Terminal Evaluation of the UNEP/GEF Project "Technology Needs Assessment Phase II " (GEF ID number 4948) (2014-2018)

Evaluation Office of the UN Environment Programme

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Technology Needs Assessment Phase II
(GEF ID 4948)
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The evaluation consultant hopes that the findings, conclusions and recommendations will contribute to the successful finalization of the current project, formulation of a next phase and to the continuous improvement of similar projects in other countries and regions.

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ABOUT THE EVALUATION

Joint Evaluation: No.

Report Language(s): English.

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Brief Description: This report is a Terminal Evaluation of the UNEP/GEF project 'Technology Needs Assessment Phase II' implemented between 2014 and 2018.The project's overall development goal was to provide targeted financial and technical support to self-selecting developing countries to carry out Technology Needs Assessments (TNAs) and develop national Technology Action Plans (TAPs) for prioritized technologies that reduce GHG emissions, support adaptation to climate, and are consistent with national sustainable development goals. The evaluation sought to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, and the relevant agencies of the project participating countries.

Key words: Climate Change Mitigation, Climate Change Adaptation, Technology Needs Assessment (TNA), Technology Action Plan (TAP), UNEP DTU Partnership (UDP).[1]

[1] These data are used to aid the internet search of this report on the Evaluation Office of UNEP Website

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LIST OF ACRONYMS

AIT	Asian Institute of Technology
BAEF	Barrier Analysis and Enabling Framework
COP	Conference of Parties
CTCN	Climate Technology Center and Network
EA	Executing Agency
ENDA	Environment Development Action in the third world
EOU	Evaluation Office of UN Environment Programme
GCF	Green Climate Fund
GEF	Global Environment Facility
IA	Implementing Agency
INDC	Intended Nationally Determined Contribution
LAC	Latin America and the Caribbean
MCA	Multi-Criteria Analysis
M&E	Monitoring & Evaluation
MoU	Memorandum of Understanding
MTR	Mid Term Review
NAMA	National Appropriate Mitigation Action
NAP	National Action Plan
NAPA	National Action Plan on Adaptation
NDC	Nationally Determined Contribution
NDE	National Designated Entity
NGO	Non-Governmental Organization
PIF	Project Identification Form
PIR	Project Implementation Review
PoW	Programme of Work
ProDoc	Project Document (must be reviewed before any project can be undertaken, with the approval of the managing division director)
RC	Regional Centre
SD	Sustainable Development
SDG	Sustainable Development Goals
TAP	Technology Action Plan
TE	Terminal Evaluation
TEC	Technology Executive Committee
TNA	Technology Needs Assessment
ToC	Theory of Change
ToR	Terms of Reference
UCT	University of Cape Town
UDP	UNEP DTU Partnership
UN	United Nations
UNEP	UN Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

PROJECT IDENTIFICATION TABLE

Table 1: Project Identification Table

GEF Project ID:	4948		
Implementing Agency:	United Nations Environment Programme (UNEP)	**Executing Agency:**	UNEP DTU Partnership (UDP)
Relevant SDG(s) and indicator(s):	Goal 6: Clean water and Sanitation Goal 7: Affordable and Clean Energy Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation Goal 13: Take urgent action to combat climate change and its impacts Goal:17: Strengthen the means of implementation and revitalize the global partnership for sustainable development		
Sub-programme:	Climate Change	**Expected Accomplishment(s):**	(b) Low carbon and clean energy sources and technology alternatives are increasingly adopted, inefficient technologies are phased out and economic growth, pollution and greenhouse gas emissions are decoupled by countries based on technical and economic assessments, cooperation, policy advice, legislative support and catalytic financing mechanisms
UNEP approval date:	November 14, 2014	**Programme of Work Output(s):**	b.1. Economic and technical (macroeconomic, technology and resource) assessments of climate change mitigation options that include macroeconomic and broad environmental considerations are undertaken and used by countries and by major groups in developing broad national mitigation plans.
GEF approval date:	August 4, 2014	**Project type:**	Full-Sized Project

GEF Project ID:	4948		
GEF Operational Programme #:	GEF – 4	**Focal Area(s):**	Climate Change
		GEF Strategic Priority:	CCM-6
***Expected* start date:**	September 2014	**Actual start date:**	November 11, 2014
***Planned* completion date:**	December 2017	**Actual operational completion date:**	September 30, 2018[2]
***Planned* project budget at approval:**	USD 8,262,756	**Actual total expenditures reported as of end 2018:**	USD 7,324,979 (GEF and co-finance)
GEF grant allocation:	USD 6,105,835	**GEF grant expenditures reported as of end 2018**	USD 5,168,058
Project Preparation Grant - GEF financing:	n.a.	**Project Preparation Grant - co-financing:**	n.a.
***Expected* Medium-Size Project/Full-Size Project co-financing:**	USD 2,156,921	**Secured Medium-Size Project/Full-Size Project co-financing:**	USD 2,156,921
First disbursement:	December 2014	**Planned date of financial closure:**	April 2020
No. of formal project revisions:	2	**Date of last approved project revision:**	May 15, 2018
No. of Steering Committee meetings:	2	**Date of last Steering Committee meeting:**	November, 2016
Mid-term Review/ Evaluation *(planned date):*	July 2016 (18 months after project start)	**Mid-term Review/ Evaluation (actual date):**	October 2017
Terminal Evaluation *(planned date):*	March – September 2018 (within 6 months of end of the project implementation)	**Terminal Evaluation (actual date):**	October 2019 – February 2020
Coverage - Country(ies):	Armenia, Belize, Burkina Faso, Burundi, Bolivia (*), Egypt (*), Gambia, Grenada, Guyana, Honduras, Jordan, Kazakhstan and Lao PDR, Madagascar, Malaysia (*), Mauritania, Mozambique, Pakistan (**),	**Coverage - Region(s):**	Global: - Africa - Asia Pacific - Latin America and the Caribbean

[2] September 2018 is the operational completion date recorded in the project's Final Report, submitted to the GEF in January 2019. The Partners Cooperation Agreement has an end date of June 2018.

GEF Project ID:	4948		
	Panama, Philippines, Seychelles, Swaziland (Eswatini), Tanzania, Togo, Tunisia, Turkmenistan (*), Uruguay, Uzbekistan (*). (*) dropped-out after approval of project (**) joined the project on separate budget		
Dates of previous project phases:	**Phase I** implemented (November 2009 – November 2013) and evaluated (report published September 2016)	**Status of future project phases:**	**Phase III** (started May 2018 and expected to finish June 2020) i.e. already ongoing during the Terminal Evaluation of Phase II. Preparation of **Phase IV** also ongoing (initial approval of PIF already received, and Phase IV expected to start second half of2020)

EXECUTIVE SUMMARY

Project background

1. Technology Needs Assessment Phase II (TNA II) was supported by the Global Environment Fund (GEF) with a grant of USD 6,105, 835. The project was implemented by United Nations Environment Programme (UNEP) and executed by the UNEP DTU Partnership (Technical University of Denmark, UDP). The project secured a further 2,228,021 USD in co-financing of which USD 71,100 was received as cash (from CTCN), for the additional participation of Pakistan and USD 2,156,921 as in-kind contributions.
2. TNA II is the second phase in a series of four project phases, as follows:

   TNA I (Nov 2009 – Nov 2013) – evaluation report published Sept 2016

   TNA II (Nov 2014 - Sept 2018) – subject of this Terminal Evaluation and subject of a Mid-Term Review published in October 2017

   TNA III (May 2018 – expected end date March 2021)

   TNA IV (planned start second half of 2020)
3. The second phase of TNA was implemented in countries within three geographic regions: Africa, Asia Pacific and Latin America and the Caribbean. Within these regions a total of 28 countries took part: Armenia, Belize, Burkina Faso, Burundi, Bolivia, Egypt, Gambia, Grenada, Guyana, Honduras, Jordan, Kazakhstan and Lao PDR, Madagascar, Malaysia, Mauritania, Mozambique, Pakistan (added at last moment via co-financing), Panama, Philippines, Seychelles, Swaziland (Eswatini), Tanzania, Togo, Tunisia, Turkmenistan, Uruguay, Uzbekistan, of which 5 dropped out during the start-up phase (Bolivia, Egypt, Malaysia, Turkmenistan and Uzbekistan).
4. The primary aim of the TNA II project was to provide assistance to a group of developing countries to identify and analyze the priority technology needs for their country, which was intended to contribute to the development of a portfolio of environmentally sound technology (EST) projects and programs to facilitate the transfer of, and access to ESTs, and related know-how.
5. A Technology Needs Assessment (TNA) can be defined as a set of country-driven, participatory activities leading to the identification, selection and guidance for the implementation of sustainable technologies in order to reduce greenhouse gas emissions (mitigation) and/or vulnerability to climate change (adaptation).
6. Commitments to promote technology transfers to developing countries have been renewed at every Conference of Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC); TNA originated in COP 7 (2001, Marrakech). The first generation of TNAs until 2008 did not include Technology Action Plans (TAPs). TAPs were introduced in the second generation TNAs. This (second generation) TNA project process originates in the GEF Poznan Strategic Programme on Technology Transfer established at the 14th COP (2008, COP14), which had the aim of scaling up investment in technology transfers, thus enabling developing countries to address their needs for climate technologies.
7. The project – assisting developing countries to carry out (improved) Technology Needs Assessments (TNAs) - is aligned with the framework of Article 4.5 of the UNFCCC Convention. The TNA project, now in its second phase of implementation, derives from the Strategic Program on Technology Transfer and is designed to support developing countries to identify and analyze priority needs, which can form the basis for a portfolio of projects and programs to adopt environmentally sound technologies (ESTs).

8. In 2010, this global level of commitment led to the establishment of the Technology Mechanism, in the form of the Technology Executive Committee (TEC) and the Climate Technology Center and Network (CTCN), which aims to 'facilitate enhanced action' on technology development and transfer in order to support progress on climate change mitigation and adaptation.
9. The Paris Agreement of 2016 (COP15, December 2015) highlighted the importance of technology in implementing both mitigation and adaptation actions. The Technology Mechanism should facilitate and promote enhanced action on technology to help countries achieve the goals of the Paris Agreement, while at the same time recognizing the importance of rapidly accelerating transformational changes towards climate resilience and reduced greenhouse gas emissions.
10. As a country-driven process, it is recognized that a TNA should not be conducted in isolation but rather integrated with other similar ongoing processes in order to support national sustainable development and, not least, the implementation of countries' Nationally Determined Contributions (NDCs).

This evaluation

11. This is the Terminal Evaluation (TE) of the "Technology Needs Assessment Project – Phase II" (TNA II) and covers the period from project approval in 2014 to the end of operation in September 2018.
12. The evaluation predominantly focused on the design, actual implementation and achievements TNA phase II, but also, to some extent, analyzed the post-project results of TNA phase I (officially evaluated in 2016) and looked into the presently ongoing TNA phase III and planned phase IV (related to design aspects; i.e. which changes have been made in the methodology compared to Phase II).
13. The evaluation analyzed the changes in the context of TNAs and TAPs over the years (e.g. the political context set by the global UNFCCC processes), to identify changes in incentives and/or barriers to participation and uptake that were not envisioned in the design phase. The analysis also provides insight into the extent to which the TNA project has contributed to the perceived and/or agreed (and formalized) value of TNA/TAPs. The evaluation focused on three key questions addressed in the Conclusions section

Key findings

14. All envisioned outputs have been achieved: TNA and TAPs prepared for 22 countries, development of tools (revision of existing and development of new) and delivery of capacity building for national experts and strengthening the outreach and dissemination of the results/
15. The envisioned outcome of Component 1: *'National consensus on technologies in priority sectors established, compatible with Nationally Appropriate Mitigation and Adaptation Actions Plans, and/or National Climate Change Strategies'* – has been achieved as can be concluded after reviewing the reports (illustrating the participation of a broad group of stakeholders and their expressed opinions) and backed by the field interviews in the 3 visited countries with variety of stakeholders.
16. It is relevant to note an improvement on the 'lessons learnt' during Phase I, due to the fact that during this second phase of the project more or less all the countries were participating at the same time as preparing their Intended Nationally Determined Contributions (INDCs) / NDCs, which made them more aware of the need for the TNA process to be aligned with the other national processes.

17. The envisioned outcome of Component 2: *'Capabilities of key national actors / players in developing TNAs and TAPs built and/or strengthened'* – has been partially achieved. This is however an informed conclusion based on the documents read and people interviewed because the project did not carry out any pre- and post-project assessments of capabilities (nor assessments of relevant knowledge, skills or changes in attitudes). Capacity building activities (training workshops, technical assistance interventions and coaching and supervision during the drafting of reports) are only assessed via 'satisfaction' surveys amongst the countries and perceived impressions from the trainers (incorporated in the synthesis reports of the regional centers). As a result, most participants were satisfied with the interventions, with minor suggestions for further improvement (e.g. with regard to applied methodology and/or available materials). This, however, does not demonstrate or confirm that the capabilities of the participants have been increased in relevant ways or to a 'sufficient' level. A review of the recently drafted TNA and/or TAP reports shows that the capabilities still need further strengthening.

18. The envisioned outcome of Component 3: *'Networks and partnerships are strengthened for the uptake of TAPs and project ideas'* – has been partially achieved, evidenced at national level via the broad participation of different stakeholders during a sequence of workshops. However, as mentioned earlier, the variety of the stakeholders can be questioned with regard to proper involvement at the right moments of the private sector and local government.

19. Co-operation at inter-regional level is less evident, although it was encouraged during the regional capacity building workshops. It appears that most countries mainly focused on their own activities, with limited networking between countries. Only when countries already have networks in place, which this project then becomes part of, does anything other than ad-hoc exchanges take place.

20. Despite ambitions to put more emphasis on engaging with the donor community at the right moment of the trajectory of TNA/TAP development, (and thereby to secure potential funding for project ideas and align data gathering and information description towards requirements of donors), this was covered in a limited way; in several countries alignment was made with the country focal points of CTCN and/or GCF and very rarely other donors and/or investors, and during regional / international workshops the involvement of CTCN was secured (several joint workshops). It appears that the step towards post-TAP is still a weak element in the process, and strongly depends on the knowledge of the TNA-coordinator on this matter. Where the TNA-coordinator / host agency also incorporates the National Designated Entity for CTCN and/or GCF it is going more smoothly.

21. The following factors can be seen as key for success:

- **Select a qualified national implementation TNA-team** (responsibility - UDP in close co-operation with national host): a TNA-coordinator (strong coordinator skills, advocacy and lobbying, with a strong network amongst the key stakeholders, good contacts with, and acceptance by, the leading government agency) and national consultants (ample knowledge in their specific work and preferably also a strong network with other resource persons). UDP, as project executing agency, in principle does not have the final say in selecting the national TNA-team – it is in the hands of the recipient country, as part of the country ownership and driven-ness – but their ample experience, based on previous TNA-project is beneficial in the screening phase of the team, and in case of strong doubts (beforehand or during the process) the recipient country should be strongly encouraged to reconsider their initial team or replace members.

- **Define a strong national project governance structure at the start** (responsibility - national TNA-teams): whenever possible align with existing structures that proved to be effective, and not set up a new structure in order to avoid parallel networks, risks for overlaps and duplication and confusion during interconnected decisions. It is strongly advisable to have the national UNFCCC - National Designated Entity (NDE) as (co)chair of the governance structure and whenever possible also involve focal points for CTCN and appropriate representation (e.g. Designated National Authority) from funding partners such as GCF, the GEF and Adaptation Fund etc. in the structure, thereby creating a first entry point for engaging with the financial mechanisms.
- **Secure baseline awareness and knowledge level to support national capacity building** (responsibility - national TNA-teams with support of UDP and RCs): Assess the baseline awareness and knowledge level of all involved parties / stakeholders in the process and whenever imbalanced opt for national capacity building activities. Otherwise the outcome of the stakeholder participation process will be sub-optimal (due to lack of involvement of key stakeholders that lag in knowledge) and/or inefficient (due to long iterative processes because the laggard parties slowly get involved). As part of the continuous learning curve, this is already strengthened in the ongoing TNA phase III.
- **Secure high-level stakeholder awareness and political buy-in** (responsibility - national TNA-teams): if not properly covered via the governance structure – because not all members have high-level decision positions – additional mechanisms should be established to create the essential buy-in; continuous checking is required to establish whether the information has been sufficiently escalated to the required level.
- **Assure effective and dynamic stakeholder engagement** (responsibility - national TNA-teams): Stakeholder engagement is a core approach of the project, and all national teams started from day 1 in mobilizing the key stakeholders via consultation processes. However, it appeared that not all stakeholders are equally able/ready to mobilize. The TNA-topic often is felt to be closer to national governmental agencies and research entities (partly because of their mandate and daily work), with hesitation from the private sector, local governments, and the broad public (with the explicit 'problem' that the latter often is not adequately represented via organizations (CSOs). They have doubts about the value of the process – what is in it for them - and are unsure about the required time input. Based on experiences within countries that were more successful in engaging with these groups, keys for success are the timing of when to engage with them and preparation of a value proposition what is in for them / why they should be involved. Finally, it is essential to be clear and open on the planning process and objectives and to pay attention to expectation management from the start (to avoid disappointments, frustrations and potential drop out).
- **Timely alignment with donor agencies** (responsibility - national TNA-teams with support of UDP and UNEP): In addition to the abovementioned key stakeholders, specific attention has to be given to engage with financial institutes / mechanisms. Their role is pivotal post-project, but the earlier they are incorporated the better, thereby aligning data collection, analysis and descriptions of plans that later need finance to the requirements of those financial institutes / mechanisms. It is evidenced that those countries who had clear knowledge about financial mechanisms – due to their alignment with them and/or engaging at an early stage

- where more successful in defining project proposals. As part of the continuous learning curve, this is already strengthened in the ongoing TNA phase III.

Performance

22. The project performed at a 'Satisfactory' level against the majority of evaluation criteria and its overall performance rating, using the UNEP Evaluation Office' weighted aggregation method [3], is rated as '**Satisfactory**'.

23. UNEP Evaluation Office heavily weights performance under the Effectiveness and Sustainability criteria. Within these the project rated 'Highly Satisfactory' under the availability of outputs, 'Satisfactory' under achievement of outcomes and 'Moderately Likely' against likelihood of impact. Against the Sustainability criteria the project's performance was rated as 'Moderately Likely' against all three sub-categories (socio-political, institutional and financial sustainability. The performance ratings table can be found in the Conclusions section.

24. Ten lessons are presented in the Lessons Learned section and cover: alignment with national strategies/streamlined planning; choice of TNA coordinator and local consultants; capacity building; participatory approach/stakeholder involvement; effectively engaging with private sector; national ownership of the project; securing high-level stakeholder awareness and political buy in; strengthening the executing structure and global networking.

25. Nine recommendations are presented in the Recommendations section, summarized here as:

- Strengthen capacity building at country level;
- Develop new guidance materials, at least on gender responsive TNAs and TAPs (already started in Phase II) and on access to finance and proposal development base on TAPS and project ideas;
- Improve engagement with private sector;
- Strengthen the involvement of CTCN;
- Balance regional and national activities within this global project with multi-country involvement;
- Recommended interventions beyond TNA Phase IV;
- Strengthen the M&E process, and;
- UNEP to develop a protocol on monitoring co-finance.

[3] The description of all criteria and applied ratings are described in UNEP's Evaluation Criteria Ratings Matrix. Details can be found in Annex VI.

I. INTRODUCTION

26. This is a Terminal Evaluation (TE) of the "Technology Need Assessment Project - Phase II" (TNA II) and covers the period from project approval in 2014 to the end of operations in September 2018.

27. TNA II was supported by the Global Environment Fund (GEF) with a grant of USD 6,105, 835. The project was implemented by United Nations Environment Programme (UNEP) and executed by the UNEP DTU Partnership (Technical University of Denmark, UDP). The project secured a further 2,228,021 USD in co-financing (in-kind from UDP and UNEP and USD 71,100 cash from Climate Technology Center and Network (CTCN)), for the additional participation of Pakistan) and USD 2,156,921 as in-kind contributions.

28. Within UNEP the project was managed by the Energy and Climate Branch of the Resource Efficiency Division. UNEP's Energy and Climate Branch is based in Paris. UNEP has a long-standing partnership arrangement with the Technical University of Denmark, which acted as the Executing Agency for this work. TNA II was designed to contribute to UNEP's 2012-13 Programme of Work under the Climate Change Sub-Programme Expected Accomplishment b) *'Low carbon and clean energy sources and technology alternatives are increasingly adopted, inefficient technologies are phased out and economic growth, pollution and greenhouse gas emissions are decoupled by countries based on technical and economic assessments, cooperation, policy advice, legislative support and catalytic financing mechanisms'*. Specifically, it aimed to deliver against the output b i) '*Economic and technical (macroeconomic, technology and resource) assessments of climate change mitigation options that include macroeconomic and broad environmental considerations are undertaken and used by countries and by major groups in developing broad national mitigation plans'*.

29. TNA II is the second phase in a series of four project phases, as follows:

- TNA I (Nov 2009 – Nov 2013) – evaluation report published Sept 2016.
- TNA II (Nov 2014 - Sept 2018) – subject of this Terminal Evaluation and subject of a Mid-Term Review published in October 2017.
- TNA III (May 2018 – expected end date March 2021)
- TNA IV (planned start second half of 2020)

30. The second phase of TNA was implemented in countries within three geographic regions: Africa, Asia Pacific and Latin America and the Caribbean. Within these regions a total of 28 countries took part: Armenia, Belize, Burkina Faso, Burundi, Bolivia, Egypt, Gambia, Grenada, Guyana, Honduras, Jordan, Kazakhstan and Lao PDR, Madagascar, Malaysia, Mauritania, Mozambique, Pakistan (added at last moment via co-financing), Panama, Philippines, Seychelles, Swaziland (Eswatini), Tanzania, Togo, Tunisia, Turkmenistan, Uruguay, Uzbekistan, of which 5 dropped out during the start-up phase. A table summarizing the geographic coverage of other phases of the TNA project can be found in Annex IV.

31. In line with UNEP's Evaluation Policy and guided by the UNEP Programme Manual, the Terminal Evaluation was undertaken after completion of the project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The Terminal Evaluation pays great attention to the questions on the validity of the assumed input-output-outcome results chain; the satisfaction of key stakeholders with the project; appropriateness of governance and management

structures and processes; the outcomes achieved, and any unintended (positive/negative) outcomes.

32. The evaluation has two primary purposes:

- to provide evidence of results to meet accountability requirements, and
- to promote operational improvement, learning and knowledge sharing.

33. The evaluation is primarily intended for use by UNEP, UDP and those countries who have previously developed Technology Needs Assessments (TNAs) and Technology Assistance Plans (TAPs) or who intend doing so in the future. This report was also intended to contribute to ongoing UNFCCC discussions.

34. Therefore, the evaluation has identified lessons of operational relevance for future project formulation and implementation, especially for the upcoming fourth phase of the TNA project, which is currently being prepared.

II. EVALUATION METHODS

35. The overall design of this evaluation was based on the specifications in the Terms of Reference provided by the UNEP Evaluation Office. It used the project's Theory of Change (TOC) [4] and logical framework, as articulated in section IV of the Project Document (ProDoc), as its guide to the project's intended change process. These two design elements were used as the basis to assess how the project performed; whether or not the proposed logic of results was seen to hold; if the assumptions made in terms of external factors and conditions needed to achieve higher level outcomes were valid, and how a range of factors affected performance. An adaptive and participatory approach was taken throughout the evaluation process to clarify linkages between assumptions and results; the causal relationships between factors within the control of the project and those outside; on the achievement of outcomes and the critical enabling factors that did, or did not, support change at higher levels.

36. The evaluation predominantly focused on the design, actual implementation and achievements TNA phase II, but also, to some extent, analyzed the post-project results of TNA phase I (officially evaluated in 2016) and looked into the presently ongoing TNA phase III and planned phase IV (related to design aspects; i.e. which changes have been made in the methodology compared to phase II). Part of the observations related to implementation during phase II, related lessons learned and formulated recommendations are already being implemented in the ongoing phase III.

37. The evaluation analyzed the changes in the context of TNAs and TAPs over the years – e.g. the political context set by the global UNFCCC processes - to identify changes in incentives and/or barriers to participation and uptake that were not envisioned in the design phase. The analysis also provides insight into the extent to which the TNA project has contributed to the perceived and/or agreed (and formalized) value of TNA/TAPs.

38. In addition to the above-mentioned, available and accessible information of similar projects conducting TNA's in recent years were assessed - inter alia the GEF-funded project in South Africa (request for Project Implementation Review (PIR) for Fiscal year 2019), "Enabling South Africa to Prepare its Third National Communication (TNC) and Biennial Update to the UNFCCC" - to assess similarities and differences in the approach, outcomes and lessons learnt.

39. The evaluation focused on the following key questions:

- The most important for the evaluation was to understand how the countries are moving (or planning to move) to the implementation of their TNA activities (including the priority project ideas they have developed from the TNA process), plus how they use the results in their own processes (e.g. national/sectoral policies, strategies… also for NDC, GCF…) and how they communicate these results and priorities to the

[4] Theory of Change is a method and an approach that, in recent years, has been increasingly used for designing and monitoring development interventions and also as a framework for use in evaluations. A Theory of Change (TOC) of a project intervention describes the processes of change by outlining the causal pathways from outputs (goods and services made available by the project to the intended beneficiaries) through project outcomes (changes resulting from the use of outputs by key stakeholders) to other 'intermediate states' towards impact, in UNEP's case - long term changes that deliver (or lead to) environmental benefits and improved human living conditions.

donors in their country (also to the relevant decision makers from the respective priority sectors).

- It was also important to get feedback on the process, the tools, the support provided and to understand what are the things that make the assistance provided under this project more effective in some countries than in other countries (this would help in further guiding countries and providing tips for carrying out effective and high-quality TNAs).
- Private sector and donor/finance community engagement was reported to be an ongoing challenge – while there are some views on why this is a challenge (limited funding, long process, mainly government driven process, rather weak private sector in many of the countries etc.) it was valuable to explore further which countries have been most successful in this area and why.

40. The evaluation examined both the global and local perspectives and the findings of the evaluation were based on the following:

(a) Desk Review: A review of relevant background documentation, inter alia:

Project related:

- Project design documents (submitted for GEF-approval);
- Project output documents related to component 1; Technology Needs Assessments (TNAs), Barrier Analysis & Enabling Frameworks (BAEFs) and Technology Action Plans (TAPs) per country;
- Project output documents related to component 2; new or revised tools and handbooks;
- Project outputs documents related to component 3; official published and shared dissemination and outreach documents and web-based information;
- Project intermediary documentation; review comments on drafts of above-mentioned output documents (to check quality control), prepared meta-data overviews;
- Project progress tracking documents; annual reporting (narrative and financial information), notes from project steering committee, etc.

Not-project related:

- Relevant documentation on TNA/TAP published by key stakeholders (UNFCCC, TEC, CTCN, GEF, GCF), i.e. studies on experiences, good practices and lessons learnt conducting TNAs.

(b) Review of meta-data: UNEP DTU Partnership has aggregated valuable information from the over 100 country reports, (3 to 6 reports per country), consisting of classifications of identified technologies, barriers, drivers and suggested actions - that are not publicly accessible but were shared with the evaluator.

(c) Site visits:

- Visit to UNEP DTU Partnership as the key Executing Agency and assessment of their information systems;
- Participation in a UNFCCC – Technology Executive Committee (TEC) meeting to assess the political context of TNAs;

- 3 country visits were made to countries that participated in TNA phase II to further illustrate the analysis from the desk review via 'story-telling'. The 3 countries (Uruguay, Eswatini and Armenia) were selected based on reports of successful implementation processes and/or 'special' outcomes, best practices, or lessons learnt;
- As part of these country visits the following were additionally consulted:
  - A country that participated under TNA phase I (Argentina) to analyze post-project activities and thereby sustainability and impact of the work
  - A country that conducted a comparable TNA-project independently (South-Africa) to assess similarities and differences in the approach, outcome and lessons learnt

(d) Semi-Structured Interviews (individual or in group) with key stakeholders, either face-to-face (at country level) or virtually (Skype calls):

- Implementing agency: UNEP
- Executing agency: UNEP DTU Partnership and all involved Regional Centers (RCs)
- Members of the Project Steering Committee
- Key contextual stakeholders: UNFCCC, TEC, GEF, GCF
- Key stakeholders at country level: TNA-coordinator, national consultants and involved stakeholders (Ministries and private sector entities).

(e) No surveys were undertaken under this evaluation, based on the expert-opinion (UNEP DTU Partnership) on the efficacy of surveys in this context; in the past it appeared that the effort was not in line with the gained output (a relatively low response with limited additional value).

41. The evaluator: i) reviewed all of the available project documentation and selective documents reflecting experiences with TNAs (listed in Annex III) to get insights on planned and actual activities, outputs and perceptions of outcomes and impacts and lessons learned (as described in periodic reports and internal synthesis reports from project implementers); ii) conducted virtual interviews with national implementers in different countries and all involved regional centers and ii) made field visits to three specific countries (including holding interviews with implementers and involved stakeholders). All the material gathered, including facts, figures and perceptions from respondents involved in, or affected by the project were triangulated and wherever possible justified by evidence and examples. All synthesized data gathered were balanced against the evaluation framework and the Theory of Change to define to what extent goals and objectives were achieved and which lessons learnt can be drawn (strengths and weaknesses) to result in conclusions and recommendations.

42. In order to assess project performance and determine outcomes and impacts, the evaluation focused on a set of key questions. The evaluation matrix was presented in the Evaluation Inception Report. The main evaluation criteria and questions were organized under different sections with proposed sub questions so as to deepen the questioning. The evaluation matrix also describes the means of verification as well as the indicators that were used to answer each of the questions.

43. The main limitation encountered by the Evaluator relates to the accuracy and depth of recall by those people who were interviewed as they were being asked to reflect on work that was carried out several years ago. This evaluation was initiated in August 2019, 11 months after the work had been completed. In particular, some bodies involved in implementation, such as the Regional Centers, had difficulty referring in detail to the

applied approach (and lessons learnt) during phase II and/or updated approach in the already ongoing phase III (in which a similar but improved approach is applied).

44. The ambition of the project reflected in its TOC and logical framework is to facilitate the assessment and planning process, which stops short of the desired outcome, i.e. the uptake of Technology Action Plans or impact, i.e. benefits accrued from the implementation of well-designed plans. However, this is the level of results which is necessary for effective change to take place. This evaluation therefore drew on the longer-term experiences of countries in the first phase of TNA I, which is not an exact comparator for the effects of TNA II. It also compared experiences with other projects designed to support technology assessment and planning processes, in the knowledge that these are also not direct comparators to the TNA project.

45. The highly multi-dimensional / global nature of the project and the participation of so many countries across different geographic region also posed challenges to an evaluation carried out with finite resources and within a prescribed timeframe.

46. Throughout this evaluation process and in the compilation of the Final Evaluation Report efforts have been made to represent the views of both mainstream and more marginalized groups. Data were collected with respect for ethics and human rights issues during the field visits. However, there was very limited evidence that the project specifically addressed these.

47. All information was gathered, after prior informed consent from people, all discussions remained anonymous and all information was collected according to the UN Standards of Conduct.

III. THE PROJECT

A. Context

48. A Technology Needs Assessment (TNA) can be defined as a set of country-driven, participatory activities leading to the identification, selection and guidance for the implementation of sustainable technologies in order to reduce greenhouse gas emissions (mitigation) and/or vulnerability to climate change (adaptation).

49. Commitments to promote technology transfers to developing countries have been renewed at every Conference of Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC). TNA originated in COP 7 (2001, Marrakech). The first generation of TNAs until 2008 did not include TAPs. TAPs were introduced in the second generation TNAs. This (second generation) TNA project process originates in the GEF Poznan Strategic Programme on Technology Transfer[5] established at the 14th COP (2008, COP14), which had the aim of scaling up investment in technology transfers, thus enabling developing countries to address their needs for climate technologies.

50. The project – assisting developing countries to carry out (improved) Technology Needs Assessments (TNAs) - is aligned with the framework of Article 4.5 of the UNFCCC Convention. The TNA project, now in its second phase of implementation, derives from the Strategic Program on Technology Transfer and is designed to support developing countries to identify and analyze priority needs, which can form the basis for a portfolio of projects and programs to adopt environmentally sound technologies (ESTs).

51. In 2010, this global level of commitment led to the establishment of the Technology Mechanism, in the form of the Technology Executive Committee (TEC) and the Climate Technology Center and Network (CTCN), which aims to 'facilitate enhanced action' on technology development and transfer in order to support progress on climate change mitigation and adaptation.

52. The Paris Agreement of 2016[6] (COP15, December 2015) highlighted the importance of technology in implementing both mitigation and adaptation actions. The Technology Mechanism should facilitate and promote enhanced action on technology to help countries achieve the goals of the Paris Agreement, while at the same time recognizing the importance of rapidly accelerating transformational changes towards climate resilience and reduced greenhouse gas emissions.

53. As a country-driven process, it is recognized that a TNA should not be conducted in isolation but rather integrated with other similar ongoing processes in order to support national sustainable development and, not least, the implementation of countries' Nationally Determined Contributions (NDCs).

54. NDCs are at the heart of the Paris Agreement and the achievement of these long-term goals. NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive NDCs that it intends to

[5] In November 2008, the *Strategic Program on Technology Transfer* was discussed and approved by the GEF Council and the LDCF/SCCF Council. The UNFCCC COP14 welcomed the GEF's Strategic Program on Technology Transfer, renaming it to the *Poznan Strategic Program on Technology Transfer*

[6] The Paris Agreement entered into force on 4 November 2016, thirty days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 % of the total global greenhouse gas emissions deposited their instruments of ratification, acceptance, approval or accession with the Depositary.

achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.

55. The primary aim of the TNA II project was to provide assistance to a group of developing countries (see table 1) to identify and analyze the priority technology needs for their country, which was intended to contribute to the development of a portfolio of environmentally sound technology (EST) projects and programs to facilitate the transfer of, and access to ESTs, and related know-how.

