programme had made to their business.

4.4.3   Moreover, participants characterised GCIP India's indirect, business-level impacts with a considerable degree of consistency. The following are representative indirect impacts, as identified independently by most participants:

- The programme was a great source of **encouragement**: participation in the process and interaction with peers built entrepreneurs' **confidence**, and gave them **validation** of the 'worth' and **credibility** of their product and business.

- The programme nurtured **more structured and longer-term thinking**, particularly with regards to **customer and market identification**. To paraphrase one participant, "*GCIP India helped change our mindset from being almost exclusively 'isn't this a great product' to 'we need to sell this, how can we take this to market?'*".

- Interaction with mentors helped **accelerate participant learning**, enabling businesses to recognise upcoming problems and avoid common start-up mistakes.

- Even where investment was not secured, exposure to investors provided **insight** into how investors think, what they look for, and which (even whether) investment options were most appropriate to pursue, **further assisting entrepreneurs' long-term planning**. Finalists attending the CTO Global Forum felt there was additional value in being exposed to international (as opposed to just India-based) investors.

- The programme **increased exposure and awareness** of their business and products; as noted above, some participants also believed that the UNIDO 'badge' endowed their work with additional credibility.

- The programme helped to build a relatively **tight-knit network of like-minded entrepreneurs**, which has in turn been (and continues to be) used for **peer support and learning**.

4.4.4   Survey results provide some additional evidence as to how the programme contributed to business development. Firstly – and again acknowledging that multiple other factors will *also* have contributed to this trend – the responses indicate that the average staff base of GCIP India participants increases considerably post-competition:

Average no. employees pre-competition	**16.5**
Average no. employees now (early 2018)	**25.4**
Average change to size of staff base	**+78%**

Figure 6: Changes to staffing base of GCIP India participants
(Derived from evaluation survey results)

4.4.5 While this trend is of course encouraging for the participating businesses, it is not possible to attribute any staffing growth directly to GCIP India. However, the survey also identified tangible, direct business-level impacts that *can* be attributed to the programme:

Q: [Have you made changes to any of the following elements] in your business as a result of the GCIP?

	n	%
Revised financing plans	6	26%
Revised business planning	12	52%
Created new jobs within the enterprise	6	26%
Made alterations in product	11	48%
Revised marketing plan	12	52%
Revised business pitch	13	57%
Have made no changes	5	22%
TOTAL[7]	23	100%

Figure 7: Survey results on business-level impacts

4.4.6 In summary, participants felt that all these 'soft' contributions (whether direct or indirect) helped them to develop stronger businesses, more robust business models and – in turn – improved chances of commercial viability and success. Of course, numerous other factors also contributed to their business models being strengthened. But participants unanimously agreed that GCIP India had at least provided an important contribution to their broader efforts.

Working towards an innovation ecosystem for cleantech

4.4.7 GCIP India has contributed to impact for individual entrepreneurs, but the programme always aimed to deliver impact *beyond* the level of individual businesses. Specifically, one of the programme's central objectives was to develop an entrepreneurial ecosystem within India for cleantech innovation.

4.4.8 It would be unrealistic to expect a national, India-wide cleantech innovation ecosystem to arise during GCIP India's short lifetime. However, the evaluation found that the programme has at least laid some important foundations. In particular, the networks and connections that have developed amongst GCIP's *direct* stakeholders (participants and experts alike) potentially represent some initial steps towards the

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[7] This is the total number of respondents to the question: respondents could provide more than one answer

development of an entrepreneurial ecosystem for cleantech, albeit a small, basic ecosystem that is limited to immediate GCIP stakeholders at this stage. The intra-programme connections appear to be well-established, well-used and self-sustaining. As noted repeatedly above, participants regularly use this peer network and maintain contact with both their competition cohort, and with the mentors and judges that supported the programme. By virtue of GCIP India's close relationship with MSME, the network also has limited, informal connections with policymakers. However – and tied back to the limited policy work undertaken by the programme – this policy 'link' is perhaps the weakest, least active element of the network.

Potential pathways to higher-level impacts

4.4.9 Ultimately – and in line with GEF objectives – the programme was hypothesised to contribute to even higher-level impacts, specifically:

- Adoption of innovative technologies and job and wealth creation in economy
- Energy savings and GHG emission reductions

4.4.10 Clearly, there is a large 'jump' and many steps between delivery of the GCIP India competition and these high-level impacts, but the programme's theory of change (figure 2 above) identified the intermediate outcomes through which – in the long-run – contributions would be made to high-level impact. The evaluation found that this logical model is plausible, the overall pathway is realistic, and that tangible progress has already been made towards achieving some of the intermediate outcomes. Figure 8 below summarises the early evidence of progress against each of the intermediate outcomes, also highlighting where gaps persist and/or where GCIP India did not deliver substantive contributions:

Intermediate outcome	Findings	Summary
Innovative technologies and viable business models identified	• 89 technologies / business models identified directly through GCIP India competition	Clear contributions from GCIP India
Regular cleantech competition continues to be delivered	• Four rounds completed, with reasonable prospects for further competitions in the future	Clear contributions from GCIP India
Cleantech entrepreneurs secure increased investment	• Several investments secured as a direct or indirect result of GCIP India	Clear contributions from GCIP India
Policy and regulatory environment is conducive for cleantech investment and adoption	• GCIP India's policy work was informal and unstructured, with no tangible results; however, it is plausible that any future work could have a stronger policy influence	No contributions yet, but plausible in the future
Incentives (economic, political, social) for emission reductions are sustained or improved	• GCIP India unlikely to have any substantive influence over broader incentives: this outcome is beyond GCIP India's control, but is nevertheless a logically important part of the pathway to impact	No contributions yet, unlikely in the future

Intermediate outcome	Findings	Summary
Innovative technologies brought to market	• Several products brought to market with at least some support from GCIP India	Clear contributions from GCIP India
GHG emission reductions delivered by technologies can be measured	• Reporting on GHG reductions were not required through GCIP India, but several identified technologies have clear potential to deliver significant reductions	No contributions yet, but plausible in the future

Figure 8: GCIP India contributions to intermediate outcomes

4.5 Sustainability

EVALUATION QUESTION 5:
To what extent are the programme's results likely to be sustained in the long term?

SUMMARY OF FINDINGS
The programme has – for most participants – contributed to the development of stronger business models that, in turn, have increased the probability that entrepreneurs will develop sustainable, commercially viable cleantech businesses. However, the evaluation also found that more support could have been provided to improve sustainability, most notably through provision of post-competition support to participants. More immediately, the evaluation found that prospects for continued delivery of the programme are strong: UNIDO India, UNIDO HQ and – most critically – MSME have all expressed a desire to support a future iteration of the work. However, the evaluation identified some concerns that should be addressed when defining the management structure for any successor programme.

Foundations in place for sustainable results

4.5.1 The above evaluation findings imply that a reasonable foundation for sustainability is in place. The programme was effective at delivering its main two outcomes, which resulted in direct and indirect contributions to business-level impacts. Some participants secured investment and new markets as a direct result of GCIP India's inputs, but most participants also reported that GCIP India contributed to stronger business models, increased confidence, and an improved probability of commercial viability. Of course, a multitude of external factors well beyond GCIP India's control will influence the ultimate success (or failure) of the businesses that the programme has supported. But – for most participants – GCIP India has at least *contributed* to the development of stronger, more sustainable businesses.

Formal post-competition support could strengthen sustainability

4.5.2 The relatively small number of programme stakeholders and the comparatively tight-knit peer networks that arise through GCIP India means that there has inevitably been a degree of longer-term, post-competition interaction between the PMU and some former participants. However, this interaction has been informal, ad-hoc, opportunistic and not with *all* former participants (survey responses indicate that **21%** of participants have not had contact from the PMU following the competition). The lack of systematic long-term support or contact with former participants is understandable: this was never a feature of the original programme design, limited

resources were available, and the PMU's priority was of course delivery of the immediate competition. Moreover, had any extensive post-competition contact and ad-hoc support been provided, this could have risked raising expectations amongst participants for a long-term 'service' that the programme and PMU was never resourced to deliver.

4.5.3 But many stakeholders identified the lack of formal, systematic post-competition engagement as an important shortcoming with the programme's design, potentially compromising the sustainability of results. While participants were confident that the cohort-level networks were self-sustaining (particularly where WhatsApp groups were being used to support engagement), they invariably also felt that GCIP India / the PMU could be more involved in these networks, and in providing longer-term support to competition alumni. Clear demand was identified for periodic networking events (even if biennial) bringing together participants from all GCIP rounds. A significant proportion of interviewees also felt that periodic 'check-ins' from GCIP India / the PMU would be welcomed, particularly if they helped to identify new opportunities and linkages. The PMU are well-connected, often with a broader view of the cleantech environment (and other business incubators) than any individual entrepreneur: it is highly plausible that even short conversations between the PMU and previous competition participants could uncover new leads and opportunities that participants would not otherwise have identified.

