Terminal Evaluation of the UN Environment Project

"Resource Efficiency and Eco-Innovation in Developing and Transition Economies"

(referred to as the "Eco-Innovation Project")

Evaluation Office of UN Environment

November 2017

Evaluation Office of UN Environment

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Page 21: Photo taken by Dr. Joyce Miller during site visit in Malaysia, March 2017

Page 78: Meeting Report: UNEP Eco-Innovation Project Global Meeting of Partners (Kuala Lumpur, Malaysia, 17-18 November 2015)

Page 81: Collage assembled from **http://unep.ecoinnovation.org/es/**

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Resource Efficiency and Eco-Innovation in Developing and Transition Economies)
(NF40500803 – overall Green Economy initiative)
November 2017

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ABOUT THE EVALUATION

Joint Evaluation: No

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Brief Description: This report is a terminal evaluation of UN Environment's "Resource Efficiency and Eco-Innovation in Developing and Transition Countries" (or more simply, the "Eco-Innovation Project") implemented during 2012-2017 with an overall goal to promote the transition towards sustainable industrial production systems in developing countries and transition economies through the promotion of eco-innovation based on resource efficient and cleaner production. Funded through the EC's Thematic Programme for Environment and Sustainable Management of Natural Resources including Energy (ENRTP) and embedded in a larger UN Environment umbrella Subprogramme, "Advancing Resource Efficiency in Business Practices", the Eco-Innovation Project was designed to leverage the EC's Eco-Innovation Action Plan, UNEP's Green Economy Initiative and its Sustainable Consumption/Production (SCP) experience and networks, particularly the jointly implemented UNIDO-UNEP Resource Efficient and Cleaner Production programme and global network (RECP*net*) of RECP service providers (also referred to as business intermediaries) This evaluation assessed project performance (in terms of relevance, effectiveness, efficiency), and sought to determine outcomes and impacts (actual and potential) stemming from the Project, including their sustainability. The evaluation's primary purposes were to (i) provide evidence of results to meet accountability requirements; and (ii) promote learning, feedback, and knowledge sharing through results and lessons learned for UN Environment, the EC, relevant organisations in the 9 countries that participated in the Project, and beyond.

Key words: Eco-Innovation; Innovation; Business Model; Business Model Innovation; Systems Thinking; Life Cycle Approach; Circular Economy; Business Case; Business Intermediaries; Agri-Food Sector; Chemical Sector, Metal Sector; Resource Efficiency; Resource Efficient Cleaner Production; RECP; RECP Eco-Innovation; RECP Demonstration, Policy Mainstreaming; Eco-Innovation Technologies; Green Economy, Green Growth; Sustainable Consumption and Production; Sustainable Industrial Production; Project Evaluation; Terminal Evaluation; TE

Evaluator's Background and Qualifications: Dr. Joyce Miller is Founder and Director of CAPRESE Sàrl and has undertaken evaluation work for United Nations agencies since 2015, leveraging her 20+ years of experience in the design, development, and delivery of capacity-building in the context of international cooperation, with a particular focus on Resource Efficiency and SMEs, in Africa/Middle East (Algeria, Egypt, Ghana, Rwanda), Asia (Bangladesh, India, Indonesia, Sri Lanka, Thailand, Vietnam), and Europe (Montenegro, Turkey). As well as coaching senior corporate staff to tap their talents, build their leadership repertoire, and create high performance teams through programs of the International Institute for Management Development (IMD in Switzerland), she co-developed an 8-week virtual learning journey in innovation, pioneering the first of its "global leadership in the cloud" offerings.

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List of acronyms

10YFP	10 Year Framework of Programmes for sustainable development
BIU	UNEP's Business and Industry Unit
CP, RECP	Cleaner Production, Resource Efficient and Cleaner Production
DG DEVCO	(EC) Directorate-General for International Cooperation and Development
DG ENV	(EC) Directorate-General for Environment
DTU	Technical University of Denmark
EA	Expected accomplishment
EC	European Commission
ENRTP	(EC) Thematic Programme for Environment & Sustainable Management of Natural Resources including Energy
EOU	Evaluation Office of UN Environment
GE, GEI	Green Economy, Green Economy Initiative
GE & HR	Gender and Human Rights
GPGC	Global Public Goods and Challenges
ITC	International Trade Center
MTS	Medium Term Strategy
NCPC	National Cleaner Production Centre
OECD	Organisation for Economic Co-operation and Development
PAGE	Partnership for Action on Green Economy
PoW	Programme of Work
PDQ	Project design quality
PRC	Project Review Committee
ProDoc	Project Document (approved description of project)
RE	Resource Efficiency
REAL	(UN Environment's) Resource Efficiency Achieved through Life cycle thinking
RECP*net*	The global UNIDO-UNEP Network on Resource Efficient and Cleaner Production
ROtI	Review of Outcomes to Impacts method
SCP / RAC	Sustainable Consumption and Production / Regional Activity Centre
SDG	Sustainable Development Goal
SME(s)	Small- and Medium-Sized Enterprise(s)
SSA, SSFA	Small Scale Agreement, Small Scale Funding Agreement
TE	Terminal Evaluation
TEST	(UNIDO's) Transfer of Environmentally-Sound Technology methodology
TOC, R-TOC	Theory of Change, Reconstructed Theory of Change
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme; from January 2017, called UN
UNIDO	United Nations Industrial Development Organisation
WBCSD	World Business Council for Sustainable Development

Key Definitions

Eco-Innovation

Eco-innovation is the development and application of a business model, shaped by a new business strategy, which incorporates sustainability throughout all business operations based on life cycle thinking and in cooperation with partners across the value chain. It entails a coordinated set of modifications or novel solutions to products (goods/services), processes, market approach and organizational structure which leads to a company's enhanced performance and competitiveness.

Source: The Business Case for Eco-Innovation, UNEP, 2014

Resource Efficiency

Resource efficiency represents a critical opportunity to address this unsustainable path, by building green economies in which economic growth is decoupled from environmental harm. Through enabling the design and production of low-impact products and services, resource efficiency can help us meet human needs while respecting the ecological carrying capacity of the earth. UN Environment defines resource efficiency from a life cycle and value chain perspective. This means reducing the total environmental impact of the production and consumption of goods and services, from raw material extraction to final use and disposal.

Source: www.unep.org/resourceefficiency/

Sustainable Production and Consumption

"The use of services and related products, which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardise the needs of future generations". Norwegian Ministry of Environment, Oslo Symposium, 1994

Source: ABC of SCP: Clarifying Concepts on Sustainable Consumption and Production: Towards a 10-Year Framework of Programmes on Sustainable Consumption and Production, UNEP, 2010

SCP aims at "doing more and better with less," increasing net welfare gains from economic activities by reducing resource use, degradation and pollution along the whole lifecycle, while increasing quality of life. This change towards SCP involves different stakeholders, including business, consumers, policy makers, researchers, scientists, retailers, media, and development cooperation agencies, among others. It requires a systemic approach and cooperation among actors operating in the supply chain, from producer to final consumer. It involves engaging consumers through awareness-raising and education on sustainable consumption and lifestyles, providing consumers with adequate information through standards and labels and engaging in sustainable public procurement, among others.

Source: www.unep.org/resourceefficiency/Home/WhatisSCP/tabid/105574/Default.aspx

Green Economy

UN Environment has developed a working definition of a Green Economy as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a Green Economy can be thought of as one which is low carbon, resource efficient and socially inclusive. A Green Economy is one whose growth in income and employment is driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services. These investments need to be catalysed and supported by targeted public expenditure, policy reforms and regulation changes. This development path should maintain, enhance and, where necessary, rebuild

natural capital as a critical economic asset and source of public benefits, especially for poor people whose livelihoods and security depend strongly on nature.

Source: www.unep.org/greeneconomy/AboutGEI/WhatisGEI/tabid/29784/Default.aspx

Project Identification Table[1]

UN Environment PIMS ID:	01686	**IMIS number:**	ECL-2G55 (for DG ENV part) EUL-2J97 (for DG DEVCO part)
Sub-programme:	(2014/15) Resource Efficiency (2016/17) Resource efficiency and sustainable consumption and production	**Expected Accomplishment(s) (EA):**	The transition towards sustainable industrial production systems in developing countries and transition economies is supported through the promotion of eco-innovation based on resource efficient, cleaner and safer production
UNEP approval date:	June 2012	**PoW Output(s):**	2016/17 - 621 2014/15 - 621, 622 2012/13 – 62P3
Coverage - Countries):	Colombia, Egypt, Kenya Malaysia, Peru, South Africa, Sri Lanka, Uganda, Vietnam	**Coverage - Regions:**	Asia, Africa, and Latin America and the Caribbean, West Asia and Eastern Europe
Expected Start Date:	1 June 2012	**Actual start date:**	1 June 2012
Planned completion date:	31 May 2016	**Actual completion date:**	September 2017
Planned project budget at approval (2012): **Planned project budget at 2016 revision**	USD 6,052,083 USD 6,168,634	**Total expenditures reported as of December 2016**	DG Env: 3661963 USD DG Devco: 1729986 USD (total EC: USD 5391949) Co-financing: 776685 as EF funds (staff) Total: 6168634 USD
Planned Environment Fund (EF) allocation:	USD 0	**Actual EF expenditures reported as of December 2016**	N.A.
Planned Extra-budgetary financing (XBF): EC ENRTP (Eco Innovation)	USD 5,391,949	**Actual XBF expenditures reported as of 31 December 2016**	3423452 EUR With exchange rate (0.725 : 4722003 USD) indicated in the report included within Annex 4 of this report
XBF secured:		**Leveraged financing:**	USD 986,685 (UN Environment in-kind contribution)
First Disbursement:	June 2012	**Date of financial closure:**	September 2017
No. of revisions:	2 revisions (2014, 2016)	**Date of last revision:**	April 2016
Mid-term review/ evaluation (planned date):	End of 2015 (a series of regional validation workshops and during the 3rd Global RECP*net* event)	**Mid-term review/ evaluation (actual date):**	Internal review undertaken during Global Partners' Meeting, Kuala Lumpur, November 2015
Date of last Steering Committee meeting:	Global meeting of partners – November 2015	**Terminal Evaluation (actual date):**	January – July 2017

[1] Source: Original Project Document (June 2012) and 2nd Revision (March 2016)

Executive Summary

Introduction

1. This document represents the full and final report of the Terminal Evaluation (TE) of "Resource Efficiency and Eco-Innovation in Developing and Transition Countries" (henceforth, referred to as the Eco-Innovation Project), initiated by UNEP in partnership with the European Commission (EC) in June 2012. This Evaluation Report describes the Project's context, its Theory of Change, evaluation findings, conclusions, lessons learned, and recommendations. Detailed background information is included in the annexes.

2. Leveraging the EC's Eco-Innovation Action Plan, UNEP's Green Economy Initiative[2] and its Sustainable Consumption/Production (SCP) experience & networks, particularly the UNIDO-UNEP Resource Efficient and Cleaner Production (RECP) programme and global network (RECP*net*[3]), the Eco-Innovation Project's purpose was "to promote the transition towards sustainable industrial production systems in developing countries and transition economies through the promotion of eco-innovation based on resource efficient and cleaner production" (RECP eco-innovation[4]). Funded through the EC's thematic programme, Environment & Sustainable Management of Natural Resources including Energy (ENRTP), the Eco-Innovation Project was part of the larger UN Environment Resource Efficiency Subprogramme[5], which aimed to build business' ability to apply resource efficiency, including cleaner production and environmental innovation, along supply chains and to measure and disclose performance through corporate sustainability reporting.

3. In addressing its overall goal, the Project used a 2-pronged approach: enhancing capacities of RECP service providers to support business & industry to respond to growing demands for more sustainable products and services while simultaneously building the motivation and capacity of policy makers and other key actors to develop an enabling environment for eco-innovation. In this light, activities were implemented in 9 countries (Colombia, Egypt, Kenya, Malaysia, Peru, South Africa, Sri Lanka, Uganda, Vietnam) seen as having the potential to develop the eco-innovation approach, pilot and prove the concept, and generate materials that could be disseminated to catalyse replication and upscaling in these countries, and beyond. A call for bids was developed to select service providers and countries for implementation.

4. With two revisions bringing its completion date to September 2017, the Project's total budget of USD 6,168,634 over its eventual 64-month duration was funded through a combined direct contribution of USD 5,391,949 from EC Directorate-Generals for Environment (DG ENV) and

[2] UNEP's Green Economy Report (2011) used macro-economic analysis & modelling to demonstrate that greening the economy across a range of sectors (i.e. agriculture, fisheries, water, forests, renewable energy, manufacturing, waste, buildings, transport, tourism and cities) can drive economic recovery and growth and lead to future prosperity and job creation, while at the same time addressing social inequalities and environmental challenges

[3] Since the Project's 2012 launch, the RECP*net*, a key platform for demonstrating, validating, disseminating, and using the Project's outputs, has grown from 47 to 74 members, which actively promote RECP and provide technical and policy support services to government and industry in developing countries and transition economies

[4] The term 'RECP eco-innovation' occurs repeatedly throughout this Report, illustrating the close (terminology) link and desired synergy of the Project's activities and outputs with ongoing joint activities of UN Environment and UNIDO within resource efficient and cleaner production (i.e. RECP)

[5] The Eco-Innovation Project contributes to 5 of 6 components (i.e. apart from corporate sustainability reporting) of the larger umbrella "Advancing Resource Efficiency in Business Practices" (Project PIMS # 01686)

International Cooperation and Development (DG DEVCO), constituting 87.4%, with an in-kind contribution of USD 776,685 (12.6%) from UN Environment.

5. This TE was undertaken in the 6-month period ahead of the Project's closure to assess its performance and strategic relevance and determine outcomes & impacts stemming from the Project, including their sustainability, using criteria provided by UN Environment's Evaluation Office (EOU). The quality of project design was assessed as part of this undertaking; it is included in the Inception Report developed in preparation for the main evaluation phase. While this Project was evaluated separately from the larger Resource Efficiency Subprogramme in which it is embedded, attempts were made to draw linkages that demonstrate its contribution to the programme-level results framework. This evaluation serves two main purposes: (i) provide evidence of results to meet accountability requirements; (ii) promote operational improvement and knowledge sharing. In this light, the TE sought to identify relevant lessons for future project formulation and implementation by UN Environment and main project partners (EC, UNIDO, RECP*net*), and other cooperation partners (ITC, UNCTAD, Regional Economic Commissions), with the aim of enhancing catalytic effects and expanding reach, impact, and practical use of the generated outputs & outcomes.

6. The evaluation was wholly executed by an external Evaluator using a participatory approach where key stakeholders were kept informed and consulted throughout the process. Primarily qualitative methods were used to determine achievements against expected outputs, outcomes, and impacts. While it would have been ideal to have direct input from all actors involved in implementing activities, due budget & time constraints, field missions were carried out in 4 of 9 pilot countries (Kenya, Malaysia, Uganda, Vietnam) in early Spring 2017. Local implementing partners in the other 5 countries, donors, consultants and other relevant stakeholders were interviewed, together with review of project reports and other relevant documents. The formulation of the findings, conclusions, and recommendations are exclusively those of the Evaluator.

Main Findings

7. Given its link with global, regional and national needs to close industrial loops and scale up RECP practice, its alignment with UN Environment's leadership remit and PoW, and its **high strategic relevance** for key stakeholders, the Eco-Innovation Project was set to make an important contribution. It delivered on this opportunity by piloting a dual-pronged approach combining application and policy components, going beyond the agency's usual mandate to promote policy reform and strengthen government capacities, to also promoting changes in private sector management practices and strengthening business intermediaries and through them, SMEs, in developing and transition economies to achieve environmentally sustainable outcomes.

8. The Project developed a **novel approach** to integrating sustainability thinking into a firm's business model that **brings together RECP practice, life cycle and systems thinking, and a value chain perspective**. The approach was implemented by 10 local partners (drawn primarily although not exclusively from RECP*net)* who demonstrated different understanding and application of eco-innovation and achieved different levels of results, which is valuable for developing insights into the diversity of approaches to utilization and to identify factors that facilitate and hinder adoption.

9. **Programmed outputs were over-achieved** for the most part. The tools that were produced were validated through a consultation process with key stakeholders, although their development timeline exceeded the initial planning horizons and some questions were raised regarding the ease

of uptake of eco-innovation, given its demand on the absorptive capacities of intended beneficiaries.

10. The Project's **direct outcomes, as defined in the R-TOC, were delivered.** These were seen by the Evaluator as **providing "valuable first steps"** and **"relevant building blocks"** towards the Intermediate States; these characterizations are consistent with a pilot project setting.

11. With respect to **its overall goal & planned objectives, the Project** initiated a process of system change in 9 pilot countries. While it may not have been fully clear at the outset that eco-innovation was a meaningful response to national priorities and needs, by the end of the intervention, significant appreciation was expressed regarding its potential, described as *"the right topic for right now"*. This **positive change in attitude shows the Project's catalytic power**. Moreover, the case study extracts regarding policy and technical implementation produced in the Project's final phase, which were approved by the implementing partners, together with detailed information from implementation in Vietnam that has gone beyond the scope of the current Project, are illustrative of the behavioural change triggered by the eco-innovation approach.

12. There were substantial efforts to **build public awareness and communicate** the Project's objectives, progress, and outcomes. **Replication potential** was enhanced by drawing local implementing partners from the RECP*net,* identifying synergies with other UN Environment initiatives, and engaging in broad opportunistic exposure; the latter represented **an extensive (unplanned) investment in disseminating the Project's outputs**. Linkages were built with the policy work undertaken by SwitchMed (Egypt, Jordan), SwitchAsia (Vietnam, Sri Lanka), and others which could be further tapped (e.g. PAGE) to enhance catalytic power. The replication potential that was built already started to bear fruit through requests from entities in Brazil & Argentina for eco-innovation training which was realised during the Project's final phase. New contracts were also struck in Vietnam, Malaysia, and Colombia to continue implementing the eco-innovation approach.

13. The Project was extremely effective in **developing country ownership and driven-ness** and in choosing, leveraging, and building up elements to support the Project's delivery. Socio-political, institutional, and environmental dimensions of sustainability were addressed.

14. **Suitable project management arrangements, financial management mechanisms, monitoring** through progress reporting, and **capable and committed supervision** were put in place within UN Environment and in the pilot countries to advance activities towards results. **Substantial support and technical backstopping were provided to the local implementing partners** by both the Project Team and external sector experts. During implementation, the Project Team practiced **adaptive management** to facilitate learning and seize opportunities although occasional gaps in communication and mutual understanding led, at times, to a perception on the part of local partners of shifting goalposts.

15. By the end of the intervention, the bulk of business strategies, business models, and country roadmaps that were developed were approved by the top management of the companies and governments. Although not fully implemented in all cases, the experiences and intentions that were so far documented can be seen as illustrative of the potential of eco-innovation for triggering change. This level of performance met the expectation of the involved stakeholders and the Project Team. Through these developments, the Project succeeded in demonstrating the potential for business model innovation and corresponding triggering of behavioural change in terms of daily business practice. On the policy side, the Project identified entry points for eco-innovation

within existing national policies and instruments and prepared key inputs to policy processes, implying likelihood of uptake, provided there is continuing momentum in the pilot countries.

16. **Time efficiency proved challenging** due to the Project's complex objectives and its time planning which did not sufficiently take into consideration the novelty of the eco-innovation approach and the extent of multi-stakeholder consultation needed along the way (e.g. calls for bids, peer review). The transition of UNEP's resource management system (from IMIS to UMOJA) during April 2015 to December 2016 led to some negative impacts. The Project itself was **sufficiently resourced** and **cost efficiencies were pursued** through sharing external consultants across several UNEP projects and opting for **joint implementation through partnership arrangements** that **increased local ownership**. Two no-cost extensions were granted.

17. **HR & GE aspects were considered** without a specific budget allocation in place to direct this, which is seen as a positive element of the project's management. Substantial in-kind contribution from local implementing partners enlarged the available resource pool. This approach is in line with the principle of **building on existing institutions, partnerships, and initiatives, which contributed to project efficiency**. At times, the level of in-kind contribution exceeded the expectation and capacity of local implementing partners. The novelty of the eco-innovation approach and the extra effort needed by all involved actors to come up the learning curve were factors driving higher than expected in-kind contributions.

18. The Project's **overall performance and contribution is rated as satisfactory.** Its **impact** through replication and upscaling is seen as **moderately likely**. This assessment would be enhanced if it would be the case that end beneficiaries (SMEs) are indeed able, in future, to secure access to adequate financial and technical resources to implement eco-innovation in order to realise its full potential and thereby generate the relevant evidence, data, and references for RECP service providers (the primary vector for dissemination and application) to confidently develop and offer (commercial) eco-innovation services.

19. Table 1 summarizes the evaluation ratings on a 6-point scale.

Table 1: Ratings Table (summary)

Criterion	Rating
A. Strategic Relevance	Highly Satisfactory
B. Achievement of Outputs	Highly Satisfactory
C. Effectiveness: Attainment of Project Objectives & Results	Satisfactory
1. Achievement of Direct Outcomes	(Highly) Satisfactory
2. Likelihood of Impact	Likely
3. Achievement of Project Goal and Planned Objectives	Satisfactory
D. Sustainability and Replication	Moderately Likely
1. Financial Sustainability	Moderately Likely
2. Socio-Political Sustainability	Highly Likely
3. Institutional Framework	Likely
4. Environmental Sustainability	Highly Likely
5. Catalytic Role and Replication Potential	Satisfactory

Criterion	Rating
E. Efficiency	Satisfactory
F. Factors Affecting Project Performance	Satisfactory
1. Preparation and Readiness	Moderately Satisfactory
2. Project Implementation and Management	Satisfactory
3. Stakeholder Participation and Public Awareness	Moderately Satisfactory
4. Country Ownership and Driven-ness	Highly Satisfactory
5. Financial Planning and Management	Moderately Satisfactory
6. UN Environment Supervision and Backstopping	Highly Satisfactory
7. Monitoring and Evaluation (M&E)	Satisfactory
a) M&E Design	Satisfactory
b) Budgeting and Funding for M&E activities	Satisfactory
c) M & E Plan Implementation	Satisfactory
Overall Project Rating	Satisfactory

Main Conclusions

20. UN Environment succeeded in developing and testing a distinctive approach that shows the promising positive contribution of fostering systems thinking, a value chain perspective, and business model innovation inspired by RECP improvements all within a single setting that extends 1-off technical assistance into a long-term relationship of working with clients (SMEs) to future-proof their business competitiveness and orient them towards sustainable industrial production. This is an important achievement within the broader context of sustainability in global business and the policy context with the emergence of Circular Economy.

21. In an already very crowded landscape of initiatives and toolkits at the avail of RECP service providers (the key envisaged vector for dissemination and cascading), eco-innovation can be positioned as a pertinent complement to existing tools, particularly in view of its ability to bridge existing competency gaps in economic analysis, business modelling, business strategy, and systems thinking. In this light, eco-innovation has the potential to energize and accelerate the pursuit of sustainable industrial production and provides a valuable reference for deepening the business sector's proactive engagement on environmental issues.

22. Convincing business intermediaries and SMEs to take up this novel approach, which demands high absorptive capacity and has potential risk, will become easier as there is more experience on the ground and as new business models have been put to the test through full implementation. While promising financial mechanisms, projects, and private sector consulting to continue implementing eco-innovation models have materialised in Malaysia and Vietnam, realisation of eco-innovation's full potential and the Project's long-term impact depends on adequate access to financial resources and technical support in the pilot countries and beyond. It is not obvious that these resources will be available in the short term to fully use the capacities built by the Project, although many international actors are working to design facilitating policies and instruments.

23. Those in the pilot settings attested that their attitudes had changed and new capacities have been built. Local implementing partners and Steering Committee members have signalled their intention to leverage the pilot experience. Near the Project's closure, entities in Argentina,

Brazil, Colombia, Panama, and France indicated their interest and advanced on their intentions to implement the approach. These are very promising signs indeed. The extent to which there will be a spontaneous expansion to other countries and widespread adoption by the bulk of RECP*net* members on the basis of this single pilot is yet to be seen. Long-term impact depends on motivating, fostering, steering, and supporting a continuing momentum to move theoretical benefits and potential into practical implementation in order to evaluate real results, build capacity, and generate the evidence, references, and structures that can underpin and assure replication and upscaling.

Main Lessons Learned

24. The Project could have benefitted from objectives and timelines that were more realistic and achievable in order to put less strain on the project partners and management. While this may sound like a truism, designing programs that can be delivered on time, scope, and budget will improve operational effectiveness and enhance reputation, providing a reliable basis to attract support.

25. Combining application and policy dimensions within a project setting can expedite progress in piloting a concept and accelerating its acceptance while at the same time, engaging local structures to capitalize on a project's results.

26. The formulation of outcomes at the project design stage in terms of a change of behaviour resulting from the use of an output is key to guiding projects towards the series of further behaviour changes that would be implied along a causal pathway, increasing the likelihood of impact.

27. Orienting selection criteria for local implementation settings towards aspects that build country ownership and driven-ness is an efficient route to sustaining project results.

28. In contexts where beneficiaries are expected to undertake financial outlays and/or organisational changes to demonstrate the viability of approaches being piloted, project activities should encompass ensuring adequate access to needed funding and other factors related to managing change, in order to move theoretical concepts to implementation and facilitate assessment of actual impacts, thereby increasing the robustness and usability of results.

29. Having a clear exit strategy as part of project design anchors sustainability from the outset.

Key Recommendations

<u>With respect to leveraging the experience and results of this Project in the short-term:</u>

30. Identify pertinent cases (new business models) with important replication potential developed under the Project, follow-up on their full implementation, and use the actual results to enhance the business case for eco-innovation.

31. Build on the pilot country experience to deepen understanding and drive concrete actions to support SME access to finance for eco-innovation.

32. Extend eco-innovation's application through strategic cooperation and leveraging RECP*net*.

33. Provided further resources would eventually be available beyond the Project's current scope, strengthen and communicate the online learning journey based on the Project website to entice intended users into actually using the eco-innovation approach as well as to deepen capacity through in-situ application, together with encouraging the use of this space for experience exchange.

With respect to future project design and implementation:

34. Formulate direct (and intermediate) outcomes in terms of the change of behaviour that is expected to result from the actual use of project outputs and identify corresponding indicators that can be used to keep on this track.

35. For pilot projects that are designed to provide proof of concept, assure that adequate access to needed resources (technical and financial) are available within the project period to ensure that theoretical ideas can be fully moved into implementation and assessed within the project period.

36. For projects that involve the private sector where target beneficiaries are required to implement change and/or invest in new approaches, align the period for demonstration to reflect the length of the business cycle for decision-making and implementation; typically, this will involve providing a longer period for national implementation within projects and/or lengthening the standard time of the overall project in order to deliver the desired, verified results.

I. Introduction

37. Leveraging the EC's Eco-Innovation Action Plan, UNEP's Green Economy Initiative and its Sustainable Consumption/Production (SCP) experience and networks, particularly the joint UNIDO-UNEP Resource Efficient and Cleaner Production programme and global network (RECP*net*), the (sub) project "Resource Efficiency and Eco-Innovation in Developing and Transition Countries" (henceforth, the Eco-Innovation Project) was launched in June 2012 with an overall purpose "to promote the transition towards sustainable industrial production systems in developing countries and transition economies through the promotion of eco-innovation based on resource efficient and cleaner production" (RECP eco-innovation). Embedded within a larger umbrella programme, "Advancing Resource Efficiency in Business Practices" (2014-2017), whose expected accomplishment (EA) to UN Environment's Programme of Work (PoW, 2014-2017) is "The transition towards sustainable industrial production systems in developing countries and transition economies is supported through the promotion of eco-innovation based on resource efficient, cleaner and safer production", the Project's contribution was to develop, pilot, validate, disseminate, and upscale related activities at national and regional levels.

38. Originally conceived as a 48-month endeavour, following two revisions (2014, 2016), the Eco-Innovation Project is planned to complete in September 2017. Its budget of USD 6,168,634 was funded through the European Commission's thematic programme for Environment and Sustainable Management of Natural Resources including Energy (ENRTP) with cash contributions of USD 3,661,963 from DG-ENV, USD 1,729,986 from DG-DEVCO, and UN Environment in-kind contribution of USD 776,685 over the Project's eventual 64-month duration.

39. In addressing its overall goal, the Project incorporated a dual approach of enhancing the capacities of business intermediaries (e.g. RECP service providers) to support industry in responding to growing demands for more sustainable products & services, while at the same time,

developing the motivation and capacity of policy makers and other key actors to create an effective enabling environment for RECP eco-innovation adoption. To this end, activities were implemented in partnership with RECP service providers (principally but not exclusively RECP*net* members) in 9 countries covering 3 geographies (Africa/Middle East: Egypt, Kenya, South Africa; Asia: Malaysia, Sri Lanka, Vietnam; Latin America: Colombia, Peru) seen to offer good potential for developing and testing the eco-innovation approach, proving the concept, garnering the needed support from political and business stakeholders, and generating materials and case studies that could be disseminated to catalyse replication and upscaling within these countries, and beyond.

40. The Project's activities, outputs, and outcomes fall within 4 components: I) **institutional strengthening & RECP*net* expansion** through enhancing RECP*net* and member capacities to provide technical support services on RECP eco-innovation especially to small- and medium-sized enterprises (SMEs), anchored around the development of a comprehensive, validated Eco-Innovation Manual with Supplements for Agri-Food, Chemicals, and Metals, i.e. resource-intensive sectors with significant adverse environmental/social impacts; II) **facilitating mainstreaming of SCP policies & eco-innovation** through the provision of guidance; III) **strengthening the business case for RECP eco-innovation in SMEs** through demonstration, documentation, and dissemination of results to encourage upscaling; and IV) **fostering global and regional networking** on RECP eco-innovation through supporting the RECP*net*.

41. This Report presents the results of the Terminal Evaluation (TE) undertaken during January–June 2017 by an independent consultant (see her biography in Annex 6) under the responsibility and management of UN Environment's Evaluation Office (EOU), in consultation with the relevant Project Manager and Resource Efficiency Subprogramme Coordinator, in accordance with the agency's 2016 Evaluation Policy[6] and 2013 Programme Manual[7] and in compliance with EC requirements as the Project's principal donor. This evaluation covered all activities since the Project's start, notionally from June 2012 extending to September 2017. The TE encompassed dual aims; to: (i) provide evidence of results to meet accountability requirements; and (ii) promote learning and knowledge sharing for UN Environment, European Commission, and relevant actors in countries that participated in the Project. In this respect, the TE focussed on identifying lessons of operational relevance for future project formulation and implementation. In this light, the TE incorporates insights gained through what has been interpreted by the Evaluator as an internal mid-term review carried out in November 2015 in conjunction with a global partners' meeting[8].

II. Evaluation Methods

42. Given the TE's dual aims, the evaluation focussed on assessing the Project's intended outcomes in a balanced manner across its 4 components (i.e. institutional strengthening, policy support, business case & tool development, dissemination & networking on RECP eco-innovation), using 6 categories of evaluation criteria (i.e. strategic relevance, achievement of outputs,

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

[7] www.unep.org/QAS/Documents/UNEP_Programme_Manual_May_2013.pdf

[8] This meeting brought together 31 knowledge partners, implementing partners, and government representatives from each implementing country to provide feedback on the eco-innovation methodology and its manual, tools, and supplements; gain first-hand inputs on policy aspects of eco-innovation; form networks & facilitate exchange amongst the implementing partners; and contribute to an International Forum on Eco-innovation (Source: Report of UNEP Eco-Innovation Project Global Meeting of Partners, 17-18 November 2015, Kuala Lumpur, Malaysia)

attainment of project objectives & planned results, sustainability & replication, efficiency, factors affecting project performance) as per the TE's Terms of Reference (see Annex 1).

43. These evaluation criteria were rated using a 6-point scale[9], with justifications elaborated through the findings in the Report's main body. These ratings are summarized in Table 1.

44. The evaluation approach commenced with an inception phase, conducted remotely by Skype with the EOU and Project Team, embodied in an Inception Report, which was developed to build common understanding amongst the parties; clarify key issues; set out the proposed approach and timeline for data-gathering, data analysis, and reporting-writing; document deliverables and key milestones; and gain timely feedback to refine the evaluation approach.

45. Initiatives were undertaken to assure a robust evaluation approach, documented within the Inception Report; namely: elaboration of an "Evaluation Matrix" following the above-mentioned 6 categories, together with envisaged sources of data to address the questions as well as indicators expected to give concrete evidence of achieved results/impacts; a reconstruction of the Project's Theory of Change; and an assessment of Project Design Quality.

46. A combined qualitative and quantitative approach was deployed for data-gathering with the aim of developing insights into fundamental strengths and shortfalls as a basis for crystallizing the findings and extracting relevant lessons for organizational learning and operational improvement. To deepen understanding and triangulate results, data was collected from a variety of perspectives using multiple means, as follows:

- Desk review: of all key project documentation supplied by UN Environment and implementing partners was undertaken, as well as consultation of the Project's website
- Face-to-face meetings: carried out with the Project Team (Paris), other UN Environment staff (Bangkok, Geneva, Nairobi, Paris, Geneva), donor representatives within the European Commission (Brussels), and other relevant actors where logistically possible (Paris, Geneva)
- Country visits: undertaken in 4 of the 9 countries (Kenya, Malaysia, Uganda, Vietnam) that partnered in demonstration activities, which allowed for direct field observations and meetings with local implementing partners, government representatives, and other relevant actors seen as having potential to leverage the Project's results. The countries for field visits were selected in consultation with the Project Team and donor representatives to maximize the possibility to observe the impact of the Project, taking account of geographical balance, the opportunity for logistical synergy, piloting of both policy and application components, inter-governmental decisions on the eco-innovation agenda, and potential to explore how eco-innovation is connected to other projects funded by the donor. Within each country, the local implementing partner assisted in identifying and arranging meetings with those organisations/individuals involved in piloting activities and other relevant stakeholders, who constituted the bulk of respondents for the purposes of this evaluation.
- Skype interviews: carried out with implementing partners in the remaining 5 pilot countries (Colombia, Egypt, Peru, Sri Lanka, South Africa) and other actors, including knowledge partners, capacity-building and innovation experts, and representatives from other UN agencies and organisations with catalytic potential.

[9] Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Sustainability is rated from Highly Likely (HL) to Highly Unlikely (HU)

- Electronic survey with ratings & explanatory justification: sent to 74 RECP*net* members, in coordination with the RECP*net* Secretariat, to build awareness of a key envisaged vector of intended beneficiaries about the Project's outputs/outcomes and obtain their input regarding the relevance of and interest in the approach for their country and their own services.

47. Several steps were undertaken to enhance stakeholder engagement and the quality of consultation: i) an introductory text was prepared and sent by the Project Team to respondents where judged appropriate; ii) respondents were informed about the TE's aims and guided in their input through a Briefing Note and interview protocol; 3) well-formulated, open-ended questions, follow-ups, and further probes were used to engage interviewees in a balanced reflection, generate new insights, and yield higher quality data (as opposed to yes/no questions or the adoption of an auditing approach) as the Evaluator deemed input to this evaluation required contextualisation, complex description, and explanation. In total, 104 respondents were personally interviewed; a further 10 individuals provided written feedback through the survey of the RECP*net* (see Annex 2). This consultation of a broad cross-section of implementing partners and relevant stakeholders was used to gather a range of perspectives and thereby triangulate the data and allow for evidence-based conclusions and recommendations.

48. Efforts were undertaken to assure the quality of data collection: i) the Evaluation Matrix organised along the required 6 categories for evaluation, together with an interview guideline (adapted according to respondent) was kept on hand as a reference, thereby maintaining focus on the purpose and scope of data collection; ii) direct observations were immediately jotted down and put in context by field notes; iii) data collected through interviews was simultaneously noted down and clarifications were sought at the time or shortly afterwards by email; iv) interview notes were subsequently reviewed and corrected; v) key interviews were digitally recorded and then used to fully transcribe responses; v) photographic evidence was gathered where deemed useful; vi) facts were checked with relevant actors and verified with additional sources, where possible.

49. Data analysis quality was assured using a software tool (QDA Miner), which provides a clear trace back to evidence underpinning the findings. This tool was used to systematically analyse, code, cross-reference, and comment data gathered through interviews and written input according to the given evaluation categories and sub-categories. The approach adopted allowed for the emergence of new, unanticipated categories and filtering by respondent cohort to detect further underlying patterns, orientations, similarities and differences.

50. To preserve the integrity of the evaluation process and enhance freedom of expression, all respondents were assured of the anonymity and confidentiality of their input. Permission was sought and secured for the use of photo documentation and audio recordings. To the largest extent possible, consultation was carried out on a 1:1 basis to collect perspectives and views that were free of influence or a desire to please the Project Team. Respondents were encouraged to provide input in their mother tongue when they felt uncomfortable with their sufficiency in English. In such cases, translation was provided by local implementing partners.

51. This TE encountered the standard limitations related to the available budget and time. From a practical point-of-view, this evaluation could not cover all implementing partners engaged in a whole suite of related activities and relevant stakeholders in all involved countries. The Evaluator visited only 4 pilot countries and within those geographies, consultation was typically limited to 1-2 locations, primarily where the implementing partners were based and thus accessible within the short period allowed for each country visit. In all, only 6 companies within 3

countries out of the pool of over 50 piloting companies spanning 9 countries were visited (see Picture 1). For these companies as well as other demonstration sites, their results were consulted via self-generated reports and case studies. While comparatively in-depth investigation could be carried out in the countries chosen for field visits, in the five remaining pilot countries, input was limited to 1-2 representatives within the implementing partners. While this was complemented by an outreach to the entire RECP*net*, the 13.5% response rate to the administered survey was disappointingly low. Nonetheless, this mechanism did provide one means for quantitative assessment through rankings. On balance, it is hoped that the countries and actors chosen for relatively more intensive consultation have provided a sufficiently representative view, thereby facilitating a balanced assessment of the Project's intended outcomes and impacts.

Picture 1: The team from the local implementing partner in Malaysia, Sirim Berhad, during the Evaluator's visit to pilot company Accel Graphic (March 2017)

52. Another limitation of the evaluation relates to the situation that the Eco-Innovation Project was launched in parallel with the UNIDO-UNEP joint RECP Program, within a landscape populated with many other initiatives to encourage and support resource efficiency improvements. These initiatives draw on the same pool of implementing partners (in so far as being members of the RECP*net*) who are simultaneously linked with many other donors and organisations. Consequently, respondents in the pilot countries did not always find it easy to distinguish amongst this complex array of initiatives and did not always feel confident in being able to attribute direct effects and impacts to a single project, programme, or activity.

53. As this TE was being undertaken before the Project's formal closure, not all reporting information for the nine months of operation in 2017 had been gathered and was consequently not available to the Evaluator for inclusion in the evaluation of Project performance. At the time of the preparation of the Zero Draft Evaluation Report, not all evidence was available regarding outcomes.

54. The TE's preliminary findings were shared with the EOU and Project Team in the form of a Zero Draft report to provide constructive comments. During this stage, important evidence from national implementation demonstrating proof of concept and behavioural change was made available to the Evaluator, who took account of this additional evidence and reflected this within the findings. For comments received from stakeholders that were not (fully) accepted, see Annex 1.

III. The Project

A. Context

55. 'Decoupling' current consumption and production patterns and 'leapfrogging' to sustainable industrial production through more efficient, environmentally-friendly, and safer use of natural resources has traditionally been triggered by regulation & risk assessment. While this regulatory-driven compliance mindset has brought about change, the pace has been incremental and slow. There has been growing recognition within the international community that public and private organizations need to be inspired and supported to act on the opportunity side of the equation to hasten and significantly deepen the move towards SCP.

56. An important backbone of the socio-economic fabric of developing & transition countries, SMEs contribute up to 75% of industrial activities, account for two thirds of national employment, and generate significantly adverse environmental effects due to inefficient operations and/or insufficient end-of-pipe pollution control, exacerbated by weak national legislation and/or enforcement. With increasing globalisation, the shift of activities to developing & transition economies has brought corresponding resource depletion and environmental degradation. Resource-intensive sectors with particularly adverse environmental and social impacts include agri-food production, building & construction, chemicals, manufacturing, and tourism.

57. While the foundation to transition towards Green Economy[10] is being built, in UNEP, there was a recognition that moving beyond incremental improvement and shifting production & consumption patterns to a new economic paradigm required more targeted interventions, like 'eco-innovation', which integrates sustainability into a firm's core decision-making processes and through all business dimensions, thereby nurturing different strategies, processes & practices and rendering novel solutions to address market needs. Moreover, where companies had looked beyond their own boundaries, into value chains and through cooperation with key partners, in 2012, at the time of the Project's launch, there was a growing conviction that in doing so, companies would be able to unlock the transformative potential to deal with current and future environmental challenges, while promoting sustainable economic activity. By the end of the Project, the issues that were apparent at its initiation were even more pressing, with the UN Secretary General calling even more strongly for a shift to a Green Economy in order to "create jobs, spur inclusive economic growth and make societies more resilient; these are all critical to sustainable development and a peaceful future"[11].

58. Against the background of the need to scale up RECP practice and close loops in industrial systems, in partnership with the EC, UNEP initiated the Eco-Innovation Project to develop local capacities for RECP eco-innovation amongst SMEs in developing and transition economies, through cooperation with business intermediaries and national governments to contribute to shaping enabling policy frameworks to mainstream SCP policies for eco-innovation. This Project

[10] UNEP's Green Economy Report (2011) demonstrated that greening the economy across a range of sectors can drive economic recovery and growth and lead to future prosperity and job creation, while at the same time address social inequalities and environmental challenges. This Report based its findings on macro-economic analysis and modelling approaches in agriculture, buildings, cities, fisheries, forests, manufacturing, renewable energy, transport, tourism, waste, and water.

[11] UN Environment Annual Report 2016 www.unep.org/annualreport/2016/index.php?page=0&lang=en

built on the agency's work in promoting sustainable resource management since the 1990s and its partnering with UNIDO in 1995 to support the RECP Programme & RECP*net*. In offering technical and policy support services to industry & governments in developing & transition economies, this network was seen as a key vector for testing new approaches, tools, and services; intermediating feedback from end beneficiaries; documenting results and lessons learned; and replication and upscaling.

B. Objectives and Components

59. Embedded within a larger 'umbrella' programme[12], which aims to build business' ability to apply resource efficiency, including cleaner production and environmental innovation, along supply chains and to measure and disclose performance through corporate sustainability reporting, the Eco-Innovation Project was designed to deliver intermediate results towards the overall objective "to promote the transition towards sustainable industrial production systems in developing and transition economies through the promotion of RECP-based eco-innovation". In this light, the Project's implementation of 4 components correspondingly yielded outcomes supporting the larger umbrella programme in which it was nested, as shown in Table 2.