Table 2: Involved countries by region

Africa & Middle East	Asia & CIS	Latin America
Burkina Faso	Armenia	Belize
Burundi	Kazakhstan (only TAP in II)	Bolivia (withdrawn)
Egypt (withdrawn)	Lao PDR (only TAP in II)	Grenada
Gambia	Malaysia (withdrawn)	Guyana
Jordan	Pakistan (adding with separate funding)	Honduras
Madagascar	Philippines	Panama
Mauritania	Turkmenistan (withdrawn)	Uruguay
Mozambique	Uzbekistan (withdrawn)	
Seychelles		
Swaziland / Eswatini		
Tanzania		
Togo		
Tunisia		

Source: ProDoc and progress reports

56. Since the implementation of the first phase of the TNA project in 2009, and evidenced in the ongoing third phase of the project, both the global context and the project itself have been progressively developing / improving – an adequate learning curve, in the boundaries of the GEF-grant conditions.

57. At a global level, e.g. in the international UNFCCC negotiations and reflected in the technology mechanisms promoted in the Paris Agreement, during the life of this project the value of TNAs has gained greater recognition. This greater appreciation has also been fueled by improvements in the quality of the TNAs, which has become evident since Phase I of the TNA project, and the recognition that TNAs can provide valuable inputs into required NDC's.

58. The project design has developed over time in response to the global attention and emphasis as well as in response to its own learning. Specifically, the sequencing of topics addressed in the capacity building and coaching have been improved on a step-by-step basis (e.g. the content of the training activities has been revised and made more practical (i.e. not only via theoretical explanation but with hands-on exercise) and aligned to the needs of the countries, and incorporating / sharing lessons learnt from predecessors (involving representatives from earlier projects to share their experiences. The guidance materials are also being continuously reviewed and improved (this is similar to the improvement of training materials, but also includes the revision of existing guidebooks, development of new guidebooks and development of e-modules).

59. The funding level per country has been increased over the years, justified by the recognition that more capacity building, and notably in-country capacity building, is

beneficial to the TNA process. This was highlighted in the Terminal Evaluation of TNA Phase I and was accepted by the GEF.

Table 3: Comparison of different phases of the global TNA-project

Project	Period	Number of Countries	Budget per country	Context of TNA	Approach (supporting tools)
Pre-project	2001 – 2009	± 70			UNDP guidance manual
Phase I	2009 – 2013	32	202,000 U$		2 regional training workshops Updated guidance material (an improve general TNA guidebook) and new materials
Phase II	2014 – 2018	23	245,000 U$	Paris Agreement – 'pull factor' from NDC-commitment Availability of success stories	2 regional training workshops Updated guidance materials and further development of new materials (stakeholder engagement, MCA, adaptation) plus e-modules)
Phase III	2018 – 2020	23	270,000 U$	Continuation	3 regional training workshops plus national training workshops More emphasis for dissemination and outreach, and finance Updated guidance materials and further development of new materials (e.g. gender, finance)
Phase IV	2020 – 2023	?	270,000 U$	Continuation	3 regional training workshops plus national training workshops More emphasis for dissemination and outreach, and finance

Source: ProDoc of respective projects and interviews with Executing Agency (UDP)

B. Objectives and components

60. This project was supported from window (1) of the Strategic Program on Technology Transfer, and was designed to originally support a total of 27 countries via targeted financial and technical support to carry out TNAs and develop national TAPs for prioritized technologies that reduce GHG emissions, support adaptation to climate change and are consistent with national sustainable development objectives. Five countries withdrew during the project life.

Table 4: Summary of project components/objectives, outcome and outputs

Component/ Objectives	Outcomes	Outputs
1. Facilitating the preparation of Technology Needs Assessments (TNAs) in twenty-five (25) developing countries – or, where these have already been prepared / started, making them more strategic and useful in an operational sense – and Technology Action Plans (TAPs) in twenty-seven (27) developing countries	1.1 National consensus on technologies in priority sectors established, compatible with Nationally Appropriate Mitigation and Adaptation Actions Plans, and/or National Climate Change Strategies	1.1.1 An institutional structure for TNA – TAP process implementation put in place 1.1.2 New or in some cases updated / strengthened TNAs in 25 countries and TAPs in 27 countries
2. Developing tools and providing capacity building and information on methodologies to support preparation of Technology Needs Assessments (TNAs) and Technology Action Plans (TAPs)	2.1 Capabilities of key national actors / players in developing TNAs and TAPs built and/or strengthened	2.1.1 New tools to identify and assess adaptation technology needs are developed 2.1.2 Capacity building tools and methodologies covering adaptation and mitigation technology needs assessments and action planning are further improved / updated to address gaps identified during implementation of the TNA Phase I project 2.1.3 Tools and methodologies are widely disseminated and made available, where needed, to support technology identification and prioritization work in closely related initiatives such as the CTCN and the pilot regional climate technology networks / finance centers funded by the GEF
3. Strengthening outreach, dissemination and networking activities to promote use and funding of TNAs and TAPs priorities	3.1 Networks and partnerships are strengthened for the uptake of TAPs and project ideas	3.1.1 Thematic Networks strengthened, with strong links to Regional Centers, GEF and UNFCCC networking initiatives (technology transfer focused), and involving regional and global stakeholders such as regional development banks, business associations, academic institutions, Chambers of Commerce

Source: Request for CEO Endorsement, 2014

C. Stakeholders

61. During the inception phase of this evaluation a stakeholder analysis was undertaken to identify key stakeholders and their role in the project design and implementation. This analysis was used to collect evidence of stakeholder mapping/analysis and later to

assess the completeness and effectiveness of stakeholder participation. This evaluation considered the following criteria for stakeholder analysis by stage of the evaluation.

Table 5: Stakeholders at different stages

Inception report	Review of project design	Review of project outputs and outcomes	Review of factors affecting performance
Identification of which individuals or groups are likely to have been affected by, or to have affected the activities of the project. Methodology and mechanisms to ensure participation of key stakeholder groups in the process. Identify key channels of communication between the project and its stakeholders (and between the stakeholders themselves)	Have all stakeholders who are affected by or who could affect (positively or negatively) the project been identified and explained in the stakeholder analysis? Did the main stakeholders participate in the design stages of the project and did their involvement influence the project design? Are the economic, social and environmental impacts to the key stakeholders identified, with particular reference to the most vulnerable groups? Have the specific roles and responsibilities of the key stakeholders been documented in relation to project delivery and effectiveness? For projects operating at country level, are the stakeholder roles country specific? Is there a lead national or regional partner for each country/region involved in the project?	Were outputs accessible to all the relevant stakeholder groups? Did desired outcomes and impacts occur amongst all stakeholder groups (and if not, consider why this might be)? Have there been any unanticipated outcomes or impacts with particular reference to the most vulnerable groups?	Participation of key stakeholders What were the interests, roles and responsibilities of key stakeholders in the project? In what way did their performance affect the achievement of project outputs and outcomes?

62. The project stakeholders are a very large group consisting of a mixture of implementing and executing agencies, collaborative partner countries and multiple others within each of the participating countries and also global agencies. The programme document states (section B1) that the TNA project intended to involve a wide range of stakeholders at the national level, among partners such as the regional centers of excellence and within financing and global organizations. At a country level, national teams were expected to involve all relevant government agencies such as Ministries of Environment and Natural Resources, Energy, Planning, Technologies and many others; also, researchers and centers linked to climate change mitigation and adaptation, private firms and financers. Globally the GEF and others are key stakeholders.

63. The TNA project design provided for financial and technical inputs, which were intended to feed into national level structures, within which most of the work for the country is undertaken. This began with the institutional structure for the national TNA team, including its designated home within a national ministry, who acted as the coordinators for the whole exercise and undertook initial work with national stakeholders to develop the work plan for the project within the country. The Regional Centers and the international project team were expected to feed knowledge, experiences and best practices into the national exercises, assist in developing approaches and

methodologies and share these across all countries to develop common approaches. The variety of partners and stakeholders who have (or could have) collaborated in delivering the outputs and promoted the move toward outcome-level objectives, through funding, knowledge sharing and technical expertise, are summarized in Table 6 below.

Table 6: Stakeholder responsibilities & contributions

Level	Stakeholder	Responsibilities and Contributions
Central Programme Management	UNEP	Ensure programmatic and financial accountability Responsible for technical components Monitoring and reporting mechanisms within the framework of the Global and National Programs
Global implementation	UNEP DTU Partnership	Responsible for technical components and project execution
	Global Steering Committee	Provides policy guidance Takes outputs from project to develop outcome-level objectives Composed of representatives from the global stakeholder agencies
	Regional Centers (RCs)	Close collaborators of UDP in the specific regions for the technical support and capacity building activities (Asia and CIS: AIT and Ala Druta, Africa and Middle-East: ENDA and UCT, Latin America and Caribbean: Fundación Bariloche and Libelula)
	UNFCCC	Support to provide convening expertise in the CC agenda, knowledge inputs, global policy and financing activities within the framework of the Global and National Programs. Linkages to and advice of the Technology Expert Committee (TEC) Collaboration and active involvement in the regional capacity building and outreach activities
	Technology Expert Committee (TEC)	Provide links to, advice and share findings on technology for CC and UNFCCC process
	GEF	Provides strategic guidance to staff in UNEP regarding the management and implementation of activities.
	CTCN	Following up on the results of the TNA and TPA to assist countries on their National Programs.
	GCF	Provides links to technology funds and to other bank financing
	World Bank and regional Development Banks	Provides links to technology funds and to other bank financing Links to TNA work in World Bank supported projects
	Donor countries	Contributions to technologies and financing
	Other organizations and programs	Examples: Think tanks and research organizations Improve/share knowledge, best practices on effective technology identification, selection and transfer Collaborate to implement certain activities; Technical support to implementation.
National Level	National governments	Work to implement bi-lateral projects. Help with understanding country-specific needs. Help integrate into required UNFCCC mandated reports; develop national plans and into national policy and budgets.
	National private sector entities	Work to implement bi-lateral projects. Help with understanding country-specific needs. Help to develop national plans and potential co-funding.
	National experts and research organizations	Identify, define and help with understanding country-specific needs. Collaborate to improve/share knowledge, share practices. Collaborate to implement activities. Provide logistical, technical or administrative support to implementation.
	Members of civil society organizations	Help with understanding their own and country-specific needs. Collaborate to improve/share knowledge, share practices. Collaborate to implement activities.

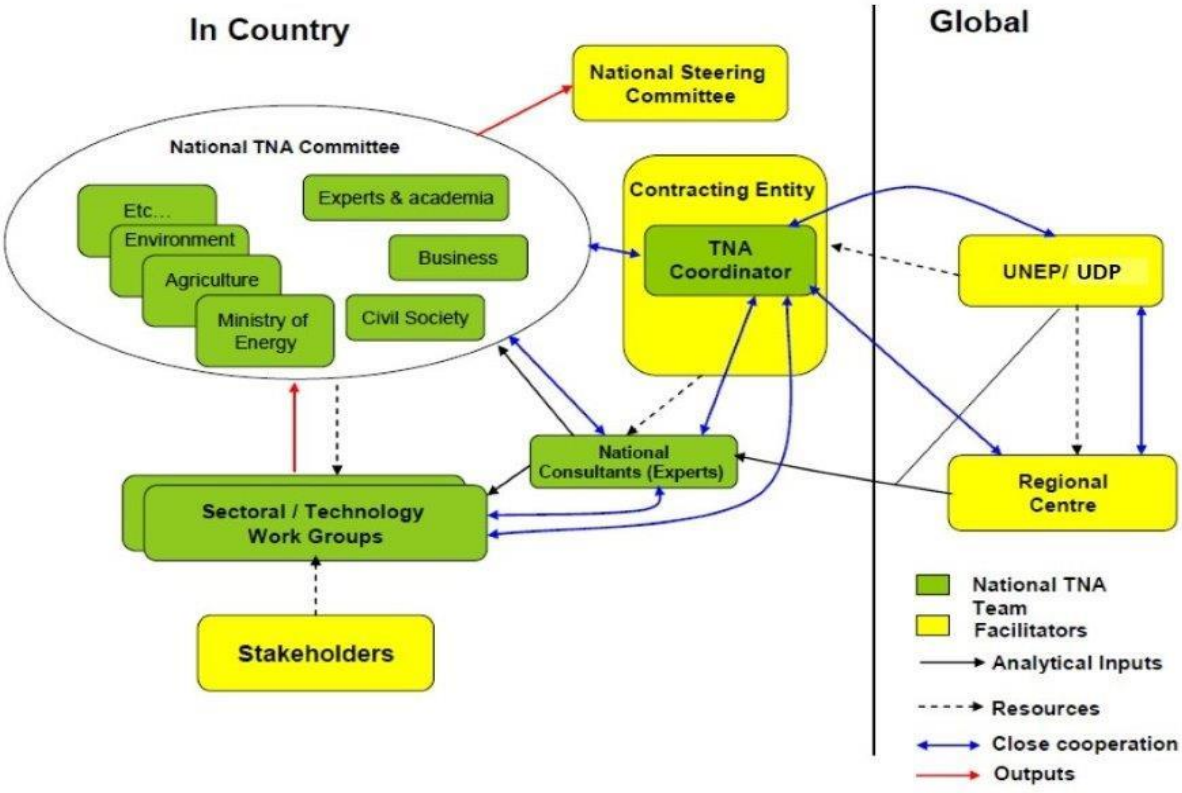
Source: Request for CEO Endorsement and reports of the Steering Committee and Workshops

D. Project implementation structure and partners

64. As the implementation agency, UNEP was responsible for ensuring that GEF policies and standards were adhered to, that the project met its objectives and achieved expected outcomes in an efficient and effective manner. UNEP was expected to ensure timelines were met and to assure quality and fiduciary standards in project delivery. UNEP managed the project Mid Term Review (conducted as an adaptive management process) and developed a management response to the review. Project supervision was entrusted to the Head of the Energy and Climate Branch in UNEP, and via him the Portfolio Manager for Climate Change Mitigation, who discharged this responsibility through the assigned Task Manager. The Executing Agency of the project was UNEP DTU Partnership (UDP).

65. Additional executing partners were a number of Regional Centers (RCs): Asian Institute of Technology (Thailand), ENDA (Senegal), Fundación Bariloche (Argentina) and Libelula (Peru)) who provided additional technical support to, and worked with, national partners responsible for the work at the national level. The diagram (Figure 1) below illustrates the relationships between the project management team (UNEP, UDP and the Regional Centers) and the national teams and their relationships for this project. A global project Steering Committee, with participation of UNFCCC, CTCN, GCF and WB representatives, was originally foreseen but in practice only functioned at the beginning of the project (2 meetings in 2016).

Figure 1: Organigram of the Project with key project key stakeholders



Source: Request for CEO Endorsement, 2014

E. Changes in design during implementation

66. Table 7 below indicates the modifications – as reported in respective annual PIRs, approved in the Steering Committee meetings in 2016 and/or officially announced and put to the GEF for approval - to the project design.

67. It is noted that from among the targeted 27 countries, 5 withdrew: some never started their activities, while others ended them at an initial / premature stage without any concrete output.

a. **Bolivia:** the country officially withdrew from the project on June 9, 2016. There appeared to be an unstable environment for effective and timely participation. An inception mission took place and country representatives joined the first regional capacity building workshop, but did not result in signing a MoU.

b. **Egypt:** the country officially withdrew from the project on June 9, 2016. There appeared an to be an unstable environment for effective and timely participation. Country representatives joined the first regional capacity building workshop, but did not result in signing a MoU.

c. **Malaysia:** the country officially withdrew from the project on February 14. 2017. They attended a training workshop (on own expenses) but did not enter into a MoU and requested to postpone involvement until the next phase of TNA.

d. **Turkmenistan:** the country officially withdrew from the project on June 16, 2016. No inception mission took place, nor was there participation in any other event.

e. **Uzbekistan:** the country officially withdrew from the project on June 23, 2016 – signed MoU initially but later dropped out on own request and requested to be considered for the next phase of TNA.

68. As a result of withdrawal of those 5 countries the allocated budget for these countries – e.g. 240,000 U$ per country – was deducted from the overall available budget, and this was reported in the annual Project Implementation Review (PIR) to GEF.

69. Because of additional funding an extra country – Pakistan – was added to the group of participating countries. Pakistan had some remaining GEF funds from a previous project (National Communications) that was initially expected to be utilized and, in addition, CTCN approved additional funding (71,000 U$) to cover the international support for involving Pakistan. Later GEF did not approve utilization of the Natcomms remaining funds but did allow the use of freefalling funds from one of the countries that had withdrawn.

70. Due to a number of delays including the sourcing of appropriate local consultants and prioritization conflicts within countries between this project's activities and other NDC-work, an additional (regional) capacity building workshop was scheduled for those countries that missed the initially scheduled workshops. Web-based training and technical support missions for several specific countries were also added to the original workplan, as recorded in several annual progress reports.

71. The originally foreseen Steering Committee, which was meant to meet on at least an annual basis to receive periodic reports and make recommendations to the project concerning the need to revise any aspects of the results framework, was found not to function and only convened twice. The function of this mechanism was partially taken over by the regular participation of members of the project team as observers in UNFCCC's TEC-meetings.

72. The internally conducted Mid Term Review (October 2017) revealed several challenges to the project's implementation and effectiveness.

a. The involvement and commitment by private sector and other key stakeholders were an overarching challenge (mentioned by 14 respondents in the survey).

b. Other challenges encountered were:

   i. Slow review process by the national TNA committees

   ii. Slow response from government in providing requested information

   iii. Lack of availability of data for properly develop their TNA

   iv. NDC work being conducted in parallel

73. As a result of the timing of this Mid Term Review, which was carried out after all capacity building activities had taken place, few response measures could be aligned to address these challenges, rather, steps were taken to mitigate them. The most essential step taken was the request for a project extension to have adequate time to properly finalize the foreseen work that was delayed by some of the above-mentioned challenges. The challenges are reported to have been taken into consideration in TNA Phase III which was being designed at that time and is currently ongoing, by putting more emphasis on those elements from the start of the new phase (i.e. during the inception missions and first training workshops.

Table 7: Changes in Implementation

1	5 Countries (Bolivia, Egypt, Malaysia, Turkmenistan and Uzbekistan) have been withdrawn from the original 25 countries identified to undertake TNAs, due to insufficient interest and commitment of these countries after the project was launched (no MoU). The overall project budget was reduced in accordance with the allocated budget per country activity.
2	1 additional country (Pakistan) was added to the group; via receipt of additional funding from CTCN
3	During the project implementation some additional training activities had to be scheduled, because due to unforeseen external conditions (elections in Guyana during 2015 that hampered initial participation) participants could not join in scheduled events.
4	The Project Steering Committee only met twice due to problems in gathering the relevant members and the perceived limited added value of the Committee to contribute to the project.
5	The project requested, and got approval for, a budget neutral, technical execution extension (via 2 amendments finally resulting in a 9-month longer project period), in order to allow a number of countries to complete their project activities. Some of the countries needed additional time to complete their TAP while others had ongoing dissemination activities and/or plans for development of the project proposals for the implementation of their TAPs.

Sources: Review of project documents and confirmed during interviews.

F. Project financing

74. At the time of evaluation, the evaluator had access to complete financial information regarding overall expenditures and (to some extent the) co-finance, presented via annual financial project overviews. In the evaluation findings (section F – Financial management) the actual expenditure is presented and analyzed.

75. The data in this section derives from the latest official information that was made available to the evaluator and as described in the official grant documents. It is important to note that the total amount represented in the suggested split in (sub) component (USD 6,019,474) is not consistent with the overall approved GEF Grant amount (USD 6,105,835), leaving USD 86,361 unallocated; the latter figure is taken as legally binding for the execution of the project, and the actual split in component is treated as indicative.

Table 8: Original Budget by component and source

Component	GEF	Co-financing	Total
(1) Facilitating the preparation of TNAs and TAPs	4,228,041	1,076,165	5,304,206
(2) Developing tools and providing capacity building	740,748	467,111	1,207,859
(3) Strengthening outreach, dissemination and networking activities	538,674	493,645	1,032,319
Project Management Costs	598,372	120,000	718,372
TOTAL	**6,105,835**	**2,156,921**	**8,262,756**

Source: ProDoc

76. The envisioned in-kind contribution (2,156,921 USD) – related to personnel costs of UNEP for activities related to the project and material expenses related to traveling, extra personnel costs for UDP above the budget and personnel costs of government staff in the recipient countries - was split in 3 components:

- UNEP: 307,889 USD
- UDP: 487,111 USD
- Participating countries: 1,361,921 USD

IV. THEORY OF CHANGE AT EVALUATION

77. The TNA Phase II project provided a Theory of Change (TOC, Annex A.2 in the Request for CEO Endorsement) to guide and monitor progress towards results; this was not the case in the TNA Phase I project. The Theory of Change presented in the diagram below (figure 2), however did not include the essential assumptions and drivers. The programme document narratively displayed some of these elements but not in the clearest manner. Therefore a 'reconstructed' TOC was developed (figure 3), that was originally prepared as part of the Terminal Evaluation of TNA Phase I and was further discussed and validated in consultations with the Executing Agency.

78. A Theory of Change explains the process of change by outlining causal linkages in an intervention, i.e., its outputs, project outcomes, 'intermediate states', and long-lasting impact. The identified changes are mapped as a set of interrelated pathway(s) with each pathway showing the required outcomes in a logical relationship with respect to the others, as well as reflecting chronological flows, where appropriate. Each 'step' in the pathway is a prerequisite for the next. The change processes between outcomes/intermediate states may require certain conditions to hold (**assumptions** - conditions that are beyond the direct control of the project) or for conditions to be facilitated by supporting actions (**drivers** - where the project has a measure of control and can make a meaningful influence).

79. This project is perceived, within the GEF funding framework, as an 'enabling activity' and is founded on the identification of similar needs that exist in multiple countries that can be met through the technical assistance provided by UNEP and UDP. One way to conceptualize the desired change process that the project aims to drive is through two interlinked causal pathways. The success of these two causal pathways depends on a mixture of capacity development, technical guidance, stakeholder engagement and wider outreach and networking.

- Causal Pathway 1) Strengthening the quality of both the development processes and contents of national-level Technology Needs Assessments and Technology Action Plans to support high-quality technology concepts and project proposals being developed within countries and being presented by national bodies to funding partners.
- Causal Pathway 2) Stimulating changes in national and regional contexts so that the uptake of, and support provided to, those plans and project proposals, is strengthened.

80. In the first causal pathway the central focus is on working with identified individuals holding relevant posts at national level to deepen their knowledge of TNA and TAP development processes and quality considerations around the contents in such assessments/plans as well as strengthening their capability to lead TNA and TAP processes in their own countries. The capacity development is supported by the provision of templates, guidance tools on assessment/planning methodologies, face-to-face training in a workshop environment and the review, by technical experts outside the country, of draft national TNAs/TAPs. To be effective it is assumed that: relevant national representatives are identified to engage with the project and take part in a consistent manner; the methodologies, tools etc. are relevant to, and can be applied effectively within, many countries; the forms of training and technical assistance are effective and that the national representatives are able and willing to transfer new knowledge, skills and attitudes to numerous relevant colleagues within their places of work to generate collective action, including the preparation of viable project proposals

derived from the TAPs, that have been informed by the prioritization embedded in the TNAs. The project aims to support the national take up of the TNAs/TAPs by working within existing national institutions, advising national representatives on engaging with a wide range of stakeholders during the assessment and planning processes to ensure their 'ownership' of the prioritized plans and encouraging the linking of these processes with other national planning and development processes (e.g. Nationally Determined Contributions etc.).

81. In the second causal pathway the central focus is on elevating the profile of technology changes as a means of reducing GHG missions and/or increasing resilience to climate change at national and regional levels and establishing the centralized identification, analysis and prioritization of technological approaches as an area of national importance. Ultimately, it is hoped that by widely establishing the value and priority of national TNAs and TAPs, proposals used to secure funding to implement technological changes will be met positively and funding will be directed towards these initiatives. The project aims to stimulate positive changes in the national and regional operating contexts by sharing information widely (e.g. websites, regional workshops etc.), linking the project with other global entities and initiatives (e.g. UNFCCC, Paris Agreement etc.) and building thematic networks/partnerships. It is assumed that potential funders can be convinced to invest by the potential for technological changes to address climate change, the national endorsement of the plans and the high quality of funding proposals. It is assumed that those working in, or affected by, the technological sectors, including private sector entities, local governments and civil society, all of whom play a critical role in making change happen, are receptive to such changes. This suggests that, once exposed to new ideas and engaged in the TNA, TAP or proposal preparation processes, these groups can be easily convinced to participate.

Table 9: Essential assumptions and drivers in the Theory of Change

Assumptions	Drivers
• Resources and partnerships are adequate for the tasks • UNFCCC meetings lead to global agreements on CC and use of TNA and TAPs • National stakeholders are willing to participate via clear engagement processes • There is effective co-operation amongst global agencies • Supported countries take steps to strengthen their institutional capacities • Technologies are attractive with low barriers to use • Other national and global problems do not divert attention from CC	• There is global and national demand for actions on CC • Technology information is readily available at the country level • There is co-operation between stakeholders at the country and regional levels • There is adequate national support • Adequate financing is available for countries to implement the TAPs • Available lobal and regional (finance) mechanisms for technological support • Global and national strategies for CC are agreed upon • Global mechanisms are in place to support CC related actions

Source: ProDoc and interviews with Implementing and Executing Agency

Figure 2 Theory of Change Diagram (as presented in the TNA II Project Document)

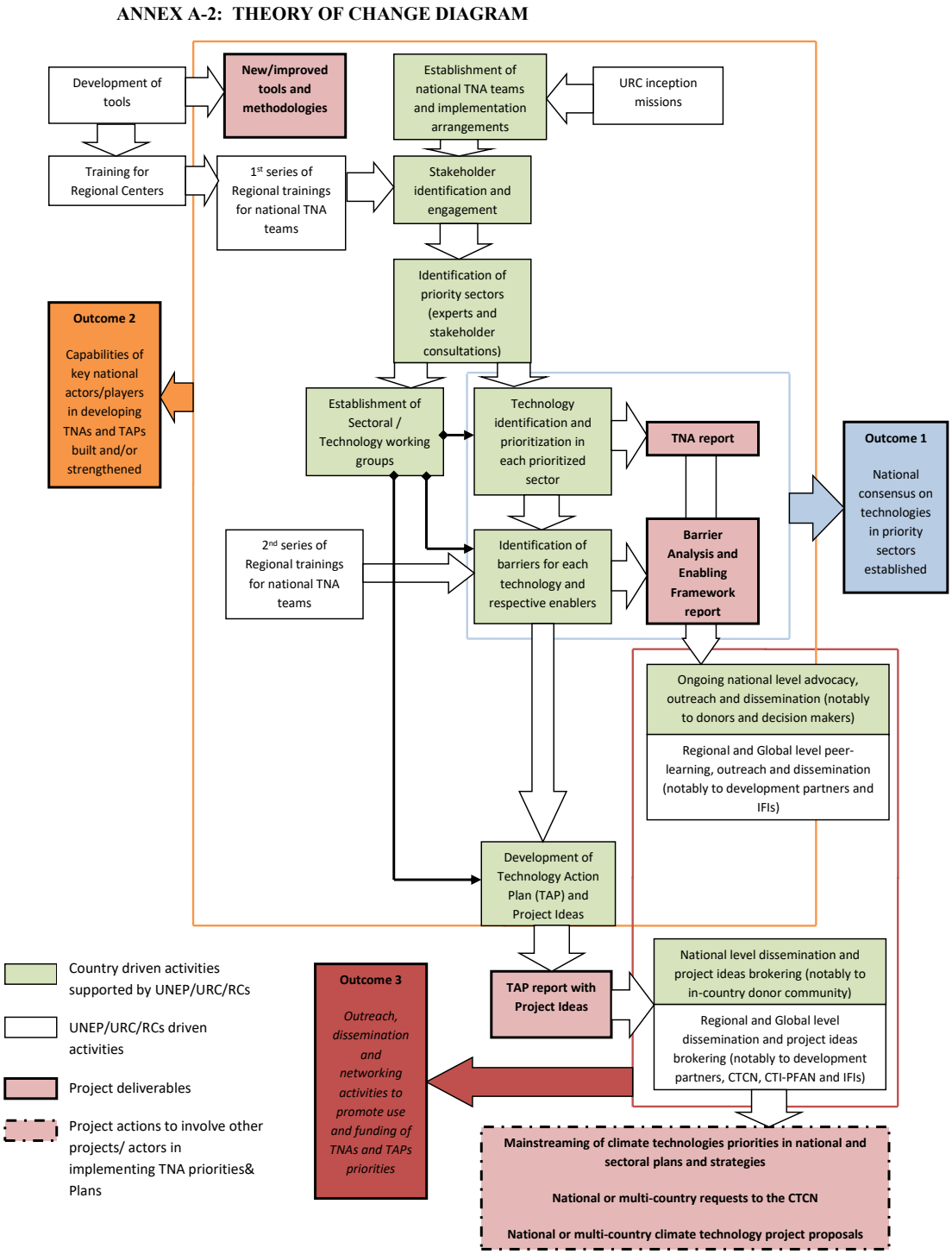
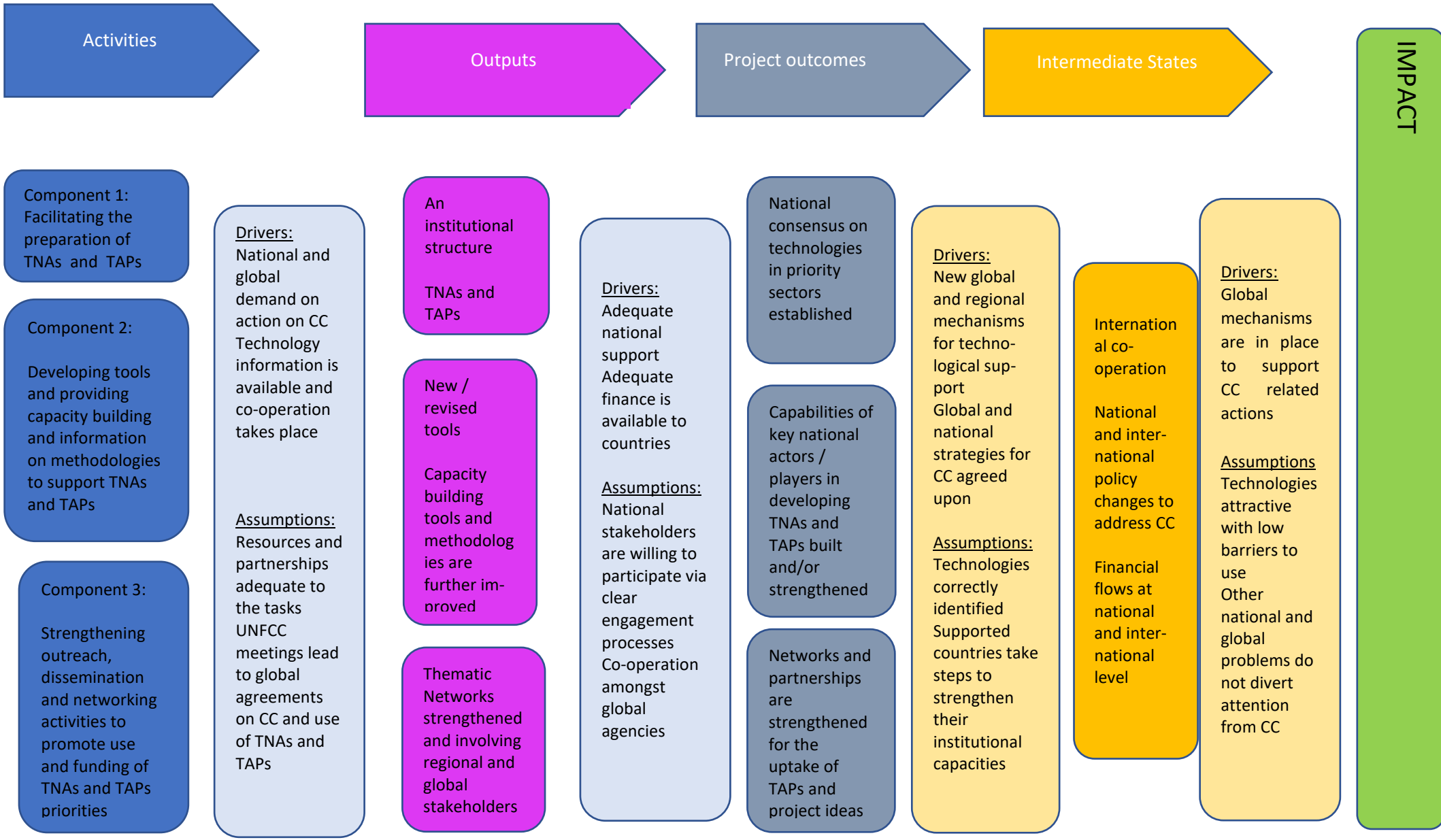


Figure 3: Reconstructed Theory of Change Diagram



V. EVALUATION FINDINGS

82. This chapter is organized according to the evaluation criteria presented in the UNEP TOR (Annex VII). This section provides a summative analysis of all triangulated data relevant to the criteria parameters as specified in the TOR and is illustrated d by findings from the three visited countries.

83. All evaluation criteria are rated against the UNEP Evaluation Office's six-point scale, as follows:

- Highly Satisfactory (HS);
- Satisfactory (S);
- Moderately Satisfactory (MS);
- Moderately Unsatisfactory (MU);
- Unsatisfactory (U); and
- Highly Unsatisfactory (HU).

Note: Sustainability and Likelihood of Impact are rated from Highly Likely (HL) down to High Unlikely (HU), and Nature of External Context is rated from Highly Favorable (HF) to Highly Unfavorable (HU).

A. Strategic Relevance

84. The evaluation has as its task to assess *'the extent to which the activity is suited to the priorities and policies of the target group, recipient, and donor'.* The elements of strategic relevance are:

- Alignment to the UNEP Medium Term Strategy (MTS) and Programme of Work (PoW);
- Alignment to Donor (GEF) Strategic Priorities;
- Relevance to regional, sub-regional and national environmental priorities; and
- Complementarity with existing interventions

Alignment to MTS and POW

85. The mission of UNEP is *'to provide leadership and encourage partnerships in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations'.* Towards this end, the organization has seven Thematic Priorities: climate change, disasters and conflicts, ecosystem management, environmental governance, chemicals and waste, resource efficiency, and environment under review, with work in all of these areas being underpinned by a commitment to sustainability.

