
Terminal Evaluation of the UNEP/GEF Project
**“Demonstrating Cost-effectiveness and Sustainability of Environmentally Sound and
Locally Appropriate Alternatives to DDT for Malaria Vector Control in Africa”**
GEF Project Number: 1331



Evaluation Office of UNEP

March 2020



Evaluation Office of UNEP

Photos Credits:

Front cover: Community engagement in Madagascar, December 2016

@UNEP/ WHO Regional Office for Africa, UNEP Evaluation Mission (2019)

This report has been prepared by independent consultant evaluators and is a product of the Evaluation Office of UNEP. The findings and conclusions expressed herein do not necessarily reflect the views of Member States or the UNEP Senior Management.

For further information on this report, please contact:

Evaluation Office of UNEP
P. O. Box 30552-00100 GPO

Nairobi Kenya

Tel: (254-20) 762 3389

Email: unenvironment-evaluation-director@un.org

Website: <https://www.unenvironment.org/about-un-environment/evaluation>

Demonstrating Cost-effectiveness and Sustainability of Environmentally Sound and Locally Appropriate Alternatives to DDT for Malaria Vector Control in Africa

GEF ID: 1331

March 2020

All rights reserved.

© 2020 Evaluation Office of UNEP

ACKNOWLEDGEMENTS

This Terminal Evaluation was prepared for the Evaluation Office of UNEP by Sandra Molenkamp, as independent evaluation consultant. The report benefits from a peer review conducted within the Evaluation Office of UNEP.

The Evaluation Office of UNEP would like to thank the Demonstrating Cost-effectiveness and Sustainability of Environmentally Sound and Locally Appropriate Alternatives to DDT for Malaria Vector Control in Africa project team and in particular Eloise Touni (Task Manager), Birkinesh Amenesheva (regional project coordinator of WHO regional Office for Africa, Assefash Zehai (WHO Eritrea), Emmanuel Chandi (project coordinator for Eritrea at WHO regional Office for Africa), Messay Gebremariam (national project coordinator, WHO Ethiopia), Herisolo Razafindraleva (national project coordinator at WHO Madagascar) and Thierry Franchard (the second national project coordinator for Madagascar) for their contribution and collaboration throughout the evaluation process. Sincere appreciation is also expressed to the Ministries of Health as Implementing Partners of the project in the three countries, and the persons at these Ministries who took the time to discuss the results of this project with the evaluation consultant. The evaluation team would also like to thank the former Task Managers of the project Jan Betlem and Kevin Helps who also provided their input to this evaluation.

Last, the evaluation team thanks all the other stakeholders who shared their knowledge and comments, and in this way contributed to the preparation of this report.

Evaluation team

Sandra Molenkamp – Evaluation Consultant

Evaluation Office of UNEP

Martina Bennett & Pauline Marima – Evaluation Managers

Mela Shah – Evaluation Programme Assistant

ABOUT THE EVALUATION

Joint Evaluation: No

Report Language(s): English

Evaluation Type: Terminal Project Evaluations

Brief Description: This report is the terminal evaluation of the UNEP-GEF project "Demonstrating Cost-effectiveness and Sustainability of Environmentally Sound and Locally Appropriate Alternatives to DDT for Malaria Vector Control in Africa", implemented between 2009 and 2018. The project's overall development goal was to reduce DDT use and the elimination of DDT stockpiles through the strengthening of malaria vector control practices in Eritrea, Ethiopia and Madagascar. The overall project objective was to demonstrate cost-effective, environmentally sound, and locally appropriate alternatives to DDT use in malaria control, ensuring their sustainable application through strengthened national and local capacity. The evaluation sought to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation had two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, Executing Partner WHO Regional Office for Africa and the GEF.

Key words: Eritrea; Ethiopia; Madagascar; DDT; chemicals; POPs; Integrated Vector Management; malaria; vector borne diseases; NIP; Stockholm Convention; Terminal Evaluation; TE; GEF; GEF project; WHO; UNEP

Project Identification Table

Executing Agency:	World Health Organization Regional Office for Africa (WHO-AFRO), Brazzaville, Congo. National Executing Agencies in the participating countries.		
Sub-programme:	Harmful substances and hazardous waste (MTS 2010-2013) / Chemicals and Waste (MTS 2014-17)	Expected Accomplishment(s):	MTS 2010-2013: EA(a) and EA(b) MTS 2014-17: EA(1) and EA(2)
UNEP approval date:	June 2008	Programme of Work Output(s) 2016-2017:	3. Methodologies to monitor and evaluate impact of actions addressing chemicals releases to support sound management of harmful substances and MEA implemented at the national level. 4. Scientific and technical services, delivered through multi-stakeholder partnerships, to build the capacities of governments, the private sector and civil society to take action on the risks posed by chemicals including those listed in relevant MEAs; and SAICM, and lead and cadmium, as well as unsound management practices.
GEF project ID:	1331 (IMIS 4A28)	Project type:	Full-size project
GEF Operational Programme #:	Operational Programme 14 on Persistent Organic Pollutants	Focal Area(s):	Persistent Organic Pollutants (POPs)
GEF approval date:	June 2008	GEF Strategic Priority:	GEF-4 Strategic Objective 2: Partnering in investments for NIP implementation. GEF-4 Strategic Objective 3: Partnering in the demonstration of feasible, innovative technologies and best practices for POPs reduction.
Expected start date:		Actual start date:	September 2009
Planned completion date:	November 2013	Actual completion date:	June 2017
Planned project budget at approval:	\$ 7,125,246 (includes project preparation costs and co-financing)	Actual total expenditures reported as of June 2017:	\$ 3,420,296
GEF grant allocation:	\$ 3,460,296	GEF grant expenditures reported as of June 2017:	\$ 3,420,296
Project Preparation Grant - GEF financing:	\$ 384,000	Project Preparation Grant - co-financing:	\$ 314,000
Expected Project co-financing:	\$ 2,966,950	Secured Project co-financing:	\$ 3,557,563
First disbursement:	15 April, 2009	Date of financial closure:	31.03.2019
No. of revisions:	3	Date of last revision:	13/12/2016 (no-cost extension)

No. of Steering Committee meetings:	2	Date of last/next Steering Committee meeting:	Last: 2-3 June 2016	Next:
Mid-term Review/ Evaluation (planned date):	June 2011	Mid-term Review:	December 2014	
Terminal evaluation (planned date):	June 2017	Terminal Evaluation (actual date):	April – October 2019	
Coverage - Country(ies):	Ethiopia, Eritrea and Madagascar	Coverage - Region(s):	Africa	
Dates of previous project phases:	(GF/2732-02-4483) Prevention of human and Environment Exposure to DDT and other Toxic Pesticides and Strengthening Malaria Control in Africa	Status of future project phases:	DDT AFRO 2 project (started in 2017)	

Table of Contents

Executive Summary	11
1 Introduction	15
2 Evaluation methods	17
2.1 Overview	17
2.2 Evaluation criteria and key questions.....	17
2.3 Data collection and analysis	18
2.4 Evaluation limitations	19
2.5 Learning, communication and outreach	19
2.6 Ethics.....	20
3 The Project	21
3.1 Context	21
3.2 Objectives and components	22
3.3 Stakeholders	24
3.3.1 International organizations:	24
3.3.2 Country stakeholders.....	25
3.3.3 Project Structures.....	26
3.3.4 Specific stakeholders defined by countries during the PDF-B phase	26
3.3.5 Beneficiaries:	27
3.4 Project implementation structure and partners	28
3.5 Changes in design during implementation	28
3.6 Project financing	29
4 Theory of change	30
4.1.1 ToC outputs and direct outcomes.....	30
4.1.2 Causal pathways:.....	31
4.1.3 Drivers and assumptions	31
5 Evaluation Findings.....	37
5.1 Strategic relevance.....	37
5.1.1 Alignment to MTS and POW.....	37
5.1.2 Alignment to UNEP / GEF strategic priorities.....	38
5.1.3 Relevance to regional, sub-regional and national environmental priorities	39
5.1.4 Complementarity with existing interventions.....	39
5.2 Quality of Project Design	40
5.3 Nature of External Context.....	43
5.4 Effectiveness	43
5.4.1 Delivery of outputs.....	43
5.4.2 Outputs for component 1	44
5.4.3 Outputs for component 2:.....	48
5.4.4 Outputs for component 3:.....	49
5.4.5 Outputs for component 4:.....	50
5.5 Achievement of Outcomes	51
5.5.1 Achievement of Outcome 1	51

5.5.2	Achievement of Outcome 2	52
5.5.3	Achievement of Outcome 3	52
5.5.4	Drivers and assumptions	53
5.6	Likelihood of Impact.....	53
5.7	Financial Management	55
5.7.1	Completeness of Financial Information.....	58
5.7.2	Communication between Finance and Project Management Staff.....	58
5.8	Efficiency	61
5.9	Monitoring and reporting	62
5.9.1	Monitoring Design and Budgeting.....	62
5.9.2	Monitoring of Project Implementation	63
5.9.3	Project reporting	63
5.10	Sustainability.....	64
5.10.1	Socio-political Sustainability	64
5.10.2	Financial Sustainability	65
5.10.3	Sustainability of the Institutional Framework.....	65
5.11	Factors Affecting Performance.....	66
5.11.1	Preparation and Readiness	66
5.11.2	Quality of Project Management and Supervision.....	66
5.11.3	Stakeholders' Participation and Cooperation	67
5.11.4	Responsiveness to Human Rights and Gender Equity	67
5.11.5	Country Ownership and Driven-ness	68
5.11.6	Communication and Public Awareness.....	68
6	Conclusions and Recommendations	70
6.1	Conclusions	70
6.2	Lessons Learned	78
6.3	Recommendations	82
Annex I.	Terms of Reference	86
Annex II.	ToC at design (developed based on the ProDoc) and comparison table:.....	100
Annex III.	Evaluation itinerary and overview of stakeholders interviewed.....	104
Annex IV.	List of documents consulted.....	106
Annex V.	Brief CV of the consultant	108
Annex VI.	Evaluation bulletin	109
Annex VII.	Report Quality Assessment.....	111

List of Tables and Figures

Table 1: Project Financing.....	29
Table 2. Comparison table between ProDoc and reconstructed ToC at evaluation:	32
Table 4: Overview table of ratings of project design	41
Table 5: Analysis of Likelihood of Impact	53
Table 6: Financial overview table	55
Table 7: Overview of co-financing	57
Table 8: Ratings of financial management components	59
Table 9: Ratings of project criteria and summary assessment.....	74
 Figure 1: Implementation structure	 28
Figure 2: Reconstructed Theory of change developed for the project evaluation	36
Figure 3: Trainings organized in the three participating countries by area of competence.....	45
Figure 4: Number of participants on IEC / BCC activities by sensitization channel in Madagascar.....	47
Figure 5: Overview of malaria vector control interventions (from WHO Final Project Report).....	49
Figure 6: DDT-Alt-model.....	82

List of acronyms and abbreviations

ASP	African Stockpiles Programme
BCC	Behavioural Change Communication
DDT	Dichloro Diphenyl Trichlorethane
DSSA	Demonstrating and Scaling-up of Sustainable Alternatives to DDT in Vector Management Global Programme
FAO	Food and Agriculture Organization (of the United Nations)
GEF	Global Environmental Facility
ICIPE	International Centre for Insect Physiology and Ecology
IEC	Information, Education and Communication
IRS	Indoor Residual Spraying
IS	Intermediate State
IVM	Integrated Vector Management
LLIN	Long-lasting Insecticidal Nets
M&E	Monitoring and Evaluation
MoH	Ministry of Health
MTS	Medium Term Strategy
NIP	National Implementation Plan (for the Stockholm Convention)
NMCP	National Malaria Control Programme
NSC	National Steering Committee
PIR	Project Implementation Review report
POPs	Persistent Organic Pollutants
PoW	Programme of Work
ProDoc	Project Document
RBM	Roll Back Malaria partnership
RSC	Regional Steering Committee
SIMA	System wide Initiative on Malaria and Agriculture
TE	Terminal Evaluation
ToC	Theory of Change
ToR	Terms of References
WHO	World Health Organization
UN	United Nations

Executive Summary

1. This report presents the findings of the Terminal Evaluation of the United Nations Environment Programme (UNEP) - Global Environment Facility (GEF) project "Demonstrating Cost-effectiveness and Sustainability of Environmentally Sound and Locally Appropriate Alternatives to Dichloro Diphenyl Trichlorethane (DDT) for Malaria Vector Control in Africa" (GEF project identification number 1331). The project implementation period was from 2009 – 2018 (the last project activity - the closing workshop – was organized in May 2017). UNEP acted as GEF Implementing Agency, while the World Health Organization (WHO) Regional Office for Africa was the Executing Agency of the Project. The main implementation partners on national level were the Ministries of Health. The project was implemented in Ethiopia and Madagascar, and in the final stages of the project also in Eritrea. The total budget of the project was \$7,125,246, including the preparation PDF-B phase. The cost to the GEF Trust Fund was \$3,460,296.
2. The project's overall goal was to demonstrate cost-effective, environmentally sound, and locally appropriate alternatives to DDT use in malaria control, ensuring their sustainable application through strengthened national and local capacity. The project's overall development goal was to reduce DDT use and the elimination of DDT stockpiles through the strengthening of malaria vector control practices in Eritrea, Ethiopia and Madagascar.
3. The evaluation had two primary purposes: (i) provide evidence of results to meet accountability requirements, and (ii) promote operational improvement, learning, and knowledge sharing through results and lessons learned among UNEP, WHO and other partners. Therefore, the evaluation identifies lessons of operational relevance for future project formulation and implementation of other similar initiatives and follow-on projects.
4. The overall approach to the evaluation is conducted in line with the scope as set out within the ToR of the Terminal Evaluation that in turn uses established evaluation criteria grouped within nine categories. In the report, the evaluator provides ratings for these evaluation criteria, together with a brief justification cross-referenced to the findings in the report, according to a 6-point scale from Highly Satisfactory to Highly Unsatisfactory.
5. The overall rating of the project is **Moderately Satisfactory** (a table summarizing ratings for all nine criteria can be found in chapter 7: Conclusions). In the first 2.5 years of the project, progress was very low. In the last years of the project, progress was much better which resulted in the most important outputs being delivered. These outputs are related to capacity building under component 1, testing of alternatives to DDT in Ethiopia and Madagascar under component 2 and insecticides resistance management under component 3. Scientific results could have been more solid if more cycles of alternatives during malaria seasons had been implemented. In Ethiopia, only one round of testing of alternatives took place, compared to three in Madagascar. The project supported countries to systematically document the impact of changes of insecticides and approaches to malaria vector control. A substantial amount of baseline data on malaria incidence, malaria burden and on insecticide resistance were collected. Application of alternative malaria control interventions resulted in a reduction in disease burden in the project districts during project implementation regardless of the alternative used. Data from Madagascar demonstrated that effective community awareness raising and mobilization considerably improves the effectiveness of alternative interventions. There was however no clear exit strategy in the countries and results

more than two years after project implementation seem not to have been sustainable. Technical details of the project were presented in the WHO Final Project report and a summary of technical findings can be found in chapter 7: Conclusions.

6. The main strengths of the project are related to the criteria **Effectiveness, Strategic Relevance** and **Factors affecting Performance**, mainly **communication and awareness raising**. The project was in line all relevant GEF and UNEP policies and complimentary with existing interventions.
7. The overall rating for **Effectiveness** is Moderately Satisfactory. The project had a very long mobilization phase. However, during the second part of the project, activities were implemented in an effective and flexible way which led to most outputs being delivered. Most outcomes were also achieved. Outcome 2 (Locally-applicable alternatives to malaria vector control are identified and tested) was partly achieved.
8. Regarding **communication and awareness raising**; communication and community sensibilization were very important for the alternative interventions at demonstration sites to be effective. This project has shown that when using an alternative intervention with simultaneous awareness raising and community sensibilization and the same method without structured community sensibilization, it is likely that the method with simultaneous and targeted awareness arising will show to be more effective.
9. A weakness of the project was **Efficiency**. Efficiency is rated as Unsatisfactory, mainly because in the first years of the project very little progress was made. Several reasons for project delays have been mentioned: expectations and (limits of) responsibilities between Implementing and Executing Agency were not always discussed beforehand. Next to that, it was mentioned that protracted procedures and bureaucracy at WHO as well as at Ministries have caused delays in timely financial transfers, which in turn caused delays in implementation of project activities
10. The Terminal Evaluation of the Project also looked at finding answers to key strategic questions as defined in the Terms of Reference. These were the following questions:
 - a. Pertaining to attribution, to what extent can the project be credited with having led to a reduction of DDT use for malaria control in the participating countries through the establishment of alternative malaria control strategies in these areas?
 - b. What are some of the key results and experiences identified by the evaluation that could help provide strategic guidance to DDT phase-out work in Africa and the Global DSSA Programme (Demonstrating and Scaling-up of Sustainable Alternatives to DDT in Vector Management Global Programme)?
 - c. To what extent were synergies built between UNEP and WHO cooperation and what are some of the possible lessons for future projects that integrate health and environment?
 - d. From the analysis of the project's impact pathway, to what extent were the most critical assumptions, drivers and duty bearers in the change process found to hold and have these been considered in the DDT AFRO II project?
 - e. In consideration of environmental and social safeguards, has the evaluation identified any unintended environmental or socio-economic impacts (positive or negative) in the project's demonstrations conducted in the field (pilot districts)?
11. Regarding key **strategic question (a)** it can be said that the project cannot be credited with having led to a reduction of use of DDT for malaria vector control. As mentioned throughout the report,

DDT was not used in any of the countries since before or since the early start of the project. It is possible that the establishment of alternative malaria control strategies may have contributed in a small degree to the fact that until today the countries have not returned to the use of DDT, as the project showed that effective alternatives are available.

12. The key experiences identified by the evaluation that could help provide strategic guidance to DDT phase-out (**key strategic question (b)**) are the following: there needs to be a clear insecticide resistance management strategy in each country; testing of resistance to chemicals used needs to be repeated on a regular basis as resistance can change over time; results of alternatives tested needs to be evidence-based, and cost-effectiveness of alternatives need to be assessed.
13. Regarding **strategic question (c)**, one of the most important lessons learned is that before or at the start of projects there needs to be a clear common understanding between the Executing and Implementing Agency. WHO as Executing Agency was in contact with the Ministries of Health, which were the implementing partners of WHO in all the project countries. Other ministries, most specifically the Ministries of Environment and Ministries of Agriculture, were not always directly involved in the activities. UNEP could ensure that other ministries are involved more closely in future projects.
14. Regarding **Strategic question (d)**, the drivers and assumptions as described in the Theory of Change mostly held for the pathway from outputs to direct outcomes. However, not all drivers were in place and this is also partially why upscaling of alternatives to other parts of the countries has not taken place. Most drivers were in place when outcomes were achieved, but since there was no exit strategy prepared for the project, it seems no momentum was created immediately after the project for replicating and upscaling of alternatives. The AFRO II project started in 2016 and has therefore not considered the outcomes of this evaluation. In the AFRO II project document, assumptions and drivers are not explicitly described but the project indirectly considers in their project document certain drivers and assumptions as defined in this evaluation in the implementation of the project activities, as can be seen in the description of components, outcomes and outputs in the AFRO II project document.
15. The evaluation has not identified any immediate and strong unintended environmental or socio-economic impacts in the project's demonstrations conducted in the field. What can be said though regarding **strategic question (e)**, is that the sensibilization activities of the local population in Ethiopia and specifically also Madagascar contributed positively to the results of the demonstration activities. The demonstrations also increased the interest of the local population in malaria prevention and control. During project implementation, malaria burden decreased in the project communities.
16. The following **lessons learned** have been formulated, based on the results of the ratings and based on the input provided by the stakeholders who were interviewed during the evaluation:
 - i. Specific roles and responsibilities should be made more explicit in agreements between Implementing Agency and Executing Agency;
 - ii. Clear communication is needed to provide realistic expectations of what can happen after the project finishes and exit strategies should be developed well in advance of project end.
 - iii. Continuous strengthening of local capacities is vital for effective and sustainable implementation of IVM;

- iv. IVM programmes should be holistic and ensure that local communities understand the need for and support IVM activities – community sensibilisation/awareness raising is vital in IVM programmes;
 - v. In Project design and initiation, a more in-depth analysis of country context and risks (political, distance and location, safety) should be conducted;
 - vi. Effective implementation of IVM is dependent on certain milestones that need to be monitored closely.
17. Six **recommendations** have been formulated which could still be (partly) integrated into the AFRO II project (and other similar projects) by WHO and UNEP:
- i. Make Awareness raising and community sensibilization activities an integral part of IVM strategies in the AFRO II project;
 - ii. Include calculations on cost-effectiveness of alternatives and experts to support this process in the AFRO II project;
 - iii. Reduce protracted processes in contracting and transfer of funds, or allow for more time for disbursement of funds and procurement in project workplans; ensure better and realistic planning and implementation;
 - iv. Use established participative national steering committees and regional steering committees in the AFRO II project to support cross-sectoral and cross-border cooperation and make sure that such structures are incorporated into existing national structures after project end;
 - v. Develop an exit strategy (per country) to make expectations clear to all stakeholders;
 - vi. When results of projects are planned to be reflected within national strategies, make sure these strategies make clear reference to the project and are made available to the Executing Agency and Implementing Agency.

1 Introduction

18. This is the report of Terminal Evaluation of the UNEP- Global Environment Facility (GEF) project "Demonstrating Cost-effectiveness and Sustainability of Environmentally Sound and Locally Appropriate Alternatives to DDT for Malaria Vector Control in Africa" (GEF project identification number 1331). The project was implemented in Ethiopia and Madagascar, and in the final stages of the project also in Eritrea. The project implementation period was from 2009 – 2018 (the last project activity - the closing workshop – was organized in May 2017). UNEP acted as GEF Implementing Agency, while the World Health Organization Regional Office for Africa was the Executing Agency of the Project. The main implementation partners on a national level were the Ministries of Health. The total budget of the project was \$7,125,246, including the preparation PDF-B phase. The cost to the GEF Trust Fund was \$3,460,296.
19. The Project was funded through the Global Environment Facility and is in line with GEF Operational Programme 14 on Persistent Organic Pollutants. The project also fits within the GEF-4 Strategic Program 2: Partnering in investments for NIP implementation, as well as GEF-4 Strategic Program 3: Partnering in the Demonstration of Feasible, Innovative Technologies and Best Practices for POPs Reduction and Substitution.
20. The project adheres to the fifth thematic strategy (Harmful substances and hazardous waste) of UNEP's Medium-term Strategy (MTS) 2010-2013 and is also in line with UNEP's MTS for the period 2014-2017. Here the project fits within the subprogramme Chemicals and Waste. The project is also in agreement with the Programme of Work (PoW) for the period 2016-2017, mainly outputs 3 and 4:
 - Output 3: Methodologies to monitor and evaluate the impact of actions addressing chemicals releases to support sound management of harmful substances and multilateral environmental agreements implemented at the national level;
 - Output 4: Scientific and technical services delivered through multi-stakeholder partnerships to build the capacities of Governments, the private sector and civil society to take action on the risks posed by chemicals, including those listed in relevant multilateral environmental agreements and the Strategic Approach, and lead and cadmium, as well as unsound management practices.
21. The evaluation is in accordance with the UNEP Evaluation Policy and 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.
22. The evaluation has two primary purposes: (i) provide evidence of results to meet accountability requirements, and (ii) promote operational improvement, learning, and knowledge sharing through results and lessons learned among UNEP, WHO and other partners. Therefore, the evaluation identifies lessons of operational relevance for future project formulation and implementation of other similar initiatives and follow-on projects such as AFRO II.
23. The evaluation was conducted by external evaluation consultant Sandra Molenkamp. Methods used were desk research, field visits to Ethiopia and Madagascar, and conducting a series of semi-

structured interviews with UNEP staff, representatives of Executing Agency WHO Regional Office for Africa, Ministries of Health and other partners and stakeholders.

24. This report contains the main evaluation findings, the reconstructed Theory of Change (at design and at evaluation), conclusions, lessons learned, and recommendations to different stakeholders. The key intended audience for the findings of this report is UNEP and the main project partners.

2 Evaluation methods

2.1 Overview

25. The Terminal Evaluation is carried out by an independent consultant under the responsibility of the Evaluation Office of UNEP in Nairobi in consultation with the Task Manager and guided by UNEP's Evaluation Policy and the UNEP Programme Manual. The evaluation period was from April 2019 to October 2019

26. The Terminal Evaluation has the purpose of 1) Accountability: objectively assessing the results generated by implementing the project activities against the expected results in alignment with UNEP's results-based management requirements; 2) Learning: contributing to operational improvement while building ownership, identifying good practices, and promoting the use of those practices within future programme planning, design, and implementation.

2.2 Evaluation criteria and key questions

27. The overall approach to the evaluation is conducted in line with the scope as set out within the ToR of the Terminal Evaluation that in turn uses established evaluation criteria grouped within nine categories. In the report, the evaluator provides ratings for these evaluation criteria, together with a brief justification cross-referenced to the findings in the report, according to the following 6-point scale: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Sustainability and Impact is rated on a 'likelihood scale' from Highly Likely (HL) down to Highly Unlikely (HU).
28. In addition to the evaluation criteria outlined, the evaluation addresses the strategic questions listed below. These are questions of interest to UNEP and to which the project is believed to be able to make a substantive contribution:
- a. Pertaining to attribution, to what extent can the project be credited with having led to a reduction of DDT use for malaria control in the participating countries through the establishment of alternative malaria control strategies in these areas?
 - b. What are some of the key results and experiences identified by the evaluation that could help provide strategic guidance to DDT phase-out work in Africa and the Global DSSA (Programme Demonstrating and Scaling-up of Sustainable Alternatives to DDT in Vector Management Global Programme)?
 - c. To what extent were synergies built between UNEP and WHO cooperation and what are some of the possible lessons for future projects that integrate health and environment?
 - d. From the analysis of the project's impact pathway, to what extent were the most critical assumptions, drivers and duty bearers in the change process found to hold and have these been considered in the DDT AFRO II project?

- e. In consideration of environmental and social safeguards, has the evaluation identified any unintended environmental or socio-economic impacts (positive or negative) in the project's demonstrations conducted in the field (pilot districts)?

2.3 Data collection and analysis

29. A Reconstructed Theory of Change (TOC) for the project developed by the independent evaluator underpinned the TE. The TOC was based on the results framework, intervention logic and risk analysis in the ProDoc, as well as from discussions with the UNEP Task Manager and the UNEP Evaluation Manager. The TOC was assessed for consistency and a clear conceptual understanding of the Project impact pathways to guide the TE. The reconstructed ToC is presented in Figure 3.
30. The TE was based on a combination of data collection methods, including a desk review of an extensive series of project documents and reports, targeted face-to-face interviews and site observation in Ethiopia and Madagascar during a mission in June/July 2019, and telephone/Skype and e-mail interviews with key project stakeholders for validation of data.
31. Two missions, to Ethiopia and Madagascar, were conducted within this evaluation from 24 June to 6 July 2019. During these missions, the evaluation consultant had extensive semi-structured interviews with the WHO national project coordinators and the main stakeholders from the Ministry of Health (as implementing partner), other ministries, members of the National Steering Committees, and in Madagascar also with persons from the district where demonstration activities were organized.
32. Several project documents, reports and further relevant data were provided to the consultant by UNEP at the outset of the consultancy. A Skype meeting between the Evaluation Officer, Task Manager, WHO Regional Project Coordinator and evaluation consultant was organised as an introduction of the Terminal Evaluation work in April 2019. Additional project documents and data were made available by the Task Manager and other project stakeholders upon request.
33. The evaluator approached the Terminal Evaluation in a participatory way, with the aim to bring together input of different stakeholders involved in the design, implementation and execution of the project. The evaluator focused on producing evidence-based conclusions by:
 - converting the evaluation information needs into answerable questions;
 - tracking down the best external evidence with which to answer them;
 - critically appraising that evidence for its validity (closeness to truth) and usefulness (future project applicability); and
 - evaluating the project performance (outputs and outcomes).
34. During the evaluation, the consultant tried to compare the project intervention with non-action. In other words: "What happened?" compared to "What would have happened without the project intervention?" An analysis of the baseline situation, general trends and activities implemented related to malaria vector control was undertaken. The findings of that analysis were compared to the intended project outcomes and impacts in order to attribute reported project interventions to those outcomes and impacts.

2.4 Evaluation limitations

35. There are several limitations that apply to this Terminal Evaluation. These include amongst others: potential for respondent bias, limited number of face-to-face and telephone interviews with project stakeholders and a limited response to evaluation questions sent by e-mail.
36. The evaluation findings are based, in part, on the views of key interviewees with a responsibility for implementation and execution of project activities that could be potentially biased in their responses regarding outcomes. Several measures were taken to reduce the effect of respondent biases and validate interview results, including the following: (i) ensuring that respondents understood the strict confidentiality of responses; (ii) including interviewees who do not have a responsibility for implementation and execution of project activities; (iii) asking respondents to provide a rationale for their judgments, including a description of specific activities which contributed to reported outcomes; and (iv) using the documents and reports that were prepared during to project to try to help verify responses of the respondents.
37. This Terminal Evaluation takes place two years after the Final Workshop and approximately 2.5 years after the last project activities were implemented. During the evaluation it became apparent that stakeholders of the project were not in the same position anymore, which may have contributed to an overall low and slow responsiveness to the evaluation consultant. It was clear that many respondents had other priorities and it often took repeated efforts for the evaluation consultant to try to get answers to evaluation questions. It also became clear that many respondents did not remember exactly all that took place and the chronological order of events, and whether certain activities and outputs could be (solely) attributed to this project. The WHO regional project officer recently retired. Fortunately, she was still available during the initial stage of the inception phase. However, not all stakeholders who were involved during the project could be interviewed or showed responsiveness to answering evaluation questions.
38. Fortunately, the project documents, including the PIR reports and the Final Project Report prepared by WHO Regional Office for Africa provided the data needed to verify which activities had taken place and supported the assessment whether certain outputs and outcomes were realized (in full or partially), even though there were some gaps and inconsistencies in these reports.
39. As is the case with many other international projects, other factors than the intervention itself could have contributed to the results and outcomes of the project. Within the framework of this project there are several external causes that have contributed to the outcomes of the project. In order to avoid attribution to the project intervention, the evaluation consultant has always tried to distinguish clearly between the intervention itself and external factors.

2.5 Learning, communication and outreach

40. To ensure promotion of learning and communication of key findings of the terminal evaluation, the evaluation adopted the following approach:
 - Interviews were undertaken in a semi-structured manner and individually with key stakeholder to allow space for interviewees to provide their views, priorities and potential recommendations;

- The reconstructed TOC at design, including assumptions and drivers, were discussed with and validated by the UNEP Evaluation Manager and Task Manager and core project staff;
- Preliminary findings, lessons learned, and recommendations were shared with the Evaluation Manager, Task Manager, WHO national coordinators and other key stakeholders after the field missions took place;
- The evaluation consultant discussed the draft terminal evaluation report and recommendations intensely with the UNEP Evaluation manager, Task Manager and other persons within UNEP responsible for this project;
- In a next consultative step, the draft and final reports were circulated to a wider group of stakeholders, e.g. the members of the National Steering Committees;
- This final report of the Terminal Evaluation takes into consideration the comments, suggestions and feedback from all partners.