4.5.4 More broadly, some stakeholders felt that such systematic, ongoing contact would only serve to deepen the PMU's understanding of the cleantech sector, arising trends, and developing challenges. This increased interaction and understanding could, in turn, help to strengthen and sustain the programme's long-term contributions to higher-level impacts.

4.5.5 A number of stakeholders also suggested that support could be improved for *non-participants*, namely those applicants that failed to qualify for the competition. Some mentors and participants felt that the feedback provided by the PMU to 'rejected' applicants was overly generic and of no substantive value. The development of tailored feedback could help entrepreneurs to identify critical flaws with their business models, could be used to signpost applicants to more appropriate accelerators / incubators, and could improve applicants' chances of participation in future rounds. Providing this level of feedback would undoubtedly require considerable resources, but the effort would ultimately feed into GCIP India's broader aim of building a cleantech innovation ecosystem in the country.

Considerations for future programme management

4.5.6 Virtually all stakeholders – from participants, to mentors, to UNIDO and MSME felt that GCIP India should continue. While views differed as to the *details* of how any future programme should be managed, some *general* principles were supported by the great majority of interviewees:

- MSME was seen as **the most appropriate long-term institutional host** for the competition, although stronger links should be established with other relevant Ministries in India.

- **UNIDO should continue to be involved in some form**: their technical expertise, national and international networks, and 'brand' all add value and credibility to the programme.

- The **low cost, pro-bono model should be retained**: the programme should aim to continue securing inputs from mentors, judges and other experts for free, and the competition should **continue to avoid awarding cash prizes**, emphasising the value of the programme's *process* instead.

4.5.7 Regarding the specifics of day-to-day management of the competition, the majority of interviewees were supportive of the PMU's relocation to IDEMI. The Institute was seen as having extensive, appropriate networks within India and – by virtue of being a subsidiary of MSME – was appropriately located from an institutional and political perspective. The day-to-day administration and management of the competition were generally viewed as relatively straightforward, and completely within the capacity of IDEMI to deliver.

4.5.8 Notwithstanding this *general* assessment of IDEMI as an appropriate body for GCIP India's day-to-day management, many interviewees raised concerns as to whether IDEMI alone could (or should) address the main areas for programme improvement and development. As also noted in the 'Effectiveness' section above, interviewees were generally not convinced that IDEMI were best positioned to address the skill gaps in the current mentor pool (marketing, investment banking), and similarly did not feel that IDEMI were well-positioned to identify and nurture networks and connections *beyond* India. Against this background, the same interviewees generally felt that any future programme would – at least for the initial phase – benefit from the continued involvement of the 'old', UNIDO-based PMU.

4.6   Gender mainstreaming

No systematic approach to mainstreaming gender

4.6.1 While there was strong progress against the programme's main outcome (*clean energy technology innovators identified and supported and becoming clean tech entrepreneurs*), the programme did not apply a gender sensitive approach during delivery of this outcome. This was at least partly due to an absence of gender analysis within the original project design, and a programme document that only contained brief and generic references to gender mainstreaming. Subsequently, programme implementation was never geared towards gender mainstreaming, and the gender dimensions of (e.g.) entrepreneurship or cleantech were not substantively addressed. No systematic monitoring was undertaken, despite the programme document indicating that gender specific targets would be established and pursued.

4.6.2 Survey results indicate that the programme did not deliver any appreciable improvements in gender equality amongst GCIP participants. The average female-male staff ratio of responding businesses was **0.53** *before* their participation in GCIP (i.e. around 1 female staff member for every 2 male staff members), with this average ratio increasing only marginally to **0.59** at the time of the survey. While there were some high-profile examples of women-led GCIP participants, of the businesses responding to the survey, **92%** were headed by men.

4.6.3 The lack of gender sensitivity across programme design and implementation has almost certainly reduced the programme's outreach and potential and – as a result – may also have reduced GCIP India's overall effectiveness.

5.   UNIDO Project evaluation ratings

In addition to the main assessment against standard evaluation criteria (relevance, efficiency, effectiveness, impact, sustainability), evaluations of UNIDO-supported projects routinely assess specific aspects of an intervention's delivery. The following section summarises (and restates, where appropriate) the evaluation's findings on **performance of partners**, and on **factors facilitating or limiting the achievement of results**, particularly with regards to M&E and results-based management. The section concludes with a table (standard to all UNIDO evaluations) that summarises performance ratings for each component of the project's design, delivery and management.

5.1 Performance of partners

UNIDO

5.1.1   To recapitulate some of the evaluation's main findings, there was consensus amongst participants and experts (mentors, judges, etc.) that GCIP India's day-to-day management was robust, efficient and effective, and had improved with each passing year. The programme's approach of managing the annual competition through a centralised but small (two-person) PMU was a logical, efficient solution. Programme administration was relatively straightforward, with essentially the same process repeated on an annual basis. Having a stable, small team with familiarity of previous years' competition rounds was conducive to increased efficiencies and strengthened processes year-on-year. The stability and size of the team also greatly supported relationship and network building across the Indian cleantech sector. In summary, UNIDO's performance was strong and well appreciated by participants.

National Counterparts

5.1.2   The project received significant in-kind contributions from MSME, most notably the time of MSME personnel (including Development Commissioners and Joint Development Commissioners), office space for the PMU, and hosting of several programme-related events. Just as importantly, MSME's backing for the programme was highly visible, and the Ministry remains highly supportive.

5.1.3   Participants and experts also assessed IDEMI's performance positively, often noting that the programme's management continued to improve during the competition's final year, i.e. during the period of the PMU's handover from UNIDO to IDEMI. Looking beyond the immediate programme implementation period though, several stakeholders were expressed concerns around IDEMI's capacity for identifying and managing a mentor pool with a broad, business-focused skill base. Similarly, some stakeholders expressed reservations about IDEMI's capacity for identifying and building networks with entrepreneurs beyond India, and with international investors (another two areas for improvement identified by GCIP India stakeholders).

Donor

5.1.4   Beyond funding, the GEF's involvement with the programme was minimal, so it would not be appropriate (or relevant) to provide an assessment of their performance here.

5.2 Factors facilitating or limiting the achievement of results

5.2.1   Paragraphs **4.3.23-26** provide a full analysis of the programme's performance with regards to M&E and RBM, but in summary the existing M&E systems were in line with those planned for within the original programme document. The PMU established the databases that were a prerequisite for efficient and effective programme

management, compiling details relating to GCIP India applicants, participant progress through the competition, 'expert' profiles, and so on. These systems clearly supported programme implementation and progress reporting.

5.2.2   However, systems were not established for longer-term monitoring. The original (highly limited) M&E plan, the resources allocated to M&E (only USD 20k, or 2%, of a USD 910k grant), and the systems subsequently developed for GCIP India were insufficient for measuring and understanding the actual contribution of the programme beyond any of the accelerator process's immediate results. This should be considered a significant gap, particularly if the programme is to continue in any form. The absence of such systems also compromises the ability of UNIDO to fully understand, sustain and strengthen the long-run contributions of their work in India.

5.2.3   Some stakeholders also raised concerns about the programme's tendency to report exclusively on the 'good news' stories arising through GCIP India. These stakeholders felt that – for transparency purposes and for even more valuable learning – an equal degree of monitoring, analysis and reporting resources should be dedicated to the 'bad news' stories. In particular, the failure of GCIP India's 2016 winner – and the lack of analysis and reporting on the reasons behind this business's failure – were seen as a missed opportunity from which to learn and strengthen the programme.

5.3 Performance ratings table

5.3.1   Evaluations of UNIDO-supported interventions routinely provide performance ratings for each component of a project's design, delivery and management. Performance is assessed against UNIDO's six-point rating scale, which ranges from 'highly unsatisfactory' (score 1) to 'highly satisfactory' (score 6).

5.3.2   Additionally, GEF-funded UNIDO projects are assessed (although not necessarily rated) against three programmatic elements *not* covered by UNIDO's ratings, namely (i) **need for follow-up** (on mismanagement, negative impacts etc.), (ii) **materialization of co-financing**, and (iii) **environmental and social safeguards**.

5.3.3   Based on the foregoing findings and analysis, the following presents ratings and summary assessments for each of the UNIDO and GEF performance components.