Table 2: Expected Outcomes of Eco-Innovation Project's 4 Components and Their Contributions to Resource Efficiency Subprogramme "Advancing Resource Efficiency in Business Practices"

	Component 1 Institutional Strengthening and RECPnet expansion	**Component 2** Policy Mainstreaming and Planning	**Component 3** Making the Business Case and Pilot Demonstration	**Component 4** Global and Regional Networking
Expected Outcome	UNIDO-UNEP RECP service provider networks strengthened, expanded and enhanced in their capacity to provide technical support services on RECP eco-innovation.	RECP mainstreaming in existing environmental and industrial development policy and planning regimes promoted to facilitate the transition towards SCP, resource efficiency and green economy	Business case for resource efficiency and eco-innovation in SMEs developed and promoted, and demonstration projects on RECP eco-innovation application in industries with a focus on SMEs supported	Support to the global UNEP-UNIDO Network on RECP (RECP*net*) through global and regional network conferences and the secretariat supported
Contribution to larger umbrella Sub-programme, "Advancing Resource Efficiency in Business Practices" (as deduced from its 2014 approved	Contributes to Component 5: Strengthening Institutional Support by developing RECP service provider capacities & motivation to apply eco-innovation in SMEs Contributes to Components 2 + 3: Developing, Testing, and Building Capacity of New Tools and Methodologies through provision of Eco-	Contributes to Component 1: Science for Business through the publication of Moving Ahead with Technologies for Eco-Innovation, supporting RECP service providers to assist SMEs in adopting & developing technology for eco-innovation Contributes to	Contributes to Component 1: Science for Business by filling existing knowledge gaps & demonstrating economic & social benefits of eco-innovation at company level, particularly for SMEs, through the development of "The Business Case for Eco-Innovation"	Contributes to Component 5 Strengthening Institutional Support by facilitating regular exchange amongst RECP service providers within a key network for dissemination, replication, and upscaling

[12] The Eco-Innovation Project directly contributes to 5 components of Project PIMS # 01686 "Advancing Resource Efficiency in Business Practices" (i.e. apart from its 6th component: corporate sustainability reporting)

Project Document)	Innovation Manual and its 3 Value Chain Supplements (Agri-Food, Chemicals Metals), seen as key management tools offering step-by-step assistance to RECP service providers to support SMEs in applying eco-innovation	Components 2 + 3 through the publication of Mainstreaming SCP Policy for Eco-Innovation as a guideline for business intermediaries to support SCP policy integration	Contributes to Component 4: Upscaling Existing Tools & Methodologies through RECP eco-innovation demonstration projects, proof of concept, and documentation of relevant case studies	

C. Target Areas and Groups

60. The Project's end beneficiaries are, generally, national-level consumers and, particularly, citizens of the 9 pilot countries, who presumably gained access to more sustainable goods and services whose production and consumption embodies lower impacts on their resource base and overall environment. In this setting, the key 'change agents' expected to contribute to and benefit from the Project included: business/industries, technical institutions, industry associations, local communities, national governments[13]. 'Innovative entrepreneurs' were added through an updated analysis of those having a stake in activities, presumably with the intention to leverage dissemination channels like SwitchMed[14]. The Project targeted SMEs, RECP service providers (business intermediaries), and policy-makers linked to SCP portfolios as beneficiaries of its outputs & outcomes. As gender and poverty alleviation were identified as key criteria for intervention design, it was foreseen that women and indigenous communities would be considered in product and company selection and specifically targeted for engagement.

61. Further strategic stakeholders were identified at the outset and during implementation to assist with awareness-raising, benefit from catalytic effects, and function as dissemination vectors, including: other UN Environment initiatives (e.g. 10YFP, Sustainable Public Procurement & Ecolabelling, Green Economy/PAGE, International Resource Panel, UNEP/SETAC Life Cycle Initiative, REAL); initiatives and agencies facilitated by the 1 UN joint planning framework (e.g. UN Global Compact, UNDP, UNIDO); regional/national EC delegations, other EC-funded programmes (e.g. SWITCH Asia, SwitchMed, SWITCH Africa Green); global private sector associations & their national business networks (e.g. International Chamber of Commerce and its national bodies, World Business Council for Sustainable Development & its regional network), and others (e.g. OECD, SEBRAE-Brazilian Agency for SMEs; Pôle Eco-conception, a French NGO).

62. The Project focused on value chains in three resource-intensive sectors with significant adverse environmental and social impacts (Agri-Food, Chemicals, Metals), combined policy and

[13] EOU identifies stakeholders broadly as all those who are affected by, or who could affect (positively or negatively) the Project's results. UN Environment recognizes the nine major groups as defined in Agenda 21: Business & Industries, Children & Youth, Farmers, Indigenous People & their Communities, Local Authorities, NGOs, the Scientific & Technological Community, Women, and Workers & Trade Unions.

[14] EC-funded, implemented by UN Environment, its Mediterranean Action Plan, UNIDO, and the Regional Activity Centre for Sustainable Consumption & Production, designed to support & connect stakeholders to scale-up social and eco innovations in the Mediterranean. SwitchMed draws on RECP*net* members as implementing partners and includes a component that fosters incubation and Green Entrepreneurship; see www.switchmed.eu/en

technical dimensions, within 9 pilot countries spanning three regions (Africa, Asia, Latin America), as illustrated in Table 3.

Table 3: Value Chains and Countries Covered through Pilot Implementation

Region	*Country*	*Technical Dimension - Value Chain*	*Policy Dimension*
Latin America	Colombia	Chemicals	Policy
Africa	Egypt	Chemicals	
Asia	Malaysia	Chemicals	
Latin America	Peru	Metals	Policy
Africa	South Africa	Metals	
Asia	Vietnam	Agri-Food	Policy
Asia	Sri Lanka	Agri-Food	
Africa	Kenya		Policy

D. Milestones in Project Design and Implementation

63. The initial development of the Project proposal took place in 2010, led by UNEP's Economy Division's Business & Industry Unit (BIU) in conjunction with the EC, which subsequently became the Project's principal donor. As a long-standing natural partner for such topics, UNIDO's Environmental Management Branch staff provided input into project design, leveraging discussions in the same era with respect to designing a jointly-run UNIDO/UNEP programme, stemming from a 2008 Terminal Evaluation, in order to transition the focus of National Cleaner Production Centres (NCPCs)[15] towards supporting enterprises to go beyond CP to RECP. Supporting the bulk of outcomes of the larger umbrella programme in which the Eco-Innovation Project was nested, it was simultaneously designed to function as UNEP's contribution to the joint UNIDO/UNEP RECP Programme to inspire and support RECP*net* members in innovating, in economic analysis, and incorporating life cycle & systems thinking in their activities and services.

64. UNEP signed grant agreements each for 36 months with two European Commission directorates (DG ENV, DG DEVCO), which, due to their staggered programmed inflow resulted in a 48-month project duration. UNEP approved the Project in June 2012.

65. The Project subsequently underwent two revisions (2014, 2016), which extended its duration to 60 and then finally to 64 months, with a planned completion on 30 September 2017.

66. During its initial years, the Project focused on conceptualization and development of methodologies and tools to support eco-innovation and the uptake of RECP practices at technical and policy levels. Due to delays linked to UNEP's transition to its new resource management system[16] and the desire to initiate all national implementation at the same time, by early 2015, the Project moved into proof of concept through demonstration activities in 44 SMEs across the 9 pilot countries. The Project's final stage was dedicated to finalising the envisaged deliverables and

[15] In 1995, UNIDO and UNEP established their global Cleaner Production Programme with 8 National Cleaner Production Centres (NCPCs). By 2015, the RECP*net* consisted of 58 RECP centres (subsuming the NCPCs) operating in 56 countries, linked to the UNIDO/UNEP Resource Efficient and Cleaner Production (RECP) Programme for Developing and Transition Countries Programme. By 2017, the RECP*net* had grown to 74 members, including new applications stemming from the Eco-Innovation Project.

[16] Delays attributed to the transition from the IMIS system to UNOJA were experienced by the Project from April 2015 through December 2016

preparing/delivering a global dissemination event in conjunction with the RECP*net*'s bi-annual conference and development of an online learning platform to facilitate dissemination of the outputs. Key milestones in project design and implementation are elaborated in Table 4.

Table 4: Key Milestones and Dates in Project Design and Implementation

Milestone	*Date*
UN Environment approved the Project with 36 months of programming to be implemented over a 48-month duration, ending in May 2015	June 2012
Grant agreement with DG ENV for 2,725.000 euro (start date: 1 June 2012; ending 31 May 2016)	16 February 2012
Grant agreement with DG DEVCO for 1,275,000 euro (start date: 1 June 2013; ending 31 May 2017)	25 March 2013
Joint EC 15th Forum on Eco-Innovation /1st UNEP Roundtable on Eco-Innovation with 300+ delegates from government, companies, technical institutes strengthened Project engagement and catalysed technical resources	12-13 November 2013
UNEP approved umbrella project, Advancing Resource Efficiency in Business Practices (January 2014–December 2017)	28 February 2014
1st revision of Eco-Innovation Project as a sub-project of Advancing Resource Efficiency in Business Practices, at no cost, extended to a 60-month duration ending in May 2017	September 2014
National-level implementation pilot and demonstration activities launched in 9 countries: Colombia, Egypt, Kenya, Malaysia, Peru, South Africa, Sri Lanka, Uganda, Vietnam	1st quarter 2015
Global Partners Meeting convened in conjunction with the International Forum on Eco-Innovation, which functioned as the mid-term evaluation (Kuala Lumpur, Malaysia)	17-18 November 2015
Side-event on *Technology Innovation for a Green Economy in Developing Countries*, as part of the OECD Green Growth and Sustainable Development Forum (Paris, France)	14-15 December 2015
2nd revision, at no cost, extended to a 64-month duration ending 30 September 2017	March 2016
Side event on *Building Partnerships for Advancing Circular Economy & Eco-Innovation Approaches* in conjunction with 5th Global RECP Conference: presentation of case studies & panel discussion facilitated South-South exchange; this functioned as Project's general closure event (Helsinki, Finland)	3-5 June 2017
Publication of all outputs and deliverables on UN Environment website	30 September 2017

E. Changes in Design during Implementation

67. 2013: Although a mid-term evaluation was to take place during the 3rd Global Network Conference on RECP (October 2013), due to delays in project implementation, this assessment was conducted internally through a Global Partners Meeting (17-18 November 2015 in Malaysia).

68. 2014: The Project's Policy Mainstreaming & Planning (Component 2) shifted from making the "economic" case to making the "policy" case for eco-innovation in order to consolidate efforts aimed at informing/guiding policy-makers towards facilitating RECP eco-innovation adoption in existing national-level SCP strategies & instruments Outputs were deepened from the level of reviewing policies to making recommendations based on policy review in 6 pilot countries linked to building roadmaps for mainstreaming eco-innovation, foreseen from the Project's outset. The overt linkage with sustainable public procurement and eco-industrial estates was backgrounded in favour of a focus on "Engaging with Technology for Eco-Innovation", with the development of a second policy guidance piece. Entry points and strategies for RECP service providers to be more actively engaged in the process were explicitly woven into these changes.

69. 2016: The step-by-step guideline on how to integrate eco-innovation at company level (contained within the Eco-Innovation Manual and its 3 Value Chain Supplements) available in traditional printed and electronic format was to be further adapted into an "online learning experience tool" to extend and prolong the use of the generated outputs. The target for new entities joining the RECP*net* was increased significantly.

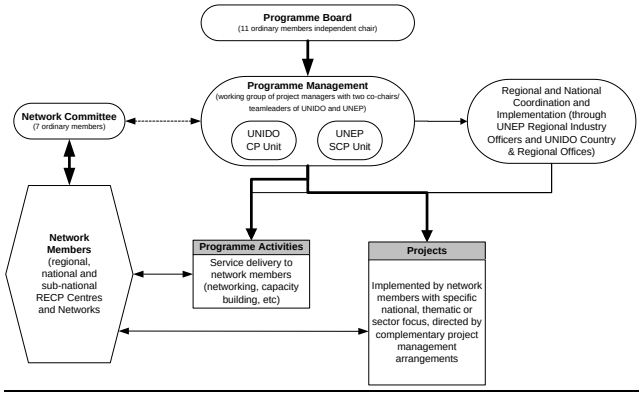
F. Implementation Arrangements

70. Overall project management and administration responsibilities were lodged with UNEP's BIU, which also played a key role in coordinating the provision of the required substantive and technical input for the conceptualisation and development of methodology and tools. This Project Team constituted within this Unit worked closely with UNEP Regional Offices in Latin America and the Caribbean, Africa, and Asia and the Pacific, which played a role in supporting regional mapping exercises (vis-à-vis RECP*net* enhancement), training and validation workshops, and provided technical back-up for activities carried out at national- and regional-level.

71. RECP*net* members were identified as an effective implementation arm for UNEP and UNIDO to reach SMEs, seen as having the "right" mandate and baseline expertise to contribute to the commitments captured in the 2030 Sustainable Development Agenda, especially in terms of the environmental dimension of sustainable development. Local implementing partners drawn principally, but not exclusively, from the RECP*net* were selected through an open call for proposals through a competitive selection process in consultation with regional offices of UN Environment and the EC. They were expected to provide technical assistance on eco-innovation to SMEs and review national and local government eco-innovation policies in the context of demonstration activities. Furthermore, they had a role to provide monitoring data and feedback on Project outputs (tools, guidance), develop/adapt training material, document/share lessons learned, and develop case studies. Their activities were specified and supported financially by the Project, with further efforts (expected to be) contributed on an in-kind basis commensurate to their role as partners.

72. The coordination with principal external partners (i.e. UNIDO and the RECP*net*) was conducted through the joint UNIDO-UNEP Programme management team and the RECP*net* Executive Committee using this Programme's governance structure as illustrated in Figure 1.

Figure 1: External Coordination Structure Linked with UNIDO-UNEP Programme



G. Project Partners

73. The Project featured collaborative work with national stakeholders in the pilot countries (local implementing partners, governments, and other institutional stakeholders), with other UN entities and with other projects from the same UN Environment Subprogramme/MEA Secretariat funded under DG ENV and DG DEVCO ENRTP Strategic Cooperation Agreements/DG ENV GPGC Programme Cooperation Agreement, as shown in Table 5.

Table 5: Local Implementing Partners and UN Environment Sub-Programme Inter-Linkages

Local Partners engaged in implementing technical and/or policy dimensions of the Project	*Other UN Environment Sub'rogramme Projects leveraging synergies with the Eco-Innovation Project*
AIT-VN Vietnam (Asian Institute of Technology)	10YFP on SCP – through its working groups of the Consumer Information and Sustainable Public Procurement programmes
CCS Vietnam (Centre for Creativity and Sustainability Study and Consultancy	Switch Asia, SwitchMed, Switch Africa Green
CER/Grupo GEA in Peru	Sustainable Public Procurement and Eco-labelling (SPPEL)
CNPMLTA Colombia (Centro Nacional de Producción Más Limpia y Tecnologías Ambientales)	Resource Efficiency Achieved through Life cycle thinking (REAL)
NCPC Sri Lanka (National Cleaner Production Centre)	Green Economy (PAGE)
NCPC Egypt (National Cleaner Production Centre)	International Resource Panel (IRP)
KNCPC Kenya (National Cleaner Production Centre)	
SIRM Berhad in Malaysia	
UCPC Uganda (Uganda Cleaner Production Centre)	
NCPC South Africa (National Cleaner Production Centre)	

H. Project Financing

74. The original total budget for the project of USD 6,052,083 increased to USD 6,168,634 as documented in the first revision (2014) and maintained through to the Project's completion. This 1.93% increase is presumably due to exchange rate fluctuation. The European Commission's financial contribution (covering total direct costs and 7% programme support cost) accounted for 87.4%; UNEP contributed 12.6% on an in-kind basis.

75. The project budget summary, sources of funding, and project expenditures (as of 31 December 2016) and review of funding agreements are provided in Section F. v. and Annex 4.

IV. Theory of Change

76. The Theory of Change (ToC) underlying the Project's design is embedded within its Project Document and can be briefly conveyed as follows: in order to promote the transition towards sustainable industrial production systems in developing and transition economies, companies need to incorporate sustainability into all dimensions of their operations based on life cycle thinking and in cooperation with partners across the value chain, which will be most fruitfully achieved in a setting where framework conditions favour the adoption of such RECP-based eco-innovation. To support this outcome, business intermediaries and policy-makers need to identify and leverage entry points to pursue this change, be equipped with suitable tools and methodologies, and be trained and accompanied (through consultancy and coaching) in their use. Through documentation of the results, a learning process will be catalysed, together with proof of

concept and the generation of materials to inspire replication. Disseminated through key channels and partnerships, the Project's results can be expected to yield a strong catalytic effect and provide an initial foundation for mainstreaming and upscaling eco-innovation culture and practice.

77. Extensive primary field data collection to verify impacts demands significant resources, beyond the scope of most development projects. Although this TE was conducted near project closure, its full impacts can be expected to be more observable in future, as human and organizational behaviour changes need time to anchor into routine and habit and for the Project's environmental & social impacts to become more evident. Therefore, the Evaluator developed a reconstructed Theory of Change (R-TOC) and undertook a Review of Outcomes to Impacts (ROtI)[17], an accepted approach to assess the likelihood of the desired impacts.

78. The R-TOC (see Figure 2) was developed as follows: Firstly, the Project's intended **long-term impacts** were formulated as: i) More policy makers in target countries promote eco-innovation approaches in their legislation; ii) More businesses (particularly SMEs) in target countries design and offer new products & services that respect RECP principles. Described as outputs in the Project Document, the **direct outcomes** (which imply a change in behaviour) are: I) Strengthened and expanded capacity of UNIDO-UNEP RECP service provider networks to provide technical support services on RECP eco-innovation; II) Existing environmental and industrial development policy and planning regimes recognize and promote RECP eco-innovation; III) Business case for resource efficiency and eco-innovation in SMEs has been developed, validated, and promoted; IV) Global & regional networking and peer learning have been facilitated. The Project's contribution to the RE Subprogramme in which it is nested were seen as **intermediate outcomes**: A) Validated, effective, practical tools for eco-innovation are more readily available and used; B) The strategic technical capacity that has been built catalyses and expands RECP eco-innovation in key resource-intensive sectors; C) More policy-makers are equipped and exhibit openness to include eco-innovation in policy; D) The (SME) business sector responds more effectively to environmental challenges; E) The (SME) business sector implements eco-innovation as a relevant response to environmental challenges; F) RECP eco-innovation has been upscaled; G) RECP*net* takes a leadership role in stimulating the business sector in its response to environmental challenges; H) RECP*net* members are spontaneously sharing experiences and knowledge in the area of eco-innovation, and beyond.

79. Secondly, the logical framework was reviewed to assess the extent to which the Project's design was consistent with and appropriate for delivering the direct outcomes and eventual intended impacts. This step involved verifying the causal logic between the different hierarchical levels, moving backwards from impacts through outcomes to the Project's outputs, which led to the **identification of 'impact pathways'** that link the Project's direct outcomes to the intermediate outcomes through to the intended (long-term) impacts. Two impact pathways were identified and respectively indicated through **green** and **pink** arrows.

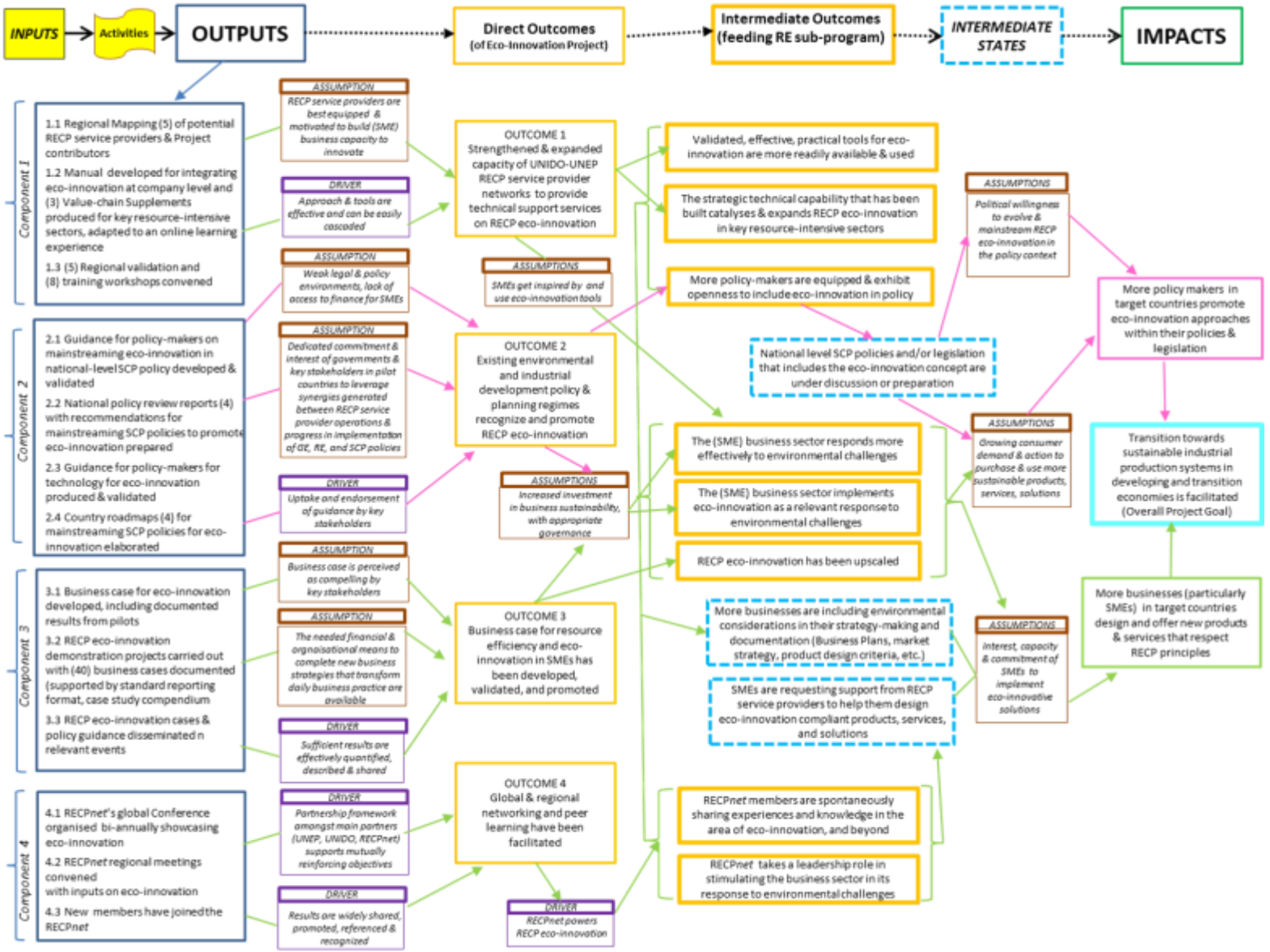
Impact pathway 1 (stimulating and supporting the business sector in effectively responding to environmental challenges) focused on the development and effective communication of a convincing case for eco-innovation at company- and value-chain levels, together with building the

[17] Developed by GEF Evaluation Office; refer to Review of Outcomes to Impacts Practitioners Handbook (2009). https://www.thegef.org/gef/sites/thegef.org/files/documents/M2_ROtI%20Handbook.pdf ; cited in UNEP's Dec 2015 Introduction to Theory of Change / Impact Pathways, the ROtI Method and the ROtI Results Score Sheet

capabilities to support the business sector in utilizing eco-innovation as a key response to environmental challenges being faced.

Impact pathway 2 (making the policy context more conducive to RECP eco-innovation adoption) focused on identifying connections with and entry points for eco-innovation within existing national frameworks and instruments, generating recommendations for country roadmaps for mainstreaming SCP policies for eco-innovation, and producing guidance to support business intermediary advisory services to SMEs with respect to developing, transferring, and localizing environmental technologies.

Figure 2: Reconstructed Theory of Change (R-TOC)



80. Thirdly, in analysing & modelling these impact pathways, considering the Risk Analysis and Critical Success Factors mentioned in the Project Document, the Evaluator identified several 'drivers' and 'assumptions'. External factors (**key drivers**) under the influence of the Project, its implementing partners & relevant stakeholders seen as able to transmit vital catalytic power through the impact pathways and thereby contribute to realising its intended impacts include:

- Approach and tools are effective and can be easily cascaded
- Uptake and endorsement of guidance by key stakeholders
- Sufficient results are effectively quantified, described, and shared
- Partnership framework amongst main partners (UNEP, UNIDO, RECPnet) supports mutually reinforcing objectives
- Results are widely shared, promoted, referenced, and recognized
- RECP*net* powers RECP eco-innovation

External factors (**key assumptions**) largely beyond the control of the Project, its implementing partners & relevant stakeholders, but if present (thereby adding leverage) or minimized (in case of hindering) could influence the realization of the intended impacts. These include:

- RECP service providers are the best equipped and motivated to build (SME) business capacity to innovate
- Weak legal & policy environments, lack of access to finance for SMEs
- Dedicated commitment & interest of governments & key stakeholders in pilot countries to leverage synergies generated between RECP service provider operations & progress in implementation of GE, RE, and SCP policies
- Business case is perceived as compelling by key stakeholders
- The needed financial & organisational means to complete the new business strategies that transform daily business practice are available
- Growing consumer demand & action to purchase & use more sustainable products, services, solutions
- SMEs get inspired by and use eco-innovation tools
- Increased investment into business sustainability, with appropriate governance
- Interest, capacity, and commitment of SMEs to implement eco-innovative solutions
- Political willingness to evolve and mainstream RECP eco-innovation in the policy context

These drivers and assumptions underpin the transformation of outputs to outcomes to impacts via '**intermediate states**'. These have been considered when assessing the likelihood of the Project's impact, sustainability, and replication potential[18]. The transitional conditions between the Project's direct outcomes and its intended long-term impact were identified as follows:

- National-level SCP policies and/or legislation that include the eco-innovation concept are under discussion or preparation
- More businesses are including environmental considerations in their strategy-making and documentation (Business Plans, market strategic, product design criteria, etc.)
- SMEs are requesting support from RECP service providers to help them design eco-innovation compliant products/services

81. The Evaluator received feedback on the draft R-TOC from the Project Team and EOU in the inception phase. During field missions, the draft R-TOC was shared with respondents who

[18] Introduction to Theory of Change / Impact Pathways, the ROtI Method and the ROtI Results Score Sheet (UNEP, last updated December 2015; to be revised)

regarded it with interest. No input was offered. The final R-TOC in Figure 2 was enhanced throughout the main evaluation phase, in view of information and insights that came to light.

V. Evaluation Findings

A. Strategic Relevance

R1: The Project's purpose and objectives were fully consistent with global, regional, and national environmental needs and perceived as highly relevant by key stakeholder groups (SMEs, business intermediaries, national governments in developing and transition economies, donors).

R2: Its design &implementation were fully aligned with UN Environment's PoW, policies & strategies; its outcomes supported EAs across several subprogrammes that operationalized the MTS 2014-2017; in strengthening the agency's leadership role by tackling a novel topic, setting a high ambition level, providing South-South exchange opportunities, and assuring country driven-ness in pilot countries, it was consistent with the Bali Strategic Plan; HR & GE were addressed through favouring engagement with local implementing partners that demonstrated gender balance and focussing eco-innovation on sectors & firms with opportunities to improve worker safety, enhance rural livelihoods, influence the value chain, and work with local government to boost the eco-system for production.

R3: The Project showed the promising positive contribution of RECP-based eco-innovation to the pursuit of sustainable industrial production and its potential to inspire business model innovation.

82. Arguably the key environmental concern that unites stakeholders across global, regional, and national levels relates to the quadrupling of global population during 1900-2000 together with climate change events and rapid industrialisation & urbanisation, which combined into a perfect storm of negative environmental processes perceived to threaten the Earth's capacity to provide for 7 billion people and sustain life[19]. Fostering the transition towards sustainable industrial production is seen as key to countering the trend evident over the past decade wherein gains in reducing environmental degradation though eco-efficiency have been overtaken by an overall increase in production[20]. Launched against this background, the Eco-Innovation Project is **fully consistent with global environmental needs** to close industrial loops and scale up RECP practice, within a life cycle and value chain perspective, as advocated by SCP, which has increasingly supplanted the preventative approach of Cleaner Production (CP) for increasing the efficiency of natural resource use and minimizing waste. Field interviews, combined with the RECP*net* survey feedback, indicated that the Project's activities & outputs are highly aligned with their respective country's national issues and needs.

83. Embedded in the RE Subprogramme, one of 6 strategic foci of UN Environment's **MTS 2014-2017**, the Project **implemented the PoW (2012-13, 2014-15, 2016-17)** with outcomes to promote changes in policy and business management practice to reduce the impact of economic growth on resource depletion & environmental degradation, Featured as a case study in UN Environment's 2016 Annual Report, the Project was **fully aligned with UN Environment's mandate** to serve as the leading global authority in articulating, facilitating, and supporting the

[19] Paraphrased from "The Environment", R. Pacheco-Vega, E-International Relations, 19 January 2017 www.e-ir.info/2017/01/19/the-environment/

[20] Global Outlook on Sustainable Consumption and Production Policies: Taking Action Together (UNEP, 2012)

response to environmental challenges. the Project had an ambition to push companies and governments to "*get ahead of the curve*"[21].

84. The Project's **outcomes directly relate to EAs across several subprogrammes that operationalize the MTS 2014-2017**: fundamentally within the RE Subprogramme, the Project contributed to EA2 Sectors and Supply by developing & fostering the uptake of the eco-innovation approach as a Green Economy and SCP instrument and management practice that can be incorporated into national and sectoral policies and within business and financial operations. By developing, testing, and sharing eco-innovation tools for the Chemical, Metal, and Agri-Food sectors, the Project has contributed to EA1 Enabling Environment. This prioritisation of sectors for application and policy support maps directly to buttressing the agency on emerging issues identified within the MTS 2014-2017 (Ensuring Food Safety & Security; Need to Minimize the Risks of Chemicals & Wastes) that have global environmental impact recognized by the scientific community as vital to human well-being but having not yet received adequate attention from the policy community. In view of its initiative to develop policy guidance and proof of concept for applying eco-innovation in the Chemical Sector, the Project contributed to all 3 EAs of the Chemicals and Waste Subprogramme. In so far that the Project's demonstration activities were aimed at supporting the governments in pilot countries to review and prepare aspects to contribute towards enabling frameworks to foster the adoption of RECP eco-innovation, in preparation for mainstreaming environmental sustainability into national development policies and plans, the Project is seen to contribute to the Environmental Governance Subprogramme's EA3: Mainstreaming Environmental Sustainability.

85. The Project presents tangible ways to put SDGs 9[22], 12[23], and 17[24] into practice and it was **fully aligned with the Bali Strategic Plan**[25]. It incorporated both technical and policy

[21] Cited in UNEP's 2011 International Resource Panel Decoupling Report & as part of the justification for Advancing Resource Efficiency in Business Practices, referring to GEO-5 for Business: Impacts of a Changing Environment on the Corporate Sector www.unep.org/geo/sites/unep.org.geo/files/documents/geo5_for_business.pdf ;https://sustainabledevelopment.un.org/index.php?page=view&type=400&nr=151&menu=1515

[22] **Goal 9** - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. The Eco-Innovation Project contributes to: Target 9.3 - Increase the access of small-scale industrial and other enterprises, particularly in developing countries, to financial services including affordable credit and their integration into value chains and markets; Target 9.4 - By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities; Target 9.a - Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States

[23] **Goal 12** - Ensure sustainable consumption and production patterns. The Eco-Innovation Project contributes to: Target 12.1 - Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries; Target 12.2 - By 2030, achieve the sustainable management and efficient use of natural resources; Target 12.4 - By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment; Target 12.5 - By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse; Target 12.6 - Encourage companies, especially large and transnational

dimensions, designed to be mutually supportive, and demonstrated UN Environment's leadership in strengthening government capacities in developing and transition economies to achieve environmentally sustainable outcomes. Local implementing structures (Steering Committees organised by the local implementing partners, guided by UN Environment) were fundamental in developing country driven-ness and functioned to provide local oversight and input. While it may not have been fully clear within the pilot countries at the outset of activities that eco-innovation was a needed response to national priorities and needs, by the end of the intervention, significant appreciation was expressed regarding its potential and value.

86. A preponderance of stakeholders interviewed indicated that the **Project's ambition level was quite high**. In view of the leadership role for UN Environment directed by the Bali Strategic Plan, embedded in the MTS 2014-2017, such an ambition level is quite appropriate. From an operational perspective, this high ambition reflects the notion that the UN "*should be seen as doing something important*" and it was furthermore tapped as a means to inspire contribution from engaged stakeholders as "*people get a lot of energy from an ambitious vision*".

87. In terms of the Project's relevance to key stakeholder groups:

SMEs: those who benefitted from the technical assistance offered through the local implementing partners and international consultants engaged by the Project tended to assess the intervention as highly relevant as they developed new insights through a hot spots analysis incorporating life cycle and value chain perspectives summed up with a vision statement that conveyed the essence of a new business model complemented by strategic goals. In a general operating context where SMEs do not instinctively tap outside sources of professional advice, such assistance was variously described as "*something that helped us to progress in the direction of going green*" (Malaysia); "*this project brought my thinking to another level, to think about all the products that could be made from all the raw material*" (Vietnam); "*it stimulated the creativity of people" (Kenya); and "with this program, we changed our own mindset*" (Uganda). The cases generated from the demonstration sites confirm the relevance of the eco-innovation approach for other SMEs in developing and transition country contexts, particularly in the chosen application sectors (Agri-Food, Chemicals, Metals), providing a basis for replication.

Business Intermediaries: this intervention was perceived by UN Environment and UNIDO as highly relevant for RECP service providers as it was designed to enable them to enhance their traditional remit of providing technical advice by expanding their perspective to a firm's entire business system within the broader value chain (eco-system) and to develop expertise in market research, business model innovation, approaching consumers, etc. and/or partner with

companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle; Target 12.a - Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production

[24] **Goal 17** - Strengthen the means of implementation and revitalize the global partnership for sustainable development. The Eco-Innovation Project contributes to Target 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

[25] Adopted in February 2005, the Bali Strategic Plan mandated UNEP to deliver capacity-building and technology support, become more responsive to country needs, and be better at communicating its key messages. From internal document: "Strategy to Action: A Strategic for UNEP to Implement the Bali Strategic Plan", 25 August 2006

others, to extend their service offering. The Project was further perceived as addressing a critical competency gap as the eco-innovation approach would inherently lead RECP service providers to deepen skills in economic analysis, fundamental to promoting RECP to the private sector. While some of the local implementing partners were initially reticent about the strategic relevance and practical use of the Project's activities and outputs, based on field observations, the RECP*net* survey response, and indirect feedback gleaned from the 2017 Global RECP Conference, their perception (particularly those involved in implementation) evolved in a positive direction, to the extent that eco-innovation was portrayed as "*the right topic for right now*".

National Governments in Developing & Transition Economies: pointing to the fact that SMEs, a backbone of most of these economies, badly need to improve their performance and gain a competitive edge, this intervention was viewed as highly relevant and useful, variously described as: a "win-win concept"; strengthening ongoing restructuring activities (e.g. in Agri-Food, rural development); providing a link with other sectors (e.g. Tourism); developing knowledge on a new topic area; furnishing needed policy support (re: national research agenda, SCP policies); providing a platform for offering compliance assistance to industry; and offering a "3rd way" to work with SMEs that complements command & control and voluntary approaches.

Donors: the Project was portrayed as "*fitting in pretty well*" with other programs related to Green Economy, Resource Efficiency, Sustainable Consumption and Production and was deemed relevant in so far as the Project contained scope for replication using its outcomes. SMEs supported through other EC-funded initiatives (specifically PAGE and regional SWITCH programs for Asia, Africa, and the Mediterranean) were expected to be able to use the outputs generated by the Project. Moreover, the Project's approach was perceived to be of value for promoting circular economy in business & industry in developing countries, thereby supporting the EC's implementation of its 2015 Circular Economy Action Plan.

88. Due to its close link to the RECP*net* for implementing demonstration activities and eventual dissemination of results and replication, this architecture provided **ample opportunities for South-South exchange** through regional trainings on the eco-innovation concept, use of the Manual, Supplements, and associated templates; presentations/discussions during RECP*net* regional meetings/annual conferences[26], and other meetings of relevant stakeholders[27]. During implementation, the Project Team facilitated South-South learning in that advances made in one pilot country were shared with the others. Spurred by a discussion that took place during field interviews, the Evaluator is aware of one instance where an implementing partner in one region directly approached an implementing partner in another region to tap their experience regarding new business models and the case studies that were developed. During the 5th Annual RECP Conference (June 2017, Helsinki), Eco-Innovation concept & materials were prominently featured to inform the network and encourage exchange.

[26] Convened in Helsinki, Finland (3-5 June 2017), the eco-innovation approach was featured during the Regional Chapter Meetings through *Exploring Opportunities for Projects and Regional Partnerships* and through a panel discussion on *Advancing Circular Economy and Eco-innovation in Developing and Transition Economies*

[27] To name a few: International Forum on Eco-Innovation (19-20 November 2015, Kuala Lumpur) which brought together 130 participants from Malaysia and ASEAN and the Eco-Innovation's local implementing partners from the 9 pilot countries; the 12th Asia Pacific Roundtable on SCP (12-14 July 2016, Cambodia); Life Cycle Management Conference (17-18 October 2016, New Delhi) where the Project's Vietnamese implementation partners presented their eco-innovation work; ASEAN+3 Leadership Program (25-28 October, Hanoi) organised by SWITCH ASIA PSC project where the Vietnamese implementing partners were on hand to provide inputs and discuss eco-innovation

89. **Economic, political organisational risks were analysed** at the outset, together **with mitigation strategies and safeguards, which were monitored** by the Project Team. Key opportunities identified in the Project Document as contributing to successful implementation were realised[28]. There was no mention of mechanisms to reduce the negative environmental footprint of the intervention itself. In some instances, the application of eco-innovation was used to reduce and replace labour with technology, thereby eliminating jobs that involved working with hazardous chemicals and led to the creation of new "green" jobs linked to new business models. The Project undertook specific efforts to highlight a life cycle approach to assessing the social, environmental, and economic impacts in developing new business models.

90. The UN has a mandate to address human rights & gender equality (HR & GE) in all interventions to promote social justice and equality[29]. During the Project's design phase, an outreach was made to the UN Office for Operations and Corporate Services' Gender and Social Safeguards Unit[30] to solicit input on **gender & social aspects**. The 2014 PRC review of the larger umbrella subprogramme in which the Project is nested buttressed these aspects through its comments. In assessing this aspect from a *result-wise* perspective, the Project's design addressed this dimension by: i) mentioning that its key target (SMEs) have a major bearing on gender equality & poverty alleviation; ii) foregrounding the idea that women and indigenous communities should be specifically considered. In assessing this aspect from a *process-wise perspective*, the Evaluator examined how and to what extent HR & GE were mainstreamed in the intervention's programming. An easily-achievable quantitative target was set that at least 1 company per pilot country should be selected on the basis of demonstrated contributions to addressing gender equity and/or poverty alleviation.

91. It was reported that the Project Team explicitly favoured working with local implementing partners that demonstrated gender balance in their teams. Compared to other UN Environment initiatives of the same era, the Eco-Innovation Project was described as having a really high participation of women "*in the staff of implementing partners, as the management consultants and teachers of eco-innovation, thereby not only having eco-innovation brought to them but also through them, disseminating it in their own communities*".

92. The Project Team collected sex-disaggregated data which was included in its final reporting to the EC (2016), as shown in Table 6.

[28] Pressure caused by the financial crisis combined with increasing scarcity of resources did indeed open an opportunity for the promotion and acceptance of RECP by industries. The parallel implementation of the UNIDO-UNEP RECP Programme did provide a useful framework for engaging with UNDP and other agencies, which, in turn, provided a useful support for country-level activities. The decision to establish the RECP*net* was instrumental in securing valuable technical inputs and this facilitated both South-South and North-South cooperation.

[29] Guidance Document: Integrating Human Rights and Gender Equality in Evaluations, United Nations Evaluation Group, August 2014, pg 19

[30] The "Policy and Strategy for Gender Equality and the Environment 2014-2017" (UNEP, February 2015) is an adjunct of the Medium-Term Strategy 2014-2017, prepared within the framework of two Rio+10 outcome documents that guide the agency's work: namely: "The Future We Want" and the "United Nations System-Wide Action Plan on Gender Equality and Empowerment of Women"

Table 6: Monitoring Data Concerning Gender Ratio in Engaged Service Providers and SMEs

Pilot country	% women employed within engaged local service providers	% women employed in SMEs engaged as demonstration sites
Vietnam	77	69
Malaysia	45	37
Sri Lanka	75	39
Peru	66	11
Colombia	53	64
South Africa	40	18
Egypt	29	10
Uganda	50	35
Kenya	30	Kenya only handled the policy component and as such did not engage SMEs in applying eco-innovation

93. According to its initial design, the main tool[31] used to support a systematic analysis of a firm's business model did not incorporate HR & GE aspects. This lack was subsequently addressed by integrating consideration of these aspects through the Eco-Innovation Manual linked to corporate social responsibility, demonstrating leadership through adopting the three pillars of sustainability implicit in life cycle analysis, leveraging new business processes/structures that ensure gender-balance to increase productivity/technical capacity & embracing international labour standards. These notions appeared to a much lesser extent in the policy guidance documents that were produced, and not at all in "The Business Case for Eco-Innovation".

94. The Minutes of the Global Partners' Meeting (November 2015), which functioned as an internal mid-term review, showed that gender considerations were discussed. It was observed that women were generally underrepresented in the 3 Value Chains under focus, together with a recognition that they have valuable skills that have not been fully leveraged. Based on the albeit limited set of field interviews conducted, HR & GE aspects was not perceived as a strategic aim of the Project. These aspects were not mentioned in the Calls for Proposals used to attract local implementing partners, nor in the SSFAs used to contract these actors, nor in the template used to document case studies for proof of concept. The failure to foreground an orientation that the UN has committed to pursue could reflect a perception that this Project was not designed as a gender intervention. A review of the indicators formulated in the Project's logical framework suggests that there was a predominantly technical and quantitative focus, which missed the opportunity to look more deeply at how the results impact from equality and rights perspectives.

95. Nevertheless, the Evaluator is aware of one case where a local partner explicitly used "geographic criteria" to include a pilot company from a disadvantaged group. If the boundary for what is comprised within HR & GE includes ensuring worker safety through reduced use & safe disposal of hazardous chemicals, investing in suppliers upstream in the value chain (e.g. farmers) to improve their health & incomes, enhancing rural livelihoods through new business model arrangements, and being inspired to work with local governments to boost a new eco-system for production, then this Project could be seen as powerfully fulfilling HR & GE aspects.

Strategic Relevance is rated as 'Highly Satisfactory'

[31] The Business Model Canvas (A. Osterwalder and Y. Pigneur, 2010) is a highly appreciated existing framework for capturing the essential elements of a business model on one sheet of paper in a way that is logical and easy to discuss with others, which makes this a very useful basis for spurring and documenting business model innovation

B. Achievement of Outputs

AO1: The programmed outputs were achieved or even over-achieved in quantity, using external experts under firm steering from the Project Team, enriched by input flowing from policy and application activities and validated through a process of consultation with key stakeholders.

AO2: The time for their development and validation exceeded the initially planned milestones due to the limited availability of needed expertise in the domain, underestimation of the time needed to identify and select local implementing partners and knowledge partners and then to engage the intended beneficiaries (SMEs, RECP service providers) in the approach.

AO3: As can be expected in a pilot project that is developing & testing a complex novel topic (and indeed is desired in order to develop insights into the diversity of approaches for uptake), local implementing partners demonstrated different understanding and application of the eco-innovation approach and tools, and achieved different levels of results.

AO4: The Eco-Innovation Manual, Supplements, and associated templates constitute valuable step-by-step guidance and resource material. The extent to which these will be utilized independent of training, consultancy, and/or coaching support to engage RECP service providers and SMEs in implementing the eco-innovation concept is yet to be verified.

96. The Project was implemented through 4 components, each constituted by a set of outputs[32] as shown in Table 7, with milestones and budget laid down in a delivery plan.

Table 7: Assessment of Achievement of Outputs across the Project's Four Components

Component 1: Institutional Strengthening and RECP*net* expansion		
Expected Outcome	UNIDO-UNEP RECP service provider networks strengthened, expanded and enhanced in their capacity to provide technical support services on RECP eco-innovation	
Programmed Outputs	Status at Project Closure	Assessment & Remarks
New RECP service providers engaged in the Project Target: 6 (set in 2012, revised to 8 in 2016)	**Over Achieved** 10 RECP service providers were actually engaged as local implementing partners (of which 7 of these were new to the RECP*net*)	In addition to tapping the expertise of the Regional Offices, the findings of 5 regional mapping undertaken in 2014 usefully fed into the identification and engagement of national & regional experts and institutions, diversifying the partner and resource pool that could be drawn on in developing key project outputs, in recognition that this was a new topic requiring different competences and new perspectives. The fact that 1/3 (i.e. 3 out of 10) of the local implementing actors represented totally new partnerships for UN Environment is seen an appropriate achievement. Taking on more new partnerships may have stretched the Team's support and supervisory capacities too thinly, judging from what was needed in the delivery stages. At Project launch in June 2012, the RECP*net* had 47 members. By September 2017 closure, this number had grown to 65 members covering 60 countries. The Project itself can claim to have generated leads resulting in 2 new member applications on the part of the above-mentioned partners (in Vietnam), which eventually performed at a very high level in both of the Project's policy and application activities, offering mutual support and collaborating seamlessly (as gauged from field interviews and direct observations), whose content- and process-leadership was subsequently shared to support and inspire other local implementing partners.
A step-by-step Manual for integrating	**Achieved** 1 manual in English and 2 other UN	In the planning phase, there was an idea to build on existing toolkits and guidance developed by UNEP and other relevant organisations, which resulted in a first attempt to formulate this into practical guidance for RECP service providers. This 1st version of the Manual (2014) was judged under-par, related to challenges in conceptualisation.