2.6 Ethics

41. This evaluation was carried out in accordance with the Ethical Code of Conduct as per the UNEP Evaluation policy, which includes the following key factors: (a) all interviews and information were provided in confidence and anonymously and no information can be traced back to a direct source/individual, (b) those involved in the evaluation have had the opportunity to review the evaluation findings as well as the main evaluation report, (c) the evaluator was sure to have empathy and sensitivity to different contexts and cultures in which stakeholders work.
42. To allow for a maximum of free and open discussion about the project results and about how it was implemented, the opinions of the people interviewed and of the people who responded to the survey are not disclosed in direct connection with their individual views. Their responses are being treated with full confidentiality. Only an overview of people consulted for the evaluation is presented in Annex 3 of this report.

3 The Project

3.1 Context

43. The project was designed to support Eritrea, Ethiopia and Madagascar in strengthening the capacity of these three countries to effectively plan, implement, monitor and evaluate vector control interventions that do not involve a short-sighted use of DDT with its long negative side effects.
44. In Ethiopia and Madagascar, demonstration districts were designated for implementation of the alternatives to DDT for malaria vector control. In Madagascar this was the Vatomandry district. In Ethiopia the following four demonstration districts were selected: Adama, Kafta Humera, Sodo and Tach Armachiho.
45. Malaria is a major public health problem in sub-Saharan Africa. Before the start of the project, the three countries relied on indoor house spraying of DDT for malaria vector control. DDT is still an effective insecticide for malaria vector control. However, the production and use of DDT was restricted by the Stockholm Convention because of its persistence and transboundary movement that adversely affects the environment and human health. There are a number of reasons for the continued use of DDT, including lack of capacity to implement new integrated vector management (IVM) procedures, and the lack of scientific information on the effectiveness of alternative methods or resistance to alternative insecticides. This project aimed to demonstrate that alternative vector control interventions not involving the use of DDT are cost-effective, environmentally sound, sustainable and replicable in other parts of the world where DDT is currently used for vector control. The project was designed to benefit the local population with reduced malaria burden and consequently with increased agricultural productivity. The project was consistent with the goals of the Stockholm Convention and was planned to contribute to the GEF POPs target of stress reduction and sustainable alternatives to DDT, the demonstration of [IVM] technologies with indicators of strengthened policies, legislation, and institutions. Also, the project met the objectives of the GEF Operational program on POPs (OP #14) to **provide incremental assistance** to developing countries and countries with economies in transition to reduce and/or eliminate the release of POPs into the environment. The project also was planned to contribute to the implementation of GEF Strategic Priorities on demonstration of innovative and cost-effective technologies and practices.
46. Most countries in the region reported decline in malaria burden with a regional average reduction by about 42% by 2015 (World Malaria Report, 2015). Increased use and coverage of long-lasting insecticidal nets (LLINs) and Indoor Residual Spraying (IRS) of insecticides during the last 10 years has significantly contributed to this achievement. However, sustained effectiveness of these major malaria vector control methods faces a serious challenge due to resistance of the malaria vectors to the available insecticides almost in all endemic countries of the region. Countries need DDT for the management of insecticide resistance particularly in areas where resistance against pyrethroids, the most affordable insecticide next to DDT, is widespread. Additional reasons for the continued use of DDT include: limited capacity to implement vector control intervention in an integrated vector management (IVM) manner, the lack of comprehensive scientific evidence on

the effectiveness of alternative methods, and the short list of insecticides usable for vector control. These continue to be the deriving factors for the importance of DDT in malaria control in the region.

3.2 Objectives and components

47. According to the Project Document (ProDoc), the development goal of the project is **"Reduction of DDT use and the elimination of DDT stockpiles through the strengthening of malaria vector control practice in Eritrea, Ethiopia and Madagascar"**. The overall objective of the project is **to demonstrate cost-effective, environmentally sound, and locally appropriate alternatives to DDT use in malaria control, ensuring their sustainable application through strengthened national and local capacity**. The overall project objective was planned to be achieved through fulfilment of the following specific objectives.
- a. To strengthen the capacity for malaria diagnosis, treatment and vector control in project districts, particularly for emergency malaria occurrence that may be associated with introduction of alternatives;
 - b. To strengthen national and local capacities for planning, monitoring and evaluation of vector control interventions;
 - c. To strengthen national reference centres to support the implementation of alternative malaria control interventions;
 - d. To design, implement, monitor and evaluate studies that will assess the cost-effectiveness and sustainability of alternative interventions;
 - e. To strengthen community participation and mobilization to support the sustainable implementation of alternative interventions;
 - f. To strengthen pesticide management practices that will prevent the accumulation of DDT and other toxic pesticides in stockpiles and reduce the development of vector resistance;
 - g. To assess the potential risks to human health of alternative, non-POP, insecticides, and;
 - h. To disseminate information on the best alternative malaria vector control methods for wider application.
48. In order to achieve these specific objectives, the project was divided into five components including subsequent activities and expected outcomes (see ProDoc, pages 12-23):

Component 1: Strengthening of national and local capacities for malaria control:

Outcome 1.1.: National and local capacities in planning, monitoring and evaluation of malaria control are strengthened;

Outcome 1.2.: Health centres are strengthened for emergency situations;

Outcome 1.3.: Local communities are equipped with insecticides and application apparatus for dealing with emergencies;

Outcome 1.4.: National referral centres are strengthened to provide technical support;

Outcome 1.5.: Community awareness is raised on alternative interventions less dependent on DDT.

Component 2: Implementation of alternative methods of malaria vector control tailored to local circumstances:

Outcome 2.1.: Integrated Malaria Monitoring and Surveillance System is developed;
 Outcome 2.2.: Locally appropriate alternative interventions are implemented;
 Outcome 2.3.: Community attitudes to alternative interventions are evaluated;
 Outcome 2.4.: Environmental and health impact of alternatives is assessed.

Component 3: Management and use of DDT and other public health pesticides:

Outcome 3.1.: DDT and other pesticides are managed in an environmentally sound manner;
 Outcome 3.2.: Systems for detecting insecticide resistance and management of resistance are created.

Component 4: Transboundary information exchange and technical support:

Outcome 4.1: Transboundary information exchange and technical support to countries achieved.

Component 5: Project management:

Outcome 5.1.: Project management structure is established.

49. The logical framework in the ProDoc) contains only three outcomes instead of the 13 outcomes described above. These outcomes are:

Outcome 1: Capacity at national, provincial, district and community levels to undertake planning an implementation of alternative malaria prevention measures to reduce dependence on DDT.

Outcome 2: Identification of successful locally applicable alternatives to malaria vector control with surveillance provided by an Integrated Malaria Information System.

Outcome 3: Safe storage facilities for DDT stocks and control procedures to ensure that DDT is not diverted from health protection applications to other purposes.

50. Within the Project Document no outputs are defined. Some of the outcomes that fall under the five components could more easily be considered as outputs when defining outputs as "gains in knowledge, abilities and awareness of individuals or within institutions, or the availability of new products and services that result from the completion of activities (for intended beneficiaries)¹". In reporting such as the Project Implementation Review reports (PIRs), the outcomes of the different components are regularly called outputs.

51. The evaluation considered the following overview of components and outputs and outcomes as a basis for reconstructing the ToC at design and at evaluation (please see ProDoc):

Outcomes:

Outcome 1	Capacity at national, provincial, district and community levels to undertake planning an implementation of alternative malaria prevention measures to reduce dependence on DDT.
Outcome 2:	Identification of successful locally-applicable alternatives to malaria vector control with surveillance provided by integrated malaria information system.
Outcome 3:	Safe storage facilities for DDT stocks and control procedures to ensure that DDT is not diverted from health protection applications to other purposes.

¹ (see document: Summary of preferred definitions, 22.01.2019).

Components and outputs:

Component 1: Strengthening of national and local capacities for malaria control	
Output 1.1.:	National and local capacities in planning, monitoring and evaluation of malaria control are strengthened.
Output 1.2.:	Health centres are strengthened for emergency situations.
Output 1.3.:	Local communities are equipped with insecticides and application apparatus for dealing with emergencies.
Output 1.4.:	National referral centres are strengthened to provide technical support.
Output 1.5.:	Community awareness is raised on alternative interventions less dependent on DDT.
Component 2: Implementation of alternative methods of malaria vector control tailored to local circumstances	
Output 2.1.:	Integrated Malaria Monitoring and Surveillance System is developed.
Output 2.2.:	Locally appropriate alternative interventions are implemented.
Output 2.3.:	Community attitudes to alternative interventions are evaluated.
Output 2.4.:	Environmental and health impact of alternatives is assessed.
Component 3: Management and use of DDT and other public health pesticides	
Output 3.1.:	DDT and other pesticides are managed in an environmentally sound manner.
Output 3.2.:	Systems for detecting insecticide resistance and management of resistance are created.
Component 4: Transboundary information exchange and technical support	
Output 4.1.:	Transboundary information exchange and technical support to countries achieved.
Component 5: Project management	
Output 5.1.:	Project management structure is established.

3.3 Stakeholders

52. The ProDoc contains a chapter on "Stakeholder participation and Implementation Arrangements". In the preparation phase of the project, a Vector Control Needs Assessment (VCNA) was undertaken in the three participating countries. During the needs-assessment and the preparation phase (PDF-B phase), a wide range of stakeholders were included, such as Ministries of Health, Environment, Agriculture and Land and Tourism, as well as academic institutions such as universities and research centres.
53. Based on the ProDoc (specifically the chapter on "Stakeholder participation and Implementation Arrangements") and discussions with the UN Task manager and the WHO regional project coordinator, the following key stakeholders have been identified:

3.3.1 International organizations:

54. The following international organizations are included:

UNEP: Implementation Agency of the project. The project is supervised by the UN Task manager.

WHO Regional Office for Africa: Executing Agency of the project. The regional project officer of the project was working from this regional office. In each of the three countries, a WHO national project coordinator was appointed. WHO contributed to the project with its broad international experience on malaria vector control (such as the Roll Back Malaria (RBM) partnership) and provided extensive technical support to each of the three countries.

Global Environment Facility: Main funding agency.

FAO: At the time when the ProDoc was prepared, FAO was implementing their African Stockpiles Project (ASP), addressing the issue of obsolete stockpiles disposal in African countries. Ethiopia, Eritrea and Madagascar were all part of the ASP. The ProDoc states that "...to prevent the risk of diverting DDT stocks for use in particular in the informal sector or elsewhere, the project will find a clear link with the ASP to make sure that stocks are destroyed within a reasonable time limit and in an environmentally sound manner."

SIMA (System wide Initiative on Malaria and Agriculture): SIMA was a co-funding agency of the project. As a member of the Steering Committees, SIMA was to provide expertise on malaria vector related issues in the project.

ICIPE (International Centre of Insect Physiology and Ecology): Nairobi, Kenya. ICIPE was planned to contribute to the Integrated Vector Management (IVM) training of national coordinators. The Focal Point of the ICIPE was to be a permanent member of the Regional Steering Committee. ICIPE contributed with in-kind co-funding to the project.

3.3.2 Country stakeholders

55. The following international organizations are involved:

Local communities in the demonstration districts: Although this stakeholder group has little power to influence the implementation of the project, they have a very high interest and can also be considered one of the main beneficiaries of the project. The ProDoc makes little reference to gender, human rights and minority issues, but two groups are mentioned as important stakeholder groups: children (as a high percentage of persons dying of malaria are children) and women (health impact from insecticides are different for women and men). In 2003, as mentioned in the ProDoc (page 1), malaria was the single biggest cause of death among young children in Africa and one of the most common threats to the health of pregnant women.

Ministries of Health: The Ministries of Health are country implementation partners of the project and as such have a high interest and high influence on the project. In each country they were responsible for the local implementation of project activities in the selected demonstration areas. The Ministry of Health in each country was responsible for project progress and timely implementation of activities.

Other Ministries, including Ministries of Agriculture and Ministries of Environment: Other ministries certainly have an interest in the project but are not always strongly involved in malaria vector control. It is clearly explained in the ProDoc why other ministries are important stakeholders:

- The Ministry of Agriculture has an impact on vector control, because of its activities related to irrigation schemes and enforcement of regulations on the use of pesticides banned for agriculture;

- The Ministry of Environment and Tourism has the authority to protect the environment from pesticide contamination;
- The Ministry of Trade or Finance may have an impact on malaria control because of its import tax and tariff on nets and insecticides;

Universities and research institutes: Research institutions assisted in the evaluation of alternative control tools and various interventions.

District Councils / local government of the demonstration districts: As the alternatives were tested in districts in Ethiopia and Madagascar, they were directly involved in the implementation of project activities in their district. The district representatives therefore had a high interest in the project.

3.3.3 Project Structures

56. During project implementation, the following two structures were established:

National Project Steering Committee: During the PDB-B preparation phase, a National Project Steering Committee was set up in each of the three participating countries. Within this committee, key stakeholders on IVM participated in the preparation of the project, including both national and international organizations. The NSCs were meeting during project implementation on a regular basis to support implementation of the activities on a national level.

Regional Project Steering Committee: The RSC acted as the highest supervisory organ of the project. It was comprised of the WHO regional project coordinator, representing the participating countries, WHO national project coordinators, the UNEP Task Manager, ICIPE and specific regional and international research institutions. The Committee planned to meet at least once a year to review progress and provide guidance on project implementation.

3.3.4 Specific stakeholders defined by countries during the PDF-B phase

During the project preparation (PDF-B phase), the following specific organizations were identified in each country to move the implementation of IVM forward and are copied here from the ProDoc:

Eritrea:

Ministry of Health; Ministry of Agriculture; Ministry of Land, Water and Environment; Ministry of Public Works and Construction; Ministry of Local Government; Municipalities and Town Councils of the demonstration districts; Ministry of Finance; University of Asmara; World Health Organisation; Food and Agriculture Organisation of the United Nations; USAID; UNICEF; National Bureau of Standards; Ministry of Labour and Social Affairs.

Ethiopia:

Regional and National malaria control programs; Environment Protection Agency, Safe environment Group; WHO; Ministry of Agriculture; Institute of Pathobiology, Addis Ababa University; Ethiopian Health and Nutrition Research Institute.

Madagascar:

Ministry of Health; Ministry of Environment; Ministry of Agriculture; Ministry of Finances and Commerce; Municipalities of demonstration districts; private sector (pesticide company); District Medical Offices; RBM national committee; WHO.

3.3.5 Beneficiaries:

57. The **key beneficiaries** identified in the ProDoc (page 28-29) were the following:
- a) **Populations living in project districts:** malaria incidence was expected to be reduced, the environment therefore would be cleaner, and the local population would be empowered to take decisions on their health through training and public awareness-raising on alternative interventions.
In the ProDoc the population has not further been divided in specific sub-groups such as women and children, even though these groups are mentioned a few times as stakeholders.;
 - b) **Health workers** at risk of exposure through mixing and handling of public health insecticides were planned to be trained on their safe use and management and this would expectedly reduce health risks related to continued exposures to insecticides;
 - c) **Public health institutions** that were expected to participate in capacity development activities would strengthen their own capacities, and;
 - d) **Malaria control personnel** who would receive training on alternative vector control strategies such as IVM.
58. The stakeholders in this project with a high interest and high influence are the main stakeholders that were interviewed for this Terminal Evaluation report. These stakeholders are the Ministries of Health of the three countries as implementing partners (including NMCP (National Malaria Control Programme) coordinators), UNEP, WHO Regional Office for Africa (regional project coordinator) and the WHO country offices (national project coordinators).
59. Other stakeholders with high interest (but with less direct influence) are the district councils and local governments, and of course the local communities, health workers and health institutions who benefit directly from positive results of the project. These stakeholders were interviewed during a field mission to the Vatomandry district in Madagascar in July 2019.
60. There are several (international) stakeholders that provide a supporting role in the project. Their influence on the project and interest in the project is less high than of the main stakeholders mentioned above, but they have an important role in providing expertise to the project to ensure sound project results. These include SIMA and ICEPE.
61. Besides the Ministry of Health, other Ministries also are project stakeholders. The Ministry of Environment looks at environmental aspects and the Ministry of Agriculture are important, as they are enforcing regulations that ban the use of DDT in agriculture. It is therefore important that the Ministry of Health cooperates with other ministries and find synergies where possible. Cooperation of the Ministries of Health with other stakeholders has been assessed during the main evaluation phase.

3.4 Project implementation structure and partners

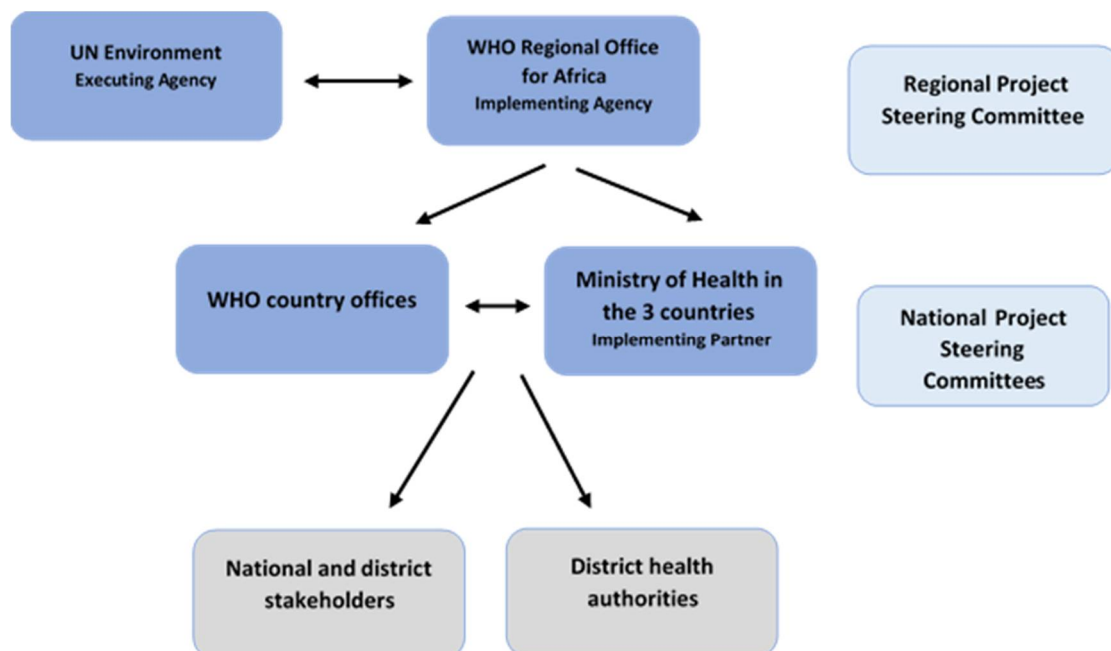


Figure 1: Implementation structure

62. The Implementing Agency (IA) for the project was UNEP and Executing Agency (EA) was the WHO Regional Office for Africa. The WHO Regional Office for Africa managed the project through their regional project coordinator and appointed national project coordinators from WHO country offices in each of the three countries. The Ministries of Health in each country were responsible for the local implementation of project activities in the selected demonstration areas and responsible for general project progress in their country. Support structures for implementation of activities were the Regional Project Steering Committees and on national level the National Steering Committees. In these committees national and regional stakeholders provided input to work plans, reviewed project progress and provided technical expertise.

3.5 Changes in design during implementation

63. The project was originally planned to be implemented from 31 March 2009 – 31 October 2013. During the project implementation, three revisions were agreed upon. Each revision allowed for project extensions in order for project objectives to be achieved and for unspent funds to be utilized during the extension periods. The total budget remained the same. The first amendment allowed the project duration to be extended until December 2015. In the second revision, the duration was extended until December 2016 and with the last amendment the project was extended until 30 September 2018 (the last activities however took place in early 2017 and the closing workshop was held in June 2017).

3.6 Project financing

64. The total approved budget for the project was \$7,125,246 as we see outlined in the table below under "Total cost of the project", including the preparation PDF-B phase. The cost to the GEF Trust Fund was \$3,460,296 shown in the first line. Please see also the project budget and expenditure overview and co-finance tables in chapter 6.7.

Table 1: Project Financing

	Cash (USD)	In-kind
Cost to the GEF Trust Fund	3,460,296	
PDF-B	384,000	
Government of Eritrea		542,225
Government of Ethiopia		182,000
Government of Madagascar		331,300
SIMA/ICIPE		55,000
Roll Back Malaria Initiative		300,000
WHO (EA)	500,000	1,056,425
PDF-B Co-financing		314,000
Total costs of the project	7,125,246.00	

4 Theory of change

65. At the time the ProDoc was designed, the Theory of Change (ToC) was not yet a requirement for the development of project proposals. Therefore, the TOC had to be reconstructed based on the defined outcomes, outputs, results and objectives as described in the ProDoc.

4.1.1 ToC outputs and direct outcomes

66. As explained in chapter 4.2, no outputs have been defined in the ProDoc. The outcomes that fall under the five components could more easily be considered as outputs when defining outputs as "gains in knowledge, abilities and awareness of individuals or within institutions, or the availability of new products and services that result from the completion of activities (for intended beneficiaries)"². For the reconstruction of the Theory of Change, outcome 1.2 to outcome 5.1 are called outputs (some outputs are slightly rephrased to be in line with the above-mentioned definition, please see also comparison table 2 below).
67. Within the diagram of the reconstructed **ToC at design** (the reconstructed ToC based on the ProDoc), the outcomes of the first four components are – slightly reformulated, so they are in line with the above-mentioned definition – used as outputs that lead to the three outcomes as mentioned in the log frame (these outcomes are also slightly reformulated to make them more clear). Component 5 ("Project management structure is established") is not used in the reconstructed ToC as it is an operational component referring to execution and administrative aspects of the project.
68. During the main evaluation phase, it became clear that outcome 3 as stated in the log frame needed to be reformulated. Outcome 3 was as follows: "Safe storage facilities for DDT stocks are established and control procedures to ensure that DDT is not diverted from health protection applications to other purposes are improved." The project did not establish any new storage facilities but used existing ones for insecticides used during the testing of alternative interventions. Furthermore, as DDT was not used in any of the three countries during the project implementation period, the second part of the outcome (DDT is not diverted from health applications) was no longer valid. This led to reformulation of Outcome 3 as follows: "Management of pesticides in an environmentally sound manner improved in Eritrea, Ethiopia and Madagascar".
69. The **ToC diagram that was developed at project design** and the corresponding table that summarizes the amendments that have been made to the outputs and outcomes of the ProDoc can be found in Annex 2 of this report.
70. The table below summarizes the corrections / amendments that have been made to the outputs and outcomes of the ProDoc and that have been used by the evaluation to reconstruct the **ToC during the main phase of the evaluation** (Figure 1).

² see document: Summary of preferred definitions, 22.01.2019).

71. Regarding evaluation of the project, it should be noted that the project is responsible for achieving the outputs and direct outcomes. Intermediate states 1 and 2, as well as the Impact, are expected to be part of the longer-term possible results, and the project will be positively assessed where it appears likely that these results would be realized.

4.1.2 Causal pathways:

72. Outputs related to component 1 all focus on improving and strengthening local, district and regional capacities on malaria control. Only when all these 5 outputs are accomplished, will outcome 1 be successfully achieved, i.e. "Capacity at national, provincial, district and community levels to undertake planning and implementation of alternative malaria prevention measures to reduce dependence on DDT is built and strengthened". This capacity is also a prerequisite for achieving intermediate states (IS) 1.1 and 2.1 and finally impact. Only when the capacity at national, district and local level remain in minimum at the level as achieved under direct outcomes, it can be expected that IVM interventions will be replicated and upscaled to national level (IS 1.1), DDT use will be reduced (IS 2.1) and thus a reduced reliance on DDT (Impact 1) can be achieved in the long-term.
73. When capacity is at the required level, alternative methods for malaria control need to be identified based on available data. When all appropriate systems and tools are in place, the alternatives need to be tested carefully and extensively, leading to the most suitable alternatives identified (outcome 2) that can be used for upscaling to national level (IS 1.1). This will expectedly lead to a reduced use of DDT (IS 2.1) and finally a reduced reliance on DDT (Impact 1).
74. Outputs under component 3 are mostly connected directly to outcome 3 and are related to the sound management of DDT and other pesticides. When e.g. spray operators are trained on pesticide management, on safe handling and storage of insecticides, and vector control teams are trained on determining susceptibility status of vector species, will this lead to an improved management of pesticides in the participating countries (outcome 3). Improved management of pesticides will support and facilitate upscaling of implementation of alternatives to DDT (IS 1.1). This will lead to a reduced use of DDT (Intermediate State 2.1), a reduced reliance on DDT (Impact 1) and will also lead to better environment and health (Impact 2).
75. The outputs under component 4 ("Transboundary information exchange and technical support to countries achieved") are cross-cutting in that they support all outcomes to be achieved successfully. Experience gained within other projects and countries will help the project to be implemented more successfully and effectively. Technical support from WHO and other international organizations is also vital for strengthening capacity to implement alternative malaria prevention measures, to identify and test locally applicable alternatives and to improve general management and control procedures of pesticides in an environmentally sound manner.

4.1.3 Drivers and assumptions

76. In the log frame of the ProDoc, assumptions and risks are defined. The main assumptions as copied from the ProDoc are:
- Governments maintain their political will towards scaling up the implementation of activities
 - Adequate compliance assurance and political will in each country;

- Health care workers, farmers and local communities participate in the development of alternatives;
- Methodologies and technologies for alternatives to malaria vector control using DDT are appropriate to local conditions. Community accepts the alternatives;
- Governments and local communities are convinced of the need for, and the public health and environmental benefits of, stringent controls on storage and access restrictions to pesticide stocks.

77. These assumptions have been reflected into the ToC diagram and are valid for each step in the diagram (from output to outcome, from outcome to intermediate state 1 and 2, and from intermediate state 2 to impact). The third assumption mentioned above ("Health care workers, farmers and local communities participate in the development of alternatives") has however been incorporated into the drivers, as active participation will drive the project forward and results will be achieved more successfully. Also, this is a factor that is within the control of the project.

78. The evaluation has identified the following drivers in the reconstructed ToC :

- Robust and participatory mechanisms for (transboundary) information exchange and technical support are available to the intended beneficiaries;
- All stakeholders are aware of the available alternatives, their efficiency and sustainability of application and health risks caused from DDT;
- Health care workers, farmers and local communities participate actively in the development (and upscaling) of alternatives;
- Strong evidence that alternatives are effective is effectively communicated to the intended beneficiaries

79. Based on feedback to the ToC received during the inception phase of the evaluation, the last driver mentioned above (Strong evidence that alternatives are effective) was added as a factor influencing the pathway from outcomes to Intermediate state 1; it can be expected that when locally appropriate alternative to malaria vector control are identified and tested, strong evidence that these alternatives are effective will be a push for replicating and upscaling of alternatives to other parts of the country.

80. The first driver (Robust and participatory mechanisms for (transboundary) information exchange and technical support) is especially important for the causal pathway between outputs to outcomes. It can be expected that within the pathways from outcome to intermediate states 1 and 2 and impact, the countries will become less dependent on WHO and international exchange of experience. The other drivers are again valid for each pathway in the diagram; when the stakeholders are aware of the importance of alternative methods and these are broadly supported, it can be expected that this will more easily and effectively lead to upscaling of alternatives and to a reduced reliance on DDT.