Performance ratings table

Project element		Summary assessment	Rating
A	**IMPACT (OVERALL)**	Direct and indirect impacts delivered for individual businesses, and reasonable progress made towards higher-level impacts	Satisfactory (5)
B	**PROJECT DESIGN (OVERALL)**		Moderately satisfactory (4)
1	Overall design	Reasonable design, but undue emphasis placed on policy strengthening outcome	Moderately satisfactory (4)
2	Logframe	Logframe was a good reflection of programme design, but did not provide basis for long-term monitoring	Satisfactory (5)
C	**PROJECT PERFORMANCE (OVERALL)**		Satisfactory (5)
1	Relevance	Highly relevant to participants, government priorities, and UNIDO's mandate	Highly satisfactory (6)
2	Effectiveness	Programme was generally assessed as effective by participants, but areas for improvement identified	Satisfactory (5)
3	Efficiency	Good value for money, with significant efficiencies gained through pro-bono model of support	Highly satisfactory (6)
4	Sustainability of benefits	Overall prospects are strong, but PMU handover process could have been implemented earlier	Moderately satisfactory (4)
D	**CROSS-CUTTING PERFORMANCE (OVERALL)**		Moderately unsatisfactory (3)
1	Gender mainstreaming	Work on gender mainstreaming was highly limited, with negligible improvements in gender equality	Unsatisfactory (2)

	Project element	Summary assessment	Rating
2	M&E	Short-term monitoring in place, but no systems established for longer-term M&E	Moderately unsatisfactory (3)
3	Results-based management	Programme management was responsive, with process improvements undertaken as a result of learning	Highly satisfactory (6)

E	**PARTNER PERFORMANCE (OVERALL)**		Highly satisfactory (6)
1	UNIDO	PMU performance was strong, with quality of delivery increasing year-on-year	Highly satisfactory (6)
2	National Counterparts	Strong support from MSME and strong performance by IDEMI during final year of competition	Highly satisfactory (6)
3	Donor	Limited inputs beyond financing, but funds provided in timely manner	Satisfactory (5)

F	**OVERALL ASSESSMENT**	Satisfactory (5)

-	**GEF:** Need for follow-up	No issues identified.
-	**GEF:** Materialization of co-financing	**See paras 4.2.6-4.2.7 above (Efficiency) for full analysis** Co-financing of USD 3m was projected (per original programme document), including USD 2.5m in-kind from GOI. Some in-kind contributions were received, but these were never quantified. Unlikely that the level of in-kind contributions received approached the originally projected amounts.
-	**GEF:** Environmental and Social Safeguards	Not relevant for this project.

6. Conclusions and recommendations

6.0.1 GCIP India has delivered an effective, valuable contribution for entrepreneurs working in the country's cleantech sector. While there are numerous business incubators within the country, GCIP India's focus on the cleantech sector was unique, and was further differentiated by its emphasis on *business* development rather than technology validation or technical development. This emphasis was particularly valued by competition participants, who appreciated the systematic way in which the programme allowed them to focus on and strengthen the 'softer' aspects of their companies.

6.0.2 Ultimately, this support has delivered positive outcomes for participating businesses. Some entrepreneurs reported major, tangible results (investments, new markets) that would not have been attained if they hadn't participated in GCIP India. *More* significant though was the overall *contribution* that the programme delivered alongside the multiple other factors influencing business trajectories. The great majority of participants felt that GCIP India helped them to develop stronger companies, more robust business models and – in turn – improved chances of commercial viability and success.

6.0.3 GCIP India's operating model was also highly efficient, with the overall investment representing good value for money. Particularly cost-effective was the pro-bono model of support, whereby extensive, high-quality expert inputs (mentors, judges, investors) were secured to deliver a considerable proportion of the programme's work at no cost. This has established a potentially self-sustaining operational model and 'virtuous circle' for any future programme: numerous competition participants expressed a desire to eventually 'give something back' and provide their own expert inputs within future competitions.

6.0.4 Perhaps most significantly, there are indications that the programme has laid some early foundations for a cleantech innovation ecosystem within India. The networks and connections that have developed amongst the programme's participants and experts potentially represent some initial steps towards the development of an entrepreneurial ecosystem for cleantech that – although basic, small and limited to immediate GCIP stakeholders – did not previously exist.

6.0.5 The challenge now is to sustain and strengthen these early results, and to build on the nascent ecosystem that GCIP India has helped to develop. Based on detailed feedback from programme stakeholders and the evaluation's own findings, the following recommendations are made.

Continue the programme
6.0.6 Virtually all stakeholders felt that GCIP India should continue. Further, stakeholders were supportive of both MSME's hosting of the programme, and of IDEMI's administrative role. However, concerns remain regarding IDEMI's capacity to address key areas for programme improvement, particularly strengthening of the mentor pool (recommendations 4 and 5 below), and the linking of participants to broader networks in India and internationally (recommendation 6 below). Given UNIDO's deeper experience and institutional knowledge of the programme, it would be unwise for UNIDO to withdraw entirely from programme management in the near term. UNIDO are particularly well-placed to lead the design of any future programme, including the formal responses to this evaluation's recommendations.

However, once any new programme is established, UNIDO's continued involvement in day-to-day management should be time limited, with a view to fully embedding the core competition functions within India, regardless of whether those functions are transferred solely to IDEMI or shared across other institutions. At the same time, any stepping back from day-to-day management should categorically *not* preclude the continued *involvement* of UNIDO. UNIDO's technical inputs and brand add clear value to GCIP India: the attractiveness and value of the competition would be reduced without UNIDO's support. In the long-term UNIDO could potentially become a programme 'knowledge partner', similar to the role currently fulfilled by CTO.

Recommendation 1

UNIDO and MSME should identify and allocate appropriate resources for continuation of the programme. However, sufficient capacity to administer the day-to-day logistics of the programme exists within India, so UNIDO's involvement in day-to-day admin should be phased out ultimately. Initially though, UNIDO should take the lead role in designing any successor programme, including addressing this evaluation's recommendations. In the long-term UNIDO should also maintain its association with the programme, potentially becoming a 'knowledge partner' as it moves away from being an implementing partner.

Systematise post-competition engagement

6.0.7   The programme has helped to increase the probability that sustainable, commercially viable businesses will be developed. However, the sustainability and strengthening of programme results could be increased through the provision of post-competition support to participants. The PMU are well-connected, with a broader view of the cleantech environment than any individual entrepreneur: even short conversations between the PMU and previous participants could uncover new leads and opportunities that participants would not otherwise have identified. Crucially, this kind of support for previous participants would also advance the programme's longer-term efforts to build a national cleantech innovation ecosystem. Systematic, ongoing engagement with GCIP India alumni would also allow the PMU to implement longer-term monitoring of programme results, in turn improving their ability to understand, sustain and strengthen the programme's long-run impacts.

Recommendation 2

UNIDO and the PMU should ensure that the design of any future programme includes plans and resources for the provision of post-competition support to participants.

Recommendation 3

UNIDO and the PMU should ensure that any future programme's M&E framework goes beyond day-to-day monitoring and incorporates indicators and tools that support measurement of long-term results. This could potentially include a *requirement* that participants continue to provide relevant data to the PMU.

Broaden and strengthen the mentor pool

6.0.8   The current mentor pool is strong, and mentor inputs were highly valued by the great majority of participants. However, participants and *the mentors themselves* identified critical skills gaps being the absence of specialist experience relating to (i) marketing and (ii) investment banking. More broadly, some mentors also felt that more quality assurance was required to ensure the consistency and appropriateness of mentoring advice and contributions provided through the programme.

Recommendation 4

UNIDO and the PMU should recruit specialist expertise on (i) marketing and (ii) investment banking to the mentor pool.

Recommendation 5

UNIDO and the PMU should develop and implement a systematic approach to the oversight and quality assurance of mentoring inputs. Initially, this does not necessarily have to be complex and could – for example – be primarily based on joint briefings to the mentor pool in advance of critical programme events and/or periodic opportunities for peer learning amongst mentors.

Build wider networks

6.0.9 Participants identified the peer networks arising through GCIP India as being one of the programme's most valuable components. However, there were missed opportunities to extend these networks beyond India, whether with the eight other GCIP 'sister' countries, or through UNIDO's broader international networks.

Recommendation 6

UNIDO should establish formal links between GCIP India participants and the cohorts developed through other national GCIP programmes, and resources should be allocated to support exchange between these national cohorts. UNIDO should also explore whether and how their wider networks – both in India and internationally – could be linked with GCIP participants.

Develop a gender sensitive programme design

6.0.10 One of the weakest aspects of the programme's design and implementation was the absence of gender mainstreaming. This almost certainly reduced the programme's outreach and potential and – as a result – may also have reduced GCIP India's overall effectiveness.

Recommendation 7

UNIDO should commission a gender analysis to inform the design process for any follow-on programme. This analysis should – as a minimum – identify drivers and barriers to participation in the Indian cleantech section, and should identify principles and activities to improve gender mainstreaming during programme implementation mainstreaming during programme implementation.