[32] These are drawn from the approved 2014/2016 Project Documents (revisions), which maintained the Expected Outcome from the original 2012 Project Document and, with respect to Component 2, broadened beyond eco-industrial parks to SCP policy support

eco-innovation at company-level, adapted to an online learning experience Target: 1 Manual: English and 2 other UN languages	languages (French and Portuguese), 1 manual template toolkit in English **Unplanned & Achieved** Set of templates to complement the Manual **Added through 2nd revision and Achieved:** Website with adapted online learning experience; due for completion by September 2017	This can be explained by the lack of clarity about the eco-innovation concept, the need to determine its boundaries, and efforts to distinguish this from what others were doing in an increasingly crowded international cooperation landscape. Field interviews for this evaluation uncovered efforts were underway in the same period on the part of a several organisations[33], of which the Project Team seemed to have little awareness and did not sufficiently tap. An alternative knowledge partner was subsequently engaged, i.e. DTU which is a UN Environment Collaborating Centre, whose contributions were highly appreciated by all parties. Under the direction and supervision of the Project Team, the Manual was significantly upgraded, expanded into a step-by-step guide, and finalized only in March 2017. In this process, it was subjected to major consultation, benefitting from feedback from the engaged experts as well as local implementing partners in preparation for national demonstration activities. This breadth of contribution can normally be expected to enhance feelings of ownership and by inference, use. During field interviews conducted by the Evaluator, this was typically the first opportunity that respondents had to actually see and touch the finished product, which required an extended period to produce the requested "look and feel". The Evaluator gathered mixed reviews concerning the Manual. There was great appreciation for its professional design and the comprehensiveness of its contents. While lauding the desire to translate a high-level strategic concept into a concrete operational approach with a step-by-step implementation procedure, the eventual result has, for the most part, been perceived as "heavy" (literally) and was deemed to demand a high level of motivation to utilize. It was reported that the Project Team was quite directive regarding the level of detail; contrary expert proposals were overridden, driven by the view that the Manual's intended users (RECP service providers and other business intermediaries), who lack expertise in business strategy development and innovation management, would need this level of detail. During the course of the Project, numerous templates were developed to provide additional support to the local implementing partners; these have been assembled into an additional output unforeseen in the initial planning. The demonstration activities showed various levels of engagement on the part of the involved RECP service providers in applying the Manual, ranging from closely following the prescribed steps, to picking and choosing what was seen to be useful and relevant, to not at all perceiving the value of the Manual for several months into implementation and only finally opening it through strong encouragement from external experts, then requiring extensive hand-holding and major backstopping by the Project Team and engaged experts to keep the local partner on track. If the latter behaviour were to hold true for the bulk of intended beneficiaries, this would significantly curtail the prospects for applying the eco-innovation approach, if the assumption is that application will be driven at the initiative of the RECP service provider and/or proactive SMEs, without the advantage of extensive technical backstopping and significant support from subject matter experts. In the Project's final stage, an external expert was commissioned to adapt the Eco-Innovation Manual & other relevant outputs into an online learning environment. A website (http://unep.ecoinnovation.org/) was developed; it contains an introductory video, showcases 10 business cases drawn from the Project as proof of concept, offers search capabilities by type of company, region, and value chain. and functions

[33] EC's Eco-Innovation Observatory (EIO) and the Centre for Sustainable Design (CfSD) with their 2015" Eco-Innovate! A Guide to Eco-Innovation for SMEs and Business Coaches"; OECD's "Sustainable Manufacturing Toolkit: Seven Steps to Environmental Excellence" providing easy-to-read start-up guidance complemented by a web portal including technical advice on performance management and guidance links www.oecd.org/innovation/green/toolkit , Swiss and German government funded activities to promote and implement eco-innovation (technologies, processes, services) in eco-innovation parks; World Business Council for Sustainable Development (WBCSD) which promoted innovation as a key element to achieving its Vision 2050, amongst others

		as a repository of the Project's tools and resource materials. This effort can be seen as fulfilling the idea of an online experience in so far that materials can be accessed in a virtual manner and worked through online as well as be downloaded for local use. Some respondents expressed concern regarding their ability to profit from an online site, given the current state of Internet coverage, download speed, and national IT infrastructure, particularly if downloads are beyond a relatively small size. In principle, such a format and channel can facilitate wider dissemination of the eco-innovation approach and its supporting materials given the possibility to easily share and download material, via the RECP*net* and hopefully beyond. Addressing the concern expressed by some respondents that the current state of Internet coverage, download speed, and infrastructure in certain locations may limit the opportunity to fully profit from these resources, the Eco-Innovation Manual itself, which has the largest volume of the tools produced by the Project, is around 7 megabytes in downloadable form. In locations where the download speed is a constraint, the individual chapters of the Manual, with reduced volume, can be downloaded separately or worked through in an online manner.
Value-chain Supplements (related to Eco-Innovation Manual) Target: 3 key resource-intensive sectors	**Achieved** 3 supplements for Agri-Food, Chemicals, Metals in English and 2 other UN languages (French and Portuguese)	An extensive dissemination and selection process was used to choose the organisations that eventually had the lead to develop sector-specific supplements and provide technical expertise in demonstration activities: a Swedish research institute for Agri-Food and a German consultancy for the Metals and Chemicals sectors. Their efforts were initiated in April 2014, which seems to be sufficient in terms of the rhythm of the prerequisite preceding development of the Eco-Innovation Manual to which the Supplements are intimately linked. It can be confirmed that these Supplements underwent a rigorous consultation and feedback process (including inclusion in the validation workshops mentioned below). However, as these Supplements need to be used directly with the much larger Manual, this has resulted in a relatively complex process during application.
Regional validation and training workshops Target: 5 regional workshops and 6 training programs	**Over Achieved** 7 regional validation workshops held in 5 regions 8 value-chain specific training programs were conducted	Regional validation workshops were convened in 5 regions (Africa, Latin America & Caribbean, Asia Pacific, West Asa, Europe), which strengthened knowledge on resource efficiency, validated the operational approach to eco-innovation and stimulated interest in Calls for Proposals for national implementation partners. Through 8 value-chain training programs, both public and private sector actors gained capability to undertake a value chain assessment and develop eco-innovation models. The fact that 3 (of the 5 regional validation workshops) were organised as training events on the eco-innovation methodology incorporates a notion of efficiency and expediency but such an approach risks that stakeholder feedback is less easy to accept and incorporate if participants are already simultaneously being trained on what the approach entails. It is understood that, at the time, the way in which the Project was developing the notion of eco-innovation as a strategic business approach was relatively new in the developing country context and that there were few experts and little reference material on which to draw. This context was perhaps seen as justification for the Project to be more directive in this respect.
Experts trained on RECP eco-innovation Target: 120	**Over Achieved** 550 experts were trained	It is a credit to the Project that a significantly higher number of experts were trained than originally planned. This was achieved through the programmed activities and through further un-envisaged training programs undertaken in additional countries (Chile, Brazil, Argentina) at the cost of other donors & partners. While the number of people exposed to eco-innovation was much higher than planned, based on perspectives gained through field interviews, the training provided was insufficient to anchor the concept and consequently, considerable "hand-holding" from the Project Team was required, together with ample support from the sector experts engaged for application of the Value Chain Supplements.

Component 2: Policy Mainstreaming and Planning		
Expected Outcome	RECP mainstreaming in existing environmental and industrial development policy and planning regimes promoted to facilitate the transition towards sustainable consumption and production, resource efficiency and green economy	
Programmed	Status at Project	Assessment & Remarks

Outputs	Closure	
Validated guidance for policy-makers on mainstreaming eco-innovation within national-level SCP policy (English and 2 UN languages) Target: 1 stakeholder validation event; 1 guideline in English; 3 executive summaries in English and 2 UN languages	**Achieved** 3 validation events held; 1 policy guideline in English, translation into French and Spanish published in September 2017	*Mainstreaming Eco-Innovation in SCP Policies* was developed with the active participation of beneficiaries, which is to be applauded, based on a strategy to develop their own evidence base to demonstrate the practical aspects of eco-innovation from business, policy, and technology angles from the demonstration projects. In this light, its development progressed more slowly than programmed. It was available in a draft working version during the Project's national implementation phase. Changes in UN Environment's graphic charter reportedly led to delays in design, which then delayed the publication of this output. It was envisaged that this guideline would be published on the UN Environment website by June 2017. As of the date of this evaluation, this publication was not available in its final form. This guidance features cases studies from 4 of the 9 pilot countries where the Project's Policy Component was implemented (i.e. Colombia/Peru, Kenya, Vietnam). While the selection of these countries spanned 3 major regions covered by the Project (Latin America, Africa, and Asia, respectively), it would be unrealistic to imagine that these case studies sufficiently and fully cover the scope of options in all national contexts. Nevertheless, this should be seen as a valuable exploration of the ways in which RECP eco-innovation can be fostered and mainstreamed within national SCP policy. On the basis of information that became available in the Project's final phase, concrete steps were triggered in the involved countries (e.g. in Peru: an Eco-Innovation Committee with government entities, incubators and academics and a national eco-innovation website (www.eco-innovacionperu.com) were created; in Colombia: creation of 2016-2019 Policy Roadmap for Action with 8 strategies & 35 activities, an Eco-innovation Technical Support Group, new national database with 50 strategic eco-innovation actors, resources mobilized for eco-innovation in 10 municipalities in the Área Metropolitana del Valle de Aburrá)
National policy review reports with recommendations for mainstreaming SCP policies to promote eco-innovation Target: 6 reports	**Achieved** 2 national-level reports; 4 country-specific policy "briefs"	Initially, 2 policy review reports were published in 2015 through cooperation with SWITCH Asia and SWITCH Med. Then the level of analysis seems to have evolved; based on evidence gathered through field interviews, the interpretation of the mandated work led a local team to develop a further 4 country-specific policy "briefs" (not yet finalized at the time of this evaluation). Based on what the Evaluator deduced, these country-specific reports are all drawn from one country (Kenya) and arose out of the interest of national stakeholders to explore prospects for mainstreaming eco-innovation into Water Quality Regulations, Waste Management Regulations, and Science, Technology and Innovation strategy. The outputs underway are judged as very valuable. The Evaluator detected strong appreciation on the part of those involved for the opportunity to engage in such an endeavour, indicating that these policy briefs are vital references that will be used in the country to trigger discussion and potentially legislative change in the medium term. In this light, such a process is very attractive for replication in Kenya & beyond. The Project Team reported that partners in 4 countries contributed to the "Roadmap for Action" to implement recommendations of the policy review studies. In this respect, the reported activities ranged from developing detailed implementation plans for policies along the Agri-Food value chain at provincial level in Vietnam to mapping existing funding opportunities for greening SMEs in one hub in Colombia.
Validated guidance for technology for eco-innovation Target: 1	**Achieved** 1 guideline to be published in September 2017	*Moving Ahead with Technologies for Eco-Innovation* was intended to be a resource for RECP service providers and other business intermediaries for advising and enabling SMEs in developing, transferring, and localizing environmental technologies, consistent with the Addis Ababa Action Agenda[34]. While it appeared to have been largely developed by external experts based on academic & practitioner literature, in consultation with the Project Team, a working

[34] United Nations. 2015. Addis Ababa Action Agenda from the Third International Conference on Financing for Development, endorsed by the General Assembly in its resolution 69/313 of 27 July 20. Article 122 speaks of the role of initiatives, such as RECP*net* and NCPCs, in promoting the development and diffusion of relevant science, technologies and capacity development.

guideline in English, 3 executive summaries in English and 2 UN languages		version of this guideline was tested by the teams in Malaysia, Egypt, South Africa, Colombia and Peru and an expert review workshop was held by UNEP and UNIDO in 2014. This guideline was still under finalization at the time of the TE. Although few respondents interviewed for this evaluation during the field visits seemed to be aware of its existence and purpose, this represents a very small subsection of the intended users; thus, extrapolation concerning its utility and use is limited.
Policy roadmaps to integrate eco-innovation Target: 6 country-specific roadmaps	**Achieved** 6 integrated roadmaps were produced and approved by the respective government actors	The Policy Component aimed to ensure that eco-innovation was integrated into existing policy roadmaps to ensure their coherence to support eco-innovation in SMEs and avoid multiplying the number of policy instruments. Upon hearing that the Project had an aim to develop integrated policy roadmaps, some respondents expressed scepticism about the extent to which such a Project could stimulate the development of country-specific roadmaps, given the extent of engagement that this would require on the part of national governments. There was a concern that such a roadmap would be a UN Environment-driven product with "*zero or very little buy-in*". In spite of this scepticism, the roadmaps for action that were developed within the scope of the Project were described by the Project Team as a model for other countries and met the expectations of the implementing partners. The Evaluator did not have sufficient visibility regarding the process to develop these roadmaps nor the resulting documents to make a further assessment.

Component 3: Making the Business Case and Pilot Demonstration		
Expected Outcome	Business case for resource efficiency and eco-innovation in SMEs developed and promoted, and demonstration projects on RECP eco-innovation application in industries with a focus on SMEs supported.	
Programmed Outputs	Status at Project Closure	Assessment & Remarks
Publication highlighting the business case for eco-innovation, including case studies from targeted value chains Target: 2 publications; 1 in English, 2 additional UN languages	**Achieved** 1 publication; 1 in English, 4 additional UN languages (Arabic, French, Portuguese, Spanish)	*The Business Case for Eco-Innovation* was first published in English in 2014 and subsequent versions have been made available in Arabic, French and Spanish in 2017 in collaboration with the SwitchMed program, thereby extending its distribution to the Middle East/North Africa region. A Portuguese version was also prepared in the final phase of the intervention. In terms of content, this publication very helpfully focusses on the drivers underlying the business case for eco-innovation and explains its added value, backed up by case studies from around the world, half of which could be characterized as SMEs; only one of these was based in an emerging market. For this publication to be a convincing instrument for policy-makers and SMEs in developing & emerging markets, a much stronger proportion of representative cases would be needed and can hopefully be drawn from the compendium in preparation from the Project's demonstration activities. In terms of format, the Evaluator took note of the criticism mentioned by some stakeholders that the "look & feel" of this publication is not coherent and therefore not easily identified with the Project's other publications (i.e. the Eco-Innovation Manual & its Supplements), which creates unnecessary hurdles for dissemination as a package. The Evaluator observed that its publication predated the development of other technical outputs and was seemingly inspired by format and argumentation of UNEP's 2012 publication of *The Business Case for the Green Economy* and fits coherently into this (alternative) set of communication materials. With respect to the 2nd publication that was programmed (i.e. compendium of business case studies on RECP eco innovation in English, with summaries in 2 other UN languages), it is understood that 44 case studies were documented during the project period. Rather than publishing these within a traditional printed publication, it is judged to be entirely suitable that these cases are being transformed into "web stories" to be available via the online platform before Project closure.
RECP eco-innovation demonstration	**Over Achieved** 10 RECP Service	The Project Team is to be applauded for revising upwards its initial targets (in 2012: 6 countries, 30 eco-innovation case studies) and finally going beyond the enhanced target by engaging 10 local implementing partners and 56 companies in 9 countries.

projects with business cases (results) documented in a standard format Target: 8 countries with 5 companies each, 40 new business cases documented (following 2nd revision)	Providers within 9 countries engaged 56 companies which yielded 44 eco innovation case studies	Due to the short timeframe for national implementation (18 months), the local implementing partners, understandably, often chose companies with whom they already had relationships in order to reduce the time needed to build trust for introducing such a novel approach with potential risk in relation to changing the business model. While this approach was practical for generating the desired results from the pilot, it opens a question about the extent to which companies that are completely unfamiliar with RECP can be engaged in the eco-innovation approach and derive results in such a short timeframe. Finally, under this pilot, 44 companies implemented the eco-innovation approach and reached varying levels of results, which have been documented using a standard reporting format designed and provided by the Project Team. During interviews carried out in Spring 2017 with local implementing partners and a small sub-section of the pilot companies, while demonstrating the theoretical value of the eco-innovation concept, many of the new business models had not yet been implemented for various reasons: i) the project period allowed for identification of potential measures but was typically not sufficient to facilitate full implementation as, in any change process, this requires time to get senior management "buy-in", adapt internal procedures, acquire new equipment, redeploy and train new staff and so on; ii) insufficient existing capital reserves to facilitate investment in new technology, when the business models were driven towards a new technology development; iii) inadequate terms and/or insufficient access to credit for green innovation. In cases where eco-innovation thinking led to organisational changes and improvement in the relationship with a supplier or other actor in the value chain, progress was observed within a shorter timeframe. Notably, within 6 months of interviews carried out by the Evaluator, by the time of Project closure in Autumn 2017, there was tangibly more progress in implementing the business models and in advancing on the country roadmaps approved by the implementing partners (see Annex).
Dissemination of RECP eco-innovation case studies and policy guidance in relevant events Target: 3 events held, 1 in each value chain	**Over Achieved** 16 events covering the 3 targeted value chains were convened as well as numerous opportunistic settings were seized to showcase the Project's activities and results	The Project Team is to be applauded for convening a significantly higher number of dissemination activities than initially envisaged. Presumably this was achieved due to the efficient use of partnerships, piggy-backing of events, and combining training and dissemination activities. Regional training was carried out in: Lima (2013), Hanoi (2013), Amman (April 2014), Prague (May 2014), Nairobi)2014), Panama (August 2014), Beijing (November 2014), as well as training in the 8 countries with technical components. Furthermore, opportunities were seized through synergistic linkages with other programs and activities, which was particularly evident from 2015 onwards. In addition, UNEP joined several international discussions during which the methodological approach and the Project's results were presented (e.g. annual Conference of the International Solid Waste Management Association in September 2015; GIZ-hosted workshop on international value chains in October 2015; UK government organised workshop in the context of the G7 Alliance for Resource Efficiency in November 2015; OECD Green Growth & Sustainable Development Forum in December 2015; the Project was presented at the Sustainable Brands event in Buenos Aires in 2016 and through an official side event of the World Circular Economy Forum in June 2017, jointly organised by UN Environment and UNIDO in conjunction with the 5th RECP Global Conference in Helsinki, Finland. Six final dissemination events were convened in South Africa, Sri Lanka, Malaysia, Colombia, Peru, and Vietnam in 2017. It can be expected that the extensive effort invested in dissemination activities will spark interest and future action to apply the eco-innovation approach. This conclusion is based on the fact that in the Project's final stage, at the request of outside actors, 3 training events were undertaken in Brazil, Argentina, and Colombia, further creating demand for collaboration on eco-innovation (for example request from Universidad de Buenos Aires, en la Facultad de Arquitectura, Diseño y Urbanism, for a curriculum to use the eco-innovation tools and methodology).

Component 4: Global and Regional Networking		
Expected Outcome	Support to the global UNEP-UNIDO Network on RECP (RECP*net*) through global and regional network conferences and the secretariat supported.	
Programmed Outputs	Status at Project Closure	Assessment & Remarks
Organisation of global conferences of RECP*net* Target: 3 events; 50 participants in 2013; 65 participants in 2015; 143 participants in 2017	**Achieved** 3 bi-annual conferences were convened; 2 of these had significantly more participants than anticipated, the 3rd undershot its target presumably due to factors outside the control of the Project	As part of UNEP's support to the joint UNEP-UNIDO RECP Programme, which was launched in parallel, support from the Eco-Innovation Project was channelled towards the RECP Secretariat and RECP*net*'s 3rd, 4th, and 5th global conferences: ➢ Montreux (4-5 September 2013): "Putting Decoupling into Action: Moving to Scale": 150+ participants from 60 countries participated ➢ Davos (12-16 October 2015): "Delivering RECP towards the Sustainable Development Goals 2030"; 200 participants from 60+ countries attended ➢ Helsinki (3-5 June 2017): "Building Partnerships for Advancing Circular Economy and Eco-Innovation Approaches": 60 participants in total, including 48 RECP*net* members from 38 countries This support from UNEP, in its role as a patron agency, is seen as highly relevant and appropriate given the anticipated replication and upscaling potential of this channel for the Project's outcomes and outputs. In this light, the 3rd RECPnet Conference introduced the concept of Eco-Innovation for SMEs, with sessions on Agri-Food and Chemicals. The 4th RECP*net* Conference, which coincided with the 20-year anniversary of the NCPC program (now RECP), saw the adoption of the Davos Declaration on the Promotion of RECP in Developing and Transition Countries, which linked the promotion, mainstreaming and scaling up of RECP to supporting the 2030 Agenda for Sustainable Development and advocated a stronger role for the RECP*net* to join with other partners in government, business, financial institutions, academia, and civil society to pursue a rapid and universal uptake of RECP. Furthermore, the 5th RECP*net* Conference functioned as a "closing event" for the Project and was a key channel to build awareness of, appreciation for, and interest in the eco-innovation concept. Feedback gathered by the Evaluator suggested that the members involved as implementing partners were the most in tune to the concept although interest in the topic did appear to be high as it has been promoted as having the potential to enable RECP service providers to extend their services and build their capabilities for innovation. As to whether these actors will take up this concept and apply the tools has yet to be seen.
Organisation of regional RECP*net* meetings Target: 3 events held, 1 per region	**Achieved**	The Project's outputs and outcomes were highlighted and promoted through the anticipated regional RECP*net* gatherings.
Acquisition of new members to the RECP*net* Target: 10 new members (raised during the 2nd revision from an initial target of 3)	**Over-Achieved** 18 new members joined, 2 of which can be directly attributed to this Project	The RECP*net* grew from 47 to 65 members during the Project period. Two of these new applications can be directly attributed to the Project (Centre for Creativity and Sustainability Study and Consultancy and the Asian Institute of Technology in Vietnam). As mentioned above, the Project did succeed in engaging 3 new entities as local implementing partners. The fact that 2 of these submitted applications for membership in the RECP*net* is seen as a very positive step. It is not clear whether the 3rd, as a government actor, faces its own organisational constraints with respect to membership and fees for such a network. The target for acquisition of new members was raised during the revision process. The formulation of the target does not specify that this growth was to be solely generated by the Eco-Innovation Project. Given that the RECP*net* and RECP programme are jointly-supported by UNIDO and UNEP, presumably other initiatives supported the acquisition strategy. The RECP*net*'s growth over the years is related to the installation of a governance structure consisting of the Members' Assembly, the Executive Committee, and the Secretariat and the establishment of Regional Chapters. Together with sustained

		support from its patron agencies, UN Environment and UNIDO, this increasing professionalisation and the privileged position of this network have stimulated growing interest to join the RECP*net* on the part of business intermediaries, observers (who are granted membership for an initial 2-year period before membership fees are liable), and consultancy companies (who can join as Associate Members, which are typically in developed countries, hoping to leverage network membership to land RECP-related contracts or mandates available from the patron agencies).

Achievements of the Project's Outputs is rated as 'Highly Satisfactory'

C. Effectiveness: Attainment of Project Objectives and Results

i. Achievement of Direct Outcomes as defined in the Reconstructed Theory of Change (R-TOC)

E1: The Project's 4 direct outcomes can be respectively seen as "an important first step towards", "provided relevant building blocks towards", "a valuable start towards", "a practical contribution towards" the Intermediate States; these characterizations are consistent with a pilot project setting

E2: The Project did succeed in developing policy roadmaps for mainstreaming eco-innovation within the pilot countries (approved by the implementing partners) and new business models (approved by the implementing partners) which are in the process of being operationalized, providing importance evidence that is illustrative of the behavioural change triggered by the eco-innovation approach

97. The achievement of the Project's overall goal; namely: "to promote the transition towards sustainable industrial production systems in developing countries and transition economies through the promotion of eco-innovation based on resource efficient and cleaner production" has been evaluated based on the 4 direct outcomes articulated within the R-TOC.

98. **Direct Outcome 1**: Strengthened and expanded capacity of UNIDO-UNEP RECP service provider networks to provide technical support services on RECP eco-innovation.

There was a strategic decision to contribute to the RECP Programme and leverage the RECP*net* to test the eco-innovation approach, which offered the advantage of building on existing relationships & institutions; this constitutes a strength on the Efficiency criterion. However, a key assumption underlying this first direct outcome (*RECP service providers are best equipped & motivated to build (SME) business capacity to innovate*) met with mixed reactions on the part respondents. On the one hand, there was an argument that those actors (technicians, engineers, accountants, etc.) who regularly visit SMEs have ample opportunity to "*fertilize the environment of the entrepreneur*" and "*be a channel of information to raise awareness that there is an opportunity*". In this respect, the privileged position of RECP*net* members (through their institutional patronage from UN Environment and UNIDO) could arguably expedite their access to SMEs, a key intended generator of the Project's desired long-term impact. While respondents raised questions about the "absorptive capacity" of such business intermediaries for such a novel and complex topic, their typical lack of a business perspective (i.e. understanding of markets, business models, where the company is situated in the value chain, how a firm produces value in this context), and mentioned an over-estimation of the abilities of the local implementing teams to identify eco-innovation potential, without significant (ongoing) support from external subject matter experts, within the eco-innovation pilot, these actors succeeded in strengthening and expanding their capacities to support SMEs through the provision of relevant support services.

Regarding a key driver of this intended direct outcome (*approach & tools are effective and can be easily cascaded*), concerns were raised about the Project's definition of "eco-innovation"[35] not being consistent with mainstream use of the term as it aims to get a company to change its vision and strategic direction. According to some respondents, changing corporate vision and mission is highly risky, "*not something a company would do without a clear advantage*", pointing to the need for "*a professional way of rolling it out*" as "*mistakes could have drastic consequences*" and in any case, "*they don't have the cashflow for it, don't want to risk losing clients. The only ones that engaged were the ones who saw a potential benefit in it. And they asked for money to pay for the change. Mostly, they were interested in short-term immediate changes*". Counter-balancing this view, the eco-innovation approach promoted by the Project did succeed in generating viable solutions for the pilot companies and despite some perceived risks, the Project Team reported that most companies' CEOs agreed to the proposed changes. It was also observed that business models inspired by eco-innovation which implied organizational changes or an improvement in the relationship with a supplier or another actor in the value chain were perceived as easier and less risky to implement than those requiring financial investment.

A minority of respondents expressed skepticism about the prospect of integrating sustainability into a firm's business model without first having an overall strategy oriented towards sustainability, inferring that the Project's approach is therefore more naturally the domain of start-ups, as opposed to existing enterprise. Responding to these concerns, the Project team contended that revising business strategy to adapt to changing markets and the environment is common practice in the business sector. The Project's intended approach was to put the focus on business strategy and ensure that "retrofitted" strategy was supported by top management, as a foundation for then cascading into a new business model and roadmap for implementation.

Against this background, mappings were undertaken with the support of the agency's Regional Offices, which did succeed in broadening the pool of RECP service providers and knowledge experts that could be stimulated to respond to the Project's two Calls for Proposals. In being selected (according to geographic, competency, gender balance aspects) and engaged in piloting the eco-innovation concept, the capacities of 10 RECP Service Providers in 9 countries to provide technical support services on RECP eco-innovation were directly strengthened through i) training by the Project Team and engaged experts; ii) their in-situ experience in identifying & engaging SMEs and assessing their eco-innovation potential using the provided

[35] First mentioned in academic literature by C. Fussler & P. James (1996) as "the process of developing new products, processes or services which provide customer and business value but significantly decrease environmental impact" in *Driving Eco-Innovation: A Breakthrough Discipline for Innovation and Sustainability*, Pitman Publishing: London. A literature review undertaken by C*. Díaz-García, A. González-Moreno, and F.J. Sáez-Martínez*, (2015). "Eco-innovation: insights from a literature review". *Innovation: Management, Policy & Practice*. 17 (1): 6–23, found a predominant definition of the term linked to "effect" {for example: "Innovation that improves environmental performance" (Carillo-Hermosilla et al, 2010) and "The introduction of any new or significantly improved product (good or service), process, organisational change or marketing solution that reduces the use of natural resources (including materials, energy, water and land) and decreases the release of harmful substances across the whole life-cycle (Eco-innovation Observatory, 2013)} as opposed to a minority of definitions linked to "motivation" {for example: "A process where sustainability considerations are integrated into company systems from idea generation through to R&D and commercialization" (Charter and Clark, 2007). The latter reflects the Eco-Innovation Project's conceptualization.

methodology and tools; iii) applying the step-by-step methodology contained within the Eco-Innovation Manual and its three Supplements within the targeted enterprises; iv) accompanying and coaching these SMEs on the development of new business models; and v) documenting the results in the form of case studies, using a standard format developed and provided by the Project Team. Their capacities with respect to RECP eco-innovation were further consolidated through providing feedback (through validation workshops) on the Eco-Innovation Manual and its three Supplements, as well as the two Policy Guidelines that were produced by the Project.

Outcome 1 is consequently deemed to be an important first step towards two Intermediate Outcomes of i) "Validated, effective, practical tools for eco-innovation are more readily available and used"; and ii) "The strategic technical capability that has been built catalyses and expands RECP eco-innovation in key resource-intensive sectors", The local implementing partners engaged in the pilot reported that they did strengthen and expand their capacities to provide technical support services on RECP eco-innovation by applying the Eco-Innovation Manual's models and processes, reinforced by interactions with the external experts . In using these new capabilities to consult and accompany the engaged pilot companies, arguably this constitutes a change in behaviour representing a direct outcome that can be attributed to the Project. The capacities that have been built and used during the Project can be expected to support the Intermediate States: i) "More businesses are including environmental considerations in their strategy-making and documentation (business plans, market strategy, product design criteria, etc.)"; and ii) "SMEs are requesting support from RECP service providers to help them design eco-innovation compliant products, services, and solutions", which are expected to drive towards the Project's overall long-term intended impact of transitioning to sustainable industrial production systems in developing and transition economies.

99. **Direct Outcome 2**: Existing environmental and industrial development policy and planning regimes recognize and promote RECP eco-innovation

A key assumption underlying this outcome (dedicated commitment & interest of governments & key stakeholders in pilot countries to leverage synergies generated between RECP service provider operations & progress in implementation of GE, RE, and SCP policies) held true and was powered by a key driver (uptake and endorsement of guidance by key stakeholders) which is nonetheless dampened by another key assumption (weak legal & policy environments; lack of access to finance for SMEs).The Steering Committees used as implementation mechanisms at local level brought diverse actors from industry and government. Their composition displayed coordination across Ministries and involvement of technical multi-stakeholder partners, providing the foundation for a concerted and country-owned outcome. In this light, the Steering Committees reviewed existing legislation to identify gaps and entry points for RECP eco-innovation. In this respect, policy reviews were produced in 4 countries, which also provided recommendations for integrating eco-innovation into existing policies (e.g. SCP, Waste, Water, and Science, Technology, and Innovation). These country-specific roadmaps were formally approved by the Steering Committees in Peru, Vietnam, and Colombia, which provides clear evidence of an outcome that can be directly attributed to the Project., and cross-ministerial institutional groups set up for ensuring its implementation. During field interviews conducted by the Evaluator, policy makers in each of the 4 countries visited were able to describe eco-innovation more or less in line with the Project's definition and mentioned specifics like linking eco-innovation to "*the roll-out of our National Green Economy and Implementation Plan*" (Kenya), using eco-innovation to support the 10 pathways of the draft national SCP blueprint (Malaysia), using eco-innovation to add value to the actors in restructuring programs being undertaken in

agriculture and rural development (Vietnam), and using the current pilot performance to provide baselines for a next phase (Uganda). The existence and recognition of the term 'eco-innovation' in Peruvian policy circles was directly attributed to the Project; significantly, eco-innovation was included in the country's action plan to improve its environmental performance towards OECD ascendancy. It is understood that the review of existing policies carried out by the 4 designated implementing partners (Colombia, Kenya, Peru, Vietnam) identified opportunities to mainstream eco-innovation into existing national frameworks and offered recommendations, which have been used as input into the final version of the Mainstreaming Polices for Eco-Innovation guideline.

Outcome 2 is deemed to have provided relevant building blocks towards the Intermediate Outcome of "More policy-makers are equipped and exhibit openness to include eco-innovation in policy", which contributes to the Intermediate State: i) "National level SCP policies and/or legislation that includes the eco-innovation concept is under discussion or preparation".

100. **Direct Outcome 3**: Business case for resource efficiency and eco-innovation in SMEs has been developed, validated, and promoted

A key assumption underlying this outcome (*business case is perceived as compelling by key stakeholders)* was supported through the 2014 publication of a vital resource, which brought together contextual arguments for (i.e. "drivers") and showcased the triple bottom-line benefits of pursuing eco-innovation (using selected examples from companies around the world that showed an average annual growth of 15% and were developing new solutions, products/services that perform above industry standards). By Project closure, *The Business Case for Eco-Innovation* was available in 5 languages and was shared at numerous SCP-related events and meetings, providing important visibility for the Project and its approach. Functioning as a cornerstone in establishing the concept of eco-innovation and its association with UN Environment, this publication is expected to continue to serve as a key communication tool for the Project.

A key driver (*sufficient results are effectively quantified, described & shared*) for powering widespread adoption of the eco-innovation approach is linked to the generation of relevant implemented case studies and the endorsement and advocacy of this approach by business leaders communicated through relevant channels. As the Project aimed to demonstrate the power of "retrofitting" business strategy supported by top management, the criteria for company selection specifically included openness to sustainability and willingness to change the business strategy. During the Project period, local implementing partners in Vietnam, Malaysia, Sri Lanka, Peru, and Colombia **finalized roadmaps for implementing new business strategies, although not all had not yet embarked on their operationalization**. The underlying assumption (*increased investment in business sustainability, with appropriate governance*) has therefore yet to be meaningfully demonstrated. The delay in the delivery of technical advice to demonstration sites in Egypt, Uganda, and South Africa meant that cases stemming from these pilots did not have the time to be fully realized within the Project period. While theoretical implementation plans show the potential of a concept, the objective of a pilot is "proof of concept", which puts a strong onus onto implementation so that once verified, an approach can be taken up and more broadly applied and replicated.

Overall, the Project experienced some difficulty in identifying feasible eco-innovation opportunities as the approach is quite novel in the pilot countries, there were funding limitations,

and companies' commitment to see the process through wavered at times. Weak legal & policy environments and the lack of SME access to finance were mentioned as hindering factors. While the eco-innovation approach was implemented in 44 (out of a total of 56 initially engaged[36]) companies, not all cases revealed new business models with economic, social, and environmental impacts. The Project Team reported that one reason for dropouts was not the approach, per se, but rather the missing means to complete new business strategies that transform daily business practice and therefore require immense efforts from the entire team within an SME[37]. Nevertheless, all pilot companies succeeded in identifying relevant strategies and goals that balanced economic, environmental, and social considerations. This mindset change is an aim of the eco-innovation approach.

Outcome 3 is consequently deemed to be a valuable start towards Intermediate Outcomes: i) "The (SME) business sector responds more effectively to environmental challenges"; ii) "The (SME) business sector implements eco-innovation as a relevant response to environmental challenges"; and iii) "RECP eco-innovation has been upscaled", which contribute to Intermediate States: i) "More businesses are including environmental considerations in their strategy-making and documentation (business plans, market strategy, product design criteria, etc.)"; and ii) "SMEs are requesting support from RECP service providers to help them design eco-innovation compliant products, services, and solutions". More capability will need to be developed on the part of RECP service providers (business intermediaries) and significantly more companies will need to be engaged in applying the approach (with adequate implementation timelines), with documented results to catalyse meaningful replication and upscaling.

101. **Direct Outcome 4**: Global & regional networking and peer learning have been facilitated

A key driver (*partnership framework amongst main partners – UNEP, UNIDO, RECPnet —supports mutually reinforcing objectives*) facilitated the development of relevant capabilities (business perspective & economic analysis to complement existing technical skills in RECP) and a regular flow of Project information to assure effective planning and implementation. Another key driver (*results are widely shared, promoted, referenced, and recognized*) materialised through the Project's support to the RECP*net*'s Secretariat and the network's global conferences and regional meetings. This framework was vital for introducing the eco-innovation concept, promoting the Project's outputs & outcomes, and fulfilling UNEP's partnership/patronage obligations vis-à-vis the jointly-implemented UNIDO-UNEP RECP Programme. The global RECP*net* conferences and regional events functioned to bring together and develop RECP leadership and offered a promising venue for promoting approaches & tools that members can take up to expand and deepen their service offering. While RECP*net* members are exposed to a variety of concepts and tools through these mechanisms, eco-innovation was regularly highlighted, with substantive inputs shared as these were developed over the course of the intervention, providing the basis for peer exchange and facilitating the expansion of skills and references.

[36] The higher number of companies engaged at the outset reflected a strategic decision by the Project Team and implementing partners, accounting for the possibility of subsequent drop-outs, which proved to be the case

[37] ENRTP Strategic Cooperation Agreement/GPGC Programme Cooperation Agreements, PoW 624 Advancing Resource Efficiency in Business Practices Annex 4: Annual Project Progress Report (01/01/2016– 31/12/2016), p19

Outcome 4 is consequently deemed to be a practical contribution towards Intermediate Outcomes of i) RECP*net* members are spontaneously sharing experiences & knowledge in the area of eco-innovation, and beyond"; ii) "RECP*net* takes a leadership role in stimulating the business sector in its response to environmental challenges", which contribute to Intermediate State: i) "SMEs are requesting support from RECP service providers to help them design eco-innovation compliant products, services, and solutions".

Achievement of the Project's Direct Outcomes is rated as '(Highly) Satisfactory'

ii. Likelihood of Impact using Review of Outcomes towards Impact (ROtI) Method

L1: The Project's direct outcomes were designed to feed into a continuing process, with some allocation of responsibilities after project funding.

L2: Measures designed to move towards intermediate states have started and have begun to produce results; the business models country roadmaps for mainstreaming eco-innovation have been approved by the respective company & government actors; many parts of these were, understandably, not fully operatlionalised by Project closure, given the time needed for full implementation.

L3: The pilot showed promising potential for eco-innovation as a response for the business sector in facing growing environmental challenges; while the Project generated valuable resource material, the concept is challenging to cascade without adequate training and consultancy/coaching support.

L4: The Project's policy dimension succeeded in identifying entry points for eco-innovation within existing national policies and instruments and prepared the way for uptake & endorsement, thereby implying a stronger likelihood of impact, provided there is continuing momentum in the pilot settings.

L5: An ongoing framework to steer, foster, and support the integration of eco-innovation into policy settings will spur adoption within the pilot countries; a spontaneous adoption by the majority of RECPnet members and expansion to other countries is not envisaged, without support.

102. The likelihood of achievement of overall impact of the Eco-Innovation Project (facilitating the transition towards sustainable industrial production systems in developing and transition economies) was examined using the ROtI method, based on the R-TOC. The overall likelihood that long term impact will be achieved has been rated on a 6-point scale as **Likely** (corresponding to a BB rating; see Table 8). This rating is based on the following observations:

103. In the R-TOC, those aspects designated as the Project's direct outcomes were designed to feed into a continuing process. In this respect, in the Project's final stage, a UN Environment staff member was allocated to provide inputs on eco-innovation and circular economy; this responsibility did not previously exist. The Project's direct outcomes are seen as tangibly contributing to designated components of the larger RE Subprogramme in which the Project is embedded, which are reflected in the R-TOC as intermediate outcomes. In terms of contributions towards intermediate states, the analysis of each of the Project's direct outcomes undertaken in the previous section respectively characterized these as "an important first step towards", "provided relevant building blocks towards", "a valuable start towards", and "a practical contribution towards". These characterizations are consistent with what can be expected in light of the relatively short timeline that was designed into the overall project period for operationalizing business models at firm level and for developing country roadmaps at policy level. Although their implementation within the project period was not foreseen in the Project Document, many of the pilot actors are continuing to progress along the paths that they have approved.

104. While UNEP's Green Economy Initiative (GEI) helped place the GE concept at the heart of the global development debate, its efforts to establish a convincing economic case for GE was developed more strongly at a macro-economic level and thereby better convened international agencies & governments than private sector actors & individual consumers[38]. This background relates to assumptions identified in reviewing the Eco-Innovation Project's R-TOC which must hold true to transform the intermediate states into long-term intended impacts (refer to Figure 2). The GEI's recent TE concluded that a "final transition to a Green Economy requires directed investments from countries, both from the public and the private sector. Particularly in low-income countries there is not enough fiscal space and the private sector is too poorly developed to cover these investments. Additionally, the initiative has so far involved the private sector only to a limited extent." as the GEI's TE pointed out, "the relatively sudden and unexpected decrease of oil prices during the last two years…directly increased fossil fuel use due to lower consumer prices. Also, it affected the economy of important oil-producing and oil-importing countries that generally responded with opportunistic measures (continued fossil fuel subsidies, higher fuel imports, oil extraction by fracking) rather than applying medium term priorities related to GE transition". Governmental changes can impact the continuity of processes. While there has been a moderately positive attitude amongst major economic powers towards global environmental agreements, this can easily change, as evidenced by the US administration's 2017 decision to pull out of the 2015 Paris Climate Accord, and then seemingly reverse this position a few months later. These examples of risk are likely to endure and are difficult for a project to control.

105. Nonetheless, the objective of a pilot project is to demonstrate "proof of concept" and then, importantly, to have the pilot approach taken up and more broadly applied and replicated. In this respect, important evidence came to light near Project closure from i) Malaysia: the government integrated a financial scheme to support eco-innovative business; ii) Vietnam: the Ministry of Industry and Trade decided to fund two eco-innovation projects for the pulp & paper industry, whose results are to be expanded to further enterprises within the sector and contribute to the implementation of the national SCP action plan 2020 and to the country's Vision 2030; iii) Peru: the Ministry of Environment created a multi-stakeholder Eco-Innovation Committee and a national eco-innovation website to promote the approach; iv) Colombia: the country's 2016-2019 Policy Roadmap for Action contains 8 strategies and 35 eco-innovation activities, an Eco-Innovation Technical Support Group has been created, and resources for eco-innovation have been mobilized in 10 municipalities. **Annex 3** provides evidence of implementation towards "proof of concept" in terms of changing management practices within the pilot companies.

106. The Project's measures designed to move towards intermediate states have started and are beginning to produce results. This is a notable achievement in that this Project functioned as a pilot with dual levels of intervention, with a relatively high level of complexity: developing and testing a novel approach, building capacity for its application, generating and documenting results, while also reviewing existing national policies & instruments in a few countries to identify entry points for eco-innovation. The relatively short period available for national-level implementation led to a situation that many parts of the business models and country roadmaps for mainstreaming eco-innovation that were developed and approved by the

[38] UN Environment Project Terminal Evaluation: "Policy, macro-economic assessments & instruments to empower governments and business to advance resource efficiency and move towards a Green Economy", January 2017

respective company and government actors, have not proceeded through to full implementation in all cases. However, once implemented, these would, in principle, tangibly contribute to transitioning the Project's outcomes towards the intermediate states. Nonetheless, it is important to consider the situation within each pilot country in order to identify which factors facilitate and hinder adoption and its pace. For instance, in Vietnam, the country roadmap was approved as part of the country's SCP Action Plan which is currently being implemented, with the result that the Eco-Innovation Project's implementing partner in Vietnam has been contracted to implement eco-innovation in a number of companies, supported by government funding. The extent to which the Vietnam case can support extrapolation to other countries is yet to be seen, but seems promising.

107. Regarding **Impact pathway 1** (stimulating and supporting the business sector in effectively responding to environmental challenges), a key driver (*the approach & tools are effective and can be easily cascaded*) may not necessarily hold true for RECP*net* members that were not part of the piloting activity, let alone business intermediaries not part of this privileged network. Many respondents indicated that the training provided was not sufficient to convey the concept and develop the competence to use the tools. Despite having the step-by-step (draft) Manual available, the local implementing partners needed considerable backstopping from the Project Team and international experts, which involved regular coordination calls, substantial review, and provision of additional written guidance and input leading to refinement of deliverables (at times, extremely onerous as reported by several implementing partners). These measures were put down to extra steps necessary to overcome the initial difficulty to implement a novel approach. According to the Project Team's own reporting in 2016, substantial delays in national implementation (about 6 months, on average) were related to the time that it took to understand and deploy the approach, the limited existing expertise in business model innovation on the part of the RECP service providers, and their inability to stimulate the interest of target companies due to their own inability to explain the benefits of eco-innovation. Considering these aspects, a question must be raised about the extent of scalability of the project concept, in view of the eventual aim of replication and upscaling.