86. UNEP has a strong position on climate technology transfer based on more than a decade of promoting markets for green technologies such as renewable energy and energy efficiency in developing countries, often with a focus on removing policy and finance barriers that hinder the uptake of new technologies. The project was adequately aligned with sub-programme 1 (Climate Change) of UNEP's Programme of Work 2014-2015; 'Expected accomplishment (b): energy efficiency is improved and the use of renewable energy is increased in partner countries to help reduce GHG emissions and other pollutions as part of their low emission development pathways'; and output 3: 'tools and approaches designed and piloted in countries to develop mitigation plans, policies, measures, and low-emission development strategies and spur investment and innovation within selected sectors in a manner that can be monitored, reported on and verified'.

Rating for Relevance to UNEP's MTS and POW: Highly Satisfactory

Alignment to Donor (GEF) Strategic Priorities

87. The accelerated adoption of advanced technologies in developing countries is recognized as essential to both achieving the global goal of reducing the emission of greenhouse gases into the atmosphere and of allowing countries to adapt to the consequences of a changing climate. TNA originated in COP 7 (2001, Marrakech), resulting in the so-called first generation TNAs and support for enhanced (second generation) TNAs was included in the Poznan Strategic Program on Technology Transfer Council (November 2008). The TNA process was endorsed by Parties to the UNFCCC at COP14 in Poznan (December 2008). Moreover, the establishment of the UNFCCC Technology Mechanism at COP16 in Cancun (December 2010) aims to accelerate climate technology transfer and assist countries in identifying technology needs and removing barriers to climate technology transfer.

88. The GEF Poznan Strategic Program on Technology Transfer consists of three windows: (1) technology needs assessments (TNAs); (2) piloting priority technology projects; and (3) dissemination of successfully demonstrated technologies. The TNA phase II (and its predecessor phase I) support implementation of the first window of this Poznan Strategy. At the 16th session of the COP to the UNFCC, the parties requested the GEF to consider the long-term implementation of the strategic program (Decision 2/CP.14 of COP16).

89. The project conforms to the GEF's strategy to support enabling activities and capacity building in climate change and is fully consistent with GEF-5 priorities of enhancing national ownership of climate change activities and to strengthen countries' capacities to fulfil their reporting commitments under the Convention. The project is aligned to GEF-5 climate change objective 6 (CCM-5) which aims to support enabling activities and capacity building for Convention obligations.

90. The Paris Agreement of 2015 (COP15, December 2015) highlighted the importance of technology in implementing both mitigation and adaptation actions. The Technology Mechanism should facilitate and promote enhanced action on technology to help countries achieve the goals of the Paris Agreement, while at the same time recognizing the importance of rapidly accelerating transformational changes towards climate resilience and reduced greenhouse gas emissions.

Rating for Alignment to Donor (GEF) Strategies: Highly Satisfactory

Relevance to Regional, Sub-regional and National Priorities

91. Out of the original 25 countries targeted to receive assistance to carry out TNAs by this project, 15 already had conducted TNAs between 2001-2007. These countries participated in the initial series of TNAs supported by GEF, implemented by UNDP and UNEP. Whilst the quality and scope of information provided in those submitted reports varied widely, many countries did not present a clear set of criteria for the prioritization of technologies nor applied the suggested methodologies in a consistent manner (see Synthesis reports on TNAs), and stakeholder participation in relation to the identification of next steps and prioritization of methodologies was perceived as limited.

92. In addition, all participating countries had submitted National Communications on Climate Change; these included a national inventory on GHG emissions and a general

description of measures taken, or to be taken, by the country with respect to climate change mitigation and adaptation.

93. Building upon these previous country interventions, and their perceived weaknesses and gaps, all countries were eager to participate in the project, and thereby more systematically develop their TNAs and TAPs and use these results as input for their NDC's. Since COP20 in 2014 there has been much discussion about the Nationally Determined Contributions (NDCs), and how TNAs can and should relate to NDCs. In short, NDCs are (on the mitigation side) detailed post-2020 emission reduction pledges, intended to feed into a new international climate change agreement mandated by the UNFCCC at COP21 in Paris, December 2015. As such, it makes sense for countries conducting a TNA to explicitly link this process to their NDC commitments, and to focus on the same priority sectors and use the quantified emissions reduction targets as an input into clarifying the decision context for the mitigation assessment. Therefore, the project will be tailored to country priorities. Many countries are taking steps to follow a low carbon and climate resilient development path as reflected in their respective National Communications to the UNFCCC, National Climate Change Strategies and related action plans (Low Carbon Development Plans, NAPs, NAMAs, NAPAs), National Energy Plans and Strategies, National Investment Plans (NIPs), Medium-Term Expenditure Frameworks (MTEFs), Poverty Reduction Strategy Papers (PRSPs) or National Development Plans (NDPs) etc. At the national level, many countries have highlighted their need for assistance in determining both technology priorities and the measures needed to overcome barriers that prevent them from acquiring these technologies under market or near-to-market conditions.

94. The evaluation confirmed the project was well aligned with target group and beneficiary needs and priorities for a number of reasons. First, the preparation and implementation of the project was participatory as evidenced in all visited countries. Secondly, because the project was aligned with national development priorities and strategies and invariably took into consideration the country needs, it was also aligned with the needs and priorities of the target groups and beneficiaries.

95. However, it is noted that of the 25 targeted countries, 5 withdrew from the project in the early stages. This could suggest that there was a weaker alignment between the project's intentions and the national priorities in a fifth of the target group. However, there is insufficient evidence of whether the dropout resulted from weaker alignment with national priorities and/or insufficient awareness of the value of TNAs / TAPs, readiness and/or ownership from the national government to commit themselves at the moment of project execution to participate in and to meet the project requirements (i.e. participation in capacity building activities and following the procedures on how and when to prepare a TNA and TAP).

Rating Relevance to Regional, Sub-Regional and National Priorities:	**Satisfactory**

Complementarity with Existing Interventions

96. The objectives of the TNA are highly consistent with global priorities as exemplified by the discussions in UNFCCC (and it's TEC) and its global interventions – and aligned interventions of CTCN and GCF – to address the large and complex set of global issue of climate change and in turn the impact of climate change on multiple areas.

97. The degree of congruence of the TNA's strategic objectives and the global agenda was high, as they stemmed directly from UNFCCC resolutions on technology needs for

mitigations and adaptation, and (since the Paris Agreement December 2015) even further exemplified.

98. The evaluation found that the project complemented existing interventions in most countries in the field of climate change (and relevant other national sustainable development activities); evidenced by the description in (almost) all TNA-reports on the existing national context and the relevance of TNA-work. TNAs were especially perceived valuable to provide input to / contribute to countries' compulsory international commitment – as part of the Paris Agreement – to develop their Nationally determined contributions (NDCs).

Rating for Complementarity with Existing Interventions: **Highly Satisfactory**

Rating for Strategic Relevance: **Highly Satisfactory**

B. Quality of Project Design

99. The project design is rated as 'Satisfactory', and in the table below the strengths and weaknesses are summarized. The completed template for assessment of the quality of project design was presented in the Inception Report.

100. The quality is rated satisfactory with one major the (still) remaining weaknesses – also after gained lessons learnt from phase I; issue 5 (sustainability / replication and catalytic effects): The strategy is appropriate. It is based on known efforts of partners' support for sustaining outcomes. Financial risks are low and adequately discussed. The planned activities are likely to generate levels of ownership by the main national counterpart and stakeholders. Additional steps outside the project time are also envisaged. But no evidence (based on phase I) of way to attract funding agencies and envisioned uptake of TAPs via implementation of activities.

Table 10: Summary Quality of Design

	Item	If addressed in the prodoc	Evaluation Comments	Rating
1	Project preparation and readiness	Yes	The project document could have elaborated further on certain details, but given the large scope of issues and countries, it is satisfactory. No due diligence was included – but also not practically possible – to screen and potentially reject potential beneficiary countries upfront (to avoid drop-outs during the project)	S
2	Relevance	Yes	Fully described as background and context.	HS
3	Intended Results and Causality	Yes	There is a (simplified)Theory of Change, lacking proper description of assumptions and drivers (limited narrative description). The intervention logic is articulated and the timeframe is realistic for anticipated project outputs and some outcomes.	S

	Item	If addressed in the prodoc	Evaluation Comments	Rating
4	Efficiency	Yes	The previous work, relevant institutions, agreements, partnerships, and data sources are fully discussed. Synergies and complementarities with other organizations to increase project efficiency are described.	HS
5	Sustainability / Replication and Catalytic effects	Yes	The strategy is appropriate. It is based on known efforts of partners' support for sustaining outcomes. Financial risks are low and adequately discussed. The planned activities are likely to generate levels of ownership by the main national counterpart and stakeholders. Additional steps outside the project time are also envisaged. However, there is no evidence (based on phase I) of ways to attract funding agencies and promote the envisioned uptake of TAPs via implementation of activities	MS
6	Learning, Communication and outreach	Yes	Adequate provisions for national and regional workshops made; steps planned through the Steering Committee and web-based tools to reach additional stakeholders and networks and plans to reach out.	S
7	Governance and Supervision Arrangements	Yes	Here all ratings are satisfactory except for the question on capacities of partner countries, which were not sufficiently assessed. But it is judged acceptable given the nature of the project; and assessment is foreseen as part of the inception missions in the project itself.	S
8	Management, Execution and Partnership Arrangements	Yes	The execution arrangements were clear and the roles and responsibilities within UNEP and partners clearly defined.	S
9	Financial Planning / budgeting	Yes	No obvious deficiencies were seen in the budgets & financial planning. Resource utilization appeared cost effective. Resource mobilization proposed was realistic. Financial and administrative arrangements were clearly described.	S
10	Monitoring	Yes	The logical framework is clear and adequate. Indicators are defined, but the baseline status is rather vague. Midterm and end-of-project targets have been identified at outcome level. A Mid Term Review is provided for.	S
11	Evaluation	Yes	There is an evaluation plan; time frame; and, an explicit and adequate budget.	S

Rating for Project Design: **Satisfactory**

C. Nature of the External Context

101. The ProDoc acknowledges multiple risks related to a large number of participating countries, and political instability and countries' ownership were described as potential issues. Although very different external and country-specific conditions occurred during the period of implementation of the project, in general, this criterion is not considered to have had a significant negative effect on the delivery of the expected Outputs.

102. The 5 drop-out countries during project execution are not a result of the external contexts, and only minor delays were experienced in some countries due to national 'elections' (no serious political upheaval).

103. Regarding the security situation, social or economic issues or changes, these occasionally challenged project implementation, but mitigation strategies were successfully developed. This also includes the fact that, in general, capacity was relatively low at all levels and partners reportedly required constant support and technical assistance during project implementation, which was a key element of the project.

104. Concluding for the recipient countries in this project: Climatic events (hurricanes, droughts floods etc.) that could affect project operations have not occurred; security situation was favorable and stable; security issues have not affected project operations; status of infrastructure (roads, power, telecom) were not influencing the implementation; economic conditions were favorable and stable allowing efficient project operations and political context was favorable and stable allowing efficient project operations.

105. However, the update of the results of the project, i.e. TAPs and thereby the impact of the project, can be (strongly) influenced by the nature of external context. This can be illustrated by recent (economic) developments in specific countries in Latin America, which were observed and discussed during the field mission in Argentina, where interest in, and the country's (political) priority for, climate change has seriously dropped due to challenging national economic conditions.

106. Additionally, drastic changes in political contexts, e.g. shifts in governments with subsequent changes in administrative staff, can have a serious negative impact in terms of a weak legacy of results and knowledge on TNAs / TAPs and thereby continued uptake of foreseen plans.

Rating for Nature of the external context: **Favorable**

D. Effectiveness

Availability of Outputs

107. All listed outputs (both at a global level as well as per country) were prepared on time (sometimes with slight delays, but still in the time frame of the project and without seriously hampering implementation of the project) and made publicly accessible (via the UDP-hosted global TNA-web-site):

- All resource materials: guidance materials on the TNA methodology, e-tools and relevant publications.
- TNA reports: The reports prepared by TNA countries represent a national consensus on technologies for low carbon and climate resilient development in priority sectors. All countries prepared the following reports for each of mitigation and adaptation: Technology Needs Assessment Report, Barrier Analysis and Enabling Framework report, and Technology Action Plan report.
- TNA Fact Sheets: The TNA fact sheets are extracted from the TNA reports of countries. These factsheets have been prepared by the respective countries to help in their stakeholder consultation processes for technology prioritization.

108. All country TNA and TAP reports are reviewed by two experts (first by an expert of the relevant regional center and then by UDP), against a standardized quality assurance protocol and template. These reviews were sometimes done in sequence sometimes in parallel (depending on timing). Evidence, specifically a review of the documentation of draft reports, review comments and final reports, shows that this feedback loop (reviews followed by improvement and re-submission) resulted in an improved quality of the outputs. Examples of the nature of improvements include, more systematic and coherent presentation, completeness of data analysis and more appropriate formulation of the results).

109. Besides improvements in the quality of the TNAs / TAPs, which was a significant weakness in older TNAs, this two-person review process contributed to capacity building via increased understanding of the involved national consultants regarding the systematic development (and reporting) of TNAs and TAPs. Whenever necessary the written review procedure was accompanied with further oral explanation (via telecalls) to further explain the comments.

110. The quality ratings awarded by regional experts after the thorough review process – draft TNA and TAP reports at least once reviewed / commented and provided with guidance to improve, and in some case even a second round of reviewing - of TNA and TAP reports is presented in table 10. Of the 23 TNA/TAPs presented, 10 were of 'high' quality on submission, 11 were 'good', 1 was 'medium' and 1 was 'low'.

Table 10: Country specific outputs

Country	Achievements	TNA/TAP quality
	Africa & the Middle East	
Burundi	Expected outputs realized	Good
Burkina Faso	Expected outputs realized	Good
Egypt	Withdrawn from the project	
Gambia	Expected outputs realized	Good
Jordan	Expected outputs realized	Good
Madagascar	Expected outputs realized	Good
Mauritania	Expected outputs realized	Good
Mozambique	Expected outputs realized	High
Seychelles	Expected outputs realized	High
Swaziland / Eswatini	Expected outputs realized	Good

Tanzania	Expected outputs realized	High
Togo	Expected outputs realized	High
Tunisia	Expected outputs realized	High
	Asia	
Armenia	Expected outputs realized	High
Kazakhstan	Expected outputs realized	Good
Lao PDR	Expected outputs realized	Low
Malaysia	Withdrawn from the project	
Pakistan	Expected outputs realized	High
Philippines	Expected outputs realized	Good
Uzbekistan	Withdrawn from the project	
Turkmenistan	Withdrawn from the project	
	Latin America & the Caribbean	
Belize	Expected outputs realized	Good
Bolivia	Withdrawn from the project	
Grenada	Expected outputs realized	Good
Guyana	Expected outputs realized	High
Honduras	Expected outputs realized	High
Panama	Expected outputs realized	Medium
Uruguay	Expected outputs realized	High

Source: Opinions of involved experts from the Executing agency (UDP) and supporting Regional Centers

Honduras

Honduras prioritized sustainable livestock production as part of its TNA for the agriculture sector. This was in response to the country's policy to increase the cattle population, which has seen a decline in the past two decades following a series of hurricanes and the growing trend of converting pasture into palm tree plantations. However, in order to strengthen the livestock sub-sector sustainably and in line with GHG emissions targets, Honduras included the ambition to develop a Sustainable Livestock NAMA as one of the actions in its TAP, which should include different practices considered important for GHG emissions.

The NAMA for livestock in Honduras is now being designed. It focuses on the improvement of animal feed through pastures and fodder banks, genetic improvement, veterinary programs, and improved farming systems that include the production of incentives in finance and marketing structures as strategies for livestock repopulation. These strategies were initially identified in the TNA for Honduras, which was still under development as work began on the NAMA.

This example demonstrates not only how the TNA can inform other planning tools, but how planning tools can develop in tandem with feedback from each other.

Source: Stories from the TNAs

Seychelles: Good practice TAP preparation for implementation

Being a Small Island Developing State (SIDS) country with a small population, Seychelles has set up its institutional arrangement for the TNA with the existing structures for climate change coordination in mind, in order not to 'reinvent the wheel'. The **existing National Climate Change Committee (NCCC)**, involving high-level decision makers and led by the Principal Secretary of the governmental Department of Energy and Climate Change, was appointed as the project steering committee for the TNA. This Principal Secretary was also appointed as National TNA Coordinator.

For the execution of the TNA process, Seychelles hired an expert consultant. Although the involvement of such a consultant is considered useful or even indispensable for successful implementation of the TNA, there may be a risk that too much reliance on the expertise of a consultant leaves government staff and other stakeholders 'empty-handed' once the TNA is completed and the consultant gone. During the TNA process, hence it is **important to ensure sufficient capacity within the government** for after the TNA when technology options have to be implemented.

In order to ensure **commitment of relevant stakeholders**, for each of Seychelles' four priority, a Technology Working Group (TWG) was established.

As part of the TNA and TAP development, emphasis was given to properly **identifying stakeholders**, determining timelines, and estimating capacity and funding needs. It was realized that the relevance of stakeholders can, and will, vary during this process. In order to increase the chances of implementation, Seychelles has identified **the key stakeholders and their roles in the implementation of the TAP**. Timelines are clearly explained, as well as the estimated capacity building needs and the estimated costs. Although specific funding for the actions have not yet been secured, in the TAP it has been described how the required budgets can be acquired; partly through support from international agencies and partly through specified local government funding mechanisms.

Regarding the management planning, the TAP lists a few risks associated with technology implementation, including ways to address them. An immediate requirement to proceed with TAP implementation is the **allocation of staff within the government agency** that can oversee the progress of the technology implementation.

In Seychelles, consistency with NDC formulation was checked as both the TNA and NDC process were carried out under the same NCCC. Moreover, the same consultant was hired to support the development of both the NDC and TNA. Considering that the development of Seychelles' INDC took place in 2015, the TNA process could benefit from the multi-stakeholder process that already was in place for the INDCC. In order to enhance the implementation of TNA results, it has also been noted in the TAPs that its actions should be included in the work programme of the NDC review process. In this way the TNA results can benefits from the political backing for the NDC.

Source: Interview with Seychelles' TNA-consultant and TEC-background paper TEC/2019/19/5

111. All planned workshops were conducted according to the regional split (countries grouped in 3 regions - Africa, Asia and LAC), with an additional split in Africa for English and French-speaking countries.

112. During Phase II of the project the TNA – BAEF – TAP sequence was presented during two regional capacity building workshops; the 1st focusing on the TNA step, and the 2nd focusing on both the BAEF and TAP steps. During both workshops, with stronger emphasis in workshop 1, attention was paid to how stakeholder engagement could be best arranged. However, several respondents felt that especially the 2nd workshop was too complex and that the overload of information limited the attention that could be given to the steps that should follow the development of a TAP (e.g. development of project proposals, alignment with potential finance, etc.).

113. A supplementary workshop was hosted in 2015 to accommodate 6 countries (Burkina Faso, Guyana, Honduras, Jordan, Mozambique and Panama) that were not able to participate in the first regional capacity building workshop due to not having yet complied with the minimum requisites, (i.e. MoU was not signed yet, consultants were not screened/selected/contracted). In addition, 1 country (Uzbekistan) received online training and 1 country (Guyana) received training in combination with the inception mission. Additional technical support missions were conducted in Belize, Grenada, Guyana, Honduras and Panama early in 2017 on their request.

114. The project had foreseen a help-desk, to tailor country specific needs/questions, via email or skype communication with UDP and/or RCs and (on rare occasion possibly to stage customized technical support missions, but only limited budget was allocated for such missions. Based on feedback from the RCs the help-desk only functioned for countries at a certain mature level, who able to formulate questions/requests. Less

mature countries, the lagging countries – those who preferably the help desk should function mostly – rarely utilized this support function.

115. The capacity building workshops were held in close conjunction with the regional centers and the RCs prepared a short report to document the results of the workshop (and its lessons learnt), that were used for deciding how much additional (virtual or face-to-face) guidance would be necessary and continuously improve the effectiveness how to guide countries in the process. These reports were not produced to be made publicly available, but nonetheless, formed a relevant output.

116. In addition, at the end of the project, each RC prepared a synthesis report, aggregating the results of the countries in their group and drafting lessons learnt. These synthesis reports were also not prepared for public dissemination.

117. UDP prepared, additionally, internally aggregated overviews of meta-data (i.e. comparison of the content of all TNAs and TAPs: the sectors, identified barriers and selected technologies). This meta data was made publicly available through the TNA database. These reports were designed to support gathering information on trends and developments in TNAs their content was periodically shared publicly as background papers for the UNFCCC TEC-meetings and side events during UNFCCC COPs.

118. As part of the capacity building work the project revised part of the existing materials, incorporating lessons learnt gained during Phase I and, in addition, developed several new materials / tools to better guide the recipient countries. These include:

- A step-by-step guide for countries conducting a Technology Needs Assessment (update)
- Overcoming Barriers to the Transfer and Diffusion of Climate Technologies (update)
- TNA Guidance note**:** Evaluating measures for inclusion in a TAP (new)
- Guidance for Preparing a TAP: Enhancing Implementation of TNAs (new)
- Accessing International Funding for Climate Change Adaptation – A guidebook for Developing Countries (new)
- Guidebook on stakeholder engagement (new)
- Guidebook on Barrier Analysis (update)
- Identifying and prioritizing technologies for mitigation: A hands on guidance to multi-criteria analysis (new)
- Identifying and prioritizing technologies for adaptation: A hands on guidance to multi-criteria analysis (new)

119. All tools and methodologies have been extensively used by countries. This has been indicated in the questionnaires sent out and satisfaction surveys conducted during regional capacity building workshops. Most countries appreciated the level of scientific and methodological knowledge made available to them, with the limitation that more ambivalent responses were made on the applicability of, especially the Multi-Criteria Analysis (MCA) and Barriers Analysis & Enabling Framework (BAEF), tools. One of the countries felt the methodology insufficiently suited for countries with limited data availability and others raised questions on the customization of tools to local conditions. Others felt that the MCA and BAEF tools were too generic, too qualitative and lack quantitative information that can later hamper the correct preparation of project proposals.

120. Additionally, different countries noted that most of the information available on technology options refers to mitigation and less to adaptation and thereby requested strengthening additional information, specifically for adaptation.

121. All these materials are at present accessible on the web-site (www.tech-action.org/publications/tna-newsletters). This web-site is recently updated (post-phase

II, as part of the new phase III) providing an easily accessible and clear overview of all materials available.

Table 12: Availability of project outputs

Component	Outputs	Availability of Outputs to Target Beneficiaries	Evidence
1. Facilitating the preparation of Technology Needs Assessments (TNAs) in twenty-five (25) developing countries – or, where these have already been prepared / started, making them more strategic and useful in an operational sense – and Technology Action Plans (TAPs) in twenty-seven (27) developing countries	New or in some cases updated / strengthened TNAs in 25 countries and TAPs in 27 countries	Yes – with the limitation that the number of participating countries reduced to 23	Inception missions were staged to all involved (25) countries MoU's signed with all involved countries TNA-coordinators and local consultants screened, selected and sub-contracted within all involved countries TNA, BAEF and TAP reports reviewed (via structured 2-step approach) and final versions uploaded and accessible at the web-site
2. Developing tools and providing capacity building and information on methodologies to support preparation of Technology Needs Assessments (TNAs) and Technology Action Plans (TAPs)	Capacity building workshops (7) 1 training workshop for Regional Centers 6 training workshops for the countries	Yes	Reports available on the sequence of workshops (containing agenda, participants, brief meeting notes, reference to presentations and 'lessons learnt') Internal Capacity Building Workshop (May 2015, Copenhagen) 1st Regional Capacity Building Workshop – Latin America (June 2015, Lima) 1st Regional Capacity Building Workshop – Africa (June 2015, Arusha and Dakar) 1st Regional Capacity Building Workshop – Asia (May 2015, Bangkok) Supplementary 1st Regional Capacity Workshop (October 2015) 2nd Regional Capacity Building Workshop – Latin America (February 2016, Buenos Aires) 2nd Regional Capacity Building Workshop – Africa

Component	Outputs	Availability of Outputs to Target Beneficiaries	Evidence
			(February 2016, Cape Town and Dakar) 2nd Regional Capacity Building Workshop – Asia (March 2016, Bangkok) Global experience sharing and dissemination workshop (September 2017, Nairobi)
	Guidebooks (4/9) Improved BAEF guidebook Strengthened Adaptation methodology Guidebook on Stakeholder identification and involvement Guidance note on mainstreaming TPs into national / sectoral development plans	Yes	**New / revised guidebooks** on-line available at www.tech-action.org/publications/TNA-guidebooks A step-by-step guide for countries conducting a Technology Needs Assessment (September 2015) Overcoming Barriers to the Transfer and Diffusion of Climate Technologies 2nd Edition (2015) TNA Guidance note: Evaluating measures for inclusion in a TAP (January 2017) Guidance for Preparing a TAP: Enhancing Implementation of TNAs (xx) TNA Guidebook Series: Accessing International Funding for Climate Change Adaptation – A guidebook for Developing Countries (xx) Guidebook on stakeholder engagement (updated) Guidebook on Barrier Analysis Identifying and prioritizing technologies for mitigation: A hands on guidance to multi-criteria analysis (MCA) Identifying and prioritizing technologies for adaptation: A hands on guidance to multi-criteria analysis (MCA) Guidance on how to prepare a good TAP
	TNA / TAP e-learning and e-guidance E-guidance document on TNA best practice	Yes	**E-learning modules** on-line available at: www.tech-action.org/resources/e-learning

Component	Outputs	Availability of Outputs to Target Beneficiaries	Evidence
	E-learning for Multi Criteria Analysis		
3. Strengthening outreach, dissemination and networking activities to promote use and funding of TNAs and TAPs priorities	Thematic Networks strengthened, with strong links to Regional Centers, GEF and UNFCCC networking initiatives (technology transfer focused), and involving regional and global stakeholders 3 dissemination workshops/events Side event at COP20 Global experience sharing workshop Side event at COP21 27 national meetings with the international (in-country donor coordination groups) and local funding community 27 national TNA/TAP dissemination workshops 3 regional dissemination workshops for the CTI-PFAN community Dissemination through the participation and/or joint organization of workshops implemented under the GEF/RBDs regional pilot climate technology finance initiatives	Yes	**Publications:** Stories from the TNAs (November 2016) **Newsletters:** Regular e-newsletters, accessible via www.tech-action.org/publications/tna-newsletters **Global events:** Participation at all (bi-annual) TEC-meetings Side event at COP21 (Paris, December 2015) Side event at UNFCCC-TEC meeting (Bonn, May 2016) Background paper prepared on analysis of the linkages between the TNA and NDC processes by UDP and discussed at UNFCCC-TEC meeting (Bonn, September 2016) Side event at COP22 (Marrakech November 2016) Side event at COP23 (Bonn, December 2017) TNA-workshop in conjunction with the African Carbon Forum 2017 (June 2017, Benin). Organized and funded jointly by the UNFCCC and UDP. Side event on TNA phase II outcomes (April 2018, Bonn) Global experience sharing and dissemination workshop (April 2018, Nairobi) in conjunction with the Africa Climate Week Presentation of TNA project during CTCN's event at the Asian Climate Week (July 2018, Seoul) Presentation of TNA project during CTCN's event at the LAAC Climate Week (August 2018)

Rating for Availability of Outputs: **Highly Satisfactory**

Achievement of Project Outcomes

122. The envisioned outcome of Component 1: *'National consensus on technologies in priority sectors established, compatible with Nationally Appropriate Mitigation and Adaptation Actions Plans, and/or National Climate Change Strategies'* – has been achieved as can be concluded after reviewing the reports (illustrating the participation of a broad group of stakeholders and their expressed opinions) and backed by the field interviews in the 3 visited countries with a variety of stakeholders.

123. It is relevant to note an improvement on the 'lessons learnt' during Phase I, due to the fact that during this second phase of the project more or less all the countries were participating at the same time as preparing their INDCs/NDCs, which made them more aware of the need for the TNA process to be aligned with the other national processes. Alignment however was not always optimal – in terms of effective planning – and resulted in delays of the TNAs (because of priority being given to the NDC-process).

124. An analysis of 71 countries' TNAs and NDCs – undertaken by UDP - showed that more than 70% who have done a TNA have integrated the results into their NDC; for the countries participating under TNA Phase II this figure is even beyond 80%. Integration was in a manner that priority technologies identified and assessed through the TNA process were included in NDC. This meant that when creating their NDCs, the country was able to build upon an existing assessment of prioritized technologies, complete with an analysis of their barriers and potential enabling measures to overcome them. In some cases the results from its TNA are directly referenced in its NDC, clarifying the country's technology needs, and helping pave the way to technology transfer from the international community.

125. However, it is important to note that, as reported in the Mid-term Review (MTR, 2017) that the involvement and commitment by private sector and other key stakeholders (such as local government and civil society) remains an overarching challenge. As part of the survey in that MTR, 14 out of 18 respondent countries (and 23 countries in total actually involved in the project) referred to it and this was supported by interviews with countries. National governmental agencies (in a broad variety, not only the sectoral Ministries but also key Ministries such as Ministry of Planning and Ministry of Finance) and research entities were involved in all countries at proper levels. However, other mentioned key stakeholders are still represented as minorities. It still seems to be difficult to get the private sector, local government and civil society interested and involved in the process and committed to its success, rather than joining a workshop on an occasional basis.

126. The envisioned outcome of Component 2: *'Capabilities of key national actors / players in developing TNAs and TAPs built and/or strengthened'* – has been partially achieved. This is however an informed conclusion based on the documents read and people interviewed because the project did not carry out any pre- and post-project assessments of capabilities (nor assessments of relevant knowledge, skills or changes in attitudes). Capacity building activities (training workshops, technical assistance interventions and coaching and supervision during the drafting of reports) are only assessed via 'satisfaction' surveys amongst the countries and perceived impressions from the trainers (incorporated in the synthesis reports of the regional centers). As a result, most participants were satisfied with the interventions, with minor suggestions for further improvement (e.g. with regard to applied methodology and/or available materials). This, however, does not demonstrate or confirm that the capabilities of the

participants have been increased in relevant ways or to a 'sufficient' level. A review of the recently drafted TNA and/or TAP reports shows that the capabilities still need further strengthening.

127. It is further important to note that the capacity building workshops have a limited character – solely for a small group of 'key national actors / players' (3 persons per project per workshop, often the TNA coordinator and 2 national consultants (one related to mitigation and one to adaptation). There was no assurance that the gained knowledge was effectively shared with the broader group of national actors / players; no explicit next steps to engage with their colleagues (or even more broadly to other agencies) or, for example, preparing an action plan for national capacity building. This type of capacity building workshop depended fully on the follow-up interventions undertaken by the TNA-coordinator and his team during subsequent national workshops in the TNA/TAP development process. Some awareness raising and knowledge sharing certainly took place, but this cannot be classified as 'national' capacity building. The project partially aimed to bridge this via the development of E-learning training materials. Interviews with countries carried out during this evaluation suggest that there still is not sufficient understanding of the characteristics and needs of a quality TNA/TAP amongst the key stakeholders, necessary for proper stakeholder engagement and future ownership.

128. The envisioned outcome of Component 3: *'Networks and partnerships are strengthened for the uptake of TAPs and project ideas'* – has been partially achieved, evidenced at national level via the broad participation of different stakeholders during a sequence of workshops. However, as mentioned earlier, the variety of the stakeholders can be questioned with regard to proper involvement at the right moments of the private sector and local government.

129. Co-operation at inter-regional level is less evident, although it was encouraged during the regional capacity building workshops. It appears that most countries mainly focused on their own activities, with limited networking between countries. Only when countries already have networks in place, which this project then becomes part of, does anything other than ad-hoc exchanges take place.

130. Despite ambitions to put more emphasis on engaging with the donor community at the right moment of the trajectory of TNA/TAP development, and thereby to secure potential funding for project ideas and align data gathering and information description towards requirements of donors, this was covered in a limited way; in several countries alignment was made with the country focal points of CTCN and/or GCF and very rarely other donors and/or investors, and during regional / international workshops the involvement of CTCN was secured (several joint workshops). It appears that the step towards post-TAP is still a weak element in the process, and strongly depends on the knowledge of the TNA-coordinator on this matter. Where the TNA-coordinator / host agency also incorporates the National Designated Entity for CTCN and/or GCF it is going more smoothly.

131. There is evidence of a number of requests for submission to CTCN (and/or GCF) in almost all countries, but still not at a large scale via a streamlined and concerted action and merely depending on availability of (ad-hoc) experts. A proper quantified overview of proposals is not systematically collected but is worthwhile to consider in order to track-trace trends. During the interviews with TNA coordinators (Uruguay, Armenia, Eswatini) examples of submitted proposals were presented, but at the same time, it appeared that the development of qualified proposals was not going smoothly, due to lack of understanding of requirements and lack of skills.

132. Compared to Phase I, during which strong emphasis and guidance on national outreach was limited, all countries involved in Phase II staged outreach sessions during national workshops, almost all organized a final dissemination workshop and some prepared and disseminated briefing documents / notes.