Annex 1: Evaluation Framework

The evaluation purpose and objectives, the theory of change, and the evaluative requirements of both UNIDO and the GEF all provided the basis for the **evaluation framework**, which in turn underpinned and guided the whole methodological approach. The framework was structured against the standard **OECD-DAC criteria** agreed for the evaluation (relevance, efficiency, effectiveness, impact, sustainability) and identified **key evaluation questions**, supported by more detailed **sub-questions**.

Key evaluation questions	Sub-questions
RELEVANCE	
1. How relevant was the programme to the needs and priorities of the participating individuals and institutions?	**1.1** To what extent was the programme's work relevant to the needs of participants?
	1.2 To what extent was the programme relevant to India's national priorities and strategies?
	1.3 To what extent was the programme relevant to UNIDO's mandate?
	1.4 To what extent was the programme relevant to GEF Focal Area objectives and strategies?
EFFICIENCY	
2. How efficient was programme delivery?	**2.1** How cost-effective was the programme?
	2.2 Was the originally anticipated co-financing secured?
	2.3 Were programme roles, responsibilities and accountabilities sufficiently clear?
	2.4 How efficient and effective were the programme's management arrangements? What alternative operating models could have been implemented?
EFFECTIVENESS	
3. To what extent did the programme achieve its planned outputs and outcomes?	**3.1** What was the profile of programme participants (number, sector, gender-disaggregated staff base, turnover)?
	3.2 To what extent did the programme benefit participants?
	3.3 To what extent were institutional capacities developed to support ongoing, post-implementation delivery of the programme's work?
	3.4 What policies and regulations were identified and/or strengthened to improve promotion of clean energy technologies, innovation and entrepreneurship?
	3.5 How efficient and effective were the programme's monitoring and evaluation processes?
	3.6 What contributions did the programme make to GEF Focal Area objectives?

Key evaluation questions	Sub-questions
IMPACT	
4. What direct and indirect impact did the programme deliver?	**4.1** To what extent did the programme contribute to the development of a national entrepreneurship ecosystem for cleantech-focussed SMEs?
	4.2 What type and level of investment did participants secure as a direct result of the programme?
	4.3 What technologies did the programme help to bring to market?
	4.4 How many jobs did the programme help to create within participating enterprises?
	4.5 To what extent did the programme contribute to GHG emission reductions?
	4.6 Did the programme contribute to any unintended impacts, positive or negative?
SUSTAINABILITY	
5. To what extent are the programme's results likely to be sustained in the long term?	**5.1** What are the key factors that will affect (negatively or positively) the sustainability of the programme's results?
	5.2 What arrangements have been made to continue the programme's work beyond GCIP's implementation period?

Annex 2: Survey results

Introduction

As part of their Global Review of GCIP, the GEF Independent Evaluation Office undertook an online survey of GCIP participants from several GCIP countries, including India. The following annex compiles the responses received from GCIP India participants only. Not all of the global survey questions were directly relevant to this evaluation, so only the relevant questions and results are presented. Moreover, only the results of 'closed' questions are presented: the survey did include several open text response questions but – in order to maintain confidentiality – these text responses are not compiled here.

The survey was conducted during the period 8 February to 16 March 2018. It was circulated to **all 89 participants of all four GCIP India rounds** (2014-2017). A total of **24** survey responses were received, representing a **27% response rate**.

BUSINESS PROFILE

Q1: Is your team leader:

	n	%
Female	2	8%
Male	22	92%
TOTAL	24	100%

Q2: What sector does your enterprise primarily work in?

	n	%
Energy Efficiency	13	54%
Renewable Energy	4	17%
Waste Beneficiation	3	13%
Water Efficiency	2	8%
Other	2	8%
TOTAL	24	100%

Q3: What stage would you characterize your technology pre-GCIP?

	n	%
Concept	1	4%
Early alpha prototype	4	17%
Commercially ready - not yet deployed	4	17%
Commercial Pilot	4	17%
Actively deployed and generating revenue (not yet profitable)	5	21%
Actively deployed and generating revenue (profitable)	6	25%
TOTAL	24	100%

Q4: How long had your enterprise been in existence when you went through the GCIP program?

	n	%
2 years	5	21%
3 years	7	29%
4 years	1	4%
More than 4 years	11	46%
TOTAL	24	100%

Q5A: Is your enterprise incorporated?

	n	%
Yes	20	83%
No	4	17%
TOTAL	24	100%

Q5B: If your enterprise is incorporated, how many years has it been incorporated?

	n	%
Less than 3 years	2	10%
3-5 years	8	40%
6-10 years	4	20%
More than 10 years	6	30%
TOTAL	20	100%

Q6: What is the range of your enterprise's capitalization (USD)?

	n	%
Less than 100K	8	33%
100K – 500K	2	8%
500K – 1 Million	5	21%
1 Million – 1.5 Million	5	21%
1.5 Million – 2 Million	1	4%
Greater than 2 Million	3	13%
TOTAL	24	100%

GCIP PARTICIPATION

Q7: In what year did you go through GCIP?

	n	%
2014	8	33%
2015	4	17%
2016	5	21%
2017	7	29%
TOTAL	24	100%

Q8: What stage did you reach in the competition?

	n	%
Semi-finalist	13	54%
Finalist	11	46%
TOTAL	24	100%

Q9: How did you hear about GCIP?

	n	%
Direct Contact From GCIP	7	29%
Government Outreach	8	33%
GCIP Alumni	3	13%
Internet Search	4	17%
Other	2	8%
TOTAL	24	100%

CHANGES TO STAFFING PROFILE

Q9A: How many employees did / does the enterprise have…?

	Pre-GCIP	%	Now	%
5 or less employees	5	21%	1	4%
6-10	8	33%	9	38%
11-25	8	33%	8	33%
25 or more	3	13%	6	25%
TOTAL	24	100%	24	100%

% change to size of staff base (derived from survey results)

	n	%
Less than 0% (staff base has reduced)	2	8%
0% (no growth)	5	21%
Up to 25%	4	17%
25-50%	3	13%
50-100%	7	29%
More than 100%	3	13%
TOTAL	24	100%

Summary (derived from survey results)

Average no. employees pre-competition	16.5
Average no. employees now (early 2018)	25.4
Average change to size of staff base	+78%

Q9B: How many employees did / does the enterprise have…? (Female: Male ratio)

	Pre-GCIP	%	Now	%
0.0 (i.e. no female staff)	5	21%	3	13%
Less than 0.5 (i.e. less than 1 F to 2 M)	13	54%	16	67%
0.5 - 1.0	1	4%	2	8%
1.0 (F:M parity)	1	4%	0	0%
More than 1.0 (more F than M staff)	4	17%	3	13%
TOTAL	24	100%	24	100%

**Summary (derived from survey results)**

Average F:M staff ratio pre-GCIP	0.53
Average F:M staff ratio post-GCIP	0.59
Average change of F:M staff ratio	+6%

QUALITY ASSESSMENT OF GCIP

Q10: Please rank the following components of GCIP from most to least beneficial to your enterprise

	Ranking Order
Opportunities to showcase technology	1st
Training for business plan development	2nd
Mentorship on business development	3rd
Connection with an investor network	4th
Connection with potential business partners	5th
Technical advice through sector experts	6th
Increased capacity of supporting government institutions	7th
Improving the policy and regulatory environment for business operations	8th

NOTE: Question 11 required respondents to rate the quality of various GCIP inputs, using a 6-point scale ranging from 'Very poor' to 'Excellent'. The results table for Q11 presents the distribution of scores along the 6-point scale, along with a **weighted average score**, whereby 'marks out of ten' are calculated: the higher the weighted average score, the more positive the respondent's assessment. The weighted average scale is colour coded as follows:

0.00	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00

Very poor	**Neutral**	**Excellent**
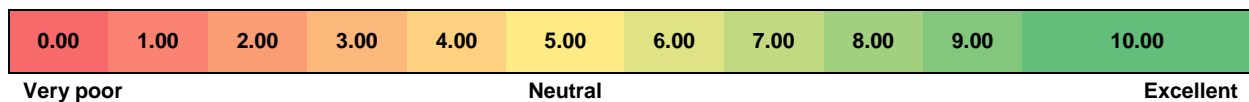
Q11: How would you rate the quality of the services you received?