108. Through this pilot, 44 companies implemented the approach. As already mentioned, given the short timeframe for national implementation (18 months), local implementing partners solicited some pilot companies from amongst those with whom they already had relationships to enhance the possibility of generating the desired results in time. This opens the question about the extent to which companies that are completely unfamiliar with RECP can be engaged in the eco-innovation approach and deliver results in a similarly short timeframe, which has a bearing on the likelihood of impact. Prospects for uptake of the eco-innovation approach would be enhanced if expectations on the part of the intended beneficiaries are adequately managed in this respect.

109. Understandably, not all demonstration sites revealed innovative new business models with clear economic, social, and environmental impacts, given the novelty of the approach and the time needed to proceed through full implementation. All of the pilot companies identified relevant strategies and goals but to achieve those goals through overhauling their business model represents a significant step. What the eco-innovation approach is trying to promote is a mindset change wherein environmental and social considerations are considered on the same level as economic aspects. A selection of cases generated through the Project are being used as "web stories" to demonstrate this this mindset change and to disseminate the positive effects of eco-innovation for SMEs in developing countries. Two drivers (*sufficient results are*

effectively quantified, described & shared and *business case is perceived as compelling by key stakeholders*), which could be expected to power replication and upscaling, need further buttressing so that RECP service providers have access to relevant evidence, data, and references to confidently develop (commercial) eco-innovation services. A key driver *(RECPnet powers RECP eco-innovation)* has yet to materialize, although the strong linkage of the Project, UN Environment, and UNIDO with this network certainly does offer the possibility to keep eco-innovation visible and part of the discourse for companies to "*keep ahead of the curve*".

110. UNEP's transition to a new resource management system delayed payments to some partners during April 2015-December 2016, which caused corresponding delays in their activities The Project Team reportedly worked very intensively to overcome the delays and kept all partners motivated in spite of these administrative issues to minimize negative impacts. It was observed that the fragility of RECP*net* actors' cashflow compromises their ability to autonomously carry on with this topic without support: commercially through consultancy services or under the context of international cooperation. Amongst respondents interviewed for this evaluation, reference was made to the 5-year timeframe that it took to reach a commercial service level with CP, inferring that a similar timeframe should be kept in mind for realising the potential of eco-innovation as a consultancy service. Moreover, a "*rule of thumb*" was shared that "*for a single consultant to become competent in eco-innovation would require working with 5 companies in 5 different sectors, with documented results*". This level of application, with its corresponding competency-building, far exceeds what the local implementing partners undertook within this pilot project, which, as far as national implementation is concerned, finally spanned about two years.

111. In contrast and very much on the positive side, the Evaluator gathered evidence that RECP*net* partners in two implementing countries found creative means to include eco-innovation in other activities (Vietnam: when faced with late delivery of Project payments, integrated eco-innovation into a call for a technical support project funded by DANIDA; Sri Lanka: integrated eco-innovation into a 2017 proposal to UN Environment's 10YFP on Consumer Information, which was accepted) specifically to continue developing their competence and generate further case studies. This vision and fortitude are to be commended and are seen as illustrative of the creativity, perseverance, and networking capacity of RECP*net* members, which will be an asset in replicating and upscaling eco-innovation.

112. Regarding **Impact pathway 2** (making the policy context more conducive to RECP eco-innovation adoption), the key driver (*uptake & endorsement of guidance by key stakeholders*) held true. There was evidence in the pilot countries of regular engagement of relevant stakeholders in policy review activities to identify entry points, develop recommendations, and follow the country roadmaps in the Project's final phase. The resulting policy documents[39] primarily function to "*inform the government on issues*" and are expected to be inputs to ongoing national processes beyond Project closure. Likelihood of impact on the Project's policy side was heightened by making linkages with existing policies & instruments, to facilitate the

[39] As an example, the implementation of the Policy Component in Kenya yielded several "policy briefs" which were still in a draft form at the time of this evaluation: *Mainstreaming Sustainable Consumption and Production Policy Provisions for Eco-Innovation in Kenya, Mainstreaming Eco-Innovation in the Science, Technology and Innovation Act of Kenya*, *Mainstreaming Eco-Innovation in Waste Management Regulations in Kenya*, and *Mainstreaming Eco-Innovation in Water Quality Regulations in Kenya*

business model innovation triggered by the eco-innovation approach. Given that SMEs typically face obstacles to access finance, particularly for eco-innovation which is not well-understood by financial institutions with limited capacities to assess such applications, making progress on evolving a policy setting that favours RECP eco-innovation adoption constitutes an important facilitating factor.

Likelihood of Impact is rated as 'Likely'

Table 8: Results & Ratings of Review of Outcomes to Impact (ROtI) Analysis for Eco-Innovation Project

Project Objective	The transition towards sustainable industrial production systems in developing countries and transition economies is supported through the promotion of resource efficient and cleaner production based on eco-innovation							
Activity[40] / Outputs	Direct Outcomes (of the Project)	Intermediate Outcomes (Project's contribution to Resource Efficiency Subprogramme in which it is nested)	Rating (D-A)	Intermediate States	Rating (D-A)	Impact	Rating (+)	Overall
2.1 Guidance for policy-makers on mainstreaming eco-innovation in national-level SCP policy developed & validated 2.2 National policy review reports (4) with recommendations for mainstreaming SCP policies to promote eco-innovation prepared 2.3 Guidance for policy-makers for technology for eco-innovation produced & validated 2.4 Country roadmaps (4) for mainstreaming SCP policies for eco-innovation elaborated	Existing environmental and industrial development policy and planning regimes recognize and promote RECP eco-innovation	More policy-makers include eco-innovation within legislation	**B**	National-level SCP policies and/or legislation that includes the eco-innovation concept is under discussion or preparation	**B**	More policy makers in target countries promote eco-innovation approaches within their legislation		**BB**
1.1 Regional mapping (5) of potential RECP service providers & Project contributors produced 1.2 Manual developed for integrating eco-innovation at company level and (3) Value Chain Supplements produced for key resource-intensive sectors, adapted to an online learning experience 1.3 (5) Regional validation and (8) training workshops convened	UNIDO-UNEP RECP service provider networks strengthened, expanded and enhanced in their capacity to provide technical support services on RECP eco-innovation	Validated, effective, practical tools for eco-innovation are more readily available & used The strategic technical capacity that has been built catalyses and expands RECP eco-innovation in key resource-intensive sectors		More businesses are including environmental considerations in their strategy-making and documentation (Business Plans, market strategic, product design criteria, etc.)		More businesses (particularly SMEs) in target countries design and offer new products & services that respect RECP principles		
3.1 Business case for eco-innovation developed, including documented results from pilots 3.2 RECP eco-innovation demonstration projects carried out with (40) business cases documented (supported by standard reporting format, case study) 3.3 RECP eco-innovation cases & policy guidance disseminated in relevant events	Business case for resource efficiency and eco-innovation in SMEs has been developed, validated, and promoted	RECP eco-innovation has been upscaled The (SME) business sector implements eco-innovation as a relevant response to environmental challenges The (SME) business sector responds more effectively to environmental challenges						
4.1 RECP*net*'s global Conference organized bi-annually, showcasing eco-innovation 4.2 RECP*net* regional meetings convened, with inputs on eco-innovation 4.3 New members have joined the RECP*net*	Global & regional networking and peer learning have been facilitated	RECP*net* members are spontaneously sharing experiences and knowledge in the area of eco-innovation, and beyond RECP*net* takes a leadership role in stimulating the business sector in its response to environmental challenges		SMEs are requesting support from RECP service providers to help them design eco-innovation compliant products/services				
The "outcome" **rating of B** is justified as follows: The project's intended outcomes were delivered and were designed to feed into a continuing process, but with some allocation of responsibilities after project funding								
The **rating of B** on "progress toward Intermediate States" is assigned as the measures designed to move towards intermediate states have started & are producing results illustrative of progress towards long-term impact								
The **overall rating of BB** corresponds to a Likely assessment as do the following ratings: CB, DA, DB, AC+, BC+								

[40] These activities correspond to those elaborated in the approved Project Document (2016), under the Project Delivery Plan and Budget (DG ENV and DG DEVCO)

Note: The use of this format for presenting the ROtI over-emphasizes a direct linearity that is not intended. The contents of this table directly correspond to the Project's Reconstructed Theory of Change. The impact pathways are designated by colour: **Impact pathway 1** (stimulating and supporting the business sector in effectively responding to environmental challenges) and **Impact pathway 2** (making the policy context more conducive to RECP eco-innovation adoption)

iii. Achievement of project goal and planned objectives

AP1: While more time was needed than initially planned, the Project succeeded in introducing a new concept to business intermediaries, SMEs, policy-makers, donors, and other UN Environment stakeholders working on related projects, and it initiated a process of system change within 9 pilot countries that can be linked to circular economy thinking.

AP2: The dual-pronged approach of combining application with a policy dimension positively functioned to engage relevant stakeholders to build national ownership and to expedite, accelerate, and optimise progress, thereby facilitating change in the direction of sustainable industrial production in developing and transition economies, in service of the Project's overall goal and planned objectives.

113. Monitoring reports in the intervention's early stages indicated that eco-innovation as strategic business approach was relatively new, especially for SMEs in developing/transition economies, and that the Project faced challenges to find suitable experts, academic research, and bodies of practice on which to draw for the conceptualisation, which extended the timeframe for developing key tools/resource material to support the piloting. Given the prospects for in-kind contributions from local implementing partners to complement the already well-resourced overall Project budget, combined with the extension in the timeline facilitated by two revisions, extending the timeframe to 64 months, it is judged that the Project's ambition on an output level was realistic for the eventual timeframe and budget available. However, the originally envisaged 36 programmed months to be implemented over a 48-month duration was clearly not sufficient. Moreover, getting to full proof of concept demonstrated by the full implementation of the company action plans and policy roadmaps developed through the Project will take considerably more time. Material provided to the Evaluator at Project closure (see Annex) indicates that the eco-innovation approach has indeed triggered behavioural change in each of the pilot countries, both in terms of policy change and changing business practice, which reached or in some cases went beyond the expectations of the original Project Document. This evidence is illustrative of the potential for triggering behavioural change and for the eco-innovation approach to be taken up more broadly as a relevant response by the (SME) business sector to environmental challenges.

114. While the above analysis shows that the Project's direct outcomes, as formulated in the R-TOC, have been achieved, its impact was assessed as moderately likely. The Project's overall goal was to facilitate the transition towards sustainable industrial production systems in developing/transition economies through the promotion of eco-innovation based on RECP. The Project Team characterized its progress towards achieving the Project's objectives as having "*begun the process of bridging practical business needs with policy objectives and aligning business practice with the eco-innovation approach*", seen as "*highly relevant for the transition to circular economy models and introducing the language of eco-innovation as a system change approach in the policy context*"[41]. It can be confirmed that the Project sparked and supported concerted efforts on the part of relevant stakeholders to engage in the eco-innovation concept and it introduced new terminology with donors, business intermediaries, and other UN Environment stakeholders working on related projects, increased uptake of eco-innovation related themes (e.g. life cycle thinking, sustainable innovation, circular economy, social innovation) has been observed and can be seen as further validating UN Environment's approach and work through this Project.

[41] ENRTP Strategic Cooperation Agreement/GPGC Programme Cooperation Agreements, PoW 624 Advancing Resource Efficiency in Business Practices Annex 4: Annual Project Progress Report (01/01/2016– 31/12/2016), p7

115. The insight that the development and acceptance of the overall concept could be expedited by a conducive policy context formed the foundation for the Project. This dual approach and the results that have been achieved thus far can be seen as "facilitating" in so far as the Project "assisted the progress of", "helped forward" and "made easier or less difficult" a "movement, passage, or change from one position, state, stage, concept to another" (i.e. transition)[42]. Based on the formulation of the overall project goal, arguably, a "start" on this constitutes achievement. Moreover, the Project did succeed in initiating a process of system change in 9 pilot countries, with relevance beyond with respect to boosting momentum towards sustainable industrial production.

116. Embedding sustainability into a firm's business model involves a radical re-thinking of key elements of the company's vision and strategy, also in view of the value chain context in which it is nested. The eco-innovation very usefully brings together RECP practice, life cycle and systems thinking into a single concept which shows the potential for inspiring a positive (even proactive) approach for companies to move towards sustainable industrial production. On the side of business intermediaries expected to support firms in this endeavour, the concept supported the development of skills in business strategy, business model innovation, economic analysis, market research or encouraged partnering with others to fill this competency gap.

117. Whether eco-innovation will be widely adopted by the (SME) business sector as a mainstream response to environmental challenges depends on significant additional steps beyond Project closure.

Achievement of Project Goal and Planned Objectives is rated as ' Satisfactory'

D. Sustainability and Replication

118. The evaluation of sustainability and prospects for replication have been assessed by reviewing five aspects: financial resources, socio-political sustainability, institutional framework, environmental sustainability, and the catalytic role of the Project vis-à-vis upscaling and replication potential. As all the dimensions of sustainability are deemed critical, the overall rating for sustainability is assigned according to the lowest rating on the separate dimensions.

i. Financial Resources

S1: The Project did not have a formal exit strategy; it relied on implicit notions included in the project design with respect to building local knowledge and mainstreaming policy change

S2: The Project design and budget did not provision for funding to ensure implementation of demonstration activities during the Project or following its closure.

S3: While end beneficiaries (SMEs) underscored the importance of access to funding to realise the potential of eco-innovation and while many international actors are currently actively working to design facilitating policies & instruments, it is not obvious that sufficient financial resources will be or will become available in the short term to use the capacities built by the Project.

119. The Project Document did not mention an exit strategy and such an aspect was not a formal requirement at the time of project design. According to the Project Team, the exit strategy was implicit in so far that the design involved working with institutional structures such as RECP*net*

[42] "Facilitated" and "transition", as defined by www.dictionary.com

members, who would then retain the knowledge and skills developed under the Project. According to the Project Team, the notion of exit strategy was implicit in the idea of mainstreaming eco-innovation instead of creating new policies and instruments.

120. The Project Document did not make any reference to provisioning for the financial sustainability of activities during the pilot or following project closure. In view of the fact that many of the demonstration sites have developed strategies (new business models) but have not yet moved fully through implementation, this raises an important issue related to financing their operationalisation.

121. Interviews in the pilot countries uncovered a diversity of attitudes regarding financing the implementation of eco-innovation: from passing on some of the cost to customers, to applying for soft loans through an existing government-supported Green Fund to undergoing a technology audit to qualify for a national government assistance program to establishing revolving funds (i.e. funding subsequent improvements through savings gained from initial improvements) to hoping that UN Environment and other international donors will step in to facilitate changes in operating technology. Over the course of the intervention, some support was provided to pilot companies through the Project to fund the purchase of new equipment.

122. To realise the potential in eco innovation, as well as develop new technologies and solutions to help shift to a resource efficient economy, it is important that SMEs have access to financing. If the business case for eco-innovation is not understood by financial institutions, this may present an insurmountable barrier to funding eco-innovation. The need for access to finance was identified by the Project Team as an area that needed further support.

123. In this respect, the Project has a valuable opportunity to link with existing UN Environment initiatives that support dialogue and build awareness at policy level regarding the risks of environmental degradation and the need to facilitate SME access to finance operational improvements going in the direction of Green Economy. For instance, the agency's partnership with the global financial sector through its Finance Initiative has links to 200+ banks, insurers and investors working to understand and address current environmental challenges. This 25-year old initiative stimulates national dialogue amongst finance practitioners, supervisors, regulators and policy-makers and, at the international level, promotes financial sector involvement in processes (e.g. global climate negotiations). In this respect, the Project Team developed a proposal for funding, jointly with UN Environment's Finance Initiative, with the aim of matching the need of funding mechanisms for specific training to identify sustainable proposals from SMEs and the SMEs need for finance. To date, this initiative has not been funded and operationalized. Furthermore, the Project Team ran a study in partnership with the NCPC in Nicaragua regarding barriers & recommendations for financing eco-innovative SMEs. In January 2017, UN "Principles for Positive Impact Finance" were launched to provide guidance for financiers and investors advocating for a holistic analysis of the positive and negative impacts of economic development, human well-being and the environment. Furthermore, UN Environment is currently collaborating with the World Business Council for Sustainable Development on a grounding paper to bridge the funding gap of the SDGs and work towards a new finance model that would support the implementation of the type of new business models encouraged by eco-innovation. Presumably, at agency level, UN Environment has a finger on the pulse of the rapidly evolving sustainability agenda and developments in integrating environmental, social and governance issues into financial institutions through regional roundtables organized annually.

124. The EC's Environmental Technologies Action Plan, which aims to make eco innovation an everyday reality throughout Europe could be a useful source of inspiration for eco-innovators in developing and transition countries in that the EC has been working since 2004 to develop a range of financing options for eco-innovative SMEs, including debt- and smaller-scale financing in recognition that venture capital is very selective and not able to address the needs of all eco-innovators. Amongst others, The World Bank and the International Bank for Reconstruction and Development are actively working on identifying market-based innovative methods of raising development finance[43]. Recognizing the "crucial role of technological solutions in creating employment and protecting the climate", the KfW Development Bank has been actively promoting new financing solutions to support developing countries[44]. Under the framework of the SwitchMed program, several efforts are underway to enable access to finance for entrepreneurs and SMEs with eco-innovative business-to-business solutions related to circular economy[45]. In this context, UNIDO is actively working on financing solutions identified for SMEs. The European Bank for Reconstruction and Development (EBRD) has also positioned itself as a marketplace to provide innovative financing solutions and is explicitly promoting eco innovation as an opportunity for companies to achieve better performance and reduce costs[46]. The OECD has recently published its 6th instalment of an annual evidence-based publication[47] with information on debt, equity, asset-based finance, and framework conditions for SME and entrepreneurship finance, with an overview of recent policy measures to support SME access to finance in 39 countries, including two of the Project's pilot countries (Colombia and Malaysia). Under the SwitchMed framework, in which UN Environment is a partner, the challenges and opportunities for enabling access to finance area being reviewed through national synergy workshops convened in collaboration with Ministries of Environment and the local implementing partners within each of the 8 participating countries; findings and lessons learned are already available[48] from workshops conducted in Lebanon, Tunisia, Morocco, Jordan. Furthermore, there is an opportunity to leverage lessons learned from *Enabling Access to Finance for Green Start-ups and Entrepreneurs* and building on new instruments that have been developed in collaboration with the EBRD and the European Federation of Ethical and Alternative Banks vis-à-vis the establishment of a Green Impact Investing Network[49]. Under the SwitchMed framework, missions have been undertaken in 4 countries to assess the finance ecosystem and interest of financing institutions regarding investments in eco-innovative or green businesses[50]. SwitchMed is now also working on implementing demand side services for green entrepreneurs to access to finance (i.e. coaching, guidelines, events where green start-ups meet financing agents) and supply side services for filling in the identified financing gaps (i.e. the Switchers Fund).

[43] *Innovative Financing for Development*, edited by S. Ketkar and D. Ratha, The International Bank for Reconstruction and Development and The World Bank (2009)

[44] www.kfw.de/KfW-Group/Newsroom/Aktuelles/Pressemitteilungen/Pressemitteilungen-Details_123265.html

[45] www.switchmed.eu/en/news/news-1/connecting-finance-with-eco-innovative-solutions-for-industries-in-tunisia

[46] http://ecoinnovationfinancingconference.rec.org/downloads/presentations/opportunity.pdf

[47] OECD (2017), *Financing SMEs and Entrepreneurs 2017: An OECD Scoreboard*, OECD Publishing, Paris. http://dx.doi.org/10.1787/fin_sme_ent-2017-en

[48] Workshop findings are available from www.switchmed.eu/en/corners/start-up/actions/action1

[49] www.switchmed.eu/en/corners/impact-investors

[50] Maps of existing instruments and the reports prepared for Egypt, Lebanon, Morocco, Tunisia are available from: www.switchmed.eu/en/corners/impact-investors/actions/actions/MENA-Touring

125. A key challenge in securing the financial sustainability of the Project's outcomes is that although eco-innovation offers positive externalities (innovation, environmental effects), market distortions caused by high carbon fuel pricing do not reflect the environmental and social costs they impose. Furthermore, eco-innovation is not focused around a common technological platform. Instead of constituting a sector in conventional terms, it is rather a theme or an umbrella term covering a wide variety of different technologies, products, services, and markets. These factors make it more difficult for potential investors to evaluate funding opportunities.[51] In this light, it is not obvious that adequate financial resources will be or will become available in the short term to use the capacities built by the Project; however, this situation could and should evolve provided that the ongoing initiatives described above are effective.

The Financial Sustainability of the Project's results and progress towards impacts is rated as 'Moderately Likely'

ii. Socio-Political Sustainability

S4: The Project succeeded in establishing key elements to assure the socio-political sustainability of results and progress towards impacts in the 9 countries where activities were implemented.

126. It is confirmed that the 9 countries in which the Project was implemented were chosen contained key elements that positively influenced the sustenance of project results and progress towards impacts. The level of ownership by main stakeholders was assured at a structural level through criteria employed in country selection, which included: i) commitment from at least one governmental counterpart and local business & industry regarding Green Economy, promotion of resource efficiency or SCP and related market opportunities; ii) engagement of an RECP service provider as the local implementing (industry) partner; iii) existence of synergies with ongoing, related activities, especially those linked to an enabling policy framework; iv) potential for wider replication of best practices within the value chain. It was assumed in the Project Document that there was demand in each national market for the provision of RECP services.

127. From interviews conducted in pilot countries, there was awareness on the part of the national government and other key stakeholders and interest in the potential of eco-innovation to contribute towards SCP incorporated into national plans (e.g. eco-innovation was described as "*jiving with the SCP framework in the country*" in Uganda and seen as relevant to pathways bringing together private consumers and companies under Malaysia's draft national SCP blueprint currently under preparation, offering specific support for "*how to work with SMEs to become more green*"; the eco-innovation training carried out in Vietnam for 70 high-ranking government officials at district and national level was characterized as "*having a strong impact on perceptions and helped to change their way of thinking regarding responsibility of production and the impact of consumption on the environment*"; eco-innovation was linked to Science, Technology, and Innovation, which was called "*the bedrock and foundation through which Kenya is going to move towards greater development*"). These examples illustrate the level of country driven-ness, promotion of changes in attitude that will facilitate uptake, and capacity-building undertaken for key stakeholders that underpin the Project's socio-political sustainability.

[51] *Financing Eco-innovation*, EIM and Oxford Research Final Report for the European Commission, DG Environment, January 2011

The Socio-Political Sustainability of the Project's results and progress towards impacts is rated as 'Highly Likely'

iii. Institutional Framework

S5: The Project benefitted from being launched in a setting where several policy frameworks supporting innovation had already been established.

S6: By leveraging the UN Environment "brand" and existing relationships with national Ministries of Environment, and by engaging (for the most part) familiar local implementing actors in partnership arrangements, with expectations for in-kind contributions and local ownership, the Project created a robust institutional framework to facilitate its operation during the intervention; the foundation built in the pilot countries points to the likelihood of sustained outcomes.

128. At the macro level, the Project drew institutional strength from being launched in a context where several policy frameworks that support innovation had already been established. For instance, UNEP's Green Economy Report and National Advisory services had already made the macro-economic case for greener investments in high potential sectors and showcased the potential associated with eco-innovation. The Project also benefitted from the UNEP "brand", existing relationships with national Ministries of Environment, and regional and national policy framework development spurred by UNEP's Marrakech Process, which resulted in the establishment of the 10YFP, thereby instantiating a global framework of action to enhance international cooperation and generate collective impact for shifting towards SCP in both developed and developing countries. It is also important to mention that the Project built on the work of UNEP's Green Economy Initiative and the experience and networks of UNEP/SCP activities, including the jointly-implemented UNIDO-UNEP RECP Programme. Recently, the UN Secretary General underscored the need for both national governments and private industry to become highly engaged in the worldwide green transition asserting that "those that will be betting on the implementation of the Paris Agreement, on the Green Economy, will be the ones that have a leading role in the economy of the 21st century"[52]. Guterres' suggestion that first movers towards SCP will reap benefits of increasing profits, wellbeing, and environmental resilience is expected to extend interest in eco-innovation.

129. The Project benefitted from related EC policies and programmes, including EC Green Growth, Green Jobs and Sustainable Development Strategies, which highlight the potential of pursuing economic growth while protecting the environment. The EC's Innovation policy promotes a shift towards a knowledge-based and resource-efficient economy with the aim of helping companies perform better and contribute to broader social objectives (growth, jobs, and sustainability). The EC's Eco-Innovation Action Plan has the objectives to help make the transition from research to markets; to improve market conditions; and to act globally. In the era in which the Eco-Innovation Project was being designed, there were already successful regional and national efforts as well as business and industry initiatives underway that were building the foundation for innovative change at policy levels.[53]

130. At a national level, the above-mentioned elements that underpin the Project's socio-political sustainability constitute central aspects of the institutional framework that provide important

[52] From António Guterres' call to action on climate change delivered at New York University, 30 May 2017; www.un.org/apps/news/story.asp?NewsID=56865#.WWJ73oiGMv2

[53] UNEP, European Commission, Global Outlook on SCP Policies: Taking Action Together. 2011

anchoring within the local settings that facilitated the pursuit of the dual lines of activity (referring to the two impact pathways identified in the R-TOC). The sustainability of the Project's outcomes rely, to a large degree, on national-level ownership, uptake, goodwill, and the commitment of the involved actors to continue implementing the plans and roadmaps developed under the project context. Without funding for and continued prioritisation of the eco-innovation topic, there is a risk that the involved actors will not finalise implementation, and then monitor to evaluate the results and crystallise the learning.

131. The Project established key elements to assure a robust institutional framework during the pilot and the sustainability of project results has already been demonstrated in some countries. The local networks in each country have been built and are strong, institutionally speaking. According to the Project Team, they will be regularly provided with information on eco-innovation. Following Project closure and funding, an ongoing framework to motivate, steer, foster, and support integration into policy settings and the development of eco-innovation competency would be useful to assure the sustainability of project results. Without such a framework, it is hard to imagine that there will be a spontaneous expansion to other countries and widespread adoption by the majority of RECP*net* members of such a novel approach. Eco-innovation demands significant absorptive capacity to understand and apply and involves a substantial commitment from and potential risk for the end beneficiaries (i.e. the change of business strategy implied by Eco-Innovation is substantially more risky than undertaking changes to improve operational efficiency, which Cleaner Production inclines).

The Institutional Framework is rated as 'Likely' in terms of sustaining project results

iv. Environmental Sustainability

S7: It is not likely that the Project will have negative environmental impact; on the contrary, its outputs and higher-level results enhance environmental sustainability.

132. By their nature, the Project's outputs and its higher-level results are designed and destined to improve environmental sustainability. Moreover, it is not obvious that any of the Project's outputs would have a negative impact on the environment, if sustained, and the move to long-term impact can only be a seen as a contribution to environmental sustainability.

The Project's Environmental Sustainability is rated as 'Highly Likely'

v. Catalytic Role and Replication

CR1: The Project's catalytic role is embodied in its novel approach (combining business model innovation, life cycle and value chain thinking and promoting collaboration, together with building a conducive policy environment to foster RECP eco-innovation adoption), which offers an operational means to engage the business sector's proactive response to environmental issues.

CR2: The Project's transformational power in national settings where pilot activities were undertaken is evidenced through changes in attitude and capacities, triggered by incentives (e.g. training, coaching, consultancy to build new competences) but in the absence of adequate access to financial resources and ongoing technical support, the realisation of eco-innovation's full potential is unlikely.

133. Through this Project, a distinctive approach was developed that encompassed business model innovation, life cycle and value chain thinking, and promotes collaboration. The Project's eco-innovation approach was developed, tested, and widely disseminated, thereby providing a reference

for governments, companies, and other organisations for deepening the business sector's proactive engagement on environmental issues. The Project's simultaneous work on the policy dimension yielded insights about factors that could facilitate or hinder the adoption of RECP eco-innovation and identified entry points within existing national policies and instruments. While it may not have been fully clear within the 9 pilot countries at the outset that eco-innovation was a meaningful response to national priorities and needs, by the end of the intervention, significant appreciation was expressed regarding its potential. This positive change of attitude is an important indicator of the Project's catalytic power.

134. Feedback provided to the Project Team, which was triangulated by evidence gathered through the Evaluator's field interviews, confirmed that the Project gave the 10 local implementing partners increased visibility and competitive advantage through expanding their skills and service offering. This was achieved through the training, coaching, and consultancy provided by the Project and through the development & application of the produced outputs (Eco-Innovation Manual and its Value Chain Supplements), which were characterized as important resources. Together, these incentives helped to change their own attitudes and build new capacities; this subsequently enabled the RECP service providers to help the engaged SMEs to develop roadmaps for change.

135. Although not each and every one of the 56 demonstration sites was transformed through the Project, the 44 firms that did substantially engage in the process progressed through a series of eco-innovation stages. Attitude and capacity changes were enabled through their investigation of operations using the "eco-innovation lens", which led to the identification of the opportunities for change and development of roadmaps to modify the business (model). As many of these roadmaps involve a 12- or 24-month (or more) implementation plan, it is conceivable that most of the pilot companies will not reach the end of their implementation plan before the close of the Project. This is also to be expected in that eco-innovation is not a short-term fix; rather, it involves engaging in a journey and following a path of change towards sustainability. There are positive signs that the analysis and planning undertaken during the Project will continue its effect beyond the intervention in that these implementation plans include basic business efficiency actions (e.g. reducing waste, changing inputs, modifying packaging). Notably, a few of the participating companies already launched new products (Hamona Drinking Coconuts in Vietnam and Asian Agro Coconut Products in Sri Lanka) and one company succeeded in changing the value chain and the quality of its products (Hiep Thanh in Vietnam). However, in the absence of adequate access to financial resources and presumably ongoing technical support, the full pursuit of the developed roadmaps is unlikely.

CR3: The Project built catalytic power and replication potential through its focus on (primarily) RECP service providers as local implementing partners and through collaboration with other UN Environment initiatives (Chemicals & Waste Subprogramme, 10YFP on SCP, Sustainable Public Procurement and Eco-labelling, Life Cycle Initiative/Resource Efficiency Achieved through Life-cycle thinking (REAL), International Resource Panel); linkages with SwitchMed and actors outside the UN system have not been fully tapped and/or appear to have been seized in an ad hoc rather than strategic manner.

136. Further evidence of the Project's catalytic power can be seen in the activities of its Policy Component, which succeeded in raising awareness of the opportunity of eco-innovation for pursuing national objectives in relation to SCP and Green Economy. In this respect, the Project's activities managed to bring the sustainability aspect of innovation to other policy frameworks, such as industrial policies and Science, Technology, and Innovation, which are traditionally not covered by UN Environment. Country reports delivered by the teams in Colombia, Kenya, Peru, and Vietnam elaborated activities in their "Roadmap to Action", agreed with National Steering Committees, to

implement recommendations coming out of the policy review studies. Before Project closure, eco-innovation was referenced and prioritized in the outcome policy documents of ongoing SCP initiatives in Egypt, Kenya, Sri Lanka, and Vietnam. This can be seen as an important contribution towards raising the profile of an emerging field of work on policies for system innovation. Overall, these policy changes (at the moment, still on paper) are evidence of the Project's catalytic role.

137. The Project's local implementing partners are linked to their own networks spanning both business and policy domains, providing a vector for cascading eco-innovation. During interviews for this evaluation, they reported that they will leverage their new expertise and experience towards replication in their own countries, particularly in light of their perception of the need to generate further reference cases and to enhance their eco-innovation competence. During the intervention, these actors demonstrated their ability to function as "ambassadors" for the eco-innovation concept in global, regional, and bilateral meetings, thereby seeding interest throughout the RECP*net*. During the recent RECP Global Conference (Helsinki, Finland, 3-4 June 2017), a revised programme of work identified "eco-innovation and circular economy" as a key theme for resource mobilization, which is an indication of the Network's interest in the topic but not yet at the level that the RECP*net* could be relied on to independently power the dissemination and application of this approach.

138. The Project has followed the directive of the MTS 2014-2017 to use partnerships more strategically to boost the use of its outputs and leverage greater impact by integrating eco-innovation into the workstreams of several other UN Environment initiatives, which led to further enhancements and opened possibilities for broader application. The Project's outputs were leveraged by the agency's Chemicals and Waste Subprogramme which pointed to the "*potential for our work going forward to pick it up and use it as a resource for training service providers to go into SMEs, which don't have the capacity to do their own full evaluation*". Through the SAICM Quick Start Programme[54], a RECP*net* member obtained funding to implement the eco-innovation approach in the construction and chemical sector in Jordan.

139. The Project established an ongoing cooperation with the UNEP/SETAC Life Cycle Initiative/Resource Efficiency Achieved through Life-cycle thinking (REAL). In addition to working jointly on developing a glossary of terms, the Project Teams co-organised a capacity-building workshop in India on Life Cycle Based Solutions for Sustainable Value Chain Management (October 2016) in which 30 Asia Pacific region participants were trained, and eco-innovation was covered in an online course developed by the REAL Project.

140. Since its outset, the Project collaborated with the 10YFP on SCP Secretariat (e.g. by bringing together the eco-innovation network with 10YFP national focal points in 129 countries; organising a side-event session in the 4th RECP Global Conference in October 2015; participating in regional roundtables in Africa, Asia Pacific, and Europe during 2014) and contributed to UN Environment working groups on Consumer Information and Sustainable Public Procurement and Eco-labelling (SPPEL). Cooperation was operationalized through joint Steering Committees established in 3 of the Project's pilot countries (Colombia, Peru, Vietnam) where SPPEL is also implemented; these structures allowed for regular information exchange and contributions to formulation work and

[54] The Strategic Approach to International Chemicals Management (SAICM) is a global policy framework to foster the sound management of chemicals whose Secretariat is hosted by UN Environment; it was agreed during the 2002 Johannesburg World Summit on Sustainable Development that by 2020, chemicals will be produced and used in ways that minimize significant adverse impacts on the environment and human health

policy review. Moving forward, it is envisaged that the Roadmaps for Action developed under the Project context in these countries will consider sustainable public procurement, as this topic is seen as a key driver to promote eco-innovation.

141. In selecting the sectors for the Eco-Innovation Manual's Value Chain Supplements, the Project was guided by the International Resource Panel (IRP)'s report on "Priority Materials and Products: Key Environmental Impacts", thereby supporting its scientific findings by focusing on agri-food, chemicals, and metals. As well as ongoing conceptual discussion between the two projects and collaboration during the 17th IRP meeting in Davos, Switzerland (in conjunction with the 4th Global RECP Conference), the Eco-Innovation Project's Ugandan partner contributed his expertise to the IRP-led High-Level Dialogue for scientists, industry leaders, & policy-makers[55].

142. Although Eastern European countries were not targeted for pilot activities, the Project sought cooperation with the Green Economies in Eastern Neighbourhood partnership project. Following a May 2014 workshop on Green Economy and SCP in Tblisi, Georgia, the NCPC from Albania submitted a proposal to implement an eco-innovation project through the ONE UN in Albania funding. In 2016, UN Environment's tourism program developed a project concept based on eco-innovation and life cycle approaches to support the transformation of tourism value chains in Small Island Development States. This project succeeded in leveraging financing through the International Climate Initiative of the German Ministry of Environment.

143. Although not visible during the Project period, catalytic potential can be expected in future in two of the Project's pilot countries (Peru, Vietnam) which have also been selected for national implementation under the Partnership for Action on Green Economy (PAGE)[56]. Interviews undertaken as part of this evaluation indicated that the potential contribution of eco-innovation to PAGE overall has not been fully leveraged.

144. The Project had the opportunity to make links with the policy components of Switch Asia (where eco-innovation was included in the workplan of Sri Lanka) and SwitchMed (where eco-innovation was integrated into the SCP Action Plan in Egypt and collaboration with the programme facilitated the translation of the Business Case for Eco-innovation into Arabic and French to extend its distribution to the Middle East/North Africa region).

145. However, there are significant, as yet untapped opportunities for collaboration between SwitchMed and the Eco-Innovation Project, which are notably both funded by the same donor. For example: i) dissemination of results through SwitchMed Connect; ii) contributing to and/or tapping the insights generated through national synergy workshops led by the SCP/RAC Green Entrepreneurship's Demonstration Component where policy-makers are brought together to discuss how to create an enabling environment for eco-innovative enterprises seem like an ideal fora to contribute the knowledge developed under the Eco-Innovation Project and to tackle the challenges and opportunities for enabling access to finance. While this was a missed opportunity in the four

[55] "Sustainable Resource Management: Business Opportunities and Economic Potential", convened in Paris, France on 18 November 2016

[56] Launched in 2013 at Rio+20, this partnership currently brings together 5 UN agencies (UN Environment, UNIDO, International Labour Organization, UN Institute for Training and Research, UNDP) whose mandates, expertise, and networks can collectively offer integrated and holistic support to countries on inclusive Green Economy, thereby operating as a mechanism coordinating UN action on Green Economy and progress towards the SDGs

workshops that have already taken place, further synergy workshops are planned in 2017-2018 (Algeria, Egypt, Israel, Palestine). Another intermediate area for collaboration is linked to taking lessons learned from 24 incubated Green Entrepreneurship and 130 Switchers' stories[57] which demonstrate existing eco-innovative start-ups and entrepreneurs in SwitchMed's 8 pilot countries and offer inspiration with respect to scaling up eco-innovation. It is understood that based on surveys carried out amongst these cohorts, SCP/RAC has indepth information on the needs and requirements of eco-innovative entrepreneurs, which could be a useful resource; iii) with respect to the policy dimension, under SwitchMed, the pilots undertaken in 4 countries (Egypt, Israel, Jordan, Palestine) have yielded useful lessons learned[58] which could enrich the Eco-Innovation Project's outputs; iv) UNIDO-led Business to Business Events and brokerage events[59] could be interesting venues to present eco-innovative solutions; v) the experiences from 133 pilot companies[60] involved in the MED TEST II Demonstration Component could be mined for business case arguments, policy mix to adapt eco-innovative solutions at the process level within existing SMEs.

146. A staff member within Switch Africa Green has been co-financed to increase linkages to the delivery of projects in Kenya, South Africa, and Uganda.

147. Outside of the UN system and outside of the RECP*net* structure, the Project's outreach efforts appeared to be ad hoc and opportunistic. Two validation workshops were undertaken for its Policy Component in January 2017 trained 27 students and reported as catalysing cooperation with 2 universities in Colombia (University Salazar y Herrera, University of Antioquia), but it is not clear how such a training will upscale the Project's results or foster replication. The Eco-Innovation Manual was translated into Portuguese and French, respectively by the Brazilian Agency for SMEs (SEBRAE[61]) and Pôle Eco-conception[62]. While the Manual is a step-by-step approach, the pilot experience of the Project showed reluctance to open up the Manual, despite undergoing training, and that embarking was prompted at the strong encouragement of the external knowledge experts. Suffice to say, it can not be expected that the simple provision of a Manual will spark meaningful upscaling. In this light, Pôle Eco-conception has convened several training workshops in the period before the Project's closure aimed at building capacity and application.

148. An important actor already working in the field of SMEs and eco-innovation was overlooked until a very late stage. Since several years, through its SME and Entrepreneurship Division, the OECD has been examining SME development in a cross-cutting way (considering skills development, the

[57] www.switchmed.eu/en/corners/start-up/histories/histories and www.theswitchers.eu/

[58] www.switchmed.eu/en/corners/policy-makers/actions/action-3 and www.switchmed.eu/en/news/news-1/Israel-Jordan-and-Palestine%20are%20implementing-circular-measures-on-the-ground

[59] www.switchmed.eu/en/corners/Business-networks-and-intermediaries and www.switchmed.eu/en/corners/Business-networks-and-intermediaries/actions/Brokarage-events-fostering-eco-innovation-partnerships

[60] www.switchmed.eu/en/corners/service-providers/actions/MED_TEST_II_progress

[61] SEBRAE is a non-profit private entity has a mission to promote the sustainable and competitive development of small businesses. It has 700 onsite service centres throughout Brazil and over 5000 small business experts working towards transferring knowledge and know-how to those who own or intend to start a company

[62] This French-based NGO has national recognition through the French Agency for the Environment (ADEME), is a founding member of the European network of eco-design centres (ENEC), and runs a national network of more than 35 relay centers across France on the theme of eco-design, eco-innovation, and circular economy. In making the request to UN Environment to undertake the French translation, the idea was to use the Eco innovation Manual and its three sector supplements in capacity building events throughout 2017 in France.

regulatory framework, and access to finance) and had already developed a self-diagnostic tool[63]. It was only towards the end of the Eco-Innovation Project that the OECD discovered that it was "*working on a similar approach and that there were many synergies*". The OECD expressed interest in the Project's outputs as a way to inform its own policy discussions. While linkages may have been present at the outset of the Project, The World Business Council for Sustainable Development (WBCSD), a channel for reaching and influencing the global business community, did not seem to be aware of the Project's outputs ("*you get an indication of many businesses are using these, if the WBCSD isn't aware of it*") and also expressed interest in being a vector for dissemination.

The Project's Catalytic Role and Replication potential is rated as 'Satisfactory'

E. Efficiency

149. The MTS 2014-2017 directs all UN Environment activities to work towards securing greater effectiveness by achieving more with the available resources.

E1: The complexity of the Project's objectives, the structuring and staggering of donor funding vis-à-vis a variety of activities across Policy and Application components, together with an underestimation of the time needed to recruit staff, engage experts & local implementing partners, and undertake conceptualisation and implementation created a major challenge for time efficiency.

i. Timeliness, Adaptation, and Effect of Delays

150. The Project's 36 programmed months of activity was initially set to begin 1 June 2012 and end 31 May 2015 for activities funded by DG ENV; activities funded by DG DEVCO were to begin on 1 June 2013 and end on 31 May 2016, thereby creating a 48-month duration. Already in its first annual reporting to the donor for the 2013 period, the Project Team recommended to extend the Project to the end of 2017 to coordinate the duration of DG ENV and DG DEVCO contributions, highlighting the added benefit of aligning project activities with UNEP's new biennial PoW. While not openly articulated, there appeared to be a recognition from a fairly early stage of the need to extend the timeline in order to achieve the Project's outputs & outcomes.

151. The first 6 months were dedicated to establishing the Project's foundations, recruiting core staff (which turned out to be slower than anticipated, on the order of a 6-month delay), and undertaking initial mapping exercises to identify relevant initiatives, technical experts, and institutions. Challenges (and with these, more delays) emerged due to limited expertise in the emerging field of eco-innovation. This had a knock-on effect for institutional engagement at national level, which was finally launched only in early 2014. The period for identifying, assessing, and engaging consultants to support the Project's national and regional activities from UNEP's regional offices and the demonstration sites in the pilot countries took longer than planned and further delays were incorporated through a decision to start the implementation at the same time in all countries in order to have adequate support from the sector experts. While substantive advances were made on the Project's core outputs, the key supplier for developing the Eco-Innovation Manual

[63] The OECD Sustainable Manufacturing Toolkit is described as providing a practical starting point for companies to improve the efficiency of their production process and products in a way that contributes to sustainable development and green growth. It is available from https://www.oecd.org/innovation/green/toolkit/

was changed mid-way, a new knowledge partner was identified and engaged, and the scope for this effort seemed to both widen and deepen.

152. In conclusion, time efficiency was a major challenge. The Project finally asked for two no-cost extensions. The first revision in 2014 was justified by the need to accommodate the delayed start of national activities due to prolonged selection of local implementing partners that resulted from using an open call for proposals. The Global Partners Meeting in November 2015, which functioned like a mid-term evaluation drew attention to the fact that the Project would need a longer time to show results. A second extension was granted in March 2016. Over the past two years, fund disbursement was delayed due to UN Environment's transition of its resource management system to Umoja, which contributed to critical delays in national implementation. With a completion date set for 30 September 2017, this constitutes a significant extension of the originally envisaged timeline.