Table 13 – Assessment of achievement of outcomes

Strategy	Baseline	Long-term Aim	Incremental project Aim	Evaluators assessment
Outcome 1: National consensus on technologies in priority sectors established, compatible with Nationally Appropriate Mitigation and Adaptation Actions Plans, and/or National Climate Change Strategies	Limited structural implementation Lack of proper stakeholder engagement and consultation for the identification of national technology needs and priorities	An institutional structure for TNA-TAP implementation put in place Enhanced stakeholder engagement process and consultation mechanisms for TNAs and TAPs	Consensus on priority technologies, agreement on a national action plan and identification of requests for submission to the CTCN Improved stakeholder engagement and consultation for the identification of national technology needs and priorities	Yes, TNA results in many countries integrated into the NDCs and Number of requests for submission to CTCN (and/or GCF) but stakeholder engagement was sub-optimal, because still especially private sector and local governments only limited involved.
Outcome 2: Capabilities of key national actors/ playesr in developing TNAs and TAPs built and/or strengthened	Limited in-country capacity to conduct TNAs and develop TAPs Lack of methodologies for TNAs and TAP development	Countries are trained to conduct TNAs and develop TAPs Capacity building tools and methodologies covering adaptation and mitigation technology needs assessments and action planning are available to countries.	Improved capacities for conducting TNAs and designing TAPs Improved methodologies for conducting TNAs and designing TAPs (especially in the area of adaptation)	Yes – improved, but not clear if improved sufficiently Because level and nature of improved capabilities are not assessed in the project and therefore, lack of evidence that national capacities have improved to such a level that they are self-sufficient
Outcome 3: Networks and partnerships are strengthened for the uptake of	Limited cooperation for climate	Targeted dissemination of TNA/TAP results to	Climate technology issues are better integrated into national	Yes

Strategy	Baseline	Long-term Aim	Incremental project Aim	Evaluators assessment
TAPS and project ideas (Component 3)	technology transfer Lack of integration of climate technology needs and priorities into national development policies, plans, and strategies Lack of access to domestic public and private finances to implement TAPs	decision makers, development partners, donors and public and private investors at national, regional and global levels Integration of climate technology needs and priorities into national development policies, plans, and strategies	development priorities to facilitate access to domestic finance for technology projects and programs Technical advisory and finance networks support TNA development and engage with countries to facilitate TAP implementation	TNA results in many countries integrated into the NDCs and evidence of number of requests for submission to CTCN (and/or GCF), but still not at a large scale

133. Based on the interviews with national TNA-teams (and reflections from involved stakeholders) and interviews with especially the regional centers (sharing their direct perceptions of the strengths and weaknesses in the process) the following factors can be seen as key for success:

134. Select a qualified national implementation TNA-team: a TNA-coordinator (strong coordinator skills, advocacy and lobbying, with a strong network amongst the key stakeholders, good contacts with, and acceptance by, the leading government agency) and national consultants (ample knowledge in their specific work and preferably also a strong network with other resource persons). UDP, as project executing agency, in principle does not have the final say in selecting the national TNA-team – it is in the hands of the recipient country, as part of the country ownership and driven-ness – but their ample experience, based on previous TNA-project is beneficial in the screening phase of the team, and in case of strong doubts (beforehand or during the process) the recipient country should be strongly encouraged to reconsider their initial team or replace members.

135. Define a strong national project governance structure at the start: whenever possible align with existing structures that proved to be effective, and not set up a new structure in order to avoid parallel networks, risks for overlaps and duplication and confusion during interconnected decisions. It is strongly advisable to have the national UNFCCC - National Designated Entity (NDE) as (co)chair of the governance structure and whenever possible also involve focal points for CTCN and GCF in the structure, thereby creating a first entry point for engaging with the financial mechanisms.

136. Secure baseline awareness and knowledge level to support national capacity building: Assess the baseline awareness and knowledge level of all involved parties / stakeholders in the process and whenever disbalanced opt for national capacity building activities. Otherwise the outcome of the stakeholder participation process will be sub-optimal (due to lack of involvement of key stakeholders that lag in knowledge) and/or

inefficient (due to long iterative processes because the laggard parties slowly get involved).

137. Secure high-level stakeholder awareness and political buy-in: if not properly covered via the governance structure – because not all members have high-level decision positions – additional mechanisms should be established to create the essential buy-in; continuous checking is required to establish whether the information has been sufficiently escalated to the required level.

138. Assure effective and dynamic stakeholder engagement: Stakeholder engagement is a core approach of the project, and all national teams started from day 1 in mobilizing the key stakeholders via consultation processes. However, it appeared that not all stakeholders are equally able/ready to mobilize. The TNA-topic often is felt to be closer to national governmental agencies and research entities (partly because of their mandate and daily work), with hesitation from the private sector, local governments, and the broad public (with the explicit 'problem' that the latter often is not adequately represented via organizations (CSOs). They have doubts about the value of the process – what is in it for them - and are unsure about the required time input. Based on experiences within countries that were more successful in engaging with these groups, keys for success are the timing of when to engage with them and preparation of a value proposition what is in for them / why they should be involved. Finally, it is essential to be clear and open on the planning process and objectives and to pay attention to expectation management from the start (to avoid disappointments, frustrations and potential drop out).

139. Timely alignment with donor agencies: In addition to the abovementioned key stakeholders, specific attention has to be given to engage with financial institutes / mechanisms. Their role is pivotal post-project, but the earlier they are incorporated the better, thereby aligning data collection, analysis and descriptions of plans that later need finance to the requirements of those financial institutes / mechanisms. It is evidenced that those countries who had clear knowledge about financial mechanisms – due to their alignment with them and/or engaging at an early stage - where more successful in defining project proposals.

Uruguay

Ownership, smart chosen coordination, governance structure

A strong interlinkage between the NDC process and the TNA process is evident in Uruguay, utilizing the same Steering Committee. For both processes the Ministry of Housing, Land Planning and Environment (MVOTMA) was in charge, with a stable composition over a longer period, which safeguards the accumulated expertise and experience. NDA/NDE for UNFCCC, CTCN, GEF, GCF are all under located the same roof. In addition, Uruguay also decided not to work with individual consultants but via 'umbrella agreements' with 2 research entities – thereby securing potentially a broader utilization of knowledge.

Stakeholder engagement:

Additionally, Uruguay was remarkably successful in achieving the involvement of local government (via the Council of Sub National Governments) and the private sector, based on building on an already 10-year working relationship with them (as a result of smart choice of the TNA-team), recognition of the quality of the TNA-team and thereby confidence from those stakeholders that participation in this process would be valuable for them.

Source: interviews in Uruguay with project stakeholders

Armenia

Post-project institutionalization mechanism to assure continuation

During the implementation of the TNA in Armenia, it became clear that the number of potentially important technologies was more than what could be covered by the Project, thus it was necessary to address these via another process. This need was presented in the Third National Communication on Climate Change of Armenia and INDC of Armenia. The Third National Communication, in particular, included provisions directly indicating the need for a national climate technology mechanism (ArmCTCN).

In addition to being a tool for the transfer and diffusion of technologies in Armenia, the ArmCTCN is envisioned to be pivotal as Armenia's implementation mechanism in the national climate change mitigation and adaptation processes.

The experience and practices of the TNA were the basis for establishing the ArmCTCN. The structure of ArmCTCN aims to mimic CTCN, with a consortium of local professional organizations, as well as representations of international organizations, and a network that will include interested organizations and individuals. During discussions with interested parties it became clear that the majority of stakeholders believed there was no need to establish a separate legal entity, therefore, the goal is to keep the new framework as informal as possible to minimize the risk of creating new bureaucratic structures.

The ArmCTCN is at present established through a memorandum between the respective scientific, academic, and other, institutions. The Armenian Technology Transfer Association, which is the CTCN NDE for Armenia, will play the role of Secretariat, while development of a web portal will ensure a timely exchange of information on technologies between its members and access to it for all interested parties within Armenia, and globally. It will move forward the technologies that have been prioritized during the TNA process in Armenia, including 6 adaptation and 14 mitigation technologies.

Source: interviews in Armenia with project stakeholders

Rating for Achievement of Outcomes: **Satisfactory**

Likelihood of Impact

140. Despite the delivery of all envisioned outputs and achievements at outcome level, as described above, the likelihood of long-lasting impact of the project is under some doubt. The likelihood of impact certainly varies enormously between the countries, with examples from a good quality TNA and TAP that is not (yet) used for any further interventions up to the utilization of the TNA and TAP content into other national plans and successful application for financing deploying specific project proposals.

141. Likelihood of Impact is determined by an assessment of the nature and level of benefits achieved at the project outcome level (national consensus on priority sectors achieved; capabilities and networking partially achieved) combined with an assessment of whether the assumptions and drivers identified in the TOC have indeed held or have been realized.

Table 13 – Essential assumptions and drivers in the Theory of Change

• Resources and partnerships are adequate for the tasks • UNFCCC meetings lead to global agreements on CC and use of TNA and TAPs	• There is global and national demand for actions on CC • Technology information is readily available at the country level • There is co-operation between stakeholders at the country and regional levels

• National stakeholders are willing to participate via clear engagement processes • There is effective co-operation amongst global agencies • Supported countries take steps to strengthen their institutional capacities • Technologies are attractive with low barriers to use • Other national and global problems do not divert attention from CC	• There is adequate national support • Adequate financing is available for countries to implement the TAPs • Available lobal and regional (finance) mechanisms for technological support • Global and national strategies for CC are agreed upon • Global mechanisms are in place to support CC related actions

Table 15: Assessment of validity of assumptions

Assumptions	Evaluator's validity check
Resources and partnerships are adequate for the tasks	National resources and partner capacity not optimal enough for the tasks; national capacity building needed, but limited foreseen in the project design
UNFCCC meetings lead to global agreements on CC and use of TNA and TAPs	Value and usefulness of TNA (to support NDCs) increased over the years, certainly since Paris Agreement
National stakeholders are willing to participate via clear engagement processes	Stakeholder engagement processes go less smoothly than expected – not all stakeholders eager and committed to join (especially private sector and to some extent also local government have limited involvement)
There is effective co-operation amongst global agencies	No conflicts in co-operation, but at the same time co-operation also not fully streamlined and effective
Supported countries take steps to strengthen their institutional capacities	Recognition of strengthening their institutional capacities, but so far insufficient steps taken
Technologies are attractive with low barriers to use	Still ample barriers for technologies to be applied in different countries
Other national and global problems do not divert attention from CC	Varies per country; CC still in most countries high on the agenda, but direct (socio) economic problems can divert attention

Table 16: Assessment of achievement of drivers

Drivers	Evaluator's achievement check
There is global and national demand for actions on CC	There is a demand, but not substantially agreed upon by all stakeholders
Technology information is readily available at the country level	For most technologies – certainly for mitigation and to a lesser extent for adaptation - the information is available, but not always with sufficient detail to assess the applicability per country.
There is co-operation between stakeholders at the country and regional levels	Partially achieved: Proper stakeholder engagement (with all key stakeholders) and smooth co-operation not in place yet
There is adequate national support	Partially achieved: capacity and capabilities of national agencies in most countries not sufficient yet
Adequate financing is available for countries to implement the TAPs	Partially achieved: Grants are available (CTCN and GCF readiness funding), but not always properly known by the 'lead agencies'; reference to the limited presence of those agencies during national workshops for establishing proper contacts
Global and national strategies for CC are agreed upon	Partially hold: still ongoing discussion in UNFCC (and COP)
Global mechanisms are in place to support CC related actions	Partially achieved: still under development

142. As a result of this the evaluator concludes that the likelihood of the impact is moderately likely, because those project outcomes that are the most important to attain intermediate states are only partially achieved as elaborated in the previous section (reference to 122, 126 and 128). Furthermore – as described in table 14 and 15 the assumptions for progress outputs to project outcomes and drivers to support transition from outputs to project outcome(s) are only partially in place. Similarly, the additional intermediate states are not fully achieved. Finally, the assumptions for the change process from intermediate state to impact do hold but drivers to support the transition are only partially in place.

Guyana:

Example of continuation post-project – recognition of local capacity

In Guyana, the expert working groups set up under the TNA project identified the lack of a robust policy framework for technology transfer, diffusion and uptake in the energy sector as the key barrier for the deployment of renewable sources of energy (and not the more usual perceived barrier financial conditions).

The stakeholder working group identified a related policy shortcoming – the need to develop the institutional and technical capacities of key institutions responsible for deploying, regulating and managing energy-sector technology applications. In light

of this, it was recommended to integrate elements of the Public Awareness and Education Programme into Guyana's Human Resources Development Plan, to allow for continuous and sustained education and development at the tertiary level.

Financial barriers were also considered, but not as key and root barriers: stakeholders further highlighted the need to reduce the financial risks' profile of renewable energy investments in the country, by strengthening the policy framework of the sector.

Source: Interview with Guyana's TNA-coordinator and Stories from the TNAs

Jordan:

Example of continuation post-project – developing proposals and applying for funds

Grazing rangelands cover 90% of Jordan's land area. While livestock management in one of the driest countries in the world has always been a challenge, recent climate changes is worsening the situation.

The TNA identified grassland management as one of the agricultural priority sectors for adaptation. Jordan has a long tradition of community-based grazing management, called 'Hima', which had been abandoned and only recently revived in a GEF founded pilot project managed by the International Union for Conservation (IUCN) and UNEP.

Based on the Technology Action Plan proposed for the agriculture sector in Jordan, the Ministry of Environment developed a concept note for the Green Climate Fund (GCF) to scale up this successful pilot project nationwide. This is one out of five (5) GFC concept notes that Jordan developed with a project development capacity building support project from Climate Technology Centre and Network (CTCN) through the UNEP DTU Partnership – all of which are based on the Technology Needs Assessment outcomes.

Source: Stories from the TNAs

Rating for Likelihood of Impact: **Moderately Likely**

Rating for Effectiveness: **Satisfactory**

E. Financial Management

Adherence to UNEP's Financial Policies and Procedures

143. As a result of the continuation of the project (i.e. building upon the predecessor similar Phase I project) and the continued engagement of almost all the same staff at the Executing and Implementing Agencies, and thereby ample experience and long-lasting working relationships, all the required procedures functioned properly and no problems occurred.

144. The only critical remark to be made is the lack of clarity in policies and procedures to document actual co-financing. See remark below

Table 17: Financial Management Table

Financial management components:	Rating	Evidence / comments
(1) Adherence to UNEP's/GEF's policies and procedures:	**S**	
Any evidence that indicates shortcomings in the project's adherence to UNEP or donor policies, procedures or rules	Minor	Lack of clarity about policies and procedures on how to justify co-financing (a detailed overview is available on part of the co-financing pre-project but not post-project)
(2) Completeness of project financial information		
Provision of key documents to the evaluator (based on the responses to A-G below)	**S**	Annual financial statements were provided. Limited co-financing reports were available, only aggregated at the end of the project (with no insights in the calculation)
A. Co-financing and project cost tables at design (by budget lines)	Yes	GEF funding and co-financing budgeted by component
B. Revisions to the budget	Yes	Due to change in participating countries (5 drop-outs) the budget had to be accordingly reduced
C. All relevant project legal agreements	Yes	
D. Proof of fund transfers	Yes	
E. Proof of co-financing (cash and in-kind)	No	No evidence seen how co-financing figures were calculated
F. A summary report of the project's expenditure during the life of the project (by budget lines, project components and/or annual level)	Yes	Available, but not possible to align expenditures per component
G. Copies of any completed audits and management response (where applicable)	n.a.	
H. Any other financial information that was required for this project (list):	n.a	
Any gaps in terms of financial information that could be indicative of shortcoming in the project's compliance with the UNEP or donor rules	No	Financial reports reviewed were complete
Project Manager, Task Manager and Fund Manager Officer responsiveness to financial request during the evaluation process	S	
(3) Communication between finance and project management staff	**S**	
Project Manager and/or Task Manager's level of awareness of the project's financial status	S	
Fund Management Officer's knowledge of project progress / status when disbursements are done	S	
Level of addressing and resolving financial management issues among Fund Management Officer and Project Manager / Task Manager	S	

Contact / communication between the Fund Management Officer, Project Manager / Task Manager during the preparation of financial and progress report	S	
Overall rating		**Satisfactory**

Completeness of Financial Information

145. The evaluator received documents that showed evidence of regular track-and-trace of annual expenditures, that could be linked to the original grant budget, but at the same were presented in a rather inconsistent manner and without clarity on how to compare the original budget lines (per component) with the exact expenditure (also by component); the annual expenditures were grouped according to type of costs – and it was not possible to objectively relate those to the components. Furthermore the (claimed) co-financing by UDP and UNEP – mentioned as in-kind contribution - are not described in the expenditure overviews, but should be added to the personnel costs. Similarly, the co-financing of participating countries is described as personnel costs and should be added the cost item 'country TNA-teams'.

Table 18: Expenditure versus original budget

	Estimated cost at design	Actual expenditure	Expenditure ratio (actual / planned)
UDP and UNEP staff (*)	1,262,102	1,432,576	113,5%
Consultants	96,139	96,274	100,1%
Administrative support	80,111	77,812	97,1%
Travel	162,548	168,468	103,6%
Sub-contracts (RCs)	785,617	768,285	97,7%
Country TNA-teams (*)	3,489,999	2,497,540	71,5%
Capacity building workshops	56,358	56,359	100,0%
Meetings and conferences	58,359	31,986	54,8%
Reporting costs	4,500	0	0,0%
Sundry	57,920	38,758	66,9%
Monitoring & evaluation	50,000	0	0,0%
TOTAL	6,105,835	5,168,058	84,6%

Source: Project (financial) progress reports

(*) The figures do not include co-financing.

146. The available report(s) described the total amount of co-financing (without actual specification):

- UDP in-kind: USD 487,111 - UDP's in-kind contribution mainly consisted in improvements of TNA guidance and tools, as well as the development of new tools and online learning modules.
- UNEP in-kind: USD 307,889 - UNEP's contribution mainly consisted of staff time to support project implementation (review of documents and reports), engagement with CTCN, UNFCCC and GEF, dissemination and outreach

(contribution to newsletters, preparation of side events…), and participation in country inception missions and TNA workshops.

- National Governments in-kind: USD1,361,921 - The contribution from Governments of participating countries mainly consisted of government staff time (i.e. National TNA coordinator, members of sectoral/technology expert groups and TNA/TAP related committees) as well as logistics for stakeholder consultation, national SC and WG meetings.
- Regional centers provided additional technical support to countries and facilitated south-south cooperation, although no financial figure was assigned to this role.

147. Additional resources (i.e. financial and in-kind resources beyond those committed to the project itself at time of approval) were leveraged as a result of the project, but not all were calculated in actual co-funding figures with the only exception being the CTCN: USD 71,100 co-funding for the implementation of Pakistan's TNA.

In addition to the main partners playing specific roles during the implementation of the project, UNFCCC and CTCN engaged directly at their own expense. UNFCCC collaborated, at its own expense, with UNEP and UDP, in the organization of TNA training and global workshops.

- CTCN: travel and accommodation expenses of 5 African TNA coordinators (which were also the NDEs of the CTCN) for the joint TNA-CTCN workshop at the Africa Climate week.

  UNFCCC: contributed by covering the expenses of 1-2 UNFCCC staff for their active participation in all TNA training and global workshops, supported preparation of guidance documents and other publications like synthesis reports, the 2 brochures "From needs to implementation: stories from the technology needs assessments". UNFCCC had an important role in the dissemination of the TNA results (TNA reports) by publishing the latest results from the TNA project on UNFCCC's website.

148. Doubts can be raised about the accuracy of the claimed co-financing figures because there is no evidence of how figures have been calculated and the figures surprisingly are exactly the same as budgeted; not only the UDP and UNEP's figures, which are mainly related to personnel costs made for activities related to the TNA-work, but especially the aggregated number of national government's in-kind contribution of 23 different countries (staff time involved during the entire process of the TNA-project). The issue of how co-finance is defined, estimated, reported on and verified is an institutional issue deserving attention by UNEP.

Communication Between Finance and Project Management Staff

149. Communication appeared to be adequate because no shortcomings have been raised or problems signaled.

Rating for Financial Management: Satisfactory

F. Efficiency

150. Cost-effectiveness and Financial Efficiency: The evaluator was not made aware of any substantial concerns regarding cost effectiveness or costliness and considers

that, taking into consideration the complexity and ambitious character of the project and although the project has not delivered all of the expected results, those achieved have been delivered at a reasonable cost.

151. Within the project context, however, the Project Manager is insufficiently empowered to (if necessary) re-allocate funds towards specific countries or between partners to higher priority activities; shifts of budgets were only possible for generic activities, aligned budgets per country are fixed. The evaluator is of the opinion that the project team needs to prioritize activities and focus on those activities that will most likely contribute to achieving the expected outcomes. Efficiency in spending would, therefore, entail a management review and the possibility to re-allocate some funds to higher priority activities. The implementing and executing agencies however have stated that almost all the funds are fully programmed and cannot be changed; the GEF required a similar budget for each beneficiary country, irrespective of its baseline conditions and needs and encountered challenges during the implementation.

152. In the design phase the project expected to provide customized support to individual countries' needs via a help-desk ('staffed' via UDP and RCs) but it is felt that this only functions for those countries having enough maturity to address their needs and request specific technical assistance, and functions less well for those with lesser capacity and lagging.

153. The sequencing of activities (inception mission, including for screening / selecting national partners – training workshop for involved regional centers – 1st regional capacity building workshop – drafting TNA – 2nd regional capacity building workshop – drafting TAP - dissemination and outreach to secure post-project uptake and ownership) was assessed as efficient, but the outcome could be further improved [7] via inclusion of extra activities (that would need additional budget):

- Include training activities at national level already during the inception mission to ensure further awareness and creating a level base of knowledge;
- Split the 2nd regional capacity building workshop in 2 separate workshops and thereby reduce the content overload (covering both BAEF and TAP development) and thereby increasing the uptake of new knowledge;
- Align, whenever needed, additional country specific technical assistance after the regional workshop and/or receipt of draft reports, in case national capacity appears insufficient and/or quality of the reports not high enough.

154. Timeliness: With multiple activities being carried out in parallel in over 20 countries by a global executing agency, supported by regional partners and national sub-contractors it is a challenge to achieve timely performance. DTU, as Executing Agency, designed a smart working protocol for all involved partners – e.g. DTU-staff, involved Regional Centers and sub-contracted national TNA-coordinators and consultants – to provide clarity on tasks and responsibilities, ways of regular communication and working procedures. This is felt beneficial for the efficiency of the implementation. The project faced delays in its implementation, however these are considered to have been beyond the control of the executing agencies and all efforts were made to ensure the

[7] Part of theses suggested improvement have already been incorporated in the design (and, upon approval of GEF the actual implementation) of phase III; e.g. national training workshops and the split of the 2nd regional capacity building workshop in 2 separate workshops.

late, but successful delivery of results. The project had (2) no-cost extensions in order to complete activities within the existing budget.

Rating for Efficiency: Satisfactory

G. Monitoring and Reporting

Monitoring Design and Budgeting

155. The monitoring for the project was designed according to both the GEF and UNEP's standard procedures for monitoring in place at the time of project design. In the ProDoc a detailed description was given of the monitoring workplan and budget and the evaluation process and budget. All specific types of monitoring activities were adequately described in detail, scheduled in a timely manner and allocated a reasonable budget of USD 69,500.

Rating for Monitoring Design and Budgeting: Highly Satisfactory

Monitoring of Project Implementation

156. The executing and implementing agencies (UNEP and UDP) had frequent communication to track progress of the project – in accordance with their internal working protocol - both with regard to time (potential delays) and content (quality of the activities and results), built upon internal team meetings at UDP with all involved staff, and regular meetings of the UDP overall coordinator and/or regional coordinators with the RCs (who were co-responsible for coaching the countries) and in addition regular contacts of the designated UDP country contact person with the TNA-coordinator in the countries.

157. The evaluator assessed that relevant data were collected regularly in accordance with a monitoring plan and work plan and these data were analyzed and shared with the UDP project team (and discussed with UNEP), and used as a basis for reporting to GEF via the required annual Project Implementation Reviews (PIR). However, the set of data was not complete to properly analyze all relevant aspects:

- No proper assessment of the actual outcome of the capacity building activities (if knowledge was increased, which elements still missing, knowledge shared etc.);
- No proper collection of specific elements of the in-country processes (if all relevant stakeholders were engaged and committed etc.);
- No proper (and timely) collection of efforts to develop project proposals for post-project implementation / financing;
- No proper (and timely) collection of dissemination and outreach activities, but rather on an ad-hoc and voluntary basis.

158. Despite these omissions, no serious delays and/or problems have been detected that should have been mitigated for via improved monitoring.

159. A specific 'failure' during the project implementation – the drop-out of 5 originally foreseen participating countries (Bolivia, Egypt, Malaysia, Turkmenistan and Uzbekistan) – is worth mentioning. However, there is no evidence that this could have been avoided due to specific actions. At the start of the project those countries had shown commitment, and the UDP and UNEP frequently contacted them to understand

the reasons for non-interest, resulting in final decisions to exclude them. Because of the global / political character of the GEF-project (all eligible countries that show initial interest can join), this type of project does not carry out any strict screening of countries who request to join.

160. A Mid-term Review was planned in the project proposal for 18 months after the project start date (i.e. mid 2016). The project Steering Committee was expected to participate in this Mid-Term Review and develop a management response to the evaluation recommendations along with a recommendation's implementation plan.

161. The actual Mid-Term Review however, took place in the middle of 2017 with the report available in October 2017. This Review was carried out as an internal process by the involved staff of UDP and UNEP. No external consultant was hired, no monitoring officer was on board and by that time the Steering Committee was no longer operational). Considering a project start date of November 2014, this indicates a delay of approximately 1 year and, as a result, the outcome of the MTR was less relevant to adjust activities and/or stage mitigation measures for those challenges during the remainder of the project's life. The Review findings served instead as input for the design of the next project (Phase III).

162. It is worth considering conducting such Mid-Term Reviews in a more timely manner in order to utilize outcome for adapting the remaining period of the project.

163. Furthermore, it is important to note that due to the set-up of the project (with a large number of countries with complex planning and very limited 'flex-budget' for unforeseen actions) there are limitations for revising the chosen approach, in fact, almost no opportunity to substantially change plans and/or re-allocate budgets. Adjustments of approaches, development of materials, etc. have taken place, but largely as a result of lessons learned in Phase I and incorporated in Phase II, and similar lessons learned in Phase II that are now incorporated in the ongoing Phase III.

Rating for Monitoring of Project Implementation: Satisfactory

Project Reporting

164. Overall the reports provided to the evaluator provided adequate reporting to track progress; the (bi) annual reports (PIRs) were prepared in accordance with GEF-templates and the Mid-Term Review report provided a description of the status of the work and any deviations of plans or challenges encountered. The reports include also a management response on how to address potential deviations.

165. In addition, internal reports were made by the Regional Centers to document the result of their work; reports after each training workshop were prepared as well as synthesis reports at the end of the project. The end of project reports contained aggregated information and perceived lessons learnt. These reports are considered very valuable for UDP to be taken into consideration for the design of a next phase

166. In the design of the project no specific output was planned to systemically document lessons learnt in a report. However, as part of the project's frequent engagement with UNFCCC and TEC, those lessons learnt were recorded in so-called 'background papers' and articles and thereby still nicely document its experiences, in combination with the internal UDP-meta data collection (track-trace monitoring system) on all content elements in the TNA and TAP reports, aggregated individual country outputs onto a global level.

Rating for Project Reporting: **Satisfactory**

Rating for Monitoring and Reporting: **Satisfactory**

H. Sustainability

Socio-political Sustainability

167. There is a fairly strong ownership, interest and commitment – certainly on global levels but also in the majority of the participating countries – among government and among other stakeholders. This typically includes alignment with existing coordinating committees (related to climate change).

168. In addition, there is a moderate mechanism in place to adapt to changes in the social / political context – relevant political priorities have been identified during the project and to some extent have been discussed with the stakeholders; the TAPs describe these priorities.

169. The results emanating from the TNA process have been used in other processes like INDCs, NDCs and other national planning processes. Several countries have said the TNA methodology has been of use for other processes. A number of the participating countries are developing project proposals and technical assistance request building on the TNA/TAP process outputs.

170. However, once the TAP has been approved and streamlined into the government's policies and priorities it does not directly imply that this will continue to be implemented as part of the commitments under NDC.

171. Additionally, sustainability was not well thought through: capacity building activities were staged to train involved experts, but early training of regular Government employees (and staff or other relevant stakeholders) allocated to development and implementation of TNAs was limited since project implementation teams set up within the Government were either understaffed or had yet to be staffed – and depend on individual TNA-coordinators in house with the national consultants out-sourced mainly from research entities. Therefore, the value of "capacity building" during the scheduled life of the project is questionable.

Rating for Socio-Political Sustainability: **Moderately Likely**

Financial Sustainability

172. The post-project continuity is highly dependent on the support of international donors; long-term financial sustainability comes through the development and implementation of a portfolio of projects. The efforts to develop and support projects will depend on the capability to properly develop such proposals, and the availability of resources from the national Government budget, private sector budget and/or international sources (CTCN, GEF, GCF, multilateral development banks, etc.).

173. There is sufficient evidence for the availability of sufficient resources from international sources, but very little evidence if it will also be possible to tap into national resources (government budgets and/or private sector commitments).

174. However, despite the availability of resources, the utilization of these – and thereby the financial sustainability – is substantially hampered by the lack of adequate knowledge to tap into them; the understanding of requirements for successful approval

of those mechanisms and especially the capacity and capabilities to develop project proposals is still meagre in most countries. [8] A limited number of countries – such as Uruguay, Jordan, Pakistan and Armenia – applied already for CTCN and/or GCF funds, but in most countries the efforts are in an infant stage.

Rating for Financial Sustainability: Moderately Likely

Institutional Sustainability

175. The project has a high degree of dependency on institutions. Once a TAP has been approved and streamlined into the government's policies and priorities, it does not directly mean that this will continue to be implemented as part of the commitment under NDC.

176. So far, the capacity building was mainly focused on individuals, without safeguarding sharing and dissemination and thereby creating an institutional legacy.

177. The delivery of project outputs (institution strengthening and capacity development) through national and international consultants, who are not integrated into normal staffing levels of the relevant stakeholders – especially the key Governmental agencies – does not guarantee that the activity will be automatically continued.

Rating for Institutional Sustainability: Moderately Likely

Rating for Sustainability: Moderately Likely

I. Factors Affecting Performance and Cross-Cutting Issues

Preparation and readiness

178. The start-up phase of the project involved inception missions to each involved country in order to screen and select the national involved experts and discuss the baseline situation. In retrospect it appears that due diligence was somewhat limited. (i) ownership to decide on involved coordinator / consultant is merely in the hands of the recipient country itself. (ii) the awareness and interest of relevant stakeholders was assessed in limited manner, merely at governmental level only and not beyond; e.g. private sector.

179. Due to the character of the project – compulsory acceptance of any interested countries to join the project (if part of the eligible group for climate change assistance under GEF-requirements) – no due diligence could be done at that stage; countries were 'accepted' and not 'selected'. Because of this and despite efforts having been undertaken to avoid countries dropping out during the project, not much else could be done. It appeared that despite initial interest these countries were not ready yet for the TNA/TAP process under the designed model. There was no flexibility to keep them on

[8] The capacity building activities have been strengthened in the design (and, upon approval of GEF) and the actual implementation of phase III; e.g. more emphasis during training on proposal development and the development of a specific guidebook.

board via more in-depth support. The commitment and required ownership was, in those countries, still insufficient.

Project management and supervision

180. The project implementation and management was assessed as very competent and properly organized: UNEP, UDP and the regional centers were all knowledgeable and well organized (e.g. roles were carefully laid out in the official contracts between UNEP and UDP and UDP and the RCs, and the project's working protocol); the workflows were processed well and the financial planning and management during implementation was appropriate.

181. A beneficial point seen was the stability of the composition of the Implementing and Executing Agency, all being involved in the predecessor TNA Phase I period, and thereby able to incorporate lessons learnt. Additionally, the selected partners – Regional Centers – were almost identical and had equal strengths based on previous experiences (for example, there was the inclusion of a specific adaptation expert for the Asian region that is Russian speaking).

182. At the design of the project a Project Steering Committee was foreseen, meeting minimum once per year – so taking into consideration a project duration of 48 months at least 4 meetings. However, this appeared not to be properly functioning. It proved difficult to get the members committed to join the meetings, and therefore the mechanism faded out after two SC-meetings. One function of the SC partially (i.e. to strategically discuss and guide the implementing of the project) was partially replaced via a sequence of other mechanisms: internal management meetings within UDP, regular meetings with UNEP, and bi-annual involvement in the UNFCCC's TEC.

183. In order to secure institutional memory, and not fully rely on the fact that involved experts will not change over time, both of which is important for the continuation of TNA-activities post-project, it is important to properly document processes and lessons learnt. UDP is doing a good effort in this manner via preparing regular papers on good practices and lessons learnt and compiling and regularly update their internal meta-database on results from the TNA-work.

Stakeholder participation, co-operation and partnerships

184. At a global level stakeholder participation, co-operation and partnerships can be assessed as appropriate. One of the most important links is the strong alignment of the project with UNFCCC-secretariat and UNFCC's Technology Executive Committee (TEC) – both pivotal in the global discussions on TNAs.

185. Similarly, links were made with other relevant key players – GEF, CTCN - via their similar involvement in the TEC, the direct links of UDP and UNEP with CTCN. The project aimed to involve them in global and regional capacity building as well as dissemination and outreach activities, to secure proper exchanges of each other's results and lessons learnt from the project and thereby aiming to build upon and seek for further synergies.

186. Links with other multi-lateral agencies (e.g. multilateral development banks) appeared to be relatively weak.

187. At country level, the national stakeholders' engagement was a sequential process. Initially the interactions were between UDP (and UNEP) and the designated entity in the country (the host of the TNA coordinator). Gradually in each country, additional stakeholders were engaged in the country and coaching in this process was provided by UDP by addressing this in the 1st regional capacity building workshop (and

the preparation of guidance materials on how to stage an effective stakeholder engagement process).

188. The evidence from this evaluation is ambiguous on whether the stakeholder participation was adequate. In most countries governmental involvement was sufficiently arranged (with strong emphasis on content-related / line Ministries but also in most countries also Ministries of Planning and Finance), and also research agencies. However, local government and private sector involvement can still be classified as meagre in many countries, based on a review of involved stakeholders as listed in country reports and to some extent also evidenced in the field visits.

189. Finally, the involvement of the (inter)national donor community at country level appeared to be similarly rather limited; merely participation during events (in the later stage of the project) without efforts to build structured communication and engagement.

Human rights and gender equity

190. During the project gender issues were not explicitly addressed – as not included in the project design – via a structured approach and/or guided by the implementers. However, at different occasions during regional workshops and/or national activities, gender issues were raised and ad-hoc addressed. It was realized that a more structured approach would be beneficial and a start was made to develop guidance for a gender-responsive TNAs, as part of Phase III.

191. To ensure that men and women can benefit equally from actions set out in TNAs and that gender inequalities in activities and outcomes are reduced or eliminated, gender differences need to be considered throughout the entire TNA process and its outcomes. By systematically mainstreaming gender issues into the TNA, it will be possible to ensure that women and men have equal opportunities in relation to the TAPs that are planned to come out of the TNAs, as well as contributing to achieving their countries' NDCs and SDGs.

Environmental, social and economic safeguards

192. UNEP projects address environmental and social safeguards primarily through the process of environmental and social screening, risks assessment and management (avoidance, minimization, mitigation or, in exceptional cases, offsetting) of potential environmental and social risks and impacts associated with project and programme activities. The core of this project is on developing plans (TNAs and TAPs), and the development process of these plans exactly incorporate all these elements. Through using the Multi Criteria Assessment as one of the key tools for the TNA/TAP process environmental, social and economic issues are considered in all along the process and the prioritization of technologies and actions. And these aspects are covered in the training workshops. Then they are further considered in the formulation of the project ideas. It will also be important post-project – the implementation of the project ideas – to build in those safeguards.