	Very poor	Poor	Acceptable	Good	Very good	Excellent	Weighted Average Score (out of 10)
Training for business plan development	0%	5%	5%	35%	20%	35%	7.50
Connection with an investor network	22%	13%	17%	9%	39%	0%	4.61
Technical advice through sector experts	23%	23%	23%	18%	9%	5%	3.64
Mentorship on business development	5%	19%	19%	19%	10%	29%	5.90

	Very poor	Poor	Acceptable	Good	Very good	Excellent	Weighted Average Score (out of 10)
Opportunities to showcase technology	13%	8%	13%	29%	13%	25%	**5.92**
Connection with potential business partners	13%	17%	35%	30%	4%	0%	**3.91**

Q12: [Have you made changes to any of the following elements] in your business as a result of the GCIP?

	n	%
Revised financing plans	6	26%
Revised business planning	12	52%
Created new jobs within the enterprise	6	26%
Made alterations in product	11	48%
Revised marketing plan	12	52%
Revised business pitch	13	57%
Have made no changes	5	22%
TOTAL *(NB this is no. of respondents to the Q: respondents could provide more than one answer)*	23	100%

Q13: Have you had any contact with GCIP after completion of the program?

	n	%
Yes	19	79%
No	5	21%
TOTAL	24	100%

Annex 3: Persons interviewed

Programme Management

Name	Organization
Bisariya, Sanjay	MSME (Joint Development Commissioner)
Goel, Rishabh	UNIDO
Gujarathi, Pradeep	IDEMI
Mishra, Ram Mohan	MSME (Additional Secretary & Development Commissioner)
Rasal, Sanjeev	IDEMI
Shrestha, Sanjaya	UNIDO
Tandon, Sandeep	UNIDO
van Berkel, René	UNIDO

Participants

Name	Organization
Babbar, Mridul	Sagar Defence
Dang, Lakshay	Sagar Defence
Das, Sibabrata	Atomberg Technologies
Goel, Nitin	Inficold
Krishna, Ashwin	Promethean Energy
Mukherjee, Anjan	Taraltec / Hyca Technologies
Paul, Arindam	Atomberg Technologies
Parashar, Nikunj	Sagar Defence
Srinivas, B V	Aspartika Biotech
Suyal, Ashok	Rays Enserv
Thandasherry, Sandith	Navgathi

Experts / External Inputs

Name	Organization
Ahuja, Monish	Punjab Renewable Energy Systems
Chandrashekar, Karthik	Sangam Ventures
Chawla, Subodh	NRDC
Deodhar, Vinay	Clean Tech Solutions
Garg, Poonam	ICFI Venture Capital Funds
Joshi, DC	NRDC
Kanumury, Mahesh	Arivali Partners
Majumdar, Sanjeev	NRDC
Purushotham, H	NRDC
Singh, Nand Pal	UNIDO

Annex 4: Documents reviewed

Cleanovators!: Outstanding Projects From The Global Cleantech Innovation Programme - India, (2015), UNIDO / GCIP India
Cleanovators II: GCIP India 2016, (2016), UNIDO / GCIP India
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GEF UNIDO Cleantech Programme for SMEs in India: Request for CEO Endorsement, GEF Trust Fund Prodoc, (2013), UNIDO
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Operational Modalities for Public Private Partnership Programs, GEF/C.42/Inf.08, (2012), GEF
Terms of Reference: Independent terminal evaluation of GEF UNIDO CleanTech Programme for SMEs in India, (2017), UNIDO
Terms of Reference: Review of the GCIP for SMEs, (2018), GEF Independent Evaluation Office

Annex 5: Terms of reference

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Terms of reference

Independent terminal evaluation of GEF UNIDO Cleantech Programme for Small and Medium Enterprises in India

UNIDO Project ID: 120345
GEF Project ID: 4065

August 2017

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 factsheet[8]

Project title	Independent terminal evaluation of GEF UNIDO Cleantech Programme for Small and Medium Enterprises in India
Project ID	120345
GEF Project ID	4065
Region	Asia and the Pacific
Country	[Keywords]
Project donor(s)	GEF
Project implementation start date	
Expected duration	36 months
Expected implementation end date	31 December 2017
GEF Focal Areas and Operational Project	Climate Change
Other executing Partners	Ministry of Micro, Small and Medium Enterprises, India
Executing partners	UNIDO
UNIDO RBM code	GC31 (RECP & LowCarbonPrd)
Donor funding	910,000
Project GEF CEO endorsement / approval date	1/18/2013
UNIDO input (in kind, USD)	In kind 50,000; Cash 50,000
Co-financing at CEO Endorsement, as applicable	Ministry of Micro, Small and Medium Enterprises, 400,000 Grant Ministry of Micro, Small and Medium Enterprises and Indian Chambers of Commerce and Industry, 2,500,000 In-Kind
Total project cost (USD)	3,000,000
Mid-term review date	
Planned terminal evaluation date	2 October – 21 December 2017

(Source: Project document)

2. Project context

The Indian economy has rebounded from the global financial crisis, and is growing steadily at a rate of around 7-8 %. The industrial sector has been a consistent driver of this growth. However, this rapid growth has led to a concomitant increase in energy demand and consumption as well. Commercial energy consumption in India rose from 217 million tonnes of oil equivalent (MTOE) in 2005/06 to 272 MTOE in 2008/09. In 2016, growth in energy consumption in India was 5.4%, 39 MTOE. The industrial sector consistently remained the largest contributor to this consumption accounting for about 56% of the total commercial energy consumption (as fuel and feedstock) during 2007/08 (153 MTOE). This has placed India as the fourth largest global industrial energy consumer behind China, the US and Russia.

Non-OECD Asia, including China and India, account for more than half of the world's total increase in energy consumption over the 2012 to 2040 projection period. The top three coal-consuming countries are China, the United States, and India, which together account for more than 70% of world coal use.

It is predicted that the Indian industrial energy consumption can increase from 3.5 to 4.2 times between years 2007 and 2050 to reach unsustainable levels threatening energy security in the long run. In 2012, the composition of industrial energy requirement in India led by coal (33%) followed by oil (23%), biomass and waste (19%), electricity (15%) and natural gas (10%) further contributes to the problem. The increasing industrial energy demand and increasing greenhouse gas emissions arising from fossil fuel and power consumption,

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[8] Data to be validated by the Consultant

concerns the Government of India about inefficiencies with the way industry currently uses fuel and power. At the same time there is increasing international pressure for the country to stem its growing carbon dioxide emissions. It is also being realized that energy savings contribute to the profitability of businesses and also enhance their competitiveness.

The MSME (micro, small and medium enterprises) sector plays a key role in the Indian economy. In 2012, it contributed around 45% of manufacturing output, 40% of exports, and employed more than 69 million people. Most of the small-scale units were concentrated in around 400 geographical clusters across the country. Out of these, there were a large number of energy-intensive MSME clusters in the manufacturing sector (around 178 cluster manufacturing about 15 product categories), which required urgent energy efficiency measures for economic and environmental sustainability. Realizing the importance of this segment of industry, the NAPCC and the recent five year plans of the Indian government marked energy efficiency improvement among MSMEs as a high priority agenda. The Indian Government, through Ministry of MSME, BEE and DIPP launched programmes/schemes to promote innovations in clean energy focusing on energy efficiency and enhanced use of renewables among MSMEs. Lately, energy efficiency improvement among MSMEs is also gaining attention of multilateral organizations. GEF funded a number of projects focusing on energy efficient technologies in the MSME sector through UNDP, UNIDO and the World Bank.

Given this scenario, investing in clean low carbon technologies was seen as a solution that could significantly reduce energy consumption and CO2 emissions in India's industrial sector, while enabling the Indian economy to alleviate energy poverty and maintain steady growth. The project aimed to help promote SMEs that could innovate and develop commercially viable clean low carbon technologies to reduce GHG emissions.

The project aimed to build on lessons learnt from similar initiatives like: (i) Cleantech programme in USA and UNIDO's reliable partner after having executed a joint project in South Africa in 2011; (ii) Eco-Business Partnership Programme in Austria; (iii) and the Al Gore Sustainable Technology Venture Competition hosted by Cicero in collaboration with Confederation of Indian Industry, IITs and IIM in India..

3. Project objective

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

The Promotion of clean energy technology innovations and entrepreneurship in India 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

This component is based on the experience gained under the successful cleantech business competition and accelerator pilot programme carried out in South Africa in 2011 as part of the Greening of COP17 project that was funded by the GEF. This competition/accelerator programme was implemented by the Government of South Africa and UNIDO in conjunction with the National Cleaner Production Center (SA-NCPC), the Council for Scientific and Industrial Research (CSIR) and the Cleantech Open from USA.

A national platform involving Chambers of Industry at the national / state level In India was proposed to be set up to organize an annual competition to identify innovators within SME clusters, facilitate mentoring to link up with global value chain and set up a more complete accelerator, modelled on the national Cleantech Open in the United States and similar programmes in other parts of the world. The National Associations of SMEs, Cleantech Open, UNIDO and other key institutions were to partner to design this programme keeping in view local conditions and needs. To begin with, in 2013-14 the cleantech competition and accelerator were to focus on one region, expanding to two other states /regions at later stages.