153. Given the level of complexity or the Project's objectives and the fact that policy processes are involved, it is understandable that a 3-year duration would not be sufficient to both raise awareness and develop tangible steps forward. Discussion with the donor on this point yielded the insight that all projects within the ENTRP portfolio in the past year have been extended even up to three times, related to problems with design, planning, and ambition level. This raises questions regarding operational effectiveness. This also implies a need for follow-up at country level to ensure consolidation of the results.

ii. Cost Efficiency

E2: Cost efficiencies were pursued through nesting in a larger umbrella, sharing consultants in UNEP regional offices across projects (which also facilitated the creation of synergies and knowledge transfer), and using partnerships & joint implementation, although the level of in-kind contribution tended to exceed the expectation (and at times, capacity) of local implementing actors, thereby risking to weaken the operational set-up.

154. On the one hand, the Project was described as ambitious; on the other hand, amongst one of the most well-funded initiatives of its era, with an overall budget of USD 6,052,083 that rose to USD 6,168,634[64]. This 1.93% increase, presumably due to exchange rate fluctuation, contributed a modest cost efficiency. Compared to the anchoring of Resource Efficiency in Vietnam, which was put at USD 10 million over a 6-year period facilitated by DANIDA, UN Environment's achievements through the Eco-Innovation Project look exceedingly favourable.

155. By design, the use of partnership agreements & joint implementation, as opposed to transactional contracting, enlarged the pool of available resources by drawing on substantial in-kind contributions, which also functioned to build local ownership. However, the extent to which these contributions were eventually a critical component already mid-way through the intervention was deemed overly onerous by the bulk of the local implementing partners, thereby constituting a factor that risked weakening the institutional context needed to facilitate success. The capacity of the local implementing partners to undertake such cooperation (which was seen as an integral part of eco-innovation) was over-estimated.

[64] Reflecting the contribution of 2.725,000 euro from DG ENV and 1.275,000 million euro from DG DEVCO which remained stable over the course of the intervention

156. Explicit cost-saving measures were used through sharing of project consultants based in UN Environment's regional offices in Bangkok and Panama, who provided coordination support to the Eco-Innovation Project and the Sustainable Public Procurement and Eco-labelling Project, and 10YFP on a 50-50% basis. This facilitated the creation of strong synergies between these projects. Towards the end of the Project, a consultant based in the Bangkok office was engaged to support three UN Environment projects (Eco-Innovation-10% with Resource Efficiency through Application of Life Cycle Thinking and SwitchAsia in equal parts). In addition to providing cost-effective support, such a structure provided significant opportunities to carry through knowledge and materials from one project to another.

157. While explicit cost efficiencies did not necessarily stem from the arrangement, the fact that the same German consultancy was engaged as the knowledge partner for developing the Value Chain Supplements on Chemicals and Metals and providing local consultancy & coaching as was engaged in parallel activities supporting UNIDO on its RECP programme' Innovative Chemical Solutions workstream, which subsumed and extended this agency's work on the Chemical Leasing approach, was seen as providing an opportunity for alignment on content.

158. HR & GE was not allocated a specific budget in relation to the results achieved; however, as already mentioned under Strategic Relevance and quantified in Table 6, the Project Team explicitly favoured working with local service providers that demonstrated gender balance in its teams and compared to other UN Environment projects. Hence a cost-efficiency argument could be made in so far that HR & GE aims were pursued due to the culture created within the Project, without the need to allocate specific budget to direct this.

iii. Building Upon and Adding Value to Other Initiatives

E4: The Project leveraged existing institutions, partnerships, complementarities, and synergies with other initiatives and programmes to increase project efficiency.

159. The strategic decision to leverage the jointly-implemented UNIDO-UNEP RECP Programme and RECP*net* as the backbone for sourcing local implementing partners and functioning as a vector for reporting progress and sharing the Project's outputs and outcomes allowed the Project to build on and strengthen this existing institutional arrangement as well as enhance overall project efficiency.

160. Through the Project's support to the RECP*net*, there were regular opportunities to "piggyback" awareness-raising and training activities onto annual and regional meetings as well as link to other relevant venues[65], thereby providing a cost-effective means to disseminate information

[65] In the 2016 reporting period, a number of events integrated substantive content from the Eco-Innovation Project, including: **13-14 September 2016**, Buenos Aires, Argentina: Sustainable Brands meeting, attended by around 300 participants, contained a UN Environment presentation about the project and UN Environment's engagement with business. **28-30 September 2016**, Santiago de Chile and Temuco, Chile: International Seminar of Sustainability organized by PROCHILE with 120 participants from academia, government, and the private sector. UN Environment delivered a keynote presentation on i) The Agenda 2030, the SDGs and the role of the private sector; ii) The need for a system change and how eco-innovation can contribute: iii) The eco-innovation project and methodology. Two eco-innovation case studies from the region were showcased. It also included a parallel session, the best attended, on the eco-innovation approach. **29 September 2016**, Santiago de Chile, Chile: Upon demand from the Ministry of the Environment, eco-innovation training was organized for the Ministry and Cleaner Production Centres of Chile. **17-18**

as well as add value to other initiatives. In this respect, broader synergy opportunities were sought through service providers and their extended networks.

161. It was reported that the Project raised the RECP*net*'s profile internally within UN Environment and externally with government counterparts and other organisational partners with the result that this network is increasingly seen as an effective implementing partner able to contribute to the environmental dimension of the 2030 Sustainable Development Agenda and specifically to UN Environment efforts in this area.

162. The Project actively sought to build synergies with ongoing initiatives in most of its pilot countries, especially in the areas of business and climate innovation as several overlaps were identified, either by theme or region. For example, in the countries where the Policy Component was being implemented, information exchanges were initiated with Switch Asia and SwitchMed (although in the latter case, as already mentioned, perhaps these were not optimal). As already described in the above section in the context of building catalytic power and replication potential, the Project explicitly pursued collaboration with several UN Environment initiatives (Chemicals & Waste Subprogramme, 10YFP on SCP, Sustainable Public Procurement and Eco-labelling, Life Cycle Initiative/Resource Efficiency Achieved through Life-cycle thinking (REAL), International Resource Panel, Switch Africa Green, SwitchMed and Switch Asia), which enhanced project efficiency.

163. Outside the UN system, the Project developed connections with two EC-funded research projects to leverage their dissemination channels: i) Green EcoNet, which is building a platform of tools and options for greening SMEs to which UN Environment provided inputs as well as case studies from Brazil, Vietnam, etc.; and ii) Innovation for Sustainable Development, which is working to advance policies for system innovation and eco-innovation.

The Project's Efficiency is rated as 'Satisfactory'

F. Factors Affecting Performance

i. Preparation and Readiness

F1: The problem, situation, risks, and safeguards were adequately described. A coherent logical framework with interconnected outputs & outcomes leveraged designed-in synergies. However, indicators were primarily quantitative in nature and did not identify impacts that could be attributed directly/indirectly to using the capacities built, changing mindset, and deriving benefits that could inspire broader application & replication; a stronger formulation of outcomes reflecting changes in behaviour would have been useful to guide the pilot's "proof of concept" fully through implementation.

F2: The serious under-estimation of time needed to work in partnership, initiate and complete multiple complex objectives operationalized through simultaneous workstreams was already recognized in the Project's first year of operation, with a recommendation to extend the Project to the end of 2017.

October 2016, New Delhi, India: Life Cycle Management Conference, which included a presentation from the Project's Vietnamese implementing partners. **18-19 October 2016**, New Delhi, India: UN ENVIRONMENT Project – REAL: Resource Efficiency through Application of Life cycle thinking (GPGC funded) training 'Lifecycle based solutions for sustainable value chain management' included eco-innovation methodology introduced by local implementing partners. **25-28 October 2016**, Hanoi, Vietnam ASEAN+3 Leadership Programme on SCP focusing on Sustainable Value Chains with 50 participants and organized by SWITCH Asia PSC project. The training included inputs from the Project's Vietnamese implementing partners.

F3: The strategic decision to leverage the existing infrastructure of RECPnet implied high needs for building change agent/business model innovation competences of RECP technical service providers; the extent to which the eventual skill gap was fully understood in the design phase is not clear and the compensatory idea that this would "force" collaboration with other experts with relevant competences did not materialize for the most part.

F4: While the strategic decision to focus on SMEs is understandable, given their importance in developing & transition economies, questions were raised about their interest to be first-movers and their actual ability to catalyse the value chain to drive the Project's long term intended impact.

164. A key design feature is the Project's nesting in a larger 'umbrella', whereby its outputs and outcomes meaningfully contribute to the results framework of the Resource Efficiency Subprogramme. This positioning gave the Project: i) higher visibility; ii) potentially higher access to a wider portfolio of other programs and actors to capitalize on its outputs and outcomes; iii) a built-in capacity for possible expansion and extension to assure follow-on and follow-up.

165. The Project Document contains an adequate problem analysis based on moving from regulatory-driven compliance to inspiring action based on long-term sustainability thinking and shifting from 1st generation innovation efforts focused on resource efficiency to 2nd generation linked to the need and opportunity for action. The situation analysis was well-encapsulated in the project justification, linked to globalization challenges and the need for a targeted intervention to build a foundation for transformation.

166. The Project had a coherent logical framework, which allowed for the construction of a Theory of Change where drivers, assumptions, intermediate states, and impacts towards the overall project goal could be deduced. The 4 components (driving the direct outcomes) within the framework are supported by 13 outputs, which are themselves backed up by numerous activities. Key activities were mentioned, budgeted, and suitably sequenced, providing a good basis for tracking progress and building momentum towards reaching the envisaged outputs and outcomes. An exit strategy was not mentioned. The Project design infers three cascading and overlapping phases, with an initial focus on developing tools and methodologies to support eco-innovation and promote the uptake of resource efficient practices. Over time, the focus shifted towards implementing the tools/methodologies and guidance material that was developed, for purposes of verification and refining the outputs based on feedback and actual experience, with a final focus on concluding the planned deliverables and disseminating achievements and results.

167. The outputs and outcomes in the original Project Document were defined and interconnected, thereby creating possibilities to leverage designed-in synergies. However, a stronger formulation of outcomes[66] reflecting actual changes in behaviour stemming from the intervention would have better guided the pilot's "proof of concept" fully through to implementation. The Project Team received this feedback through the PRC comments in 2014 during the 1st revision. It is understood that reformulations and reorientation would have constituted a new project requiring a new approval.

168. The Project's indicators were formulated in a way that the focus of what was measured could be easily quantified (in terms of *numbers of* manuals, guidance, case studies produced, validation workshops held, etc.). Given that the outcomes primarily relate to changing behaviour, it

[66] The EOU follows this working definition for outcomes: "a change of behaviour resulting from the use/application of outputs (that is not under direct control of the project)

would have been more helpful to use indicators that facilitated the identification of impacts, which could then be attributed directly or indirectly to *using* the capacities that were built, changing mindset and behaviour, and deriving benefits from the application of eco-innovation. It is understood that such indicators are difficult to construct and would have been hard to measure within the too short timeline provided for national implementation. Nevertheless, such indicators would give a more reliable picture of progress towards the project's overall goal and objectives.

169. Risk identification and safeguards presented in the Project Document were generally satisfactory. Major risks were mentioned in the risk log and inferred in the identification of critical success factors for effective implementation. Possibilities for leveraging these factors towards success were outlined, as well as strategies to manage the risks.

170. From a design standpoint, the **engagement & implication of local actors** (from business & industry, RECP service providers, through to national policy-makers and other key stakeholders), **together with planned national, regional, and international collaboration** (e.g. with global private sector associations and their national business networks; partnering facilitated by the 1 UN joint planning framework, i.e. with UNDP, UNIDO) provided useful **elements for replicating and upscaling the eco-innovation concept** and best practices.

171. The inclusion of institutional strengthening, capacity building, and peer exchange through global/regional networking recognizes the power of this combination of features in **changing mindsets**. Research suggests that influencing/implanting attitudes and behaviour represents the "highest level of intervention in a system", thereby constituting the most effective "leverage point"[67]. While the positioning of the overall Project Goal is indeed at the level of changing mindsets (as the most effective level of intervention, this can be expected to have the highest sustainability effects), the **timeframe** for achieving the results and a full mindset change can be expected to occur **long beyond the finalization of activities and project closure**. The assessment of the Project's direct outcomes indicated that direct outcomes, as defined in the R-TOC, were delivered and were designed to feed into a continuing process. The extent to which the Project was successful in building national ownership and country-drivenness is a positive element and UN Environment can leverage the strong relationships that it has with the involved actors in the pilot countries. Key elements of eco-innovation have been reflected in key policies in some pilot countries. The extent to which activities will continue to support and sustain the change in mindset beyond the life of the Project is yet to be seen. Normally this requires resourcing and prioritisation. These elements are more likely to occur with a project context rather than relying on spontaneous uptake. The broader policy context of the SDGs that requires integration reflects the holistic approach promoted by eco-innovation and should be an asset in moving towards the project's desired long-term outcome.

172. At the level of programme design, there was clearly an under-estimation of the time that would be needed to initiate and complete the multiple complex objectives operationalized through simultaneous workstreams, which involved identifying and engaging suitable knowledge partners and local implementing partners, developing the core eco-innovation guidance & tools in a participatory and iterative manner, selecting and engaging actors at national level for the piloting for both application and policy dimensions, as well as documenting the results for backing up the

[67] Green Paper on Scaling-up of MED-TEST II Activities (2016), prepared by Dr. J. Miller and E. De Friend for the European Union, UNIDO, and SwitchMed's Networking Facility, building on the research, amongst others, of D. Meadows (1999), Leverage Points: Places to Intervene in a System. Hartland, Vermont, The Sustainability Institute

overall eco-innovation business case. The need to extend the Project was signalled in the first annual reporting to the donor and finally, the Project was subjected to two extensions, effectively increasing its timespan to achieve 36 programmed months of activity to a 64-month duration, as opposed to the originally envisaged 48-month period.

173. While opting to leverage existing institutional arrangements and the natural partnership with UNIDO, the RECP Programme, and RECP*net* (seen as a strength in UNEP's performance evaluation system), this brought with it an implicit orientation towards working with engineers (typically recruited to staff RECP centres). Respondents interviewed reported that the eco-innovation idea was sold to them as "*an opportunity to take relationships with clients from being small projects and 1-off mandates to long-term engagement as eco-innovation doesn't happen within a 3-6 month timeframe*"; indeed, the process can be ongoing for several years. Technical experts in mechanical or physical science can and do bring technology to the service of a specific problem, but the adoption of that technology requires a different skill set. Convincing a business owner to embrace a technology or to change his/her way of working or designing products is not typically what engineers value or are skilled in doing. Consultants in sociological and human sciences would have more natural strength in this domain. While there was an idea that RECP service providers would therefore be "forced" to collaborate with other experts to bridge the anticipated skill gap, the extent to which this spontaneously occurred seemed limited.

174. After receiving an initial regional training, the RECP service providers were expected to develop training workshop agendas, identify participants, and adapt training material to transfer the eco-innovation concept and tools. While laudable in terms of building ownership, understanding, and engagement, this risked that effective training and cascading mechanisms would not be developed within the context of the Project due to a mismatch of the existing competency base for this task, consequently limiting the potential impact of the tools and business case. These aspects represent a potential design weakness. Compensatory actions were not outlined in the Project Document. The Project Team contended that the Eco-Innovation Manual functions as the main training material and it should be adaptable to local conditions and language by implementing institutions.

175. Another design decision relates to the focus on SMEs. While this is understandable given their importance as a backbone of developing & transition economies and the support that UN Environment projects tend to receive for selecting this target group. However, the Project's aim was to embed sustainability into value chains, prioritizing those that are the most polluting with unsustainable industries. This raises the question about the extent to which SMEs – without the clout or the scope to work with the big influencers, in addition to being constrained by what the value chain asks from them – can and do act as agents of change in the value chain.

176. The Project's design implied that SMEs want to be innovators within their market and that a business owner would welcome the opportunity to differentiate his/her offering from the competition through eco-innovation. Main factors driving change in technology or behaviour are policy backed up with enforcement rather than incentives and market drivers (if your competition is doing it, then you must do it as well). In the targeted setting, SME owners would typically want to avoid the risk of being a first-mover. While the younger generation creating start-ups may want to innovate, the extent to which older business owners and their heirs are open and appreciate the opportunity for eco-innovation needs further investigation. As one Kenyan respondent put it, "*we find the younger generation very open, but for family-held facilities, change is not easy because of the risk. They will not change unless they are very sure or have seen it somewhere before*". It was understood that the Project intentionally did not focus on start-ups. Rather, its aim was to gauge the extent to

which it was feasible for traditional RECP-type service providers to develop eco-innovation solutions for mainstream companies.

177. It was not clear if lessons from other relevant projects were incorporated into the project design. At the time of its design, the PDQ template for reviewing project design was not available. The Project was reviewed internally under the ENRTP framework, which had its own steering and approval process. Through this process, comments were provided to which there was a response. In 2014, through the internal review of the larger RE Subprogramme, PRC comments were provided that were relevant to various aspects of the Eco-Innovation Project, and these could be addressed in conjunction with its 1st revision. As a result, some changes were made in the focus of outputs and activities under the Policy Component, which have already been discussed under Changes in Design during Implementation.

The Project's Preparation and Readiness is rated as 'Moderately Satisfactory'

ii. Project Implementation and Management

F5: Suitable project management arrangements were put in place in UNEP and in the pilot countries to progress activities towards envisaged results. Adaptive management facilitated learning but gaps in communication and mutual understanding, together with perceived shifts in goalposts & improvisation frustrated local implementing partners, increasing in-kind contribution as a compensatory mechanism.

178. Project management arrangements outlined in the design phase were put in place wherein UNEP's Business and Industry Unit (BIU) had full responsibility and then subsequently designated relevant actors to the needed roles to manage and execute project activities. In this context, collaboration with UNEP's Regional Offices was appropriately deployed to undertake mapping exercises in the early part of the intervention to identify suitable local implementing partners and later, to organise regional training activities and provide support on managing activities to progress towards the envisaged results. Coordination with principal external partners (i.e. UNIDO, RECP*net*) was conducted through the RECP programme management team and the RECP*net* Executive Committee using this Programme's governance structure as illustrated in Figure 1. This structure offered a practical means to support the management of the local implementing partners and their responsibilities.

179. Regarding daily project management, a UNEP Project Officer was recruited to oversee the entire endeavour, with technical assistance from BIU staff and leadership and supervisory support from the Head of Unit in the role of Project Manager, who assumed overall responsibility for project implementation. The leadership and support of the Project Team as a whole (including external consultants engaged through the Regional Offices) was highly appreciated. Numerous stakeholders especially remarked on their dedication and engagement.

180. Within the 9 pilot countries, Steering Committees were constituted by key stakeholders, who were identified by the local implementing partners, with guidance and support from UNEP. These structures usefully functioned to provide feedback on the outputs being developed and created linkages with national governments and key institutions with upscaling potential.

181. The Project Team practiced adaptive management with the aim of iterative and incremental learning. One result of this approach was the development of additional unplanned outputs (e.g. templates, training and dissemination events as outlined under Section B. Achievement of Outputs) which boosted the prospects of achieving the intended outcomes. As the eco-innovation concept

"took many of the implementing partners out of their comfort zone", a push strategy was adopted whereby, "*we had to push them to really look for opportunities for the business, to really look for where change could be made, to think really deeply and logically about how a particular change is going to be made*". In progressing activities through to results, team members indicated that they "*had to apply different kinds of mindsets and tools and had to adjust along the way to be able to help them*". The Project Team reported that there was extensive and regular communication with local implementing partners. In distilling the experience and frustration of these actors, given the high absorptive capacities demanded to understand and apply this novel approach, the effectiveness of communication in building mutual understanding and expectations is an area that needed improvement.

182. As already mentioned under Cost Efficiency, while partnership agreements implied in-kind contributions, which instantiated joint implementation and local ownership, the level of in-kind contribution finally delivered was deemed to be overly onerous by the majority of local implementing partners. They expressed frustration with what was perceived as an improvised approach with shifting goalposts & timelines: "*we had to do 10-20 revisions and that was just for the preliminary pre-assessment report; we didn't start out with a final format, it was being developed along the way. The problem was that the format kept expanding*" and another similar view: "*for the first 3 months of the project, it was very difficult because UNEP didn't have a template for the required report, so we had to design it ourselves…for the preliminary assessment, I had to do reports of up to 30 pages and the reporting template changed 6 times. This was very time-consuming…each time we changed the report template, I felt it got better and the UNEP team always explained that eco-innovation is a learning process and that we must expect trial and error...the Eco-Innovation Project had many extensions but with no change in the budget for us an implementing partners. So having to do all this work, it was not okay for us*". Some stakeholders explicitly linked the pressure and high expectations to the inexperience of the Project Team directing activities and working under a pilot project to develop results needed to prove the project concept within timeframes and settings that did not facilitate such speed and content. Other actors also pointed to the Project Team's lack of business engagement experience, pointing out that working with companies is quite different to working with governments. There was also an observation from the knowledge experts that the Project had a very complex structure and controlling apparatus, which was not always effective in being able to tap their contributions, due to the heavy steering from the centre.

183. On the one hand, there was a recognition of the limits of absorptive capacities for both the local implementing partners as well as the pilot companies. In response, the Project Team undertook considerable backstopping and "*did a lot hand-holding*"; external knowledge experts offered significant support; and a set of supplemental templates were developed to complement the Eco-Innovation Manual. On the other hand, there was a view expressed that "*RECPnet members take any opportunities, they don't really well estimate what would be required*". It is important to note that many of the local implementing partners, in their role as NCPCs, rely on projects coming through the UN system or international donors to fund their operations; therefore, the expectation to provide in-kind contributions risked to flow into pressure being put on local staff to put in extra time in an uncompensated manner, if the organisation did not have sufficient funds from other projects or commercial activities to cover the added work. This could then be an unintended negative social consequence of the Partnership Agreement mechanism.

184. In addition to the in-kind contributions from the local implementing partners, significant additional efforts were demonstrated on the part of the Project Team. The extent to which these extraordinary contributions were solely related to engagement in the subject matter and a drive to

achieve the Project's objectives within the given timeline, versus the need to compensate for inadequate planning and resourcing is not clear.

185. The Project Team met with the local implementing partners, knowledge partners and government representatives from each pilot country in November 2015 (see Picture 2). This proved to be a vital management mechanism in bringing all key actors into the same physical venue to learn from and inspire each other, gain feedback on the eco-innovation approach and tools/resources under development, promote peer networking and exchange, and collectively identify lessons that could be fed back into ongoing activities to recalibrate where needed and re-energize the overall endeavour. For instance, during this meeting, it was agreed to allocate at least two people to follow each project to ensure quality control and shore up activities in view of incomplete implementation of the methodology.

Picture 2: Global Meeting of Partners during 17-18 November 2015 in Kuala Lumpur, Malaysia

186. Another key milestone that enhanced project management relates to the recruitment of a Project Coordinator linked with the Bangkok Regional Office. His efforts from July 2016 to streamline templates and reporting activities were highly appreciated and effective, lessening frustration and helping the teams under his responsibility to focus on finalizing their activities.

187. The Project experienced a normal level of staff turnover for an intervention that spanned five years. The effect of the departure of the Project Officer in the final stage of the intervention, was lessened by an effective handover plan. Knowledge and institutional memory were well-documented and transferred. As this individual moved to another area of UN Environment, she remained accessible to the Project Team and contributed very useful input to this evaluation. However, staff turnover at this stage made the strain related to the administration of ENRTP projects more visible and created additional workload for project staff.

The Project's Implementation and Management is rated as 'Satisfactory'

iii. Stakeholders Participation and Public Awareness

F6: A stakeholder analysis was undertaken identified who was expected to contribute to and benefit from the Project. Primarily UNEP and the EC, as principal donor, were involved in design discussions and UNIDO had early visibility about how the Project would link to the jointly-implemented RECP Programme and help build new capacities, thereby extending RECPnet members' service offering.

F7: Collaboration was actively pursued with several UNEP initiatives and synergies were sought with ongoing activities in most of the pilot countries, especially in business and climate innovation.

F8: There were ongoing efforts to build public awareness and communicate the Project's objectives, progress, outcomes, and lessons (e.g. flyer, the Project's business case publication, UNEP newsletter, articles, online learning platform). Feedback gathered through project-related meetings, SCP events, and other fora was used to refine the eco-innovation approach and Project' outputs.

188. In the project design phase, major stakeholders who were expected to contribute to and benefit from the Project were identified (i.e. business & industry, especially SMEs; technical institutions; local communities; and national governments). Over the Project's 5-year evolution, 'innovative entrepreneurs' were added through an updated analysis of those having a stake in the Project's activities. Key partners seen as having differing levels of involvement in the Project's implementation were also identified, including: UN initiatives (e.g. UNGC) and agencies like UNDP and UNIDO (facilitated by 1 UN joint planning framework), regional/national EC delegations and other EC-funded programmes (e.g. SWITCH Asia, SwitchMed, Switch Africa Green), global private sector associations and their national business networks (e.g. ICC, WBCSD, RECP*net* members and their twinning partners (International Reference Centres).

189. When the Project was being designed in 2010, primarily UNEP and the EC, as the key donor through the ENRTP, were involved in the discussions. There appeared to be very little consultation outside of these partners. Colleagues from UNIDO had some visibility about how the proposed project would contribute to the jointly-implemented RECP Programme and help in building new capacities, thereby extending the service offering of RECP*net* members. A partnership analysis was undertaken to identify potential collaborators, but other international organisations (e.g. GIZ, which has major activities in eco-innovation, SME promotion, capacity-building, green entrepreneurship, and value chains) appear to have been overlooked.

190. Bi-annual and annual progress reports were provided to DG ENV and DG DEVCO under the ENRTP Strategic Cooperation Agreement / GPGC Programme Cooperation Agreements with the aim of keeping the donor informed and ensuring synergies. The EU Delegation in pilot countries was invited and participated in country meetings, whenever feasible.

191. While not involved in formulating the design of the Project, during implementation, outputs were developed through the contribution of the subsequently engaged knowledge partners, balanced by feedback from local implementing partners who also fed in perspectives from the pilot companies, which brought a useful "reality check" and added credibility to an otherwise potentially theoretical endeavour. Feedback and consultation was also sought with national government actors in the pilot countries, who were seen as representative of further end beneficiaries of the Project's outputs and outcomes. This approach to stakeholder participation was intended to incorporate measurable results that demonstrated benefits valued by business and policy-makers, with the aim of generating robust and relevant tools and guidance.

192. As already described under Sustainability and Replication, with the aim of building catalytic power and replication potential, the Project explicitly pursued collaboration with a number of UN

Environment initiatives (Chemicals & Waste Subprogramme, 10YFP on SCP, Sustainable Public Procurement and Eco-labelling, Life Cycle Initiative/Resource Efficiency Achieved through Life-cycle thinking (REAL), International Resource Panel), which functioned to enhance Project efficiency and leverage synergies. These collaborations were identified at the outset of the Project and progress and achievements realized through this outreach were conveyed in the annual reporting to the donor.

193. As already mentioned under Efficiency, the Project actively sought to build synergies with ongoing initiatives in most of its pilot countries, especially in the areas of business and climate innovation. In the countries where the Policy Component was being implemented, information exchanges were initiated with Switch Asia and SwitchMed. The significant, as yet untapped opportunities for collaboration between SwitchMed and the Eco-Innovation Project were detailed in the discussion on the Project's catalytic role and prospects for replication.

194. Outside the UN system, the Project developed connections with two EC-funded research projects to leverage their dissemination channels: i) Green EcoNet, which is building a platform of tools and options for greening SMEs to which UN Environment provided inputs as well as case studies from Brazil, Vietnam, etc.; and ii) Innovation for Sustainable Development, which is working to advance policies for system innovation and eco-innovation.

195. There were ongoing efforts to build public awareness and communicate the Project's objectives, progress, outcomes, and lessons. Constructive feedback gathered through project-related meetings, SCP-related events, and other fora was used to refine the approach and outputs. The eco-innovation approach was disseminated in regional events in Argentina, Chile, and India and through the bi-annual RECP Conferences and at times, linked side events (e.g. Davos-2015; Helsinki-2017). The Project Team reported that these various events demonstrated a wider uptake of eco-innovation related to themes such as circular economy, with UNEP's Eco-Innovation Project being referenced as a key aspect of these developments.

196. A recto-verso flyer was developed and distributed to communicate the message of harnessing eco-innovation for sustainable development. UNEP began publishing a Newsletter three times per year to showcase its business & industry activities, which was distributed to over 1000 recipients. The publication of "The Business Case for Eco-Innovation" in November 2014 became a prominent vehicle to communicate about and provide visibility for the Project. An indication of interest in and the impressive outreach this publication achieved is evidenced by the fact that it was electronically disseminated to 3'700 contacts, distributed in hard-copy form to 200 contacts, downloaded 23,000 times by Spring 2015, and cited by numerous websites (e.g. Green Growth Knowledge) and other publications (SWITCH Asia magazine, World Resources Institute, International Institute for Sustainable Development, local media in implementing countries (Malaysia, Vietnam), and it was prominently featured in a Guardian article[68]).

197. The online learning platform (http://unep.ecoinnovation.org/) developed in the Project's final phase is expected to function as a permanent repository for materials and awareness-raising. See Picture 3.

[68] Eco-innovation: Going beyond creating technology for technology's sake", published on 4 December 2014

Picture 3: Elements from UN Environment's New Eco-Innovation Website

Stakeholder Participation and Public Awareness is rated as 'Satisfactory'

iv. Country Ownership and Driven-ness

F9: The Project had a high level of country ownership and driven-ness designed into its structure (e.g. through criteria applied for pilot country selection, use of Partnership Agreements that embodied joint implementation and implied in-kind contribution, the constitution of local Steering Committees with stakeholders bridging business and policy spheres, feedback processes used for developing outputs, linkage to and relevance of Project activities to ongoing national initiatives, policies, and instruments).

198. Some key decisions very usefully designed in country ownership and driven-ness. For instance, this was assured through criteria applied in pilot country selection, which included: i) commitment from at least 1 governmental counterpart and local business & industry regarding Green Economy, promotion of resource efficiency or SCP and related market opportunities; ii) engagement of an RECP service provider as the local implementing (industry) partner; iii) existence of synergies with ongoing, related activities, especially those linked to an enabling policy framework; iv) potential for wider replication of best practices within the value chain.

199. Furthermore, the use of Partnership Agreements instantiated the concept of being in a joint endeavour with the local implementing partners. For this Project, where its success relies on the use and spread of the eco-innovation approach and the instruments developed, such an arrangement is very suitable for building in local ownership of activities and sustaining results.

200. The expectation for in-kind contribution that was built into these agreements is another factor that functioned to build local ownership. In this light, the local RECP service providers themselves were, for the most part, to develop the training material to transmit the eco-innovation concept and tools, which, by nature, can be expected to build ownership, understanding, and engagement. As well, submitting the Project's outputs to a rigorous consultation and feedback process that included the local implementing partners and key stakeholders in the pilot countries had the function of anchoring ownership for what was developed collectively, and would presumably spur use and spread after Project closure.

201. Steering Committees were constituted in each pilot country (organised by the local implementing partners, with guidance from UNEP). These local structures brought diverse actors from industry and government to work together to provide feedback on the outputs being developed, create linkages with national governments and key institutions with upscaling potential, and in the countries where the Policy Component was being implemented, they reviewed existing legislation to identify gaps and entry points for RECP eco-innovation.

202. Evidence of local ownership and driven-ness can be seen in the Country Reports delivered by the teams in Colombia, Kenya, Peru, and Vietnam, which elaborated activities in their "Roadmap to Action", agreed with the National Steering Committees, to implement recommendations coming out of the policy review studies. Before Project closure, eco-innovation was referenced and prioritized in the outcome policy documents of ongoing SCP initiatives in Egypt, Kenya, Sri Lanka, and Vietnam. For instance, in August 2016, the Kenyan government published a Green Economy Strategy & Plan, which identified a low carbon, resource efficient, socially-inclusive development strategy to create decent green jobs. A respondent indicated, "*What drives this is eco-innovation. We believe that eco-innovation is the driver*". In Malaysia, government representatives interviewed for the evaluation asserted, "*while the UNEP Project is at an end, the national steering committee will keep going*".

203. While it may not have been fully clear within the pilot countries at the outset of activities that eco-innovation was a needed response to national priorities and needs, by the end of the intervention, significant appreciation was expressed regarding its potential and value.

Country Ownership and Driven-ness is rated as 'Highly Satisfactory'

v. Financial Planning and Management

F10: The Project was adequately resourced and benefited from further (unquantified) in-kind contributions from local implementing partners and ad hoc opportunistic funding from external partners related to capitalizing on the Project's outputs.

F11: Suitable arrangements were put in place to manage and report on budget utilization. Administrative issues of ENRTP projects, coupled with UN Environment's shift to a new resource management system, drained staff time, exacerbated by staff turnover. Delays in payments stemming from this transition during April 2015 to December 2016 had negative impacts. While some partners were able to overcome the challenges, others could not so easily manage the cashflow disruption, which led to corresponding delays in their activities.

F12: Suitable legal instruments were used for cooperation agreements and to channel funding to contracted actors for implementation activities.

204. Project funding was secured primarily through the EC's ENTRP portfolio (87.4%), with an in-kind contribution from UN Environment making up the balance (12.6%) of the planned budget. A grant agreement signed with DG ENV for 2,725,000 euro initially covered the period of 1 June 2012 to 31 May 2015. A grant agreement signed with DG DEVCO for 1,275,000 euro initially covered the period of 1 June 2014 to 31 May 2016[69]. In total, the original budget for the project of USD 6,052,083 increased to USD 6,168,63, presumably due to exchange rate fluctuation as donor funding was denominated in euro. This Project was described by a respondent as the 2nd or 3rd most well-funded UNEP Project of its era. Together with the in-kind contributions and external sources tapped, this

[69] Following two no cost extensions (2014, 2016), the concluding period for both of these grant agreements was extended to 30 September 2017

level of resourcing was adequate to sustain activities over the course of the intervention. The project budget summary, sources of funding, project expenditures (as of 31 December 2016) and review of funding agreements are provided in Annex 4.

205. The Project leveraged additional resources through substantial unquantified in-kind contributions provided by the local partners in the context of their Partnership Agreements which implied joint implementation. Further resources were also tapped on an ad hoc basis (e.g. from SEBRAE, the Brazilian Agency for SMEs and Pôle Eco-conception, a French NGO that translated the Eco-Innovation Manual into Portuguese and French, respectively), motivated by their interest in utilizing the Project's outputs in future.

206. Small-Scale Funding Agreements (SSFAs), Project Cooperation Agreements, and Special Service agreements (SSAs) were the main legal instruments used to concretize roles/responsibilities and channel support to contractors. Local implementing partners submitted interim progress reports and final reports. These were reviewed by the Project Team and approved vis-à-vis the disbursement of allocated funding.

207. A Financial Administrator was assigned to the Project whose role was to advise, help, and consult with the Project Office and ensure that: i) funds were used for the intended purpose; ii) rules and procedures were followed; iii) assure that all legal agreements were in line with project activities and meet UN Environment standards; iv) certify financial statements related to SSFAs and SSAs and donor reporting.

208. The Project Officer had a close working relationship with the Financial Administrator which featured collaboration, regular information exchange, and the provision and use of bi-weekly expenditure reports. This collaboration continued during the Project Officer succession that occurred in the final stage of the Project, supported by a handover plan which included financial planning and management aspects.

209. Issues related to the administration of ENRTP projects, coupled with the shift to a new resource management system (e.g. misalignment of budget and finance data for the same reporting periods and project outputs) continued to create a drain on staff time, which was exacerbated with the turnover of staff, creating additional workload for the project staff. Although this planned change was communicated and prepared, UN Environment's transition to a new resource management system nevertheless caused delays in payments to the local implementing partners, which resulted in work stoppage in some cases and certainly generated corresponding delays in their activities. During 2015, work plans of many local implementing partners were over-optimistically revised to make up for lost time. However, full implementation was not always possible within the overall project duration agreed with donors. As already mentioned, the Evaluator did gather evidence that when faced with late delivery of Project payments, RECP*net* partners in two implementing countries found creative means to include eco-innovation within other programmatic activities (Vietnam: eco-innovation was integrated into a call for a technical support project funded by DANIDA; Sri Lanka: integrated eco-innovation into a 2017 proposal to UN Environment's 10YFP on Consumer Information, which was accepted) in order to continue developing their competence and maintain momentum on eco-innovation within their own structures.

210. The Project followed standard UNEP reporting procedures. A unified bi-annual Financial Report was submitted to the relevant Programme Framework Coordinating Division. Annual financial reports were prepared and provided to DG ENV and DG DEVCO under the ENRTP Strategic

Cooperation Agreement / GPGC Programme Cooperation Agreements with the aim of keeping the donor informed. The budget proposal was approved by the EC and then translated internally by UNEP. Any changes in the budget were communicated back to the EC, in accordance with pre-established categories (e.g. staff, travel, implementing partners, etc.). The EC carried out its own financial evaluation of the Project. At the time of the TE, no issues or questions had been put forward by the donor.

211. One of the challenges of this Project from a financial planning and management viewpoint was that funding was provided from the donor side in euro and the bookkeeping on the side of UN Environment was in US dollars. At the Project's initiation, the euro was very strong and thus planning was conducted on the basis of a relatively high basis. Due to exchange rate fluctuations, the Financial Officer estimated that the Project lost about 10% of its funding and indicated that the projects are out of reality with their planning because of the exchange rate.

212. Another challenge faced in the intervention's final phase is related to cashflow management in that the last (20%) of donor funding is provided once all activities are finalized. The Project seems to have managed to bridge this situation by utilizing internal staff time to close the Project and by finalizing the outputs as soon as possible (supported by setting a deadline for final fund disbursements), which is seen as a sign of good financial management. Nevertheless, it is assumed that this situation has created extra strain on the project staff, exacerbated by issues related to staff turnover.

The Project's Financial Planning and Management is rated as 'Moderately Satisfactory'

vi. UN Environment Supervision and Backstopping

F13: Project management support, supervision, and technical backstopping was competently provided by the Project Team, supervisors, and the engaged knowledge partners and was highly appreciated.

213. Support and supervision from the UN Environment side was highly appreciated by those interviewed for the evaluation. The Project Officer and Coordinators were highly accessible and very responsive and perceived to be very engaged, fulfilling important coordinating and supervisory roles as well as providing substantive inputs through regional training activities.

214. Technical backstopping was conducted by the knowledge experts engaged by the Project and included in their Terms of Reference. These experts were perceived as highly competent and their support was highly appreciated.

215. Project revision was undertaken in two instances to take account for delays related to conceptualization challenges at project outset, the idea to align the timing of funding from the donor, underestimation of the time needed to identify and select local implementing partners and knowledge experts, and a decision to commence national implementation in all pilot countries at the same time. These extensions were done with no additional external funding.

UN Environment Supervision and Backstopping is rated as 'Highly Satisfactory'

vii. Monitoring and Evaluation (M & E)

F14: Standard UNEP M & E design procedures were planned, including half-yearly progress reporting under appropriate supervision and guidance, together with a mid-term and terminal evaluation.

a. M & E Design

216. In terms of the design of monitoring & evaluation, the standard UNEP procedures at the time were followed. The BIU designated a Project Officer who had full responsibility to ensure the Project's timely implementation, under the guidance of the Unit Head and the Chief of the SCP Branch. Monitoring was to be done on a half yearly basis through progress reporting, with the local implementing partners being a primary source of the monitoring data. This approach is deemed to be suitable for this project setting.

217. The Project's logical framework contained planning horizons (i.e. milestones) for the various activities that supported the delivery of the Project Outputs, which had quantitative targets, which were easy to measure and report on.

218. Both a mid-term and terminal evaluation were planned, presumably with appropriate budgets.

M & E design is rated as 'Satisfactory'

F15: The funding of M & E activities was subsumed under the Project Officer's responsibilities and assured through SSFAs signed with local implementing partners, supported by other designated staff.

b. Budgeting and Funding for M & E Activities

219. No special budget and funding for monitoring activities was allocated as progress reporting tasks were fully subsumed under the Project Officer's responsibilities, supported by other designated staff and engaged experts, as described below vis-à-vis implementation.

220. Local implementing partners were the primary source of monitoring data. The SSFAs signed with these actors obliged them to track their progress according to activity and output.

221. In the Project's Delivery Plan and Budget, evaluation expenses were included within UNEP staff expenses, under Component 1 activities. The specific allocation for evaluation tasks was not visible to the Evaluator but is assumed to fall within the agency's standard guidelines.

Budgeting for M & E Activities is rated as 'Satisfactory'

F16: Progress towards results was captured vis-à-vis Output, Component, Outcome against pre-established indicators, with contextual explanations (including achievements, challenges, risks, delays, next steps); this was communicated bi-annually through a standard format designed to fulfil donor reporting needs, with a 3-4 month lag following the reporting period.

F17: Due to delays in project implementation, the mid-term evaluation foreseen for October 2013 in connection with the 3rd Global Network RECP Conference was shifted to a Global Partners meeting convened in November 2015, which functioned very usefully for reflection and re-energised the team.

c. M & E Planning and Implementation

222. A standard reporting format was utilized which assessed progress towards achievement of results on an Output, Component, and Outcome basis vis-à-vis the indicators established in the Project Document. As the bi-annual progress reports followed this template, looking back over the documents in hindsight, this helped to build a useful picture of the Project's evolution, as challenges, delays and expected next steps mentioned in one report could be checked in the subsequent

reporting, also giving higher-level insight into how the project was being managed from one phase to another.

223. Both quantitative and qualitative assessment were used. In this light, achievements were quantified and lessons learned were crystallized. Both were put in context, pointing to strengths, weaknesses, opportunities and threats. Inter-linkages and synergies with other projects/activities were highlighted. Risks were identified and mitigation plans were put in place. Challenges and delays were identified, explanations were provided, and corrective actions were formulated and presumably taken as needed, following an adaptive management approach. Next steps elaborated in the bi-annual progress reports were presumably followed up. Expenditures were reviewed, forecasted, and presumably checked on a rolling basis.

224. The Project Officer was supported by two Project Coordinators; from July 2016, one of these was based in the Bangkok Regional Office. Their role was to coordinate and follow-up the day-to-day development and management of all Project activities. The Project Coordinators submitted quarterly progress reports to the Project Officer, thereby, in principle, ensuring timely identification of challenges and unforeseen opportunities.

225. Bi-annual progress reports were submitted by the Project Officer to the Head of Unit; this material also constituted the reporting to the donor. It was observed that monitoring reports were typically available within 3-4 months following the end of each 6-month reporting period. It is not clear whether this lag had a negative impact on the progress towards results. This delay reflected a culture of overall delay that characterized the Project and may simply be a sign of the underestimation of the time needed to implement activities (& reporting) in the pilot settings.

226. The Project's outputs were submitted to a rigorous consultation and feedback process, including the use of regional validation workshops which involved the local implementing partners, the most appropriate experts, and other relevant stakeholders.

227. Although a mid-term evaluation was originally foreseen to take place during the 3rd Global Network RECP Conference (October 2013), due to delays in project implementation, this assessment was conducted internally through a Global Partners Meeting (Kuala Lumpur, 17-18 November 2015). The Meeting Report documented feedback & key lessons from local implementation and assessed the state of eco-innovation uptake amongst pilot companies in their countries. Presumably these insights were used to refine project activities and adjust timelines, as reflected in the 2nd revision of the Project which took place in 2016.

228. The Evaluator had full access to the Project's bi-annual progress reports, which were produced until the end of 2016, the Global Partners Meeting Report, and project closure reports from the pilot countries, which extended into 2017.

M & E Planning and Implementation is rated as 'Satisfactory'

VI. Conclusions and Recommendations

A. Conclusions

229. The Eco-Innovation Project's purpose & objectives were highly consistent with global, regional, and national needs (¶82) to close industrial loops and scale up RECP practice (¶58),

fulfilled UN Environment's MTS and associated PoWs over the entire project period (¶83), perceived as highly relevant by key stakeholder groups (¶87), and instantiated the agency's remit under the Bali Strategic Plan (¶85) to serve as the leading global authority in articulating, facilitating, and supporting the response to environmental challenges. Considering these highly-rated aspects of strategic relevance, the nature and characteristic of this Project set it up to make an important contribution in the field of international cooperation.