Table 2. Comparison table between ProDoc and reconstructed ToC at evaluation:

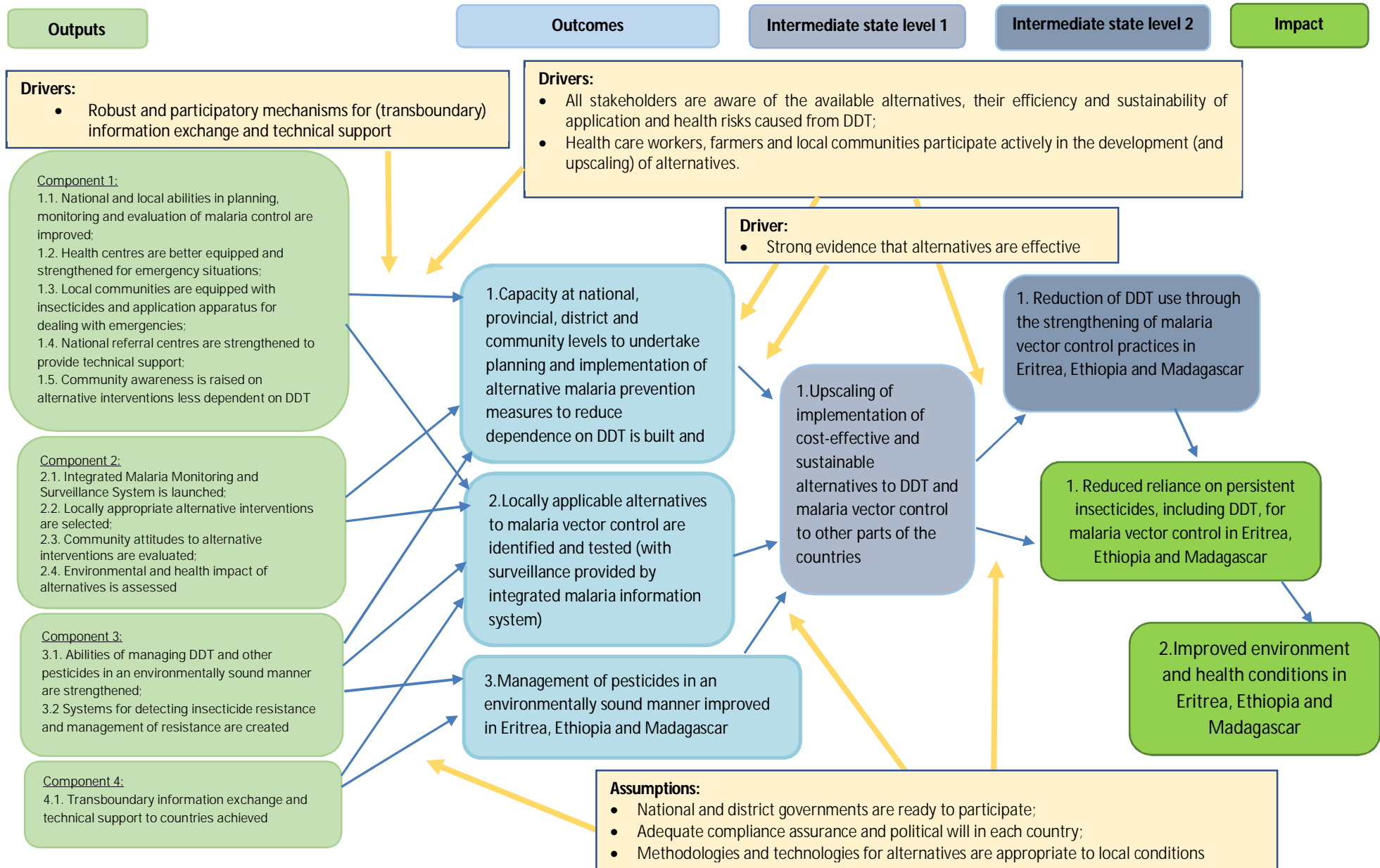
Project Document (ProDoc)		Reconstructed TOC		Justification for reconstruction
		Long Term Impact	LTI 1: Reduced reliance on persistent insecticides, including DDT, for malaria	Upscaling of alternatives to DDT and IVM practices (IS

Project Document (ProDoc)		Reconstructed TOC		Justification for reconstruction
		(long-term results)	vector control in the three countries; LTI 2: Improved environment and health conditions in the three countries.	1.1) will lead to reduction of use of DDT (IS 2.1). In the long-term this will result in a reduced reliance on DDT and therefore improved environmental and health conditions.
Overall Development Objective	Reduction of DDT use and the elimination of DDT stockpiles through the strengthening of malaria vector control practices in Eritrea, Ethiopia, Madagascar	Intermediate States (IS) (medium-term results)	IS 1.1: Upscaling of implementation of cost-effective and sustainable alternatives to DDT and malaria vector control to other parts of the countries. IS 2.1: Reduction of DDT use through the strengthening of malaria vector control practices in Eritrea, Ethiopia and Madagascar.	The ProDoc did not contain a ToC as at the time it was not a requirement. The overall development objective of the log frame aimed at reduction of DDT use, improved pesticides management and improved malaria vector control practices (IVM). These aspects of the development objective are reflected in the Intermediate States of the ToC. The overall project objective as defined in the ProDoc has been reflected in IS 1.1.
Overall Project Objective/Purpose	To demonstrate cost-effective, environmentally sound, and locally appropriate alternatives to DDT use in malaria control, ensuring their sustainable application through strengthened national and local capacity			
Outcomes (in ProDoc log frame)	Outcome 1: Capacity at national, provincial, district and community levels to undertake planning and implementation of alternative malaria prevention measures to reduce dependence on DDT. Outcome 2: Identification of successful locally-applicable alternatives to malaria vector control with surveillance	Outcomes	Outcome 1: Capacity at national, provincial, district and community levels to undertake planning and implementation of alternative malaria prevention measures to reduce dependence on DDT is built and strengthened; Outcome 2: Successful Locally-applicable alternatives to malaria vector control are identified and tested (with surveillance provided by integrated malaria	Three outcomes were defined in the log frame of the ProDoc. The first two outcomes have been used also for the ToC at evaluation (slightly rephrased to make the outcomes more clear). The last outcome of the ProDoc and ToC at design (based on the ProDoc) has been changed; during the evaluation it became clear that the project

Project Document (ProDoc)		Reconstructed TOC		Justification for reconstruction
	<p>provided by integrated malaria information system.</p> <p>Outcome 3: Safe storage facilities for DDT stocks and control procedures to ensure that DDT is not diverted from health protection applications to other purposes.</p>		<p>information system);</p> <p>Outcome 3: Management of pesticides in an environmentally sound manner improved in Eritrea, Ethiopia and Madagascar</p>	<p>did not establish any new storage facilities but used existing ones for insecticides used during the testing of alternative interventions.</p> <p>Furthermore, as DDT was not used in neither of the three countries during the project implementation period, the second part of the outcome (DDT is not diverted from health applications) was not anymore valid.</p> <p>Outcome 3 in the ToC at evaluation was rephrased in more general terms to reflect an improved management of pesticides.</p>
Outputs (Outcomes in ProDoc narrative)	<ul style="list-style-type: none"> - 1.1.: National and local capacities in planning, monitoring and evaluation of malaria control are strengthened; - 1.2.: Health centres are strengthened for emergency situations; - 1.3: Local communities are equipped with insecticides and application apparatus for dealing with emergencies; - 1.4.: National referral centres are strengthened to provide technical support; - 1.5: Community awareness is raised on alternative inventions less dependent on DDT; - 2.1.: Integrated Malaria Monitoring and 	Outputs	<ul style="list-style-type: none"> - 1.1.: National and local abilities in planning, monitoring and evaluation of malaria control are improved; - 1.2: Health centres are better equipped and strengthened for emergency situations; - 1.3: Local communities are equipped with insecticides and application apparatus for dealing with emergencies; - 1.4.: National referral centres are strengthened to provide technical support; - 1.5: Community awareness is raised on alternative inventions less dependent on DDT; - 2.1: Integrated Malaria Monitoring and Surveillance System is launched; - 2.2: Locally appropriate alternative interventions are selected; 	<p>No outputs were defined in the original ProDoc. However, the outcomes 1.1 to 5.1 as described in the narrative text of the ProDoc could be defined as outputs, when defining outputs as "gains in knowledge, abilities and awareness of individuals or within institutions, or the availability of new products and services that result from the completion of activities (for intended beneficiaries)". (There are "results" in the ProDoc log frame that could be outputs, but some are unclear and/or a duplication of the outcomes in the</p>

Project Document (ProDoc)		Reconstructed TOC		Justification for reconstruction
	<p>Surveillance System is developed;</p> <ul style="list-style-type: none"> - 2.2.: Locally appropriate alternative interventions are implemented; - 2.3.: Community attitudes to alternative interventions are evaluated; - 2.4.: Environmental and health impact of alternatives is assessed; - 3.1.: DDT and other pesticides are managed in an environmentally sound manner; - 3.2.: Systems for detecting insecticide resistance and management of resistance are created; - 4.1: Transboundary information exchange and technical support to countries achieved; - 5.1.: Project management structure is established. 		<ul style="list-style-type: none"> - 2.3.: Community attitudes to alternative interventions are evaluated; - 2.4.: Environmental and health impact of alternatives is assessed; - 3.1: Abilities of managing DDT and other pesticides in an environmentally sound manner are strengthened; - 3.2.: Systems for detecting insecticide resistance and management of resistance are created; - 4.1: Transboundary information exchange and technical support to countries achieved. 	<p>narrative text of the ProDoc.)</p> <p>The ProDoc narrative outcomes 1.1 to 5.1 are therefore mentioned in the ToC under outputs. Some of these outcomes have been slightly rephrased (to make sure that they are in line with the definition of an output mentioned above) and used in the ToC, except for outcome 5.1, which belongs to the more operational component of project management.</p>

Figure 2: Reconstructed Theory of Change



5 Evaluation Findings

5.1 Strategic relevance

5.1.1 Alignment to MTS and POW

81. The project is aligned with UNEP's Mandate, Medium Term Strategy and Thematic Priorities. UNEP's **Medium-term Strategy (MTS) 2010- 2013** had six main crosscutting sub-programmes:
- Climate change;
 - Disasters and conflicts;
 - Ecosystem management;
 - Environmental governance;
 - Harmful substances and hazardous waste; and
 - Resource efficiency – sustainable consumption and production.
82. This project fits with the fifth sub-programme on **Harmful substances and hazardous waste**. UNEP focused its efforts "on enhancing strategic alliances; servicing of the Strategic Approach to International Chemicals Management (SAICM) and the implementation of its environmental component; supporting the development and evolution of internationally agreed chemical management regimes; and assisting countries in increasing their capacities for sound management of chemicals and hazardous waste, including the collection of relevant data and information, for the benefit of environment and human health."
83. The **expected accomplishments** for the Harmful substances and hazardous waste sub-programme of the MTS 2010-2013 were the following:
- States and other stakeholders have increased capacities and financing to assess, manage and reduce risks to human health and the environment posed by chemicals and hazardous waste;
 - Coherent international policy and technical advice is provided to States and other stakeholders for managing harmful chemicals and hazardous waste in a more environmentally sound manner, including through better technology and best practices;
 - Appropriate policy and control systems for harmful substances of global concern are developed and in place in line with States' international obligations.
84. The Project also is in line with UNEP's **MTS for the period 2014-2017**. Here the project fits within the subprogramme **Chemicals and Waste**. The objective of the chemicals and waste subprogramme was to promote a transition among countries to the sound management of chemicals and waste, with a view to minimizing impacts on the environment and human health. The expected accomplishments under this subprogramme were as follows:
- Enabling environment: Countries increasingly have the necessary institutional capacity and policy instruments to manage chemicals and waste soundly including the implementation of related provisions of the multilateral environmental agreements;
 - Chemicals: Countries, including major groups and stakeholders, make increasing use of the scientific and technical knowledge and tools needed to implement sound chemicals management and the related multilateral environmental agreements;
 - Waste: Countries, including major groups and stakeholders, make increasing use of the scientific and technical knowledge and tools needed to implement sound waste management and the related multilateral environmental agreements.

85. The overall development goal of the project – the reduction of DDT use and the elimination of DDT stockpiles through the strengthening of malaria vector control practices in Eritrea, Ethiopia, Madagascar - is fully in line with priority 5 of the Medium-term Strategy 2010- 2013, as well as with subprogramme Chemicals and Waste of the MTS 2014-2017.
86. The project is also in agreement with the **Programme of Work (PoW)** for the period 2016-2017. Specifically, here should be mentioned outputs 3 and 4 of expected accomplishment ii. Countries, including major groups and stakeholders, make increasing use of the scientific and technical knowledge and tools needed to implement sound chemicals management and the related multilateral environmental agreements:
 - Output 3: Methodologies to monitor and evaluate the impact of actions addressing chemicals releases to support sound management of harmful substances and multilateral environmental agreements implemented at the national level;
 - Output 4: scientific and technical services delivered through multi-stakeholder partnerships to build the capacities of Governments, the private sector and civil society to take action on the risks posed by chemicals, including those listed in relevant multilateral environmental agreements and the Strategic Approach, and lead and cadmium, as well as unsound management practices.

Sub-Rating of Alignment to MTS and POW: Highly Satisfactory

5.1.2 Alignment to UNEP / GEF strategic priorities

87. The project is in accordance with **GEF Operational Programme 14** on Persistent Organic Pollutants. The objective of the operational program on Persistent Organic Pollutants (OP#14) is to provide assistance, on the basis of incremental costs, to developing countries and countries with economies in transition to reduce and eliminate releases of POPs into the environment. This objective is consistent with that of the Stockholm Convention which is aimed at protecting human health and the environment from POPs.
88. All three participating countries are parties to the **Stockholm convention** on Persistent Organic Pollutants and have prepared National Implementation Plans (Eritrea in 2012, Ethiopia in 2006 and Madagascar in 2008). According to the Stockholm Convention each Party should include in the Action Plan:
 - Development of regulatory and other mechanisms to ensure that DDT use is restricted to disease vector control;
 - Implementation of suitable alternative products, methods, and strategies, including resistance management strategies to ensure the continuing effectiveness of these alternatives;
 - Measures to strengthen health care and to reduce the incidence of the disease.
89. The project also fits within the **GEF-4 Strategic Program 2**: Partnering in investments for NIP implementation, as well as **GEF-4 Strategic Program 3**: Partnering in the Demonstration of Feasible, Innovative Technologies and Best Practices for POPs Reduction and Substitution. The objective of Strategic Program 2 was for the GEF to partner in investments needed for NIP implementation to achieve impacts in the reduction of POPs production, use and releases, and reduce the stress on human health and the environment caused by POPs, including through promoting the use of substitute products or alternative practices that prevent or reduce the generation and/or release of POPs. The main aim of Strategic Program 3 was for the GEF to support projects that demonstrate and promote the replication of environmentally sound, alternative products to POPs, or the substitution of materials and processes to prevent POPs formation.

90. The project is also fully in line with the **Bali Strategic Plan for Technology Support and Capacity building**. The Bali Strategic Plan for Technology Support and Capacity Building is an inter-governmentally agreed framework for strengthening the capacity of governments in developing countries and countries with economies in transition to consistently address their needs, priorities and obligations in the field of the environment. The project fits well within the Bali Strategic Plan's thematic areas (vii) chemicals, (viii) waste management and (x) health and environment, and cross-cutting areas (ix) Access to scientific and technological information, (x) Facilitating access to and support for environmentally sound technologies and corresponding know-how, and; (xi) Education and awareness raising.
91. The project is also in accordance with the **South-South Cooperation**. This is a cross-cutting mechanism intended to enhance UNEP's ability to deliver environmental capacity building and technology-support activities in developing countries and regions of the South. The implementation of the South-South Cooperation initiative is carried out as part of the Bali Strategic Plan for Technology Support and Capacity Building.
92. The Project was implemented in partnership with WHO. The main strategic document guiding international efforts to eliminate and prevent malaria is the **Programme "Demonstrating and Scaling-up of Sustainable Alternatives to DDT in Vector Management" (DSSA)** that was launched in 2009, joining efforts of UNEP, GEF and WHO. This project respects the DSSA programme design, using the multi-sectoral approach and implementation of the joined WHO/UNEP Inter-agency Partnership programs. It focuses on country implementation, applies the best available global practices and provides domestic benefits that in the long run will contribute to the global level results.

Sub-Rating of Alignment to GEF strategic priorities: Highly Satisfactory

5.1.3 Relevance to regional, sub-regional and national environmental priorities

93. On a national and regional level this project was also highly relevant and fits well within national policies. In each country the national Ministries of Health implement the National Malaria Control Programmes (NMCP) and this project was implemented within these programmes.
94. In the context of IVM strategies for the control of disease vectors, a Regional Consultation to prepare African countries for reduced reliance on DDT for malaria control was held in 2000 in Harare, Zimbabwe. The Regional Consultation formulated recommendations that included amongst others the statement that alternatives to DDT should be introduced gradually into the NMCPs after investigation of insecticide resistance, status and prospects; and that insecticide policy, legislation and inter-sectoral collaboration should enforce human health protection in the context of the use of alternative insecticides.

Sub-Rating of Alignment to GEF strategic priorities: Highly Satisfactory

5.1.4 Complementarity with existing interventions

95. The main other intervention at design stage in the region and mentioned in the ProDoc was the Africa Stockpiles Project (ASP), which was addressing the issue of obsolete pesticides disposal in African countries. The project was implemented by the World Bank in cooperation with FAO. UNEP was a partner in this project. This project was expected to deal with management of DDT and other pesticides in public health applications and the ASP was to focus on a much broader range of obsolete pesticides. The aim of the ASP was to inventory and eliminate existing

Persistent Organic Pollutants (POPs) and other obsolete pesticides obsolete pesticide stockpiles and associated waste, and to implement measures to prevent recurrence of obsolete pesticide stockpiles.

96. WHO is the secretariat and technical arm of the Roll Back Malaria (RBM) Partnership. The RBM Partnership to End Malaria is the largest global platform for coordinated action towards a world free from malaria. The Partnership is comprised of more than 500 partners committed to end malaria, including malaria endemic countries, their bilateral and multilateral development partners, the private sector, nongovernmental and community-based organizations, foundations, and research and academic institutions. Through the RBM partnership, it was expected that within this project WHO could take full advantage of opportunities available at global, regional and country levels to identify and allocate appropriate technical support for project implementation, monitoring and evaluation.

Sub- Rating on Complementarity with existing interventions: Satisfactory

Overall Rating of Strategic Relevance: Highly Satisfactory

5.2 Quality of Project Design

97. A detailed review of the Project design was carried out during the Inception Phase of the evaluation. The project was generally well designed. There is no ToC, and gender and human rights aspects are only indirectly touched upon; however, these were not requirements at the time when the ProDoc was designed. The description of the components and outcomes in the narrative part of the ProDoc and in the log frame are not always clear or consistent. No outputs have been formulated (although the outcomes as described in the narrative part of the text could mostly be used as outputs - see also chapter 4), and the log frame is not always correct (e.g. three out of ten results are set apart from the results in the main part of the log frame without any clarification why this has been done).
98. The project preparation phase is well described and the specific situation in each country was explained very well. Also, the general supervision arrangements and partnerships are explained within the ProDoc satisfactorily. It is clear from the ProDoc that there have been extensive consultations with stakeholders within so called National Steering Committees and that the input provided by the stakeholders was taken well into account when the components and activities of the project were designed.
99. In summary, the ProDoc contains the following strengths and weaknesses:

Strengths:

- The project was well prepared, including a complete and clear problem and situation analysis and explanations on strategic relevance;
- The project contains a clear stakeholder analysis and all relevant stakeholders were involved in developing the project;
- The governance and supervision arrangements are clear and appropriate;

- Sustainability, upscaling and replicability are well assessed and explained in the ProDoc.

Weaknesses:

- The log frame and outcomes/outputs are not clearly explained and sometimes inconsistent and therefore the causal pathways not convincingly described;
- There are few references to gender and human rights issues;
- Certain vulnerable groups such as women and children are mentioned in the ProDoc but not clearly identified as separate stakeholder groups.

100. The overall rating of the project design is rated as Satisfactory, with the lowest rating for D) Intended Results and Causality, but ratings for most sections set as Satisfactory and a few as Moderately Satisfactory (see also Annex C - Completed Assessment of the Project Design Quality):

Table 3: Overview table of ratings of project design

	SECTION	RATING (1-6)	WEIGHTING	TOTAL (Rating x Weighting/100)
A	Nature of External Context	5	4	0,2
B	Project Preparation	4	12	0,48
C	Strategic Relevance	5	8	0,4
D	Intended Results and Causality	3	16	0,48
E	Logical Framework and Monitoring	5	8	0,4
F	Governance and Supervision Arrangements	5	4	0,2
G	Partnerships	5	8	0,4
H	Learning, Communication and Outreach	4	4	0,16
I	Financial Planning / Budgeting	5	4	0,2
J	Efficiency	5	8	0,4
K	Risk identification and Social Safeguards	4	8	0,32
L	Sustainability/Replication and Catalytic Effects	5	12	0,6
M	Identified Project Design Weaknesses/Gaps	5	4	0,2
TOTAL SCORE (Sum Totals)				4,44 (S)
1 (Highly Unsatisfactory)		< 1.83		
2 (Unsatisfactory)		>= 1.83 < 2.66		
3 (Moderately Unsatisfactory)		>= 2.66 < 3.5		
4 (Moderately Satisfactory)		>= 3.5 <= 4.33		
5 (Satisfactory)		> 4.33 <= 5.16		
6 (Highly Satisfactory)		> 5.16		

101. Below a textual summary of the quality of the project design per section is provided:

102. **Nature of the External Context: Moderately Satisfactory.** The ProDoc describes the external context the project was operating in. The narrative part of the ProDoc describes in detail each country context, stakeholders involved, their responsibilities and this analysis served as a basis for planning management structures and activities that included the mitigation measures to reduce possible risks.

103. **Project preparation: Moderately satisfactory.** Throughout the document the situation analysis is complete and consistent, the annexes include more detailed information per country. The project document contains a clear stakeholder analysis, however not specifically including gender/minority. The stakeholder consultation processes are well described, including a description of the National Steering Committees (NSCs) set up to support this process. The

project does not contain a clear analysis of gender issues (reference is made to health impacts on women), of human right issues or of issues specifically related to indigenous peoples.

104. **Strategic Relevance: Satisfactory.** The ProDoc refers mostly to UNEP's work under the Stockholm Convention. The ProDoc makes specific reference to GEF's OP#14 (Operational Program) and GEF Strategic Priority POP-3: Demonstration of Innovative and Cost-Effective Technologies and Practices. The project plans to cooperate strongly with the National Malaria Control Programs (NMCPs) in the three countries. The African Stockpiles Program (ASP) implemented by FAO and the Roll Back Malaria (RBM) partnerships are specifically mentioned.
105. **Intended Results and Causality: Moderately unsatisfactory.** At the time when the ProDoc was developed, the ToC was not yet a requirement. The ProDoc does not use consistent definitions of outcomes, results and outputs. Causal pathways can only be derived by combining the description of components in the narrative text and the outcomes in the log frame. There are only few assumptions described in the log frame and drivers are not included. The roles of key stakeholders are described (although not for each causal pathway), gender and minority issues are not included (only reference to children and women is made as a specific group).
106. **Logical Framework and Monitoring: Satisfactory.** Several SMART indicators for outcomes and results have been used. Baseline information related to key performance indicators is included in the ProDoc. Annex K "Monitoring, Progress reporting and Evaluation Plan" contains a clear table with division of responsibilities. A budget for monitoring is included. The Workplan and Timetable of Annex L is realistic, however very concise and no explanations are offered.
107. **Governance and Supervision Arrangements: Satisfactory.** The project governance and supervision model is described and the responsibilities between Implementing and Executing Agency are also defined.
108. **Partnerships: Satisfactory.** The capacities, roles and responsibilities of partners have been assessed well and are described in the ProDoc.
109. **Learning, Communication and Outreach: Moderately satisfactory.** There are plans in place for sharing results and exchange of experience between the three countries and with other international projects and networks. The ProDoc does not contain a clear knowledge management approach. The project has identified means of communication mostly with the local community (but not so with other stakeholders). There is no reference to gender and minority groups. No clear methods for communication with other key stakeholders have been described.
110. **Financial Planning / Budgeting: Satisfactory.** The budget is coherent and explained well in the main text and annexes. There is a clear explanation in the annex of baseline, alternative and incremental costs.
111. **Efficiency: Satisfactory.** The project has been well designed in relation to the duration and levels of funding. There have been three budget-neutral extensions. Each revision allowed for project extensions in order for project objectives to be achieved and for unspent funds to be used during the extension periods. The total budget remained the same.
112. **Risk identification and Social Safeguards: Moderately Satisfactory.** Several risks and assumptions have been identified in the log frame. One negative impact related to malaria reoccurrence is described but overall little attention is paid to environmental, social and economic impacts.

113. **Sustainability / Replication and Catalytic Effects: Satisfactory.** Sustainability and Replicability are clearly described in the ProDoc. An exit strategy is not defined in the ProDoc. The ProDoc presents strategies to promote scaling up and replication. Some socio-political, financial, institutional and environmental sustainability issues are touched upon within the ProDoc, although not specifically listed.

Rating of Quality of Project Design: Satisfactory

5.3 Nature of External Context

114. The nature of the external context is rated as favourable to the project, although it can be said that the political and economic situation in the three countries was not completely stable.
115. Eritrea started to participate only later in the project and there have been delays in implementation of the project (especially in the first three years of the project). There is no evidence however to suggest that these delays were caused solely by external factors, such as politics, economics, security situation or infrastructure weaknesses.
116. In Madagascar it has been suggested that elections had caused delays. Also, for Eritrea it was mentioned that granting permission to travel outside the capital by the relevant authorities was at times a concern. These delays did not have a major impact on implementation of the project; the impact on the project regarding the security context and political context seem small.
117. Infrastructure weaknesses occasionally affected project operations. In Madagascar it was already decided before the project really started that certain districts would not be included as they are too far away and infrastructure generally is in bad condition. It was decided to work only in the Vatomandry district, which is relatively close to the capital. Even so, getting to the Vatomandry district and to the communities in this district was not always easy and did affect the implementation of activities at times. In Ethiopia, only one district was too far away from the capital and at times it was impossible to go there. It was mentioned by several respondents in both Ethiopia and Madagascar as a lesson learned to better consider infrastructure limitations beforehand.
118. In the PIR reports, UNEP and Executing Partner WHO rated the risk factor "Political Stability" as low to medium and generally agreed that there was no significant risk of the political situation affecting implementation of the project in a negative way.

Rating of Nature of External Context: Favourable

5.4 Effectiveness

5.4.1 Delivery of outputs

119. According to progress reports, the Final WHO report, information received during missions to Ethiopia and Madagascar, and interviews with WHO and UNEP staff, the project has successfully delivered most activities and outputs as planned in the ProDoc. It should be noted, however, that Eritrea participated only in the final stage of the project and therefore has not

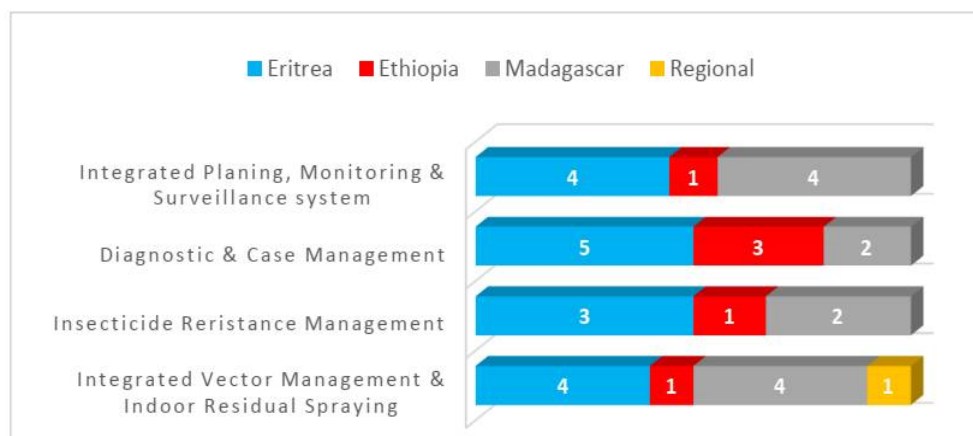
implemented all activities, e.g. they were not able to test alternatives at demonstration sites. They focused instead on improving insecticide resistance management and on capacity building (trainings such as IVM trainings and developing a curriculum for the Asmara university). Even though the persons interviewed about the project in Eritrea all were content with the final results of the activities, the country could not implement the full range of activities as originally planned. As mentioned in the PIR reports, when Eritrea started to participate in the project, a specific plan of action was developed for this country containing only activities related to some outputs which could be expected to be delivered fully by the end of the project.

120. Besides the progress reports and interviews during missions and with UNEP and WHO staff, the Final Project Report developed by WHO provided useful data for checking whether all outputs were delivered. This Final Project Report is partly based on reports prepared by national coordinators. Many of the exact numbers, tables, and figures provided below come from this report. The information provided in the WHO Final Project Report has been verified by the evaluation consultant during interviews, in email communication with other respondents, and by reviewing other project documents such as mid-term evaluations, PIRs, annual reports and minutes of meetings.

5.4.2 Outputs for component 1

121. The ToC has the following outputs for component 1:
- 1.1: National and local abilities in planning, monitoring and evaluation of malaria control are improved;
 - 1.2.: Health centres are better equipped and strengthened for emergency situations;
 - 1.3: Local communities are equipped with insecticides and application apparatus for dealing with emergencies;
 - 1.4.: National referral centres are strengthened to provide technical support;
 - 1.5.: Community awareness is raised on alternative interventions less dependent on DDT;
122. **Output 1.1. National and local abilities in planning, monitoring and evaluation of malaria control are strengthened** was fully implemented. It was mentioned by interviewees in all countries that capacity building and the trainings held were a very important aspect of this project and considered valuable as it truly supported the successful implementation of activities. For all countries capacity trainings on different topics were organised.
123. The picture below gives an overview of the number of training sessions organized per area of competence. In total 2,764 persons were trained in the four areas of competence mentioned in the figure below. According to the last PIR (July 2016-30 June 2017), the planned number of trained people was in total 230, however only specific numbers were mentioned for IVM training, trained personnel on diagnosis and treatment of malaria, and trained entomology technicians and sprayers.

Figure 3: Trainings organized in the three participating countries by area of competence



124. Output 1.2. Health centres are better equipped and strengthened for emergency situations

has been implemented. Diagnostic tools and antimalarial drugs (including rapid diagnostic kits, binoculars, microscopes, motorbikes) were distributed to all health centres in the project districts. According to the Final WHO report, a total of 1,257 learners were trained in malaria diagnosis and treatment. The acquired equipment and knowledge were used to provide immediate and adequate treatment to all malaria patients visiting health centres in the project districts.

125. The final PIR report (July 2016 to June 2017) rated the four indicators mentioned under this output as Satisfactory and Highly Satisfactory (only specific numbers were mentioned for indicator iii and iv in relation to end-of-project targets):

- i. Number of health facilities in the project areas with adequate appropriate anti-malaria drugs (HS) (level at 30 June 2017: all health facilities in all project districts were supplied with adequate anti-malaria drugs and no facilities ran out of stocks);
- ii. Number of malaria cases treated promptly at the community level (S) (level at 30 June 2017: all cases that were reported to health facilities in project areas were treated promptly);
- iii. Number of trained personnel on the proper diagnosis and treatment of malaria (HS) (1143 persons were trained in total, even though 30 per country were planned to be trained);
- iv. Number of health facilities with adequate capacity for prompt diagnosis of malaria (S) (all 9 health facilities and health posts in project districts had adequate capacity for prompt diagnosis of malaria).

126. Output 1.3. Local communities are equipped with insecticides and application apparatus for dealing with emergencies

was also implemented. Stocks of alternative insecticides for emergency preparedness were procured for project districts between 2011 and 2014 (1,329 kg of propoxur to Ethiopia, 1,242 kg of bendiocarb to Madagascar, 2,637 litres and 1,904 litres of pirimiphos-methyl to Madagascar and Ethiopia respectively). Equipment for entomological monitoring and spray operations was also provided (binocular microscopes, dissecting microscopes, Hudson's sprayers, Haemacue and CDC light traps). To enhance human resources capacity, 35 entomologists and 458 spray operators were trained in entomology and IRS best practices (the end-of-project target was a total of 100 trained entomology technicians and sprayers).

127. One of the indicators for this output was "Availability of a contingency stock of DDT at national level that can be rapidly distributed to affected areas during an emergency". This indicator was labelled as not applicable, as in all countries during the project interventions DDT was already not used anymore. For emergency preparedness therefore other insecticides were used.
128. **Output 1.4. National referral centres are strengthened to provide technical support** was also successfully implemented. One entomology referral laboratory was strengthened in Ethiopia and another one in Madagascar. In Eritrea capacity was built in the partner university in Asmara and three insectaries were made functional in 2016. In the three project countries, local health staff in project districts were trained in the use of GIS to collect eco-epidemiological, intervention coverage and health system data.
129. **Output 1.5. Community awareness is raised on alternative inventions less dependent on DDT** was also implemented. In Eritrea an IVM stakeholder consensus and information dissemination workshop was held in 2017 to review the national strategic plan for malaria and to reach consensus on the establishment of viable sectoral collaboration on IVM. The workshop resulted in the development of strategies for collaborative work, on weather forecasting and epidemic preparedness and awareness about the advantages of alternative interventions.
130. In Ethiopia, an anthropological survey was conducted in the project districts from October to December 2016 in order to:
 - i. assess the overall implementation of IEC/ BCC (Information Education Communication / Behavioural Change Communication) interventions for malaria prevention and control in the country, particularly at the project sites;
 - ii. identify best practices, challenges and gaps for future improvements in community awareness interventions using IEC/BCC materials in the project areas.
131. Data were collected through a review and assessment of relevant documentation and from focus group discussions and key informant interviews. Overall, several weaknesses were revealed after an analysis of IEC/BCC for malaria prevention and control in Ethiopia. The main finding was 'the insufficiency of IEC/BCC activities for education and sensitization of schools, public health workers, and communities (including migrant workers and pastoralists) about the benefits of IRS, LLINs and environmental sanitation'. A document with gaps and actions needed to raise community awareness was prepared. Based on this, several actions were taken for the formulation of an IEC/ BCC strategy aimed at raising community awareness, including preparation of new communication materials (audio-visual, posters, brochures). This strategy has not been implemented during the short remaining period of the project, but some materials were prepared and distributed.
132. Major strengths were also identified by the survey and included:
 - i. a supportive environment with strong leadership and commitment to integrate malaria prevention in health communication;
 - ii. a functional technical working group on health education that serves as a platform for coordinating and fostering partnerships, as well as harmonizing and aligning health promotion and communication interventions for disease control, including control of malaria;
 - iii. strong commitment and leadership in engaging and encouraging communities to participate in health promotion and disease (including malaria) prevention at the household level;
 - iv. supportive policies such as expansion of health infrastructure at all levels and promotion of the development of all categories of health care providers in enough

numbers to ensure access and quality of care and enable the attainment of nationally and globally set health promotion targets:

- v. the upward trend in documentation and dissemination of best practices in health promotion and disease (including malaria) prevention;
- vi. the increasing use of ICT and the internet for sharing information and exchanging IEC/BCC messages.