Country ownership and driven-ness

193. Most parts of the project show proper country ownership and driven-ness as the core of the project design is based on execution of activities by national experts and agencies, coached and supervised by international agencies. The actual process – of

development of TNAs and TAPs –fully addresses analyzing, discussing and agreeing upon national priorities and resulting in plans approved by national stakeholders.

194. Post project some doubt can be raised if country ownership will be sufficient to effectively result in implementation, due to dependency on external sources (especially financing) and because implementation can require, at least partially, a shift of ownership from national governments, who are the leading stakeholders during the TNA/TAP process, to local governments and/or private sectors, and these were often felt insufficiently engaged.

Communication and public awareness

195. The project – on a global level and inside all involved countries – has taken multiple steps to increase awareness about the TNA process, and also on the results (the ideas in the TAP), through web-sites, workshops, publications, etc.

196. Globally, DTU (with support from UNEP) was especially active and successful in their communication and public awareness process, including: web-site entirely dedicated to TNA (with abundant information on the process, resource materials and the results); publications (success-stories of TNA); e-newsletters; outreach via TEC (participating as observer and involved on a regular basis in discussions via drafting background papers on successes achieved and lessons learned) and participation with the UNFCCC (side events at COP-meetings showcasing TNA-results).

197. However, it is also important to note that post-project communication with beneficiary countries of that phase gradually fades away – UDP (and UNEP) seems to have limited communication with the participating countries as soon as the project is over – as was noticed during the field visit in Argentina (from Phase I), but also already with most of the countries from Phase II where the actual activities stopped approximately one year ago. Contact only remains with some countries for specific reasons, for example, to solicit their involvement in an event (a regional capacity building workshop in the next phase or a (side) event oriented on TNA, but no systematic, structured communication. A similar observation can be made with regard to communication between the regional centers and the countries. There appears a tendency, which is partly logical (also because no resources can be formally allocated as part of the GEF-grant for post-project activities), to focus strongly on communication with the countries involved in the ongoing phase.

198. Country specific level: The TNA-coordinator (and his/her host agency) spent adequate time on dissemination and outreach, which was mainly via a national (generic) dissemination workshop, with media attention when the TAP was ready, and sometimes the development of leaflets, videos, etc. Limited evidence is found of a strategic communication plan – with segmentation of target groups etc. which would have resulted in customized efforts towards specific stakeholders (citizens, private sector, local government) linking to their needs and interests. [9]

Rating for Factors Affecting Performance and Cross-Cutting Issues: **Satisfactory**

[9] The dissemination and communication activities have been strengthened in the design (and, upon approval of GEF0 and the actual implementation of phase III; e.g. more training and guidance and compulsory requirement to prepare a national communication plan.

VI. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

199. Overall the project accomplishments are rated as Satisfactory. Evidence shows an improvement in the quality and effectiveness of the work compared to TNA Phase I. A learning curve has been followed, partly supported by the continuation of the same staff in UNEP and UDP. Changes in the enabling context (i.e. support for the Paris Agreement) and the associated increase in the interest for, and perceived value of, TNAs/ TAPs has supported the project's ambitions. This can also be seen, in part, as an impact of the work of the project itself.

200. However, despite this positive conclusion several challenges remain and weaknesses have been detected that limit the achievements of the outcomes and likelihood of the impact of the interventions. Improvements are essential to upgrade the level of achievement of the highly relevant, but also ambitious, objectives. Part of these improvements have already been incorporated in the next phase (III) that was already ongoing during the evaluation of phase II.

201. The previous phase of this project, implemented between 2010 – 2014, was evaluated in 2016 and the evaluation report published in 2017 included a set of recommendations. At that time Phase II was already under implementation but as UNEP carries out evaluations in a participatory manner and the draft report would have been shared much earlier, it is still relevant to confirm the extent to which the Phase I recommendations have been adopted, before outlining recommendations for Phase II (see Table 18).

Table 19: Implementation of recommendations from Phase I

	Recommendation	Management response	Accomplished in Phase II
1	Recognize and reach out to ongoing/completed projects on technology for climate change funded by UNEP, GEF and now CTCN, the multilateral financial institutions, and others, (for example enlighten on efficient lighting technologies) which can provide concrete lessons for TNA. Explore mechanisms to link to such projects, and their results to the TNA Phase II, to add additional stakeholders, financial institutions and where appropriate private sector representatives, and as appropriate, additional expert inputs and for the governance) of work.	Countries will be provided with a selective list of relevant UNEP projects that have a clearly defined technology focus and include links to websites and contact persons. This will enable national TNA teams to benefit from the resources and publications and possibly contact these initiatives. However, with the limitation that UDP does not have specific project budget within the project to do this in a comprehensive manner.	Yes – information is shared via the web-sites; e.g. UDP TNA web-site and in addition UNEP developed a site to reference all its technology projects with links to respective websites: http://www.unep.org/technology/ http://www.unep.org/technology/search-portfolio

	Recommendation	Management response	Accomplished in Phase II
2	Work with UNFCCC to ensure all TNA reports are also available at the UNFCCC website - Link to communication/public awareness in the section on factors affecting performance	A fully refurbished web-site (hosted by UDP) plus incorporation in the UNFCCC website	Yes – information timely shared via these web-sites
3	Explore options with the key partners – countries and regional centers and the stakeholders to enhance and improve dissemination of key issues, public policy and coverage about technology issues related to climate change in more and different forums, including the mass media by providing relevant information, promoting evidence-based results of government and international programming and contributing to on-going needs for public policy formulation; explore additional options to find ways of influencing and engaging with civil society and academics on the issues	New guidebook TNA on stakeholder engagement developed	Yes – the guidebook has been published, but that output is no assurance that dissemination is improved. See also comment under #2
4	Commit to a minimum agenda (could be very brief and periodic) for following up on the core outputs, resulting outcomes and examples of successful programs emerging out of the TNA efforts	Collect success stories Present at global workshops and side events	Yes – a booklet with success stories from phase I was published (2016) and also a similar booklet with success stories from phase II (2019). And via participation in different events, newsletters (and pod-casts) success stories have also been disseminated.
5	Ensure that the UDP incorporate into its strategic plans elements for future support, on the issues of technology and CC, as this is not a onetime effort; encourage and secure commitments of the competent cadre of staff involved to maintain the momentum and	Rejected – outside control of UNEP project	UDP is still heavily involved in TNA-projects – as executing agency under phase III (and upcoming phase IV), and other related activities. It is worth considering how to secure the legacy of knowledge built inside UDP over the years.

	Recommendation	Management response	Accomplished in Phase II
	knowledge base on the key issues.		
6	Review with UNEP DTIE and GEF on possible reallocations for the current budget for TNA Phase II, to ascertain the degree to which the GEF rules do allow for flexibility during execution of approved projects to consider real experience and facts on the ground.	Rejected – outside control of UNEP project	n.a.
7	Examine the possible value of engaging external technical reviewers of the work done, for example in mid-term reviews, which would cost more than the current practice but can provide additional perspectives, complementing the useful project monitoring systems in place.	No budgets foreseen to do this	M&E procedures still open for improvement, in order to support more effective lessons learnt.
8	Make efforts towards a revitalized steering committee to improve strategic decision making in this highly complex project, with multiple partners, as the priorities would be viewed differently by partners, based on their own different perspectives, and effective integration of the different views is important.	Smart choice of SC members (more selective) in order to establish a Steering Committee to have strategic discussion	No - Despite changes the Steering Committee again did not function as envisioned and was dismantled after 2 meetings. SC members seem to have busy agendas and also don't get any compensation. It is not clear if budget allocation could overcome this hurdle. As an alternative, links were being made to regularly consult UNFCCC secretariat, CTCN and GCF, via participation in the regular (at least bi-annual) TEC-meetings. This creates a window of opportunity to discuss outputs, outcomes and lessons learnt of the project but can't be seen as a dedicated project-related Steering Committee.
9	Either through the above process, or through different mechanisms, increase the participation of global stakeholder agencies at events so they are encouraged to follow up on the implementation	Strong emphasis on dissemination at country level. And on a global level utilization of UNFCC events and periodic publication of newsletters.	Partly – certainly at country level but also at global level, the participation of global stakeholder agencies was not substantially increased; UNFCCC-secretariat frequently participated at global events, and

	Recommendation	Management response	Accomplished in Phase II
			also CTCN and sometimes also GCF, but limited other agencies. CTCN and GCF are also – similar to UNEP and UDP - both a member of UNFCCC-TEC. At country level it varied, depending on the host agency of the TNA-coordinator and how closely connected they were with the focal points / donors
10	Increase internal competencies to more flexibly apply a range of tools and methods to the specific situations faced by country, sector and purpose. Consider a greater coherence for framing the issues adding perspectives from economics and politics how they interact and are influenced, and apply systems thinking, to clarify more how UDP can increase the value of the outcomes.	Rejected – compliance can't be tracked. And furthermore, the project is country driven and therefore it is the role of countries to increase the value of the outcomes rather than UDP	No - An issue still to be solved in multi-country projects that also are country driven. UNEP and UDP recognize this issue, but how should projects deal with generic training packages delivered as part of capacity building activities versus tailoring technical assistance to local conditions, when resources are limited. The typical approach is to provide guidance that is generic but also has some flexibility for countries to adapt.
11	In any discussions of technological change and innovation pay greater attention to the broader economic and financial barriers for example the effects of subsidies and to "unintended consequences", which loom larger when a new technology is engaged at scale.	Update of the guidebook on 'Overcoming barriers to the transfer and diffusion of climate technologies'	Yes – properly addressed via the update of the guidebook and inclusion of it in the 2nd regional capacity building workshops (on BAEF)
12	The issue of linkages between countries, increasing opportunities for learning between countries, linking to regional and global networks for knowledge, information, technology and finance areas area for the subsequent TNA Phase II to pay greater attention to.	Organize global experience sharing workshop and regional capacity building workshops. Additionally, organize side-events during high-level (pre) COP-meetings.	Partially – the planned workshops and side events were organized but that does not directly translate into a direct and positive effect for the countries involved in Phase II.
13	Countries involved in Phase II should note that many of the factors for	More emphasis on the dissemination at national	Limited achievement – a few positive examples.

	Recommendation	Management response	Accomplished in Phase II
	greater national value are in their control. At the project level they include integration of such work within national decision making and climate change structures, energetic leadership at an appropriate national level with access to senior officials and to a wide range of ministries and departments, and a reasonable provision for national resources to complement the external finance.	level; development of targeted briefing notes and activities to disseminate to decision makers.	But in phase II no budget was allocated for supporting the countries. In phase III specific budget was allocated.
14	Follow up at the national level after the project ends is also critical for the use of the outputs in national planning, financing and programming.	Rejected – is not part of the donor activity, and GEF rejected inclusion of such activity in new proposals. But at the same time agreed that the suggested recommendation is important. Seeking for ways how to deal with this, in close co-operation with TEC.	Still limited systematic gathering of results post project, due to the fact that this is time (and cost) intensive, both at global level and at national level, and budget allocation was not allowed by GEF, neither for UDP nor at national level. Regular communication between UDP and the Regional Centers and the TNA-coordinators stops post-project and then relies on ad-hoc communication and interest from parties to reply on surveys sent out by UDP and/or UNFCCC. Still weakness 'in the system'
15	Almost all the countries involved rely on multi-lateral and bilateral donor partners for critical financing support to complement national resources. Linking to them at the national level and sharing information on the findings of priorities and action plans determined through the project, to develop funded activities to take them forward. For this and in general many countries can follow some of the good examples by others in terms of dissemination, tracking and sharing information and follow up.	Advocate this for new countries; to engage with in-country donor / development partners' community and also the GEF focal point, CTCN NDE and GCF NDA.	Partly improved, but still not adequately covered in all countries. Engagement with the donor community depends strongly on the network and experience of the TNA-coordinator, and it appeared not always properly aligned. As a result still a gap to be bridged between TAP, project proposal writing and submission to the right channels.

	Recommendation	Management response	Accomplished in Phase II
16	UNEP FMO must work together with GEF and project team to ensure that all information on available financial resources to the project, both as provided in the GEF grant and also as co-financing are provided to the project managers in a transparent manner	Envisioned to improve the reporting system (at UNEP)	Still the co-financing data (of all involved parties) are not justified, and thereby questionable if achieved. There are not guidelines how to document and monitor co-financing in a transparent manner.

202. As can be seen, most of the recommendations listed in the TE of TNA Phase I are addressed in Phase II, but still not all in an effective manner.

203. Three key strategic questions were included in the Terms of Reference of this evaluation.

- How the countries are moving (or planning to move) to the implementation of their TNA activities (including the priority ideas they have developed from the TNA-process), plus how they use the results in their own processes (e.g. national/sectoral policies, strategies) and how they communicate these results to the donors.
- Feedback on the process, the tools, the support provided and to understand what are the things that make it more successful in some countries than in some other countries (thereby help in further guiding countries and providing tips for doing a successful TNA)
- Private sector and donor/finance community engagement remains a challenge. It will be valuable to see which countries have been most successful in this area and why.

204. <u>How are the countries moving to the implementation of their TNA activities?</u> Evidence showed that the quality of the TNA and TAP outputs has increased – based on experts' opinions comparing the quality of TNAs over the last 10 to 15 years. The systematic approach and guidance, capacity building and coaching at national level is harvesting results. However, the improved quality of TNAs and TAPs does not ensure that they also will be implemented in an effective manner.

205. An important improvement, triggered by global and national contextual development, contributed to a better uptake of the TNA/TAP in national strategies. Since the start of phase II, and leveraged by the Paris Agreement, the NDCs have a high priority in the national CC strategies as part of countries' international commitments and it is felt that TNA/TAP can provide accurate input for these NDCs. The perceived value of TNAs has, therefore, increased and it is important to properly align these processes within a planning context, so that they can piggy-back on each other, thereby generating more interest and commitment from governmental agencies to be deeply involved, along with other relevant parties. It would therefore be worthwhile to pre-select participating countries based on evidence that the TNA-process can build upon or is in line with the planning of the NDC's. Up until now GEF was not supportive for such approach suggested by UNEP.

206. Capacity building was a core element of the change process in the project, but still addresses a rather limited number of national experts with a lack of certainty of whether the intended knowledge has been gained adequately, how wide spread it has become and, as a result, how self-sufficient the country became. This is key to confirming and adequate institutional legacy.

207. The development of, and subsequently the uptake of, TAPs in an effective manner requires, besides capacity building for national experts on how to prepare them, correct stakeholder engagement at the right moment (that will be addressed below) and bridging the gap between the TAP, the transition of the project ideas into project proposals that are accepted by donors / investors and the implementation of those plans. It appears that, despite more good examples in Phase II, the steps taken are still at a nascent stage. Many countries still have insufficient know-how on where to tap into the right fund and how to prepare proposals acceptable for specific donors or investors. Alignment with and/or embedding in national / sector plans, and thereby aligned with national development priorities, will leverage tapping into national budgets.

208. What are the key lessons learnt as feedback on the process, the tools, the support etc.? The step by step process in Phase II is better tailored to the needs of the recipient countries, but improvements are still needed. The guidance materials have been substantively improved and the sequential training and coaching is heading in the right direction. However, many respondents still reported that the approach is not sufficient to strengthen the national capacity for developing and implementing TNAs and TAPs. The approach, related budget and box of available tools and materials should be further extended; the complexity of the training approach should be reduced by including more steps in the approach, and –importantly – not only a limited number of national experts should be trained (in phase II 2 to 4 experts from each country were involved in the regional capacity building activities) but in the future widen the scope through a sequence of national capacity building workshops. It is noted that as part of the ongoing phase III – with enlarged budgets per country – the capacity building activities have been strengthened. It is worthwhile to assess whether other (bilateral) TNA-projects in which substantially greater budgets are available (e.g. TNA-project in Brazil with a budget of 700,000 U$ via GCF readiness funding) result in increased outcome and likelihood of impact).

209. Were countries successful in effectively engaging the private sector? In addition to the abovementioned weaknesses, engaging with the private sector and donor/finance communities can still be seen as one of the key challenges. It appears that countries still struggle to engage broadly and systematically with the private sector as well as the local government during the process of developing TNAs and TAPs, although both are relevant as potential implementers for the envisioned project ideas.– . Both types of stakeholders seem difficult to engage on a continuous basis mainly because they seem to lack an understanding of the value of the TNA/TAP process. Creative ways have to be defined how to trigger their attention at the right moment.

210. Similarly, the donor / finance community engagement is limited. Most countries tried to bring them on board in the last stage of their TNA / TAP process, via dissemination and outreach workshops. UNEP recognizes this factor and continuously advocates to bring the national focal points on board (NDE, DNA, NDA, GEF, etc.) as they are the national entities responsible for endorsing / utilizing the available funding mechanisms (CTCN, GEF, GCF and Adaptation Fund). While it would be advisable to engage with them earlier in the process it is perhaps unrealistic to expect these groups to have any incentive to invest large amounts of time in the planning and prioritization

processes that they cannot influence. These groups often do not show pro-active interest in engaging with the TNA / TAP process, and the guidance and moderation from UDP was mainly done at a regional level, i.e. engaging CTCN (and sometimes other financial institutions) in regional capacity building ang global sharing workshops, and by making information available on different financing mechanisms (e.g. new guidance materials), but no direct support for countries to engage on country level. That was left to the responsible of the national team. Therefore, the factor that determined countries' success in developing project proposals and submitting these to the right channels was the capacity and capability of the TNA-team; knowing the channels (the TNA-team was close positioned / aligned to NDA's and focal points of financing mechanisms), bringing them on board in a timely manner and already having working experience developing project proposals.

B. Summary of project findings and ratings

211. The table below provides a summary of the ratings and findings were discussed in detail above. Overall, the project demonstrates a performance rating of 'Satisfactory'.

Table 20: Summary of project findings and ratings

Criterion	Summary assessment	Rating
Strategic Relevance	**No shortcomings identified**	**S**
1. Alignment to MTS and POW	The project is aligned to UNEP's MTS (2010-13) and POW (2012-13)	HS
2. Alignment to GEF/Donor strategic priorities	The project is aligned to both UNEP and UNFCCC's strategic priorities and directly aligned supports GEF, CTCN and GCF's agenda	HS
3. Relevance to regional, sub-regional and national environmental priorities	The project supports national efforts in all countries to address climate change and the outputs are often directly utilized for preparation of their NDC's and to some agree also broader national development strategies.	S
4. Complementarity with existing interventions	The project properly aligns with ongoing and planned (inter)national interventions on climate change undertaken by UNFCCC	HS
Quality of Project Design	The design was adequate, with sufficient details, building upon lessons learnt from previous experience. Its 'major' weakness is the still insufficient assurance of impact – via limited design how to bridge the gap between planned project and envisioned post-project interventions, and thereby questions on the sustainability of the project	**S**
Nature of External Context	Varied per country, but overall not a major factor during the project period.	**F**
Effectiveness		**S**
1. Availability of outputs	All planned outputs (both at global level as well as per country) were achieved on time and (publicly) accessible (via the web-site) as well as aggregated meta-data for (internal) lessons learnt for improvement of guidance and external briefings.	HS
2. Achievement of project outcomes	Envisioned outcomes are all properly achieved.	S
3. Likelihood of impact	Long-term impact can be questioned despite the availability and accessibility of sufficient donor grants, due to the weak bridge between TAPs (direct output of the project) and project proposal development for continuation. Despite improvement efforts (compared to phase I) to strengthen awareness of available grants the capacity and capability at country level for these next steps is still felt limited.	ML

Criterion	Summary assessment	Rating
Financial Management		**S**
1. Adherence to UNEP's financial policies and procedures	As a result of continuation of the project – building upon predecessor phase I project – and long-term working relation between the executing and implementing agencies all required procedures functioned properly.	S
2. Completeness of project financial information	The relevant financial information was easily available and accessible, but not always consistent and coherent	S
3. Communication between finance and project management staff	Communication is properly working, no shortcomings identified.	S
Efficiency	Taken into consideration the complexity of the project – numerous countries involved with different (baseline) conditions and local partners – and the ambitious goals with limited budgets (per country) the project is considered to be efficient in its use of funds. More flexibility – to adapt country support to specific conditions and stage additional support whenever required – would be beneficial to increase the efficiency; a delicate balance in a global project (with 20+ countries involved).	**S**
Monitoring and Reporting		**HS**
1. Monitoring design and budgeting	Adequate attention was given at design for proper and regular monitoring and evaluation.	HS
2. Monitoring of project implementation	The executing and implementing agencies frequently discussed the progress of the project implementation and documented it via (bi) annual reports, but the monitoring was not covering all elements. The envisioned set-up of a Steering Committee did not work out properly; only 2 meetings took place (with limited presence of external stakeholders and experts), but was partially replaced by regular participation in the UNFCCC-TEC meetings (and COP-side events) and thereby getting high-level reflection on outputs and outcomes of the project. The mid-term evaluation was conducted at a rather late moment in the project and thereby having limited value for the ongoing project itself (and merely for the design of the next phase).	S
3. Project reporting	Available reports gave adequate insights in progress – but lacking some details - results achieved and lessons learnt.	S
Sustainability		**ML**
1. Socio-political sustainability	This strongly varies per country and strongly depends on the established ownership and efforts for strengthening institutional awareness and capacity; in many countries merely on individual basis and not sufficiently embedded and mainstreamed. Shifts in position can easily reduce the knowledge / legacy of the project.	ML
2. Financial sustainability	This strongly varies per country, but overall insufficient evidence that interventions will be likely continue to be funded at a large scale in (all) countries. Strongly depends on the ownership of the outputs/outcomes per country, awareness of the right channels for funding and capacity to develop high quality project proposals for funding.	ML
3. Institutional sustainability	Despite all capacity building efforts, in many countries merely on individual basis and not sufficiently embedded and mainstreamed. Shifts in position can easily reduce the knowledge / legacy of the project.	ML
Factors Affecting Performance		**S**
1. Preparation and readiness	Very adequate, based on experience and lessons learnt of the predecessor project and stability in the composition of the implementation and executing agencies (and its supporting partners).	HS

Criterion	Summary assessment	Rating
2. Quality of project management and supervision	High quality – both in guiding and supervising the quality of outputs of the projects as well as the proper (and regular) communication with all involved project partners to track and trace progress and anticipate on upcoming problems.	HS
3. Stakeholders' participation and cooperation	At country level stakeholder participation and co-operation was covered sufficiently – with the exception of (strong) involvement of private sector – but sometimes rather 'traditional' and insufficient dynamic; not anticipating on required change of stakeholders per different phase of the project.	S
4. Responsiveness to human rights and gender equity	More could have done to engage women and marginal groups, both during the implementation of the project itself as well as properly addressing it as part of the development of TNAs and TAPs.	MS
5. Environmental, social and economic safeguards	Properly addressed – as part of the well-designed approach and guidance how to develop TNAs and TAPs addressing environment, social as well as economic issues.	S
6. Country ownership and driven-ness	Despite the 'standardization' of approach and templates for outputs (TNAs and TAPs) the actual implementation was always driven by country needs and priorities and thereby adequate country ownership. However, doubts can be made if the correct 'ownership' is achieved to secure post-project interventions.	S
7. Communication and public awareness	Both at global level as well as at country level a number of dissemination and outreach activities have been conducted to secure proper communication on the results of the project and thereby increasing the (public) awareness. In the global arena of climate change the results of TNA are well-known and highly valued. The awareness at country level varies and not always well spread beyond the actually involved stakeholders during the project itself. This could hamper further mainstreaming.	S
Overall Project Performance Rating		**S**

C. Lessons learned

Lesson Learned #1:	Alignment with national strategies / streamline planning
Context/comment:	It is more and more recognized that TNA – if properly developed (i.e. systematically / structured) have a great added value for strengthening national strategies. TNA / TAP outputs have shown a great value to support countries for the formulation and implementation of their NDCs and support the formulation of planning and reporting documents, including but not limited to the revised NDCs. But it requires proper coordination and sequenced (timing) between the different agencies to avoid planning conflicts, delays and/or duplication of work. Incorporating the UNFCCC NDE in a leading position in the governance structure appeared to be strongly beneficial. Building upon / aligning with national development strategies can also be a leverage for tapping into national budgets.

Lesson Learned #2:	Choice of TNA-coordinator and local consultants
Context/comment:	Local leadership, and their capacities, strongly influences the quality of the TNA/TAP process and its outputs. Failure in selecting the 'right' TNA-coordinator (with adequate knowledge and skills, and acceptance from the different stakeholders), his/her positioning in the host agencies, and the national consultants can severely hamper the progress. Therefore, there is a need to ensure more scrutiny – despite the basis of country driven-ness in the project approach - in selecting the national TNA coordinator and local consultants, and to further improve or adapt tool, training and capacity building activities. The inception missions need to aim more strongly to identify qualified national experts / consultants and the supervising national TNA coordinator and avoid potential risks of delays, problems with stakeholder engagements or low quality of outputs leading to replacement to solve the problem.

Lesson Learned #3:	Capacity building
Context/comment:	Already highlighted in the TNA Phase I evaluation the lessons learned / recommendation that more capacity building, and notably in-country capacity building, would be very beneficial to the TNA

	processes; national capacity building workshops on top of the regional workshops. National capacity to develop TNAs / TAPs is one of the key factors for success; not only involved persons in the project (TNA-coordinator and consultants), but also capacity of involved stakeholders. It is important to secure that capacity building is going beyond individual persons and tries to secure institutional embedding of knowledge to create legacy and avoid countries becoming dependent on specific experts. In the ongoing phase III elements of improved capacity building have already been incorporated (2 national workshops are part of the process, compared to phase II). Existing capacity building activities proved to be highly appreciated if the approach incorporated substantial hands-on exercises that properly address ways to apply the method to the local conditions.

Lesson Learned #4:	**Participatory approach / stakeholder involvement**
Context/comment:	Most countries took notice of the diverse interest, backgrounds, experiences and understanding of climate change and development issues of the stakeholders. The project teams recognized the importance of engaging the right stakeholders in key steps of project implementation to ensure that consensus is achieved. Different mechanisms were applied at country level for effective stakeholder engagement, and UDP supported the process via developing a specific guideline how to identify and engage relevant stakeholders in the TNA process and addressed this issue at the regional capacity building workshops. An issue to be solved still is the imbalance in know-how and knowledge between the different stakeholders, that can hamper and delay effective discussions; partially it was covered via preparation of some fact sheets to provide all participants with similar baseline information, but there still is a need for further action (see need for strengthening national capacity).

Lesson Learned #5:	**Effectively engage the Private sector**
Context/comment:	It appeared that, with exception of a few countries (like Uruguay, Tunisia, Jordan) accurate involvement and getting commitment from the private sector appeared to be difficult (similar as concluded during phase I). Private sector engagement appeared triggered by their interest in possible investments arising from identified project proposals.

	Accurate timing and handling expectation management in getting private sector involved seems to be the key for success – too early contact can lead to disappointment and drop-out because and too late contact will lead to challenges during the actual implementation phase

Lesson Learned #6:	**National /country ownership of the TNA project**
Context/comment:	From the start of the project the countries were recommended to use already existing national climate changes committees, or other relevant already formed committees to implement / supervise the project to avoid institutional duplication where possible and immediately seek for alliance with other relevant national developments. This is applied by most countries and appeared to be successful. Incorporating the UNFCCC NDE in a leading position in the governance structure appeared to be strongly beneficial. Additionally, engagement with other focal points of mechanisms from the Convention (such as GCF and Adaptation Fund) is beneficial for tapping into future funding for implementation.

Lesson Learned #7:	**Securing high-level stakeholder awareness and political buy-in**
Context/comment:	This can be achieved via the right choice of (members of) the Steering Committee / governance structure to immediate secure this high-level awareness and political buy-in, and in case the representation was not properly addressing it, additional meetings should be staged for political leaders to enhance their sense of project ownership.

Lesson Learned #8:	**Strengthening the executing structure**
Context/comment:	Executing agency's (UDP) smart designed working protocol helped to clarify roles, tasks and procedures between all involved parties (UDP, RC's and national experts). When timely and coordinated feedback / review, preferably followed by direct 1-to-1 oral explanation, was provided to countries it helped them to improve the process and strengthen the content of the reports. The flexibility to stage additional support – additional to the original envisioned sequence of workshops and country visits – via extra country visits for technical assistance, or customized webinar trainings were highly valued, because they could directly address specific country needs beyond the general training and coaching.

Lesson Learned #9:	Global networking
Context/comment:	The strong(er) engagement of UNEP and especially UDP with UNFCCC-secretariat and TEC-meetings secured better exchange of information and lessons learned (vice-versa) and, most important, leverage for (the value and utilization) of TNAs.

D. Recommendations

Recommendation #1:	Strengthen capacity building at country level
Context/comment:	National trainings for a wider group of stakeholders would strengthen stakeholder engagement and thereby the quality of the different outputs resulting from the TNA process. A new capacity building package for national TNA teams should be developed – on top of the regional capacity building workshops that are staged for the coordinating staff the TNA teams in combination with international networking – and at least 2 national training workshops should be delivered (2 days/workshop with an audience of up to 30 participants, to keep the workshop interactive. A larger number could increase the potential capacity building but at the same time due to less interaction the risk to decrease the effect of the training). In addition a training workshop should be included to strengthen national capacities for project preparation and proposal writing (for a group of up to 10 experts, who showed strong engagement during the first parts of the TNA-project); this training (in combination with development of a training package / guidance)) will help countries in writing proposals and identifying which development partner(s), investment partners, donor and/or funding mechanism to target for their prioritized technology actions. Partially already incorporated in phase III (2 national trainings per country and 3 regional trainings in lieu of 2, plus development of guidance materials on proposal development). Additionally, the project should aim to a create strong(er) institutional legacy at country level – securing a commitment to the continuation of the 'TNA-teams' / governance structure post-project in order to capitalize on that capacity during the post-project implementation processes.
Priority Leve[10]l:	Critical recommendation

[10] Select priority level from the three categories below:
Critical recommendation: address significant and/or pervasive deficiencies in governance, risk management or internal control processes, such that reasonable assurance cannot be provided regarding the achievement of programme objectives.

Responsibility:	Executing agency (UDP) in combination with support partners
Proposed implementation time-frame:	2020

Cross-reference(s) to rationale and supporting discussions: Section 86, 117-124, 132-133,141

Recommendation #2:	**Develop new guidance materials, at least:** **(a) Guidance on Gender Responsive TNA and TAP** **(b) Guidance on access to finance and proposal development based on TAPs and project ideas**
Context/comment:	Guidance materials are an essential requirement for the capacity building activities – used in the workshops, but partially also serve as guidance for non-participants – and needs to be on a regular basis evaluated (if practical enough for effectiveness) and updated (in case of new developments). The TNA-project already has a number of guidance materials, and this can be enlarged with at least 2 new ones (as publications, but preferable also as e-learning modules): • Most TNA / TAP process did not integrate specific gender consideration or aspects in their analysis. A guidebook to elaborate on the aspects of how gender can be integrated into the assessments and why and how it is relevant to include such aspects when focusing on technologies. In addition, also recommendations how to identify, consider and integrate gender considerations throughout the TNA/TAP process. • A guidebook on accessing international funding for climate change mitigation and adaptation is already existing, but need to be updated with recent developments in opportunities. And it should be made as practical as possible on guiding how to prepare effective proposals (identifying which partners, what elements to cover, what level of justification is needed to convince a donor, etc.) It is recognized and acknowledged that guidance and training (both on gender and access to funding) are already incorporated in the ongoing phase III.
Priority Level:	Important recommendation

Important recommendation: address reportable deficiencies or weaknesses in governance, risk management or internal control processes, such that reasonable assurance might be at risk regarding the achievement of programme objectives. Important recommendations are followed up on an annual basis.
Opportunity for improvement: comprise suggestions that do not meet the criteria of either critical or important recommendations, and are only followed up as appropriate during subsequent oversight activities.

Responsibility:	Executing agency (UDP)
Proposed implementation time-frame:	Already covered under present ongoing Phase III. It would be worthwhile to evaluate the acceptance and applicability of the guidance materials, to see if improvement is needed (perhaps to be made more practical). This is especially with regard to the guidance on access to finance, which requires regular updates (and/or links with e-modules) to be in line with new developments

Cross-reference(s) to rationale and supporting discussions: Section 117-127

Recommendation #3:	**Improve the engagement with the private sector**
Context/comment:	Proper stakeholder identification and engagements has proved to be critical for conducting a successful TNA/TAP process since quality and success strongly depends on political will and (co) ownership of the relevant stakeholders. And especially involvement of the private sector should be further strengthened, but at a certain moment also involvement of a.o. local government can be relevant. Attention is therefore needed to ensure a rigorous stakeholder mapping, a targeted selection of the stakeholders (and smart choice who actual represents the stakeholder (interest, commitment, knowledge, decision power) to engage in the process, and coaching the national TNA-coordinator (and his team) in this process. The inception missions to the participating countries will aim to identify TNA-champions amongst the decision makers and stakeholders. It will be important to not take a static approach, but dynamically – continuously reconsider if the same stakeholders (entities, and the persons who represent those entities) are still valid during the ongoing process of the project. A shift can be needed, and other stakeholders to be brought in.
Priority Level:	Critical recommendation
Responsibility:	Executing agency (UDP) in close co-operation with the Regional Centers and the country TNA-coordinators
Proposed implementation time-frame:	2020

Cross-reference(s) to rationale and supporting discussions: Section 131, 143, 214-215

Recommendation #4:	Strengthen the involvement of CTCN
Context/comment:	CTCN is seen by all involved parties – implementing and executing agency and national teams – as an agency that can play a pivotal role in bridging the gap between TAP preparation and implementation of project ideas, via support to develop those ideas effectively and thereby aligning towards financing mechanisms (such as GCF). This is also in line with CTCN's mandate. However, it still is felt that CTCN is insufficiently engaged in the project – merely via involving in regional workshops and co-organization of regional workshops. The impact of this engagement at national level is insufficient and a more pro-active attitude from CTCN would be very beneficial. This could be addressed via direct bilateral communication (bi-annual meetings) between UDP / UNEP and CTCN to share the progress of the project, lessons learned and seek interest for joint activities. Additionally, it is recommended that the country NDE should be more closely incorporated in the governance structure, as the national focal point for CTCN; and thereby secure that requests to CTCN are aligned with or emanate from the TNA/TAP-process.
Priority Level:	Important recommendation
Responsibility:	UNEP and UDP
Proposed implementation time-frame:	2020 – onwards

Cross-reference(s) to rationale and supporting discussions: section 177-179, 215

Recommendation #5:	Global project with multi-country involvement
Context/comment:	A global project with multi-country involvement always needs a balance between regional activities (for effective use of limited budgets) and national specific activities that can deliver tailored technical assistance taken into consideration country specific conditions (referring a.o. to recommendation 1 listed above). The regional aspect – peer-to-peer exchange and south-south co-operation – can be very beneficial for improved knowledge sharing on TNAs and TAPs implementation, especially in the same region (countries that potentially already have a working relation) and/or with similar climate change challenges and priorities.