Expected Outcomes:

1.1. A national level coordinating mechanism / platform established to promote clean technology innovations and entrepreneurship amongst SMEs; and

1.2. Clean energy technologies innovators identified, and supported, and cleantech entrepreneurs promoted

Component 2 – Building national capacity for clean technologies and the development of a supportive local entrepreneurial ecosystem. Partners and stakeholders including staff of National Associations of SMEs were to be trained on best practices for management of the platform. Capacity building initiatives were to include inter alia training of trainers on entrepreneurship start-ups, knowledge management and exchange of information on best practices and coordination mechanisms including specific focus on successful women entrepreneurs and participants.

Expected Outcomes:

2.1. National Associations of SMEs (such as FICCI, CII etc.) involved in capacity building initiatives

2.2. Mentoring and training programme developed for high growth SMEs identified through competition and outreach activities

2.3. Cleantech Institution established for training of trainers and entrepreneurs and linking with universities and institutions

Component 3 – Policy and institutional framework for scaling up cleantech competition, innovations and acceleration activities across India. The project aimed to assist in reviewing the policies and regulations relating to promotion of clean energy technologies, innovation and entrepreneurship to identify which ones need to be developed and/or improved.

Expected Outcomes:

3.1. Policies and institutional framework strengthened to promote cleantech innovations in SMEs 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 11 outputs. The full logical framework is included as annex 1.

4. Project implementation arrangements

As the GEF Implementing Agency, UNIDO holds the ultimate responsibility for the timely implementation of the project, the delivery of the planned outputs and the achievement of the expected outcomes. The project is being directly implemented by UNIDO in collaboration with MSME and other national partners.

A **Project Steering Committee** was established under the Chairmanship of the Development Commissioner and Additional Secretary MSME. Its members were to be drawn from MSME, National Associations of Commerce and Industry, DIPP, MNRE, BEE and UNIDO. The **Project Management Unit** (PMU) acts as the Secretariat of the PSC. The PMU consists of the National Project Manager (NPM) and a Project Administrative Assistant (PAA). Operating as an entity, the PMU is responsible for the day-to-day management, monitoring and evaluation of project activities as in the agreed project work plan. The PMU coordinates all project activities being carried out by project national experts and partners. Advisory working groups are to be established when necessary. Organogram of the management of the project implementation is shown in Figure 1.
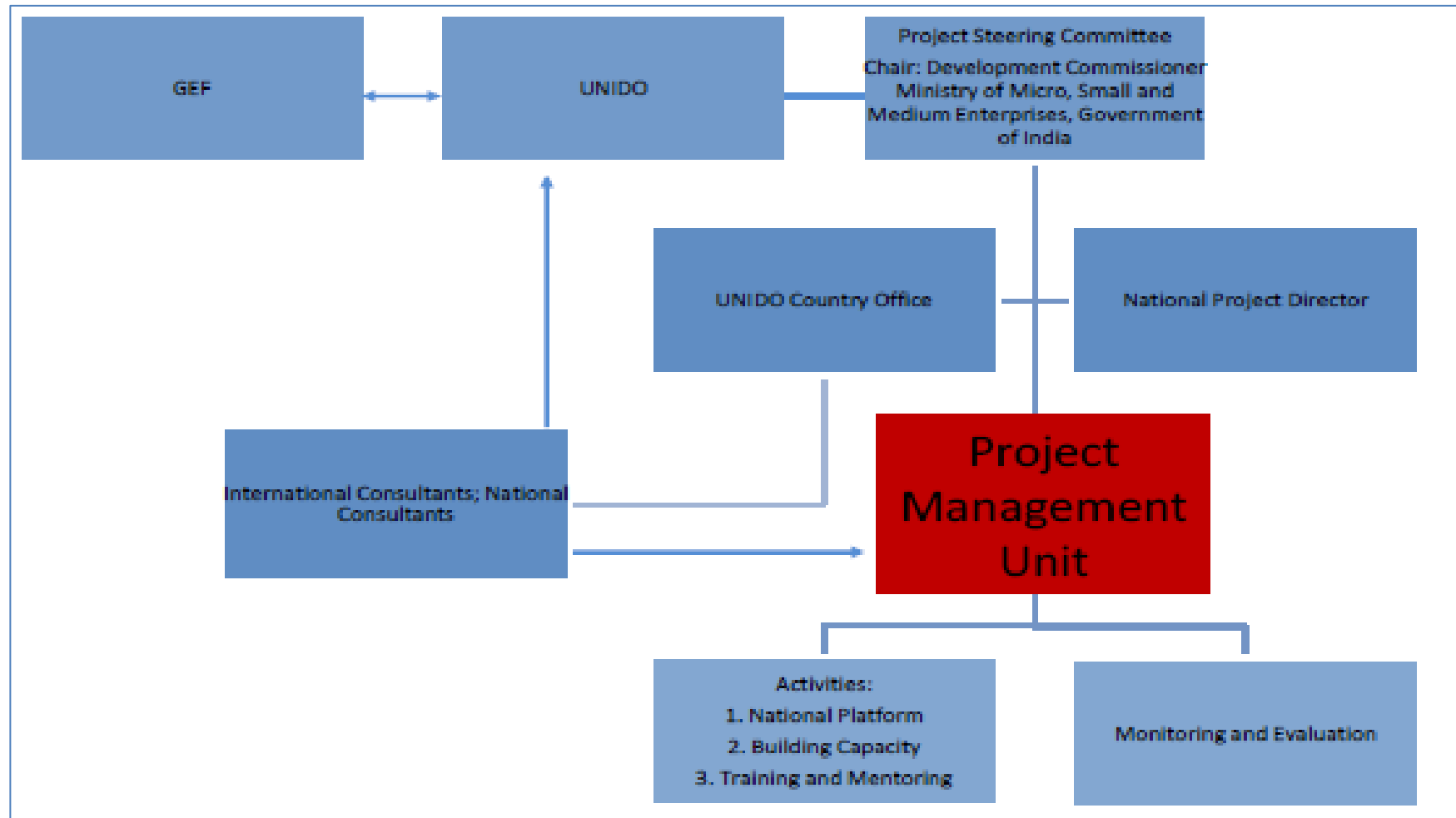
Figure 1. Project organization chart

5. Main findings of the Mid-term review (MTR)

Details of a mid-term review.

6. Budget information

Table 1. Financing plan summary

USD	*Project Preparation*	*Project[9]*	*Total (USD)*
Financing (GEF / others)	Click here to enter text.	1,000,000	1,000,000.00
Co-financing (Cash and In-kind)	Click here to enter text.	3,000,000	3,000,000
Total (USD)	0.00	4,000,000.00	**4,000,000.00**

Source: Project document / progress report

Table 2. Financing plan summary - Outcome breakdown[10]

Project outcomes	Donor (GEF/other) (USD)	Co-Financing (USD)	Total (USD)
1. A national level coordinating mechanism / platform established to promote clean technology innovations and entrepreneurship amongst SMEs & Clean energy technologies innovators identified and supported, and cleantech entrepreneurs promoted	280000	880000	1,160,000.00

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[9] Includes project management cost

[10] Source: Project document.

Project outcomes	Donor (GEF/other) (USD)	Co-Financing (USD)	Total (USD)
2. National Associations of SMEs (such as FICCI, CII, etc.) involved in capacity building initiatives & Mentoring and training programme developed for high growth SMEs identified through competition and outreach activities & Cleantech Institution established for training of trainers and entrepreneurs and linking with universities and institutions	460000	1300000	1,760,000.00
3. Policies and institutional framework strengthened to promote cleantech innovations in SMEs in the country	150000	500000	650,000.00
4. Adequate monitoring of all project indicators together with regular evaluations to ensure successful project implementation	20000	50000	70,000.00
Total (USD)	910,000.00	2,730,000.00	3,640,000.00

Source: Project document / progress report

Table 3. Co-Financing source breakdown

Name of Co-financier (source)	Classification	Type	Total Amount (USD)
UNIDO	Implementing Agency	In kind	50,000
		Cash	50,000
Ministry of Micro, Small and Medium Enterprises	Counterpart	Cash	400,000
Ministry of Micro, Small and Medium Enterprises and Indian Chambers of Commerce and Industry	Counterpart	In kind	2,500,000
Total Co-financing (USD)			3,000,000.00

Source : Project document / progress report

Table 4. UNIDO budget execution (under Grant 2000001433).

Item	2013	2014	2015	2016	2017	Total Expenditure (USD)
Contractual Services	1.586	76.578	80.086	6.826	140.000	385.075
Equipment			21.040	5.590	4.221	30.851
International Meetings		3.360	5.373	23.909		32.642
Local travel	22.702	21.593	14.653	14.838	12.356	86.141
Nat. .Consult./Staff	42.807	33.515	98.747	29.650	13.573	218.292
Other Direct Costs	974	5.344	9.150	5.380	441	21.289
Premises		46	25.070	464		24.652
Staff & Intern Consultants	8.414		2.577	8.367	653	20.010
Staff Travel	221		221			
Train/Fellowship/Study		15.627	498			16.125
Grand Total	76.703	156.062	256.973	174.096	171.243	835.077

Source: UNIDO project database

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 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 12/15/2017**Error! Reference source not found.**.