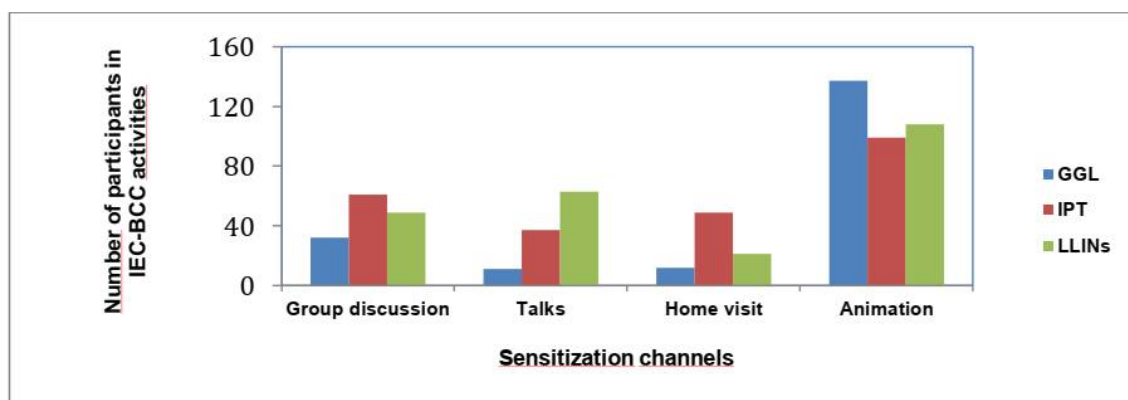
133. In Madagascar, an anthropological study conducted in January 2013 showed that the community was deeply involved in the fight against malaria. The approach to raise their awareness about alternative malaria control methods, therefore, focused on the development of their participatory leadership, given that the community already recognized the effectiveness of the preventive vector control methods available that include IRS and LLINs. Additionally, despite a high rate of illiteracy in some areas, the country does have opportunities to disseminate IEC messages through preschool and school institutions. Community awareness about malaria transmission and locally appropriate preventive and curative methods was raised through IEC and BCC activities including 84 talks, 269 mass sensitization campaigns, 22 group discussions and 17 home visits. The total number of participants in these activities was 7,423; the breakdown by channel of communication is provided in the figure below.

134. In the PIR reports, no specific number of persons to be engaged in awareness raising and IEC/BCC activities were mentioned. The end-of-project targets as stated in the PIRs were:

- i. Public attitudes to alternative interventions assessed and documented and appropriate actions designed;
- ii. Communities acquire knowledge on and use alternative interventions.

135. Outcomes of IEC and BCC activities to raise community awareness about alternative interventions and reduced dependence on DDT in Madagascar, 2013–2015:

Figure 4: Number of participants on IEC / BCC activities by sensitization channel in Madagascar



136. All interviewed people in Madagascar in the Vatomandry district emphasized the importance of the community awareness and sensibilization activities. During testing of alternative interventions, this aspect was found to be vital for the successful result of the alternative methodologies. It should be noted that during the visit of the evaluation consultant to Vatomandry, people who were interviewed mentioned that nowadays awareness raising takes place at health centres, where women take their children for vaccinations, and at schools, but no larger scale awareness raising and community sensibilization is taking place. According to people interviewed at local communities, malaria incidence is rising again (no actual numbers of malaria incidence were provided).

5.4.3 Outputs for component 2:

137. Component 2 included the following outputs:
 - 2.1. Integrated Malaria Monitoring and Surveillance System is launched;
 - 2.2. Locally appropriate alternative interventions are selected;
 - 2.3. Community attitudes to alternative interventions are evaluated;
 - 2.4. Environmental and health impact of possible alternatives is assessed.

138. **Output 2.1. Integrated Malaria Monitoring and Surveillance System is launched** was changed during project implementation. It proved to be too complicated to develop a standalone malaria surveillance system in both Ethiopia and Madagascar, therefore the existing systems at the Ministry of Health were used. Epidemiological data were systematically managed in all project districts. At the end of the project up to date parasitological and entomological data including pesticide resistance was gathered in all districts. Also, the implementation and impact of all interventions had been monitored and evaluated and local capacity was strengthened.

139. In conclusion; when it became clear that the Integrated Malaria Monitoring and Surveillance System would be too complex to be developed, the project contributed to the gathering and reporting of data using existing systems of the NMCP departments. All activities under this output (e.g. weekly notifications (in Madagascar monthly) of malaria cases were sent to the NCMP and analysis of these data and reports were sent on a regular basis to national and district offices) were implemented. Also, the two indicators for this output - (i.) improved epidemiological data collection, collation and analysis, and ii.) proper planning, implementation and evaluation of malaria control including enhanced vector control - were fully achieved at the end of the project.

140. **Output 2.2. Locally appropriate alternative interventions are selected** was delivered in Ethiopia and Madagascar. Ethiopia implemented one cycle and Madagascar implemented three cycles of alternative approaches. The alternative interventions that were implemented were assessed and documented. It can be noted that it could have been expected that the project would have implemented more than one round of alternative approaches, as was the case in Ethiopia, in order to substantiate the results of these interventions.

141. In Madagascar three different combinations of alternative interventions were assessed:
 - i. LLINs alone,
 - ii. LLINs in combination with bendiocarb and pirimiphos-methyl IRS, and
 - iii. LLINs in combination with community engagement and participation.

142. In Ethiopia, pirimiphos-methyl was the alternative insecticide selected for use during alternative interventions. Two groups of villages were established: Cluster I villages comprising four localities where propoxur was used for IRS and Cluster II villages, also comprising 4 localities, where pirimiphos-methyl was used

143. As mentioned previously, Eritrea started to participate only late in the project and therefore they were not able to test alternatives due to a lack of time. Instead the country focused on capacity building (outcome 1) and on insecticide resistance management (outcome 3).

144. The following table shows an overview of malaria vector control interventions in project countries with emphasis on DDT utilization before/in 2009 (official start of the project) and 2017 (end of the project). It should be noted that all countries stopped using DDT before the

alternatives were tested and before activities in the project started to be implemented (during the first years of the project there was little progress).

Figure 5: Overview of malaria vector control interventions (from WHO Final Project Report)

Country (District)	Baseline vector control interventions in 2009	End-of-project target	Level in 2017 ('Highly Satisfactory')
Ethiopia (Adama, Sodo, Kola Tembien, Tach Armachio)	<ul style="list-style-type: none"> High LLIN coverage DDT IRS (about 800,000 DDT kg/year) 	60% reduction in DDT use	<ul style="list-style-type: none"> High LLIN coverage continued Pirimiphos-methyl IRS in project districts (propoxur in others) No tendency towards DDT reintroduction DDT still listed as insecticide for public health
Madagascar (Vatomandry, Atsinanana)	<ul style="list-style-type: none"> High LLIN coverage DDT not used for more than 10 years DDT listed as possible insecticide to use 		<ul style="list-style-type: none"> High LLIN coverage continued Pirimiphos-methyl IRS in project districts (carbamate in others) No tendency towards DDT reintroduction DDT still listed as insecticide for public health
Eritrea (Anseba, Debub, Gash-Barka and Northern Red Sea)	<ul style="list-style-type: none"> High LLIN coverage DDT IRS in selected districts (13 002.35 kg) Targeted larval control 		<ul style="list-style-type: none"> High LLIN coverage continued Bendiocarb & lambda cyhalothrin IRS DDT not used since 2012 No possibility of DDT reintroduction DDT still listed as insecticide for public health Larval control (temephos for larviciding)

145. **Output 2.3. Community attitudes to alternative interventions are evaluated** was done in Ethiopia and Madagascar. This output is connected to **Output 1.5.** (Community awareness is raised on alternative inventions less dependent on DDT). In Madagascar a newly applied IEC / BCC strategy was developed and implemented and in Ethiopia a strategy was designed and partly implemented (in Ethiopia only towards the end of the project).

146. **Output 2.4 Environmental and health impact of alternatives is assessed** was delivered in Ethiopia and Madagascar. In both countries the impact of alternatives was assessed, and the outcomes were reported and shared with stakeholders. As is mentioned in the FAO Final Report; as a result of the alternative interventions and improved capacities for case management and vector control, a decrease in malaria incidence was recorded in the project district within all types of combined interventions.

5.4.4 Outputs for component 3:

147. The following outputs were defined for component 3:

- 3.1.: Abilities of managing DDT and other pesticides in an environmentally sound manner are strengthened;
- 3.2.: Systems for detecting insecticide resistance and management of resistance are created;

148. **Output 3.1. Abilities of managing DDT and other pesticides in an environmentally sound manner are strengthened** was mostly delivered. In the original project proposal, it was planned that storage facilities would be refurbished or constructed. Due to limited budgets and circumstances (storage facilities are often privately owned), this activity was not implemented. However, spray operators were trained on IRS and pesticide management. In total, 458 persons were trained on IRS (the end-of-project target was 100 trained persons, including sprayers and entomology technicians.) These trainees included public health officers, laboratory technicians, insectary attendants, local health assistants, spray supervisors and spray operators. These persons were also trained in key vector control interventions such as IRS and LLINS and the training focused also on practical aspects of IRS including insecticide deposits, under-spraying, over-spraying, handling of spray equipment, safe transport and storage, and cleaning and maintenance of spray equipment.

149. **Output 3.2. Systems for detecting insecticide resistance and management of resistance are created** was delivered in all three countries. For this output the following four activities had been planned:

- Train vector control teams in carrying out susceptibility tests;
- Provide susceptibility test kits;
- Determine susceptibility status of identified vector species;
- Determination complex species and resistance mechanism.

150. All these activities were implemented, except for the last activity which was not fully implemented in Madagascar. In all three countries, however, insecticide resistance management plans were produced. For example, in Ethiopia, because of resistance to malaria vectors to DDT in 2009, and subsequent resistance to deltamethrin in 2012, propoxur and pirimiphos-methyl 300 CS were selected for IRS operations.

151. For Eritrea, next to capacity building under outcome 1, this was the main output on which Eritrea focused their efforts.

5.4.5 Outputs for component 4:

152. The following output was established for component 4:

- 4.1: Transboundary information exchange and technical support to countries achieved;

153. **Output 4.1. Transboundary information exchange and technical support to countries achieved** is fully delivered for Madagascar and Ethiopia since the start of the project. The Regional Project Steering Committees have met approximately once per year to discuss proposals of the country to the project, discuss progress in each country and where necessary adjust work plans and budgets. As Eritrea joined only later in the project, they also started to participate later in the Regional Project Steering Committees.

154. Most of the interviewed persons mentioned that the Regional Project Steering Committee provided much valued input and technical expertise to the project and activities in each country. Such a structure is considered to be of high importance in regional projects like this, as it provided the opportunity to share experiences. It was also suggested that sometimes it can also be important to include persons working in the field who are implementing the project activities e.g. at the demonstration sites. The Regional Steering Committees also provided the opportunity to share experiences from other projects, such as the similar WHO EMRO (Regional Office for the Eastern Mediterranean) project.

155. The Executing Agency WHO regional Office for Africa and the WHO country offices actively provided technical and other support by participation in activities in each country and in the National Steering Committees. Field missions to each country were undertaken regularly by the Regional Project Coordinator, as well as national project coordinators.

Rating of Delivery of Outputs: Satisfactory

5.5 Achievement of Outcomes

156. The project was evaluated against the direct outcomes, assumptions and drivers in the reconstructed Theory of Change and rated as Moderately Satisfactory. The achievement of each outcome will be discussed below.

157. The outcomes as mentioned in the ToC are the following:

- **Outcome 1:** Capacity at national, provincial, district and community levels to undertake planning and implementation of alternative malaria prevention measures to reduce dependence on DDT is built and strengthened;
- **Outcome 2:** Locally applicable alternatives to malaria vector control are identified and tested (with surveillance provided by integrated malaria information system);
- **Outcome 3:** Management of pesticides in an environmentally sound manner improved in Eritrea, Ethiopia and Madagascar.

158. The following assumptions and drivers were formulated from output to outcome and will be discussed below:

Drivers:

- Robust and participatory mechanisms for (transboundary) information exchange and technical support
- All stakeholders are aware of the available alternatives, their efficiency and sustainability of application and health risks caused from DDT;
- Health care workers, farmers and local communities participate actively in the development of alternatives;

Assumptions:

- National and district governments are ready to participate;
- Adequate compliance assurance and political will in each country;
- Methodologies and technologies for alternatives are appropriate to local conditions

5.5.1 Achievement of Outcome 1

159. **Outcome 1. Capacity at national, provincial, district and community levels to undertake planning and implementation of alternative malaria prevention measures to reduce dependence on DDT is built and strengthened** has been fully achieved. As explained in chapter 6.4, the outputs leading to this outcome have all been delivered; in each country many trainings were organized, health centres and local communities were better equipped to deal with emergency situations, national referral centres were strengthened and community awareness raised. The combined efforts undertaken to train people in a diverse series of trainings, and to provide health centres and local communities with appropriate equipment, as well as to raise awareness and understanding among local communities, has resulted in the stakeholders being able to implement successfully locally appropriate alternatives in the project districts. During interviews, respondents confirmed that capacity in their countries was strengthened during the project, which was important for identifying and testing of alternatives and to manage insecticides in a more sound manner.

160. The improved capacity related to awareness raising finally resulted in alternative interventions having been implemented more successfully. Many persons who were interviewed clearly mentioned that awareness raising and sharing of information on the use of alternative interventions was vital to them and to successful application of alternatives.

161. Some interviewees also stated that it is important that trainings are repeated and updated on a regular basis; there is generally a high staff turn-over and new information, technologies and methods become available. Capacity during the project was certainly strengthened. However, for this capacity to remain sustainable, it was recommended by these interviewees to repeat capacity building activities regularly and to make sure capacity building and strengthening is also continued after project end by including these aspects in project exit strategies.

5.5.2 Achievement of Outcome 2

162. **Outcome 2. Locally applicable alternatives to malaria vector control are identified and tested (with surveillance provided by integrated malaria information system)** was partly achieved. Both Madagascar and Ethiopia collected a substantial amount of baseline data and implemented alternative methodologies based on these data in their countries, meaning also that the alternatives tested were locally appropriate and the alternatives were implemented based on evidence gathered at the start of the project. Ethiopia tested one cycle of alternatives and Madagascar tested three cycle of alternatives.
163. Eritrea was involved later in the project and did not focus on testing of alternatives at demonstration sites, mainly due to time limits. The activities to be implemented in Eritrea were agreed by WHO and UNEP and an action plan prepared. These activities (related to capacity building and insecticide resistance management) were successfully achieved. The testing of alternatives however was of major importance for the higher-level results of this project to be achieved.
164. Even though locally appropriate alternatives were identified and (partly) tested, no cost calculations of implementing these alternatives were made. This was not specifically mentioned when formulating this outcome in the ProDoc, however it was part of the objectives of the project and it would have improved the results of the project if the project could not only have demonstrated that appropriate alternatives were available, but also in how far these alternatives were cost-effective.

5.5.3 Achievement of Outcome 3

165. **Outcome 3. Management of pesticides in an environmentally sound manner improved in Eritrea, Ethiopia and Madagascar** was achieved.
166. During the lifetime of this project DDT has not been used and as mentioned above under achievement of outputs for component 3, no storage facilities were refurbished or constructed. It was agreed upon between UNEP and WHO that the indicators referring to storage are not applicable. However, abilities to manage DDT and other pesticides and insecticides in a sound way were improved; as mentioned under 6.4.4, training on safe storage of insecticides and handling of IRS spray equipment were organized and other aspects were trained, such as maintenance of equipment, handling of spray equipment, safe transport and cleaning and maintenance of spray equipment. The capacity built during these trainings was used in practice successfully during spray operations in the project districts and in this way abilities of managing DDT and other pesticides for malaria control in an environmentally sound manner were improved.
167. Systems for detecting insecticide resistance and management of resistance were created as explained above under achievement of outputs for component 3. Vector control teams were trained in carrying out susceptibility tests and in this way susceptibility of identified vector species were determined.

5.5.4 Drivers and assumptions

168. All drivers and assumptions for the causal pathway from outputs to outcomes held (please see also below under chapter 6.6 and table 4). Health care workers were better aware of alternatives and how to support the implementation of alternative interventions after they received training, and the health centres were better equipped to support the implementation of alternative methods. The local communities, especially in Madagascar, were very motivated to support the application of alternative interventions and became actively involved in developing alternatives. Active mechanisms for technology exchange were set up, such as the Regional Steering Committee. WHO national coordinators and the WHO Regional Office for Africa also supported the Ministries of Health and the project district with technological expertise and implementation of alternatives. The ministry of Health and district authorities were keen to support the project and the methodologies selected were appropriate to local conditions and could therefore be implemented successfully.

Rating of Achievement of Outcomes: Moderately Satisfactory

5.6 Likelihood of Impact

169. This evaluation assessed the likelihood of the intended, positive impact becoming a reality. The likelihood of impact is assessed based on the reconstructed ToC and an analysis is done to determine whether assumptions and drivers from outputs to impact hold, and whether outputs, outcomes, intermediate states and impact were achieved/are likely to be achieved in future.

170. Based on this, the achievement of impact is assessed as Moderately Likely, even though intermediate state 1 and intermediate state 2 have not been achieved two years after the project activities were finalized. Table 5 below summarises the analysis of the likelihood of Impact.

171. The following assumptions need to hold in order for the intermediate states and the impact to be achieved:

- National and district governments are ready to participate (in development and implementation of alternative interventions);
- There is adequate compliance assurance and political will in each country;
- Methodologies and technologies of alternative interventions are appropriate to local conditions.

172. And the drivers below need to hold for the intermediate states and impact to be achieved:

- Robust and participatory mechanisms for (transboundary) information exchange and technical support are established and operational;
- All stakeholders are aware of the available alternatives, their efficiency and sustainability of application and health risks caused from DDT;
- Health care workers, farmers and local communities participate actively in the development (and upscaling) of alternatives;
- There is strong evidence that alternatives are effective (and this effectively communicated to the intended beneficiaries)

Table 4: Analysis of Likelihood of Impact

#	Criteria	Findings
1	Drivers to support transition from outputs to direct	All 3 drivers were in place: There was a participatory and robust mechanism for transboundary information exchange. Several

#	Criteria	Findings
	outcomes are partially in place/in place	interviewees agreed that the Regional Steering Committee was of added value to the project. All stakeholders were aware of the alternatives, and health care workers and local communities were strongly involved in the development of alternatives.
2	Assumptions for the change process from outputs to direct outcomes hold/ partially hold/ do not hold	All 3 assumptions held, the governments (Ministries of Health) participated actively and were interested to achieve results, and WHO made sure that methodologies for alternatives were appropriate to local conditions.
3	Proportion of direct outcomes fully or partially achieved	Not all direct outcomes were fully achieved, especially with regard to outcome 2. In Eritrea, no alternatives were tested due to the limited time the country participated in the project. In Ethiopia, only one cycle of testing had taken place (more cycles would have substantiated the results of the alternatives tested).
4	Outcomes to attain intermediate states / impact (the most important, others)	The most important and relevant outcomes were partially achieved: capacity in all three countries were strengthened and alternatives were tested in Ethiopia and Madagascar. In all three countries methods for detecting resistance were tested.
5	Level of direct outcome achievement (full, partial)	As discussed above in 6.5.1 to 6.5.3, the most important outcomes were mostly achieved (except for Eritrea), but not all outcomes were achieved.
6	Drivers to support transition from direct outcome(s) to intermediate states are not in place/ in place/ partially in place	Not all drivers are in place, and this is also partially why upscaling of alternatives to other parts of the countries has not taken place. It can be expected that information exchange and technical support would still be available but now, after the project not all stakeholders are aware of alternatives and their efficiency. Most drivers were in place when outcomes were achieved but it seems no momentum was created immediately after the project ended and as time passes it will become more difficult to achieve IS 1.
7	Assumptions for the change process from direct outcomes to intermediate states hold/ partially hold/ do not hold	Not all assumptions hold; it is not clear if national and district governments are fully ready to participate or lack of funding is the main reason why upscaling of alternatives has not taken place.
8	Proportion of Intermediate states achieved (none, some, all)	Currently, more than two years after the final activities of the project took place, none of the intermediate states were achieved. It can be argued that intermediate state 2 (reduction of DDT use) has been achieved, however this can likely not be attributed to "the strengthening of malaria vector control practices in Eritrea, Ethiopia and Madagascar" as is mentioned in the second part of the intermediate state 2 statement. DDT was already not used anymore prior to implementation of project activities.

#	Criteria	Findings
9	Drivers to support transition from intermediate states to impact are not in place/ in place/ partially in place	More than two years after project activities were implemented, the evaluation found that the drivers from intermediate state to impact are not in place.
10	Assumptions for the change process from intermediate states to impact hold, partially hold, do not hold	More than two years after project activities were implemented, the evaluation found that the assumptions from intermediate state to impact are not in place.
	OVERALL RATING	Moderately Likely

Rating of Likelihood of Impact: Moderately Likely

Overall Rating of Effectiveness: Moderately Satisfactory

5.7 Financial Management

173. The total approved budget for the project was USD 7,125,246 (see table 1, chapter 4.6), including the PDF-B phase. The project budget included USD 3,460,296 in cash by the GEF Trust Fund and USD 500,000 in cash by the Executing Agency WHO. The budget included also the following in-kind contributions: USD 1,055,525 from the three participating countries, USD 55,000 from SIMA/ICIPE, USD 300,000 from the Roll Back Malaria Initiative and USD 1,056,425 from WHO.
174. The budget for the PDF-B phases was USD 384,000 cash from GEF and 314,000 in kind co-financing.
175. Below is a table presenting the overview of total project budget, actual project expenditures, unspent balance and expenditure ratio (actual/planned). The total project budget was USD 3,460,296, and this is the same as the final project expenditures. Therefore, the overall expenditure ratio is 1.

Table 5: Financial overview table

Overview of project budget, expenditures, unspent balance, expenditure ratio in USD:

PERSONNEL COMPONENT	Total project budget in USD	Actual expenses in USD	Unspent balance in USD	Expenditure ratio
Project personnel				
1 Regional coordinator				
2 National coordinators	143.414,00	141.149,54	2.264,46	0,98

PERSONNEL COMPONENT	Total project budget in USD	Actual expenses in USD	Unspent balance in USD	Expenditure ratio
5 District coordinators	35.455,00	22.713,96	12.741,04	0,64
10 Community agent/HEWs	21.380,00	5.787,48	15.592,52	0,27
sub-total	200.249,00	169.650,98	30.598,02	0,85
Consultants				
International consultants	97.527,00	168.354,00	-70.827,00	1,73
National Consultants	41.286,00	39.315,57	1.970,43	0,95
sub-total	138.813,00	207.669,57	-68.856,57	1,50
Travel on Official business				
National coordinators travel and DSA	48.312,00	46.542,30	1.769,70	0,96
Regional coordinator travel and DSA	99.685,00	93.072,00	6.613,00	0,93
sub-total	147.997,00	139.614,30	8.382,70	0,94
Component total	487.059,00	516.934,85	29.875,85	1,06
SUBCONTRACTS				
WHO	246.431,00	259.498,00	-13.067,00	1,05
subtotal	246.431,00	259.498,00	-13.067,00	1,05
Sub-contracts (MoU's/LA's for non-profit supporting organizations)				
Strengthening health centres for malaria treatment	221.311,00	229.762,00	-8.451,00	1,04
Insecticide and application equipment	226.845,00	238.688,00	-11.843,00	1,05
Enhancing of technical capacity of national referral centres	65.439,00	76.502,02	-11.063,02	1,17
Sub-Total	513.595,00	544.952,02	-31.357,02	1,06
Other Sub-contracts				
Provision of assistance for integrated malaria monitoring and surveillance	534.046,00	502.902,00	31.144,00	0,94
Alternative interventions and strategies	694.164,00	694.163,79	0,21	1,00
DDT storage and resistance management	70.013,00	69.427,00	586,00	0,99
Environmental Assessment of Alternatives	38.027,00	34.333,00	3.694,00	0,90
Awareness and Community Education	69.175,00	56.702,00	12.473,00	0,82
Sub-Total	1.405.425,00	1.357.527,79	47.897,21	0,97
Component total	2.165.451,00	2.161.977,81	3.473,19	1,00
TRAINING COMPONENT				
Group Training				
IVM training workshop	170.274,00	203.130,00	-32.856,00	1,19
sub-total	170.274,00	203.130,00	-32.856,00	1,19
Meetings/conferences				
Project Management Meetings	419.624,00	479.674,26	-60.050,26	1,14
sub-total	419.624,00	479.674,26	-60.050,26	1,14

PERSONNEL COMPONENT	Total project budget in USD	Actual expenses in USD	Unspent balance in USD	Expenditure ratio
Component total	589.898,00	682.804,26	92.906,26	1,16
EQUIPMENT COMPONENT				
Expendable Equipment				
Office supplies	9.190,00	9.190,00	0,00	1,00
Library acquisitions				
Computer Software	2.000,00	0,00	2.000,00	0,00
sub-total	11.190,00	9.190,00	2.000,00	0,82
Non-expendable Equipment				
Computers and Printers	10.000,00	0,00	10.000,00	0,00
Office Equipment Scanner, etc				
sub-total	10.000,00	0,00	10.000,00	0,00
Component total	21.190,00	9.190,00	12.000,00	0,43
Operation and maintenance of equip.				
Rental & maint. of computer equip.	30.000,00	32.571,00	-2.571,00	1,09
Rental & maint. of copiers				
Repair & maint. of vehicles & insurance, fuel	12.397,00	11.198,66	1.198,34	0,90
Rental of car	33.151,00	32.317,09	833,91	0,97
Rental of meeting rooms & equip.				
Sub-Total	75.548,00	76.086,75	76.086,75	1,01
M & T Evaluation			0,00	
Mid-Term Evaluation	10.000,00	13.302,00	-3.302,00	1,33
Baseline and awareness evaluation				
Alternative impact assessment	71.150,00	0,00	71.150,00	0,00
Terminal evaluation	40.000,00	0,00	40.000,00	0,00
sub-total	121.150,00	13.302,00	107.848,00	0,11
Component total	196.698,00	89.388,75	107.309,25	0,45
TOTAL	3.460.296	3.460.296	0	1,00

176. The co-financing provided by the project is USD 3,046,530 in-kind and USD 511,033 in cash. In-kind co-finance was provided by WHO Regional Office in Africa, the Ministries of Health in each country, by the RBM and by ICEPE/SIMA. Cash co-finance was provided by WHO Regional Office for Africa. The actual co-finance is approximately USD 11,000 higher than planned and the in-kind co-finance is almost USD 590,000 more than anticipated.

Table 6: Overview of co-financing

Co-financing (Type/Source)	Government		WHO		RBM		ICEPE/SIMA		Total		Disbursed
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
Grants											
Loans											
Credits											

Equity Investments											
In-kind support	1.055.525	1.077.554	1.056.425	1.613.980	300.000	300.000	55.000	54.996	2.466.650	3.046.530	
Cash			500.000	511.033					500.000	511.033	
TOTALS	1.055.525	1.077.554	1.556.425	2.125.513	300.000	300.000	55.000	54.996	2.966.950	3.557.563	3.557.563

5.7.1 Completeness of Financial Information

177. During the evaluation the Task Manager, Fund Management Officer and WHO Regional Office for Africa staff provided most project financial documents needed to assess financial management of the project. All expense reports and co-financing reports were provided. The co-financing report for 2017 with a final overview of co-financing was made available to the evaluation very late during the main evaluation phase. This report showed that in-kind funding realised was approximately USD 590,000 higher than the planned in-kind funding, and the cash co-funding around USD 11,000 higher than anticipated.
178. The co-financing report showed several calculation errors. Also, there were inconsistencies in the cumulative totals between the expense reports provided by WHO and the financial analysis report as kept by the FMO. After discussion with the Task Manager, WHO was asked to correct inconsistencies and provide a final statement of accounts and final co-financing report.
179. Although the expense reports and co-financing reports were provided, the final reports by WHO had never been prepared. There were no consolidated final numbers and it has taken time for the evaluator to be able to assess the reports and fill in the requested tables in this report. Corrected and updated expense reports and co-finance reports were presented to the evaluation only towards the end of the main evaluation phase.
180. Please see table 8 "Ratings of financial management components" below for a detailed overview of completeness of financial information, as well as of communication between finance and project management staff.

Rating of Completeness of Financial Information: Moderately Satisfactory

5.7.2 Communication between Finance and Project Management Staff

181. Interviews with the Task Manager, Fund Management Officer and WHO regional coordinator suggest that communication on financial issues during the second part of the project was generally good. Even so, it was regularly necessary to send repeated requests to receive the quarterly financial reports and co-financing reports from the Executing Agency.
182. When assessing the quarterly expense reports, the co-financing reports and the Financial Analysis report of the project, several inconsistencies and calculation errors were found. This indicates that there has not always been clear communication between the Implementing and Executing Agency.
183. Two years after the project activities were finalised, the final amount due to WHO regional Office for Africa has not been transferred, as WHO never submitted their final report, final statement of accounts, final co-financing report and organization's audit reports. This may be an indication of a lack of communication between WHO Regional Office for Africa and UNEP and a lack of responsiveness from WHO to submit the final reports and close the project.