	Mentorship of experienced countries (participating in previous projects) should be considered; not only on occasional basis for a single presentation at an event, but on a more systematic basis. The regional capacity building activities should be more tailored to these aspects and mechanisms should be develop to strengthen the networking beyond these specific events; via smart chosen social media appliances. For that reason, budgets should be made also more flexible – not too rigid fixed as an identical amount for each country and identical pathways to approach each country. Such model is easier to manage, but underestimates the different baseline conditions per country and thereby the needs and requirements per country. A too standardized approach – one model / approach fits all - can result in reduced national ownership. It is noted that the concept phase of TNA IV is already completed so either the issue needs to be raised with the donor, or a response would have to wait until TNA is developed.
Priority Level:	Opportunity for recommendation
Responsibility:	UNEP
Proposed implementation time-frame:	2020 – onwards

Cross-reference(s) to rationale and supporting discussions: section X.x.

Recommendation #6:	**Recommended interventions beyond phase IV**
Context/comment:	At this moment phase III of the TNA project is also in the final stage and phase IV is already in the pipeline, resulting around 2022 in covering all ± 100 eligible countries that need support in TNA/TAP development and implementation. But certainly, still the implementation of the TAP has been properly done, and over the years – due to change in conditions, insights, technology development, etc. – the TNA/TAP exercise should be reiterated. And it is too ambitious to consider that all countries participating in these project phases will have strengthened their local capacities in such a way that they can be self-sustaining. Therefor ideas need to be developed to: (i) Update the TNA/TAPs in the frontrunning countries (shorter effort) with focus on implementation (ii) Renew the TNA/TAPs in the laggard countries – those countries that 'failed' to properly develop them, mainly due to limited capacity

	In addition to this it is worthwhile to consider – in close conjunction with UNFCCC-secretariat's work to make TNA synthesis reports - to continue systematically collect information, analyze and synthesize the achievements (lessons learnt, success stories but also fail factors) to align new support streams. It would be worthwhile to consider a longer-term function for UDP – building upon their wealth of practical experience and expertise they have built over the years with these TNA-projects. A model should be chosen to strengthen the co-operation with other programs, besides the already mentioned UNFCCC-secretariat also stronger links with the CTCN-work and GCF.
Priority Level:	Opportunity for recommendation
Responsibility:	UNEP and UDP
Proposed implementation time-frame:	2021

Cross-reference(s) to rationale and supporting discussions: section 151-153

Recommendation #7:	**Strengthen the M&E process**
Context/comment:	Taken into consideration the situation that Phase II of the TNA project already started before the Terminal Evaluation of Phase I was done, and similar Phase III stared before the TE of phase II was done, a more timely M&E process should be considered. Perhaps the importance of the Mid-Term Review could be increased – both content-wise as well as timely execution (done at a moment when still substantial adjustments can be made) and perhaps also a more independent execution. Otherwise both the MTE and the TE are becoming a more administrative exercise (document evidence, lessons learnt over a long period time of time) with limited effect on the incorporation of those lessons learnt into practice. Furthermore, to request from all contractual partners (also from the Regional Centers and the TNA-coordinator) a short bi-annual progress report with – besides the short overview of facts and figures (and deviations) – a list of encountered challenges and lessons learnt. Similar to the 'contractual requirement' of the Regional Centers, the participating TNA-coordinator were to prepare an annual overview of their activities and lessons learnt. The TNA, BAEF and TAP reports give insight into the different workshops hosted and which participants were present, but no regular documentation seems to be available for other indirect interventions that took place in the country (e.g. meetings, briefings, plans for project proposals, etc.) or for a short overview of challenges

	encountered. Some TNA-coordinators were more proactive in this area than others. Such a simplified reporting template would be a good mechanism to catch lessons learnt. The internal track-trace monitoring system could be further strengthened, beyond analyzing the TNA and TAP content, to include some essential parts in the collected and aggregated data, a.o. • Data on level of stakeholder engagement in each country – to track-trace involvement of all essential stakeholders and thereby timely trace if some have been overlooked or (in)deliberately excluded; • Data on addressing vulnerable/marginalized groups, including gender; • Data on activities (and perception) of dissemination and outreach; • Data on development of concepts notes for project idea funding, with initial response from donors; • And to add – especially when projects include capacity building and institutional strengthening activities – proper assessment methods to compare pre and post project changes in capacity.
Priority Level:	Important recommendation
Responsibility:	UNEP and UDP
Proposed implementation time-frame:	2020 (to be incorporated in the design of phase IV)

Cross-reference(s) to rationale and supporting discussions: section 86-87, 126-144, 172-182

Recommendation #8:	**UNEP to develop a protocol on monitoring co-finance**
Context/comment:	GEF always requires a certain amount of co-financing in their project proposals (up to a certain minimum ratio), meant to secure ownership of the executing and implementing agencies and recipient countries. However, the evaluation shows insufficient clarity on the definitions, methods for estimation at the design stage, nor standard procedures and protocols for monitoring and reporting at the implementation stage. Neither from GEF side nor from the executing and implementing agencies. A short and concise document is worthwhile to develop how to provide this clarity and guidance and showing as UNEP a

	frontrunner position when deploying donor money under the promises of co-financing.
Priority Level:	Opportunity for improvement
Responsibility:	UNEP
Proposed implementation time-frame:	2020 – 2021

Cross-reference(s) to rationale and supporting discussions: Section 161-168

ANNEX I. RESPONSE TO STAKEHOLDER COMMENTS

Table 21: Response to stakeholder comments received but not (fully) accepted by the reviewers, where appropriate

Page Ref	Stakeholder comment	Evaluator(s) Response	UNEP Evaluation Office Response
Para 100 / table 10	Comments (made by the Implementing Agency (UNEP) on several ratings given – in the Inception Report – regarding the Project Design Quality, more specifically with regard to: (a) the completeness of the Theory of Change, and (b) the sustainability / replication and catalytic effects	(a) The evaluator described – in para 77 – 81 – that the design documents lacked a proper description and presentation of the assumptions and drivers, an essential part of the ToC. And as a result, the evaluator finds the rating of MU adequate. (b) The evaluator described – in table 10 – the weaknesses in the design, and later in the Likelihood of Impacts – in para 139 – 141 – the effect on the actual implementation. And as a result, the evaluator finds the rating of MS adequate	

ANNEX II. PEOPLE CONSULTED DURING THE EVALUATION

	Name	Position in the project	Date
Implementing agency			
UNEP	Mark Radka	Head of Branch (UNEP)	Skype-call
	Jonathan Duwyn	Task Manager (UNEP)	Face-to-face in Copenhagen
	Ruth Cuotto & Geordie Colville	Portfolio Manager (UNEP)	Skype-call
Executing agency			
UNEP DTU Partnership	John Christensen	Director	Skype-call
	Peter Skotner	Deputy-director	Face-to-face in Copenhagen
	Jorge Rogas	Project Manager and regional coordinator LAC – activities	Face-to-face in Copenhagen
	Sara Traerup	Regional coordinator Africa and the Middle East – activities (and Project Manager phase-III)	Face-to-face in Copenhagen, Bonn and Cape Town
	Subash Dhar	Regional coordinator Asia and CIS - activities	Face-to-face in Copenhagen
	Gordon A. Mackenzie	Country focal point for different LAC and African countries	Face-to-face in Copenhagen
Regional Centers (RCs)			
Fundación Bariloche	Daniel Bouille	Regional consultant	Face-to-face in Buenos Aires
	Osvaldo Giraldin	Regional consultant	Face-to-face in Buenos Aires
	Marina Recalde	Regional consultant	Face-to-face in Buenos Aires
Environnement et Développement du Tiers Monde (ENDA-TM), Senegal	Ba, Libasse	Regional consultant	Skype-call
University of Cape Town (UCT), South Africa	Jiska de Groot	Regional consultant	Face-to-face meeting during workshop in Cape Town
	Debbie Sparks	Regional consultant	Face-to-face meeting during workshop in Cape Town
Asian Institute of Technology (AIT), Thailand	Prof. Dr. Sivanappan Kumar	Regional consultant	Skype-call
	Rajendra Shrestha	Regional consultant	Skype-call
	Dr. Mokbul Morshed Ahmed	Regional consultant	Skype-call

	Name	Position in the project	Date
Individual consultant from Moldova (adaptation specialist)	Ala Druta	Regional consultant	Face-to-face meeting during workshop in Cape Town
Libelula, Peru	Pia Zevallos	Regional consultant	Skype-call
Project Steering Committee			
UNEP DTU Partnership	John Christensen	Member PSC	Skype-call
UNEP	Jonathan Duwyn	Member PSC	Face-to-face meetings
GEF Secretariat	Katya Kuang-Idba	Member PSC	Skype-call
World Bank	Jonathan Cooney	Member PSC	Skype-call
UNFCCC – secretariat	Vladimir Hecl	Member PSC	Face-to-face meetings
Other relevant (global) key stakeholders			
GEF-secretariat	Katya Kuang-Idba		Skype-call
UNFCCC – TEC	Suil Kang	Korea representative at TEC	Face-to-face at TE-meeting in Bonn
UNFCCC – TEC	Vladimir Hecl	UNFCCC secretariat	Face-to-face at TE-meeting in Bonn
UNFCCC – TEC	Stella Gama	Malawi representative / vice-chair at TEC	Face-to-face at TE-meeting in Bonn
UNFCCC – TEC	Ladislaus Kyaruzi	Tanzania representative at TEC	Face-to-face at TE-meeting in Bonn
UNFCCC – TEC	Hans-Jorn Weddinge	BINGO-representative (ThyssenKrupp) at TEC	Face-to-face at TE-meeting in Bonn
JIN	Wytze van der Gaast	Consultant on TNA for TEC	Skype-call
Countries			
Argentina (phase I)	Gabriel Blanco	TNA-coordinator	Skype-call
University of Buenos Aires	Pablo Bonelli	National consultant	During field mission
University of Buenos Aires	Ana Lea Cukierman	National consultant	During field mission
University of San Martin	Jose Barbero	National consultant	During field mission
National University of Central Buenos Aires	Estella Santalla	National consultant	During field mission
National Technical University - Facultad Regional Mendoza	Enrique Puliafito	National consultant	During field mission
Freelance consultant	Yanina Guthmann	National consultant	During field mission
Ministry of Environment & Sustainable Development	Fabian Gaioli	National consultant and interim staff Ministry (for NDC)	During field mission
Armenia (phase II)	Aram Gabrielyan	TNA-coordinator	During field mission

	Name	Position in the project	Date
Director of the Environment Project Implementation Unit	Meruzhan Galstyan	Host of the TNA-coordinator	During field mission
Freelance consultant	Tigran Sekoyan	Coordinator for mitigation activities	During field mission
Vice Minister of the Ministry of Environment	Vardan Melikyan	During the project coordinator for adaptation activities	During field mission
Vice Minister of the Ministry of Economy	Naira Margaryan	Key stakeholder	During field mission
Director UNIDO office in Armenia	Anahit Simonyan	Key stakeholder	Via skype call
Armenia's Country Water Partnership	Arevik Hovsepyan	National consultant water	During field mission
Armenia Chamber of Commerce and Industry	Masis Sarsyan	Key stakeholder private sector	During field mission
Ministry of Agriculture	TBD – via TNA-coordinator	Key stakeholder	During field mission
Amberd Research Center	Samvel Avetisyan	National consultant adaptation	During field mission
Settlement Center CJSC	Mkrtich Jalalyan,	National consultant mitigation	During field mission
Consecoard LLC	V. Tevosyan	Consultant for advising government in development GCF proposals	During field mission
Eswatini (phase II)	Hlobsile Skhosana	TNA-coordinator	During field mission
	Minky Groenewald	Assistant to TNA-coordinator	During field mission
	Deepa Pullanikkatil	National consultant	During field mission
	Mduduzi Mathunjwa	National consultant	During field mission
Guyana (phase II)	Rohini Kerrett	TNA-coordinator	Skype-call
Mauritania (phase II)	Fall Oumar	Assistant to TNA-coordinator	Skype-call
	El Wavi Sidi Mohammed	TNA-coordinator	Skype-call
	Siday Ould Dah	National consultant (waste)	Skype-call
	Cheikh Kane	National consultant (energy)	Skype-call

	Name	Position in the project	Date
	Mohammed Ould Sidi Bolle	National consultant	Skype-call
	Amadiy Dian Ba	National consultant	Skype-call
Tanzania (phase II)	Euster Kibana	National consultant	During workshop in Cape Town
Uruguay (phase II)	Jorge Castro	TNA-coordinator, MVOTMA, Climate Change Division	During field mission
Ministry of Housing, Land Planning and Environment (MVOTMA), climate Change Division	Carla Zilli	National government / TNA coordination	During field mission
MVOTMA	Jorge Rucks (Vice Minister)	National government / Key stakeholder	During field mission
Ministry of Livestock, Agriculture and Fisheries (MGAP)	Soledad Bergos	National government / Key stakeholder	During field mission
Ministry of Industry, Energy and Mining (MIEM)	Beatriz Olivet and Antonella Tambasco	National government / Key stakeholder	During field mission
Local government association	Ethel Badin	Local government / Key stakeholder	During field mission
Technological Laboratory Uruguay (LATU)	Carlos Saizar	National consultant	During field mission
Interdisciplinary Center for Response to Climate change and Variability (UDELAR)	Rafael Terra	National consultant	During field mission
Liberia (phase III)	Christopher Bangalie	TNA-coordinator	During regional workshop in Cape Town
Malawi (phase III)	Christopher Manda	TNA-coordinator	During regional workshop in Cape Town
Uganda (phase III)	Deborah Mirembe Kasula	Assistant to TNA-coordinator	During regional workshop in Cape Town
Ukraine (phase III – 'self-paid))	Anatoli Shmurak	TNA-coordinator	During regional workshop in Cape Town
South Africa (bilateral project)			
Department of Science & Innovation (DSI) - Previously UNFCCC's NDE South Africa	Henry Roman	Key governmental stakeholder	During field mission
Departmens of Science & Innovation (DSI)– UNFCCC's NDE South Africa	Cecil Masaka	Key governmental stakeholder	During field mission
Department of Science & Innovation (DSI	Oscar Mokatedi	Key governmental stakeholder	During field mission

	Name	Position in the project	Date
Department of Environment Forestry and Fisheries (DEFF)	Sandra Motshwanedi	TNA-coordinator	During field mission
Department of Environment Forestry and Fisheries (DEFF)	Mkhuthazi Steleki	Involved in TNA-project	During field mission
Council for Scientific and Industrial Research (CSIR)	Sasha Naidoo	Leader of the TNA consultant team	During field mission

ANNEX III. KEY DOCUMENTS CONSULTED

Project design documents
PIF Phase II
Request for Endorsement Phase II (including Annexes – i.e. Logframe, TOC, Budget, etc.)
Review Sheets Phase II
GEF5 CEO Endorsement Annex B-1: Responses to GEF Reviews
CEO Endorsement / approval
Internal Co-operation Agreements
Signed Internal Cooperation Agreement
Request for Endorsement Phase I
Request for Endorsement Phase III
Request for Endorsement Phase IV
Internal project management (content)
Internal guidance note for processes
List of docs produced
Contacts lists, contracts and budgets
Supervision mission reports - some samples already seen
Regional Inception Reports (relevant for assessment / selection of national consultants and the design of the national organizational structure)
Regional Synthesis Reports
Workshop reports on the regional capacity building workshops in different regions (including 'client satisfaction' of participating countries with regard to project methodology) – some samples already seen
Internal project management (financial)
Excel files with annual budget expenditures
Contractual documents
Project supervision
UNEP and UNEP DTU Partnership, 2017: GEF-Funded Umbrella Technology Needs Assessment (TNA) Project. Internal Mid-term Review
UNEP, 2015: TNA phase II. Half-yearly progress report July – December 2015
UNEP, 2016: TNA phase II. Half-yearly progress report January – June 2016
UNEP, 2016: TNA phase II. Half-yearly progress report July – December 2016
UNEP, 2016: TNA phase II. PIR Fiscal year 2016 (1 July 2015 – 30 June 2016)
UNEP, 2017: TNA phase II. PIR Fiscal year 2017 (1 July 2016 – 30 June 2017)
UNEP, 2018: TNA phase II. PIR Fiscal year 2018 (1 July 2017 – 30 June 2018)
UNEP, 2019: TNA phase II. Final report

Project design documents
UNEP, 2018: Justification for an additional three-month technical execution extension of TNA Phase II until 30 September 2018
Steering Committee meeting documents
Report 1st Steering Committee TNA Phase II (19 May 2016, Bonn)
Report 2nd Steering Committee TNA Phase II (9 November 2016, Marrakech)
Relevant output documents of under component 1 (available for all countries from phase II)
TNA report (adaptation)
Barrier Analysis report (adaptation)
TAP report (adaptation)
TNA report (mitigation)
Barrier Analysis report (mitigation)
TAP report (mitigation)
Review notes for each of the abovementioned documents (to illustrate QC-mechanism)
Meta-data matrix, illustrating the key issues of each country participated under phase II
Relevant output documents under component 2 (handbooks and guidance materials)
UNEP DTU Partnership, 2019: J. Haselip, R. Narkeviciute, J. Rogat and S. Traerup, TNA Step by Step. A guidebook for countries conducting a Technology Needs Assessment and Action Plan
UNEP DTU Partnership, 2018: J. de Groot, Guidance for a gender-responsive TNA
UNEP DTU Partnership, 2018: S. Traerup and V. Hecl, Summary of Country Priorities. Technology Needs Assessments 2015-2018
TEC and UNEP DTU Partnership, 2017: Enhancing Implementation of TNAs. Guidance for Preparing a Technology Action Plan
UNEP DTU Partnership, 2017: P. Naswa, S. Dhar and S. Sharma, TNA Guidance Note. Evaluating Measures for Inclusion in a TNA
UNEP DTU Partnership, 2015: S. Dhar, D. Desgain and R. Narkeviciute, Identifying and Prioritizing Technologies for Mitigation – A hands on guidance to multi-criteria analysis (MCA)
UNEP DTU Partnership, 2015: I. Nygaard and U. Elmer Hansen, Overcoming Barriers to the Transfer and Diffusion of Climate Technologies. Second Edition
UNEP DTU Partnership, 2015: J. Haselip, R. Narkeviciute, J. Rogat, A step-by-step guide for countries conducting a Technology Needs Assessment
Relevant output documents under component 3 (dissemination and outreach)
UNFCCC – TEC, 2019: Report on the 18th meeting of the Technology Executive Committee (25-27 March 2019), including meeting presentations and background papers
UNEP DTU Partnership, 2018: D. Puig, J. Haselip and F. Bakhtiari, The mismatch between the in-country determinants of technology transfer, and the scope of technology transfer initiatives under the UNFCCC
UNEP DUT Partnership, 2018: S. Traerup, L. Greersen and C. Knudsen, Mapping barriers and enabling environments in TNAs, NDCs and TAs of the CTCN. Draft paper presented at the 15th meeting of the TEC (25-28 September 2018, Bonn)
Related documents

Project design documents
UNEP, 2015: Terminal Evaluation of the UNEP / GEF Project: "Technology Need Assessment Phase I" – Inception Report
UNEP, 2016: Terminal Evaluation of the UNEP / GEF Project: "Technology Need Assessment Phase I" – Final Report
UNEP DTU Partnership, 2012: J. Boldt, I. Nygaard, U. Elmer Hansen, S. Traerup, Overcoming barriers to the transfer and diffusion of Climate Technologies UNFCCC, 2015: December 12; Adoption of the Paris Agreement, Proposal by the President, Draft decision -/CP.21; FCCC /CP/2015/L.9
UNFCCC Synthesis Reports on TNA's, 1st in 2006, 2nd in 2009 and 3rd in 2013. The 4th is under preparation, perhaps draft will be accessible
TEC – Reports of the bi-annual meetings (accessible https://unfccc.int/ttclear/tec/meetings.html) from 2013 onwards
TEC – background papers presented during those bi-annual meetings, most relevant:
TEC/2013/5/8: Interlinkages between technology needs assessments and national and international climate policy making processes
TEC/2015/11/8: Good Practices of Technology Needs Assessments
TEC/2015/11/6: Guidance on enhanced implementation of the results of technology needs assessments: draft interim report by the Technology Executive Committee
TEC/2016/13/7: Aligning technology needs assessments with the process to formulate and implement national adaptation plans
TEC/2016/12/6: Background paper on the implementation of technology action plans of developing countries
TEC/2016/13/6: Linkages between the technology needs assessment process and the nationally determined contribution process
TEC/2017/14/6: Draft methodology on monitoring and evaluation of the implementation of technology needs assessment results
TEC/2017/14/8: Evaluation of the Poznan strategic programme, including draft terms of reference
TEC/2017/14/5: Updated outline of the paper on aligning technology needs assessments with the process to formulate and implement national adaptation plans
TEC/2017/15/6: Draft paper on aligning technology needs assessments with the process to formulate and implement national adaptation plans
TEC/2017/15/7: Updated paper on linkages between the TNA and NDC process
TEC/2018/16/6: Draft paper on aligning technology needs assessments process with the national adaptation plans process
TEC/2018/16/7: Updated paper on linkages between the TNA and NDC process1
TEC/2018/17/6: Draft paper on aligning technology needs assessments process with the national adaptation plans process
TEC/2018/17/4: Draft paper on mapping barriers and enabling environments in Technology Needs Assessments, Nationally Determined Contributions, and Technical Assistance of the Climate Technology Centre and Network
TEC/2019/19/5: Draft paper on experiences, lessons learned and good practices in conducting TNAs and implementing their results
UNFCCC, 2015: Evaluation of the Poznan strategic programme on technology transfer: final report by the Technology Executive Committee; FCCC/SBI/2015/16
UNFCCC, 2015: Synthesis report on the aggregate effect of the intended nationally determined contributions, FCCC/CP/2015/7
UNFCCC, 2013: Conference of the Parties; Report of the Conference of the Parties on its eighteenth session, held in Doha from 26 November to 8 December 2012; FCCC/CP/2012/8/Add.1
UNFCCC and UNDP, 2010: Handbook for conducting Technology Needs Assessment for Climate Change

Project design documents
UNFCCC, 2008: Report of the Global Environment Facility on the elaboration of a strategic programme to scale up the level of investment in the transfer of environmentally sound technologies, FCCC/SBI/2008/16
UNFCCC, 2007: Climate Change: Impacts, Vulnerabilities and Adaptation in Developing Countries
CTCN, Annual reports and meta-data on their involvement in projects (as a follow-up of TNA-activities)
GEF, 2019: Report of the GEF to the 25th session of the COP to the UNFCCC
GCF, 2019: 8th report of GCF to COP
GCF, 2018: Report of the independent evaluation of the Readiness and Preparatory Support Programme
GEF, 2014: Request for CEO Endorsement "Enabling South Africa to Prepare its Third National Communication (TNC) and Biennia Update to the UNFCCC"
GEF, 2019: PIR Fiscal Year 2019 "Enabling South Africa to Prepare its Third National Communication (TNC) and Biennia Update to the UNFCCC"

ANNEX IV. PARTICIPATING COUNTRIES

Phase I (1st round)	Phase I (2nd round)	Phase II	Phase III	Phase IV
Argentina Bangladesh Cambodia Costa Rica Cote d'Ivoire Georgia Indonesia Mali Morocco Peru Senegal Thailand Vietnam	Azerbaijan Bhutan Colombia Cuba Dominican Rep Ecuador El Salvador Ghana Kazakhstan (TNA) Kenya Lao (TNA) Lebanon Mauritius Moldova Mongolia Rwanda Sri Lanka Sudan Zambia	Armenia Belize Burkina Faso Bolivia (*) Egypt (*) Gambia Grenada Guyana Honduras Jordan Kazakhstan (TAP) Lao PDR (TAP) Madagascar Malaysia (*) Mauritania Mozambique Pakistan (**) Panama Philippines Seychelles Swaziland / Eswatini Tanzania Togo Tunisia Turkmenistan (*) Uruguay Uzbekistan	Afghanistan Antigua and Barbuda Benin Central African Republic Chad Djibouti Dominica Eritrea Fiji Guinea Haiti Jamaica Liberia Malawi Nauru Niger Myanmar Sao Tome and Principe Suriname Trinidad & Tobago Ukraine (**) Uganda Vanuatu	Comoros Ethiopia Guinea Bissau Maldives Niue Papua New Guinea Solomon Islands Somalia South Sudan St. Kitts and Nevis Timor Leste Tonga Tuvalu Yemen Kiribati

(*) Listed in the original plan but dropped out (and no funds disburse)

(**) Countries that participate in the global project via parallel, separate financing.

ANNEX V: ALIGNMENT WITH SUSTAINABLE DEVELOPMENT GOALS

Technology Needs Assessment contributes to achieving the Sustainable Development Goals (SDGs) particularly to Goal 13 "Take urgent action to combat climate change and its impacts" and in general to the following the following:

- **Goal 6** "Clean water and Sanitation," specifically, (6.A) "By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programs, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies."

- **Goal 7** "Affordable and Clean Energy," and specifically, (7.A) "By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology".

- **Goal 9** "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation," and specifically, (9.B) "Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities."

- **Goal 17** "Strengthen the means of implementation and revitalize the global partnership for sustainable development," specifically, (17.14) "Enhance policy coherence for sustainable development.", (17.16) "Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries.", and (17.7) "Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favorable terms, including on concessional and preferential terms, as mutually agreed." will be achieved.

ANNEX V. BRIEF CV OF THE EVALUATOR

Name: Frans Verspeek

Profession	Sustainability expert
Nationality	Dutch
Country experience	• Africa: South Africa, Ghana, Kenya, Mauritania, Zimbabwe • Americas: Mexico • Asia: China, Mongolia, Thailand, Vietnam, Lao, Cambodia, Indonesia, Nepal, Bangladesh, India, Pakistan, Sri Lanka • Europe: Netherlands, Czech Republic, Poland • Middle East: Bahrain, Israel • NIS and Central Asia: Russian Federation, Ukraine, Georgia, Turkey
Education	• Environmental Sciences (M.Sc. in 1991), built upon Chemical Engineering and (Environmental) Chemistry (B.Sc. in 1986)

Short biography

Mr. Verspeek is an independent consultant, graduated in 1991 in Environmental Sciences, has impeccable broad knowledge of a variety of sustainability concepts, combining analytical, conceptual and technical skills, shown during the past 25+ years in various complex international settings for WBG, UN, OECD and EU.

Key specialties and capabilities cover:

- He has been involved in global international RECP-programmes since the launch of UNIDO/UNEP's programmes mid-nineties; via programme development, technical assistance and institutional strengthening activities – especially on the ground in Asia – resulting also in a large personal contact network with relevant stakeholders in the field of RECP (multilateral agencies, knowledge institutes, industry associations and governments).
- He has been involved from 2007 - 2013 with EU's SWITCH-Asia programme on Sustainable Consumption and Production (300 million Euro with ±100 projects on RECP in Asia); co-responsible for developing the entire programme (including the Policy Support Component), and 3 years as team leader of the SWITCH-Asia Network Facility (to assist, distil and facilitate information flows in the programme), advice for the Sri Lanka and Thai Government on their national Sustainable Consumption and Production strategies, etc.
- He furthermore has ample experience in developing complex international programmes, based on extensive stakeholder consultation; e.g. EU's SWITCH-Asia programme on Sustainable Consumption and Production (SCP), EU's Greening the Supply Chain Programme for Asia, and UNIDO's most recent global programme on Eco-industrial Parks.

Selected assignments and experiences:

- 2018: Senior advisor of WBG's RECP's activities in South Asia (Bangladesh, India and Pakistan);
- 2017-2018: Project developer to establish programmes on Eco-Industrial Parks consisting of pilot projects and knowledge sharing, resulting in 2 large global programmes (10+ m Euro programmes each) accepted and launched.
- 2017: Thailand-EU Policy Dialogues Support Facility, supporting Thailand's implementation of the sustainable development goals (SDGs), via multi stakeholder consultations and drafting roadmaps for SDGs 1,11 and 12.
- 2017: EU SWITCH ASIA - Policy Support Component in Sri Lanka, Multi-stakeholder consultation process and drafting the national Sri Lanka SCP policy, strategy and action plan and coordination mechanism.

- 2016: Technical Assistance to develop an EU-funded Sustainable Consumption & Production (SCP) Programme document to promote practice & policy of Green Economy in Bangladesh.
- 2016: Project developer to formulate a new (10 MEuro) EU-programme on Greening Supply Chains for EU DG Trade with identification missions in 5 countries in Asia; accepted, launched and presently implemented by OECD & ILO and replicated also in the Latin America region.
- 2013-2014: Senior strategic advisor for a large Greening the Supply Chain in the textile industry – PaCT project in Bangladesh – involving both key international retailers as well as local manufacturers and facilitating set up of enabling conditions.
- 2013-2014: Involved as expert in a sequence of workshops as part of a foresight study aiming to define sustainable transitions and the potential of eco-innovation for jobs and economic development in EU eco-industries 2035 (2035 - Paths towards a sustainable EU economy).
- 2013-2014: Project developer to formulate a Vietnam Climate Innovation Centre (5 m$ bid in a World bank (infoDev) international bidding process with 10+ m$ investment facilities), accepted and launched.
- 2008 – 2013: In-depth involvement in the development and implementation of the EU SWITCH-Asia SCP Programme (co-responsible for developing the overarching programme (initial size 150 m Euro), it's specific policy support component, assessor during different rounds of Call for Proposals and team leader of the Network Facility (meant for analyse, distil and disseminate lessons learnt).

Independent evaluations:

- Better Mill Initiative in China (2016). A 1 MEuro project involving 43 textile mills in China linked to 6 European retailers
- Green Industry Initiative / Green Industry Platform (2015-2016). A 1 MEuro programme from UNIDO to initiate Green Industry actions and facilitate information sharing and advocacy
- Sustainable Product Innovation in Vietnam, Lao and Cambodia (2013-2014). A 2 MEuro project under SWITCH-Asia aiming to strengthen product innovation in 3 SE Asia countries with capacity building of experts and piloting in 200+ enterprises.

ANNEX VI. EVALUATION TORS (WITHOUT ANNEXES)

Terminal Evaluation of the UN Environment/Global Environment Facility project "Technology Need Assessment Phase II"

Section 1: PROJECT BACKGROUND AND OVERVIEW

- **Project General Information**

Table 1. Project summary

GEF Project ID:	**4948**		
Implementing Agency:	Economy Division, Energy and Climate Branch, UN Environment	**Executing Agency:**	UNEP-DTU Partnership
Sub-programme:	Climate Change	**Expected Accomplishment(s):**	(b) Low carbon and clean energy sources and technology alternatives are increasingly adopted, inefficient technologies are phased out and economic growth, pollution and greenhouse gas emissions are decoupled by countries based on technical and economic assessments, cooperation, policy advice, legislative support and catalytic financing mechanisms
UN Environment approval date:	14 November 2014	**Programme of Work Output(s):**	b.1. Economic and technical (macroeconomic, technology and resource) assessments of climate change mitigation options that include macroeconomic and broad environmental considerations are undertaken and used by countries and by major groups in developing broad national mitigation plans.
GEF approval date:	4 April 2014	**Project type:**	FSP
GEF Operational Programme #:	GEF4	**Focal Area(s):**	Climate Change
		GEF Strategic Priority:	GEF4 Special Climate Change Fund – Technology Transfer CCM-6 supporting enabling activities and capacity building for Convention obligations.
***Expected* start date:**		**Actual start date:**	15 November 2014
***Planned* completion date:**	30 September 2019	**Actual completion date:**	30 September 2019
***Planned* project budget at approval:**	$8,262,756	**Actual total expenditures reported as of 30 June 2019:**	US$ 4,284,876.89

GEF grant allocation:	$6,105,835	**GEF grant expenditures reported as of 30 June 2019:**	US$ 4,284,876.89	
Project Preparation Grant - GEF financing:	N/A	**Project Preparation Grant - co-financing:**	N/A	
***Expected* Full-Size Project co-financing:**	$2,156,921	**Secured Full-Size Project co-financing:**	UNEP: USD 307,889 UDP: USD 487,111 Countries: USD 1,100,000 USD (as 5 countries dropped out) CTCN: USD 71,000 to Pakistan	
First disbursement:	December 2014	**Date of financial closure:**	**30 September 2018** (After the completion of the Terminal Evaluation)	
No. of revisions:	2	**Date of last revision:**	15 May 2018	
No. of Steering Committee meetings:	2 (Global) *Other Steering Committee meetings took place at a country level*	**Date of last/next Steering Committee meeting:**	**All:** May 2015 Bonn Nov 2016 Marrakech	**Next:** N/A
Mid-term Review/ Evaluation *(planned date):*		**Mid-term Review (actual date):**	**27 October 2017**	
Terminal Evaluation *(planned date):*		**Terminal Evaluation (actual date):**	**August - Dec 2019**	
Coverage - Country(ies):	Armenia, Belize, Burkina Faso, Burundi, Bolivia, Egypt, Gambia, Grenada, Guyana, Honduras, Jordan, Madagascar, Malaysia, Mauritania, Mozambique, Panama, Philippines, Seychelles, Swaziland, Tanzania, Togo, Tunisia, Turkmenistan, Uruguay, Uzbekistan, Kazakhstan and Lao PDR. *Pakistan joined TNA Phase II half a year later with old unspent GEF funding plus CTCN funding.*	**Coverage - Region(s):**	Global	
Dates of previous project phases:	TNA I (2009-2013)	**Status of future project phases:**	TNA III in progress (May 2018-May 2021)	

- **Project rationale**

2.1 The Global Environmental Facility financed three projects of similar design (*Technology Needs Assessment Phase I, Phase II and Phase III)* for countries to develop Technology Needs Assessments (TNA) and Technology Action Plans (TAP) for prioritized technologies to 4.5 of the UNFCCC. ***The subject of this terminal evaluation is the second project, Technology Needs*** reduce GHG emissions and support adaptation to climate change. The TNA/ TAP assessment results were to inform national policies and planning and contribute to a pipeline of projects. As part of the GEF Strategic Programme on Technology Transfer, the TNA projects provide targeted financial and technical support to developing countries in carrying out improved technology needs assessments within the framework of Article ***Assessment, Phase II, running from November 2014 - September 2019.***

2.2 The word "technology" covers a very large set of concepts, which are not always totally clear to most users. "Technology"[11] as used in the project defines the term as *a mix of knowledge, organizations, procedures, machinery, equipment, and human skills that are combined to produce socially desired products.* Further, national economic and social structures and the equivalent international structures, shape the perceptions and framing of the issues, and subsequently the definitions of problems and needs, hence influencing the direction of technological change. Technical change in turn reshapes with it the social, economic and other structures in a continual change process.The UNFCCC process defines "technology needs assessment" as a set of country-driven activities that *identify and determine the mitigation and adaptation technology priorities* of a country, and they in turn emerge from the national priorities for mitigation and adaptation, and the development plans, of the country. The goal of the Technology Needs Assessment process was to assist the self-selected developing countries to identify and analyse priority technology needs, which could then form a portfolio of environmentally sound technology (EST) projects.