The evaluation has three specific objectives:

(i)   Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability and progress to impact;

(ii)   Identify key learning to feed into the design and implementation of the forthcoming projects; and

(iii)   Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing projects by UNIDO.

III. Evaluation approach and methodology

The TE will be conducted in accordance with the UNIDO Evaluation Policy[11] and the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle[12]. 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 (ODG/EVQ/IEV) 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.

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

[12] 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 India.

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. Table 5 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 5. 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 ODG/EVQ/IEV uses a six-point rating system, where 6 is the highest score (highly satisfactory) and 1 is the lowest (highly unsatisfactory) as per Table 6.

Table 6. 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 conducted from October to December 2017. 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.

   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 is scheduled to take place from 15 Sep to 30 Dec 2017. At the end of the field mission, there will be a presentation of the preliminary findings for all stakeholders involved in this project in the country visited among the participating countries.

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 ODG/EVQ/IEV, UNIDO PM, 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 ODG/EVQ/IEV standards.

Table 7. Tentative schedule

Timelines	Tasks
15 Sep—20 October 2017	Desk review and writing of inception report
2-3 November	Vienna: briefing with HQ
30 Oct-3 Nov	Field visit
4-5 December 18 December	Debriefing in Vienna Preparation of first draft evaluation report
15 Jan 2018	Internal peer review of the report by the UNIDO ODG/EVQ/IEV and other stakeholder comments to draft evaluation report
30 Jan 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 India 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 ODG/EVQ/IEV 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 Evaluation Manager.

The Inception Report will focus on the following elements: preliminary project theory model(s); 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 timetable[13].

Evaluation report format and review procedures

The draft report will be delivered to ODG/EVQ/IEV (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 UNIDO ODG/EVA 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 ODG/EVQ/IEV. Quality assurance and control is exercised in different ways throughout the evaluation process (briefing of consultants on methodology and process of UNIDO ODG/EVQ/IEV, providing inputs regarding findings, lessons learned and recommendations from other UNIDO evaluations, review of inception report and evaluation report by UNIDO ODG/EVQ/IEV).

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 ODG/EVQ/IEV 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 ODG/EVQ/IEV, which will submit the final report to the GEF Evaluation Office and circulate it within UNIDO together with a management response sheet

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[13] The evaluator will be provided with a Guide on how to prepare an evaluation inception report prepared by the UNIDO ODG/EVQ/IEV.

Annex 1: Project Results Framework

Results	Indicators	Means of Verification	Assumptions and Risks
Objective			
Promotion of clean technology innovations and entrepreneurship in selected SME clusters in India	Tons of GHG emissions avoided; Number of participant SMEs taking part in the cleantech programme;	Project progress reports; mid-term and final project evaluation reports	Continuous government support and commitment; Lack of commitment from entrepreneurs in the SME sector to participate in the competition
Outcomes			
1. National Platform (a coordination mechanism) established to promote clean technology innovations and business models for SMEs	Number of SMEs as members of the national platform Number of innovative businesses created Tons of GHG emissions avoided	Project progress reports; mid-term and final project evaluation reports	Continuous government support and participation
2. National capacity built to promote a national entrepreneurial innovations ecosystem including a convening platform	National Cleantech Programme hosted by national associations / chambers of commerce and industry Behavioral changes of SME entrepreneurs towards innovations Support institutions involvement in the cleantech programme	Project progress reports; mid-term and final project evaluation reports Financial institution's reports on scale of investments in innovator SMEs	Sufficient commitment and participation by the SMEs and industry associations

Results	Indicators	Means of Verification	Assumptions and Risks
3. Policy and institutional framework strengthened for scaling up cleantech innovations in selected SME sectors	Number of new policies and guidelines prepared to incentivize innovations in SMEs Strengthening of existing policies enabling SMEs increased access to financing and technologies	Project progress reports; mid-term and final project evaluation reports	Continuous support and participation by MSME and Chambers of Commerce and Industry
Outputs			
1.1 SMEs associations and national agencies involved in promoting clean technology innovations mobilized and a coordinating platform at the national level established	Number of SMEs associations and national agencies involved Number of entries, number of semi-finalists and finalists, etc	Monitoring and Project progress reports; mid-term and final project evaluation reports	Continuous support from government and national agencies
1.2 Annual cleantech business competition and accelerator established across selected SME clusters covering four cleantech sectors (launch Q3 2013)	Number of successful women entrepreneurs engaged and trained	Monitoring and Project progress reports; mid-term and final project evaluation reports	Continuous government support and committed participation of entrepreneurs
1.3 Extensive advocacy and outreach activities organized at the national level, and willing states and SME clusters identified for participation in the cleantech platform (Q2 2013)	Number of activities identified in the pilot phase Tons of GHG emissions avoided	Monitoring and Project progress reports; mid-term and final project evaluation reports	Continuous support and participation by government and entrepreneurs
2.1. Capacity building of national industrial association to host the cleantech programme	Number of MSME staff trained to be able to organize the competition and the acceleration programme	Monitoring and Project progress reports; mid-term and final project evaluation reports	Continuous support from the government and participation of the local partners
2.2. Mentor Program – Up to 200 mentors identified and trained	Number of mentors trained	Monitoring and Project progress reports; mid-term	Continued support from the trained mentors to participate

60

Results	Indicators	Means of Verification	Assumptions and Risks
2.3. Training Program - Intensive Training Seminar held over 3 days to support the 30 semifinalist companies. Additional training events held regionally and online 2.4. Corporate and PPP Forums held regionally	Number of semi-finalist companies supported by Cleantech Open Academy Number of shortlisted SMEs connected with funding and partnership opportunities Number of SME entrepreneurs invests in innovations Number of support institutions involved in the cleantech programme	and final project evaluation reports Project progress reports; mid-term and final project evaluation reports Monitoring and Project progress reports; mid-term and final project evaluation reports	in the program Committed participation of entrepreneurs Continuous support from SMEs, Government , National institutions and other national agencies
3.1. Enabling policy and regulatory environment created 3.2. Regional stakeholder meetings held and partnerships developed with leading institutions, agencies and universities across the country	Number of new effective policies in place for promoting cleantech innovations Number of existing policies strengthened for increased access of SMEs to financing and technologies Number of regional stakeholder meetings held and partnerships developed	Project progress reports; mid-term and final project evaluation reports Project progress reports; mid-term and final project evaluation reports	Continuous support from government Continuous support and participation by relevant stakeholders

Annex 2: Detailed questions to assess evaluation criteria

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

#	**Evaluation criteria**
A	**Progress to impact** ✓ Mainstreaming: 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? ✓ Replication: To what extent the project's specific results (e.g. methodology, technology, lessons, etc.) are reproduced or adopted ✓ Scaling-up: 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? The three UNIDO impact dimensions are: ✓ Safeguarding environment: To what extent the project contributes to changes in the status of environment. ✓ Economic performance: To what extent the project contributes to changes in the economic performance (e.g. finances, income, costs saving, expenditure) of individuals, groups and entities? ✓ Social inclusiveness: 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	**Project design**
1	• Overall design ✓ 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)? ✓ Risk managment: 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	• Logframe ✓ 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 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? ✓ 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

#	Evaluation criteria
	provide enough triangulation (cross-checking)? Are they indicators sex-diaggregated, 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	• Relevance ✓ 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	• Effectiveness ✓ 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	• Efficiency ✓ 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? ✓ 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?
4	• Sustainability of benefits ✓ Will the project results and benefits be sustained after the end of donor funding? ✓ Does the project have an exit strategy? *Financial risks:* ✓ What is the likelihood of financial and economic resources not being available once the project ends? *Socio-political risks:* ✓ 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?