Rating of Communication between Finance and Project Management Staff: Moderately Satisfactory

Table 7: Ratings of financial management components

Financial Management components	Rating	Evidence/Comments
1. Completeness of project financial information	MS	
Provision of key documents to the evaluator (based on the responses to A-G below)		
A. Co-financing and Project Cost's tables at design (by budget lines)	Yes	The project budget was included in the ProDoc.
B. Revisions to the budget	Yes	All revisions were received from the regional project coordinator of WHO Regional Office for Africa, as well as the Fund Management Officer.
C. All relevant project legal agreements (e.g. SSFA, PCA, ICA)	Yes	The main relevant agreement between UNEP and WHO Regional Office for Africa was already received at the very start of the evaluation.
D. Proof of fund transfers	Yes	These were provided by the Fund Management Officer during the main phase of the evaluation.
E. Proof of co-financing (cash and in-kind)	Yes	Reports were received from both the Task Manager and the Fund Management Officer. However, there were errors in the reports, but these were corrected and made available to the evaluation consultant at the end of the evaluation.
F. A summary report on the project's expenditures during the life of the project (by budget lines, project components and/or annual level)	Yes	A financial analysis report was sent by the Fund Management Officer during the main phase of the evaluation. Also, a final overview of the project's expenditures was included in the last quarterly expenditure report as prepared by WHO. However, there were inconsistencies between the financial analysis and last quarterly expenditure report. The final expenditure report was updated and corrected by WHO at the end of the evaluation.
G. Copies of any completed audits and management responses (where applicable)	N/A	No project audit is necessary as is laid down in the agreement between UNEP and WHO. The organisation's audit should have been sent to UNEP though and this had not been done, but it was sent during the main evaluation phase.
H. Any other financial information that was required for this project (list):	No	
Any gaps in terms of financial information that could be indicative of shortcomings in the project's	Yes	There were calculation errors in the co-financing report, and there were inconsistencies between the financial analysis report and WHO's overview of

Financial Management components	Rating	Evidence/Comments
compliance with the UNEP or donor rules		total expenditures in the last quarterly expenditure report. The final reports by WHO were not prepared and there were no consolidated final numbers. This was corrected towards the end of the main evaluation report and a final co-finance and expenditure report were made available to the evaluation.
Project Manager, Task Manager and Fund Management Officer responsiveness to financial requests during the evaluation process	MU	It took repeated efforts to receive all financial documentation, both from UNEP as well as from WHO Regional Office for Africa.
2. Communication between finance and project management staff	MS	
Project Manager and/or Task Manager's level of awareness of the project's financial status	MU	Only during the evaluation, it became clear that WHO had never provided a final report and statement of accounts, and therefore never received the final payment.
Fund Management Officer's knowledge of project progress/status when disbursements are done.	MS	The Fund Management Officer seemed to be aware of general project status when disbursements were done and presented the disbursement statements timely to the evaluation.
Level of addressing and resolving financial management issues among Fund Management Officer and Project Manager/Task Manager.	MS	During the project, it seems that no large financial management issues came to the fore (although sometimes repeated requests needed to be sent to the Executing Agency to receive reports). However, during the evaluation, it turned out that the project had not been financially closed yet. WHO prepared final reports only during the main phase of the evaluation.
Contact/communication between by Fund Management Officer, Project Manager/Task Manager during the preparation of financial and progress reports.	MS	Communication between the Fund Management Officer, the Task Manager and WHO's Regional Project Coordinator in general terms went well. It was, however, mentioned that regularly repeated requests needed to be sent to the Executing Agency to receive the quarterly reports.
Overall rating	MS	

Overall Rating of Financial Management: Moderately Satisfactory

5.8 Efficiency

184. The project had three no cost extensions. The project was originally planned to be implemented from 31 March 2009 – 31 October 2013. The first amendment allowed the project duration to be extended until December 2015. In the second revision, the duration was extended until December 2016 and within the last amendment the project was extended until 30 September 2018. The last activities, however, took place in May 2017 when a final workshop was organized.
185. In the first 2.5 to 3 years of the project, little progress was made. Ratings for project progress in the PIRs in the first years were rated as unsatisfactory. The project did not really start until several years after the official start of the project. Several reasons for project delays have been mentioned by interviewees. First of all, it was the first time for UNEP and WHO Regional Office for Africa to work on such a regional project and expectations and (limits of) responsibilities were not always discussed beforehand, which may have led to misunderstandings on both sides. Also, for a while, there was no Task Manager assigned at UNEP to supervise the project. Next to that, it was mentioned that protracted procedures and bureaucracy at WHO as well as at Ministries have caused delays in timely financial transfers, which in turn caused delays in implementation of project activities. As the period for implementation of activities regularly depended on the period of the malaria seasons, this at times caused great concerns. In the last years of the project these difficulties were mostly overcome, and the management structure worked well and more effectively according to the people consulted.
186. In the last three years of the project a lot of progress was made, and the most important outputs were achieved. Eritrea mostly participated only in the last year of the project and focused their efforts on capacity building and management of insecticide resistance. Eritrea did not test alternatives during consecutive malaria seasons. In some cases, activities were only implemented very late in the project, which would ideally have been implemented earlier before other activities had taken place, such as the IEC/BCC activities in Ethiopia. A strategy document with identification of gaps and actions needed to raise community awareness was prepared. This strategy could not be fully implemented during the short remaining period of the project, but some materials were prepared and distributed.
187. Although not all outputs were achieved, the full original budget of USD 3,420,296.00 was spent. This indicates that there may have been a lack of cost-effectiveness in organizing activities and achieving project outputs. However, it has also been suggested by several people consulted that the original budget would not have been enough for effective and prolonged testing of alternatives and for gathering enough scientific and evidence-based information.
188. One of the aims of the project was to demonstrate the cost-effectiveness of alternatives to DDT for malaria vector control. However, these calculations were not made. This suggests that the project staff have not considered cost-effectiveness during the implementation of project activities.
189. Regarding UNEP's footprint, the following can be said: UNEP and WHO Regional Office for Africa made use of the existing NMCP in the countries and other malaria vector control activities through the Ministries of Health. During the project there was no unnecessary duplication of resources. The Project tried to implement efficiency measures by combining necessary project travel for different activities to avoid excessive travel and planning meetings back to back. It has been suggested that infrastructure contexts could have been considered better in advance when selecting demonstration districts. In Ethiopia there were extra travel costs and long travel, which might have been prevented if a more clear selection of districts

had taken place and districts within reasonable travel distance were selected. In Madagascar because of this, already at the start some districts were excluded from the project.

190. Even though there were delays during the first years of the project and it has taken time for WHO and UNEP to find a common understanding of how the project can be implemented, and even though cost-effectiveness has not been considered, during the last years the most important outputs and direct outcomes were achieved. However, efficiency can only be rated as unsatisfactory, as the first years hardly any progress was made.

Rating of Efficiency: Unsatisfactory

5.9 Monitoring and reporting

191. Assessment of Monitoring and Reporting is divided into the following subcategories:

- Monitoring Design and Budgeting;
- Monitoring of project implementation;
- Project Monitoring.

5.9.1 Monitoring Design and Budgeting

192. The ProDoc contained a Monitoring, Progress Reporting and Evaluation Plan, which included a table with an overview of Monitoring, Reporting and Evaluation Responsibilities, a table summarizing the key content required in the progress and financial reports, and a table with a list of key performance indicators. The indicators mentioned in the ProDoc were mostly generally formulated and not SMART. The budget in the ProDoc contained only a general budget line for mid-term and terminal evaluations. No budget for data collection in connection with monitoring was foreseen in the project. Monitoring was carried out as part of the daily project management by the Executing Agency. For monitoring of progress and financial reports responsible persons were assigned, however no persons were assigned for monitoring progress against key performance indicators.
193. The monitoring tools mentioned in the Monitoring, Progress Reporting and Evaluation Plan were also assessed by the evaluation consultant, including PIRs, progress reports of countries, mid-term evaluations (for Ethiopia and Madagascar), disbursement statements reports, financial quarterly expenditure reports, and also reports not specifically mentioned in the Monitoring, Progress Reporting and Evaluation Plan, such as reports of planning meetings and Regional Project Steering Committees.
194. A monitoring plan to track progress against indicators towards achievement of the project outputs and direct outcomes was part of the ProDoc. More specific and therefore more SMART indicators were established and reported upon in the annual PIRs. However, not all indicators and end-of-project targets were SMART, they were not all included in initial PIRs and some have changed in later PIRs. The ratings for level of achievement of end-of-project targets were not always clearly and adequately explained in the PIRs.
195. The Monitoring, Progress Reporting and Evaluation Plan was not disaggregated by relevant stakeholders and gender and minority/disadvantaged groups were not mentioned in the ProDoc. However, at the time of preparation of the ProDoc this was not a requirement.

Rating of Monitoring Design and Budgeting: Moderately Satisfactory

5.9.2 Monitoring of Project Implementation

196. Monitoring of project implementation was part of the day to day activities of the Executing Agency. Besides the reports prepared to monitor progress of activities, the following main M&E activities were completed during the project:
- Ethiopia and Madagascar conducted National Project Steering Committee meetings each year where project progress was assessed, and national stakeholders were involved in monitoring of the project;
 - Seven Regional Project Steering Committees meetings were conducted, during which implementation of project activities and documentation of data were reviewed;
 - National project coordinators carried out numerous field visits;
 - The regional project coordinator conducted a total of 5 field visits to Ethiopia and Madagascar.
197. Two mid-term reviews were carried out and mid-term reports were prepared by independent consultants; one for Ethiopia and one for Madagascar (both reports are from March 2015). No mid-term review was conducted in Eritrea as this country was only involved in the last stages of the project. The mid-term reports included an overview of activities carried out and presented findings and recommendations to improve project implementation and progress.
198. All data and evidence were collected by WHO Regional Office for Africa and have been integrated each year into the PIRs. In the PIRs project status was briefly described, progress of outputs including SMART indicators were explained and assessment of progress status per activity in percentages were included. The level of achievement regarding end-of-project targets was not always clearly explained.

Rating of Monitoring of Project Implementation: Satisfactory

5.9.3 Project reporting

199. Substantial documentation of project progress was available for the evaluation. The PIRs, especially those of later years, generally documented progress well (project status, progress per output using SMART indicators and implementation status in percentages for activities) and were mostly in line with other reporting, such as the reports of the Regional Project Steering committees and the annual reports of country progress. Not all reports were shared during the evaluation, meaning there are some gaps, e.g. not all reports of the Regional Steering Committee Meetings and not all annual country reports were shared. However, enough information was provided to the evaluation to make an assessment of how the project progressed and in how far outputs and outcomes were achieved. The Final Project Report developed by WHO Regional Office for Africa was very useful, as it provided an overview of all outputs and often a detailed explanation how outputs were delivered, including hard data on number of persons involved in activities and trained and a detailed overview of baseline and other data gathered before and during the testing of alternatives.
200. There are occasional gaps, differences and unclarities in the different reports. For example, in the Final Project Report prepared by WHO sometimes different numbers are used than in the final PIR. Above, when describing delivery of outputs in chapter 6 and when mentioning number of persons involved in certain activities, the Final Project Report prepared by WHO was the leading document, as this has been prepared later than the final PIR and was based on final data and reports delivered by the national project coordinators.

201. Even though the reporting to the donor through the PIRs adequately reflects the project scope of work, no Tracking Tool as used in GEF projects was made available to the evaluation.

Rating of Project Reporting: Moderately Satisfactory

Overall Rating of Project Monitoring and Reporting: Satisfactory

5.10 Sustainability

5.10.1 Socio-political Sustainability

202. In all countries during project implementation the Ministries of Health showed a high interest to support the project outputs and outcomes. During interviews, it was clear that the Ministries of Health were actively supporting the project and had a high interest in positive project results. It was indicated by several informants that the results of the project were incorporated into existing and future National Malaria Control Programme (NMCP) strategies. In general, the Ministries of Health showed commitment to IVM processes and to the project. The project also supported the further development of NMCP strategies and was in line with national priorities and interests regarding reduction of malaria burden and reduction of DDT and other pesticides, and in line with the country NIPs for the Stockholm Convention.
203. As mentioned previously (see chapter 3.4), there has sometimes been a low, slow and limited responsiveness to the evaluation and not all stakeholders could be interviewed extensively. This is for instance the case with the Ministry of Health in Ethiopia. Therefore, it is difficult to assess if the Ethiopian Ministry of Health has/will continue with and upscale alternative IVM methodologies.
204. There is generally a moderate to high turnover in ministries and this means that institutional memory is reduced. Also, even though capacity building was an important and vital element of the project, results can only be sustained if trainings are repeated (and where necessary updated) on a regular basis. The commitment to people who were trained could have been more pronounced. The evaluation did not gain enough overall evidence that this is the case. In Madagascar, it was clear that activities in the Vatondry district were not sustained, even though the local population expressed a keen interest for further testing of alternatives and more comprehensive awareness raising.
205. It has been suggested that using DDT is very much determined by politics. Interviewees have suggested that in many countries, governments are not willing to reduce or move away from using DDT. In the three project countries, DDT has not been used since before the project implementation period and it was expressed during interviews that governments are not planning to return to using DDT again. It is a risk that cannot be completely excluded and may also depend on results of any possible future interventions using alternatives to DDT and resistance management processes. As long as a high resistance to DDT is also found in future activities, and as long as (cost) effective alternatives are available, it is not expected that these three countries will return to using DDT.

Rating of Socio-political Sustainability: Moderately Unlikely

5.10.2 Financial Sustainability

206. In all countries, implementation of future actions will only be possible with external support. The NMCPs are supported with budgets from other donors for malaria control, but they seem limited to support IVM practices in a regular and sustainable way. In Madagascar, where the evaluation consultant had the opportunity to also visit the demonstration district and two communities that were involved in testing of alternatives, no further testing had taken place and the focus of the country is mostly on distributing nets and awareness raising through schools and health centres. It is likely that lack of budget for IVM practices is one of the main causes of this lack of sustainability of project outputs and outcomes and of the testing of alternatives not being upscaled to other regions.
207. No exit strategy has been prepared during the project and no sustainable future funding for replicating and upscaling of testing alternatives has been secured. It was mentioned by several respondents that it was a disappointment that these three countries were not eligible for continued support through e.g. the AFRO II project.

Rating of Financial Sustainability: Unlikely

5.10.3 Sustainability of the Institutional Framework

208. The sustainability of project results is dependent on the support of the Ministries of Health. The project was implemented within the existing structure of the NMCPs. These NMCPs are the most important frameworks to support sustainability of project results. According to people interviewed, results of the project and information collected within the project have been incorporated in the NMCP strategies, however no concrete examples of incorporation into these strategies were provided. In Madagascar and Ethiopia alternatives have not been tested after the project in project and other districts of the country. This is an indication that the NMCP strategies are not robust enough to support sustainability of implementation of IVM alternatives. Also, the Ministries of Health have limited human resources to actively replicate and upscale IVM practices to other parts of the country. In Ethiopia the Ministry of Health has not responded to repeated requests to contribute to the evaluation, which may indicate a lack of commitment to move forward and support upscaling and replication.
209. During the project no clear exit strategy has been developed to sustain project results after the project. An exit strategy could have included elements on financial and institutional sustainability and continued support of WHO country offices. It was visible that two years after the project, the project outcomes were not sustained, and no upscaling or replication has taken place. It is highly recommended for the AFRO II project to develop exit strategies for each country in close cooperation with the Ministries of Health, other Ministries and national stakeholders.

Rating of the Sustainability of the Institutional Framework: Unlikely

Overall Rating of Sustainability: Unlikely

5.11 Factors Affecting Performance

5.11.1 Preparation and Readiness

210. The project was prepared well. The Project design carefully considered the discussions with an extensive list of stakeholders during the project preparation phase. A National Steering Committee was set up in which the stakeholders provided their input and expertise for the development of the project.
211. As is mentioned previously, it took a long time for the project to take off. An inception meeting was organized and country workplans started to be developed but in the first two years no real activities took place. The first PIR reports rated project progress as unsatisfactory. A legal agreement between UNEP and the Executing Agency was signed and a first financial disbursement was made. However, the project did not start to be implemented in the way it was originally planned. During interviews several reasons were mentioned, including bureaucracy within the Executing Agency and no common understanding between Implementing and Executing Agency on how the project needed to be implemented in a timely manner. In the ProDoc and legal agreement the tasks and responsibilities are defined, but in reality, it was sometimes unclear what needed to be done and by whom. This may be because it was the first project implemented within this area by WHO in cooperation with UNEP. It also took time before the needed staff was recruited (especially in Madagascar).

Rating of Preparation and Readiness: Moderately Unsatisfactory

5.11.2 Quality of Project Management and Supervision

212. Project management delivered by the Executing Agency and supervision provided by UNEP was not always of the quality needed during the first phase project implementation. UNEP had no Task Manager appointed to the project for a while and therefore supervision had been lacking and there was very little guidance for the implementation of the project. Although it is understandable that it takes time for a new project to really start, certainly when it concerns a regional project and a new cooperation between Implementing and Executing Agency, the mobilisation phase of the project was very long. Project reports and the interviews with Project stakeholders confirm a strong improvement of project management after the first 2.5 to 3 years of the project. This is also corroborated by the fact that project activities started to be implemented in a timelier manner in the second phase of the project. Also, the reporting started to become clearer and more detailed. The Regional Project Steering Committee functioned well, and project staff was managed well. The working relationship between Implementing and Executing Agency became overall more constructive which led to activities being implemented and outputs being delivered in a flexible way. In later years the protracted processes for disbursements of funds was still mentioned as an issue affecting project performance, but overall the persons who were interviewed were content with the results of the project and the support provided in the field by WHO.
213. The working relationship between WHO Regional Office for Africa and UNEP was constructive in later years. However, as mentioned under "Financial Management" in chapter 6.7, it turned out that the final financial settlement had not been made two years after project activities (and one year officially after the project end date according to the third amendment); the final amount due to WHO Regional Office for Africa had not been transferred at the time of the evaluation, as WHO never submitted their final report, final statement of accounts, final co-financing report and the organization's audit reports. Inconsistencies in the co-financing

reports and expense report were found during the evaluation period that needed to be corrected.

Rating of Project Management and Supervision: Moderately Satisfactory

5.11.3 Stakeholders' Participation and Cooperation

214. During the project preparation phase, a good analysis of stakeholders was made. During the project implementation, stakeholders were involved in National Steering Committee meetings, although it seems that these NSCs had at times a more informative than participative character. A more comprehensive cooperation with other Ministries (besides the Ministries of Health), such as the Ministries of Environment and Agriculture, could have benefitted the project. As was explained in the ProDoc (see also 4.3.2), these ministries have an impact on vector control. The Ministry of Environment has the authority to protect the environment from pesticide contamination. The ministries were participating during the project preparation phase but seem not to have been very actively involved during implementation of the project.
215. Stakeholders at national and international levels were involved in the Regional Project Steering Committees. During the lifetime of the project, seven meetings of the Regional Project Steering Committees were organized. During the meetings work plans and budgets were discussed and technical input was provided for the demonstration of alternatives and data collection. People who were interviewed generally said the feedback and input provided was valuable for implementation of project activities.
216. The cooperation with stakeholders at the local level seemed in general to have been intensive and constructive. During the evaluation, stakeholder cooperation and participation was mostly assessed in Madagascar as here the evaluation consultant visited the project district and had interviews with the local representatives of the Ministry of Health and stakeholders from the Ambalamangahazo and Tsarasambo communities of the Vatomandry district. Overall, the local stakeholders were very positive about their roles and involvement in the project and the way in which the interests of the local population were being considered. They understood well what the aims of the project were. Community awareness raising and sensibilization contributed significantly to the success of the implemented activities, in Ethiopia and especially in Madagascar. It should be noted that the local population in Madagascar even nowadays were interested to continue with alternative methods (it was mentioned that they would like to set up their own foundation to support this) but said that in their communities currently only nets were distributed and that it was their impression that malaria incidence was increasing again.

Rating of Stakeholders' Participation and Cooperation: Moderately Satisfactory

5.11.4 Responsiveness to Human Rights and Gender Equity

217. Gender equity and human rights issues are not separately identified in the ProDoc. Although the evaluation has not found any evidence of the project failing to respond well to gender equity and human rights issues, no special project policy had been made at the start of the project to strengthen its positive and pro-active responsiveness to human rights and gender equity. At the time of project preparation, it was not a requirement to specifically consider gender and human rights issues.
218. There are some references in the ProDoc to women and especially children, who are considered to be the most vulnerable to adverse effects of exposures to chemicals. Children

are mentioned regularly as malaria is the single biggest cause of death among young children in Africa, and therefore they are considered as a specific target group by the project. When (baseline) data were gathered on incidence of malaria, data were also collected according to gender.

219. When looking at project documentation, such as lists of participants of meetings, it seems that women were represented fairly well, both on the executing and decision-making levels, and certainly in the local communities visited in Madagascar.

Rating of Responsiveness to Human Rights and Gender Equity: Moderately Satisfactory (but difficult to rate as these aspects were not programming principles at the time of the project development and initiation)

5.11.5 Country Ownership and Driven-ness

220. In all project countries the Ministries of Health were the implementing partners and worked closely together with the WHO Regional Office for Africa to secure project results. They were directly involved in the implementation of activities through the NMCP departments. The persons interviewed acknowledged that the project was important to them, and that results and information gained from the project were incorporated into the country strategic plans on malaria. The Ministries of Health provided in-kind co-financing to the project.

221. As was mentioned previously under 3.4, the responsiveness to the evaluation was not always very high, and unfortunately no representative from the Ministry of Health in Ethiopia could be interviewed for this evaluation. This may indicate that there is no strong drive at the Ministry to advocate for long-term changes. In Madagascar the persons interviewed at the Ministry of Health were overall positive about the results of the project and stressed that the results are still used in their NMCP strategy.

Rating of Country Ownership and Driven-ness: Moderately Satisfactory

5.11.6 Communication and Public Awareness

222. Communication and awareness raising efforts mostly focused on the population in the demonstration districts (see also under "6.4.2 - Outputs for component 1). In Ethiopia an anthropological survey was conducted end of December 2016 to assess implementation of IEC/BCC interventions for malaria control and prevention in the country and to identify best practices, challenges and gaps for future improvement in community awareness interventions using IEC/BCC materials in the project areas. The survey identified several weaknesses and gaps in existing IEC/BCC activities, and also identified strengths. Based on the survey, actions needed to raise community awareness were established and several new communication materials were prepared. The communication and awareness raising survey was conducted during a short time at the end of the project and therefore limited actions could be taken during the remaining period of the project.

223. In Madagascar an anthropological survey was already implemented in 2013 that showed that the local population was strongly interested in malaria prevention and control. Based on the survey intensive community awareness raising and sensibilization took place in the communities in the Vatomandry district that were directly involved in the testing of alternatives, including 84 talks, 269 mass sensitization campaigns, 22 group discussions and 17 home visits. The total number of participants in these activities was 7,423 (see also 6.4.2 - Outputs for component 1")

224. People interviewed in Ethiopia and Madagascar stressed the importance of awareness raising and community sensibilization. In Madagascar the conclusion was that alternatives can only be successful if large-scale community awareness raising campaigns are implemented before, during and after the alternatives are tested.
225. Results and experiences were shared within the Regional Steering Committee meetings and the National Steering Committees. WHO provided input based on their experience with similar projects in other regions. A specific project communication plan has not been prepared and implemented.

Rating of Communication and Public Awareness: Satisfactory

Overall Rating of Factors Affecting Performance: Moderately Satisfactory

6 Conclusions and Recommendations

6.1 Conclusions

226. Besides evaluating the nine criteria assessed in chapter 6 (for a table summarizing this assessment, please see below under table 9), the Terminal Evaluation of the project also looks at finding answers to the following key strategic questions:

- a. Pertaining to attribution, to what extent can the project be credited with having led to a reduction of DDT use for malaria control in the participating countries through the establishment of alternative malaria control strategies in these areas?
- b. What are some of the key results and experiences identified by the evaluation that could help provide strategic guidance to DDT phase-out work in Africa and the Global DSSA Programme (Demonstrating and Scaling-up of Sustainable Alternatives to DDT in Vector Management Global Programme)?
- c. To what extent were synergies built between UNEP and WHO cooperation and what are some of the possible lessons for future projects that integrate health and environment?
- d. From the analysis of the project's impact pathway, to what extent were the most critical assumptions, drivers and duty bearers in the change process found to hold and have these been considered in the DDT AFRO II project?
- e. In consideration of environmental and social safeguards, has the evaluation identified any unintended environmental or socio-economic impacts (positive or negative) in the project's demonstrations conducted in the field (pilot districts)?

227. Regarding key **strategic question (a)** it can be said that the project cannot be credited with having led to a reduction of use of DDT for malaria vector control. As mentioned throughout the report, DDT was not used in any of the countries since before or at the start of the project. It is possible that the establishment of alternative malaria control strategies may have contributed in a small degree to the fact that until today the countries have not returned to the use of DDT as the project showed that effective alternatives are available. The project helped to document the resistance to DDT by malaria vectors in Ethiopia. It was mentioned by people who were interviewed that there is no guarantee that the countries will not return to DDT but at the moment it seems unlikely. This would also depend on the susceptibility to DDT and other chemicals being tested on a regular basis.

228. The key experiences identified by the evaluation that could help provide strategic guidance to DDT phase-out (**key strategic question (b)**) are the following: there needs to be a clear insecticide resistance management strategy in each country; testing of resistance to chemicals used needs to be repeated on a regular basis as resistance can change over time; results of alternatives tested needs to be evidence-based, and; cost-effectiveness of alternatives needs to be assessed. Only when resistance to DDT is found to be high and cost-effective and appropriate alternatives are available (and information on this is accessible to stakeholders), it can be expected that countries will be (more) open to phasing out DDT.

229. Pertaining to **strategic question (c)**, one of the most important lessons learned is that before or at the start of projects there needs to be a clear common understanding between the Executing and Implementing Agency and expectations of each other's responsibilities and tasks should be clear. In this project this was not the case, and this may have contributed to the long delays and low progress during the first years of the project. It is important that UNEP ensures there is always a Task Manager available to support the project. WHO as Executing Agency was in contact with the Ministries of Health, which were the implementing partners of WHO in all the project countries. Other ministries, most specifically the Ministries of Environment and Ministries of Agriculture, were not directly involved in the activities. It is recommended that other ministries in any future projects are involved more actively, as DDT obviously has strong environmental, and also agricultural, aspects. UNEP could ensure that other ministries are involved more closely.
230. **Strategic question (d)** is divided into two questions; the first one is related to whether or not the drivers and assumptions as defined in the reconstructed TOC held and to what extent, and the second question is whether these assumptions and drivers were considered in the AFRO II project.
231. Regarding the drivers and assumptions, it can be said they mostly held for the pathway from outputs to direct outcome. As is explained in chapter 6.6, not all drivers are in place in the causal pathway from direct outcome to Intermediate State 1, and this is also partially why upscaling of alternatives to other parts of the countries has not taken place. It can be expected that information exchange and technical support would still be available, but not all stakeholders are aware of alternatives and their efficiency, and important local stakeholders were not included in the development and upscaling of alternatives. Most drivers were in place when outcomes were achieved, but since there was no exit strategy prepared for the project, it seems no momentum was created immediately after the project and as time passes it will become more difficult to achieve IS 1. Also, not all assumptions hold; it is not clear if national and district governments are fully ready to participate or lack of funding is the main reason why upscaling of alternatives has not taken place.
232. The AFRO II project started in 2016 and currently a mid-term review is being conducted. The AFRO II project therefore has not considered the outcomes of this evaluation, nor has it taken into account the recommendations and lessons learned as formulated in the Final Project Report developed by WHO Regional Office for Africa and the final PIR for 2016-2017, as these reports had not been written yet when AFRO II already started. In the AFRO II project document, assumptions and drivers are not explicitly described. Afro II was designed in part by the same persons already working on AFRO I and even though the final recommendations and lessons learned were not explicitly documented yet at the time, some lessons learned were emerging from e.g. the annual PIRs. AFRO II does therefore indirectly consider in their project document certain drivers and assumptions as defined in this evaluation in the implementation of the project activities, as can be seen in the description of components, outcomes and outputs. It is e.g. explained that (international) exchange and technical support will be an important aspect of implementing IVM alternatives in the countries and local stakeholders will be actively involved and communicated with during development and implementation of demonstration projects. One of the approaches described in the AFRO II project document is e.g. "Evidence based dissemination of information and education of communities for behavioural change (IEC-BCC)". When looking at assumptions, focus is being given to policy-making and active involvement of national and local authorities within component 1: "Promote evidence-based multi-sectoral policy-making for IVM and strengthen multi-sectoral alliance in the promotion & implementation of environmentally sound & effective innovative interventions to reduce reliance on DDT for diseases vector control and strengthen countries' capacity for a better

compliance with multi-lateral environmental agreements particularly the Stockholm Convention".

233. The evaluation has not identified any immediate and strong unintended environmental or socio-economic effects (positive or negative) in the project's demonstrations conducted in the field. What can be said though regarding **strategic question (e)**, is that the sensibilization activities of the local population in Ethiopia and specifically also Madagascar contributed positively to the results of the demonstration activities. The demonstrations also increased the interest of the local population in malaria prevention and control; in Madagascar it was mentioned by several persons interviewed in the communities that up until today people would be interested to set up a small organization to support alternatives being implemented as it was clear that alternatives had a positive effect on malaria prevention and control. During project implementation, malaria burden decreased in the project communities.
234. The Final Project report developed by WHO regional Office for Africa presents the results per component and provides technical details regarding the data gathered and alternative interventions implemented. The report is amongst others based on reports prepared by WHO national coordinators and constitutes the main technical report developed by the project and made available to the evaluation.
235. The report provides valuable data but is not always clear in which data were gathered and which activities were implemented within the project and which outside of the project. The following general **technical findings** regarding technical data and activities are mentioned in the Final Project Report (and have been confirmed during interviews with stakeholders):
- In Madagascar three different combinations of alternative interventions were assessed:
 - iv. LLINs alone,
 - v. LLINs in combination with bendiocarb and pirimiphos-methyl IRS, and
 - vi. LLINs in combination with community engagement and participation;
 - In Ethiopia, pirimiphos-methyl was the alternative insecticide selected for use during alternative interventions. Two groups of villages were established: Cluster I villages comprising four localities where propoxur was used for IRS and Cluster II villages, also comprising 4 localities, where pirimiphos-methyl was used;
 - Due to its low residual efficacy, pirimiphos-methyl may need to be replaced by another alternative chemical for IRS in Ethiopia;
 - It proved to be too complicated to develop a standalone malaria surveillance system in both Ethiopia and Madagascar, therefore the existing systems at the Ministry of Health were used;
 - Epidemiological data were systematically managed in all project districts. At the end of the project up to date parasitological and entomological data including pesticide resistance were gathered;
 - Application of alternative malaria control strategies associated with strong community engagement led to reduction of malaria disease burden during implementation of the alternatives;
 - No data on the cost-effectiveness were documented;
 - In Madagascar testing of alternative interventions took place during three years. In Ethiopia only during one year. In order to make results more strong, more rounds of testing of alternatives are needed;
 - To make results more robust and research which alternative interventions are the preferred alternatives, further and more comprehensive research would be needed on:
 - i. cost-effectiveness of alternative interventions;
 - ii. patterns of vector behaviour during implementation of interventions;

- iii. trends in vector resistance to all insecticides in use and the mechanisms involved;
- iv. newly developed insecticides, and;
- v. applicability of alternatives on a larger scale.

236. The objective of the project was to demonstrate cost-effective, environmentally sound, and locally appropriate alternatives to DDT use in malaria control, ensuring their sustainable application through strengthened national and local capacity. The overall rating of the project – based on the assessment of nine criteria in chapter 6 – is **Moderately Satisfactory**.
237. In the first 2.5 to 3 years, project progress was overall very low. In the last 4 years of the project, progress was much better which resulted in the most important outputs being delivered. These outputs are related to capacity building under outcome 1, testing of alternatives to DDT in Ethiopia and Madagascar under outcome 2 and insecticides resistance management under outcome 3. It is important to note that the (scientific) results could have been more solid if more cycles of alternatives during malaria seasons had been implemented; in Ethiopia only one round of testing of alternative interventions took place. Also, cost-effectiveness of the alternatives tested were not calculated.
238. The project supported the countries to systematically document the impact of changes of insecticides and approaches to malaria vector control. A substantial amount of baseline data on malaria incidence, malaria burden and on insecticide resistance were collected. Application of alternative malaria control interventions resulted in a reduction in disease burden in the project districts during project implementation. Data from Madagascar demonstrated that widespread access to LLINs, with very high levels of ownership and utilization can be achieved and maintained through continuous distribution and replacements after mass distribution campaigns, especially when supplemented by effective community awareness raising and mobilization. It was clear from the evaluation that all stakeholders highly appreciated the awareness raising and community sensibilization activities and that these contributed to successful delivery of outputs.
239. The project demonstrated that there may be suitable alternative methods and IRS insecticides to DDT for malaria control on a long-term basis. There was however no clear exit strategy in the countries and results more than two years after project implementation seem not to have been sustainable. Alternative malaria control interventions have not been replicated or upscaled to other parts of the country in Ethiopia and Madagascar.
240. Eritrea started to participate only in the last year of the project. Since there was little time remaining, the country could not execute the complete set of activities as originally planned. A specific work plan was designed for Eritrea which allowed the country to implement successfully a series of capacity building activities related to outcome 1 and insecticide resistance management under outcome 3, which helped the country move forward with development of IVM strategies.
241. The original project design was properly prepared, including a complete and clear problem and situation analysis and explanations on strategic relevance. The stakeholder analysis was well elaborated, and governance and supervision arrangements were clear and appropriate. However, the log frame and outcomes/outputs were not clearly explained and sometimes inconsistent and therefore the causal pathways not always convincingly described.
242. Below an overview is presented of all nine criteria used to assess the project and the ratings provided by the evaluation. The ratings are given according a 6-point scale: Highly Satisfactory

(HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Sustainability and Impact is rated on a 'likelihood scale' from Highly Likely (HL) down to Highly Unlikely (HU).