230. Although the planned timelines were exceeded, the Project delivered on this opportunity (¶113) by developing an approach that shows the potential for a positive (even proactive) approach for companies to move towards sustainable business (¶133), which brings together RECP practice and life cycle and value chain thinking (¶116) to spur the integration of sustainability into a firm's business model (¶100). In enabling RECP service providers to extend their offer beyond technical expertise to look at a firm's entire business system (¶87), and through that, develop skills to bridge a critical competency gap (¶116, ¶174) related to business strategy, business model innovation, economic analysis, market research, systems thinking (¶87), or partner to obtain these (¶173), eco-innovation can be considered as a pertinent and needed complement (¶101) to existing tools and can be used to boost momentum towards sustainable industrial production in developing and transition economies (¶115).

231. The Project's direct outcomes (¶98, ¶99, ¶100, ¶101) provided valuable *first steps* and *important building blocks* (¶103) towards intermediate states underpinning the transition towards long-term impact ((¶106, ¶115). The Project initiated a process of system change in 9 pilot countries (¶115), with relevance beyond. Increased uptake of eco-innovation related themes (e.g. life cycle thinking, sustainable innovation, circular economy, social innovation) has been observed and can be seen as further validating UN Environment's approach (¶114) and the outcomes achieved through this Project (¶103).

232. The Project's dual-pronged approach of combining **application** with a **policy** dimension expedited acceptance (¶115) by actively engaging key influencers in institutional positions that could evolve more favourable framework conditions to foster the adoption of RECP eco-innovation (¶133) and built insights into factors that facilitate and impede uptake and adoption (¶136). While it may not have been fully clear in the 9 pilot countries at the outset that eco-innovation was a meaningful response to national priorities and needs, by the end of the intervention, significant appreciation was expressed regarding its potential (¶203) and it came to be seen as "*the right topic for right now*" (¶87). This positive change of attitude is an important indicator of the Project's catalytic power (¶127, ¶133).

233. On the **application side**, the strategic decision (¶98) to test and refine the eco-innovation approach and supporting tools using 10 local implementing partners (¶170), seen as highly representative of intended business intermediary beneficiaries and for the most part, members of RECP*net* (a vector under the patronage of UN Environment and UNIDO expected to power replication and upscaling ¶88), helped to bring a needed reality check and credibility to what could have otherwise been deemed an impractical, theoretical concept with limits to its operationalisation (¶191). This strategy provides built-in structural potential for dissemination and application (¶98, ¶101), as yet unrealised (¶106, ¶108) but with promising potential.

234. **On the policy side**, the Project's pragmatic approach of identifying entry points for eco-innovation within existing national policies and instruments, together with the development of country roadmaps that serve as preparation for ongoing policy discussions linked to SCP and Green

Economy (¶112) can be expected to catalyse change in the medium-term (¶136), provided the momentum in the pilot settings continues (¶131). Before Project closure, eco-innovation was referenced and prioritized in the outcome policy documents of ongoing SCP initiatives in Egypt, Kenya, Sri Lanka, and Vietnam (¶202), suggesting reason for optimism.

235. One of the Project's keys to success relates to the strength of country ownership (¶198), thereby providing a pillar to sustain the results. Valuable resource material (¶134) was developed, tested, and validated through a multi-stakeholder consultation process (¶191, ¶200, ¶226), which was used to assure local ownership (¶199, ¶200, ¶201). Other important contributors came into play through the criteria applied for pilot country selection ((¶126), the use of Partnership Agreements that embodied joint implementation and implied in-kind contribution (¶155), the construction of a robust institutional framework (¶128, ¶130) and attention to socio-political factors (¶127), which facilitated the Project's operation and provided anchors to encourage the continuation of activities beyond Project closure. Although a formal exit strategy was articulated, the notion of exit strategy was implicitly woven into the decision to work with institutional structures that would retain the knowledge and skills developed under the project, together with the idea of mainstreaming eco-innovation instead of creating new policies and instruments (¶119).

236. A less successful aspect of the Project relates to the under-estimation of time needed (¶150) to work in partnership, initiate and complete multiple complex objectives operationalized through simultaneous workstreams, install local project management structures, build and cascade capacities, and focus stakeholders on activities (¶151) in settings where implementing teams are typically juggling a number of mandates and complexities themselves. Unrealistic time planning generated pressure for results (¶182) on the part of the local implementing partners, and may have been a factor in the perception of an exceedingly high level of compensating in-kind contribution (¶182), creating frustration that risked undermining the operational set-up (¶155). While project delays appear to represent common practice within the ENTRP portfolio (¶153), this practice also risks jeopardizing reputation and operational efficiency (¶150).

237. An unrealistic assessment of the capacity of local implementing partners necessitated the unplanned development of templates (¶96, ¶182) to ensure adequate understanding and application of the eco-innovation concept (¶110), accompanied by substantial "hand-holding" and technical backstopping on the part of both the Project Team and knowledge experts (¶96, ¶107, ¶183). While competently provided and highly appreciated by local implementing partners (¶213, ¶214), this arguably channelled resources towards backstopping that could have been otherwise available to buttress areas where the Project's performance was weaker (e.g. linkages with SwitchMed ¶145, ¶162, ¶193; ¶143 that could have enhanced catalytic power; better anchoring of financial sustainability ¶120). If such a level of technical, sector, and value chain expertise would prove to be needed to apply eco-innovation beyond the pilot context, this would seriously undermine its prospects for easy replication and upscaling.

238. Through the Project, case studies spanning 3 value chains across 3 major geographies were generated, which showed differences in what was used and appreciated in the concept (¶135), thereby generating very useful resource material and experience (¶96), which is available through the Project website. Given the pilot experience, it is not clear that simply having availability of material will spur replication (¶181). The new business models and country roadmaps developed and approved by the implementing partners are in the process of being operationalized and have demonstrated promising potential (¶106, ¶108). This partly relates to the situation that the Project's time horizon ran out (¶120), despite two no-cost extensions (¶113). This also relates to the

inadequate access of SMEs to funding to pursue eco-innovation (¶96, ¶100, ¶112). While there are a great number of existing initiatives and actors (including UN Environment) currently looking at how to facilitate SME access to finance operational improvements going in the direction of Green Economy (¶123, ¶124), it is not obvious that sufficient financial resources will be or will become available in the short term to use the capacities built by the Project (¶125).

239. At the project design stage, a stronger formulation of outcomes would have guided the pilot towards realising changes in behaviour stemming from using the Project's outputs (¶167). The Project reached the level of having action plans developed and starting with implementation at company level and country roadmaps formally approved by multi-stakeholder Steering Committees. Initiatives to use and sustain policy results have been documented in Malaysia, Vietnam, Colombia, and Peru (¶105). This is a laudable achievement. Implementation of these plans would involve a series of further behaviour changes further along the causal pathways, which is a key aspect supporting the likelihood of impact (¶103). While there were signals from the involved national representatives and local implementing partners that they will leverage the pilot experience towards mainstreaming and replication (¶137), without an ongoing framework to motivate, steer, foster, and support integration into policy settings and foster continued application of eco-innovation, it is hard to imagine that there will be a spontaneous expansion to other countries and widespread adoption by the majority of RECP*net* members (¶131).

240. Table 9 provides an overall summary of the evaluation findings, justifications, and resulting ratings[70] as per the criteria given by the EOU.

Table 9: Summary of Findings and Ratings by Evaluation Criteria for the Eco-Innovation Project

Criterion	Summarized Assessment of the Findings	Rating
A. Strategic Relevance	The Project goal and its objectives are consistent with global environmental needs, highly relevant for key stakeholders (SMEs, business intermediaries, donors, governments in developing & transition economies), and showed the promising potential contribution of RECP-based eco-innovation to sustainable industrial production. Its design and implementation were aligned with UN Environment's MTS (2010-2013, 2014-2017) and its associated PoWs; and it reflects the agency's mandate under the Bali Strategic Plan.	HS
B. Achievement of Outputs	For the most part, the programmed outputs were achieved or even over-achieved in terms of quantity and validated through a consultation process with key stakeholders, although their development timeline substantially exceeded the initial planning horizons and some questions were raised regarding the ease of uptake of eco-innovation given its demand on the absorptive capacities of intended beneficiaries.	HS
C. Effectiveness: Attainment of Project Objectives & Results	Having assessed the 3 constituting aspects, the overall rating for effectiveness has been allocated based on the average across the separate dimensions.	S
1. Achievement of Direct Outcomes	The Project's 4 direct outcomes were respectively described as "an important first step towards", "provided relevant building blocks towards", "a valuable start towards", "a practical contribution towards" the Intermediate States; these characterizations are consistent with a pilot project setting, particularly in light of the short timeline for national implementation within the overall project period for operationalizing business models at firm level and developing country roadmaps at policy level.	(H)S
2. Likelihood of Impact	The pilot showed promising potential for eco-innovation as a response for the business sector in facing growing environmental challenges. Measures designed to move towards intermediate states have started and have begun to produce results. Entry points for eco-innovation within existing national policies and instruments were identified and prepared the way for uptake & endorsement, thereby implying likelihood of impact, provided there is continuing momentum in the pilot settings.	L (BB)

[70] Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Sustainability is rated from Highly Likely (HL) to Highly Unlikely (HU)

Criterion	Summarized Assessment of the Findings	Rating
3. Achievement of Project Goal and Planned Objectives	While more time was needed than planned, the Project delivered on its overall goal & planned objectives in so far that it initiated a process of system change in 9 pilot countries linked to circular economy thinking using a dual approach of combining application with a policy dimension that expedited progress and engaged the key stakeholders to build national ownership.	S
D. Sustainability and Replication	Having assessed the 5 constituting aspects, the overall rating for sustainability has been allocated according to the lowest rating on the separate dimensions.	ML
1. Financial Sustainability	While the Project itself was sufficiently resourced, it is not obvious that adequate financial resources will be or will become available in the short term to use the capacities built by the Project, although many international actors are currently actively working to design facilitating policies & instruments.	ML
2. Socio-Political Sustainability	The Project succeeded in establishing key elements to assure the socio-political sustainability of results and progress towards impacts in the 9 countries where activities were implemented.	HL
3. Institutional Framework	The Project created a robust institutional framework to facilitate its operation. Engaging with familiar local actors in partnership arrangements generated in-kind contribution and local ownership. It was launched in settings where policy frameworks supporting innovation were already established. The foundation built in the pilot countries points to the likelihood of sustained outcomes.	L
4. Environmental Sustainability	It is not likely that the Project will have a negative environmental impact; its outputs and higher-level results enhance environmental sustainability.	HL
5. Catalytic Role and Replication Potential	Embodied in its novel approach (combining business model innovation, life cycle & value chain thinking and promoting collaboration, together with building a conducive policy environment to foster RECP eco-innovation adoption linked with national objectives vis-à-vis SCP and Green Economy), which offers an operational means to engage the business sector's proactive response to environmental issues. While attitudes have been changed and new capacities have been built, in the absence of adequate access to financial resources and ongoing technical support, the realisation of eco-innovation's full potential is unlikely. Replication potential was enhanced by leveraging local implementing partners of the RECP*net,* identifying synergies with other UN Environment initiatives, and engaging in broad opportunistic exposure and dissemination. A more strategic approach as well as linkages with other key programmes (SwitchMed, PAGE), which have not been sufficiently tapped, could build further catalytic power.	S
E. Efficiency	Time efficiency was a major challenge stemming from complex objectives and unrealistic time planning (which appears to be standard practice and seems to be accepted by all stakeholders). Two no-cost extensions were granted. This raises questions regarding operational effectiveness. Cost efficiency was pursued through sharing external consultants across several UNEP projects and opting for joint implementation through partnership arrangements that increased local ownership. While substantial in-kind contribution enlarged the available resource pool,, the level of contribution exceeded the expectation (and at times, the capacity) of local implementing partners, thereby undermining the context needed to facilitate success. HR & GE aspects were considered without the allocation of a specific budget directing this. Building on existing institutions, partnerships & initiatives increased project efficiency.	S
F. Factors Affecting Project Performance	Having assessed the 7 constituting aspects, the overall rating for factors affecting project performance is satisfactory.	S
1. Preparation and Readiness	The problem, situation, and risks were adequately described, together with a coherent logical framework. However, outcomes pointing to changes in behaviour and more robust indicators would have helped to attribute direct/indirect impacts and guide towards the behaviour and mindset changes needed to support the Project's long-term goal. The (understandable) strategic decisions to leverage existing institutions and focus on RECP service providers and SMEs offered opportunities as well as weaknesses where compensatory strategies could have helped.	MS
2. Project Implementation and Management	Suitable project management arrangements were put in place in UNEP & pilot countries to progress activities towards desired results. Adaptive management was used; gaps in communication and mutual understanding, together with perceived shifts in goalposts & improvisation frustrated local partners, increasing their in-kind contribution as a compensatory mechanism.	S
3. Stakeholder Participation and Public Awareness	Primarily UNEP and EC, as main donor, were involved in design discussions. Those expected to contribute to and benefit from the Project were identified through a stakeholder analysis. Collaboration was pursued with several UNEP initiatives; links to relevant activities in pilot countries were made. Efforts to build public awareness and communicate Project's objectives, progress, outcomes, and lessons were seen as adequate.	S
4. Country Ownership and Driven-ness	These aspects were effectively designed into the Project's structure (e.g. through criteria applied for pilot country selection, use of Partnership Agreements that embodied joint implementation and implied in-kind contribution, constitution of local Steering Committees with stakeholders bridging business and policy spheres, iterative feedback processes drawing on local results used for developing outputs, linkage to and relevance of Project activities to ongoing national initiatives, policies, and instruments).	HS

Criterion	Summarized Assessment of the Findings	Rating
5. Financial Planning and Management	The Project was adequately resourced and further benefited from in-kind contributions of local partners & ad hoc funding from external actors (re: translation of Project outputs). Suitable legal instruments were used for contracting and satisfactory arrangements were put in place to manage and report on budget utilization. Delays in payments related to UNEP's SAP transition disrupted cashflow to local partners; while some were able to overcome this challenge, this created a corresponding delay in the activities of others.	MS
6. UN Environment Supervision and Backstopping	Project management support, supervision, and technical backstopping were competently provided by the Project Team, supervisors, and external knowledge experts and highly appreciated by the local implementing partners.	HS
7. Monitoring and Evaluation (M&E)	Having assessed the 3 constituting aspects, M & E is rated as satisfactory.	S
a. M&E Design	Standard UNEP M & E design procedures were planned, including half-yearly progress reporting under appropriate supervision and guidance, together with a mid-term and terminal evaluation.	S
b. Budgeting for M&E activities	Funding of M & E activities was subsumed under the Project Officer's responsibilities, supported by other designated staff & assured through SSFAs with local implementing partners who provided monitoring data.	S
c. M & E Plan Implementation	Progress towards results was captured and communicated bi-annually vis-à-vis Output, Component, Outcome against pre-established indicators, with contextual explanations (re: achievements, challenges, risks, delays, next steps) using a standard format fulfilling donor reporting needs. The mid-term evaluation was shifted from October 2013 due to delays in project implementation to November 2015, undertaken through a Global Partners Meeting, which provided useful reflection and re-energised the team.	S
Overall Project Rating	The Project's overall performance is rated as satisfactory. While more time was needed than initially planned, the Project, which set a high ambition level by incorporating a dual-pronged approach with policy & application components implemented through simultaneous interconnected workstreams, was delivered on budget, demonstrated the promising potential of eco-innovation as a relevant response for the (SME) business sector to environmental challenges, built valuable capacities to support the behavioural changes implied by eco-innovation, and made important contributions towards its overall goal & objectives, which feed into the larger umbrella Resource Efficiency Subprogramme in which it is nested. The Project's outputs were over-achieved, for the most part and the team did a stellar job in building country ownership and driven-ness. Suitable project management, financial management, supervision, backstopping, monitoring & evaluation mechanisms were put in place. The Project's likelihood of impact would be supported by factors related to end beneficiaries securing adequate access to technical and financial resources to fully implement eco-innovation in order to realise its full potential.	**S**

B. Lessons Learned

241. In the spirit of promoting organisational learning, key lessons have been distilled from the Project's experience which are seen to be relevant for future programme formulation and implementation by UN Environment and other main project partners (EC, UNIDO, RECP*net*).

Lesson 1: The Project could have benefitted from objectives and timelines that were more realistic and achievable in order to put less strain on the project partners and management. While this may sound like a truism, designing programs that can be delivered on time, scope, and budget will improve operational effectiveness and enhance reputation, providing a reliable basis to attract support.

242. The Eco-Innovation Project was expected to simultaneously achieve a complexity of objectives: i) pilot and prove a demanding novel approach to advance the uptake of RECP practice in a systems thinking context (¶58; ¶100, ¶133); ii) facilitate the development of new skills and mindsets (¶87) that would allow RECP service providers to extend their offer or orient them towards partnering with others (¶116) to bridge a current competency gap (¶98); iii) enhance the prospects for application and replication by influencing the policy-setting to be more favourable to what was being developed (¶99,115, ¶133); iv) channel resources towards the RECP Programme, fulfilling UNEP's patron role (¶63, ¶101); v) build on existing settings, initiatives, and infrastructure (¶58, ¶128; ¶160), following criteria to improve operational effectiveness (¶157); vi) build awareness and

interest in the concept and get other programs to buy-in and utilize this terminology/concept to improve prospects for dissemination (¶114, ¶138, ¶140); vi) implement all of this in a way that builds in local ownership and country driven-ness (¶198) to assure the sustainability of results (¶199); and vii) demonstrate UN Environment's leadership on the global stage vis-à-vis its mandate from the Bali Strategic Plan (¶85), thereby providing an inspiring vision that would energize all those involved to contribute their efforts towards building something important (¶86).

243. Each dimension and requirement built in another layer of complexity to be achieved within the standard 36-month program setting suggesting a belief that an ambitious package of objectives and timeline is needed to obtain funding. Such a duration would not be sufficient to both raise awareness and develop tangible steps forward (¶153). During implementation, challenges and delays accumulated, which is an already well-known phenomenon in pilot projects and should have been expected based on the wealth of the agency's experience in this domain, and generously planned for. Compensatory mechanisms of adding more support from external consultants (¶96) and the Project Team (¶181), together with in-kind contributions from local implementing partners (which created frustration, fatigue and risked to weaken the institutional context needed to facilitate success ¶182) were not able to keep the project on track for the planned milestones (¶152). Two no-cost extensions were granted, contributing to perceptions of operational ineffectiveness (¶153) and the inability of UN agencies to effectively plan and manage projects, thereby necessitating follow-up & extension.

Lesson 2: Combining application and policy dimensions within a project setting can expedite progress in piloting a concept and accelerating its acceptance while at the same time, engaging local structures to capitalize on a project's results.

244. The Project's success in developing and piloting an approach that came to be described by intended beneficiaries as "*the right topic for right no*w" (¶87) is linked to pursuing a dual-pronged approach (¶232) that simultaneously engaged key stakeholders from the business community and those in the policy domain, both inputting iteratively to the concept, expediting its development (¶115), while building insights into the factors that would facilitate and hinder its subsequent use (¶133). Relevant stakeholders in both domains developed plans to bring the concept forward into implementation, be that through new business models (¶100) or country roadmaps (¶99, ¶202)), where the widespread success of the former is ultimately linked to progress in the latter influencing framework conditions to be more favourable to their adoption. The constitution of Steering Committees (¶201) by the local implementing partners provided relevant oversight and input and functioned to bring relevant actors together within a single structure who could capitalize on the project's outputs and outcomes (¶180).

Lesson 3: The formulation of outcomes in terms of a change of behavior resulting from the use of an output is key to guiding projects towards the series of further behavior changes that would be implied along a causal pathway, increasing the likelihood of impact.

245. Quantitatively, the Project achieved and even over-achieved its outputs, for the most part (¶96). However, a weakness was evident at the level of program design (¶167) in that outcomes were not formulated in ways that clearly geared towards demonstrating proof of concept through implementation of action plans (at company level) and policy roadmaps (at government level). The formulation of the Project's indicators led to a focus on achieving what could be easily quantified (*numbers of* manuals, guidance, case studies produced, validation workshops held, etc.) (¶167). Given that the Project's intended outcomes primarily relate to changing behaviour, it would have

been more helpful to use formulations that orient towards identifying impacts, which could then be attributed directly or indirectly to *using* the capacities that were built, changing mindset and behaviour, and deriving benefits from the application of eco-innovation. Such formulations for outcomes create stretch goals for project teams and would offer a more reliable picture of progress towards a project's overall goal and likelihood of impact.

Lesson 4: Orienting selection criteria for local implementation settings towards aspects that build in country ownership is an efficient route to sustaining project results.

246. The criteria put forward in the design phase for the selection of countries for national implementation served the Project well in that decisions were steered towards assuring country ownership and driven-ness (¶126), which is increasingly seen as a key factor for sustaining project results beyond closure (¶200). In addition to geographic criteria (¶98) used to maintain global reach, countries were chosen as piloting partners based on having commitment from a least one pivotal governmental counterpart with an interest in pursuing SCP and related market opportunities in a setting with ongoing activities linked to enabling the policy framework (¶198). This assured the engagement of relevant actors with a self-interest in benefitting and power to capitalize on the Project's capacity-building (¶127). Within the national settings, local implementing partners were engaged that had the capacity for joint implementation (¶199), could function as ambassadors (¶137), and carried the potential for replication within their own countries, and beyond through peer exchange/South-South learning (¶88). Together, these elements increased the project's efficiency and contribute to sustaining its results.

Lesson 5: In contexts where beneficiaries are expected to undertake financial outlays and/or organisational changes to demonstrate the viability of approaches being piloted, project activities should encompass ensuring adequate access to needed funding and other factors related to managing change, in order to move theoretical concepts to implementation and facilitate assessment of actual impacts, thereby increasing the robustness and usability of results.

247. From the Project's outset, it was clear that SMEs would be expected to not only develop new business models but also implement these to provide proof of concept (¶76, ¶84). Theoretical cases, while showing the potential of eco-innovation, until fully put to the test of real implementation, are simply not sufficient to convince business intermediaries and SMEs to take up such a novel approach (¶239). Experience under the NCPC and RECP programmes shows the long-standing and ongoing obstacles for such enterprises to obtain funding for resource efficiency improvements (¶123). With the business case for eco-innovation not widely understood (¶122) and given the situation that eco-innovation is not focussed around a common technological platform and is rather an umbrella term covering a wide variety wide variety of different technologies, products, services, and markets – making it even more difficult for potential investors to evaluate funding opportunities (¶125), assuring suitable access to funding under the pilot context becomes even more pertinent to underpin and assure credibility of project results.

Lesson 6: Having a clear exit strategy as part of project design anchors sustainability from the outset.

248. The Project's design did not mention or plan for an exit strategy (¶166). The Project's outputs and direct outcomes were achieved (¶98, ¶99, ¶100, ¶101); yet its likelihood of impact was deemed moderate (¶102) due to the fact that bulk of the business models and country roadmaps developed were still at a theoretical level (¶106, ¶108) and a follow-up at country level would be

needed to consolidate the results (¶153). Good practice indicates that exit strategies built into program design can guide behaviour during implementation, be used to hold organisations and their partners to account throughout the process, and assure expertise and momentum for change in the country is not lost following project closure.

C. Recommendations

249. Based on the TE's conclusions and lessons learned, some recommendations are offered with the aim of sustaining the Project's results and reaching impact. It is understood that follow-up and action depend on availability of funds and/or a follow-on programme.

Recommendation 1: Identify pertinent cases (new business models) with important replication potential developed under the Project, follow-up on their full implementation, and use the actual results to enhance the business case for eco-innovation.

250. Of the 44 cases documented, by the final stage of the intervention, only 10 of these are featured as "web stories" downloadable through the Project's website. Presumably a wealth of experience and evidence is yet to be realised through the business models developed (¶239). Once implemented, these will provide pertinent know-how as well as data regarding costs, benefits, and impacts that can be used to buttress the business case for eco-innovation (¶239), particularly as the cases are representative of SMEs in developing and transition economies.

251. **Who and What?** The Project Team should I) establish criteria/justification for what would serve as valuable examples of what could and should be replicated, within the framework of what has already been developed in a theoretical manner and based on identifying where there are gaps in the evidence; II) review the repository of documented cases to identify those meeting the criteria; III) prioritize their importance for testing through implementation (in the event that external technical and financial resources are required; refer to Recommendation 2); IV) review overall set of cases identified for implementation to identify patterns/common themes in requirements as the basis for developing an overall framework to support their realisation; V) follow-up on implemented cases to distil learning and evidence; VI) update *The Business Case for Eco-Innovation* based on these real cases from SMEs in developing & transition economies.

252. Local implementing partners in the related pilot countries should: I) review options with the implicated companies to pursue implementation of the designated business models; II) identify existing resources to progress, with timelines; III) identify outstanding needs vis-à-vis implementation; IV) propose options to address these needs

253. **When?** Activities I-IV should be initiated consecutively before the end of the Project using existing resources, as part of the closure process, with completion by 31 March 2018 (i.e. six months after formal Project closure). Activities V-VI should be completed within two years (or beyond?) of Project closure (i.e.by 30 September 2019) reflecting a realistic timeframe for implementing the more challenging aspects of business model change.

254. **Measurable Performance Targets**: i) development of selection criteria; ii) identification of gaps in evidence for business case for eco-innovation; iii) prioritization of business models for implementation; iv) identification of needs by implicated companies; v) identification of opportunities available locally and nationally for securing access to needed resources; vi) identification of unmet (outstanding) resource needs required for business model implementation;

viii) list of proposals for securing access to needed resources; viii) proposal for an overall framework to support realisation.

Recommendation 2: Build on the pilot country experience to deepen understanding and drive concrete actions to support SME access to finance for eco-innovation.

255. One of the TE's conclusions is that it is not obvious that adequate financial resources will be available in the short term to use the capacities built by the Project (¶238). This represents an opportunity, perhaps even an obligation, to advance on this front. The Project designed in significant elements to assure country ownership and driven-ness (¶235); which should now be leveraged to drive further value to reach impact.

256. **Who and What?** The Project Team should initiate contact with the Steering Committees (via local implementing partners?) established in the 9 pilot countries with a request that they identify options available through national structures and programmes where opportunities could be seized to link piloting companies with relevant initiatives. If options are not clear or seem unlikely, use this "study" as a basis to build insight into facilitating & hindering factors to SME finance for RECP and eco-innovation and identify specific steps that could be taken by which actors to address the situation. **When?** This idea should be initiated in conjunction with the Project's closure, using existing resources, and is expected to require at least 6 months to facilitate the needed review. **Measurable Performance Targets**: i) Meeting of Steering Committees convened in each of the 9 pilot countries by 15 September 2017; ii) identification of existing relevant programs/initiatives that could facilitate implementation of innovative business models in their respective country; iii) report on insights regarding facilitating and hindering factors at national level and suggestions for next steps by 31 March 2018.

257. **Who and What?** In conjunction with the above-mentioned "study" undertaken by relevant actors in the pilot countries, the Project Team should review the numerous existing international initiatives and actors that support dialogue and build awareness at policy level regarding the risks of environmental degradation and the need to facilitate SME access to finance operational improvements going in the direction of Green Economy (¶123) with the aim of identifying any existing programs to which the pilot countries and/or specific companies could be linked in order to advance on this topic, building on the concrete cases developed under this Project context. Strengthening collaboration with UNIDO and SwitchMed (¶124) could well prove useful in this regard. **When?** During the 6 months following Project closure. **Measurable Performance Targets:** i) report on relevant synergies and possible linkages; ii) proposal for collaboration or other options, leveraging Recommendation 1, by 31 March 2018.

Recommendation 3: Extend the application of eco-innovation through strategic cooperation and leveraging the RECP*net*.

258. The strategic decision to build on the RECP*net* by sourcing the Project's local implementing partners from this structure was seen to increase overall project efficiency as this built on and added value to other initiatives (¶159) and this approach recognized the patronage and support (¶101) of UN Environment and UNIDO, partners in pursuing RECP. Indeed, through this Project, RECP*net*'s profile was enhanced internally within UN Environment and externally with government counterparts and other organisational partners to the extent that it is increasingly seen as an effective implementing partner able to contribute to the environmental dimension of the 2030 Sustainable Development Agenda and specifically to UN Environment efforts in this area (¶161). Key

drivers identified in the Project's Theory of Change were that" RECP*net* will power RECP eco-innovation" and "results are widely shared, promoted, referenced, and recognized" (¶80). The TE concluded that the Project provided valuable first steps/important building blocks, demonstrated that a process of system change was initiated in the pilot countries (¶231), and that eco-innovation is a pertinent complement to existing tools and can be used to boost momentum towards sustainable industrial production in developing and transition economies (¶230). The TE also concluded that a spontaneous expansion to other countries and widespread adoption by the majority of RECP*net* members can not be expected without an ongoing framework to motivate, steer, and foster this (¶239).

259. **Who and What?** The Project Team should discuss carrot and stick opportunities with the RECP*net* Executive Committee to advance uptake of eco-innovation. A stick approach refers to ideas like including eco-innovation in a performance management system. A carrot approach refers to ideas like privileging actors for future cooperation that incorporate eco-innovation in their service offering. Other options for promoting the approach are to "buddy" the 9 pilot countries with RECP*net* volunteers, forming South-South partnerships for knowledge transfer and mentoring. A monitoring system should be established, with attention to evaluating the extent of external technical, sector, and value chain expertise needed to apply eco-innovation to gauge its prospects for replication & upscaling (¶237). **When?** Within 3 months of Project closure. **Measurable Performance Targets:** i) discuss strategy for increasing uptake of eco-innovation included in agenda of upcoming RECP*net* Executive Committee meeting, by 31 December 2017; ii) proposals for advancing uptake by 31 March 2018; iii) monitoring of uptake through progress reporting and evaluation of results, with recommendations; iv) report on uptake experience during next RECP*net* bi-annual conference (2019).

260. **Who and What?** The Project Team should review the Project's contributions to other UN Environment initiatives and linkages established with other programmes as the basis for developing a strategy to enhance the replication and mainstreaming of eco-innovation. **When?** Within 3 months following Project closure. **Measurable Performance Targets:** i) mapping of linkages & synergies; ii) strategy for advancing uptake by 31 March 2018; iii) report on uptake experience during next RECP*net* bi-annual conference (2019), and next steps.

Recommendation 4: Provided further resources would be available beyond the Project's current scope: strengthen & communicate the online learning journey based on the Project website to entice intended users into using the eco-innovation approach as well as to deepen capacity through in-situ application, together with encouraging use of this space for experience exchange.

261. Valuable resource material and experience (¶238) were generated, which is available through a website that functions as a public repository for the Project's materials (¶197). An important first step was undertaken to adapt the Eco-Innovation Manual and its Value Chain Supplements to an online downloadable format. Given the pilot experience, it can not be assumed that the simple availability of tools will be sufficient to spark meaningful upscaling (¶147). An online learning journey (e.g. framed as a program, together with virtual assistance/coaching/consulting?) could be developed that leverages the Project's outputs and experience to engage disseminators and users of the approach, strengthen competence in its application, and offer a modern venue to facilitate knowledge management and promote peer exchange, particularly in view of the implications of Recommendation 3.

262. **Who and What?** The Project Team should discuss the extent to which this can be undertaken with available resources. **When?** Before Project closure. **Measurable Performance Targets:** i) report on discussion; ii) proposal for online learning environment strategy and resourcing; iii) identification of potential providers.

Recommendation 5: With respect to future project design and implementation:

263. Formulate direct (& intermediate) outcomes in terms of the behaviour change that is expected to result from the actual use of project outputs and identify corresponding indicators that can be used to keep on this track.

264. For pilot projects that are designed to provide proof of concept, assure that adequate access to needed resources (technical and financial) are available within the project period to ensure that theoretical ideas can be fully moved into implementation and assessed within the project period.

265. For projects that involve the private sector where target beneficiaries are required to implement change and/or invest in new approaches, align the demonstration period to reflect the length of the business cycle for decision-making & implementation; typically, this will involve providing a longer period for local implementation and/or lengthening the time of the overall project to deliver the desired, verified results.

VII. Annexes

Annex 1 – Terms of Reference of this Evaluation (without annexes)

TERMS OF REFERENCE[71]

Terminal Evaluation of the UNEP project: "Resource Efficiency and Eco-Innovation in Developing and Transition Economies" (Referred to as the "Eco-Innovation Project")

PROJECT BACKGROUND AND OVERVIEW

1.1 Project General Information

Table 1. Project summary[72]

Sub-programme:	(2014/15) Resource Efficiency (2016/17) Resource efficiency and sustainable consumption and production	**Expected Accomplishment(s):**	The transition towards sustainable industrial production systems in developing countries and transition economies is supported through the promotion of eco-innovation based on resource efficient, cleaner and safer production.
UNEP approval date:	June 2012	**PoW Output(s):**	2016/17 - 621 2014/15 - 621, 622 2012/13 – 62P3
Coverage - Country(ies):	Colombia, Egypt, Malaysia, Peru, South Africa, Sri Lanka, Vietnam, Uganda and Kenya	**Coverage - Region(s):**	Asia, Africa, and Latin America and the Caribbean, West Asia and Eastern Europe
Expected Start Date:	June 2012	**Actual start date:**	June 2012
Planned completion date:	September 2017	**Actual completion date:**	September 2017
Planned project budget at approval:	USD 6,168,634	**Total expenditures reported as of [date]:**	
Planned Environment Fund (EF) allocation:	USD 0	**Actual EF expenditures reported as of [date]:**	
Planned Extra-budgetary financing (XBF): EC ENRTP (Eco Innovation)	USD 5,391,949	**Actual XBF expenditures reported as of [date]:**	3,030,055
XBF secured:		**Leveraged financing:**	USD 776,685 (UNEP In-kind contribution)
First Disbursement:	June 2012	**Date of financial closure:**	September 2017
No. of revisions:	2 revisions (2014 and 2016)	**Date of last revision:**	April 2016
Mid-term review/ evaluation	End of 2015 (a series of	**Mid-term review/ evaluation**	None undertaken

[71] TOR template version of June 6 2015

[72] Source: Project Document. Revision March 2016

(planned date):	regional validation workshops and during the 3rd Global RECP*net* event)	**(actual date):**	
Date of last Steering Committee meeting:	Global meeting of partners – November 2015	**Terminal Evaluation (actual date): *(where applicable)***	December 2016 – June 2017

1.2 Project rationale

1. In many developing countries and emerging economies, small and medium sized enterprises (SMEs) are the backbone of economic and industrial activities - contributing up to 75% of industrial activities. At the same time, these SMEs are often high polluters due to the higher level of inefficiency in their industrial production operations and/or the lack of efficient end-of-pipe pollution control systems often coupled with weak national policy regulations and/or enforcement. In particular, critical sectors such as building and construction, tourism, agri-food production, chemicals and manufacturing are resource intensive with adverse environmental and social impacts. This, combined with the increasing shift of the manufacturing sector to developing and transition economies, has led to higher resource depletion and environmental pollution. Consequently, alarmingly high levels of resource depletion, and environmental pollution from current production and consumption (SCP) patterns are pushing the limits of sustainability.

2. UNEP has supported the development of new approaches and capacity building in sustainable resource management since the 1990's. In 1994, UNEP in collaboration with the United Nations Industrial Development Organization (UNIDO) launched the International Project on Establishment of National Cleaner Production Centres. To date, in the evolved joint Resource Efficient and Cleaner Production (RECP) Programme, there are 74 active RECP service providers in developing countries and transition economies that promote resource efficient and cleaner and safer production and provide technical and policy support services to governments and industries. Recognising the need to demonstrate and upscale the programme's economic and environmental benefits, UNEP operates in core intervention areas: Building support delivery capacity on RECP (primarily through the RECP Network - RECP*net*), thematic application of RECP in industries, Policy and financing mechanisms and Innovation in technology transfer and product development.[73]

3. Actions for resource efficient and sustainable consumption and production (SCP) and the transition towards a Green Economy have historically been motivated only by emerging regulations and risks; and although the foundation for transformation is being built, more targeted interventions are necessary. This implies the creation of new strategies, products, processes and practices as well as shifts in consumption behaviour. Decoupling current consumption and production patterns is recognised as fundamental to the transition to a resource efficient and Green Economy, and approaches such as eco-innovation are key to the transition.

4. There is growing evidence that sustainability driven innovation can bring about more radical systemic change on a national (macro) level as well as drive business success and competitive advantage at the firm (micro) level. Eco-Innovation holds the potential for the much-needed systemic change in creating and meeting the demand for sustainable goods and services, particularly in developing and transition economies with growing manufacturing sectors. In many of these economies, small and medium-sized enterprises (SMEs) are key to economic activity and growth, providing up to two thirds of formal employment.

5. Eco-innovation is the development and application of a **business model**, shaped by a new **business strategy** that incorporates sustainability throughout all business operations based on life cycle thinking and in cooperation with partners across the value chain. It entails a coordinated set of modifications or novel

[73] (http://www.unep.fr/scp/cp/unep_unido_prog.htm)

solutions to products (goods / services), processes, market approach and organizational structure which leads to a company's enhanced performance and competitiveness.

6. In 2012, in partnership with the European Commission, UNEP established the Eco-Innovation Project (hereinafter referred to as "project"), which aims to develop local resources and capacities for eco-innovation in developing and transition economies. It specifically targets small and medium sized enterprises (SMEs). To reach the SMEs, the UNEP eco-innovation project co-operates with service providers within Resource Efficiency and Cleaner Production (RECP), other business intermediaries, and national governments. This project also builds upon the work of UNEP's Green Economy Initiative and experience and networks of UNEP/SCP activities including the RECP Programme, and on the direction of European Commission's (EC) new Eco-Innovation Action Plan.

1.3 Project objectives and components

7. The overall goal of the project is **to promote the transition towards sustainable consumption and production systems in developing countries and transition economies through the promotion of eco-innovation based on RECP (RECP Eco-innovation)**. The project and its activities focus on the value chains of three sectors that have high environmental and social impact: agri-food processing, metals and chemicals. Building on experience, this project is designed to create the conditions for RECP service providers to support business and industry to respond to the growing demands for more sustainable products and services.

8. Specifically, the project aims to achieve the following objectives:

i. Strengthen and expand the UNIDO-UNEP RECP*net* enhance their capacity to provide technical support service on RECP and promoting eco-innovation;
ii. Promote RECP mainstreaming in existing environmental and industrial development policy and planning regimes to facilitate the transition towards a resource efficient and green economy;
iii. Develop and promote the business case for resource efficiency and eco-innovation technologies based on existing innovative applications in SMEs including the application of eco-innovation in EC member countries and support demonstration projects on RECP eco-innovation application in industries with particular focus on SMEs; and
iv. Support RECP*net*, the global UNEP-UNIDO Network on RECP, as a platform for North-South and South-South Cooperation, through the organization of the global and regional network conferences and provision of support to its secretariat.

9. The project targets the global network of Resource Efficient and Cleaner Production (RECP) intermediaries, in particular National Cleaner Production Centres and Programmes (NCPCs) and other providers of RECP services. Intermediaries and business supporting institutions can also include local governments, private corporations, non-profit organizations, business associations and academic institutions. They support particularly SMEs and are facilitators of knowledge, experience, funding sources and business contacts.

10. The overall approach to project implementation was aligned with the management of the Joint UNEP-UNIDO Programme on Resource Efficient and Cleaner Production (RECP) in Developing and Transition Countries and built upon previous awareness-raising, pilot and demonstration efforts, methodologies and training toolkits in: resource efficient, cleaner and safer production at industrial level; design for sustainability (D4S); and in mainstreaming RECP principles in national policies. The implementation of the would follow these four key approaches:

- Effective networking and peer learning;
- Effective enabling environment for RECP implementation;
- Implementation of RECP by businesses and related stakeholders; and

- Enhancement of national capacities to facilitate and manage the transfer, adaptation and replication of sustainable product developments.

11. Based on the objectives and implementation approaches mentioned above, the following were identified as the key components to deliver the overall goal of the project:

12. **Component 1: Institutional strengthening and RECPnet expansion:** This component involved the identification of new and enhanced capacities of existing RECP service providers to provide technical support services on RECP eco-innovation to industries, with particular focus on SMEs; it also expanded the RECP network to other countries requesting support.

13. **Component 2: Policy mainstreaming and planning:** This component contributed to shaping the necessary policy frameworks needed to mainstream SCP policies for eco-innovation. Activities under this component addressed policies such as sustainable public procurement and/or eco-industrial parks, among others, as well as the role of technologies for eco-innovation. This component would contribute to the transition towards more sustainable industrial systems as key elements for transitioning to a green economy.

14. **Component 3: Making the business case and pilot demonstration:** The business case for RECP eco-innovation at the company level, based on best practices and supporting demonstration projects for scaling-up and wider replication, were developed under this component.

15. **Component 4: Global and regional networking:** This component covered activities on global and regional networking in support of the Global UNEP–UNIDO Network on RECP (RECPnet) knowledge sharing and the promotion of North-South and South-South cooperation on RECP eco-innovation.

16. The Logical Framework can be found in **Annex 11** of this TOR.

1.4 Executing Arrangements

17. The project is fully coordinated and implemented by the UNEP Responsible Industry and Value Chain Unit (RIVU), which works closely with UNEP Regional Offices and relevant external partners. RIVU has the overall responsibility of managing the implementation of this project including coordinating the provision of the required substantive and technical input for the successful implementation of the project.

18. The UNEP Regional Offices in Africa, Asia-Pacific, and Latin America and the Caribbean, through their Regional Industry Officers, are responsible for organizing the Regional Training of Trainers Programme and supporting RIVU in the provision of the necessary technical back-up support for the activities to be carried out at the national level.

19. The following are the key partners involved in the implementation of this project:

- The Global UNIDO-UNEP Network on Resource Efficient and Cleaner Production (**RECPnet**) which consists of RECP service providers and their twinning partners, International Reference Centres (IRCs).
- The Environmental Management Branch of **UNIDO** has been a long-standing partner with UNEP's Business and Industry Unit, and considered to be one of the key partners for the implementation of this project.
- As the principal operational agency of the UN at the countries level, **UNDP** was engaged at the national level including relevant governmental bodies.
- The **European Commission** has worked towards promoting Eco-innovation in Europe since 2004, when it adopted the ambitious Environmental Technologies Action Plan (ETAP), and more recently by launching the Eco-innovation Action Plan to promote environmental technologies and eco-innovative products and services within the EU and globally.
- **Global private sector associations and their national business networks** (UNGC, WBCSD, ICC and others) have relevant chapters and national networks which support the development and implementation of national level interventions, particularly in the areas of innovation and in value chain.

20. Coordination with the principal partners, i.e. UNIDO and the RECP service provider network, is conducted through the Executive Committee of the network comprising the regional chapter representatives and UNIDO-UNEP as a joint Secretariat.

1.5 Project Cost and Financing

21. The Eco-Innovation Project is funded through the European Commission (EC) Thematic Programme for Environment and Sustainable Management of Natural Resources Including Energy (ENRTP). It is a thematic programme for external cooperation to promote Environmental and Sustainable Management in the world and especially in developing countries. The programmes are managed and the projects selected at national and/or regional level. These projects can link in with environmental topics. The Eco-innovation initiative provides funding for projects in various sectors that mitigate environmental impacts or promote a more efficient use of resources.

22. The project received direct funding from the Commission's Directorate -General for International Cooperation and Development (DG DEVCO)[74] and the Directorate-General for Environment (DG ENV)[75], totalling USD 5,391,949, in addition to in-kind contribution from UNEP of USD 776,685, bringing the overall project budget to a **total of USD 6,168,634.** Table 2 below shows the summary of project's estimated cost (based on the data in the Project Document revision of March 2016).