#	Evaluation criteria
	✓ Is there sufficient public/stakeholder awareness in support of the project's long-term objectives?
	Institutional framework and governance risks:
	✓ 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?
	Environmental risks:
	✓ 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	• Gender mainstreaming
	✓ 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	• M&E:
	✓ ***M&E design***
	o Was the M&E plan at the point of project approval practical and sufficient?
	o Did it include baseline data and specify clear targets and appropriate indicators to track environmental, gender, and socio economic results?
	o 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;
	o Did it include budget adequate funds for M&E activities?
	✓ ***M&E implementation***
	o 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?
	o Are annual/progress project reports complete and accurate?
	o 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?
	o 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?
	o Were resources for M&E sufficient?
	o 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?
	o 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	• Project management
	✓ 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

#	Evaluation criteria
	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	• <u>UNIDO</u> ✓ *Design* o Mobilization of adequate technical expertise for project design o Inclusiveness of project design (with national counterparts) o Previous evaluative evidence shaping project design o Planning for M&E and ensuring sufficient M&E budget ✓ *Implementation* o Timely recruitment of project staff o Project modifications following changes in context or after the Mid-Term Review o Follow-up to address implementation bottlenecks o Role of UNIDO country presence (if applicable) supporting the project o Engagement in policy dialogue to ensure up-scaling of innovations o Coordination function o Exit strategy, planned together with the government
2	• <u>National counterparts</u> ✓ *Design* o Responsiveness to UNIDO's invitation for engagement in designing the project ✓ *Implementation* o Ownership of the project o Support to the project, based on actions and policies o Counterpart funding o Internal government coordination o Exit strategy, planned together with UNIDO, or arrangements for continued funding of certain activities o Facilitation of the participation of Non-Governmental Organizations(NGOs), civil society and the private sector where appropriate o Suitable procurement procedures for timely project implementation o Engagement with UNIDO in policy dialogue to promote the up-scaling or replication of innovations
3	• <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	**Overall project achievement** ✓ 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

UNIDO

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 [name of country]
Start of Contract (EOD):	September 15, 2017
End of Contract (COB):	December 15, 2017
Number of Working Days:	23/30 working days spread over 4 months

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. 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. 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

[2-3 short paragraphs: project summary + project objectives (from project document)]

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 of 3A accordingly (if needed);	• Adjust table of evaluation questions, depending on country specific context; • Draft list of stakeholders to interview during the field missions; • Brief assessment of the adequacy of the country's legislative and regulatory	4/5 days	Home-based

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
Assess the adequacy of legislative and regulatory framework relevant to the project's activities and analyze other background info.	framework.		
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.	• Inception report	2 days	Home based
2. Briefing with the UNIDO Independent Evaluation Division, project managers and other key stakeholders at UNIDO HQ.	• Detailed evaluation schedule with tentative mission agenda (incl. list of stakeholders to interview and site visits); mission planning; • Division of evaluation tasks with the National Consultant.	2 days	Vienna, Austria
3. Conduct field mission to [Name of country] in 201714.	• 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 initial findings prepared, draft conclusions and recommendations to stakeholders in the country, including the GEF OFP, at the end of the mission.	6/8 days	[Name of country]

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

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
4. Present overall findings and recommendations to the stakeholders at UNIDO HQ	• After field mission(s): Presentation slides, feedback from stakeholders obtained and discussed	1 days	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.	• Draft evaluation report.	6/8 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.	• Final evaluation report.	2/4 days	Home-based
	TOTAL	23/30 days	

MINIMUM ORGANIZATIONAL REQUIREMENTS

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

Technical and functional experience:

- Minimum of 10 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.

Reporting and deliverables

1) At the beginning of the assignment the Consultant will submit a concise Inception Report that will outline the general methodology and presents a concept Table of Contents;

2) The country assignment will have the following deliverables:

- Presentation of initial findings of the mission to key national stakeholders;
- Draft report;
- Final report, comprising of executive summary, findings regarding design, implementation and results, conclusions and recommendations.

3) Debriefing at UNIDO HQ:

- Presentation and discussion of findings;
- Concise summary and comparative analysis of the main results of the evaluation report.

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 [Name of country]
Start of Contract:	15 September 2017
End of Contract:	15 December 2017
Number of Working Days:	19/23 days spread over 4 months

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 tools in order to ensure their understanding in the local context; Analyze and assess the adequacy of legislative and regulatory framework, specifically in the context of the project's objectives and targets.	Evaluation questions, questionnaires/interview guide, logic models adjusted to ensure understanding in the national context; A stakeholder mapping.	3 days	Home-based

MAIN DUTIES	Concrete/measurable outputs to be achieved	Expected duration	Location
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. Assist and provide detailed analysis and inputs to the team leader in the preparation of the inception report.	• Detailed evaluation schedule • List of stakeholders to interview during the field missions.	4 days	Home-based
Coordinate and conduct the field mission with the team leader in cooperation with the Project Management Unit, where required; Consult with the team leader on the structure and content of the evaluation report and the distribution of writing tasks.	• Presentations of the evaluation's initial findings, draft 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.	6/7 days (including travel days)	[Name of country]
Prepare inputs and analysis to the evaluation report according to TOR and as agreed with the Team Leader.	Draft evaluation report prepared.	4/6 days	Home-based
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.	Final evaluation report prepared.	2 days	Home-based
TOTAL		25 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 [name of local language] 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
  ➢ Must provide a synopsis of the storyline which includes the main evaluation findings and recommendations
  ➢ Must present strengths and weaknesses of the project
  ➢ Must be self-explanatory and should be maximum 3-4 pages in length

I. Evaluation objectives, methodology and process
  ➢ Information on the evaluation: why, when, by whom, etc.
  ➢ Scope and objectives of the evaluation, main questions to be addressed
  ➢ Information sources and availability of information
  ➢ Methodological remarks, limitations encountered and validity of the findings

II. Country and project background
  ➢ Brief country context: an overview of the economy, the environment, institutional development, demographic and other data of relevance to the project
  ➢ Sector-specific issues of concern to the project[15] and important developments during the project implementation period
  ➢ Project summary:
     o Fact sheet of the project: including project objectives and structure, donors and counterparts, project timing and duration, project costs and co-financing
     o Brief description including history and previous cooperation
     o Project implementation arrangements and implementation modalities, institutions involved, major changes to project implementation
     o Positioning of the UNIDO project (other initiatives of government, other donors, private sector, etc.)
     o Counterpart organization(s)

III. Project assessment

This is the key chapter of the report and should address all evaluation criteria and questions outlined in the TOR (see section VI Project Evaluation Parameters). Assessment must be based on factual evidence collected and analyzed from different sources. The evaluators' assessment can be broken into the following sections:

  A. Project design

  B. Implementation performance
     o Ownership and relevance (Report on the relevance of project towards the country and beneficiaries, country ownership, stakeholder involvement)
     o Effectiveness (The extent to which the development intervention's objectives, outcomes and deliverables were achieved, or are expected to be achieved, taking into account their relative importance)
     o Efficiency (Report on the overall cost-benefit of the project and partner country's contribution to the achievement of project objectives)
     o Likelihood of sustainability of project outcomes (Report on the risks and vulnerability of the project, considering the likely effects of sociopolitical and

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[15] Explicit and implicit assumptions in the logical framework of the project can provide insights into key-issues of concern (e.g. relevant legislation, enforcement capacities, government initiatives, etc.)

institutional changes in the partner country, and its impact on continuation of benefits after the project ends, specifically the financial, sociopolitical, institutional framework and governance, and environmental risks)
  - o Project coordination and management (Report project management conditions and achievements, and partner country commitment)
  - o Assessment of monitoring and evaluation systems (Report on M&E design, M&E plan implementation, and budgeting and funding for M&E activities)
  - o Monitoring of long-term changes
  - o Assessment of processes affecting achievement of project results (Report on preparation and readiness / quality at entry, financial planning, UNIDO support, co-financing, delays of project outcomes/outputs, and implementation approach)
  - C. Gender mainstreaming

At the end of this chapter, an overall project achievement rating should be developed as required in Annex 2. The overall rating table should be presented here.

IV. Conclusions, recommendations and lessons learned

This chapter can be divided into three sections:

A. Conclusions

This section should include a storyline of the main evaluation conclusions related to the project's achievements and shortfalls. It is important to avoid providing a summary based on each and every evaluation criterion. The main conclusions should be cross-referenced to relevant sections of the evaluation report.

B. Recommendations

This section should be succinct and contain few key recommendations. They should:
  - ➢ be based on evaluation findings
  - ➢ be realistic and feasible within a project context
  - ➢ indicate institution(s) responsible for implementation (addressed to a specific officer, group or entity who can act on it) and have a proposed timeline for implementation if possible
  - ➢ be commensurate with the available capacities of project team and partners
  - ➢ take resource requirements into account.

  Recommendations should be structured by addressees:
  - o UNIDO
  - o Government and/or Counterpart Organizations
  - o Donor

C. Lessons learned
  - ➢ Lessons learned must be of wider applicability beyond the evaluated project but must be based on findings and conclusions of the evaluation
  - ➢ For each lesson, the context from which they are derived should be briefly stated

Annexes should include the evaluation TOR, list of interviewees, documents reviewed, a summary of project identification and financial data, including an updated table of expenditures to date, and other detailed quantitative information. Dissident views or management responses to the evaluation findings may later be appended in an annex.

Annex 5: Checklist on evaluation report quality
Project Title:
UNIDO PROJECT ID:
Evaluation team:
Quality review done by: Date:

Report quality criteria	UNIDO IEV 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 issues'. On the contrary, it concerns and should fully engage both men and women and is a precondition for, and an indicator of sustainable people-centered 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?