Technology Needs Assessment Phase I (TNA I)

2.3 Implemented from 2009 to 2013, TNA I supported 36 countries, from which 30 countries each produced four TNA reports: Technology Needs Assessment (TNA), Barrier Analysis & Enabling Framework (BA & EF), Technology Action Plan (TAP) and Project Ideas (PI) report. . 5 of the initial countries withdrew, namely, Bolivia, Egypt, Malaysia, Turkmenistan and Uzbekistan. The total GEF expenditure was $6,476,071, with a per country allocation of $202,000. Noteworthy follow up projects from TNA I included mapping farmland contours in Jordan and using TNA reports as inputs for Nationally Determined Contributions (NDC) in Peru and Argentina.

2.4 Under Phase I the most frequently prioritized sectors for adaptation included: 1) Agriculture, 2) Water Resources and 3) Costal Zones and Tourism, while the most frequently prioritized sectors for mitigation were those of 1) Energy, 2) Industry, 3) Transport, 4) Agriculture and Forestry and 5) Waste. Many countries prioritized the same sectors showing that they share the same concerns.

Technology Needs Assessment Phase II (TNA II)

2.5 Implemented from late 2014 and due to end in September 2019, TNA II supported 27 additional countries with a GEF grant of $6,105,835. TNA II was similarly global in scope, but targeted different countries (see list in Annex I of these Terms of Reference). Only two countries were involved in both TNA I and TNA II (Laos

[11] The project follows the meaning ascribed to the word in the IPPC report "Methodological and Technological Issues in Technology Transfer" of 2000 which is the only special report on technology related issues for climate change produced by it and follows the definition provided in 1993 UNCED conference in "Green technologies for development transfer, trade and cooperation", page 4. The IPCC report (2000) defines technology similarly as "A piece of equipment, technique, practical knowledge or skills for performing a particular activity. "Technology Transfer", which we emphasize here, does privilege equipment and technique, and "transfer". The IPCC report explains that transfer includes the "broad set of processes covering the exchange of knowledge, money and goods amongst different stakeholders that lead to the spreading of technology" and the concept of transfer is used in the "broadest and most inclusive" sense, to encompass "diffusion of technologies and cooperation across and within countries".

and Kazakhstan), which were half-way through their TNA process by the end of TNA I. TNA Phase II countries submitted three reports: TNA, BA & EF and TAP, the last one including project ideas.

Previous Evaluation Findings

2.6 According to the TNA I terminal evaluation, critical success factors for a TNA process include a good project design, strong financial management, strong national coordinator, good in-country ownership and arrangements for technical assistance on TNA reports from the four Regional Centers. Each Regional Center was mandated to provided technical assistance on developing the reports and disseminating results to improve uptake. A major weakness identified was that the prioritized technologies lacked financing. For this reason, establishing linkages with Ministries of Finance, financial institutions and keener involvement of the private sector were suggested from the onset.

2.7 TNA II was already designed by the time of the TNA I evaluation, but some recommendations were taken into account as they were already part of the project's own learning. TNA III is currently underway and did take on some of the TNA I terminal evaluation recommendations. In response to the terminal evaluation recommendation, TNA III devoted more the amount allocated per country which, in turn, meant that more resources are available for communicating results. It is anticipated that TNA III will, therefore, be better placed to disseminate assessment results to project financiers early on and to use this information to influence national budgeting processes. Hence, TNA III contains a larger budget for national capacity building workshops and donor round tables based on the recommendations from the evaluation of TNA I. *(See recommendations and reactions – TNA I terminal evaluation and NDE Germany's briefing note on the Introduction to the Technology Needs Database (TND) and analysis of technology needs identified by developing countries (2017).*

- **Project objectives and components**

3.1 As part of the GEF Strategic Programme on Technology Transfer, the TNA II project aimed to provide targeted financial and technical support to assist 25 developing countries carry out improved Technical Needs Assessment (TNA) within the framework of Article 4.5 of the UNFCCC. Assisted countries, plus Khazakstan and Lao PDR[12], were also to develop national Technology Action Plans (TAP) for prioritized technologies that reduce greenhouse gas emissions, support adaptation to climate change, and are consistent with national sustainable development objectives.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount ($)	Confirmed Cofinancing (in-kind)
1. Facilitating the preparation of Technology Needs Assessments (TNAs) in twenty five (25) developing	TA	National consensus[13] on technologies in priority sectors established, compatible with Nationally Appropriate	An institutional structure for TNA-TAP process implementation put in place [14] New (or in some cases updated/strengthened) TNAs in 25 countries and TAPs in 27 countries[15]	GEF TF	4,228,041	1,061,165

[12] Kazakhstan and Lao PDR only completed their TNA during TNA Phase I, therefore both countries will receive additional support to develop their TAPs under this new TNA Phase.

[13] 'National consensus' reaching is a multi-stakeholder process (with the National TNA Committees) using multi-criteria assessment tools which generate priorities. Consensus is sought among national bodies and then endorsement of those priorities at a ministerial level

[14] 'Put in place' means 'operational' i.e. the establishment of the national TNA committee, the TNA team (national coordinator and consultants) and the sectoral working groups that run the TNA process

[15] TNAs and TAPS should be available to the countries' decision-makers and development partners

countries - or, where these have already been prepared/started, making them more strategic and useful in an operational sense - and Technology Action Plans (TAPs) in twenty seven (27) developing countries		Mitigation and Adaptation Actions Plans, and/or National Climate Change Strategies				
2. Developing tools and providing capacity building and information on methodologies to support preparation of Technology Needs Assessments (TNAs) and Technology Action Plans (TAPs)	TA	Capabilities of key national actors/players in developing TNAs and TAPs built and/or strengthened[16]	New tools to identify and assess adaptation technology needs are developed[17] Capacity building tools and methodologies covering adaptation and mitigation technology needs assessments and action planning are further improved/updated to address gaps identified during implementation of the TNA Phase I project[18] Tools and methodologies are widely disseminated and made available[19], where needed, to support technology identification and prioritization work in closely related [to climate technology related inititaitves] initiatives, such as the CTCN and the pilot regional climate technology networks/finance centers funded by the GEF	GEF TF	740,748	458,111

[16] These new capabilities are expected to be demonstrated by the end result i.e. TNA/TAP process conducted by the countries (it is a fully country led and owned process, the project should have provided the tools, the training on the tools, a helpdesk and some reviews of the outputs)

[17] 'Developed' also implies these capacity building tools have been made available to all the National TNA teams/experts who run the planning processes. These tools and methodologies are also used/explained during the project's trainings.

[18] The improved/updated tools should be found among the National TNA teams/experts that run the process and may also be apparent in countries that conducted their TNA outside of the project e.g. Brazil is currently using the project's methodology and tools for the TNA funded by GCF.

[19] Tools should have been made available to the countries targeted by the project and also globally through COP, some of the guidance has been developed in collaboration with UNFCCC and the TEC.

3. Strengthening outreach, dissemination and networking activities to promote use and funding of TNAs and TAPs priorities	TA	Networks and partnerships are strengthened[20] for the uptake of TAPs and project ideas	Thematic Networks strengthened, with strong links to Regional Centers, GEF and UNFCCC networking initiatives (technology transfer focused), and involving regional and global stakeholders such as regional development banks, business associations, academic institutions, Chambers of Commerce	GEF TF	538,674	478,645
Subtotal					5,507,463	1,997,921
Project management Cost (PMC)21					598,372	159,000
Total project costs					6,105,835	2,156,921

○ Executing Arrangements

Stakeholder Role	**Agencies**
Implementing Agency- technical and financial oversight	UNEP
Executing Partners	National Teams – National Designated Entities (NDEs), Ministries of Environment, Water, Transport, Energy, National Planning, Technologies, Finance; Legal/Law/Policy formulation, Municipal/County Councils, grassroots/community groups, academia, representatives of civil society, research centres. Private firms, in-country financers
Technical assistance in report preparation and results dissemination	Climate Technology Centre and Network (CTCN) and four Regional Centres were responsible for providing technical support to the national TNA teams in their region, ensuring quality in all the reports. Regional Centres (RCs): Asian Institute of Technology (Thailand), ENDA (Senegal), Fundación Bariloche (Argentina) and Libelula (Peru) Other UNEP projects and programs in related fields in the region (e.g. CTCN), UNFCCC, IEA
Communication Only	Other IGOs, NGOs e.g. USAID, World Bank, IFC, Bilateral Agencies

4.1 At the national level, stakeholders were grouped under categories as below:

National Steering Committee: The role of this committee was to provide high-level guidance and endorsement to the national TNA team and help secure political acceptance for the TAP. Furthermore, it was expected to supervise the TNA work and provide advice to the National TNA team whenever requested. The correct formation of this committee was crucial for the relevance and legitimacy of the project. (Like with the previous phase, the composition of these committees

[20] Stronger networks/partnerships should be evident through more diverse groups being included (e.g. workshops with financiers); side events at the COP; documentation of follow-up stories (by UDP and UNFCC) and an assessment by the UNFCCC Sec is currently ongoing on TNA II countries to see how they moved or are moving to the implementation of their priorities.

[21] PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

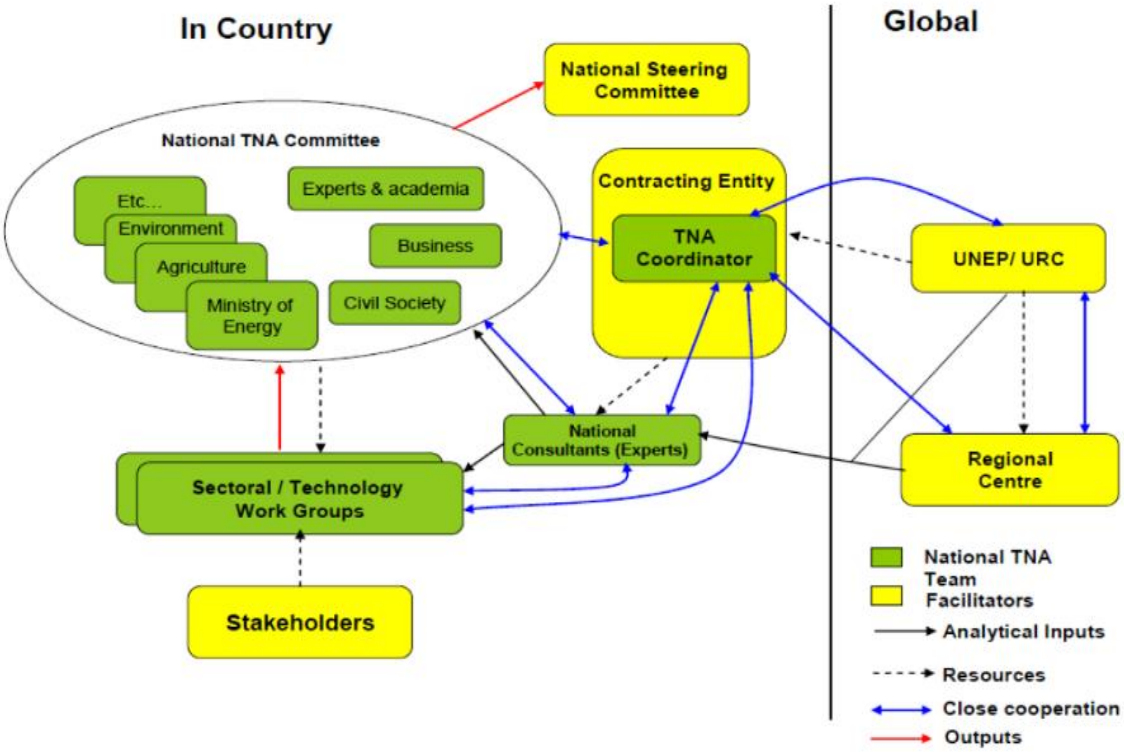
has varied from one country to another. They have included representatives from relevant ministries and/or agencies such as - Ministries of Environment and Natural Resources, Land, Agriculture, Forestry, Fisheries, Industry, Mines, Energy, Water Resources, Finance and Economic Planning, Public Works and Transport; Industry, Local Government, Rural Development, Health; Energy, Foreign Affairs and International Cooperation, Education, etc.)

National TNA Committee: Core driving group in each country. It was comprised of representatives responsible for implementing policies from relevant ministries and other actors related with issues such as climate change science, sector policies, national development objectives, etc. The composition of the National TNA committee was relatively flexible as it needed to induct members from the relevant stakeholder groups for specific tasks. It also varied from country to country depending on the prioritised sectors and technologies.

The *TNA Coordinator:* Leader and focal point for the TNA project in each country and the manager of the overall TNA process. The TNA coordinator was also expected to act internationally, sharing lessons and championing the project during international workshops and other relevant meetings (UNFCCC negotiations, CTCN Workshops and other technology events outside of the climate arena).

National Consultants (Experts): National experts on climate change adaptation and mitigation undertook the work and supported the entire TNA process. They were responsible for the research, analysis and synthesis of the entire process, development and climate change objectives, and on technical, environmental, social and economic factors.

Sectorial / Technical Workgroups: Working groups integrated the stakeholders and identified key aspects of the prioritized sectors and technologies; they were involved in the decision-making process regarding the most appropriate technologies for each of the prioritized sectors and combined their knowledge on development needs with technologies. The visual overleaf illustrates the envisaged project linkages at the local and global levels.



○ Project Cost and Financing

5.1 The table below summarizes budget, scope and spend information for TNA phases I-III.

	TNA I	TNA II	TNA III
Implementation period	2009-2013	2014-2018	2018-2021
Implementing Countries(#)-target	35-45	27	23
Implementing Countries(#)-actual	32	22	
Total GEF grant($) budgeted	8,181,818	6,105,835	6,210,000
GEF $/ country	202, 000	245,000	270,000
GEF grant spent ($)	6,476,071	5,168,058	
GEF Grant Balance($)	1,705,747	937,777	

5.2 The TNA II budget by component is incoporated in the table under project objectives and components, (Section 3 above). Sources of co-financing are presented in the table below:

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount ($)
National government	Twenty seven National Governments Contribution (to be determined at Country level)22	In-kind	1,361,921

[22] The in-kind contributions from National Governments amount to about 50,000 USD/country and corresponds mainly to Government staff time (i.e. National TNA coordinator, members of sectoral/technology expert groups and TNA/TAP related committees) as well as financing logistics for stakeholder consultation, national SC and WG meetings.

Implementing Agency	UNEP	In-kind	307,889
Executing Agency	URC	In-kind	487,111
Total Co-financing			2,156,921

- **Implementation Issues**

6.1 This section documents the overall and regional-level implementation issues. It draws on conversations with the Project Manager, UNEP Project Coordinators, terminal evaluation report of TNA I and Mid-term Review report for TNA II.

Overall

6.2 The limited pipeline of follow on projects around prioritized technologies included:

- Lack of strong private sector and other financier participation early on pointing to the need for targeted inclusion and dissemination throughout the TNA process. The issue is how to keep their interest during long government-led processes.
- Lack of linkages between these TNA projects and other UNEP/GEF work related to technology financing, transfer and diffusion (e.g Enlighten project, CTCN).
- Note, however, that the links between TNA II and CTCN are reported to have been emphasized from the early stages of the project and a number of NDEs (national CTCN Focal Points) were nominated as National TNA Coordinators and some joint TNA/CTCN events are reported to have been held to encourage TNA II countries to submit Technical Assistance requests.

6.3 Project implementation issues also included a weak steering committee facing competing scheduling demands (e.g. UNFCC/ COP events); and limited in-country capacity to execute prioritized technologies as well as an inability to repurpose budgets to reflect goals as the project progressed.

Regional

6.4 In **Africa**, many national stakeholders reported that they lacked institutionalized national mechanisms to carry on TNA/TAP implementation and were not sufficiently equipped to prepare funding requests to the international channels (this is also reported from other regions but less often, and it will be seen that a number of countries from Africa have indeed followed up with funding requests to bilateral and multilateral channels but reports of use of results is less robust). There was a higher apprehension in the ability to acquire licenses to use/implement many technologies.

6.5 In the **Asian region**, despite the satisfaction with the usefulness of technical support, more than half of the respondents indicated they needed additional support, especially on economic and cost-benefit analysis of selected technologies, improvement on the prioritization process, and support after the project completion. Also some countries in the region had greater difficulty with English, and so had difficulty understanding some of the guides and books provided. Finally, in Asia, there was a strong comment that international funding agencies too often only focused on "building capacity" and not on the future requirements of implementation.

6.6 The smaller number of respondents in the **Latin American region** suggested their limitations included the limited availability of national experts/consultants, changes in political authorities, and limitations on the statistical data that was locally available.

6.7 The variations within countries were largely due to internal factors. First, the delays in official procedures in some countries reduced their time for participation and slowed down the implementation. Secondly, many countries reported their lack of experience, lack of capacity for the analysis that was required, the lack of domestic resources, which were often used by the higher performing teams to enhance the national outputs and outcomes.

Section 2. OBJECTIVE AND SCOPE OF THE EVALUATION

- **Key Evaluation principles**

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

7.2 The **"Why?" Question.** As this is a terminal evaluation and a follow-up project is likely [or similar interventions are envisaged for the future], particular attention should be given to learning from the experience. Therefore, the "*Why?*" question should be at the front of the consultants' minds all through the evaluation exercise and is supported by the use of a theory of change approach. This means that the consultants need to go beyond the assessment of "*what*" the project performance was, and make a serious effort to provide a deeper understanding of "*why*" the performance was as it was. This should provide the basis for the lessons that can be drawn from the project.

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

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

- **Objective of the Evaluation**

8.1 In line with the UN Environment Evaluation Policy[23] and the UN Environment Programme Manual[24], the Terminal Evaluation (TE) is undertaken at completion of the project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UN Environment and URC, DTU Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation (i.e. ongoing phase of TNA III and future phase of TNA IV)

[23] http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationPolicy/tabid/3050/language/en-US/Default.aspx

[24] http://www.unep.org/QAS/Documents/UNEP_Programme_Manual_May_2013.pdf . *This manual is under revision.*

- **Key Strategic Questions**

9.1 In addition to the evaluation criteria outlined in Section 10 below, the evaluation will address the **strategic areas** listed below:

- The most important for the evaluation is to understand how the countries are moving (or planning to move) to the implementation of their TNA activities (including the priority project ideas they have developed from the TNA process), plus how they use the results in their own processes (e.g. national/sectoral policies, strategies… also for NDC, GCF…) and how they communicate these results and priorities to the donors in their country (also to the relevant decision makers from the respective priority sectors).
- It is also important to get feedback on the process, the tools, the support provided and to understand what are the things that make it more successful in some countries than in some other countries (this would help in further guiding countries and providing tips for doing a successful TNA).
- Private sector and donor/finance community engagement remains a challenge – while there are some views on why this is a challenge (limited funding, long process, mainly government driven process, rather weak private sector in many of the countries etc) it would be valuable to see which countries have been most successful in this area and why.

- **Evaluation Criteria**

10.1 All evaluation criteria will be rated on a six-point scale. Sections A-I below, outline the scope of the criteria and a link to a table for recording the ratings is provided in Annex 1). A weightings table will be provided in excel format (link provided in Annex 1) to support the determination of an overall project rating. The set of evaluation criteria are grouped in nine categories: (A) Strategic Relevance; (B) Quality of Project Design; (C) Nature of External Context; (D) Effectiveness, which comprises assessments of the delivery of outputs, achievement of outcomes and likelihood of impact; (E) Financial Management; (F) Efficiency; (G) Monitoring and Reporting; (H) Sustainability; and (I) Factors Affecting Project Performance. The evaluation consultants can propose other evaluation criteria as deemed appropriate.

A. Strategic Relevance

The evaluation will assess, in line with the OECD/DAC definition of relevance, *'the extent to which the activity is suited to the priorities and policies of the target group, recipient and donor'.* The evaluation will include an assessment of the project's relevance in relation to UN Environment's mandate and its alignment with UN Environment's policies and strategies at the time of project approval. Under strategic relevance an assessment of the complementarity of the project with other interventions addressing the needs of the same target groups will be made. This criterion comprises four elements:

i. *Alignment to the UN Environment Medium Term Strategy[25] (MTS) and Programme of Work (POW)*

The evaluation should assess the project's alignment with the MTS and POW under which the project was approved and include, in its narrative, reflections on the scale and scope of any contributions made to the planned results reflected in the relevant MTS and POW.

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

Donor, including GEF, strategic priorities will vary across interventions. UN Environment strategic priorities include the Bali Strategic Plan for Technology Support and Capacity Building26 (BSP) and South-South Cooperation (S-SC). The BSP relates to the capacity of governments to: comply with international agreements and obligations at the national level; promote, facilitate and finance environmentally sound technologies and to strengthen frameworks for developing coherent international environmental policies. S-

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

[26] http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf

SC is regarded as the exchange of resources, technology and knowledge between developing countries. GEF priorities are specified in published programming priorities and focal area strategies.

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

The evaluation will assess the extent to which the intervention is suited, or responding to, the stated environmental concerns and needs of the countries, sub-regions or regions where it is being implemented. Examples may include: national or sub-national development plans, poverty reduction strategies or Nationally Appropriate Mitigation Action (NAMA) plans or regional agreements etc.

iv. *Complementarity with Existing Interventions*

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

Factors affecting this criterion may include:

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

B. Quality of Project Design

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

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

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

C. Nature of External Context

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

D. Effectiveness

i. Delivery of Outputs

The evaluation will assess the project's success in producing the programmed outputs *(products, capital goods and services resulting from the intervention)* and achieving milestones as per the project design document (ProDoc). Any *formal* modifications/revisions made during project implementation will be considered part of the project design. Where the project outputs are inappropriately or inaccurately stated in the ProDoc, reformulations may be necessary in the reconstruction of the TOC. In such cases a table should be provided showing the original and the reformulation of the outputs for transparency. The delivery of outputs will be assessed in terms of both quantity and quality, and the assessment will consider their ownership by, and usefulness to, intended beneficiaries and the timeliness of their delivery. The evaluation

will briefly explain the reasons behind the success or shortcomings of the project in delivering its programmed outputs and meeting expected quality standards.
Factors affecting this criterion may include:

- Preparation and readiness
- Quality of project management and supervision[27]

ii. Achievement of Direct Outcomes

The achievement of direct outcomes (short and medium-term effects of the intervention's outputs; a change of behaviour resulting from the use/application of outputs, which is not under the direct control of the intervention's direct actors) is assessed as performance against the direct outcomes as defined in the reconstructed[28] Theory of Change. These are the first-level outcomes expected to be achieved as an immediate result of project outputs. As in 1, above, a table can be used where substantive amendments to the formulation of direct outcomes is necessary. The evaluation should report evidence of attribution between UN Environment's intervention and the direct outcomes. In cases of normative work or where several actors are collaborating to achieve common outcomes, evidence of the nature and magnitude of UN Environment's 'substantive contribution' should be included and/or 'credible association' established between project efforts and the direct outcomes realised.

Factors affecting this criterion may include:

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

iii. Likelihood of Impact

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

The evaluation will also consider the likelihood that the intervention may lead, or contribute to, unintended negative effects. Some of these potential negative effects may have been identified in the project design as risks or as part of the analysis of Environmental, Social and Economic Safeguards.[29]

[27] In some cases 'project management and supervision' will refer to the supervision and guidance provided by UN Environment to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping provided by UN Environment.

[28] UN Environment staff are currently required to submit a Theory of Change with all submitted project designs. The level of 'reconstruction' needed during an evaluation will depend on the quality of this initial TOC, the time that has lapsed between project design and implementation (which may be related to securing and disbursing funds) and the level of any changes made to the project design. In the case of projects pre-dating 2013 the intervention logic is often represented in a logical framework and a TOC will need to be constructed in the inception stage of the evaluation.

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

The evaluation will consider the extent to which the project has played a catalytic role or has promoted scaling up and/or replication[30] as part of its Theory of Change and as factors that are likely to contribute to longer term impact.
Ultimately UN Environment and all its partners aim to bring about benefits to the environment and human well-being. Few projects are likely to have impact statements that reflect such long-term or broad-based changes. However, the evaluation will assess the likelihood of the project to make a substantive contribution to the high-level changes represented by UN Environment's Expected Accomplishments, the Sustainable Development Goals[31] and/or the high level results prioritised by the funding partner.

Factors affecting this criterion may include:

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

E. Financial Management

Financial management will be assessed under two themes: *completeness* of financial information and *communication* between financial and project management staff. The evaluation will establish the actual spend across the life of the project of funds secured from all donors. This expenditure will be reported, where possible, at output level and will be compared with the approved budget. The evaluation will assess the level of communication between the Project/Task Manager and the Fund Management Officer as it relates to the effective delivery of the planned project and the needs of a responsive, adaptive management approach. The evaluation will verify the application of proper financial management standards and adherence to UN Environment's financial management policies. Any financial management issues that have affected the timely delivery of the project or the quality of its performance will be highlighted.

Factors affecting this criterion may include:

- Preparation and readiness
- Quality of project management and supervision

F. Efficiency

In keeping with the OECD/DAC definition of efficiency the evaluation will assess the extent to which the project delivered maximum results from the given resources. This will include an assessment of the cost-effectiveness and timeliness of project execution. Focussing on the translation of inputs into outputs, cost-effectiveness is the extent to which an intervention has achieved, or is expected to achieve, its results at the lowest possible cost. Timeliness refers to whether planned activities were delivered according to expected timeframes as well as whether events were sequenced efficiently. The evaluation will also assess to what extent any project extension could have been avoided through stronger project management and identify any negative impacts caused by project delays or extensions. The evaluation will describe any cost or time-saving measures put in place to maximise results within the secured budget and agreed project timeframe and consider whether the project was implemented in the most efficient way compared to alternative interventions or approaches.

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

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

The evaluation will give special attention to efforts by the project teams to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. to increase project efficiency. The evaluation will also consider the extent to which the management of the project minimised UN Environment's environmental footprint.
The factors underpinning the need for any project extensions will also be explored and discussed. As management or project support costs cannot be increased in cases of 'no cost extensions', such extensions represent an increase in unstated costs to implementing parties.

Factors affecting this criterion may include:

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

G. Monitoring and Reporting

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

i. Monitoring Design and Budgeting

Each project should be supported by a sound monitoring plan that is designed to track progress against SMART[32] indicators towards the delivery of the projects outputs and achievement of direct outcomes, including at a level disaggregated by gender, vulnerability or marginalisation. The evaluation will assess the quality of the design of the monitoring plan as well as the funds allocated for its implementation. The adequacy of resources for mid-term and terminal evaluation/review should be discussed if applicable.

ii. Monitoring of Project Implementation

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

iii. Project Reporting

UN Environment has a centralised Project Information Management System (PIMS) in which project managers upload six-monthly status reports against agreed project milestones. This information will be provided to the Evaluation Consultant(s) by the Evaluation Manager. Some projects have additional requirements to report regularly to funding partners, which will be supplied by the project team (e.g. the Project Implementation Reviews and Tracking Tool for GEF-funded projects). The evaluation will assess the extent to which both UN Environment and donor reporting commitments have been fulfilled. Consideration

[32] SMART refers to indicators that are specific, measurable, assignable, realistic and time-specific.

will be given as to whether reporting has been carried out with respect to the effects of the initiative on disaggregated groups.

Factors affecting this criterion may include:

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

H. Sustainability

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

i. Socio-political Sustainability

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

ii. Financial Sustainability

Some direct outcomes, once achieved, do not require further financial inputs, e.g. the adoption of a revised policy. However, in order to derive a benefit from this outcome further management action may still be needed e.g. to undertake actions to enforce the policy. Other direct outcomes may be dependent on a continuous flow of action that needs to be resourced for them to be maintained, e.g. continuation of a new resource management approach. The evaluation will assess the extent to which project outcomes are dependent on future funding for the benefits they bring to be sustained. Secured future funding is only relevant to financial sustainability where the direct outcomes of a project have been extended into a future project phase. Even where future funding has been secured, the question still remains as to whether the project outcomes are financially sustainable.

iii. Institutional Sustainability

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

Factors affecting this criterion may include:

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

I. Factors and Processes Affecting Project Performance

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

i. Preparation and Readiness

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

ii. Quality of Project Management and Supervision

In some cases 'project management and supervision' will refer to the supervision and guidance provided by UN Environment to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping and supervision provided by UN Environment.

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

iii. Stakeholder Participation and Cooperation

Here the term 'stakeholder' should be considered in a broad sense, encompassing all project partners, duty bearers with a role in delivering project outputs and target users of project outputs and any other collaborating agents external to UN Environment. The assessment will consider the quality and effectiveness of all forms of communication and consultation with stakeholders throughout the project life and the support given to maximise collaboration and coherence between various stakeholders, including sharing plans, pooling resources and exchanging learning and expertise. The inclusion and participation of all differentiated groups, including gender groups should be considered.

iv. Responsiveness to Human Rights and Gender Equity

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

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

v. Country Ownership and Driven-ness

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

vi. Communication and Public Awareness

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

Section 3. EVALUATION APPROACH, METHODS AND DELIVERABLES

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

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

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

Relevant background documentation, inter alia in the dropbox as well as:

a. Project design documents (including minutes of the project design review meeting at approval) for TNA I, TNA II and TNA III; Annual Work Plans and Budgets or equivalent, revisions to the project (Project Document Supplement), the logical framework and its budget;
b. Project reports such as six-monthly progress and financial reports, progress reports from collaborating partners, meeting minutes, relevant correspondence and including the Project Implementation Reviews and Tracking Tool etc.;
c. Quality review of TNA reports: http://www.tech-action.org and http://unfccc.int/ttclear/tna/reports.html
d. Other Project outputs: e.g. Regional workshop reports undertaken, TNA reports, TNA events held at COP related meetings
e. Mid-Term Review or Mid-Term Evaluation of the TNA II and TNA I projects;
f. Terminal Evaluation of TNA I project.

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

g. UN Environment Task Manager (TM) and Portfolio Manager;
h. Project management team;
i. UN Environment Fund Management Officer (FMO);
j. Sub-Programme Coordinator;
k. Project partners, including Regional centers, national TNA coordinators, national consultants, CTCN, UNFCCC and Technology Executive Committee
l. Relevant resource persons.

- **Surveys:** administered to all countries - questions customized based on region and theme
- **Field visits:** Up to three country visits, if necessary
- **Other data collection tools** (as deemed necessary)

- **Evaluation Deliverables and Review Procedures**

11.1 The evaluation team will prepare:

- **Inception Report:** (see Annex 1 for links to all templates, tables and guidance notes) containing an assessment of project design quality, a draft reconstructed Theory of Change of the project, project stakeholder analysis, evaluation framework and a tentative evaluation schedule.
- **Preliminary Findings Note:** typically in the form of a powerpoint presentation, the sharing of preliminary findings is intended to support the participation of the project team, act as a means to ensure all information sources have been accessed and provide an opportunity to verify emerging findings. In the case of highly strategic project/portfolio evaluations or evaluations with an Evaluation Reference Group, the preliminary findings may be presented as a word document for review and comment.
- **Draft and Final Evaluation Report:** (see links in Annex 1) containing an executive summary that can act as a stand-alone document; detailed analysis of the evaluation findings organised by evaluation criteria and supported with evidence; lessons learned and recommendations and an annotated ratings table.
- **Evaluation Bulletin:** a 2-page summary of key evaluation findings for wider dissemination through the Evaluation Office website.

11.2 **Review of the draft evaluation report**. The evaluation team will submit a draft report to the Evaluation Manager and revise the draft in response to their comments and suggestions. Once a draft of adequate quality has been peer-reviewed and accepted, the Evaluation Manager will share the cleared draft report with the Project Manager, who will alert the Evaluation Manager in case the report contains any blatant factual errors. The Evaluation Manager will then forward revised draft report (corrected by the evaluation team where necessary) to other project stakeholders, for their review and comments. Stakeholders may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions as well as providing feedback on the proposed recommendations and lessons. Any comments or responses to draft reports will be sent to the Evaluation Manager for consolidation. The Evaluation Manager will provide all comments to the evaluation team for consideration in preparing the final report, along with guidance on areas of contradiction or issues requiring an institutional response.

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

11.4 The Evaluation Manager will prepare a **quality assessment** of the first and final drafts of the main evaluation report, which acts as a tool for providing structured feedback to the evaluation consultants. The quality of the report will be assessed and rated against the criteria specified in template listed in Annex 1 and this assessment will be appended to the Final Evaluation Report.

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

- **The Evaluation Team/Evaluation Consultant**

12.1 For this evaluation, the evaluation team will consist of one Evaluation Consultant who will work under the overall responsibility of the Evaluation Office represented by an Evaluation Manager Janet Wildish, in consultation with the UN Environment Task Managers, Geordie Colville/Jonathan Duwyn, Fund Management Officer, Martin Okun and the Climate Change Sub-programme Coordinator, Niklas Hagelburg. The consultant will liaise with the Evaluation Manager on any procedural and methodological matters related to the evaluation. It is, however, the consultants' individual responsibility to arrange for their visas and immunizations as well as to plan meetings with stakeholders, organize online surveys, obtain documentary

evidence and any other logistical matters related to the assignment. The UN Environment Task Manager and project team will, where possible, provide logistical support (introductions, meetings etc.) allowing the consultants to conduct the evaluation as efficiently and independently as possible.