Table 2: Planned Project Cost

COST TO:	USD Year 1 and 2	USD Year 3	USD Year 4	USD Year 5	USD Total
Total Direct Cost DG-ENV	679,777	1,676,159	931,459	135,000	**3,422,395**
Programme Support Cost (7%) DG-ENV	47,584	117,331	65,202	9,450	**239,568**
Total Direct Cost DG-DEVCO	14,379	1554610	60,000	0	**1,628,989**
Programme Support Cost (6.2%) DG-DEVCO	891	96,386	3,720	0	**100,997**
UNEP In-kind Contribution	258,895	258,895	0	0	**776,685**
Environment Fund	-	-	-	-	-
Other Contribution (European Commission)	-	-	-	-	-
TOTAL	**1,001,526**	**3,703,381**	**1,060,381**	**144,450**	**6,168,634**

[74] The Directorate-General for International Cooperation and Development is responsible for formulating European Union development policy and thematic policies in order to reduce poverty in the world, to ensure sustainable economic, social and environmental development and to promote democracy, the rule of law, good governance and the respect of human rights, notably through external aid

[75] The Directorate-General for Environment is the European Commission department responsible for EU policy on the environment.

1.6 Implementation Issues

23. The project was initiated in 2012 and since then has undergone two extensions. The first revision in 2014 was for the purpose of accommodating the delayed start of the national activities due to prolonged selection through an open call for proposals. The second and most recent extension done in 2016 was as a result of the delays in the national activities implementation and for the purpose of aligning the duration of both DG DEVCO and DG Environment contributions.

24. The project is a component of a larger "umbrella" programme titled "Advancing Resource Efficiency in business practices" (Project PIMS no 01686) which focuses on enhancing business' ability to apply resource efficiency including cleaner production and environmental innovation along supply chains and to measure and disclose performance through corporate sustainability reporting. This is a global project although some of its components (the Eco-innovation Project included) are regional in nature and are designed to test, disseminate and up-scale activities at regional and national levels.

25. The Eco-innovation project mostly covers contributes to entirely (2 and 3) or partially (1, 4 and 5) to all components of this umbrella programme except for component 6 (focusing of corporate sustainability reporting) , and has a separate Project Document with funding from both DG ENV and DG-DEVCO[76]. The project began in 2012 and its initial stages focused mainly on the development of tools and methodologies to support eco-innovation and the uptake of resource-efficient practices at the technical and policy levels. Following the project extension in 2014 however, project activities were focused more on the implementation of these tools and methodologies. The final year of the project has been dedicated to the dissemination and communication of the project results.

26. The National Cleaner Production Centres cover over 64 countries around the world but the project is specifically implementing the testing new tools and methodologies with Small and medium Enterprises (SMEs) across 9 of these countries selected through an open call for proposals.

27. There has been no mid-term evaluation or review undertaken to date. The project has yielded useful results for UNEP to build a stronger programme around mainstreaming sustainability in Small and Medium Enterprises. As such, the recommendations and lessons learned emerging from the evaluation of this project will be of particularly importance to organisational learning and improvement.

28. Whereas the project shall be evaluated separately from the larger programme under which it is embedded, there will be need to ensure that the evaluation draws clear linkages that demonstrate its contribution to the programme-level results framework.

TERMS OF REFERENCE FOR THE EVALUATION

1.7 Objective and Scope of the Evaluation

29. In line with the UNEP Evaluation Policy[77] and the UNEP Programme Manual[78], the Terminal Evaluation 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

[76] Although the project has funding from two DGs, administratively it is treated as one project

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

[78] http://www.unep.org/QAS/Documents/UNEP_Programme_Manual_May_2013.pdf

knowledge sharing through results and lessons learned among UNEP and other main project partners such as UNIDO, European Commission, RECP*net and* UNDP. Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation [especially for the subsequent work of UNEP in this area].

30. It will focus on the following sets of **key questions**, based on the project's intended outcomes, which may be expanded by the consultants as deemed appropriate:

(a) POLICY: To what extent has the project been successful in promoting interest and endorsing commitment of the governments of countries in which the project was implemented, to integrate resource efficient and cleaner and safer production (RECP) and eco-innovation into national strategies for sustainable consumption and production?

(b) USE OF TOOLS: To what extent has the project succeeded through its demonstration projects (in the nine countries) to develop and promote business case for resource efficiency and eco-innovation in SMEs, and to support local industries and especially SMEs with RECP and eco-innovation application?

(c) THE BUSINESS CASE: What achievements emanating from this project can be directly or partially attributed to the realization of the development objective of the greater framework to which it constitutes a key component (i.e. enhancing business' ability to measure corporate environmental performance, apply life-cycle based methodologies and tools to enhance resource efficiency and eco-innovation in supply chains, and to measure and disclose performance through corporate sustainability reporting) and synergies with other SCP related initiatives such as SWITCH Asia, SWITCH Med, SWITCH Africa Green, PAGE (Partnership for Green Economy), 10YFP (10 Year Framework of Programmes on SCP) etc?

(d) SCALING UP: For the benefit of the subsequent work of UNEP in this area and/or up-scaling and replication of project outputs and results, which aspects emanating from this project should UNEP focus more in the future in this type of projects; which implementation approaches can be credited with having had the greatest influence in achieving laid out objectives, and which were considered to have been the most significant risks and challenges from which pertinent lessons can be derived?

1.8 Overall Approach and Methods

31. The Terminal Evaluation of the Project will be conducted by independent consultants under the overall responsibility and management of the UNEP Evaluation Office in consultation with the UNEP Project Manager and the Coordinator of the Resource Efficiency Sub-programmes.

32. It 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 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.

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

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

- Relevant background documentation, inter alia UNEP Medium Term Strategy (2010-2013 and 2014-2017); UNEP Programme of Work (2012-13, 2014-15);
- Project design documents (including minutes of the project design review meeting at approval); Annual Work Plans and Budgets or equivalent, revisions to the project (Project Document Supplement),
- Logical framework and its budget;

- Project reports such as periodic / six-monthly progress and financial reports, progress reports from collaborating partners, meeting minutes, relevant correspondence etc.;
- Project outputs, including manuals and guidelines, websites, Training workshop/meeting reports, facts sheets, publications, policy briefs/guidelines, policy reports, etc.;
- Evaluations/reviews of related projects

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

- UNEP Project Manager
- Project management team
- UNEP Fund Management Officer;
- Project partners in UNIDO,
- Representatives from UNIDO-UNEP RECP service provider networks
- European Commission as the donor to the project
- National focal points
- Relevant resource persons including knowledge partners;

(c) **Surveys** (e.g. use of questionnaires);

(d) **Field visit** the evaluation will include a visit to some of the SMEs in about 4 target countries engaged in this project, in at least three different regions, including the project team and partners based in France; the consultant shall also be expected to attend a meeting that is scheduled for April 2017 (date and venue to be confirmed);

(e) **Other data collection tools** to facilitate secondary data collection.

1.9 Key Evaluation principles

34. 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) to the extent possible, and when verification was not possible, the single source will be mentioned. Analysis leading to evaluative judgements should always be clearly spelled out.

35. The evaluation will assess the project with respect to **a minimum set of evaluation criteria** grouped in five categories: (1) Strategic Relevance; (2) Attainment of objectives and planned result, which comprises the assessment of outputs achieved, effectiveness and likelihood of impact; (3) Sustainability and replication; (4) Efficiency; and (5) Factors and processes affecting project performance, including preparation and readiness, implementation and management, stakeholder participation and public awareness, country ownership and driven-ness, financial planning and management, UNEP supervision and backstopping, and project monitoring and evaluation. The evaluation consultants can propose other evaluation criteria as deemed appropriate.

36. **Ratings.** All evaluation criteria will be rated on a six-point scale. Annex 3 provides guidance on how the different criteria should be rated and how ratings should be aggregated for the different evaluation criterion categories.

37. **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.

38. **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. 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, i.e. of processes affecting attainment of project results (criteria under category F – see below). This should provide the basis for the lessons that can be drawn from the project. In fact, the usefulness of the evaluation will be determined to a large extent by the capacity of the consultants to explain "*why things happened*" as they happened and are likely to evolve in this or that direction, which goes well beyond the mere review of "*where things stand*" at the time of evaluation.

39. A key aim of the evaluation is to encourage reflection and learning by UNEP staff and key project stakeholders. The consultant should consider how reflection and learning can be promoted, both through the evaluation process and in the communication of evaluation findings and key lessons.

40. **Communicating evaluation results.** Once the consultant(s) has obtained evaluation findings, lessons and results, the Evaluation Office will share the findings and lessons with the key stakeholders. Evaluation results should be communicated to the key stakeholders in a brief and concise manner that encapsulates the evaluation exercise in its entirety. There may, however, be several intended audiences, each with different interests and preferences 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.

1 Strategic relevance

41. The evaluation will assess, in retrospect, whether the project's objectives and implementation strategies were consistent with global, regional and national environmental issues and needs.

42. The evaluation will also assess 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. UNEP's Medium Term Strategy (MTS) is a document that guides UNEP's programme planning over a four-year period. It identifies UNEP's thematic priorities, known as Subprogrammes (SP), and sets out the desired outcomes [known as Expected Accomplishments (EAs)] of the Subprogrammes. The evaluation will assess whether the project makes a tangible/plausible contribution to any of the EAs specified in the MTS (2010-13 and 2014-2017) The magnitude and extent of any contributions and the causal linkages should be fully described.

43. The evaluation should assess the project's alignment / compliance with UNEP's policies and strategies. The evaluation should provide a brief narrative of the following:

(a) *Alignment with the Bali Strategic Plan (BSP)*[79]. The outcomes and achievements of the project should be briefly discussed in relation to the objectives of the UNEP BSP.

(b) *Gender balance*. Ascertain 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. Are the project intended results contributing to the realization of international GE (Gender Equality) norms and agreements as reflected in the UNEP Gender Policy and Strategy, as well as to regional, national and local strategies to advance HR & GE?

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

(c) *Human rights based approach (HRBA) and inclusion of indigenous peoples issues, needs and concerns*. Ascertain to what extent the project has applied the UN Common Understanding on HRBA. Ascertain if the project is in line with the UN Declaration on the Rights of Indigenous People, and pursued the concept of free, prior and informed consent.

(d) *South-South Cooperation.* This is regarded as the exchange of resources, technology, and knowledge between developing countries. Briefly describe any aspects of the project that could be considered as examples of South-South Cooperation.

(e) *Safeguards*. Whether the project has adequately considered environmental, social and economic risks and established whether they were vigilantly monitored.

44. Based on an analysis of project stakeholders, the evaluation should assess the relevance of the project intervention to key stakeholder groups and relevance for building further the area of work under the next UNEP Programme of Work

2 Achievement of Outputs

45. The evaluation will assess, for each component, the projects' success in producing the programmed outputs (products and services delivered by the project itself) and milestones as per the ProDocs and any modifications/revisions later on during project implementation, both in quantity and quality, as well as their usefulness and timeliness.

46. Briefly explain the reasons behind the success (or failure) of the project in producing its different outputs and meeting expected quality standards, cross-referencing as needed to more detailed explanations provided under Section F (which covers the processes affecting attainment of project results). Were key stakeholders appropriately involved in producing the programmed outputs?

3 Effectiveness: Attainment of Objectives and Planned Results

47. The evaluation will assess the extent to which the project's objectives were effectively achieved or are expected to be achieved.

48. The **Theory of Change** (ToC) of a project depicts the causal pathways from project outputs (goods and services delivered by the project) through outcomes (changes resulting from the use made by key stakeholders of project outputs) towards impact (long term changes in environmental benefits and living conditions). The ToC will also depict any intermediate changes required between project outcomes and impact, called 'intermediate states'. The ToC further defines the external factors that influence change along the major pathways; i.e. factors that affect whether one result can lead to the next. These external factors are either drivers (when the project has a certain level of control) or assumptions (when the project has no control). The ToC also clearly identifies the main stakeholders involved in the change processes.

49. The evaluation will reconstruct the ToC of the project based on a review of project documentation and stakeholder interviews. The evaluator will be expected to discuss the reconstructed TOC with the stakeholders during evaluation missions and/or interviews in order to ascertain the causal pathways identified and the validity of impact drivers and assumptions described in the TOC. This exercise will also enable the consultant to address some of the key evaluation questions and make adjustments to the TOC as appropriate (the ToC of the intervention may have been modified / adapted from the original design during project implementation).

50. The assessment of effectiveness will be structured in three sub-sections:

(f) Evaluation of the **achievement of outcomes as defined in the reconstructed ToC**. These are the first-level outcomes expected to be achieved as an immediate result of project outputs. For this project, the main question will be to what extent the project has contributed to the transition towards sustainable

industrial production systems in developing countries and transition economies through the promotion of eco-innovation based on resource efficient and cleaner production.

(g) Assessment of the **likelihood of impact** using a Review of Outcomes to Impacts (ROtI) approach[80]. The evaluation will assess to what extent the project has to date contributed, and is likely in the future to further contribute, to [intermediate states], and the likelihood that those changes in turn to lead to positive changes in the natural resource base, benefits derived from the environment and human well-being. The evaluation will also consider the likelihood that the intervention may lead to unintended negative effects (project documentation relating to Environmental, Social and Economic. Safeguards)

(h) Evaluation of the **achievement of the formal project overall objective, overall purpose, goals and component outcomes** using the project's own results statements as presented in the Project Document[81]. This sub-section will refer back where applicable to the preceding sub-sections (a) and (b) to avoid repetition in the report. To measure achievement, the evaluation will use as much as appropriate the indicators for achievement proposed in the Logical Framework (Logframe) of the project, adding other relevant indicators as appropriate. Briefly explain what factors affected the project's success in achieving its objectives, cross-referencing as needed to more detailed explanations provided under Section F. Most commonly, the overall objective is a higher level result to which the project is intended to contribute. The section will describe the actual or likely **contribution** of the project to the objective.

(i) The evaluation should, where possible, disaggregate outcomes and impacts for the key project stakeholders. It should also assess the extent to which HR and GE were integrated in the Theory of Change and results framework of the intervention and to what degree participating institutions/organizations changed their policies or practices thereby leading to the fulfilment of HR and GE principles (e.g. new services, greater responsiveness, resource re-allocation, etc.)

4 Sustainability and replication

51. Sustainability is understood as the probability of continued long-term project-derived results and impacts after the external project funding and assistance ends. The evaluation will identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of benefits. Some of these factors might be direct results of the project while others will include contextual circumstances or developments that are not under control of the project but that may condition the sustainability of benefits. The evaluation should ascertain to what extent follow-up work has been initiated and how project results will be sustained and enhanced over time. The reconstructed ToC will assist in the evaluation of sustainability, as the drivers and assumptions required to achieve higher-level results are often similar to the factors affecting sustainability of these changes.

52. Four aspects of sustainability will be addressed:

(j) *Socio-political sustainability.* Are there any social or political factors that may influence positively or negatively the sustenance of project results and progress towards impacts? Is the level of ownership by the main stakeholders sufficient to allow for the project results to be sustained? Are there sufficient government and other key stakeholder awareness, interests, commitment and incentives to promote and enable more active business and industry (especially SMEs) engagement in the transition towards sustainable consumption and production, resource efficiency and green economy? Did the project conduct 'succession planning' and implement this during the life of the project? Was capacity building conducted for key stakeholders? Did the intervention activities aim to promote (and did they promote) positive sustainable changes in attitudes, behaviours and power relations between the different stakeholders? To what extent has the integration of HR and GE led to an increase in the likelihood of sustainability of project results?

80 Guidance material on Theory of Change and the ROtI approach is available from the Evaluation Office.

81 Or any subsequent **formally approved** revision of the project document or logical framework.

(k) *Financial resources.* To what extent are the continuation of project results and the eventual impact of the project dependent on financial resources? What is the likelihood that adequate financial resources[82] will be or will become available to use capacities built by the project? Are there any financial risks that may jeopardize sustenance of project results and onward progress towards impact?

(l) *Institutional framework.* To what extent is the sustenance of the results and onward progress towards impact dependent on issues relating to institutional frameworks and governance? How robust are the institutional achievements such as governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. required to sustaining project results and to lead those to impact on human behaviour and environmental resources, goods or services?

(m) *Environmental sustainability.* Are there any environmental factors, positive or negative, that can influence the future flow of project benefits? Are there any project outputs or higher level results that are likely to affect the environment, which, in turn, might affect sustainability of project benefits? Are there any foreseeable negative environmental impacts that may occur as the project results are being up-scaled?

53. **Catalytic role and replication**. The *catalytic role* of UNEP interventions is embodied in their approach of supporting the creation of an enabling environment and of investing in pilot activities which are innovative and showing how new approaches can work. UNEP also aims to support activities that upscale new approaches to a national, regional or global level, with a view to achieve sustainable global environmental benefits. The evaluation will assess the catalytic role played by this project, namely to what extent the project has:

(n) *catalyzed behavioural changes* in terms of use and application, by the relevant stakeholders, of capacities developed;

(o) provided *incentives* (social, economic, market based, competencies etc.) to contribute to catalyzing changes in stakeholder behaviour;

(p) contributed to *institutional changes*, for instance institutional uptake of project-demonstrated policies, practices or management approaches;

(q) contributed to *policy changes* (on paper and in implementation of policy);

(r) contributed to sustained follow-on financing (*catalytic financing*) from Governments, private sector, donors etc.;

(s) created opportunities for particular individuals or institutions ("*champions*") to catalyze change (without which the project would not have achieved all of its results).

54. *Replication* is defined as lessons and experiences coming out of the project that are replicated (experiences are repeated and lessons applied in different geographic areas) or scaled up (experiences are repeated and lessons applied in the same geographic area but on a much larger scale and funded by other sources). The evaluation will assess the approach adopted by the project to promote replication effects and determine to what extent actual replication has already occurred, or is likely to occur in the near future. What are the factors that may influence replication and scaling up of project experiences and lessons? What areas UNEP can focus more in developing further this area of work focusing in business sector engagement (especially SMEs in developing economies) in transition to SCP and Green Economy and contributing to the environmental dimension of sustainable development?

5 Efficiency

55. The evaluation will assess the cost-effectiveness and timeliness of project execution. It will describe any cost- or time-saving measures put in place in attempting to bring the project as far as possible in

[82] Those resources can be from multiple sources, such as the national budget, public and private sectors, development assistance etc.

achieving its results within its (severely constrained) secured budget and (extended) time. It will also analyse how delays, if any, have affected project execution, costs and effectiveness. Wherever possible, costs and time over results ratios of the project will be compared with that of other similar interventions. The evaluation will also assess the extent to which HR and GE were allocated specific and adequate budget in relation to the results achieved.

56. 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. For instance, the evaluation should assess how well the project was able to increase efficiency by building upon previous awareness-raising, pilot and demonstration efforts, methodologies and training toolkits in resource efficient, cleaner and safer production at national and regional levels as well as other ongoing initiatives by UNEP in the area of SCP and Green Economy.

6 Factors and processes affecting project performance

57. **Preparation and readiness**. This criterion focusses on the quality of project design and preparation. Were project stakeholders[83] adequately identified and were they sufficiently involved in project development and ground truthing e.g. of proposed timeframe and budget? Were the project's objectives and components clear, practicable and feasible within its timeframe? Are potentially negative environmental, economic and social impacts of projects identified? Were the capacities of executing agencies properly considered when the project was designed? Was the project document clear and realistic to enable effective and efficient implementation? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project implementation? Were counterpart resources (funding, staff, and facilities) and enabling legislation assured? Were adequate project management arrangements in place? Were lessons from other relevant projects properly incorporated in the project design? What factors influenced the quality-at-entry of the project design, choice of partners, allocation of financial resources etc.? Were any design weaknesses mentioned during the project review process at the time of project approval adequately addressed?

58. **Project implementation and management**. This includes an analysis of implementation approaches used by the project, its management framework, the project's adaptation to changing conditions and responses to changing risks including safeguard issues (adaptive management), the performance of the implementation arrangements and partnerships, relevance of changes in project design, and overall performance of project management. The evaluation will:

(t) Ascertain to what extent the project implementation mechanisms outlined in the project document have been followed and were effective in delivering project milestones, outputs and outcomes. Were pertinent adaptations made to the approaches originally proposed?

(u) Evaluate the effectiveness and efficiency of project management and how well the management was able to adapt to changes during the life of the project.

(v) Assess the role and performance of the teams and working groups established and the project execution arrangements at all levels.

(w) Assess the extent to which project management responded to direction and guidance provided by the UNEP Project Manager, and feedback from RECPnet members during the validation workshops and the project partners in the countries which were in turn steered by the national steering committees.

[83] Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or 'stake' in the outcome of the project. The term also applies to those potentially adversely affected by the project.

(x) Identify operational and political / institutional problems and constraints that influenced the effective implementation of the project, and how the project tried to overcome these problems.

59. **Stakeholder participation, cooperation and partnerships.** The Evaluation will assess the effectiveness of mechanisms for information sharing and cooperation with other UNEP projects and programmes, external stakeholders and partners. The term stakeholder should be considered in the broadest sense, encompassing both project partners and target users (such as SMEs, regional, national and sub-national RECP network members, donors) of project products. The TOC and stakeholder analysis should assist the evaluators in identifying the key stakeholders and their respective roles, capabilities and motivations in each step of the causal pathways from activities to achievement of outputs, outcomes and intermediate states towards impact. The assessment will look at three related and often overlapping processes: (1) information dissemination to and between stakeholders, (2) consultation with and between stakeholders, and (3) active engagement of stakeholders in project decision making and activities. The evaluation will specifically assess:

(y) the approach(es) and mechanisms used to identify and engage stakeholders (within and outside UNEP) in project design and at critical stages of project implementation. What were the strengths and weaknesses of these approaches with respect to the project's objectives and the stakeholders' motivations and capacities?

(z) How was the overall collaboration between different functional units of UNEP involved in the project? What coordination mechanisms were in place? Were the incentives for internal collaboration in UNEP adequate?

(aa) Was the level of involvement of the Regional, Liaison and Out-posted Offices in project design, planning, decision-making and implementation of activities appropriate?

(bb) Has the project made full use of opportunities for collaboration with other projects and programmes including opportunities not mentioned in the Project Document[84]? Have complementarities been sought, synergies been optimized and duplications avoided?

(cc) What was the achieved degree and effectiveness of collaboration and interactions between the various project partners and stakeholders during design and implementation of the project? This should be disaggregated for the main stakeholder groups identified in the inception report.

(dd) To what extent has the project been able to take up opportunities for joint activities, pooling of resources and mutual learning with other organizations and networks? In particular, how useful are partnership mechanisms and initiatives such as RECPnet to build stronger coherence and collaboration between participating organisations?

(ee) How did the relationship between the project and the collaborating partners (institutions and individual experts) develop? Which benefits stemmed from their involvement for project performance, for UNEP and for the stakeholders and partners themselves? Do the results of the project (strategic programmes and plans, monitoring and management systems, sub-regional agreements etc.) promote participation of stakeholders, including users, in environmental decision making?

60. **Communication and public awareness**. The evaluation will assess the effectiveness of any public awareness activities that were undertaken during the course of implementation of the project to communicate the project's objective, progress, outcomes and lessons. This should be disaggregated for the main stakeholder groups identified in the inception report. Did the project identify and make us of existing communication channels and networks used by key stakeholders? Did the project provide feedback channels?

[84] This project is embedded under a larger programme: (621.1) Resource efficiency and sustainable consumption and production

61. **Country ownership and driven-ness.** The evaluation will assess the degree and effectiveness of involvement of government / public sector agencies in the project, in particular those involved in project execution and those participating in the RECP Network.

(ff) To what extent have Governments assumed responsibility for the project and provided adequate support to project execution, including the degree of cooperation received from the various public institutions involved in the project?
(gg) How and how well did the project stimulate country ownership of project outputs and outcomes?

62. **Financial planning and management**. Evaluation of financial planning requires assessment of the quality and effectiveness of financial planning and control of financial resources throughout the project's lifetime. The assessment will look at actual project costs by activities compared to budget (variances), financial management (including disbursement issues), and co-financing. The evaluation will:

(hh) Verify the application of proper standards (clarity, transparency, audit etc.) and timeliness of financial planning, management and reporting to ensure that sufficient and timely financial resources were available to the project and its partners;
(ii) Assess other administrative processes such as recruitment of staff, procurement of goods and services (including consultants), preparation and negotiation of cooperation agreements etc. to the extent that these might have influenced project performance;
(jj) Present the extent to which co-financing has materialized as expected at project approval (see Table 1). Report country co-financing to the project overall, and to support project activities at the national level in particular. The evaluation will provide a breakdown of final actual costs and co-financing for the different project components (see tables in Annex 4).
(kk) Describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective. Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector.

63. Analyse the effects on project performance of any irregularities in procurement, use of financial resources and human resource management, and the measures taken UNEP to prevent such irregularities in the future. Determine whether the measures taken were adequate.

64. **Supervision, guidance and technical backstopping.** The purpose of supervision is to verify the quality and timeliness of project execution in terms of finances, administration and achievement of outputs and outcomes, in order to identify and recommend ways to deal with problems which arise during project execution. Such problems may be related to project management but may also involve technical/institutional substantive issues in which UNEP has a major contribution to make.

65. The evaluators should assess the effectiveness of supervision, guidance and technical support provided by the different supervising/supporting bodies including:

(ll) The adequacy of project supervision plans, inputs and processes;
(mm) The realism and candour of project reporting and the emphasis given to outcome monitoring (results-based project management);
(nn) How well did the different guidance and backstopping bodies play their role and how well did the guidance and backstopping mechanisms work? What were the strengths in guidance and backstopping and what were the limiting factors?

66. **Monitoring and evaluation**. The evaluation will include an assessment of the quality, application and effectiveness of project monitoring and evaluation plans and tools, including an assessment of risk management based on the assumptions and risks identified in the project document. The evaluation will

assess how information generated by the M&E system during project implementation was used to adapt and improve project execution, achievement of outcomes and ensuring sustainability. M&E is assessed on three levels:

(oo) *M&E Design*. The evaluators should use the following questions to help assess the M&E design aspects:

- Arrangements for monitoring: Did the project have a sound M&E plan to monitor results and track progress towards achieving project objectives? Have the responsibilities for M&E activities been clearly defined? Were the data sources and data collection instruments appropriate? Was the time frame for various M&E activities specified? Was the frequency of various monitoring activities specified and adequate?
- How well was the project logical framework (original and possible updates) designed as a planning and monitoring instrument?
- SMART-ness of indicators: Are there specific indicators in the logframe for each of the project objectives? Are the indicators measurable, attainable (realistic) and relevant to the objectives? Are the indicators time-bound?
- Adequacy of baseline information: To what extent has baseline information on performance indicators been collected and presented in a clear manner? Was the methodology for the baseline data collection explicit and reliable? For instance, was there adequate baseline information on pre-existing accessible information on global and regional environmental status and trends, and on the costs and benefits of different policy options for the different target audiences? Was there sufficient information about the assessment capacity of collaborating institutions and experts etc. to determine their training and technical support needs?
- To what extent did the project engage key stakeholders in the design and implementation of monitoring? Which stakeholders (from groups identified in the inception report) were involved? If any stakeholders were excluded, what was the reason for this? Was sufficient information collected on specific indicators to measure progress on HR and GE (including sex-disaggregated data)?
- Did the project appropriately plan to monitor risks associated with Environmental Economic and Social Safeguards?
- Arrangements for evaluation: Have specific targets been specified for project outputs? Has the desired level of achievement been specified for all indicators of objectives and outcomes? Were there adequate provisions in the legal instruments binding project partners to fully collaborate in evaluations?
- Budgeting and funding for M&E activities: Determine whether support for M&E was budgeted adequately and was funded in a timely fashion during implementation.

(pp) *M&E Plan Implementation*. The evaluation will verify that:

- the M&E system was operational and facilitated timely tracking of results and progress towards projects objectives throughout the project implementation period;
- Half-yearly Progress & Financial Reports were complete and accurate;
- Risk monitoring (including safeguard issues) was regularly documented
- the information provided by the M&E system was used during the project to improve project performance and to adapt to changing needs.

7 The Consultant

67. The evaluation will be undertaken by one independent Consultant. Details about the specific roles and responsibilities of the consultant are presented in Annex 1 of these TORs. The following expertise and experience is required: Over 15 years of professional experience, including evaluation of large, regional or global programmes and using a Theory of Change approach; an advanced university degree in environmental sciences and/or expertise in resource efficiency, sustainable consumption and production, green economy, life-cycle based approaches; a broad understanding of large-scale, consultative assessment processes; broad understanding of business engagement and role in resource efficiency and cleaner production policy and

management strategies; broad understanding of developing economies context, excellent analytical and report production skills, good command of English; attention to detail and respect for deadlines.

68. The Consultant will coordinate data collection and analysis, and the preparation of the main report for the evaluation. S/He will ensure that all evaluation criteria and questions are adequately covered.

69. By undersigning the service contract with UNEP/UNON, the consultant certifies that they have not been associated with the design and implementation of the project in any way which may jeopardize their independence and impartiality towards project achievements and project partner performance. In addition, they will not have any future interests (within six months after completion of the contract) with the project's executing or implementing units.

8 Evaluation Deliverables and Review Procedures

70. The evaluator will prepare an **inception report** (see Annex 2(a)) of TORs for Inception Report outline) containing a thorough review of the project context, project design quality, a draft reconstructed Theory of Change of the project, the evaluation framework and a tentative evaluation schedule.

71. It is expected that a large portion of the desk review will be conducted during the inception phase. It will be important to acquire a good understanding of the project context, design and process at this stage. The review of design quality will cover the following aspects (see Annex 7 for the detailed project design assessment matrix):

- Strategic relevance of the project
- Preparation and readiness;
- Financial planning;
- M&E design;
- Complementarity with UNEP strategies and programmes;
- Sustainability considerations and measures planned to promote replication and up-scaling.

72. The inception report will present a draft, desk-based reconstructed Theory of Change of the project. It is vital to reconstruct the ToC *before* most of the data collection (review of progress reports, in-depth interviews, surveys etc.) is done, because the ToC will define which direct outcomes, drivers and assumptions of the project need to be assessed and measured – based on which indicators – to allow adequate data collection for the evaluation of project effectiveness, likelihood of impact and sustainability.

73. The inception report will also include a stakeholder analysis identifying key stakeholders, networks and channels of communication. This information should be gathered from the Project document and discussion with the project team.

74. The evaluation framework will present in further detail the overall evaluation approach. It will specify for each evaluation question under the various criteria what the respective indicators and data sources will be. The evaluation framework should summarize the information available from project documentation against each of the main evaluation parameters. Any gaps in information should be identified and methods for additional data collection, verification and analysis should be specified. Evaluations/reviews of other large assessments can provide ideas about the most appropriate evaluation methods to be used.

75. Effective communication strategies help stakeholders understand the results and use the information for organisational learning and improvement. While the evaluation is expected to result in a comprehensive document, content is not always best shared in a long and detailed report; this is best presented in a synthesised form using any of a variety of creative and innovative methods. The evaluator is encouraged to make use of multimedia formats in the gathering of information e.g. video, photos, sound recordings.

Together with the full report, the evaluator will be expected to produce a 2-page summary of key findings and lessons. A template for this has been provided in Annex?

76. The inception report will also present a tentative schedule for the overall evaluation process, including a draft programme for the country visit and tentative list of people/institutions to be interviewed. The inception report will be submitted for review and approval by the Evaluation Office before the any further data collection and analysis is undertaken.

77. **The main evaluation report** should be brief (approximately 40 pages – excluding the executive summary and annexes), to the point and written in plain English. The report will follow the annotated Table of Contents outlined in Annex 2. It must explain the purpose of the evaluation, exactly what was evaluated and the methods used (with their limitations). The report will present evidence-based and balanced findings, consequent conclusions, lessons and recommendations, which will be cross-referenced to each other. The report should be presented in a way that makes the information accessible and comprehensible. Any dissident views in response to evaluation findings will be appended in footnote or annex as appropriate. To avoid repetitions in the report, the authors will use numbered paragraphs and make cross-references where possible.

78. **Review of the draft evaluation report**. The consultant will submit a **"zero draft" report** to the UNEP EO and revise the draft following the comments and suggestions made by the EO. Once a draft of adequate quality has been accepted, the EO will share this first draft report with the Project Manager, who will alert the EO in case the report would contain any blatant factual errors. The Evaluation Office will then forward the first draft report to the other project stakeholders, in particular (refer to Section I.4) 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. It is also very important that stakeholders provide feedback on the proposed recommendations and lessons. Comments would be expected within two weeks after the draft report has been shared. Any comments or responses to the draft report will be sent to the UNEP EO for collation. The EO will provide the comments to the evaluation Consultant for consideration in preparing the final draft report, along with its own views.

79. The Consultant will submit the final draft report no later than 2 weeks after reception of stakeholder comments. The Consultant will prepare a **response to comments**, listing those comments not or only partially accepted by them that could therefore not or only partially be accommodated in the final report. They will explain why those comments have not or only partially been accepted, providing evidence as required. This response to comments will be shared by the EO with the interested stakeholders to ensure full transparency.

80. **Submission of the final evaluation report.** The final report shall be submitted by Email to the Head of the Evaluation Office. The Evaluation Office will finalize the report and share it with the interested Divisions and Sub-programme Coordinators in UNEP. The final evaluation report will be published on the UNEP Evaluation Office web-site www.unep.org/eou.

81. As per usual practice, the UNEP EO will prepare a **quality assessment** of the zero draft and final draft report, which is 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 Annex 3.

82. The UNEP Evaluation Office will assess the ratings in the final evaluation report based on a careful review of the evidence collated by the evaluation consultants and the internal consistency of the report. Where there are differences of opinion between the evaluator and UNEP Evaluation Office on project ratings, both viewpoints will be clearly presented in the final report. The UNEP Evaluation Office ratings will be considered the final ratings for the project.

83. 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 Project Manager. After reception of the Recommendations Implementation Plan, the Project Manager is expected to complete it and return it to the EO within one month. (S)he is expected to update the plan every six month until the end of the tracking period. As this is a Terminal Evaluation, the tracking period for implementation of recommendations will be 18 months, unless it is agreed to make this period shorter or longer as required for realistic implementation of all evaluation recommendations. Tracking points will be every six months after completion of the implementation plan.

9 Logistical arrangements

84. This Terminal Evaluation will be undertaken by one independent evaluation consultant contracted by the UNEP Evaluation Office. The consultant will work under the overall responsibility of the UNEP Evaluation Office and will consult with the EO on any procedural and methodological matters related to the evaluation. It is, however, the consultant's individual responsibility to arrange for his/her travel, visa, obtain documentary evidence, plan meetings with stakeholders, organize online surveys, and any other logistical matters related to the assignment. The UNEP Project Manager and project team will, where possible, provide logistical support (introductions, meetings, site visits, etc.) allowing the consultant to conduct the evaluation as efficiently and independently as possible.

10 Schedule of the evaluation

85. Table 7 below presents the tentative schedule for the evaluation.

Table 7. Tentative schedule for the evaluation

Milestone	Tentative timelines
Consultant recruitment and contracting process	November-December 2016
Kick off meetings	January 2017
Inception Report	January 2017
Evaluation Missions: **Africa** - Uganda (Agri-food) or Kenya (Policy); **Latin America and the Caribbean** - Colombia (Chemicals); **Asia Pacific** - Viet Nam (Agri-food and Policy) or Malaysia (Chemicals); **France** – UNEP Paris; and a Meeting in April 2017 (date and venue to be confirmed).	February - June 2017
Telephone interviews, online/electronic surveys etc.	January - June 2017
Draft report submitted to EO	March 2017
Draft Report shared with project team**	March 2017
Attendance to project meeting	April 2017
Draft Report shared with external stakeholders	May 2017
Additional data collection and report revision	May-June 2017
Final Report and 2-page summary of key findings and lessons	June 2017

**The missions will be spread over time to cater for the participation of the consultant in the meeting in April 2017 as well as to meet with project participants closer towards project end.*

***To allow for preliminary findings to be presented at the meeting in April 2017, the consultant shall prepare a more or less completed draft of the TE report but this will be updated later and finalised towards the end of June 2017 (approximately 2 months prior to the project end)*

List of Annexes

Annex 1	Consultant-specific Terms of Reference
Annex 2	Annotated Table of Contents of the main evaluation deliverables
Annex 3	Evaluation Ratings

Annex 4	Project costs and co-financing tables
Annex 5	Quality Assessment of the Evaluation Report
Annex 6	Documentation list for the evaluation to be provided by the UNEP Task/Project Manager
Annex 7	Template for the assessment of the quality of project design
Annex 8	Introduction to Theory of Change / Impact pathways, the ROtI Method and the ROtI Results Score sheet
Annex 9	Stakeholder Analysis for the Evaluation Inception Report
Annex 10	Template for 2 page bulletin summarising project results and key lessons
Annex 11	Project's Logical Framework

Annex 2 – Evaluation Respondents

People interviewed for this evaluation in UN-related agencies

Fuaad **Alkizim**	Fund Management Officer for Eco-Innovation Project, Economy Division	UN Environment (Paris)
Smail **Alhilali**	Acting Head, RECP Programme, UNIDO; ex-Director General of Morocco Cleaner Production Centre	UNIDO (Vienna)
Sandra **Averous Monnery**	Programme Officer Consumption and Production Unit, Resources and Markets Branch	UN Environment (Paris)
Zura **Nukusheva-Béguin**	Consultant, Secretariat, International Resource Panel	UN Environment (Paris)
Karina **Boers**	Affiliate Staff	UN Environment (Paris)
Garrette **Clark**	Former Eco-Innovation Project Staff; now Programme Officer, Cities & Lifestyles	UN Environment (Paris)
Achim **Halpaap**	Chief, Chemicals & Health Branch, Economy Division	UN Environment (Geneva)
Llorenc **Mila i Canals**	Project Manager	UN Environnent - SETAC Life Cycle Initiative (Paris)
Angus **MacKay**	Manager, Green Development & Climate Change; Partnership for Action on Green Economy Delegate	UNITAR - United Nations Institute for Training and Research (Geneva)
Pauline **Marima**	Evaluation Manager, Evaluation Office	UN Environment (Nairobi)
Hassan **Mehdi**	RECP*net* Secretariat, Environment Branch, Industrial Resource Efficiency Unit	UNIDO (Vienna)
Kevin **Munn**	Programme Office, Chemicals & Health Branch, Economy Division	UN Environment (Geneva)
Ligia **Noronha**	Director, Economy Division	UN Environment (Nairobi)
Fabienne **Pierre**	Programme Officer, 10YFP Secretariat	UN Environment (Paris)
Liazzat **Rabbiosi**	Project Officer (until from Sept 2013 to Nov 2016); currently Programme Officer (CAP South Asia region) Ozone Action – Montreal Protocol	UN Environnent (Bangkok)
Helena **Rey**	Task Manager for the Evaluation, Project Officer (November 2016 to present)	UN Environment (Paris)
Walter **Reinhardt**	SCP Project Coordinator	UN Environnent (Bangkok)
George **Scott**	Programme Officer, Finance Initiative	UN Environment (Geneva)
Mela **Shah**	Evaluation Programme Assistant, Evaluation Office	UN Environment (Nairobi)
Stephan **Sicars**	Unit Chief, Resource Efficiency	UNIDO (Vienna)
Michael **Spilsbury**	Director, Evaluation Office	UN Environment (Nairobi)
Steven **Stone**	Chief, Economics and Trade Branch, Economy Division	UN Environment (Geneva)
Elisa **Tonda**	Head, Responsible Industry and Value Chain Unit, Sustainable Lifestyles, Cities and Industry Branch	UN Environment (Paris)
Katie **Tuck**	Associate Programme Officer, 10YFP Secretariat	UN Environment (Paris)
Elisa **Vacherand**	Programme Officer, Positive Impact Finance	UN Environment (Geneva)
Dirk **Wagener**	Sub-Programme Coordinator for the Resource Efficiency Sub-Programme	UN Environment (Nairobi)
Feng **Wang**	Programme Officer	UN Environnent - SETAC Life Cycle Initiative (Paris)
Vera **Weick**	Programme Officer, Green Economy, Economics and Trade Branch, Economy Division	UN Environment (Geneva)

Field Mission in Kenya

Kelvin **Khisa**	Senior Research Scientist, Kenya Industrial Research and Development Institute (KIRDI)	Nairobi, Kenya
Margaret **Maimba**	Chief Scientist, National Commission for Science, Technology & Innovation	Nairobi, Kenya
Evans **Nangulu**	Consultant, Kenya National Cleaner Production Centre	Nairobi, Kenya
Steve Onseri **Nyamori**	Deputy Director, Kenya National Cleaner Production Centre	Nairobi, Kenya
John **Nyangena**	Policy Analyst, Productive Sector Division, Kenya Institute for Public Policy Research & Analysis (KIPPRA)	Nairobi, Kenya
Alice **Odingo**	Soroptimist International UN Representative, University of Nairobi, Department of Geography and Environmental Studies	Nairobi, Kenya
Robert **Orima**	Chief Enforcement Officer, National Environment Management Authority (NEMA)	Nairobi, Kenya
Nyamusi Janet **Osero**	Cleaner Production Expert, Kenya National Cleaner Production Centre	Nairobi, Kenya

Field Mission in Malaysia

Chew **Bee Ooi**	General Manager, Wilron Products Sdn Bhd	Selangor, Malaysia
Abang Othman **Bin Abang Yusof**	Deputy Under Secretary, Strategic Technology and S&T Application Division, Ministry of Science, Technology, and Innovation	Putrajaya, Malaysia
Mohamad Razif **Bin Haji Abd Mubin**	Director, Environmental and Natural Resources Section, Economic Planning Unit, Prime Minister Dept.	Putrajaya, Malaysia
Ahmad Kamal **Bin Wasis**	Deputy Director, Environmental and Natural Resources Section, Economic Planning Unit, Prime Minister Department	Putrajaya, Malaysia
Fatimah Wati **Binti Che Abdullah**	Principal Assistant Director, Environmental and Natural Resources Section, Economic Planning Unit, Prime Minister Department	Putrajaya, Malaysia
Nor Haswani **Binti Kamis**	Principal Assistant Secretary, Strategic Technology and S&T Application Division, Ministry of Science, Technology, and Innovation	Putrajaya, Malaysia
Nur 'Ashiquin **Binti Mohammed Ridzan Nirmal**	Researcher, Product Safety & Hazard Assessment, Environmental Technology Research Centre, SIRIM	Shah Alam, Malaysia
Nik Munerahanim **Binti Nik Muhammad**	Principal Assistant Secretary, Strategic Technology and S&T Application Division, Ministry of Science, Technology, and Innovation	Putrajaya, Malaysia
Shireen Shaharina **Binti Mohamed Shamaun**	Researcher, Environmental Technology Research Centre, SIRIM Berhad	Shah Alam, Malaysia
Vicki **Lim**	Business Director, Wilron Products Sdn Bhd	Selangor, Malaysia
Uma **Mahiam**	Principal Assistant Secretary, Transfer of Technology and Commercialisation of R&D Division, Ministry of Science, Technology, and Innovation	Putrajaya, Malaysia
Tan Yong Nee	Head, Pollution Abatement Section, Environmental Technology Research Centre, SIRIM Berhad	Shah Alam, Malaysia
Stanley **Teo Kwang Yaw**	Consultant, Technology Research Centre, SIRIM Berhad	Shah Alam, Malaysia

Field Mission in Uganda

Alfred **Aveku**	Quality Controller, Upland Rice Millers Co. Ltd.	Jinja, Uganda
Andrew **Ayor**	Materere University (Steering Committee member)	Kampala, Uganda
Ben **Gelenga**	Operations Manager, Upland Rice Millers Co. Ltd.	Jinja, Uganda
Richard **Lutalo**	Senior Science Officer, UNCOST-Uganda National Council for Science and Technology (Steering Committee president)	Kampala, Uganda
James **Ludigo**	Technical Officer, Uganda Cleaner Product Centre	Kampala, Uganda
Robert **Mawanda**	Uganda Manufacturers Association (Steering Committee member)	Kampala, Uganda
George **Mugerwa**	Office of the President (Steering Committee member)	Kampala, Uganda
Dixon **Musasizi**	Production Manager, Kazire Health Products Ltd	Mbarara, Uganda
Juliet **Nakiyinji**	Electrician, Kazire Health Products Ltd	Mbarara, Uganda
Hilda **Orishaba**	Agronomy Specialist, Kazire Health Products Ltd	Mbarara, Uganda
Kassim **Semanda**	Ministry of Industry and Trade and Cooperatives (Steering Committee member)	Kampala, Uganda
Silver **Ssebagala**	Executive Director, Uganda Cleaner Product Centre	Kampala, Uganda
Edson **Twinomujuni**	Technical Officer, Uganda Cleaner Product Centre	Kampala, Uganda