Table 8: Ratings of project criteria and summary assessment

Criterion	Summary Assessment	Rating
A. Strategic Relevance		Highly Satisfactory
1. Alignment to MTS and POW	The project is in line with MTS 2013-2015 and fits within the fifth thematic strategy on Harmful substances and hazardous waste. It also is in line with the MTS for the period 2014-2017 where it fits within the sub-programme Chemicals and Waste. The project is also in agreement with the PoW 2016-2017, especially output 3 and 4 of expected accomplishment 2.	Highly Satisfactory
2. Alignment to UNEP / Donor/GEF strategic priorities	The project is in line GEF Operational Programme 14, as well as GEF-4 Strategic Program 2 (Partnering in investments for NIP implementation), and GEF-4 Strategic Program 3 (Partnering in the Demonstration of feasible, innovative technologies and best practices for POPs reduction and substitution).	Highly Satisfactory
3. Relevance to regional, sub-regional and national environmental priorities	On a national and regional level this project was also highly relevant and fits well within national policies. In each country the national Ministries of Health implement the National Malaria Control Programmes (NMCP). The Regional Consultation of African countries already in 2000 recommended that alternatives to DDT should be introduced gradually into the NMCPs after investigation of insecticide resistance, status and prospects, and that insecticide policy, legislation and inter-sectoral collaboration should enforce human health protection in the context of the use of alternative insecticides.	Highly satisfactory
4. Complementarity with existing interventions	The main intervention at design stage in the region and mentioned in the ProDoc was the Africa Stockpiles Project (ASP), which was addressing the issue of obsolete pesticides disposal in African countries.	Satisfactory
B. Quality of Project Design	A detailed review of Project Design was executed during the Inception Phase of the evaluation. The overall rating of the Project Design was rated as Satisfactory.	Satisfactory
C. Nature of External Context	The Nature of External Context is rated as Favorable. There is no evidence that external factors had a strong impact on execution of the project, although at times political contexts may have influenced implementation of activities in a minor way. Due to infrastructure weaknesses, it was decided already at the start of the project to exclude inaccessible districts in Madagascar and focus only on one district. In Ethiopia one district was at times too difficult to reach during implementation of activities.	Favorable
D. Effectiveness		Moderately Satisfactory
1. Delivery of outputs	The delivery of outputs is rated as satisfactory. The project had a very long mobilization phase and during the first years little progress was made. However,	Satisfactory

	during the second part of the project, activities were implemented in an effective and flexible way which led to most outputs being delivered.	
2. Achievement of direct outcomes	Outcome 1 (Capacity at national, provincial, district and community levels to undertake planning and implementation of alternative malaria prevention measures to reduce dependence on DDT is built and strengthened) was achieved, as well as outcome 3 (Management of pesticides in an environmentally sound manner improved in Eritrea, Ethiopia and Madagascar). Outcome 2 (Locally-applicable alternatives to malaria vector control are identified and tested) was partly achieved. In Eritrea no alternatives were tested as they joined the project only in the last year. In Ethiopia only one cycle of alternatives was tested.	Moderately Satisfactory
3. Likelihood of impact	The Likelihood of Impact is assessed using the Likelihood Decision Tree Excel file. Based on the answers given to the questions posed in this tool, the impact was assessed as Moderately Likely even though Intermediate State 1 and 2 have not been achieved two years after the final project activities took place.	Moderately Likely
E. Financial Management		Moderately Satisfactory
1. Completeness of project financial information	It took repeated efforts and requests to receive the financial documentation needed for the evaluation. Some errors and inconsistencies were found in the co-financing report. Also, there were inconsistencies between the financial analysis provided by the Fund Management Officer and the final overview in the final expense report prepared by WHO. It turned out that the final financial report, co-finance report and final statement of accounts were never sent to UNEP. Fortunately, this situation was amended and corrected final reports were made available to the evaluation.	Moderately Satisfactory
2. Communication between finance and project management staff	During project implementation, communication generally went well even though UNEP regularly had to ask repeatedly for expense reports to be sent by WHO. The fact that the final financial report, co-finance report and final statement of accounts were never sent to UNEP, can be an indication of a certain lack of communication between UNEP and WHO staff. However, UNEP and WHO together managed to rectify the situation and provided corrected final reports.	Moderately Satisfactory
F. Efficiency	Efficiency is rated as Unsatisfactory, mainly because in the first years of the project very little progress was made. The project had three no cost extensions.	Unsatisfactory
G. Monitoring and Reporting		Satisfactory
1. Monitoring design and budgeting	The ProDoc contained a Monitoring, Progress Reporting and Evaluation Plan, which included a table with an overview of Monitoring, Reporting and Evaluation Responsibilities, a table summarizing the key content required in the progress and financial reports, and a table with a list of key performance indicators. The budget in the ProDoc contained a general overall budget line for mid-term and terminal evaluations. No budget	Moderately Satisfactory

	for data collection in connection with monitoring was foreseen in the project. Monitoring was carried out as part of the daily project management by the Executing Agency.	
2. Monitoring of project implementation	Several monitoring activities were implemented during the project: annual National Steering Committees were organized, 7 Regional Steering Committees were organized, national project coordinators carried out numerous field visits and the regional project coordinator undertook 5 field visits to Ethiopia and Madagascar and two midterm reviews were conducted in Ethiopia and Madagascar. All monitoring data were used for the PIRs where each year project status was briefly described, progress of outputs using SMART indicators were explained and an assessment of progress status per activity was made.	Satisfactory
3. Project reporting	Substantial documentation of project progress was available to the evaluation, including annual PIRs and a Final Project Report prepared by WHO. Not all reports were made available to the evaluation, although enough information was provided to assess project implementation and progress. There are occasional gaps, differences discrepancies and unclarity in the reports. The final financial, co-finance and statement of accounts are missing, and no GEF Tracking Tool was made available to the evaluation.	Moderately Satisfactory
H. Sustainability		Unlikely
1. Socio-political sustainability	The Ministries of Health as implementing partners generally showed a high interest in the project and were supporting the project during implementation. However, two years after the project the ministries have not been able to replicate testing of alternatives in other parts of the countries. This may in part be due to a high turnover in ministries and therefore a reduction of institutional memory and also a lack of financial possibilities. It seems that it is not likely that the three participating countries will return to using DDT again, although it is a risk that cannot be completely excluded and would also depend on results of any future alternative interventions and resistance management processes.	Moderately Unlikely
2. Financial sustainability	In all countries implementation of future actions will only be possible with external support. It is very likely that lack of finances contributed to the fact that no replication of testing of alternatives has taken place until now.	Unlikely
3. Institutional sustainability	Sustainability depends on the support of the Ministries of Health. Results of the project were incorporated into NMCP strategies (although no concrete examples were provided). In Madagascar alternatives have not been tested after the project in other districts of the country. NMCP strategies seem not robust enough to support sustainability of implementation of IVM alternatives. Also, the Ministries of Health have limited human (and financial) resources to actively replicate and upscale IVM practices to other parts of the country. The MoH in Ethiopia has not responded to repeated requests to provide information to the evaluation which may	Unlikely

	indicate a lack of commitment to support upscaling and replication. Finally, no exit strategy was prepared and discussed with the MoH and other stakeholders. A well elaborated exit strategy could have supported the outcomes to be sustained and replicated.	
I. Factors Affecting Performance		Moderately Satisfactory
1. Preparation and readiness	The project was prepared well and based on elaborate discussions with stakeholders. However, the mobilization phase of the project took more than two years. During the first years little progress was made. Several reasons for this were mentioned; this was the first time such a larger-scale project was implemented in this region, high bureaucracy and a lack of common understanding between IA and EA.	Moderately Unsatisfactory
2. Quality of project management and supervision	During the first part of the project, the project performance of WHO and the supervision provided by UNEP were not always of the quality needed for successful implementation of the project. Later on, when expectations were made more explicit, the project management and supervision improved considerably.	Moderately Satisfactory
3. Stakeholders participation and cooperation	Stakeholders were well involved during the preparation phase and a good stakeholder analysis was presented in the ProDoc. Stakeholders participated in the National Steering Committees and Regional Steering Committees. Cooperation with stakeholders at local level seemed in general to have been intensive and constructive. Some important stakeholders, such as Ministries of Environment and Ministries of Agriculture could have been involved more actively into the implementation of project as these ministries have an impact on vector control. The Ministry of Environment has the authority to protect the environment from pesticide contamination.	Moderately Satisfactory
4. Responsiveness to human rights and gender equity	This criterion was difficult to rate as these aspects were not programming principles at the time of project development and initiation. No special policy was therefore included in the ProDoc. The evaluation has found no indications that the project failed to respond to gender equity and human rights issues.	Moderately Satisfactory
5. Country ownership and driven-ness	In all project countries, the Ministries of Health were implementing partners and cooperated closely with WHO to secure results. Persons at the MoH in Madagascar stressed that this project had been important to them and that they incorporated results into their NMCP strategies. The Ministry of Health in Ethiopia did not respond to the evaluation, which may indicate a lack of commitment to the project.	Moderately Satisfactory
6. Communication and public awareness	Communication and awareness raising efforts mostly focused on the population in the demonstration districts. In Ethiopia a IEC/BCC survey was conducted towards the end of the project which analysed strengths and weaknesses. Based on this, a strategy was developed. This strategy could not be fully implemented but some communication materials were prepared and distributed. In Madagascar, a survey was already conducted in 2013 which showed that the local	Satisfactory

	population was already very much engaged in malaria prevention and control. All persons interviewed stressed the vital importance of awareness raising and community sensibilization. In Madagascar the generally shared conclusion was that alternatives can only be effective if large-scale and well targeted awareness raising campaigns are implemented before, during and after the alternatives are tested.	
Overall Project Rating		Moderately Satisfactory

6.2 Lessons Learned

243. During the evaluation process, the lessons learned as described below were gathered and are based on interviews with stakeholders during missions to Ethiopia and Madagascar and by Skype and email with other stakeholders, on observations and on reports (especially the Final Project Report prepared by WHO Regional Office for Africa, as well as the last PIR (2016-2017) were helpful in formulating lessons learned).

Lesson 1: **Specific roles and responsibilities should be made more explicit in agreements between Implementing Agency and Executing Agency in order for expectations to be more clear and to prevent delays in implementation of the project.**

Context from which lesson is derived:

This was the first such project implemented in the region by WHO regional Office for Africa and UNEP. This lack of experience working together possibly contributed to the low project progress in the first years of the project. During the project there have been several Task Managers and for a while there was a gap in supervision by UNEP as there was no Task Manager. There was a lack of common, documented understanding of roles which combined with staff turnover led to project delays. Even though the legal binding agreements between EA and IA are clear and cover all relevant legal aspects, there could have been more focus at project start of clarifying expectations and setting up a clear management structure with responsibilities and task divisions. It is also important that the project does not suffer from personnel changes during implementation of the project.

Contexts in which lesson may be useful:

All UNEP projects where UNEP is the Implementing Agency and another organization is the Executing Agency. This is especially important when it concerns a project in which the cooperation between EA and IA is relatively new.

Lesson 2: **Clear communication by UNEP and the Executing Agency to all stakeholders is needed to provide realistic expectations of what can happen after the project finishes and exit strategies should be developed well in advance of project end. When the exit strategy is developed well before project end, all project stakeholders who will be involved in carrying on project results still can comment and provide input to the exit strategy.**

Context from which lesson is derived: The Terminal Evaluation of this project was implemented more than two years after the last activities took place (the closing workshop was organized in May 2017). Although overall this had a negative impact on responsiveness of stakeholders and the Terminal Evaluation was also too late to provide input for the AFRO II project, it also meant that the evaluation consultant had the opportunity to assess what happened in the two years after the project activities were finalized, especially in Madagascar where interviews with stakeholders in the project district were conducted. It was clear that two years after the project, the results of the project were not sustained very well, and therefore that expectations of some people who were interviewed were not met. It also showed that the results of the project, even though it was mentioned that these results were incorporated into NMCP strategies, were not carried on because the project had no clear exit strategy on how results could be sustained after project end. It is also important to include funding aspects into the exit strategy; availability of funds from national budgets and international assistance are a major factor in securing the sustainability of project results.

Contexts in which lesson may be useful: All UNEP projects.

Lesson 3: **Continuous strengthening of local capacities (through for example field trainings repeated and updated on a regular basis) is vital for effective and sustainable implementation of IVM.**

Context from which lesson is derived: During the project, many capacity building activities and trainings were implemented. According to people consulted, the capacity building outputs were very important to the successful implementation of the project. However, as there is a regular staff turn-over and new information and methods become available, it is important that trainings be repeated and updated on a regular basis. It is important to include capacity building and strengthening in the above-mentioned exit strategy. The project could have focused more on making the capacity that was built more sustainable.

Contexts in which lesson may be useful: All UNEP projects with a strong focus on training and capacity building.

Lesson 4: **IVM programmes should be holistic, ensuring that besides technical aspects also other aspects are considered and making sure that local communities and other stakeholders understand the need for and support IVM activities; community sensibilisation/awareness raising is vital in IVM programmes.**

Context from which lesson is derived:

The results of the project show that communication and community sensibilization were vital parts of the project. In Ethiopia and Madagascar surveys were organized and the stronger and weaker points of existing IEC/BCC activities were analysed. Data from Madagascar demonstrated that general access to LLINs, with very high levels of ownership and application can be achieved and maintained through continuous distribution and replacements after mass distribution campaigns, especially when supplemented by effective community awareness raising and mobilization.

In Madagascar the generally shared conclusion was that alternatives can only be effective if large-scale and well targeted awareness raising campaigns are implemented before, during and after the alternatives are tested. Also in Ethiopia the importance of well targeted IEC/BCC activities was stressed for successful implementation of activities and for the overall effectiveness of alternative interventions.

Contexts in which lesson may be useful:

All UNEP projects that include IVM activities.

Lesson 5:

In Project design and initiation, a more in-depth analysis of country context and risks (political, distance and location, safety) should be conducted. When such an analysis is done properly, it can prevent delays, difficulties and the need to make changes in activities and planning during implementation of the project.

Context from which lesson is derived:

Even though the criterion "Nature of External Context" was rated as favourable, it was indicated in all countries that changes needed to be made during project implementation, or that there were difficulties in project implementation due to political, safety and infrastructure factors. In Madagascar already at the start it was decided to exclude some districts as due to poor infrastructure it would be impossible to travel to these districts on a regular basis. Travelling to and within the district where the activities were implemented - in Vatomandry - was not always easy, even though this district is relatively close to the capital. In Ethiopia one district was far away and weather and infrastructure conditions made it at times difficult to go there. This contributed to unexpected travel costs for field surveys. In Eritrea the need for permission to travel outside Asmara by relevant authorities was at times a concern that derailed effective and timely implementation of project activities.

Contexts in which lesson may be useful:

All UNEP projects, especially those that are implemented within specific and more complicated political, economic and infrastructure contexts.

Lesson 6:

Effective implementation of IVM and continuous strengthening of local capacities is dependent on certain milestones that need to be monitored closely (including insecticide resistance management plans, available evidence-based alternative tools, sustainable research and training plans, awareness raising of local communities).

Context from which lesson is derived:

At the end of the project the DDT-Alt-model model was prepared based on experiences gained within the project. This model contains all the elements within 2 mechanisms needed for successful implementation of IVM. It made clear that effective implementation of IVM and continuous strengthening of local capacities is dependent on certain milestones that need to be monitored closely. Only when all milestones are included and achieved, it can be expected that projects on demonstrating effective alternatives can be implemented successfully.

Mechanism 1 is the Effective implementation of IVM including reducing reliance on DDT. The milestones include: Adaptive strategic planning; Available evidence-based alternative tools; Strong integrated malaria control, monitoring and surveillance system; Multisectoral collaboration and partnership; Insecticide resistance management plans; Sustainable operational research and training plans.

Mechanism 2 is the Continuous strengthening of local capacities. The milestones include: Knowledge on the usefulness of alternative tools; Locally adapted communication system; well-trained field entomologists; Awareness and compliance of local communities to alternative tools; Effective malaria case management; Available technical centres to support the NMCP.

These mechanisms and the elements described – when implemented well - lead to successful implementation of IVM. What needs to be considered however is follow-up in project demonstration districts and support to countries to replicate and upscale in their country after the project.

Contexts in which lesson may be useful:

All UNEP projects that include IVM activities.

244. The model below was prepared by WHO based on experiences gained within the project, explaining which milestones countries are encouraged to implement to ensure effective implementation of IVM.

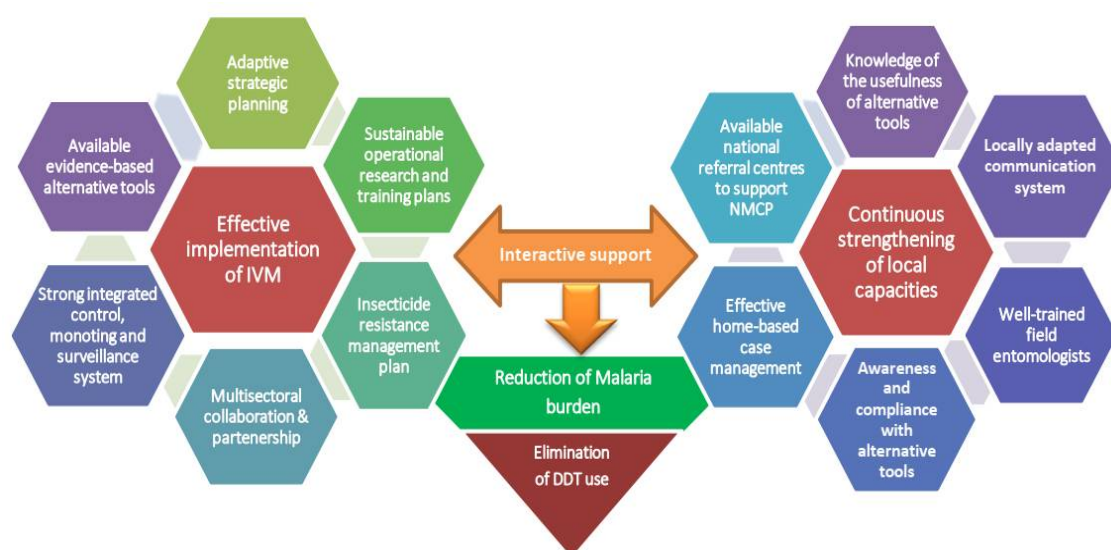


Figure 6: DDT-Alt-model

6.3 Recommendations

245. As the project was operationally completed two years ago, the recommendations below are not targeted anymore towards the AFRO I project. However, the recommendations below could still be integrated into the AFRO II project (and other similar projects) by UNEP and WHO.

Recommendation 1: Make Awareness raising and community sensibilization activities an integral part of IVM strategies in the AFRO II project.

Context of the recommendation:

As mentioned throughout this document, communication and community sensibilization were very important for alternatives to be effective; this project has shown that when using a method with simultaneous awareness raising and community sensibilization and the same method without structured community sensibilization, it is likely that the method with simultaneous and targeted awareness arising will show to be more effective. In Ethiopia only at the end of the project attention was paid to IEC/BCC activities. This meant that the strategy developed could not be fully implemented within the project timeframe. It is therefore important that focus on awareness raising and community sensibilization is done right from the start of the project and starts already before alternatives are tested, and that an adequate budget is allocated. A communication strategy and plan should be elaborated in the planning phase, before the main activities of testing of alternatives start. During the implementation process, monitoring the execution of communication activities should be done on a regular basis, by an assigned person. Adjustment of activities and budget should be done regularly. Where possible, disaggregated data (stakeholder groups, gender) should be collected. If necessary, include external communication professionals: in both Ethiopia and Madagascar, specific consultants were contracted for developing IEC/BCC strategies.

Responsibility: UNEP Task Manager for the AFRO II project

Timeline: Immediately

Recommendation 2: Include calculations on cost-effectiveness of alternatives and experts to support this process in the AFRO II project.

Context of the recommendation: The title of this project is: "Demonstrating Cost-effectiveness and Sustainability of Environmentally Sound and Locally Appropriate Alternatives to DDT for Malaria Vector Control in Africa". During the project cost-effectiveness was not calculated. It is however a very important aspect when trying to convince persons to reduce use of DDT or phase out DDT completely. This will also be the case in the AFRO II project. Therefore, it is recommended that calculations on costs of alternatives are made in the AFRO II project and presented in the final project documents and actively communicated to key stakeholders. Calculating cost-effectiveness requires expertise that may not be available within the Implementing and Executing agencies and hence it is also recommended to include experts before alternatives are being tested, including for example health-economists.

Besides calculating cost-effectiveness, there are of course other aspects to demonstrating that alternative interventions can be effective, such as testing of resistance to chemicals used on a regular basis as resistance can change over time. Also, results of alternatives tested need to be evidence-based. Only when resistance to DDT is found to be high, and cost-effective and appropriate alternatives are available, it can be expected that countries will be (more) open to phasing out DDT.

Responsibility: UNEP Task Manager for the AFRO II project

Timeline: Immediately, at least before and during implementation of alternative interventions.

Recommendation 3: Reduce protracted processes in contracting and transfer of funds, or allow for more time for disbursement of funds and procurement in project workplans; ensure better and realistic planning and implementation.

Context of the recommendation: During the evaluation, it was mentioned regularly and by different interviewees that protracted processes in contracting and transfer of funds has influenced the project in a negative way. It is therefore recommended to the Executing Agency of the AFRO II project that they ensure timing of activities is realistic and more time is allowed for organizing activities when it is expected that transfer of funds, procurement and contracting may take considerable time. If necessary, existing work plans need to be adapted accordingly. Where possible, administrative processes can be reduced. It has also been suggested that it is important to have a person dedicated to the project who does not also simultaneously have to implement (many) other projects.

Responsibility: WHO Regional Office for Africa as Executing Agency AFRO II project

Timeline: Immediately

Recommendation 4: Use established participative national steering committees and regional steering committees in the AFRO II project to support cross-sectoral and cross-border cooperation and make sure that such structures are incorporated into existing national structures after project end.

Context of the recommendation: National Steering Committees were established at the beginning of the AFRO I project. The steering committee provides oversight and guidance for the project and ensures that all key stakeholders are informed about and involved in the project. It also plays an important role in monitoring of project activities and approving work plans. Representatives from key stakeholders from government (and civil society) should be meeting on a regular basis. In the AFRO I project, it seems that National Steering Committees had more of an informative character than a participative one. However, active involvement of the key stakeholders during the whole period of the project would contribute to building ownership over the process on country level and may facilitate integration of follow-up activities into regular processes of the responsible organizations at project end. Therefore, where possible, it is important to ensure that the project National Steering Committees are incorporated into existing relevant national structures, or - if such a structure does not exist - to encourage such a structure to be established. In exit strategies (see recommendation below) attention should be paid to the establishment or integration of a steering committee into relevant existing structures after project end.

As is mentioned in the project, important key stakeholders such as the Ministry of Environment and Agriculture, were informed but not always very actively involved in the project. A more participative National Steering committee could also have ensured more active involvement from other ministries, as these ministries certainly have an impact on vector control (e.g. the Ministry of Environment has the authority to protect the environment from pesticide contamination).

Responsibility: UNEP Task Manager AFRO II project.

Timeline: Immediately

Recommendation 5: Develop an exit strategy (per country) to make expectations clear to all stakeholders.

Context of the recommendation: No clear exit strategy was developed for the AFRO I project. This may be one of the reasons why two years after project activities were finalized, there has been no clear follow-up or replication and upscaling of alternative interventions. Even though the project demonstrated to a certain degree that effective alternatives are available, such a result can only be sustained if alternative interventions are upscaled to other parts of the country. Ministries of Health (as the agency that implements the national NMCP strategies) and also WHO country offices play an important role in this. As part of an exit strategy, it is advised to organize a meeting towards project end with all key relevant ministries to discuss and handover the results of the project and to ensure that all key stakeholders are involved in developing an exit strategy that could facilitate project results to be sustained and a follow-up to the project to be implemented. It is clear that in many countries, financial (external) sources play a crucial role when implementing follow-up

activities and it is not always likely that these sources can be secured (in full) by project end, but a realistic and targeted exit strategy may well support Ministries of Health and other relevant key stakeholders to sustain project results after the project has finalized.

Responsibility: UNEP Task Manager of the AFRO II project and the WHO Regional Office for Africa.

Timeline: Development of an exit strategy should be discussed and developed well in time before project end. Endorsement of the strategy by the participating countries can be planned during the closing period of the AFRO II project.

Recommendation 6: When results of projects are planned to be reflected within national strategies, make sure these strategies make clear reference to the project and are made available to the EA and IA.

Context of the recommendation: In many reports and during several interviews, it was stated that the results of this project were incorporated into NMCP strategies. Of course, this can be considered a major result of the project. However, no concrete examples were provided, and it is not clear if explicit references in these strategies were made to the project. It is recommended to the Executing Agency to ensure that statements on results being incorporated into national strategies are made explicit (when possible, such statements could even be provided by the Ministry of Health in writing) and clear references to the project are made. Also, as it is a great accomplishment if NMCP and other strategies make effective use of positive results from the project, it is advised to actively share this information to key stakeholders and funding agencies.

Responsibility: UNEP Task Manager of the AFRO II project

Timeline: Towards the end of the AFRO II project, when results of that project are indeed incorporated into NMCP strategies of the participating countries.

Annex I. Terms of Reference

Section 1: BACKGROUND AND OVERVIEW OF THE PROJECT

1. Project general information

Table 1. Project Summary¹

Executing Agency:	World Health Organization Regional Office for Africa (WHO-AFRO), Brazzaville, Congo. National Executing Agencies in the participating countries.		
Sub-programme:	Harmful substances and hazardous waste (MTS 2010-2013) / Chemicals and Waste (MTS 2014-17)	Expected Accomplishment(s):	MTS 2010-2013: EA(a) and EA(b) MTS 2014-17: EA(1) and EA(2)
UNEP approval date:	June 2008	Programme of Work Output(s) 2016-2017:	3. Methodologies to monitor and evaluate impact of actions addressing chemicals releases to support sound management of harmful substances and MEA implemented at the national level. 4. Scientific and technical services, delivered through multi-stakeholder partnerships, to build the capacities of governments, the private sector and civil society to take action on the risks posed by chemicals including those listed in relevant MEAs; and SAICM, and lead and cadmium, as well as unsound management practices.
GEF project ID:	1331 (IMIS 4A28)	Project type:	Full-size project
GEF Operational Programme #:	Operational Programme 14 on Persistent Organic Pollutants	Focal Area(s):	Persistent Organic Pollutants (POPs)
GEF approval date:	June 2008	GEF Strategic Priority:	GEF-4 Strategic Objective 2: Partnering in investments for NIP implementation. GEF-4 Strategic Objective 3: Partnering in the demonstration of feasible, innovative technologies and best practices for POPs reduction.
Expected start date:		Actual start date:	September 2009
Planned completion date:	November 2013	Actual completion date:	June 2017
Planned project budget at approval:	\$ 7,125,246 (includes project preparation costs and co-financing)	Actual total expenditures reported as of June 2017:	\$ 3,519,558
GEF grant allocation:	\$ 3,460,296	GEF grant expenditures	\$ 3,420,296.00

¹ Source: Prodoc and GEF PIR Fiscal Year 16

		reported as of June 2017:	
Project Preparation Grant - GEF financing:	\$ 384,000	Project Preparation Grant - co-financing:	\$ 314,000
Expected Project co-financing:	\$ 2,966,950	Secured Project co-financing:	\$ 2,966,950
First disbursement:	15 April, 2009	Date of financial closure:	31.03.2019
No. of revisions:	3	Date of last revision:	13/12/2016 (no-cost extension)
No. of Steering Committee meetings:	2	Date of last/next Steering Committee meeting:	Last: 2-3 June 2016
Mid-term Review/ Evaluation (planned date):	June 2011	Mid-term Review:	December 2014
Terminal evaluation (planned date):	June 2017	Terminal Evaluation (actual date):	February 2018
Coverage - Country(ies):	Ethiopia, Eritrea and Madagascar	Coverage - Region(s):	Africa
Dates of previous project phases:	(GF/2732-02-4483) Prevention of human and Environment Exposure to DDT and other Toxic Pesticides and Strengthening Malaria Control in Africa	Status of future project phases:	DDT AFRO 2 project (started in 2017)

2. **Project Background and Rationale**

Malaria is considered as a major public health problem and obstacle to socio-economic development in most tropical countries. It is estimated that 80-90% of the global annual malaria cases (300 million) and deaths (1 million) occur in Africa. In sub-Saharan Africa alone, it is estimated that malarial mortality among children is in the range of 430,000 and 680,000 per year.

One of the elements of the Global Malaria Control strategy is vector control, aimed at killing mosquitoes through Indoor Residual house Spraying (IRS). This involves infrequent spraying with insecticides inside human habitations to reduce mosquito lifespan and density, thereby reducing malaria transmission and the prevention of epidemics. DDT (Dichloro-diphenyl-trichloroethane), which was developed in the 1940s, is known as the first synthetic insecticide. It is also one of the twelve (12) insecticides recommended by the World Health Organization (WHO) for use in Indoor Residual house Spraying and has been in use in several countries in the World as an effective way of obtaining large-scale benefits at affordable cost. DDT was initially used with great effect to combat malaria, typhus and other insect-borne diseases, as well as insect control in crop and livestock production and in homes and gardens.

Although DDT is effective in vector control, continued exposure threatens both biodiversity and human health. DDT is listed as a persistent organic pollutant (POP) under Annex B of the Stockholm Convention (signed in 2001 and in effect since 2004). Like the other POPs, DDT poses significant global risks because it is toxic, bioaccumulates in the food chain, and is susceptible to long-range environmental transport (via air and water). Countries need DDT for insecticide resistance management particularly now when resistance against pyrethroids, the most affordable insecticide next to DDT, is wide spread. It is with this background that the Stockholm Convention stipulated the use of DDT for disease vector control until when affordable and equally effective alternative tool is made available to national malaria control programs (NMCPs).

Under the Stockholm Convention, its production and/or use is currently restricted to selective and targeted vector control in accordance with World Health Organization (WHO) recommendations and guidelines. Countries that are party to the Convention can produce and/or use DDT for disease vector control when locally safe, effective and affordable alternatives are not available. Parties are required to notify the Secretariat of such production, or use, or intention to use DDT.

An integrated vector management (IVM) approach has been promoted in the planning and selection of alternative methods for vector control. Implementation of IVM is intended to, inter alia, lead to reduced reliance

on insecticides for public health protection applications. Since the initiation of the IVM process by WHO in 2001, countries are willing to implement IVM, however this requires selection of appropriate vector control methods that can be applied in a well-defined area having specific and well-defined epidemiological conditions. DDT-using countries in Africa, for the most part, have however not been able to appropriately assess and adopt alternatives to DDT that would be similarly, or more, effective, affordable and sustainable.

This project is part of the collaborative endeavour to demonstrate effectiveness of potential alternative insecticides and other tools to reduce reliance of national malaria control programs on DDT. The project was designed to be implemented in a number of demonstration districts in three project countries, namely **Ethiopia, Eritrea and Madagascar**. The project strategy was to enhance the capacity of the participating countries to effectively plan, implement, monitor and evaluate vector control interventions which are not relying on DDT. It tries to demonstrate cost-effective, environmentally sound, and locally appropriate alternatives to DDT, ensuring their sustainable use through strengthened national and local capacity for malaria control.