12.2 The consultant will be hired over the period 12th August 2019/Year to 111th Feb 2020] and should have: an advanced university degree in environmental sciences, international development or other relevant political or social sciences area; a minimum of 10 years of technical / evaluation experience, including of evaluating national, regional or global programmes and using a Theory of Change approach; a good understanding of technology for sustainable development and climate change mitigation/adaptation, assessing implementation capacity for technology needs assessments and follow up action; excellent writing skills in English and, where possible, knowledge of the UN system, specifically of the work of UN Environment.

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

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

Inception phase of the evaluation, including:
- preliminary desk review and introductory interviews with project staff;
- draft the reconstructed Theory of Change of the project;
- prepare the evaluation framework;
- develop the desk review and interview protocols;
- draft the survey protocols (if relevant);
- develop and present criteria for country and/or site selection for the evaluation mission: *A stratified sampling strategy is proposed where the countries would be grouped according to GDP/GDP and further stratification by level of achievement of project outcomes. Countries that participated in both TNA I and II would be visited by default to understand progress along the causal pathways in the project theory of change*
- plan the evaluation schedule;
- prepare the Inception Report, incorporating comments until approved by the Evaluation Manager

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

Reporting phase, including:

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

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

○ Schedule of the evaluation

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

Table 3. Tentative schedule for the evaluation

Milestone	Tentative Dates
Inception Mission (Paris)	
Inception Report	
Evaluation Mission	
Telephone interviews, surveys etc.	
Powerpoint/presentation on preliminary findings and recommendations	
Draft report to Evaluation Manager (and Peer Reviewer)	
Draft Report shared with UN Environment Project Manager and team	
Draft Report shared with wider group of stakeholders	
Final Report	
Final Report shared with all respondents	

○ Contractual Arrangements

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

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

Schedule of Payment:

Deliverable	**Percentage Payment**
Approved Inception Report *(see Annex VI with links to tools)*	30%
Approved Draft Main Evaluation Report *(see Annex VI with links to tools)*	30%
Approved Final Main Evaluation Report	40%

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

14.4 The consultants may be provided with access to UN Environment's Programme Information Management System (PIMS) and if such access is granted, the consultants agree not to disclose information from that system to third parties beyond information required for, and included in, the evaluation report.

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

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

Annex I: List of Countries in TNA I, II and III

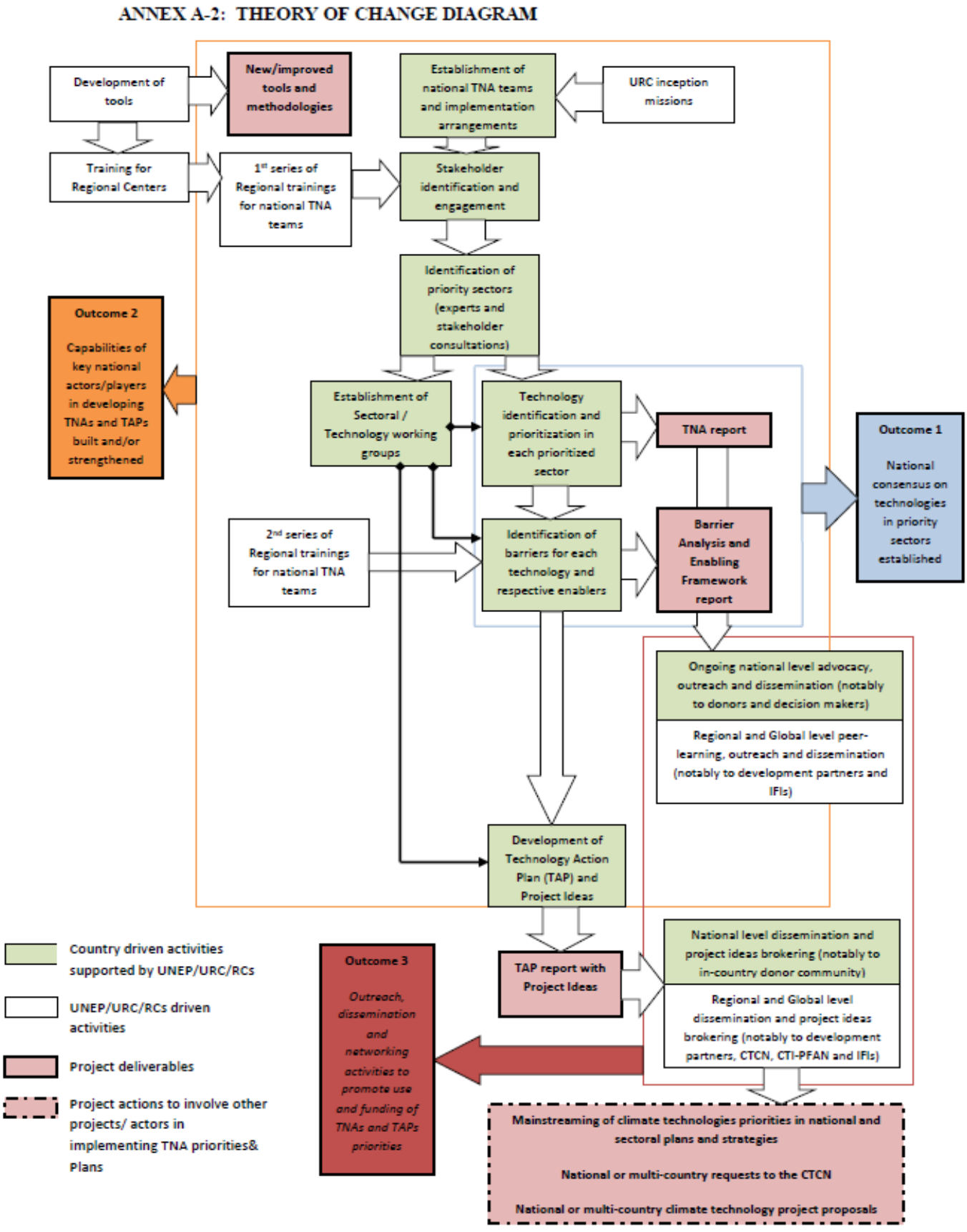
	TNA Phase I (2009-2013)		TNA Phase II (2014-2016)
Region	**First Round**	**Second Round**	
Africa	1. Cote d'Ivoire 2. Mali 3. Morocco 4. Senegal	5. Ethiopia 6. Ghana 7. Kenya 8. Mauritius 9. Rwanda 10. Sudan 11. Zambia	1. Burkina Faso 2. Burundi 3. Egypt 4. Gambia 5. Madagascar 6. Mauritania 7. Mozambique 8. Seychelles 9. Swaziland 10. Tanzania 11. Togo 12. Tunisia
Asia	1. Bangladesh 2. Cambodia 3. Indonesia 4. Thailand 5. Vietnam	6. Bhutan 7. Lao PDR (did only TNA) 8. Lebanon 9. Mongolia 10. Nepal 11. Sri Lanka	1. Jordan 2. Lao PDR (TAP only) 3. Malaysia 4. Philippines

Eastern Europe	1. Georgia	2. Azerbaijan 3. Kazakhstan (did only TNA) 4. Moldova	1. Armenia 2. Kazakhstan *(TAP only)* 3. Turkmenistan 4. Uzbekistan
Latin America and Caribbean	1. Argentina 2. Costa Rica 3. Guatemala 4. Peru	5. Cuba 6. Colombia 7. Dominican Republic 8. Ecuador 9. El Salvador 10. Bolivia	11. Belize 12. Bolivia 13. Grenada 14. Guyana 15. Honduras 16. Panama 17. Uruguay

The TNA III project will support 7 additional countries from the list below.

Country	LDC	SIDS
AFRICA		
Angola	X	
Benin	X	
Cape Verde		X
Comoros	X	X
Equatorial Guinea	X	
Guinea Bissau	X	X
Lesotho	X	
Liberia	X	
RDC	X	
Sao Tome and Principe	X	X
Sierra Leone	X	
Somalia	X	
Tanzania	X	
The Gambia	X	
Uganda	X	
Zambia	X	
ASIA & PACIFIC		
Cook Islands	X	
Fiji	X	
Kiribati	X	X
Maldives		X
Marshall Islands	X	
Micronesia	X	
Myanmar	X	
Niue	X	
Palau	X	
Papua New Guinea	X	
Samoa	X	
Solomon Island	X	X
Timor Leste	X	X
Tonga	X	
Tuvalu	X	X
Vanuatu	X	X
Yemen	X	
LATIN AMERICA AND THE CARRIBBEAN		
Bahamas		X
Barbados		X
Jamaica		X
Saint Kitts and Nevis		X
Saint Lucia		X
Saint Vincent and the Grenadines		X
Trinidad and Tobago		X

Annex II: TNA II Theory of Change (*source:* ProDoc)



Annex III: RECOMMENDATIONS FROM TERMINAL EVALUATION OF TNA I (2016)

***TNA I EVALUATION & IDENTIFIED TECHNOLOGY NEEDS IN TNAS AND INDCS* RECOMMENDATIONS**	**WHAT WILL BE DONE?**	**STATUS & MEASURES TAKEN**
Recommendation 1: Recognize and reach out to ongoing/completed projects on technology for climate change funded by UNEP, GEF and now CTCN, the multilateral financial institutions, and others, (for example en.lighten on efficient lighting technologies) which can provide concrete lessons for TNA. Explore mechanisms to link to such projects, and their results to the TNA Phase II, to add additional stakeholders, financial institutions and where appropriate private sector representatives, and as appropriate, additional expert inputs and for the governance) of work.	Countries will be provided with a selective list of relevant UN Environment projects (approx. 10-20 projects) that have a clearly defined technology focus and include links to websites and contact persons. This will enable national TNA teams to benefit from the resources and publications and possibly contact these initiatives. *(Supply copy of list)*	Amended The budget is very limited and this would require a lot of additional coordination for which we do not have the resources.
Recommendation 2: Work with UNFCCC to ensure all TNA reports are also available at the UNFCCC website - Link to communication/public awareness in the section on factors affecting performance	*(EOU will check the websites)*	Completed. The UNFCCC Secretariat's Technology Team has already made available completed TNAs, TAPs, as well as some TNA analysis reports on their website/technology portal: http://unfccc.int/ttclear/tna/reports.html TNA Phase II reports will be displayed on the UNFCCC website when TNA Phase II is completed.
Recommendation 3: Explore options with the key partners – countries and regional centres and the stakeholders to enhance and improve dissemination of key issues, public policy and coverage about technology issues related to climate change in more and different forums, including the mass media by providing relevant information, promoting evidence-based results of government and international programing and contributing to on-going needs for public policy formulation; explore additional options to find ways of influencing and engaging with civil society and academics on the issues.	In TNA Phase II, countries are encouraged to disseminate the TNA results to high level decision makers and relevant donor coordination groups established in the country (by Participating/presenting in meetings and developing targeted briefing notes).	Completed: Guidance on stakeholder engagement has been strengthened on engaging private sector and financiers in a …. (type of document/insert link?) For TNA Phase III more funding per country has been obtained from GEF and we have included the following new outputs for the countries: national dissemination plan, targeted briefing notes, and dissemination events.
Recommendation 4: Commit to a minimum agenda (could be very brief and periodic) for following up on the core outputs, resulting outcomes and examples of successful programs emerging out of the TNA efforts.	TNA is collaborating closely with TEC and UNFCCC Sec and constantly encourages them to follow up on past successes. For example, Phase I and II partners are invited to ongoing activities to present their experiences. Monitoring the implementation of TAPs has been included in the TEC workplan.	Amended
Recommendation 7: Examine the possible value of engaging external technical reviewers of the work done, for example in mid-term reviews, which would cost more	The project does not have adequate resources to do so. UDP does a mid-term review for DANIDA that includes TNA.	Amended.

than the current practice but can provide additional perspectives, complementing the useful project monitoring systems in place.	(Supply mid-term review)	
Recommendation 8: Make efforts towards a revitalized steering committee to improve strategic decision making in this highly complex project, with multiple partners, as the priorities would be viewed differently by partners, based on their own different perspectives, and effective integration of the different views is important.	Under TNA Phase II the SC includes a smaller number of members. The team still aims to improve the agenda to have more strategic discussions rather than having a main focus on updating SC members. (Supply list of previous and current SC members – possibly two different, existing documents)	Yes.
Recommendation 9: Either through the above process, or through different mechanisms, increase the participation of global stakeholder agencies at events so they are encouraged to follow up on the implementation	We are putting a stronger emphasis on the dissemination of the results notably at country level. We disseminate TNA results and tools through UNFCCC events and the Technology Facilitation Mechanism linked to the SDGs. UDP also periodically publishes newsletter updating with project progress, success stories and upcoming events. Electronic version of Newsletters are normally sent to key stakeholders. (Supply copy of electronic newsletters)	Yes.
Recommendation 11: In any discussions of technological change and innovation pay greater attention to the. broader economic and financial barriers for example the effects of subsidies and to "unintended consequences", which loom larger when a new technology is engaged at scale.		Completed. The guidance has been updated and improved already.
Recommendation 12: The issue of linkages between countries, increasing opportunities for learning between countries, linking to regional and global networks for knowledge, information, technology and finance areas area for the subsequent TNA Phase II to pay greater attention to.		Completed. Two experience sharing workshops undertaken in TNA Phase II. Regional workshops undertaken and TNA events held at COP related meetings
TNA Participating Countries (to be incorporated in Phase II of the TNA project):		
Recommendation 13: Countries involved in Phase II should note that many of the factors for greater national value are in their control. At the project level they include integration of such work within national decision making and climate change structures, energetic leadership at an appropriate national level with access to senior officials and to a wide range of ministries and departments, and a reasonable provision for national resources to complement the external finance.		Completed. More emphasis on dissemination at national level has been integrated in TNA Phase II and TNA Phase III. The development of targeted briefing notes and activities to disseminate results to decision makers, in country-donors/development partners and private sector including financiers have been included in TNA Phase II and TNA Phase III. It should be noted however that for TNA Phase II no additional budget has been provided and therefore it may

		not be possible for the countries to conduct these additional activities properly. While for TNA Phase III the GEF agreed to provide some additional funds for more CB at national level and for dissemination of results.
Recommendation 15: Almost all the countries involved rely on multi-lateral and bilateral donor partners for critical financing support to complement national resources. Linking to them at the national level and sharing information on the findings of priorities and action plans determined through the project, to develop funded activities to take them forward. For this and in general many countries can follow some of the good examples by others in terms of dissemination, tracking and sharing information and follow up.	This is something we will encourage more actively for Phase II and III countries. We have emphasized on the engagement with the in-country donor/development partners' community and also of the national GEF operational focal point, the CTCN National Designated Entity, the GCF National Designated Authority… Most of TNA Phase I countries have organized a final workshop where the results of the project are presented at the national level with the participation of local key stakeholders.	Yes.
UNEP and GEF		
Recommendation 16: UNEP FMO must work together with GEF and project team to ensure that all information on available financial resources to the project, both as provided in the GEF grant and also as co-financing are provided to the project managers in a transparent manner	Good reporting including on co-financing. Filing system has also been improved.	Yes.
Recommendation from Briefing paper Market feasibility studies for prioritized technologies in the TNA and TAP are a recommended next step to provide the business case for private sector investments in these.		

REJECTED RECOMMENDATIONS (by EOU)

Recommendation	Accepted / rejected	Project Team Response	Evaluation Office Comment
Recommendation 5: Ensure that the UDP incorporate into its strategic plans elements for future support, on the issues of technology and CC, as this is not a onetime effort; encourage and secure commitments of the competent cadre of staff involved to maintain the momentum and knowledge base on the key issues.	No.	It is not specifically for UDP to ensure future support, all development partners should take-up TNA. Both UN Environment and UDP are well aware of TNAs and regularly explore ways/opportunities to support the implementation of priority actions identified by countries through their TNA process. We continue strengthening links between TNA and CTCN	Outside control of UN Environment project

		UDP/UN Environment supported 6 TNA Phase I countries to develop NAMAs (FIRM project funded by Denmark)	
Recommendation 6: Review with UNEP DTIE and GEF on possible reallocations for the current budget for TNA Phase II, to ascertain the degree to which the GEF rules do allow for flexibility during execution of approved projects to take into account real experience and facts on the ground.	No.	This is not possible due to the GEF rules (not in our control)	Outside control of UN Environment project/against funder rules
Recommendation 10: Increase internal competencies to more flexibly apply a range of tools and methods to the specific situations faced by country, sector and purpose. Consider a greater coherence for framing the issues adding perspectives from economics and politics how they interact and are influenced, and apply systems thinking, to clarify more how UDP can increase the value of the outcomes.	Yes.	It must be noted though that flexibility has always been there, we suggest/recommend some tools but countries can choose to use different ones. It is a country driven process and therefore also the role of countries to increase the value of the outcomes rather than UDP…	Compliance cannot be tracked
Recommendation 14: Follow up at the national level after the project ends is also critical for the use of the outputs in national planning, financing and programming.	No.	While we agree that this is important and had suggested an activity for monitoring after the project ends. GEF asked to remove this new activity. It should also be noted that TEC has been requested to come up with a system to monitor TAP implementation.Since we work closely with the TEC as members of the TEC's TNA taskforce, we will be involved in suggesting an approach to track TAP implementation (TNA/TAP follow-up actions)	Donor not funding activity

Annex VI: Tools, Templates and Guidance Notes for use in the Evaluation

The tools, templates and guidance notes listed in the table below, and available on the Evaluation Office website (www.unep.org/evaluation), are intended to help Evaluation Managers and Evaluation Consultants to produce evaluation products that are consistent with each other and which can be compiled into a biennial Evaluation Synthesis Report. The biennial summary is used to provide an overview of progress to UN Environment and the UN Environmental Assembly. This suite of documents is also intended to make the evaluation process as transparent as possible so that all those involved in the process can participate on an informed basis. It is recognised that the evaluation needs of projects and portfolio vary and adjustments may be necessary so that the purpose of the evaluation process (broadly, accountability and lesson learning), can be met. Such adjustments should be decided between the Evaluation Manager and the Evaluation Consultant in order to produce evaluation reports that are both useful to project implementers and that produce credible findings.

ADVICE TO CONSULTANTS: As out tools, templates and guidance notes are updated on a continuous basis, kindly download documents from these links during the Inception Phase and use those versions throughout the evaluation.

Document	Name	URL link
1	Evaluation Process Guidelines for Consultants	Link
2	Evaluation Consultants Team Roles *(Team Leader and Supporting Consultant)*	Link
3	List of documents required in the evaluation process *(older version)*	Link
4	Evaluation Criteria *(summary of descriptions, as in these terms of reference)*	Link
5	Evaluation Ratings Table (only)	Link
6	Matrix Describing Ratings by Criteria	Link
7	Weighting of Ratings (excel)	Link
8	Project Identification Tables (GEF and non-GEF)	Link
9	Structure and Contents of the Inception Report	Link
10	Template for the Assessment of the Quality of Project Design (Word template)	Link
	Template for the Assessment of the Quality of Project Design (Excel tool)	Link
11	Guidance on Stakeholder Analysis	Link
12	Gender Note for Evaluation Consultants	Link
13	Use of Theory of Change in Project Evaluations	Link
14	Assessment of the Likelihood of Impact Decision Tree (Excel)	Link
15	Possible Evaluation Questions	Link
16	Structure and Contents of the Main Evaluation Report	Link
17	Cover Page, Prelims and Style Sheet for Main Evaluation Report	Link
18	Financial Tables	Link
19	Template for the Assessment of the Quality of the Evaluation Report	Link

ANNEX VII. QUALITY ASSESSMENT OF THE EVALUATION REPORT

Evaluand Title:

Technical Needs Assessment, Phase II

All UNEP evaluations are subject to a quality assessment by the Evaluation Office. This is an assessment of the quality of the evaluation product (i.e. evaluation report) and is dependent on more than just the consultant's efforts and skills.

	UNEP Evaluation Office Comments	Final Report Rating
Substantive Report Quality Criteria		
Quality of the Executive Summary: The Summary should be able to stand alone as an accurate summary of the main evaluation product. It should include a concise overview of the evaluation object; clear summary of the evaluation objectives and scope; overall evaluation rating of the project and key features of performance (strengths and weaknesses) against exceptional criteria (plus reference to where the evaluation ratings table can be found within the report); summary of the main findings of the exercise, including a synthesis of main conclusions (which include a summary response to key strategic evaluation questions), lessons learned and recommendations.	Final report: The Executive Summary provides an appropriate summary of the report's findings.	**5**
I. Introduction A brief introduction should be given identifying, where possible and relevant, the following: institutional context of the project (sub-programme, Division, regions/countries where implemented) and coverage of the evaluation; date of PRC approval and project document signature); results frameworks to which it contributes (e.g. Expected Accomplishment in POW); project duration and start/end dates; number of project phases (where appropriate); implementing partners; total secured budget and whether the project has been evaluated in the past (e.g. mid-term, part of a synthesis evaluation, evaluated by another agency etc.) Consider the extent to which the introduction includes a concise statement of the purpose of the evaluation and the key intended audience for the findings?	Final report: Complete and concise section	**5**
II. Evaluation Methods This section should include a description of how the *TOC at Evaluation*[33] was designed (who was involved etc.) and applied to the context of the project? A data collection section should include: a description of evaluation methods and information sources used, including the number and type of respondents; justification for methods used (e.g. qualitative/ quantitative; electronic/face-to-face); any selection criteria used to identify respondents, case studies or sites/countries visited; strategies used to increase stakeholder engagement and consultation; details of how data were verified (e.g. triangulation, review by stakeholders etc.). Methods to ensure that potentially excluded groups (excluded by gender, vulnerability or marginalisation) are reached and their	Final report: Detailed description of the approach taken. Detail on efforts made to reach marginalised groups would have been appreciated. Note that development of the TOC at Evaluation is covered below.	**5.5**

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

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experiences captured effectively, should be made explicit in this section. The methods used to analyse data (e.g. scoring; coding; thematic analysis etc.) should be described. It should also address evaluation limitations such as: low or imbalanced response rates across different groups; gaps in documentation; extent to which findings can be either generalised to wider evaluation questions or constraints on aggregation/disaggregation; any potential or apparent biases; language barriers and ways they were overcome. Ethics and human rights issues should be highlighted including: how anonymity and confidentiality were protected and strategies used to include the views of marginalised or potentially disadvantaged groups and/or divergent views. Is there an ethics statement?		
III. The Project This section should include: • *Context:* Overview of the main issue that the project is trying to address, its root causes and consequences on the environment and human well-being (i.e. synopsis of the problem and situational analyses). • *Results framework*: Summary of the project's results hierarchy as stated in the ProDoc (or as officially revised) • *Stakeholders:* Description of groups of targeted stakeholders organised according to relevant common characteristics • *Project implementation structure and partners:* A description of the implementation structure with diagram and a list of key project partners • *Changes in design during implementation:* Any key events that affected the project's scope or parameters should be described in brief in chronological order • *Project financing:* Completed tables of: (a) budget at design and expenditure by components (b) planned and actual sources of funding/co-financing	Final report: Detailed section covering all elements.	**6**
IV. Theory of Change The *TOC at Evaluation* should be presented clearly in both diagrammatic and narrative forms. Clear articulation of each major causal pathway is expected, (starting from outputs to long term impact), including explanations of all drivers and assumptions as well as the expected roles of key actors. Where the project results as stated in the project design documents (or formal revisions of the project design) are not an accurate reflection of the project's intentions or do not follow UNEP's definitions of different results levels, project results may need to be re-phrased or reformulated. In such cases, a summary of the project's results hierarchy should be presented for: a) the results as stated in the approved/revised Prodoc logframe/TOC and b) as formulated in the *TOC at Evaluation*. *The two results hierarchies should be presented as a two-column table to show clearly that, although wording and placement may have changed, the results 'goal posts' have not been 'moved'.*	Final report: Detailed discussion of causal pathways and effective diagram, including identification of Drivers and Assumptions at all levels.	**6**
V. Key Findings **A. Strategic relevance:** This section should include an assessment of the project's relevance in relation to UNEP's mandate and its alignment with UNEP's policies and strategies at the time of project approval. An assessment of the complementarity of the project at design (or during	Final report: Detailed discussion of all elements.	**6**

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inception/mobilisation[34]), with other interventions addressing the needs of the same target groups should be included. Consider the extent to which all four elements have been addressed: v. Alignment to the UNEP Medium Term Strategy (MTS) and Programme of Work (POW) vi. Alignment to Donor/GEF Strategic Priorities vii. Relevance to Regional, Sub-regional and National Environmental Priorities viii. Complementarity with Existing Interventions		
B. Quality of Project Design To what extent are the strength and weaknesses of the project design effectively summarized?	Final report: Good summary of assessment of project design in table format.	**6**
C. Nature of the External Context For projects where this is appropriate, key external features of the project's implementing context that limited the project's performance (e.g. conflict, natural disaster, political upheaval[35]), and how they affected performance, should be described.	Final report: Section confirms that unfavourable external factors did not affect project performance, but also acknowledges the risks that these factors pose.	**6**
D. Effectiveness **(i) Outputs and Project Outcomes:** How well does the report present a well-reasoned, complete and evidence-based assessment of the a) availability of outputs, and b) achievement of project outcomes? How convincing is the discussion of attribution and contribution, as well as the constraints to attributing effects to the intervention. The effects of the intervention on differentiated groups, including those with specific needs due to gender, vulnerability or marginalisation, should be discussed explicitly.	Final report: Detailed discussion of the availability of outputs and achievement of outcomes, supported by country level vignettes and summary tables.	**6**
(ii) Likelihood of Impact: How well does the report present an integrated analysis, guided by the causal pathways represented by the TOC, of all evidence relating to likelihood of impact? How well are change processes explained and the roles of key actors, as well as drivers and assumptions, explicitly discussed? Any unintended negative effects of the project should be discussed under Effectiveness, especially negative effects on disadvantaged groups.	Final report: Good discussion of likelihood of impact supported by summary tables showing the assessment of the validity of assumptions and drivers and with vignettes from country level	**6**
E. Financial Management This section should contain an integrated analysis of all dimensions evaluated under financial management and include a completed 'financial management' table. Consider how well the report addresses the following: • *Adherence* to UNEP's financial policies and procedures • *completeness* of financial information, including the actual project costs (total and per activity) and actual co-financing used • *communication* between financial and project management staff	Final report: Good discussion of elements of financial management with supporting tables. Discussion of communication is limited, possibly because there were shortcomings to explore.	**5**

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

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

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F. Efficiency To what extent, and how well, does the report present a well-reasoned, complete and evidence-based assessment of efficiency under the primary categories of cost-effectiveness and timeliness including: • Implications of delays and no cost extensions • Time-saving measures put in place to maximise results within the secured budget and agreed project timeframe • Discussion of making use during project implementation of/building on pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. • The extent to which the management of the project minimised UNEP's environmental footprint.	Final report: Good discussion of efficiency. Consider if the 'smart working protocol' is a tool that could be shared with other project teams?	**5**
G. Monitoring and Reporting How well does the report assess: • Monitoring design and budgeting *(including SMART results with measurable indicators, resources for MTE/R etc.)* • Monitoring of project implementation *(including use of monitoring data for adaptive management)* • Project reporting *(e.g. PIMS and donor reports)*	Final report: Good discussion – consider whether the UDP 'internal working protocol' is a tool that could be shared with other project teas?	**5**
H. Sustainability How well does the evaluation identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of achieved project outcomes including: • Socio-political Sustainability • Financial Sustainability • Institutional Sustainability	Final report: Good discussion of the three sub-categories of sustainability.	**5**
I. Factors Affecting Performance These factors are <u>not</u> discussed in stand-alone sections but are **integrated in criteria A-H as appropriate**. Note that these are described in the Evaluation Criteria Ratings Matrix. To what extent, and how well, does the evaluation report cover the following cross-cutting themes: • Preparation and readiness • Quality of project management and supervision[36] • Stakeholder participation and co-operation • Responsiveness to human rights and gender equity • Environmental and social safeguards • Country ownership and driven-ness • Communication and public awareness	Final report: Good summary of cross-cutting issues. Institutional learning could be gained from a) gender responsive plans being incorporated into TNA III and b) using a Multi Criteria Assessment tool for TNA/TAP processes.	**5**
VI. Conclusions and Recommendations **i. Quality of the conclusions:** The key strategic questions should be clearly and succinctly addressed within the conclusions section. It is expected that the conclusions will highlight the main strengths and weaknesses of the project and connect them in a compelling story line. Human rights and gender dimensions of the intervention (e.g. how these dimensions were considered, addressed or impacted on) should be discussed explicitly. Conclusions, as well as lessons and recommendations, should be consistent with the evidence presented in the main body of the report.	Final report: Conclusions section is complete with responses to strategic questions, update on responses to recommendations from the evaluation of TNA I etc.	**5**
ii) Quality and utility of the lessons: Both positive and negative lessons are expected and duplication with recommendations should be avoided. Based on explicit evaluation findings, lessons should be rooted in real project experiences or derived from problems	Final report: The lessons are clear and relevant.	**5**

[36] In some cases 'project management and supervision' will refer to the supervision and guidance provided by UNEP to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping provided by UNEP.

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encountered and mistakes made that should be avoided in the future. Lessons must have the potential for wider application and use and should briefly describe the context from which they are derived and those contexts in which they may be useful.		
iii) Quality and utility of the recommendations: To what extent are the recommendations proposals for specific action to be taken by identified people/position-holders to resolve concrete problems affecting the project or the sustainability of its results? They should be feasible to implement within the timeframe and resources available (including local capacities) and specific in terms of who would do what and when. At least one recommendation relating to strengthening the human rights and gender dimensions of UNEP interventions, should be given. Recommendations should represent a measurable performance target in order that the Evaluation Office can monitor and assess compliance with the recommendations.	Final report: The recommendations are clear and relevant.	**5**
VII. Report Structure and Presentation Quality		
i) Structure and completeness of the report: To what extent does the report follow the Evaluation Office guidelines? Are all requested Annexes included and complete?	Final report: The report follows the UNEP guidelines.	**6**
ii) **Quality of writing and formatting:** Consider whether the report is well written (clear English language and grammar) with language that is adequate in quality and tone for an official document? Do visual aids, such as maps and graphs convey key information? Does the report follow Evaluation Office formatting guidelines?	Final report: The report is clear and well-written	**6**
OVERALL REPORT QUALITY RATING		**5.5 Satisfactory**

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

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

Evaluation Process Quality Criteria	**Compliance**	
	Yes	**No**
Independence:		
1. Were the Terms of Reference drafted and finalised by the Evaluation Office?	**Y**	
2. Were possible conflicts of interest of proposed Evaluation Consultant(s) appraised and addressed in the final selection?	**Y**	
3. Was the final selection of the Evaluation Consultant(s) made by the Evaluation Office?	**Y**	
4. Was the evaluator contracted directly by the Evaluation Office?	**Y**	
5. Was the Evaluation Consultant given direct access to identified external stakeholders in order to adequately present and discuss the findings, as appropriate?	**Y**	
6. Did the Evaluation Consultant raise any concerns about being unable to work freely and without interference or undue pressure from project staff or the Evaluation Office?		**N**
7. If Yes to Q6: Were these concerns resolved to the mutual satisfaction of both the Evaluation Consultant and the Evaluation Manager?		**N / A**
Financial Management:		
8. Was the evaluation budget approved at project design available for the evaluation?	**Y**	
9. Was the final evaluation budget agreed and approved by the Evaluation Office?	**Y**	
10. Were the agreed evaluation funds readily available to support the payment of the evaluation contract throughout the payment process?	**Y**	
Timeliness:		
11. If a Terminal Evaluation: Was the evaluation initiated no more than six months before project operational completion? Or, if a Mid Term Evaluation: Was the evaluation initiated no more than six-months prior to the project's mid-point?	**Y**	
12. Were all deadlines set in the Terms of Reference respected, as far as unforeseen circumstances allowed?	**Y**	
13. Was the inception report delivered and reviewed/approved prior to commencing any travel?	**Y**	
Project's engagement and support:		
14. Did the project team, Sub-Programme Coordinator and identified project stakeholders provide comments on the evaluation Terms of Reference?	**Y**	
15. Did the project make available all required/requested documents?	**Y**	
16. Did the project make all financial information (and audit reports if applicable) available in a timely manner and to an acceptable level of completeness?	**Y**	
17. Was adequate support provided by the project to the evaluator(s) in planning and conducting evaluation missions?	**Y**	
18. Was close communication between the Evaluation Consultant, Evaluation Office and project team maintained throughout the evaluation?	**Y**	
19. Were evaluation findings, lessons and recommendations adequately discussed with the project team for ownership to be established?	Y	
20. Did the project team, Sub-Programme Coordinator and any identified project stakeholders provide comments on the draft evaluation report?	**Y**	
Quality assurance:		
21. Were the evaluation Terms of Reference, including the key evaluation questions, peer-reviewed?	**Y**	
22. Was the TOC in the inception report peer-reviewed?	**Y**	
23. Was the quality of the draft/cleared report checked by the Evaluation Manager and Peer Reviewer prior to dissemination to stakeholders for comments?	**Y**	
24. Did the Evaluation Office complete an assessment of the quality of both the draft and final reports?	**Y**	
Transparency:		
25. Was the draft evaluation report sent directly by the Evaluation Consultant to the Evaluation Office?	**Y**	
26. Did the Evaluation Manager disseminate (or authorize dissemination) of the cleared draft report to the project team, Sub-Programme Coordinator and other key internal personnel (including the Reference Group where appropriate) to solicit formal comments?	**Y**	

Evaluation Process Quality Criteria	Compliance	
27. Did the Evaluation Manager disseminate (or authorize dissemination) appropriate drafts of the report to identified external stakeholders, including key partners and funders, to solicit formal comments?	**Y**	
28. Were all stakeholder comments to the draft evaluation report sent directly to the Evaluation Office	**Y**	
29. Did the Evaluation Consultant(s) respond adequately to all factual corrections and comments?	**Y**	
30. Did the Evaluation Office share substantive comments and Evaluation Consultant responses with those who commented, as appropriate?	**Y**	

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

Process Criterion Number	**Evaluation Office Comments**