Field Mission in Vietnam

Pham Minh **Duc**	Managing Director, Ecolink	Cau Giay, Vietnam
Le Van **Duc**	Deputy Director, Department of Cultivation, Ministry of Agriculture and Rural Development	Hanoi, Vietnam
Kieu Nguyen Viet **Ha**	Ministry of Industry and Trade	Hanoi, Vietnam
Pham Hoang **Hai**	Chief of Secretariat, Vietnam Business Council for Sustainable Development (VBCSD)	Hanoi, Vietnam
Nguyen Le **Hang**	Marketing, Vietnamese National Cleaner Production Centre (VNCPC)	Hanoi, Vietnam
Dinh Thao **Hoa**	Consultant, Centre for Creativity and Sustainability (CCS)	Hanoi, Vietnam
Nguyen Thi Bich **Hoa**	Vietnam Vice Director, Asian Institute of Technology	Hanoi, Vietnam
Pham Thi Quynh **Hoa**	Head of International Cooperation Department, National Academy of Public Administration (NAPA)	Hanoi, Vietnam
Thu **Hoa**	Assistant, Asian Institute of Technology	Hanoi, Vietnam
Can Viet **Hoang**	Communication Officer, Vietnam Business Council for Sustainable Development (VBCSD)	Hanoi, Vietnam
Michael **Krakowski**	GIZ Programme Director / Chief Technical Advisor, Programme “Macroeconomic Reform/Green Growth”, Project “Social Dimension of Green Growth	Hanoi, Vietnam
Nguyen Thi Phuong **Lien**	Owner, Vietlien	Cau Giay, Vietnam
Nguyen Hong **Long**	Senior Expert on Sustainable Product Innovation & Green Production, Director of Centre for Creativity and Sustainability (CCS)	Hanoi, Vietnam
Tran Van **Nhan**	Director, Vietnamese National Cleaner Production Centre (VNCPC)	Hanoi, Vietnam
Nguyen Thi Thien **Phuong**	Director, Department of International Cooperation and Science, Technology, Ministry of Natural Resources and Environment (MONRE), Vietnam Environment Administration	Hanoi, Vietnam
Nguyen Huu **Tai**	Director, Vietnam Tea Association	Hanoi, Vietnam
Huong Bui **Thu**	Sustainable Business and Communications Manager,	Hanoi, Vietnam

	Unilever Vietnam	
Nguyen Thi Thanh **Tu**	Programme Officer, National Academy of Public Administration (NAPA)	Hanoi, Vietnam
Hoang Duong **Tung**	Deputy Director, Ministry of Natural Resources and Environment (MONRE), Vietnam Environment Administration	Hanoi, Vietnam

Representatives from implementing actors in other pilot countries

Marcos Alegre **Chang**	Vice Minister, Peruvian Ministry of Environment / former Executive Director, "Centro de Ecoeficiencia y Responsabilidad Social – CER (piloting agency in Peru)	Lima, Peru
Mohamed Mazen **Elshagie**	Resource Efficiency & Cleaner Production Specialist, Egypt National Cleaner Production Centre (ENCPC)	Cairo, Egypt
Samantha **Kumarasena**	Executive Director, National Cleaner Production Centre Sri Lanka (NCPCSL)	Colombo, Sri Lanka
Lee-Hendor **Ruiters**	Executive Director, National Cleaner Production Centre South Africa (NCPC-SA)	Pretoria, South Africa
Maricé **Salvador**	Project Analyst, Grupo GEA	Lima, Peru
Ali Abo **Sena**	Director, ENCPC	Cairo, Egypt
Uthpala **Sankalpani**	Consultant, NCPCSL	Colombo, Sri Lanka
Carlos **Toro**	Project Director, Centro Nacional de Produccion Mas Limpia	Bogota, Colombia

Other stakeholders interviewed

Faycal **Boureima**	Consultant to Eco-Innovation Project since 2014	Lausanne, Switzerland
Marcel **Crul**	Consultant to Eco-Innovation Project since 2014; Faculty, Delft University of Technology	Delft, The Netherlands
Lucia **Cusmano**	Secretary to OECD Working Party on SMEs, Entrepreneurship and Tourism (Paris)	Paris, France
Peter **Czaga**	EC Directorate-General Environment (DG ENV), Policy Officer, Environmental Knowledge, Eco-Innovation & SMEs	Brussels, Belgium
Andrea **Floudiotis**	Consultant to Eco-Innovation Project since 2014	Paris, France
Jürgen **Hannak**	GIZ programme leader, Chemicals & Textiles	Dhaka, Bangladesh
Craig **Hawthorne**	Consultant to Eco-Innovation Project since 2014	Munich, Germany
Julian **Hill-Landolt**	WBCSD Director, Sustainable Lifestyles	Geneva, Switzerland
Arab **Hoballah**	Former Branch Chief, UNEP Economy Division	Paris, France
Edith **Kürzinger**	Consultant, trainer, coach, concept developer for sustainability topics	Königswinter, Germany
Paola **Migliorini**	EC Directorate-General Environment (DG ENV), Policy Officer, Sustainable Production Products & Consumption	Brussels, Belgium
Jamie **O'Hare**	Consultant to Eco-Innovation Project since 2014 within Mechanical Engineering Dept., Technical University of Denmark (DTU)	Copenhagen, Denmark
Thibaut **Portevin**	EC Directorate-General Development (DEVCO), Policy Officer, Forests and Green Economy	Brussels, Belgium
Francisco **Szekely**	Professor of Leadership and Sustainability, IMD – International Institute for Management Development	Lausanne, Switzerland

Burcu **Tuncer**	SwitchMed Networking Facility, Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC)	Barcelona, Spain

Respondents who provided input through RECP*net* survey administered during April-May 2017

Vladimir **Dobeš**	Director Czech National Cleaner Production Centre EMPRESS	Prague, Czech Republic
Johannes **Fresner**	Managing Director, STENUM GmbH	Vienna, Austria
Mustafa **Maghawry**	Project Coordinator, Egyptian National Cleaner Production Centre	Cairo, Egypt
Trần Văn **Nhân**	Head of Training, Vietnamese National Cleaner Production Centre	Hanoi, Vietnam
Thongphet **Phonsavath**	National Coordinator, Cleaner Production Centre Lao	Vientiane, Lao People's Democratic Republic
Irshad **Ramay**	Coordinator, National Cleaner Production Centre Pakistan	Rawalpindi, Pakistan
Ndivhuho **Raphulu**	Project Manager, National Cleaner Production Centre South Africa	Pretoria, South Africa
Gloria **Restrepo**	Professional Support, Centro Nacional de Producción Más Limpia y Tecnologías Ambientales	Bogota, Colombia
Goran **Romac**	Director, Croatian Cleaner Production Centre	Croatia
Maricé **Salvador**	President, Group GEA	Lima, Peru

Annex 3 – Overview of Case Study Results of the Eco-Innovation Project

This information was provided to the Evaluator upon the Project's formal closure (30 September 2017) based on material that was revised and approved by the Implementing Partners

Peru

Policy

- At a national level, the Peruvian Ministry of Environment – with Grupo GEA as technical secretariat – have led policy initiatives such as a Policy Roadmap for Action, and the country has created a multi-stakeholder Eco-innovation Committee with government entities, incubators and academia.
- Creation of national eco-innovation website: http://www.eco-innovacionperu.com/

Technical

- IMSA, manufacturers of machines and equipment for coffee, cocoa and grain processing, are notably **introducing new technology** to generate energy and biochar from the processing of organic waste. **'Pirotec' is a new pilot prototype** which is expected to reduce energy consumption and waste, reduce operational costs and lead to overall improvements to the coffee and cocoa processing industries.
- Peru Green Recycling sustainably manage and recycle waste electrical and electronic equipment (WEEE); they are **developing a new method for WEEE collection** from communities. This will lead to higher revenues as expansion continues, with WEEE management activities being formalized in communities.
- METAX is a manufacturer of medical furniture products for healthcare establishment. Through eco-innovation, METAX is **developing a new antibacterial product line** and improving its performance by reducing operational costs, waste generation, energy and water consumption.
- MIMCO provides metal coatings of steel structures for the mining, construction and telecommunication sectors. By **developing new methods for re-use of zinc and recovery of iron by-products**, the company anticipates income from recovered zinc as well as savings from reduced waste, operational costs and raw material use.

Colombia

Policy

- Creation of the 2016-2019 Policy Roadmap for Action; eight strategies and 35 eco-innovation activities.
- Creation of an Eco-innovation Technical Support Group;
- New national database with 50 strategic eco- innovation actors
- Resources mobilised for eco-innovation in 10 municipalities in the Área Metropolitana del Valle de Aburrá.

Technical

- Zen Naturals SAS, creators of body care products based on natural ingredients, are reducing agrochemical use and adopting new environmentally and socially responsible processes – the company is **releasing new products** and reducing energy and water consumption.
- Zak Ecológico SAS, producers of personal care and household products using aromatic and medicinal plants, are c**reating new business lines with goods from environmentally and socially responsible agriculture** – the company expects big sales increases while it participates in fair trade programmes.
- Naturesse, a cosmetics and amenities business, innovates by recycling soap waste and reducing its environmental footprint – **the company is developing a new product from its waste**, and is lowering electricity and water consumption while attracting new customers.
- Industrias Cavex SAS, producers of greener industrial and household cleaning products, are putting new business practices in place – sales are rising, waste and energy consumption are down, and **new business lines** are being developed.

Egypt

Technical

- Enkana, manufacturer of printing inks for the Egyptian and broader MENA market, **is transitioning from solvent-based inks to eco-friendly water-based inks** as part of its eco-innovative activities. The company is aiming to take advantage of a growing international market in water-based inks, while also reducing waste and exposure to harmful solvents for both workers and customers.
- Al-Shehab Merdye, specializes in spinning and dyeing cotton yarns, offering a range of cotton dyeing services. Faced with high water and chemical consumption, high energy consumption due to older, inefficient machines, as well as the high cost of raw materials, the company has embarked on eco-innovation. The business **now uses a new dyeing technique based on natural dyes**, addressing the above hotspots while targeting a growing international market for environmentally friendly dyes.
- ChimiArt, who manufacture and import chemicals for a variety of industrial applications, used the eco-innovation approach to **develop a sustainable business model based on a chemical leasing approach** (to tackle tough competition from other companies).
- MCC, or Metallurgical and Chemicals Company, provides chemicals for use in the Middle East construction and metallurgical sectors. By **adopting a sustainable business model, using safer chemicals and focusing on new product lines**, new marketing strategies and R&D, MCC is targeting a more eco-friendly, more successful future for the business.

Malaysia

Technical

- Accel Graphic System, creators of an innovative, eco-friendly ink dispensing system, have tackled their business challenges head on through eco-innovation. The **business has introduced a new product line, sustainable ink**, allowing it to market an eco-label certified product. Accel **now also provides two innovative services**: “chemical leasing” and a new ink dispensing system,

leading to environmental benefits and cost reductions. The ink dispensing service could also cut paint and packaging waste by 50%.

- Wilron Products **is manufacturing an ecological, water-based adhesive, much different to the solvent-based chemical which made up the bulk of its production**. The more environmentally-friendly adhesive will be eligible for the Green Building Index, leading to new business opportunities abroad.
- Fire Fighter Industry, producer of B2B fire and safety equipment, is using eco-innovation to **develop the local untapped residential market through new partnerships** with property developers and Malaysia Fire Department. In this market, the company is aiming for a 10% year-on-year growth in sales revenue.
- Nets Printwork, an eco-printing service provider, **is to develop by 2020** printing paper from local, sustainably-sourced raw materials in collaboration with local researchers and providers.
- Intercosmetic Asia Pacific, cosmetics producer for several large firms, **is developing Halal skincare products derived from locally available plant extracts**, reducing product toxicity and waste.

South Africa

Technical

- MacBrothers, A B2B manufacturer of stainless steel kitchen fittings, supplies and catering equipment for a range of customers. The company **aims to innovate through offering bespoke kitchen designs based on eco-friendly** principles – thus improving energy and water efficiency, and passing on financial savings to the client.
- GVTec, Manufactures stainless steel casks for the wine industry – mostly to South Africa's Western Cape but also to international markets. For GVTec, **eco-innovation means energy and water savings for customers**, and boosting profits by 20% by providing services such as tank cleaning and repairs.

Sri Lanka

Technical

- Asian Agro, SME from Kochchikade, produced desiccated coconut with high levels of waste and equally high energy bills. Through eco-innovation, the company **now produces virgin coconut oil with higher profits and export potential,** while minimizing wastes and also diversifying to new product lines.
- Rasoda Dairies, A dairy business previously hampered by lack of technology, low supplier productivity and high waste, **has used eco-innovation to move from a production-centric business model to a partnership-oriented approach**. With farmer development underpinning its eco-innovations, Rasoda has increased milk yields and energised its value chain, forming multiple supplier partnerships in the process.
- Convenience Foods, Producers of vegetable protein and other foods, used the eco-innovation process to address a range of "hotspots"; including factory efficiency, high import dependency and government packaging regulations. Now **the company is well on the way to locally-sourced soy, a new "green-conscious" product line, and strong partnerships with local farmers**.

- U10 Ceylon Commodities & Consultants, Who process and export cinnamon from Sri Lanka's Southern province, were faced with a range of problems before turning to eco-innovation – from quality standards, to waste, workforce and environmental damage. **The company is now introducing multiple solutions including sustainable business practices, product diversification and eco-tourism** to promote the brand.
- Jachufi Fruit-Based Industry, A specialist in fruit processing, used a range of tools including Life Cycle Thinking **to develop a new business model**. One which will produce fruit pulp to become a pulp supplier for bigger brands, and in future distribute pulp or juice to customers in a service-oriented model.

Uganda

Technical

- Upland Rice Millers Company URMC is an SME which dries, mills and packages rice in collaboration with over 2000 Ugandan rice farmers, embarked on eco-innovation to make the business perform more sustainably. **Engaging with its value chain, the company set about tackling a range of hotspots including harmful on-farm fertilizers, to water use, worker health and safety, and energy use.** The company has already made big savings by switching from fossil fuels to biomass with energy efficiency on the increase. Profitability across the value chain has also risen due to yield increases for some farmers of 100% to 200%, with Upland Rice Millers' sales also expected to increase.
- Reco Industries, A food processing company specialising in fruit and vegetables, is **marketing a new product line under the brand name** RUTAFA, using locally available raw materials.
- Buhweju Tea Factory, A medium-sized tea production company fully owned by local farmers. To **tackle problematic hotspots** such as raw material wastage, high energy consumption, water pollution and soil erosion at supplier tea farms, the company turned to ecoinnovation. It also aimed for increased output and quality of its Greenleaf tea. With a new strategic business model and on-the-ground changes, Buhweju has already noticed that the quality of its Greenleaf is up, resulting in increased Fair Trade sales (from 2% to 5%). The production of tea per cubic metre of fuel (firewood) has also risen from 393kg to 472 kg.
- GBK Dairy Products, GBK has used eco-innovation to tackle milk waste, water pollution and toxic chemical use at its dairy facility and at supplier farms. For this producer of UHT milk and flavoured yoghurt, **key innovations included collaboration with small-scale farmers as key suppliers, and partnerships with DDA and TetraPack to process higher quality milk** with a longer shelf life – going from 90 days to 180 days.
- Kazire Health Products, Uganda's leading producer of organic healthy drinks, took on eco-innovation to help it roll out its products across the country during a period of growth. One key innovation is the **production of a new line of pineapple and orange peel drinks**, essentially **turning waste into profit**. And a series of farm-level and factory-level changes have also led to big results. A plastic collection and recycling programme has created over USD 20,000 of additional revenue; and **new farming contracts** with 60 pineapple and aloe vera farmers have led to profits across the value chain.

Vietnam

Technical

- Viet Lien, Producers of guava leaf tea, made an ambitious innovation drive to put a stop to environmental degradation and poor business results. The **company switched to organic farming, product diversification, service provision for the community, as well as turning the site into an eco-tourism destination**.
- Eco-Link, A processor of organic teas, ginger and turmeric, was faced with limited access to organic raw materials, high transportation costs and a lack of visibility for the brand in the region's high-end market. Through eco-innovation, the company targeted the local organic market by **changing the farming habits of suppliers** and **building relations with new stakeholders** including local government and certification bodies.

Additional Information:

Implementing partners in Vietnam have prepared an impressive and highly professional Powerpoint presentation (31 slides) entitled, Follow-Up Activities of Eco-Innovation in Vietnam, which showcases the results achieved in pilot companies and is a valuable foundation for developing commercial consultancy activities linked to eco-innovation

In addition, at Project closure, as directly reported by the Vietnamese implementing partners (CCS-Centre for Creativity and Sustainability and AIT-Asian Institute for Technology in Vietnam): there are important spill-over effects of Eco-Innovation project, as follows:

- The positive effects of the eco-innovation project in the food industry made Vietnamese policymakers more concerned about the role of building innovative ecosystems in industries. Therefore, the Ministry of Industry and Trade decided to experiment Eco-Innovation methodology in other sectors. They are now funding two Eco-Innovation pilot projects for paper/ pulp and beverage industries, which are two key sectors in Vietnam because the pulp and paper industry plays an important role in protecting forests and generating sustainable livelihood for the poor and ethnic, while the beverage has huge contribution to government budget.
- CCS are tasked to implement eco-innovation in the pulp and paper industry. The aim is to build an Eco-Innovation supplementary for the industry basing on the Eco-Innovation manual, and implement pilot project with 2 pilot enterprises. The project result is supposed to be expanded to more paper processing enterprises and can be applied to other sectors to contribute to the success of the implementation of the national action plan on sustainable production and consumption to 2020, vision 2030 of Vietnam.
- This is undertaken as part of implementation of SCP Action Plan where eco-innovation was integrated. They also indicated some specific changes at the company levels. There is much focus on Circular Economy also in the country and RE in general in the region. Perhaps in some way the term eco-innovation is getting lost in emerging concepts of CE. The whole Ministerial summit in Sep was dedicated to RE, pollution and waste prevention including focus on plastics, that thanks in part to UN Environment's efforts in this area. These trends could be also captured in the report.

Annex 4 – Summary of Co-Finance Information and Statement of Project Expenditure by Activity Valuation

Financial Report 2016 **(DTIE - ECL - 2G55 : S1-32ECL-000007)** **(01/01/2016 - 31/12/2016)** **Project Title:** Resource Efficiency and Eco-Innovation in Developing and Transition Economies (DG Env part) **Project IMIS code: ECL - 2G55** **Project Umoja code: S1-32ECL-000007** **Project Umoja WBSE:SB-000678.03**		**Budget by calendar year* (in EUR)**					**Reallocation**	**Expenditures incurred**			
		2012-13	2014	2015	2016	**Total**	**allowed reallocation (article 9.2 of the FAFA GC and article 11.4 PAGODA GC) ****	**Total cost in the reporting period (in USD)**	**Total cost (in EUR)**	**Cumulated costs (before current report) (in EUR)**	**Cumulated costs (from start of implementation) (in EUR)**
10	**PERSONNEL COMPONENT**										
1100	Project personnel					-					
1101	Programme Officer (P3)	33,397	112,500	110,442	54,376	310,715					
1102	Associate Programme Office (P2)	16,035	90,000	87,000	43,500	236,535		208,110	150,880	394,490	545,370
1161	Staff and other personal cost					-					
1199	*Sub-total*	49,432	202,500	197,442	97,876	547,250	-	208,110	150,880	394,490	545,370
1200	Consultants					-					
1201	Consultants Comp 1:2 and 1:3		10,500	-		10,500					
1202	Consultants Comp 2.1 and 2.3	28,500	71,700	-		100,200					
1203	Consultants Comp 3.1 and 3.3	32,250	19,126	-		51,376			-	464,485	464,485
1205	Consultant Comp 4	91,350	107,632	69,745		268,727					
1206	Consultant Miscl.		11,310	21,751		33,061					
1299	*Sub-total*	152,100	220,268	91,496	-	463,864	-	-	-	464,485	464,485
1600	Travel on official business					-					
1601	Staff Travel: Comp 1.2 & 1.3	6,492	18,850	7,250		32,592					
1603	Staff Travel: Comp 2.1 & 2.3	5,959	18,850	21,040		45,848		8,479	6,147	138,973	145,120
1605	Staff Travel: Comp 3.3	-	15,080	25,376		40,456					
1607	Staff Travel: Comp 4.1 & 4.2	14,138	36,193	36,250		86,581					
1699	*Sub-total*	26,588	88,973	89,916	-	205,477	-	8,479	6,147	138,973	145,120
	Component total	**228,120**	**511,741**	**378,854**	**97,876**	**1,216,591**	-	**216,589**	**157,027**	**997,948**	**1,154,975**
20	**SUB-CONTRACT COMPONENT**										
2201	Comp 1.2 &1.3	101,250	264,482	-		365,732					
2202	sub-contracts: NCPCs and partners	-	60,320	9,744		70,064					
2203	Sub-contracts: Comp 2.3	48,150	15,835	-		63,985		94,940	68,832	509,217	578,049
2204	Sub-contracts: Comp 3.1 & 3.3	-	22,620	14,500		37,120					
2261	Transfer and grants to counterparts (IP)					-					
2199	*Sub-total*	149,400	363,257	24,244	-	536,901	-	94,940	68,832	509,217	578,049
2999	***Component total***	**149,400**	**363,257**	**24,244**	-	**536,901**	-	**94,940**	**68,832**	**509,217**	**578,049**
30	**TRAINING COMPONENT**										
3300	Meetings/Conferences					-					
3301	Meetings: Comp 1.2 & 1.3	27,548	223,938	-		251,486					
3302	Meetings: Comp 3.1 & 3.3	-	12,818	14,500		27,318					
3303	Meetings: Comp 2.1 & 2.3	1,393	43,732	32,480		77,605		35,173	25,500	320,292	345,792
3304	Meetings: Comp 4.1 & 4.2	72,712	31,132	130,500		234,344					
3399	*Sub-total*	101,653	311,620	177,480	-	590,753	-	35,173	25,500	320,292	345,792
3999	***Component total***	**101,653**	**311,620**	**177,480**	-	**590,753**	-	**35,173**	**25,500**	**320,292**	**345,792**
40	**EQUIPMENT AND PREMISES COMPONENT**									-	
4100	Expendable equipment					-					-
4161	Supplies, commodities, material (IP)					-				9,037	9,037
4199	*Sub-total*	-	-	-	-	-		-	-	9,037	9,037
4999	***Component total***	-	-	-	-	-		-	-	**9,037**	**9,037**
50	**MISCELLANEOUS COMPONENT**					-	-				
5100	Operation and maintenance of equipment					-					
5161	General operating and other direct cost (IP)					-				3,010	3,010
5199	*Sub-total*							-	-	3,010	3,010
5200	Reporting costs					-					
5201	Reporting cost: Comp 1.2	-	22,620	27,550		50,170					
5202	Reporting cost: Comp 2.1 & 2.3	15,278	15,080	14,500		44,858		3,897	2,826	9,287	12,112
5203	Reporting Cost: Comp 3.1 & 3.3	15,382	18,850	25,375		59,607					
5299	*Sub-total*	30,659	56,550	67,425	-	154,634	-	3,897	2,826	9,287	12,112
5500	Evaluation					-					
5501	*RECP-2013 + Terminal evaluation*	-	18,850	29,000		47,850		28,000	20,300		20,300
5599	*Sub-total*	-	18,850	29,000	-	47,850	-	28,000	20,300	-	20,300
5999	***Component total***	**30,659**	**75,400**	**96,425**	-	**202,484**	-	**31,897**	**23,126**	**12,297**	**35,422**
99	**TOTAL COMPONENTS**	**509,833**	**1,262,017**	**677,003**	**97,876**	**2,546,729**	-	**378,599**	**274,484**	**1,848,791**	**2,123,275**
	Programme Support Cost (7%) [i]	35,688	88,341	47,390	6,851	178,271	-	26,502	19,214	129,415	148,629
	GRANT TOTAL	**545,521**	**1,350,359**	**724,393**	**104,727**	**2,725,000**	-	**405,101**	**293,698**	**1,978,206**	**2,271,904**
Note:	* Row C-G must match approved project delivery plan										

[i] **Under ENRTP SCAs: DG ENV 7%, DG DEVCO 6.2%**
Under DG ENV GPGC PCA: 7%

* Delete budget year as appropriate. The approved budget reflects the EC funding and UNEP/MEA co-financing only and, excludes the other donor co-financing

** FAFA General conditions (as of Nov. 2014) for DG ENV & DG DEVCO ENRTP SCAs:

Article 9.2. Where a modification to the Description of the Action and/or the budget does not affect the basic purpose of the Action and the financial impact is limited to a transfer within a single budget heading, including cancellation or

** PAGODA General conditions (as of Nov. 2014) for DG ENV GPGC PCA:

Article 11.4. By derogation from Articles 11.1, 11.2 and 11.3, where an amendment to Annex I and/or Annex III does not affect the basic purpose of the Action, and the financial impact is limited to a transfer within a single budget

Co-financing (€):	-						
Exchange Rate applicable to this report	0.725						
Project exchange rate detail	USD	Exch. Rate	USD	Exch. Rate	USD	Exch. Rate	
	1,180,000	0.750	1,399,204	0.754	1,082,759	0.725	

UNEP-MEA designated certifying officer (FMO): Fuaad Alkizim

Progress Financial Report **01/01/2016 - 31/12/2016** **Project Title:** Resource Efficiency and Eco-Innovation in Developing and Transition Economies (DG DEVCO Part) **Project IMIS code: EUL - 2J97** **Project Umoja code: S1-32EUL-000010**		**Budget by calendar year* (in EUR)**					**Reallocation**	**Expenditures incurred**			
		June 2012 - May 2013 (Year 1)	June 2013 - May 2014 (Year 2)	June 2014 - May 2015 (Year 3)	June 2015- May 2016	**Total**	**allowed reallocation (article 9.2 of the FAFA GC) ****	**Total cost in the reporting period (in USD)**	**Total cost (in EUR)**	**Cumulated costs (before current report) (in EUR)**	**Cumulated costs (from start of implementation) (in EUR)**
10	**PERSONNEL COMPONENT**										
1200	Consultants					-			-		-
1204	Consultant: Comp 3.2		24,375	24,375	24,375	73,125			-	7,812	7,812
1299	*Sub-total*	-	24,375	24,375	24,375	73,125	-	-	-	7,812	7,812
1600	Travel on official business					-			-		-
1602	Travel: Comp 1.1.		7,813	7,836	7,812	23,461					
1604	Travel Comp 2.2 & 2.4		46,875	46,875	12,500	106,250		16,311	12,022	2,785	14,807
1606	Travel: Comp 3.1 & 3.2		27,344	39,063	41,133	107,540					
1699	*Sub-total*	-	82,032	93,774	61,445	237,251	-	16,311	12,022	2,785	14,807
	Component total	-	**106,407**	**118,149**	**85,820**	**310,376**	-	**16,311**	**12,022**	**10,598**	**22,619**
20	**SUB-CONTRACT COMPONENT**										
2200	Sub-contracts (Non-UN Organizations)					-			-		-
2202	Sub-contracts: Comp 1.1		39,063	39,063	39,063	117,189					
2204	Sub-contracts: 2.2 & 2.4		156,000	140,000	93,250	389,250		334,531	246,550	815,151	1,061,701
2206	Sub-contracts: Comp 3.2 & 3.3		140,000	150,000	93,750	383,750					
2299	*Sub-total*	-	335,063	329,063	226,063	890,189	-	334,531	246,550	815,151	1,061,701
2999	***Component total***	-	**335,063**	**329,063**	**226,063**	**890,189**	-	**334,531**	**246,550**	**815,151**	**1,061,701**
99	**TOTAL COMPONENTS**	-	**441,470**	**447,212**	**311,883**	**1,200,565**	-	**350,843**	**258,571**	**825,749**	**1,084,320**
	Programme Support Cost (6.2 %) [i]	-	27,371	27,727	19,337	74,435	-	21,752	16,031	51,196	67,228
	GRANT TOTAL	-	**468,841**	**474,939**	**331,220**	**1,275,000**	-	**372,595**	**274,603**	**876,946**	**1,151,548**
Note:	* Row C-G must match approved project delivery plan										

[i] under ENRTP: DG ENV 7 %,
under DG DEVCO 6.2 %

* Delete budget year as appropriate. The approved budget reflects the EC funding and UNEP/MEA co-financing only and, excludes the other donor co-financing

** FAFA General conditions (as of Nov 2014):

Where a modification to the Description of the Action and/or the budget does not affect the basic purpose of the Action and the financial impact is limited to a transfer within a single budget heading, including cancellation or introduction of an item, or a transfer between budget headings involving a variation (as the case may be in cumulative terms) of 15% or less of the amount originally entered (or as modified by a formal amendment) in relation to each concerned heading for eligible costs, the Organisation may amend the budget and shall inform the Contracting Authority accordingly in writing. This method shall not be used to amend headings for administrative costs or the contingency reserve.

Co-financing (€):	-
Exchange Rate (€-$):	0.737

UNEP-MEA designated certifying officer: F. Alkizim

Annex 5 – Evaluation Findings Brief

UN environment
United Nations Environment Programme

Resource Efficiency and Eco-Innovation in Developing and Transition Economies

Results and Lessons Learned from the "Eco-Innovation Project"

About the Project

Initiated in June 2012 (total budget: USD 6,168,634) with an overall goal to promote the transition towards sustainable industrial production systems in developing & transition economies through eco-innovation inspired by resource efficient & cleaner production (RECP), the "Eco-Innovation Project" was embedded in a larger subprogramme, "Advancing Resource Efficiency in Business Practices," reflecting one of UN Environment's 6 strategic foci and funded through the EC's Thematic Programme for Environment & Sustainable Management of Natural Resources including Energy (ENTRP).

Following two revisions that extended its duration by 33%, to September 2017, the Project employed a dual approach: enhancing capacities of RECP service providers to support business & industry to respond to growing demands for more sustainable products/services while simultaneously building the motivation and capacity of policy makers and other key actors to develop an enabling environment for eco-innovation.

Activities were implemented in 9 pilot countries (Colombia, Egypt, Kenya, Malaysia, Peru, South Africa, Sri Lanka, Uganda, Vietnam, spanning 3 major geographies of Asia, Africa/Middle East, Latin America) seen as having the potential to develop and "prove" the eco-innovation approach and generate materials that could be disseminated to catalyse replication and upscaling in these countries, and beyond.

A step-by-step Eco-Innovation Manual and 3 Value Chain Supplements (Agri-Food, Chemicals, Metals) as well as policy guidance documents (*Mainstreaming Sustainable Consumption and Production Policy for Eco-Innovation*, *Moving Ahead with Technologies for Eco-Innovation*) were produced and validated through a multi-stakeholder consultation process. These materials as well as case studies and other project resources are available from http://unep.ecoinnovation.org/

Key elements from the UN Environment Eco-Innovation website

A Terminal Evaluation of the Project was carried out during January-July 2017 to fulfil accountability requirements and to promote knowledge-sharing, feedback, and learning that could be used for future project formulation and implementation.

Eco-innovation is the development and application of a business model, shaped by a new business strategy, which incorporates sustainability throughout all business operations based on life cycle thinking and in cooperation with partners across the value chain. It entails a coordinated set of modifications or novel solutions to products (goods & services), processes, market approach, and organizational structure – which enhance a company's performance and competitiveness.

Source: The Business Case for Eco-Innovation, UNEP, 2014

Strategic Relevance

The Project was fully consistent with global, regional, and national needs to close industrial loops and scale up RECP practice, seen as highly relevant by key stakeholders, and aligned with UN Environment's leadership mandate under the Bali Strategic Plan for Technology Support & Capacity Building. Human rights & gender equity were addressed through favouring engagement with local partners that demonstrated gender balance and by focussing eco-innovation on sectors and firms (especially small- and medium-sized enterprise, SME) where there was an opportunity to improve worker safety, enhance rural livelihoods, influence the value chain, and work with local government to boost the eco-system for production.

Global Meeting of Implementing Partners
(17-18 November 2015 in Kuala Lumpur, Malaysia)

The Project succeeded in developing a novel approach to integrate sustainability thinking into a firm's business model that brings together RECP practice, life cycle and systems thinking with a value chain perspective, which provides a valuable reference for deepening the business sector's proactive engagement on environmental issues.

Eco-Innovation Project • November 2017

Project Performance

The Eco-Innovation Project went beyond UN Environment's usual mandate to promote policy reform and strengthen government capacities, to also promote changes in private sector management practices and strengthen business intermediaries and through them, SME, in developing and transition economies to reduce the impact of economic growth on resource depletion and environmental degradation.

The approach was implemented by 10 local partners (drawn mainly but not exclusively from RECP*net*) who demonstrated different understanding and application of eco-innovation and achieved different levels of results. This yielded valuable insights into the diversity of usage and factors that facilitated and slowed uptake and adoption.

Evaluation visits to pilot companies during Spring 2017 in Kenya, Malaysia, Uganda, and Vietnam

Programmed outputs were achieved and validated through a consultation process with key stakeholders, although their development timeline exceeded the initial planning horizons. There are some questions regarding the ease of uptake of eco-innovation, given its demand on the absorptive capacities of intended beneficiaries. The Project's direct outcomes were delivered and collectively characterized as relevant building blocks towards the Intermediate States. Such characterizations are consistent with a pilot project setting.

Factors affecting Performance

The Project was very effective in developing country ownership and driven-ness and in leveraging elements to assure the Project's sustainability along socio-political, institutional, and environmental dimensions. Suitable project and financial management arrangements were put in place, together with capable and committed supervision. By the end of the Project, the eco-innovation approach had triggered behavioural change in each of the pilot countries, both in terms of policy change and changing business practice, which reached or in some cases went beyond the expectations of the original Project Document. This evidence is illustrative of the potential for catalysing behavioural change and for the eco-innovation approach to be taken up more broadly as a relevant response by the (SME) business sector to environmental challenges

Long-term impact depends on sustaining the momentum to apply eco-innovation and generating the evidence, references, and local structures to foster replication and upscaling.

It was not obvious that financial resources will be available in the short term to use all of the capacities built by the Project, although many international actors are currently working to design facilitating policies and instruments.

Key Lessons Learned

Lesson 1: Project designs with realistic objectives and timelines put less strain on project partners and management. While this may sound like a truism, designing programs that can be delivered on time, scope, and budget will improve operational effectiveness and enhance reputation, which provide a reliable basis for attracting resources and other support.

Lesson 2: The formulation of outcomes at the project design stage in terms of a change of behaviour resulting from the use of an output is key to guiding projects towards the series of further behaviour changes that would be implied along a causal pathway, increasing the likelihood of impact.

Lesson 3: Combining application and policy dimensions can expedite progress, build acceptance, and deliver valued insight.

- Key stakeholders in government and industry were simultaneously engaged to advance the eco-innovation concept through new business models & country roadmaps, where the success of the former is ultimately linked to progress in the latter influencing framework conditions to be more favourable to their adoption.
- This enriched the approach and accelerated it acceptance while creating local structures (Steering Committees) with potential to expand its reach, impact, and practical use.

Lesson 4: Orienting selection criteria for local implementation settings towards aspects that build country ownership and driven-ness is an efficient route to sustaining project results.

- In addition to geographic criteria used to maintain global reach, countries were chosen as piloting partners based on having commitment from a least one pivotal governmental counterpart with self-interest in benefitting from and power to capitalize on the Project.
- Local partners were engaged in joint implementation, functioned as ambassadors, and had potential for replication in their own countries, and beyond through peer exchange/South-South learning, increasing project efficiency.

Lesson 5: In settings where beneficiaries can be expected to undertake financial outlays to demonstrate approaches and/or implement change, organising access to funding as part of project activities will increase robustness & usability of results.

- Experience from the National Cleaner Production and RECP programs shows long-standing obstacles for SMEs to obtain funding for resource efficiency improvements.
- The business case for eco-innovation is not widely understood. Eco-innovation is not focussed around a common technological platform; it is an umbrella term covering a variety of different technologies, products, services, and markets – making it even more difficult for potential investors to evaluate funding opportunities. Assuring suitable access to funding under a pilot context is key to assuring the generation of project results.

Lesson 6: Having a clear exit strategy as part of project design anchors sustainability from the outset.

- Good practice affirms that building an exit strategy into program design from the outset can guide behaviour during implementation, be used to hold entities and their partners to account throughout the process, and assure the momentum for change is not lost following project closure.
- Outputs and direct outcomes were delivered and the Project's impact was deemed as likely. Follow-up at country level will be needed to consolidate the results.

Annex 6 – Evaluator's Biography

Dr. Joyce Miller is Founder and Director of CAPRESE, Chair of PREMA*net* since 2008, and has undertaken evaluation work for United Nations agencies since 2015. Her PhD (Organisational Learning, Stakeholder Analysis, Innovation), MBA, BA (Political Science), certification in GIZ's CapacityWORKS and qualifications as an Executive Coach and Master PREMA® Trainer underpin 20 years of experience in the design/development/delivery of business development services in Resource Efficiency, coaching, mentoring, impact monitoring, and technical advice in the context of International Cooperation. In addition to managing GIZ's Industry Component/Policy Advice for Environment & Climate Change (2011-2012, Jakarta), which involved strengthening staff in 3 counterpart Ministries, she has undertaken numerous mandates to build local consulting capacity anchored in the PREMA® approach (which she had a core role in developing) and in implanting a culture of group counselling and peer consultancy in Africa/Middle East (Algeria, Egypt, Ghana, Rwanda), Asia (Bangladesh, India, Indonesia, Sri Lanka, Thailand, Vietnam), and Europe (Montenegro, Turkey). She has extensive experience with organisational capacity-building (public & private actors, business federations, chambers, associations, industrial zone management) and SME development (Manufacturing, Tourism, Construction). In International Evaluation and Team Leader roles, she evaluated the UNIDO/UNEP Resource Efficient Cleaner Production (RECP) programme and developed recommendations for the future strategy and governance structure of the UNEP/SETAC Life Cycle Initiative. As well as coaching in IMD's leadership programs, she co-developed an 8-week virtual learning journey and the pedagogical materials of the Being Innovative program and has performed the dual roles of Learning Manager and Program Coach since its inception in 2014.

Annex 7 – Quality Assessment of the Evaluation Report

Quality Assessment of the Evaluation Report

Evaluation Title: **"Resource Efficiency and Eco-Innovation in Developing and Transition Economies" (Referred to as the "Eco-Innovation Project")**

All UNEP evaluations are subject to a quality assessment by the Evaluation Office. The quality assessment is used as a tool for providing structured feedback to the evaluation consultants.

The quality of both the draft and final evaluation report is assessed and rated against the following criteria:

	UNEP Evaluation Office Comments	Draft Report Rating	Final Report Rating
Substantive report quality criteria			
A. **Quality of the Executive Summary**: Does the executive summary present the main findings of the report for each evaluation criterion and a good summary of recommendations and lessons learned? (Executive Summary not required for zero draft)	**Draft report:** It is well summarised and captures the main highlights of the evaluation findings in a succinct manner Final report: Same comment	5	5
B. **Project context and project description**: Does the report present an up-to-date description of the socio-economic, political, institutional and environmental context of the project, including the issues that the project is trying to address, their root causes and consequences on the environment and human well-being? Are any changes since the time of project design highlighted? Is all essential information about the project clearly presented in the report (objectives, target groups, institutional arrangements, budget, changes in design since approval etc.)?	**Draft report:** The context and background of the project are well defined and in accordance with the TOR requirements Final report: Same comment	6	6
C. **Strategic relevance**: Does the report present a well-reasoned, complete and evidence-based assessment of strategic relevance of the intervention in terms of relevance of the project to global, regional and national environmental issues and needs, and UNEP strategies and programmes?	**Draft report:** There is sufficient detail provided including examples that show project relevance to global, regional and national environmental issues and needs, including UNEP mandate, MTS 2010-13 and MTs 2014-17, relevant Expected Accomplishments and subprogrammes, BSP, South-South exchange, gender & social aspects, as well as a range of key stakeholders. Final report:	6	6

	Same comment		
D. **Achievement of outputs**: Does the report present a well-reasoned, complete and evidence-based assessment of outputs delivered by the intervention (including their quality)?	**Draft report:** The chapter gives an evidence based assessment of output delivery; qualitative aspects of the outputs are also discussed, though not in all cases The consultant is advised to ensure consistency between rating and findings Final report: Requested changes were adequately reflected in the final report	5	5.5
E. **Presentation of Theory of Change**: Is the Theory of Change of the intervention clearly presented? Are causal pathways logical and complete (including drivers, assumptions and key actors)?	**Draft report:** The TOC diagram is clear, logical and it sufficiently depicts the project's causal pathways. It is also sufficiently described in narrative. Final report: Same comment	6	6
F. **Effectiveness - Attainment of project objectives and results**: Does the report present a well-reasoned, complete and evidence-based assessment of the achievement of the relevant outcomes and project objectives?	Draft report: The section on Effectiveness needs further elaboration of the findings, clearer linkages to the outcomes being assessed, and more evidence-based narratives. Final report: Improvements noted in the final report	4.5	5
G. **Sustainability and replication**: Does the report present a well-reasoned and evidence-based assessment of sustainability of outcomes and replication / catalytic effects?	Draft report: The treatment of the 'sustainability' section could use more substantiation including also specific examples to justify the ratings provided. The assessment digresses form the core issues that need to be assessed under the sub-criteria Final report: Requested changes have been adequately addressed	4	5
H. **Efficiency**: Does the report present a well-reasoned, complete and evidence-based assessment of efficiency? Does the report present any comparison with similar interventions?	Draft report: This section is covered adequately and sufficiently responds to TOR requirements Final report:	5	5

	Some minor improvements noted in the final report		
I. **Factors affecting project performance**: Does the report present a well-reasoned, complete and evidence-based assessment of all factors affecting project performance? In particular, does the report include the actual project costs (total and per activity) and actual co-financing used; and an assessment of the quality of the project M&E system and its use for project management?	Draft report: This section is covered adequately for the most part. Minor improvements needed to get a more comprehensive and systematic coverage of the sub-criteria being assessed. The consultant has been advised to avoid quoting interviewees verbatim, to draw more cross linkages to the main evaluation criteria, and to minimize the text. Final report: Requested chages have been effected	5	6
J. Quality of the conclusions: Do the conclusions highlight the main strengths and weaknesses of the project, and connect those in a compelling story line?	Draft report: The conclusions section is well written and highlights the key findings from the project evaluation – both positive and negative. Final report: Same comment	6	6
K. **Quality and utility of the recommendations**: Are recommendations based on explicit evaluation findings? Do recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?)'. Can they be implemented?	Draft report: The recommendations are well founded on actual findings mentioned in the report. They propose specific actions and state who should do what, why, when and where Final report: Same comment	6	6
L. **Quality and utility of the lessons**: Are lessons based on explicit evaluation findings? Do they suggest prescriptive action? Do they specify in which contexts they are applicable?	Draft report: The lessons are clear and include their contextual background. They are formulated in a manner that allows for wider applicability Final report: Came comment	6	6
Report structure quality criteria			
M. **Structure and clarity of the report**: Does the report structure follow EO guidelines? Are all requested Annexes included?	Draft report: The consultant has made an effort to follow the guidelines provided in the TOR and by the Evaluation Manager. All requested annexes are included. Final report: Same comment	6	6
N. **Evaluation methods and information sources**: Are evaluation methods and information sources clearly described?	Draft report: The evaluation approach, methodology and information sources are clearly	5	5

Are data collection methods, the triangulation / verification approach, details of stakeholder consultations provided? Are the limitations of evaluation methods and information sources described?	described. The consultant consulted widely. Primary data were enumerated through interviews, meetings, consultations and interviews. Secondary data was extracted from existing documentation. Results of the primary and secondary data analysis were triangulated. Limitations are adequately described. Minor inconsistencies noted and corrections have been requested. Final report: No change		
O. **Quality of writing**: Was the report well written? (clear English language and grammar)	Draft report: The report is well written, comprehensible, and logical. Final report: Same comment	6	6
P. **Report formatting**: Does the report follow EO guidelines using headings, numbered paragraphs etc.	Draft report: The report is well written, comprehensible, and logical. Final report: Same comment	6	6
	OVERALL REPORT QUALITY RATING	**(5.5) HS**	**(5.7) HS**