The demonstration of alternative interventions requires the improvement and strengthening of existing control efforts; because the participating countries have already initiated a series of interventions for malaria vector control, the project adds to the existing baseline activities to apply alternatives to DDT for malaria vector control, while expanding and enhancing the existing capacity to review, select and implement such alternatives. At the time of the project design the DDT vector control baselines in the project countries were as follows:

Ethiopia DDT baseline data: Since 1960 malaria control in Ethiopia has generally been implemented by using IRS with DDT for reducing the life span of vector mosquitoes. This has involved the use of approximately 360 tons of DDT annually.

Madagascar DDT baseline data: In Madagascar, after severe malaria epidemics in highland areas in 1987, DDT was re-introduced for vector control. This use of DDT gradually decreased from 208 tonnes in 1993 to 60 tonnes in 2002. At the time, in case of serious malaria outbreaks, the annual estimated need of DDT was about 200 tons/year in Madagascar.

Eritrea DDT use baseline data: Depending on the epidemiological situations, the DDT use in Eritrea varied between 7 and 30 tons annually.

Selective and targeted vector control should be based on sound knowledge of the prevailing local epidemiological and social situations. Planning and implementation of evidence-based vector control interventions in an integrated manner where and when most appropriate require selection of methods that can be applied in areas having specific and well-defined environmental and epidemiological conditions for maximum impact. These interventions need to be selected based on evidences at the program level and should be evaluated ecologically, entomologically and epidemiologically to inform program on the need for changes in the objectives of vector control programmes over time as the epidemiology of the disease changes. The project therefore enhances the capacity of the participating countries to effectively plan, implement, monitor and evaluate vector control interventions that do not involve a short-sighted use of DDT with its long term negative side effects.

3. Project objectives and components

The project has both short- and long-term objectives. The short-term objective of the project was to demonstrate cost-effective, environmentally sound, and locally appropriate alternatives to DDT use in malaria control, ensuring their sustainable application through strengthened national and local capacity. In the long term, the project aims to contribute towards countries' effort to diversify vector control tools and move away from traditional method of blanket house spraying to selective vector control approaches. This is to be achieved through the following specific objectives:

- a) To strengthen the capacity for malaria diagnosis, treatment and vector control in project districts, particularly for emergency malaria occurrence that may be associated with introduction of alternatives;
- b) To strengthen national and local capacities for planning, monitoring and evaluation of vector control interventions;
- c) To strengthen national reference centres to support the implementation of alternative malaria control interventions;
- d) To design, implement, monitor and evaluate studies that will assess the cost effectiveness and sustainability of alternative interventions;
- e) To strengthen community participation and mobilization to support the sustainable implementation of alternative interventions;
- f) To strengthen pesticide management practices that will prevent the accumulation of DDT and other toxic pesticides in stockpiles and reduce the development of vector resistance;
- g) To assess the potential risks to human health of alternative, non-POP, insecticides; and
- h) To disseminate information on the best alternative malaria vector control methods for wider application.

The project was designed around four (4) project components:

Component 1. Strengthening of national and local capacities for malaria control. The implementation of IVM for the control of malaria and reducing the release of DDT require the human resources and technical capacity to implement evidence-based alternative interventions. This component aimed to address the capacity needs of the participating countries in development and implementation of effective alternative malaria vector control interventions were lacking.

Component 2. Implementation of alternative methods of malaria vector control tailored to local circumstances. This component represents the core of the project. The component was to be implemented in ten (10) districts within the territory of the three participating countries. Major sub-activities include the development of an Integrated Malaria Information System (IMIS) for the purpose of case surveillance, data entry and management. It was to provide a basis for identifying patterns in malaria incidence and clustering, determine the risk factors associated with disease clustering, and ensure implementing, monitoring and evaluation of malarial control measures. The pilot districts are listed below:

Eritrea	Anseba, Debud, Gash Barka
Ethiopia	Adama, Kafta, Humera, Sodo, Tach Armachiho
Madagascar	Anjozorobe, Ambalavo, Vatomaniry

Component 3. Management and use of DDT and other public health pesticides. Participating countries were expected to continue to use DDT, as appropriate, in non-project districts during the five-year period of project implementation. Regulations governing the use of DDT and other pesticides were to be put in place and enforced. The component was designed to ensure that the import, packaging, registration, transport and storage of DDT and other public health pesticides was done according to WHO pesticide management guidelines and the provisions of the Stockholm Convention on POPs.

Component 4. Transboundary information exchange and technical support. Transboundary information exchange and expertise is needed to promote IVM and manage vector control programmes at local levels. The lack of integration with other sectors, including Agriculture and Environment, was identified as a factor inhibiting the implementation of IVM. This component aimed to address the need for coordination among different sectors to support implementation of the Stockholm Convention.

Component 5. Project Management. Component five was to cover the project management and Monitoring and evaluation aspects of the project.

4. **Executing Arrangements**

UNEP is the GEF **Implementing Agency** for this project and the **Executing Agency** is the World Health Organisation (WHO) Regional Office for Africa. WHO provided a part-time **Project Manager** based at the AFRO office in Brazzaville for the duration of the project.

A **Regional Steering Committee** (RSC) was to be established based largely on a similar committee established during the project preparation phase. The RSC purpose was to act as the highest supervisory organ of the project. It was to comprise of the **Regional Project Coordinator**, representing the participating countries, WHO/AFRO (Project Manager), UNEP (Task Manager, GEF Unit/GEF Chemical portfolio), System-wide Initiative on Malaria and Agriculture (SIMA) - International Centre of Insect Physiology and Ecology (ICIPE), and specific regional research institutions. The Committee was required to meet at least once a year to review progress and provide guidance on project implementation.

The **National Steering Committees** (NSCs) that were established during the project preparation phase were to continue to provide guidance on the implementation of the project at national levels. The **National Project Coordinator** and the relevant district project officer were to also participate. The NSCs were linked to country National Implementation Plan (NIPs) development through the inclusions of each national NIP project coordinator on respective NSCs to ensure cross-linkages and mutual benefits. NSC meetings were to be held twice per year in each of the participating countries and opportunities for bilateral and/or multilateral collaboration were to be explored.

Wherever necessary, project managers and other specialists from other DDT projects from other regions were to be invited to participate in meetings and/or activities, such as Regional Project Steering Committee or special technical meetings, so that mutual learning and exchange of lessons learnt would be facilitated on an inter-regional scale.

5. **Project Cost and Financing.**

Table 2 presents a summary of the overall project cost at the design (component-specific budgets are available in the project document).

Table 2. Project budget at design – AFRO 1

GEF funding:	GEF project funding	\$3,460,296
	PDF A	\$0
	PDF-B	\$384,000

SUB TOTAL GEF	\$3,844,296
CO-Financing:	
Governments in-kind & cash:	\$1,055,525
Contributions from other organisations:	
The World Health Organization	\$1,556,425
Roll Back Malaria	\$300,000
International Centre for Insect Physiology and Ecology & System Wide Initiative of Malaria in Agriculture (ICIPE/SIMA)	\$55,000
PDF-B Co-financing	\$314,000
SUB TOTAL CO-FINANCING	\$3,280,950
TOTAL PROJECT COST + PDF-B	\$7,125,246

6. Implementation issues.

Resistance of the malaria vectors to the available insecticides is on the increase. Countries need DDT for insecticide resistance management particularly now when resistance against pyrethroids, the most affordable insecticide next to DDT, is wide spread. The project reported that a major challenge was that a significant amount of time was spent on baseline data collection as the vector control interventions in Ethiopia and Madagascar were being transformed in response to the appearance and expansion of insecticide resistance, and also in response to changing malaria epidemiology. This left limited time for application of the actual alternative interventions in order to compare the pre- and post-alternative implementation malaria situation.²

In Madagascar, cultural factors impacted to some extent on the implementation of information-education-communication/behavioural change communication (IEC-BCC) strategy for malaria control and limited their impact. Environmental conditions also presented a substantial risk to the implementation of the DDT AFRO I project; some project locations especially in Ethiopia and Madagascar were difficult to reach due to weather conditions. This contributed to unexpectedly high cost of travel for field surveys.

Other risks identified by the project in their progress reports include: 1) work flow issues, such as due to delay in funds transfers; 2) changes in IRS policies in Ethiopia; 3) issues of incentives for district staff involved in implementation of activities; 4) timely availability of required materials and supplies; and 5) challenges in setting up basic information and communication systems (GIS, email, etc.) and collecting geo-referenced data.

Section 2. OBJECTIVE AND SCOPE OF THE EVALUATIONS

7. Key Evaluation principles

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

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

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.

Communicating evaluation results. 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

² Project Implementation Review (PIR) for 2015-2016)

lessons. Clear and concise writing is required on all evaluation deliverables. Draft and final versions of the main evaluation report will be shared with key stakeholders by the Evaluation Manager. There may, however, be several intended audiences, each with different interests and needs regarding the report. The Evaluation Manager will plan with the consultant(s) which audiences to target and the easiest and clearest way to communicate the key evaluation findings and lessons to them. This may include some or all of the following: a webinar, conference calls with relevant stakeholders, the preparation of an evaluation brief or interactive presentation.

8. Objective of the Evaluation

In line with the UNEP Evaluation Policy³ and the UNEP Programme Manual⁴, the Terminal Evaluation (TE) is undertaken at completion of the project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UNEP and WHO as well as the country level partners. Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation of follow on projects (such as AFRO II).

9. Key Strategic Questions

In addition to the evaluation criteria outlined in Section 8 below, the evaluations will address the **strategic questions** listed below. These are questions of interest to UNEP and to which the project is believed to be able to make a substantive contribution:

- (a) Pertaining to attribution, to what extent can the project be credited with having led to a reduction of DDT use for malaria control in the participating countries through the establishment of alternative malaria control strategies in these areas?
- (b) What are some of the key results and experiences identified by the evaluation that could help provide strategic guidance to DDT phase-out work in Africa and the Global DSSA Programme⁵?
- (c) To what extent were synergies built between UNEP and WHO cooperation and what are some of the possible lessons for future projects that integrate health and environment?
- (d) From the analysis of the project's impact pathway, to what extent were the most critical assumptions, drivers and duty bearers in the change process found to hold and have these been considered in the DDT AFRO II project?
- (e) In consideration of environmental and social safeguards, has the evaluation identified any unintended environmental or socio-economic impacts (positive or negative) in the project's demonstrations conducted in the field (pilot districts)?

10. Evaluation Criteria

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

A. Strategic Relevance

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

i. Alignment to the UNEP Medium Term Strategy⁶ (MTS) and Programme of Work (POW)

³ <http://www.unep.org/eou/StandardsPolicyandPractices/UNEPevaluationPolicy/tabid/3050/language/en-US/Default.aspx>

⁴ http://www.unep.org/OAS/Documents/UNEP_Programme_Manual_May_2013.pdf. This manual is under revision.

⁵ Demonstrating and Scaling-up of Sustainable Alternatives to DDT in Vector Management Global Programme

⁶ UN Environment's Medium-Term Strategy (MTS) is a document that guides UN Environment's programme planning over a four-year period. It identifies UN Environment's thematic priorities, known as Sub-programmes (SP), and sets out the desired outcomes, known as Expected Accomplishments (EAs), of the Sub-programmes.

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

ii. Alignment to UNEP /GEF/Donor Strategic Priorities

Donor, including GEF, strategic priorities will vary across interventions. UNEP strategic priorities include the Bali Strategic Plan for Technology Support and Capacity Building⁷ (BSP) and South-South Cooperation (S-SC). The BSP relates to the capacity of governments to: comply with international agreements and obligations at the national level; promote, facilitate and finance environmentally sound technologies and to strengthen frameworks for developing coherent international environmental policies. S-SC is regarded as the exchange of resources, technology and knowledge between developing countries. GEF priorities are specified in published programming priorities and focal area strategies.

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

The evaluation will assess the extent to which the intervention is suited, or responding to, the stated environmental concerns and needs of the countries, sub-regions or regions where it is being implemented. Examples may include: national poverty plans, National Implementation Plan on POPs, national/regional Malaria control strategies etc.

iv. Complementarity with Existing Interventions

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

Factors affecting this criterion may include: stakeholders' participation and cooperation; responsiveness to human rights and gender equity and country ownership and driven-ness.

B. Quality of Project Design

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

Factors affecting this criterion may include (at the design stage): stakeholders participation and cooperation and responsiveness to human rights and gender equity, including the extent to which relevant actions are adequately budgeted for.

C. Nature of External Context

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

D. Effectiveness

The evaluation will assess effectiveness across three dimensions: achievement of outputs, achievement of direct outcomes and likelihood of impact.

Achievement of Outputs

The evaluation will assess the project's success in producing the programmed outputs (products and services delivered by the project itself) and achieving milestones as per the project design document (ProDoc). Any formal modifications/revisions made during project implementation will be considered part of the project design. Where the project outputs are inappropriately or inaccurately stated in the ProDoc, a table should, for transparency, be provided showing the original formulation and the amended version. The achievement of outputs will be assessed in terms of both quantity and quality, and the assessment will consider their usefulness

⁷ <http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf>

and the timeliness of their delivery. The evaluation will briefly explain the reasons behind the success or shortcomings of the project in delivering its programmed outputs and meeting expected quality standards.

Factors affecting this criterion may include: preparation and readiness and quality of project management and supervision⁸.

Achievement of Direct Outcomes

The achievement of direct outcomes is assessed as performance against the direct outcomes as defined in the reconstructed⁹ Theory of Change (TOC). These are the first-level outcomes expected to be achieved as an immediate result of project outputs. A table can be used where substantive amendments to the formulation of direct outcomes as necessary. The evaluation should report evidence of attribution between UNEP's intervention and the direct outcomes. In cases of normative work or where several actors are collaborating to achieve common outcomes, evidence of the nature and magnitude of UNEP's contribution should be included.

Factors affecting this criterion may include: quality of project management and supervision; stakeholders' participation and cooperation; responsiveness to human rights and gender equity and communication and public awareness.

Likelihood of Impact

Based on the articulation of longer term effects in the reconstructed TOC (i.e. from direct outcomes, via intermediate states, to impact), the evaluation will assess the likelihood of the intended, positive impacts becoming a reality. Project objectives or goals should be incorporated in the TOC, possibly as intermediate states or long term impacts. The Evaluation Office's approach to the use of TOC in project evaluations is outlined in a guidance note available on the EOU website, web.unep.org/evaluation and is supported by an excel-based flow chart called, Likelihood of Impact Assessment (see Annex 1). Essentially the approach follows a 'likelihood tree' from direct outcomes to impacts, taking account of whether the assumptions and drivers identified in the reconstructed TOC held. Any unintended positive effects should also be identified and their causal linkages to the intended impact described.

The evaluation will also consider the likelihood that the intervention may lead, or contribute to, unintended negative effects. Some of these potential negative effects may have been identified in the project design as risks or as part of the analysis of Environmental, Social and Economic Safeguards.¹⁰

The evaluation will consider the extent to which the project has played a catalytic role or has promoted scaling up and/or replication¹¹ as part of its Theory of Change and as factors that are likely to contribute to longer term impact. Ultimately UNEP and all its partners aim to bring about benefits to the environment and human well-being. Few projects are likely to have impact statements that reflect such long-term or broad-based changes. However, the evaluation will assess the likelihood of the project to make a substantive contribution to the high-level changes represented by UNEP's Expected Accomplishments, the Sustainable Development Goals¹² and/or the high level results prioritised by the funding partner.

Factors affecting this criterion may include: quality of project management and supervision, including adaptive project management; stakeholders' participation and cooperation; responsiveness to human rights and gender equity; country ownership and driven-ness and communication and public awareness.

E. Financial Management

Financial management will be assessed under three broad themes: completeness of financial information, communication between financial and project management staff and compliance with relevant UN financial management standards and procedures. The evaluation will establish the actual spend across the life of the

⁸ In some cases 'project management and supervision' will refer to the supervision and guidance provided by UN Environment to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping provided by UN Environment.

⁹ UN Environment staff are currently required to submit a Theory of Change with all submitted project designs. The level of 'reconstruction' needed during an evaluation will depend on the quality of this initial TOC, the time that has lapsed between project design and implementation (which may be related to securing and disbursing funds) and the level of any changes made to the project design. In the case of projects pre-dating 2013 the intervention logic is often represented in a logical framework and a TOC will need to be constructed in the inception stage of the evaluation.

¹⁰ Further information on Environmental, Social and Economic Safeguards (ESES) can be found at <http://www.unep.org/about/eses/>

¹¹ Scaling up refers to approaches being adopted on a much larger scale, but in a very similar context. Scaling up is often the longer term objective of pilot initiatives. Replication refers to approaches being repeated or lessons being explicitly applied in new/different contexts e.g. other geographic areas, different target group etc. Effective replication typically requires some form of revision or adaptation to the new context. It is possible to replicate at either the same or a different scale.

¹² A list of relevant SDGs is available on the EO website www.unep.org/evaluation

project of funds secured from all donors. This expenditure will be reported, where possible, at output level and will be compared with the approved budget. The evaluation will assess the level of communication between the Task Manager and the Fund Management Officer as it relates to the effective delivery of the planned project and the needs of a responsive, adaptive management approach. The evaluation will consider the application of proper financial management standards and adherence to UNEP's financial management policies to extent possible. Any financial management issues that have affected the timely delivery of the project or the quality of its performance will be highlighted.

Factors affecting this criterion may include: preparation and readiness and quality of project management and supervision.

F. Efficiency

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

The evaluation will give special attention to efforts by the project team to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. to increase project efficiency. The evaluation will also consider the extent to which the management of the project minimised UNEP's environmental footprint.

Factors affecting this criterion may include: preparation and readiness (e.g. timeliness); quality of project management and supervision and stakeholders' participation and cooperation.

G. Monitoring and Reporting

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

Monitoring Design and Budgeting

Each project should be supported by a sound monitoring plan that is designed to track progress against SMART¹³ indicators towards the achievement of the project's outputs and direct outcomes, including at a level disaggregated by gender or groups with low representation. The evaluation will assess the quality of the design of the monitoring plan as well as the funds allocated for its implementation. The adequacy of resources for mid-term and terminal evaluation/review should be discussed if applicable.

Monitoring of Project Implementation

The evaluation will assess whether the monitoring system was operational and facilitated the timely tracking of results and progress towards project objectives throughout the project implementation period. It will also consider how information generated by the monitoring system during project implementation was used to adapt and improve project execution, achievement of outcomes and ensure sustainability. The evaluation should confirm that funds allocated for monitoring were used to support this activity.

Project Reporting

Projects funded by GEF have specific evaluation requirements with regard to verifying documentation and reporting (i.e. the Project Implementation Reviews, Tracking Tool and CEO Endorsement template¹⁴), which will be made available by the Task Manager. The evaluation will assess the extent to which both UNEP and donor reporting commitments have been fulfilled.

Factors affecting this criterion may include: quality of project management and supervision and responsiveness to human rights and gender equity (e.g. disaggregated indicators and data).

H. Sustainability

Sustainability is understood as the probability of direct outcomes being maintained and developed after the close of the intervention. The evaluation will identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of achieved direct outcomes. Some factors of sustainability may be embedded in the project design and implementation approaches while others may be contextual circumstances

¹³ SMART refers to indicators that are specific, measurable, assignable, realistic and time-specific.

¹⁴ The Evaluation Consultant(s) should verify that the annual Project Implementation Reviews have been submitted, that the Tracking Tool is being kept up-to-date and that in the CEO Endorsement template Table A and Section E have been completed.

or conditions that evolve over the life of the intervention. Where applicable an assessment of bio-physical factors that may affect the sustainability of direct outcomes may also be included.

Socio-political Sustainability

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

Financial Sustainability

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

Institutional Sustainability

The evaluation will assess the extent to which the sustainability of project outcomes is dependent on issues relating to institutional frameworks and governance. It will consider whether institutional achievements such as governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. are robust enough to continue delivering the benefits associated with the project outcomes after project closure.

Factors affecting this criterion may include: stakeholders' participation and cooperation; responsiveness to human rights and gender equity (e.g. where interventions are not inclusive, their sustainability may be undermined); communication and public awareness and country ownership and driven-ness.

I. Factors and Processes Affecting Project Performance

These factors are rated in the ratings table, but are discussed as cross-cutting themes as appropriate under the other evaluation criteria, above.

Preparation and Readiness

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

Quality of Project Implementation and Execution

Specifically for GEF funded projects, this factor refers separately to the performance of the executing agency and the technical backstopping and supervision provided by UNEP, as the implementing agency.

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

Stakeholder Participation and Cooperation

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

Responsiveness to Human Rights and Gender Equity

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

The report should present the extent to which the intervention, following an adequate gender analysis at design stage, has implemented the identified actions and/or applied adaptive management to ensure that Gender Equity and Human Rights are adequately taken into account. In particular, the evaluation will consider to what extent project design (section B), the implementation that underpins effectiveness (section D), and monitoring (section G) 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; (iii) the role of women in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation.

Country Ownership and Driven-ness

The evaluation will assess the quality and degree of engagement of government / public sector agencies in the project. The evaluation will consider the involvement not only of those directly involved in project execution and those participating in technical or leadership groups, but also those official representatives whose cooperation is needed for change to be embedded in their respective institutions and offices. This factor is concerned with the level of ownership generated by the project over outputs and outcomes and that is necessary for long term impact to be realised. This ownership should adequately represent the needs and interests of all gender and marginalised groups.

Communication and Public Awareness

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

Section 3. EVALUATION APPROACH, METHODS AND DELIVERABLES

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

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

- (a) A **desk review** of:
 - Relevant background documentation, inter alia relevant country programmes and strategies (NIPs and malaria programme documents at country level); relevant UNEP, WHO and GEF programme guidelines and strategies;
 - Project design documents (including minutes of the project design review meeting at approval); Annual Work Plans and Budgets, revisions to the project (Project Document Supplement), the logical framework;
 - Project reports such as six-monthly progress and financial reports, progress reports from collaborating partners, meeting minutes, relevant correspondence and including the Project Implementation Reviews, and Tracking Tool etc.;
 - Project outputs: technical reports, evidence concerning capacity building/training events (agendas and participant lists), academic articles, presentations or other communications tools, studies, publications and any other relevant documented outputs;
 - Mid-Term review and terminal report of the project;
- (b) **Interviews** (individual or in group) with:

- UNEP Task Manager and other relevant staff;
 - UNEP, Head of Chemicals and Health Branch
 - UNEP Project Fund Management Officer (FMO);
 - Project management team (WHO);
 - Sub-Programme Coordinator (Chemicals and Waste)
 - Regional Coordinator for Chemicals, Waste and Air Quality, Africa Office
 - National Project coordinators from the three countries, Steering committee members (regional and national), representatives from relevant government ministries, Project partners e.g. Roll Back Malaria (RBM) and ICIPE/SIMA,
 - Other relevant resource persons.
- (c) **Surveys** (to be determined in inception stage)
- (d) **Field visits** this will include a visit to 1-2 of the AFRO I countries, based on meeting arrangements confirmed during the evaluation inception stage
- (e) **Other data collection tools/approaches** as may be deemed appropriate and beneficial

Evaluation Deliverables and Review Procedures

The evaluation team will prepare:

- i) **Inception Report:** (see Annex 1 for links to all templates, tables and guidance notes) containing an assessment of project design quality, a draft reconstructed Theory of Change of the project, project stakeholder analysis, evaluation framework and a tentative evaluation schedule.
- ii) **Preliminary Findings Note:** typically, in the form of a Powerpoint presentation, the sharing of preliminary findings is intended to support the participation of the project team, act as a means to ensure all information sources have been accessed and provide an opportunity to verify emerging findings.
- iii) **Draft and Final Evaluation Report:** (see links in Annex 1) containing an executive summary that can act as a stand-alone document; detailed analysis of the evaluation findings organised by evaluation criteria and supported with evidence; lessons learned and recommendations and an annotated ratings table.
- iv) **Evaluation Brief:** a 2-page summary of key evaluation findings and lessons learned for wider dissemination through the EOU website.

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

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

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

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

The Evaluation Consultant

For this evaluation process, the evaluation team will consist of an evaluation consultant, working under the overall responsibility of the Evaluation Office represented by an Evaluation Manager (Martina Bennett), in consultation with the UNEP Task Manager (Ms. Eloise Touni), Fund Management Officer (Ms. Anuradha

Shenoy), and the Sub-programme Coordinator of the Chemicals and Waste sub-programme. The evaluation consultant will liaise with the Evaluation Manager on any procedural and methodological matters related to the evaluation. It is, however, the consultant's individual responsibility to arrange for their visas and immunizations as well as to plan meetings with stakeholders, organize online surveys, obtain documentary evidence and any other logistical matters related to the assignment. The UNEP Task Manager and project team will, where possible, provide logistical support (introductions, meetings etc.) allowing the consultants to conduct the evaluation as efficiently and independently as possible.

The evaluation consultant will be hired for over the period April 2019 to September 2019 and should have an advanced degree in environmental sciences or other relevant area; a minimum of 15 years of technical experience including work on POPs, pesticide management and environmental risk assessment; evaluation of large, regional or global programmes preferably by using a Theory of Change approach; a broad understanding of DDT and malaria control; sufficient regional knowledge; excellent communication (including writing) skills in English; a working knowledge of French is considered an advantage; and if possible, knowledge of the work of UNEP and/or WHO.

The evaluation consultant will ensure that all evaluation criteria and questions are adequately covered. Detailed guidelines for Consultants can be found on the Evaluation Office website: (<https://www.unenvironment.org/about-un-environment/evaluation>).

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

Inception phase of the evaluation, including:

- preliminary desk review and introductory interviews with project staff;
- draft the reconstructed Theory of Change of the project;
- prepare the evaluation framework;
- develop the desk review and interview protocols;
- draft the survey protocols (if relevant);
- develop and present criteria for country and/or site selection for the evaluation mission;
- plan the evaluation schedule;
- prepare the Inception Report, incorporating comments until approved by the Evaluation Manager

Data collection and analysis phase of the evaluation, including:

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

Reporting phase, including:

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

Managing relations, including:

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

Schedule of the evaluation

The table below presents the tentative schedule for the evaluation.

Table 3. Tentative schedule for the evaluation(s)

Milestone	Deadline
Contract start	08 April 2019
Inception Meeting (Skype)	05 April 2019
Inception Desk Review and Interviews	8-28 April 2019
Inception report draft submission	29 April 2019
Inception report final submission	09 May 2019
Evaluation mission (1-2 countries)	May/June 2019
Additional data collection and interviews	June 2019
Presentation of preliminary findings and recommendations	30 June 2019
Draft report to Evaluation Office	15 July 2019
Draft Report shared with UNEP Project Manager and team	August 2019
Draft Report shared with wider group of stakeholders	September 2019
Final Terminal Evaluation Report submission	03 October 2019

Contractual Arrangements

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

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

Schedule of Payment for the Team Leader:

Deliverable	Percentage Payment
Approved Inception Report (as per annex document 7)	30%
Approved Draft Main Evaluation Report (as per annex document 13)	40%
Approved Final Main Evaluation Report	30%

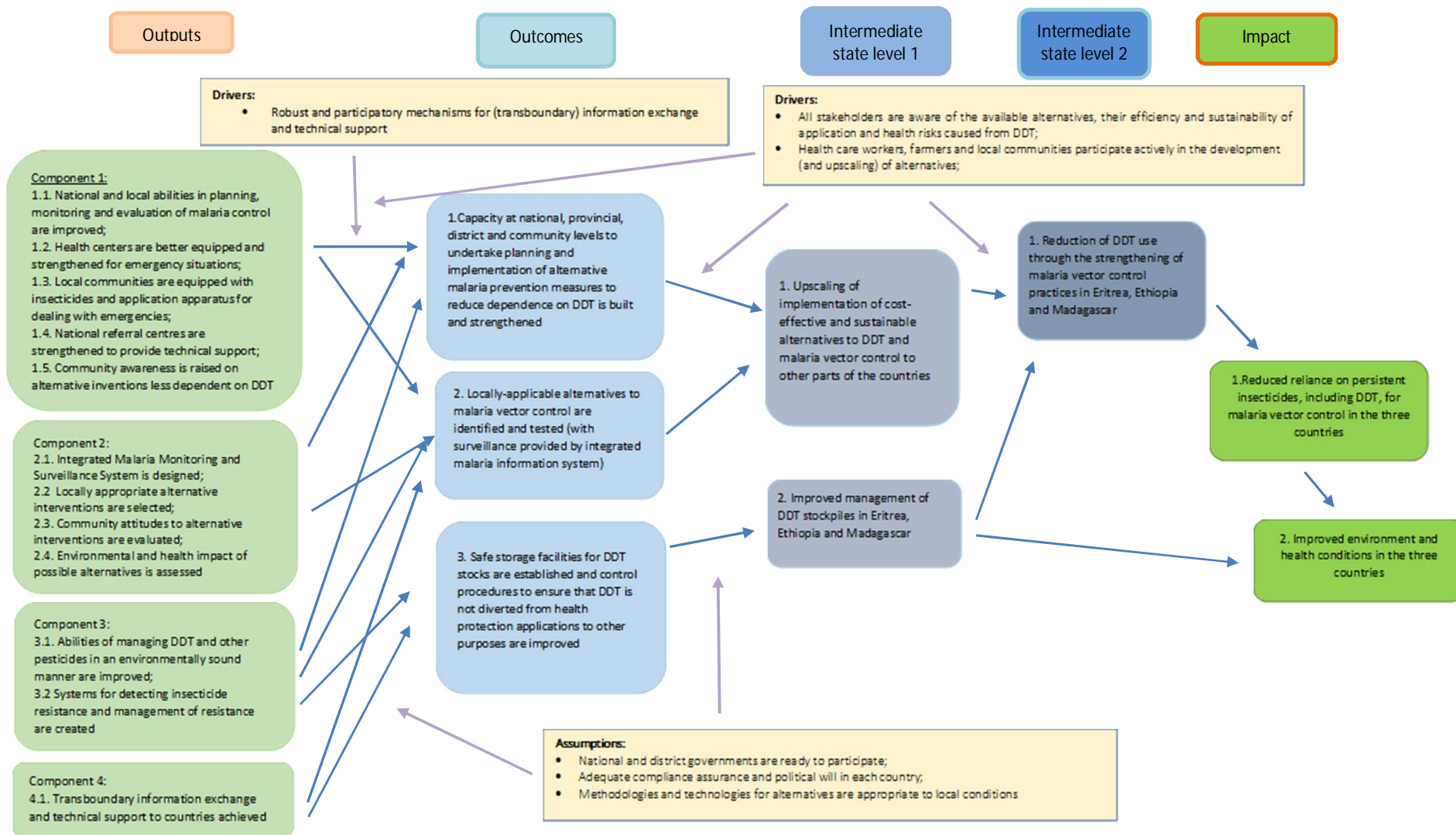
Fees only contracts: Air tickets will be purchased by UNEP and 75% of the Daily Subsistence Allowance for each authorised travel mission will be paid up front. Local in-country travel will only be reimbursed where agreed in advance with the Evaluation Office and on the production of acceptable receipts.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

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

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

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

Annex II. ToC at design (developed based on the ProDoc) and comparison table:



Project Document		Reconstructed TOC		Justification for reconstruction
		Long Term Impact	<p>LTI 1: Reduced reliance on persistent insecticides, including DDT, for malaria vector control in the three countries;</p> <p>LTI 2: Improved environment and health conditions in the three countries.</p>	Upscaling of alternatives to DDT and IVM practices (IS 1.1) will lead to reduction of use of DDT (IS 2.1). In the long-term this will result in a reduced reliance on DDT and therefore improved environmental and health conditions. Improved management of DDT stockpiles (IS 1.2) is also expected to lead to a reduced reliance on DDT and to better environmental and health conditions in the three countries.
Overall Development Objective	Reduction of DDT use and the elimination of DDT stockpiles through the strengthening of malaria vector control practices in Eritrea, Ethiopia, Madagascar	Intermediate States (IS)	<p>IS 1.1: Upscaling of implementation of cost-effective and sustainable alternatives to DDT and malaria vector control to other parts of the countries.</p> <p>IS 1.2: Improved management of DDT stockpiles in Eritrea, Ethiopia and Madagascar.</p> <p>IS 2.1: Reduction of DDT use through the strengthening of malaria vector control practices in Eritrea, Ethiopia and Madagascar.</p>	The ProDoc did not contain a ToC as at the time it was not a requirement. The overall development objective of the log frame aimed at reduction of DDT use, improved DDT management and improved malaria vector control practices (IVM). These three aspects of the development objective are reflected in the Intermediate States of the ToC. The overall project objective as defined in the ProDoc has been reflected in IS 1.1.
Overall Project Objective/Purpose	To demonstrate cost-effective, environmentally sound, and locally appropriate alternatives to DDT use in malaria control, ensuring their sustainable application through strengthened national and local capacity			
Outcomes (in ProDoc log frame)	Outcome 1: Capacity at national, provincial, district and community levels to undertake planning and implementation of alternative malaria prevention measures	Outcomes	Outcome 1: Capacity at national, provincial, district and community levels to undertake planning and implementation of alternative malaria prevention measures to reduce dependence on DDT	Three outcomes were defined in the log frame of the ProDoc. These outcomes have been used also for the ToC (slightly rephrased to make

Project Document		Reconstructed TOC		Justification for reconstruction
	to reduce dependence on DDT. Outcome 2: Identification of successful locally-applicable alternatives to malaria vector control with surveillance provided by integrated malaria information system. Outcome 3: Safe storage facilities for DDT stocks and control procedures to ensure that DDT is not diverted from health protection applications to other purposes.		is built and strengthened; Outcome 2: Successful Locally-applicable alternatives to malaria vector control are identified and tested (with surveillance provided by integrated malaria information system); Outcome 3: Safe storage facilities for DDT stocks are established and control procedures to ensure that DDT is not diverted from health protection applications to other purposes are improved.	the outcomes more clear).
Outputs (Outcomes in ProDoc narrative)	<ul style="list-style-type: none"> - 1.1.: National and local capacities in planning, monitoring and evaluation of malaria control are strengthened; - 1.2.: Health centres are strengthened for emergency situations; - 1.3: Local communities are equipped with insecticides and application apparatus for dealing with emergencies; - 1.4.: National referral centres are strengthened to provide technical support; - 1.5: Community awareness is raised on alternative inventions less dependent on DDT; - 2.1.: Integrated Malaria Monitoring and Surveillance System is developed; - 2.2.: Locally appropriate alternative interventions are implemented; 	Outputs	<ul style="list-style-type: none"> - 1.1.: National and local capacities in planning, monitoring and evaluation of malaria control are strengthened; - 1.2: Health centres are better equipped and strengthened for emergency situations; - 1.3: Local communities are equipped with insecticides and application apparatus for dealing with emergencies; - 1.4.: National referral centres are strengthened to provide technical support; - 1.5: Community awareness is raised on alternative inventions less dependent on DDT; - 2.1: Integrated Malaria Monitoring and Surveillance System is launched; - 2.2: Locally appropriate alternative interventions are selected; - 2.3.: Community attitudes to alternative interventions are evaluated; - 2.4.: Environmental and health impact of alternatives is assessed; - 3.1: Abilities of managing DDT and other pesticides in 	<p>No outputs were defined in the original ProDoc. However, the outcomes 1.1 to 5.1 as described in the narrative text of the ProDoc could be defined as outputs, when defining outputs as "gains in knowledge, abilities and awareness of individuals or within institutions, or the availability of new products and services that result from the completion of activities (for intended beneficiaries)". (There are "results" in the ProDoc log frame that could be outputs, but some are unclear and/or a duplication of the outcomes in the narrative text of the ProDoc.)</p> <p>The ProDoc narrative outcomes 1.1 to 5.1 are therefore mentioned in the ToC under outputs. Some of these outcomes have been slightly</p>

Project Document		Reconstructed TOC		Justification for reconstruction
	<ul style="list-style-type: none"> - 2.3.: Community attitudes to alternative interventions are evaluated; - 2.4.: Environmental and health impact of alternatives is assessed; - 3.1.: DDT and other pesticides are managed in an environmentally sound manner; - 3.2.: Systems for detecting insecticide resistance and management of resistance are created; - 4.1: Transboundary information exchange and technical support to countries achieved; - 5.1.: Project management structure is established. 		<ul style="list-style-type: none"> an environmentally sound manner are improved; - 3.2.: Systems for detecting insecticide resistance and management of resistance are created; - 4.1: Transboundary information exchange and technical support to countries achieved. 	rephrased (to make sure that they are in line with the definition of an output mentioned above) and used in the ToC, except for outcome 5.1, which belongs to the more operational component of project management.

Annex III. Evaluation itinerary and overview of stakeholders interviewed

People consulted:

Name	Organisation	Function/role in project
Birkinesh Amenesheva	WHO Regional Office	Regional project Coordinator
Eloise Touni	UNEP	Task manager
Emmanuel Chanda	WHO Regional Office	National project coordinator for Eritrea
Martina Bennett	UNEP	Evaluation Manager
Anuradha Shenoy	UNEP	FMO
Kevin Helps	UNEP	UNEP Head of GEF Chemicals and Waste Unit
Jan Betlem	UNEP	Task manager (at start of the project)
Razafindralava Herisolo	WHO	National Project Coordinator for Madagascar
Dr Messay Gebremariam	WHO	National Project Coordinator for Ethiopia
Prof Immo Kleinschmidt	LSHTM (London School of Hygiene and Tropical Medicine), London	Epidemiologist, expert
Prof Maureen Coetzee	NICD (National Institute for Communicable Diseases (South-Africa), South Africa	Entomologist, Expert
Eritrea:		
Dr Assefash Zehaie	WHO Eritrea	National Professional Officer
Mr Selam Mihreteab	Ministry of Health	Head of the NCPM
Ethiopia:		
Dr Girum Hailu		IEC/ BCC consultant for the project
Ato Teshome Bacha		Malaria focal point of the Adama district
Madagascar		
Approximately 10 persons from Ambalamangahazo and Tsarasambo communities interviewed		Community agents Vatomandry district
Rakotozafy Mbolatiana Jean Larissa		Field entomologist
- Randriamanananaisoa Jacquis - Totosoanary Hardy Narcisse - Rakotondrazafy Jaoferson Jean Yves	Ministry of Health	Representatives of District Health Agency in Vatomandry
Dr Thierry Franchard	Ministry of Health	National project coordinator at NMCP
Prof. Ratsimbaoa Arsene	Ministry of Health	Former Director of NMCP
Dr. Henintsoa	WHO Madagascar	Focal point malaria program

Travel schedule of missions to Ethiopia and Madagascar:

Monday 24 June	Travel Amsterdam - Addis Ababa, Ethiopia
Tuesday 25 June	Arrival in Addis Ababa Afternoon: meeting with Messay Gebremariam, WHO national project coordinator
Wednesday 26 June	Meetings with: Dr Girum Hailu, IEC/ BCC consultant Mr Alemayehu Woladeamanuel, Ministry of Agriculture
Thursday 27 June	Planned: One day travel by car to Adama district from Addis Ababa (one of the demonstration districts of the project where alternative methods were tested, and the one closest to the capital). Meeting with Ato Teshome Bach, malaria focal point in the Adama district, and some of his colleagues. Due to political instability travel was not possible, and Ato Teshome Bach was interviewed by email.
Friday 28 June	Second meeting with Messay Gebremariam, WHO national project coordinator.
Saturday 29 June	Travel to Antananarivo
Monday 1 July	Meetings with: Naina Razafy, WHO national project coordinator Thierry Dr. Henintsoa, focal malaria program WHO country office
Tuesday 2 July	Meetings with former and current director of the National Malaria Control Programs and with the Ministry of Health
Wednesday 3 July	Travel to Vatomandry district by car (this was the demonstration district of the project where alternative methods were tested). Health community agents in Vatomandry and Ambalamangahazo and Tsarasambo communities One of the field entomologists collecting data at the sites Head of District Health Agency in Vatomandry and his team
Thursday 4 July	Meetings in the district (see 3 July) and travel back to Antananarivo in the afternoon
Saturday 6 July	Travel to Amsterdam

Annex IV. List of documents consulted

1. Terms of Reference for the Terminal Evaluation of the Terminal Evaluation of the UNEP/Global Environment Facility project: "Demonstrating Cost-effectiveness and Sustainability of Environmentally Sound and Locally Appropriate Alternatives to DDT for Malaria Vector Control in Africa" (GEF ID 1331);
2. Project Document "Demonstrating Cost-effectiveness and Sustainability of Environmentally Sound and Locally Appropriate Alternatives to DDT for Malaria Vector Control in Africa";
3. Project revision documents 1,2 and 3;
4. PIR 2009 – 2010;
5. PIR 2010 – 2011;
6. PIR 2011 – 2012;
7. PIR 2013 – 2014;
8. PIR 2014 – 2015;
9. PIR 2015 – 2016;
10. PIR 2016 – 2017;
11. Mid-term Evaluation Report "Demonstrating and Scaling up Sustainable Alternatives to DDT, and Strengthening National Vector Control Capabilities in Ethiopia" (March 2015);
12. Mid-term Evaluation Report "Démonstration de l'efficacité et de la durabilité des alternatives au DDT, respectueuses de l'environnement et localement appropriées pour la lutte contre le paludisme à Madagascar, dans la Région OMS-AFRO" (February/March 2015);
13. Final Project report "Demonstrating Cost Effectiveness and Sustainability of Environmentally Sound and Locally Appropriate Alternatives to DDT for Malaria Vector Control in Africa, 2009-2017", prepared by the WHO Regional Office for Africa;
14. Project Implementation Final Outcome Report for Ethiopia, 2017
15. Annual Report Ethiopia 2013 by WHO
16. Report of the 1st Regional Steering Committee Meeting of the Project, 2010
17. Report of the 3rd Regional Steering Committee, 2012
18. Report of the Regional Project Steering Committee, 2015
19. Report of the Regional Project Steering Committee, 2016
20. Protocol of the DDT/GEF project demonstration districts in Ethiopia, 2010
21. Several reports of operational planning meetings in Ethiopia
22. Progress report of the implementation of the DDT/GEF project in Ethiopia, 2013
23. Financial expenditure report by WHO, 2nd quarter 2017
24. Co-funding report 2015-2016
25. Project Progress Report, July - Dec 2016, WHO
26. LoA between UNEP and WHO
27. Budget: Reconciliation between GEF activity-based budget and UNEP budget by expenditure code (GEF finance only)
28. Annual report 2013 Madagascar, WHO and MoH (in French)
29. Co-funding report 2009-2010
30. Co-funding report 2010-2011
31. Co-funding report 2011-2012
32. Co-funding report 2012-2013
33. Co-funding report 2013-2014
34. Co-funding report 2014-2015
35. Co-funding report 2016-2017
36. Financial reports 2009-2017

37. Additional reports of (National and Regional) Steering Committee meetings
38. Annual work plans 2009-2017
39. Additional annual reports of countries
40. Summary of preferred definitions, 22.01.2019
41. GEF Policy Paper, Focal area strategies and strategic programming for GEF-4, October 2007
42. Ministère d'Environnement, des Forêts et du Tourisme (MEFT), Plan national de mise en œuvre de la convention stockholm sur les polluants organiques persistants, August 2008
43. Department of Environment of the Ministry of Land, Water and Environment, National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants, June 2012
44. Federal Democratic Republic of Ethiopia National Implementation Plan for the Stockholm Convention, September 2006
45. GEF, Operational program on persistent organic pollutants (OP#14), November 2003
46. UNEP, Final draft UNEP Medium-term Strategy 2010–2013, Environment for Development, Final draft of MTS for the 10th Special Session of the GC/GMEF
47. UNEP, Medium Term Strategy 2014-2017, January 2015
48. United Nations Environment Assembly of the United Nations Environment, Proposed biennial programme of work and budget for 2016–2017, April 2014
49. Demonstrating and Scaling-up of Sustainable Alternatives to DDT in Vector Management Global Programme (Global DSSA Programme), The DSSA Programme in Africa at a glance
50. UNEP, Bali Strategic Plan for Technology Support and Capacity-building, 2005

Annex V. Brief CV of the consultant

Sandra Molenkamp is an independent consultant based in The Netherlands. She holds a Master of Arts degree in Slavic Cultures and Languages and has 18 years of experience in managing environmental projects in Eastern Europe, Russia, the Caucasus, Central Asia, and West Africa for the environmental NGOs Milieukontakt International and Green Cross Switzerland.

Since 2004, Sandra Molenkamp has been involved in POPs and obsolete pesticides projects financed by The Netherlands Ministry of Foreign Affairs, FAO, UNEP, GEF, UNDP and Green Cross Switzerland with a focus on awareness raising, environmental and social impact assessment and planning activities, technical capacity building, project evaluation and stakeholder involvement.

Key skills and experience for this assignment

- 18 years of experience in project management of international (environmental and health) projects in countries in transition and developing countries (with partners from Central Asia, Eastern Europe, the Caucasus, the Balkans and West Africa);
- Extensive experience in acquisition of projects, supporting the development of new project directions and writing project proposals;
- Experience in internal and external project evaluation and monitoring;
- Design and implementation of training and capacity building programmes;
- Design and implementation of community engagement plans;
- Experience with stakeholder involvement in POPs projects;
- Networking and communication skills;
- Broad experience in financial and narrative reporting;

Qualification and Associations

- MA Slavic Cultures and Languages;
- Ambassador of the International HCH and Pesticides Association (IHPA).
- Training on Mercury Initial Assessment, United Nations Institute for Training and Research (UNITAR), Minsk
- Training course on Development of Environmental Management Plans and Health and Safety Plans, Food and Agriculture Organization of the United Nations (FAO), Rome
- Training on Environmental and Social Assessment and Environmental Management Training, FAO Rome
- Training Acquisition, Trans Missie training & advies BV, The Netherlands
- NIMA-A (Netherlands Marketing Institute): certificate Public Relations

February 2019 – present Independent consultant and advisor

February 2016 – February 2019 Project manager Green Cross Switzerland

February 2001 – February 2016 Project manager Milieukontakt International, The Netherlands

Annex VI. Evaluation bulletin

About the Project

The overall development goal of the project "Demonstrating Cost-effectiveness and Sustainability of Environmentally Sound and Locally Appropriate Alternatives to DDT for Malaria Vector Control in Africa" was to reduce DDT use and to eliminate DDT stockpiles through the strengthening of malaria vector control practices in Eritrea, Ethiopia and Madagascar. The overall objective was to demonstrate cost-effective, environmentally sound, and locally appropriate alternatives to DDT use in malaria control, ensuring their sustainable application through strengthened national and local capacity.

The project was originally planned to be implemented from 31 March 2009 – 31 October 2013. During the project implementation, three revisions were agreed upon for project objectives to be achieved and for unspent funds to be utilized during the extension periods. The project was extended until 30 September 2018 (the closing workshop was held in June 2017). The total approved budget for the project was \$7,125,246, including the preparation phase. The cost to the GEF Trust Fund was \$3,460,296.

Background

Malaria is a major public health problem in sub-Saharan Africa. Before or at the start of the project, Eritrea, Ethiopia and Madagascar relied on indoor house spraying of DDT for malaria vector control. DDT is still an effective insecticide for malaria vector control. However, the production and use of DDT was restricted by the Stockholm Convention because of its persistence and transboundary movement that adversely affects the environment and human health. There are several reasons for the continued use of DDT including lack of capacity to implement new integrated vector management procedures, and the lack of scientific information on the effectiveness of alternative methods or resistance to alternative insecticides. This project aimed to demonstrate that alternative vector control interventions not involving the use of DDT are cost-effective, environmentally sound, sustainable and replicable in other parts of the world where DDT is currently used for vector control. The project was designed to benefit the local population with reduced malaria burden and consequently with increased agricultural productivity.



Performance

The overall rating of the project is Moderately Satisfactory. In the first 2.5 to 3 years, project progress was overall very low. In the last 4 years of the project the progress was much better which resulted in the most important outputs being delivered. These outputs are related to capacity building, testing of alternatives to DDT in Ethiopia and Madagascar and insecticides resistance management. It is important to note that the (scientific) results could have been more solid if more cycles of alternatives during malaria seasons had been implemented; in Ethiopia only one round of testing of alternatives took place.

The project supported the three countries to systematically document the impact of changes of insecticide and approaches to malaria vector control. A considerable amount of valuable baseline data on malaria incidence, malaria burden and on insecticide resistance were collected. Application of alternative malaria control interventions resulted in a reduction in disease burden in the project districts during project implementation. Data from Madagascar demonstrated that universal access to LLINs, with very high levels of ownership and utilization can be achieved and maintained through continuous distribution and replenishments after mass distribution campaigns, especially when supplemented by effective community awareness raising and mobilization.

The project demonstrated that there are suitable alternative methods and IRS insecticides to DDT for malaria control on a long-term basis. There was however no clear exit strategy in the countries and results more than two years after project implementation seem not to have been sustainable.

Preparation of Indoor Residual Spraying, Madagascar



Key Lessons Learned

Lesson 1: Specific roles and responsibilities should be made more explicit in agreements between Implementing Agency and Executing Agency.

This was the first such project implemented in the region by WHO Regional Office for Africa and UNEP. This lack of experience contributed to the low project progress in the first years of the project. There was a lack of common understanding which led to project delays. There could have been more focus at project start to clarify expectations and to setting up a clear management with responsibilities and task divisions.

Lesson 2: Clear communication is needed to provide realistic expectations of what can happen after the project finishes and exit strategies should be developed well in advance of project end.

As the evaluation was done two years after project activities were finalized, it was clear that results were not sustained very well, probably because the project had no clear exit strategy on how results could be continued after project end and how the stakeholders such as the Ministries of Health could carry on these results.

Lesson 3: Continuous strengthening of local capacities is vital for effective and sustainable implementation of IVM.

According to people consulted, the capacity building outputs were very important for the successful delivery of the project outputs. However, as there is a regular turn-over of persons and new information and methods become available, it is important that trainings need to be repeated on a regular basis. It is important to include capacity building and strengthening in the exit strategy mentioned under Lesson 2.

Lesson 4: IVM programmes should be holistic and ensure that local communities understand the need for and support

IVM activities – community awareness raising is vital in IVM programmes.

The results of the project show that communication and community sensibilization were vital parts of the project. In Madagascar the generally shared conclusion was that alternatives can only be effective if large-scale and well targeted awareness raising campaigns are implemented before, during and after the alternatives are tested. Also in Ethiopia the importance of well targeted IEC/BCC activities was stressed for successful implementation of activities and for the overall effectiveness of alternative interventions.

Lesson 5: In Project design and initiation, a more in-depth analysis of country context and risks (political, distance and location, safety) should be conducted.

In all countries, interviewees mentioned that changes needed to be made during the project, or that there were difficulties due to political, safety and infrastructure factors. In Madagascar already at the start it was decided to exclude some districts as they were too far away. In Ethiopia one district was far away and weather and infrastructure conditions made it at times difficult to go there. This contributed to unexpected travel costs for field surveys. In Eritrea the need for permission to travel outside Asmara by relevant authorities was at times a concern that derailed effective and timely implementation of project activities.

Lesson 6: Based on experiences gained within this project, the WHO final report described the DDT-Alt-model. This model contains all the elements within 2 mechanisms needed for successful implementation of IVM.

At the end of the project this model was prepared based on experiences gained within the project. It made clear that effective implementation of IVM and continuous strengthening of local capacities is dependent on certain milestones that need to be monitored closely. Only when all milestones are included and achieved, projects on demonstrating effective alternatives can be implemented successfully.

Annex VII. Report Quality Assessment

All UN Environment evaluations are subject to a quality assessment by the Evaluation Office. This is an assessment of the quality of the evaluation product (i.e. evaluation report) and is dependent on more than just the consultant's efforts and skills. Nevertheless, the quality assessment is used as a tool for providing structured feedback to evaluation consultants, especially at draft report stage. This guidance is provided to support consistency in assessment across different Evaluation Managers and to make the assessment process as transparent as possible.

Substantive Report Quality Criteria	UN Environment Evaluation Office Comments	Final report rating
Quality of the Executive Summary: <p>The Summary should be able to stand alone as an accurate summary of the main evaluation product. It should include a concise overview of the evaluation object; clear summary of the evaluation objectives and scope; overall evaluation rating of the project and key features of performance (strengths and weaknesses) against exceptional criteria (plus reference to where the evaluation ratings table can be found within the report); summary of the main findings of the exercise, including a synthesis of main conclusions (which include a summary response to key strategic evaluation questions), lessons learned and recommendations.</p>	Clear and concise. Provides a good summary of the main findings of the evaluation	6
I. Introduction <p>A brief introduction should be given identifying, where possible and relevant, the following: institutional context of the project (sub-programme, Division, regions/countries where implemented) and coverage of the evaluation; date of PRC approval and project document signature); results frameworks to which it contributes (e.g. Expected Accomplishment in POW); project duration and start/end dates; number of project phases (where appropriate); implementing partners; total secured budget and whether the project has been evaluated in the past (e.g. mid-term, part of a synthesis evaluation, evaluated by another agency etc.)</p> <p>Consider the extent to which the introduction includes a concise statement of the purpose of the evaluation and the key intended audience for the findings?</p>	Relevant background information is provided in a concise manner	6
II. Evaluation Methods <p>This section should include a description of how the TOC at Evaluation¹⁷ was designed (who was involved etc.) and applied to the context of the project?</p> <p>A data collection section should include: a description of evaluation methods and information sources used, including the number and type of respondents; justification for methods used (e.g. qualitative/quantitative; electronic/face-to-face); any selection criteria used to identify respondents, case studies or sites/countries visited; strategies used to increase stakeholder engagement and consultation; details of how</p>	The section read well and covers the main areas.	6

¹⁷ During the Inception Phase of the evaluation process a TOC at Design is created based on the information contained in the approved project documents (these may include either logical framework or a TOC or narrative descriptions). During the evaluation process this TOC is revised based on changes made during project intervention and becomes the TOC at Evaluation.

<p>data were verified (e.g. triangulation, review by stakeholders etc.).</p> <p>Methods to ensure that potentially excluded groups (excluded by gender, vulnerability or marginalisation) are reached and their experiences captured effectively, should be made explicit in this section.</p> <p>The methods used to analyse data (e.g. scoring; coding; thematic analysis etc.) should be described.</p> <p>It should also address evaluation limitations such as: low or imbalanced response rates across different groups; gaps in documentation; extent to which findings can be either generalised to wider evaluation questions or constraints on aggregation/disaggregation; any potential or apparent biases; language barriers and ways they were overcome.</p> <p>Ethics and human rights issues should be highlighted including: how anonymity and confidentiality were protected and strategies used to include the views of marginalised or potentially disadvantaged groups and/or divergent views.</p>		
<p>III. The Project</p> <p>This section should include:</p> <ul style="list-style-type: none"> • Context: Overview of the main issue that the project is trying to address, its root causes and consequences on the environment and human well-being (i.e. synopsis of the problem and situational analyses). • Objectives and components: Summary of the project's results hierarchy as stated in the ProDoc (or as officially revised) • Stakeholders: Description of groups of targeted stakeholders organised according to relevant common characteristics • Project implementation structure and partners: A description of the implementation structure with diagram and a list of key project partners • Changes in design during implementation: Any key events that affected the project's scope or parameters should be described in brief in chronological order • Project financing: Completed tables of: (a) budget at design and expenditure by components (b) planned and actual sources of funding/co-financing 	<p>The section read well and covers the main areas.</p>	<p>6</p>
<p>IV. Theory of Change</p> <p>The TOC at Evaluation should be presented clearly in both diagrammatic and narrative forms. Clear articulation of each major causal pathway is expected, (starting from outputs to long term impact), including explanations of all drivers and assumptions as well as the expected roles of key actors.</p> <p>Where the project results as stated in the project design documents (or formal revisions of the project design) are not an accurate reflection of the project's intentions or do not follow OECD/DAC definitions of different results levels, project results may need to be re-phrased or reformulated. In such cases, a summary of the project's</p>	<p>Well-written and good explanation of causal pathways and description of the assumptions and drivers underlying the TOC.</p>	<p>5.5</p>

results hierarchy should be presented for: a) the results as stated in the approved/revised Prodoc logframe/TOC and b) as formulated in the TOC at Evaluation. The two results hierarchies should be presented as a two column table to show clearly that, although wording and placement may have changed, the results 'goal posts' have not been 'moved'.		
V. Key Findings A. Strategic relevance: This section should include an assessment of the project's relevance in relation to UN Environment's mandate and its alignment with UN Environment's policies and strategies at the time of project approval. An assessment of the complementarity of the project with other interventions addressing the needs of the same target groups should be included. Consider the extent to which all four elements have been addressed: <ol style="list-style-type: none"> 1. Alignment to the UN Environment Medium Term Strategy (MTS) and Programme of Work (POW) 2. Alignment to UN Environment/ Donor/GEF Strategic Priorities 3. Relevance to Regional, Sub-regional and National Environmental Priorities 4. Complementarity with Existing Interventions 	Alignment to UN Environment/GEF Strategic Priorities is well-written and presented. Bali Strategic Plan and South-South Cooperation have been adequately included in the discussion.	6
B. Quality of Project Design To what extent are the strength and weaknesses of the project design effectively <u>summarized</u> ?	Good summary of the strengths and weaknesses of the project design.	6
C. Nature of the External Context For projects where this is appropriate, key <u>external</u> features of the project's implementing context that limited the project's performance (e.g. conflict, natural disaster, political upheaval), and how they affected performance, should be described.	Short and concise description of the external factors affecting the project.	6
D. Effectiveness (i) Outputs and Direct Outcomes: How well does the report present a well-reasoned, complete and evidence-based assessment of the a) delivery of outputs, and b) achievement of direct outcomes? How convincing is the discussion of attribution and contribution, as well as the constraints to attributing effects to the intervention. The effects of the intervention on differentiated groups, including those with specific needs due to gender, vulnerability or marginalisation, should be discussed explicitly.	The assessment of outputs includes verification of the results. The assessment of outcomes is clear and concise.	5
(ii) Likelihood of Impact: How well does the report present an integrated analysis, guided by the causal pathways represented by the TOC, of all evidence relating to likelihood of impact? How well are change processes explained and the roles of key actors, as well as drivers and assumptions, explicitly discussed?	Discussion is grounded in the TOC, and the table used to present the results to the Likelihood of Impact Decision Tree is straightforward and transparent.	6

Any unintended negative effects of the project should be discussed under Effectiveness, especially negative effects on disadvantaged groups.		
E. Financial Management This section should contain an integrated analysis of all dimensions evaluated under financial management and include a completed 'financial management' table. Consider how well the report addresses the following: <ul style="list-style-type: none"> • completeness of financial information, including the actual project costs (total and per activity) and actual co-financing used • communication between financial and project management staff 	All aspects are considered and discussed.	5
F. Efficiency To what extent, and how well, does the report present a well-reasoned, complete and evidence-based assessment of efficiency under the primary categories of cost-effectiveness and timeliness including: <ul style="list-style-type: none"> • Implications of delays and no cost extensions • Time-saving measures put in place to maximise results within the secured budget and agreed project timeframe • Discussion of making use of/building on pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. • The extent to which the management of the project minimised UN Environment's environmental footprint. 	Detailed discussion provided.	6
G. Monitoring and Reporting How well does the report assess: <ul style="list-style-type: none"> • Monitoring design and budgeting (including SMART indicators, resources for MTE/R etc.) • Monitoring of project implementation (including use of monitoring data for adaptive management) • Project reporting (e.g. PIMS and donor report) 	All sections adequately discussed.	5
H. Sustainability How well does the evaluation identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of achieved direct outcomes including: <ul style="list-style-type: none"> • Socio-political Sustainability • Financial Sustainability • Institutional Sustainability 	Good discussion under the first two sections. The third, Institutional Framework, would benefit from additional evidence to justify the rating.	5
I. Factors Affecting Performance These factors are <u>not</u> discussed in stand-alone sections but are integrated in criteria A-H as appropriate . Note that these are described in the Evaluation Criteria Ratings Matrix. To what extent, and how well, does the evaluation report cover the following cross-cutting themes:	All sections adequately addressed in a stand-alone section.	5

<ul style="list-style-type: none"> • Preparation and readiness • Quality of project management and supervision¹⁸ • Stakeholder participation and co-operation • Responsiveness to human rights and gender equity • Country ownership and driven-ness • Communication and public awareness 		
VI. Conclusions and Recommendations i. Quality of the conclusions: The key strategic questions should be clearly and succinctly addressed within the conclusions section. It is expected that the conclusions will highlight the main strengths and weaknesses of the project, and connect them in a compelling story line. Human rights and gender dimensions of the intervention (e.g. how these dimensions were considered, addressed or impacted on) should be discussed explicitly. Conclusions, as well as lessons and recommendations, should be consistent with the evidence presented in the main body of the report.	Clear conclusions and strategic questions are addressed.	5
ii) Quality and utility of the lessons: Both positive and negative lessons are expected and duplication with recommendations should be avoided. Based on explicit evaluation findings, lessons should be rooted in real project experiences or derived from problems encountered and mistakes made that should be avoided in the future. Lessons must have the potential for wider application and use and should briefly describe the context from which they are derived and those contexts in which they may be useful.	Clear and useful lessons learned were formulated.	5
iii) Quality and utility of the recommendations: To what extent are the recommendations proposals for specific action to be taken by identified people/position-holders to resolve concrete problems affecting the project or the sustainability of its results? They should be feasible to implement within the timeframe and resources available (including local capacities) and specific in terms of who would do what and when. At least one recommendation relating to strengthening the human rights and gender dimensions of UN Environment interventions, should be given. Recommendations should represent a measurable performance target in order that the Evaluation Office can monitor and assess compliance with the recommendations.	Clear and useful recommendations. Suggestion were provided on refining the recommendations to be more specific to the AFRO II project for compliance purposes.	5
VII. Report Structure and Presentation Quality		
i) Structure and completeness of the report: To what extent does the report follow the Evaluation Office	Structures and guidelines followed.	6

¹⁸ In some cases 'project management and supervision' will refer to the supervision and guidance provided by UN Environment to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping provided by UN Environment.

guidelines? Are all requested Annexes included and complete?		
ii) Quality of writing and formatting: Consider whether the report is well written (clear English language and grammar) with language that is adequate in quality and tone for an official document? Do visual aids, such as maps and graphs convey key information? Does the report follow Evaluation Office formatting guidelines?	Good quality draft report. Well structured, clearly written, concise whilst providing all the detail required.	6
OVERALL REPORT QUALITY RATING		HS (5.6)

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