



**United Nations Environment Programme**

**Terminal Evaluation of the UNEP/GEF Project  
“Malaria Decision Support Tool: Evaluating health, social  
and environmental impact and policy trade-off”**

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## Contents

<b>ACRONYMS AND ABBREVIATIONS .....</b>	<b>II</b>
<b>EXECUTIVE SUMMARY.....</b>	<b>1</b>
<b>I. INTRODUCTION .....</b>	<b>5</b>
<b>II. THE EVALUATION.....</b>	<b>5</b>
<b>III. THE PROJECT .....</b>	<b>7</b>
A. <i>Context.....</i>	<i>7</i>
B. <i>Objectives and components.....</i>	<i>9</i>
C. <i>Target areas/groups.....</i>	<i>10</i>
D. <i>Milestones/key dates in project design and implementation.....</i>	<i>11</i>
E. <i>Implementation arrangements.....</i>	<i>12</i>
F. <i>Project financing.....</i>	<i>12</i>
G. <i>Project partners.....</i>	<i>13</i>
H. <i>Changes in design during implementation.....</i>	<i>13</i>
I. <i>Reconstructed Theory of Change of the Project.....</i>	<i>13</i>
<b>IV. EVALUATION FINDINGS.....</b>	<b>16</b>
A. <i>Strategic Relevance .....</i>	<i>16</i>
B. <i>Achievement of outputs .....</i>	<i>17</i>
C. <i>Effectiveness: Attainment of project objectives and results.....</i>	<i>23</i>
D. <i>Sustainability and replication.....</i>	<i>29</i>
E. <i>Catalytic role and Replication.....</i>	<i>31</i>
F. <i>Efficiency .....</i>	<i>32</i>
G. <i>Factors affecting performance .....</i>	<i>35</i>
H. <i>Complementarity with UNEP strategies and programmes.....</i>	<i>42</i>
<b>V. CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>42</b>
A. <i>Conclusions.....</i>	<i>42</i>
B. <i>Lessons Learned .....</i>	<i>45</i>
C. <i>Recommendations.....</i>	<i>46</i>
<b>ANNEX 1: TERMS OF REFERENCE.....</b>	<b>47</b>
<b>ANNEX 2: EVALUATION TIMELINE, ITINERARY AND LIST OF PERSONS INTERVIEWED .....</b>	<b>94</b>
<b>ANNEX 3: LIST OF DOCUMENTS CONSULTED.....</b>	<b>96</b>
<b>ANNEX 4: EXPENDITURES OF GEF TRUST FUNDS ACCORDING TO BUDGET LINES.....</b>	<b>97</b>
<b>ANNEX 5: EXPENDITURES OF CO-FUNDS ACCORDING TO UNEP BUDGET LINES.....</b>	<b>98</b>
<b>ANNEX 6: THE CONSULTANT.....</b>	<b>99</b>

## Acronyms and Abbreviations

DDT	Dichlorodiphenyltrichloroethane
DVCD	Disease Vector Control Division
GEBs	Global Environmental Benefits
GEF	Global Environment Facility
GFATM	Global Fund to fight Aids, Tuberculosis and Malaria
IRS	Indoor Residual Spraying
ITNs	Insecticide Treated Nets
IVM	Integrated Vector Management
LOA	Letter of Agreement
MCD	Malaria Control Division
MDAST	Malaria Decision Analysis Supporting Tool
M & E	Monitoring & Evaluation
MOH	Ministry of Health
MOU	Memorandum of Understanding
MSP	Medium Size Project
MTR	Mid Term Review
NIMR	National Institute for Medical Research
NC	National Coordinator
NGO	Non-Governmental Organization
NIP	National Implementation Plan
NMCP	National Malaria Control Programme
PC	Project Coordinator
PIF	Project Identification Form
PM	Project Manager
PMU	Project Management Unit
POP	Persistent Organic Pollutant
POW	Programme of Work
PSC	Project Steering Committee
ROI	Review of Outcomes to Impacts
TCG	Technical Working Group
TOC	Theory of Change
TORs	Terms of Reference
UNEP	United Nations Environment Programme
VOI	Value of Information
WHO	World Health Organization
WHO AFRO	World Health Organization, Regional Office for Africa

## Executive Summary

### A. Introduction

1. The Global Environment Facility (GEF) medium size project (MSP) “*Malaria Decision Support Tool: Evaluating health, social and environmental impact and policy trade-off*” was implemented from 2009 – 2013 by the United Nations Development Programme (UNEP) and executed by World Health Organization, Regional Office for Africa (WHO AFRO Office, Congo Brazzaville) in partnership with Duke University and the University of Pretoria. The sources of funding for this project of total budget of \$ 2,012,888, and that was implemented in Kenya, Tanzania and Uganda, were as follows:- GEF: \$ 999,000; Co-funding (kind and cash):- Countries: \$ 42,000; WHO: \$ 398,000; Duke University: \$ 423,888 and University of Pretoria: \$ 150,000

2. The project was designed to protect human health and the environment by promoting sustainable malaria control strategies that are consistent with the successful implementation of the Stockholm Convention on Persistent Organic Pollutants. Specifically, the project was set out to promote evidence-based, multi-sectoral malaria control policy-making in Kenya, Tanzania, and Uganda through the use of a comprehensive framework (MDAST) for assessing the full range of health, social, and environmental risks and benefits associated with alternative malaria control strategies.

### B. Evaluation findings and conclusions

3. The major objective of this terminal evaluation was to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including its sustainability and replication potential.

4. The project relevance is considered as “**Highly Satisfactory**” given that the three participating countries are parties to the Stockholm Convention. In particular, in their National Implementation Plans (NIPs) they have planned the phasing out of DDT for malaria control by promoting the use of alternatives. The focus of the project remains very relevant to the mandate of UNEP that promotes chemical safety by providing policy advice, technical guidance and capacity building to developing countries.

5. Whilst efficiency is considered as “**Highly Satisfactory**” as all planned outputs have been successfully delivered, effectiveness of the project, on the other hand, has been rated as “**Moderately Unsatisfactory**” given that the outcome identified in the reconstructed theory of change “*Policy makers of Ministries of Health use MDAST in order to choose the best policy for malaria control*” did not occur. Indeed, although a refined operational tool (MDAST) was available and training workshops have been undertaken, the stakeholders did not use MDAST for policy decision on malaria. They indicated that the training was too short for them to operate MDAST with confidence, and in that context they requested more training and follow up activities to further build their capacities on the use of MDAST.

6. Involvement of stakeholders at national level was “**Satisfactory**”. Those actively involved in project were mainly from the Ministry of Health that included NMCP and DVCD. Stakeholders from other sectors like Ministry of Environment, Ministry of Agriculture, academic and research institutions were also involved and provided data for the development of MDAST.

7. Project implementation was cost-effective, owing to a number of factors, including early establishment of partnerships amongst key partners (WHO, UNEP, Duke University and University of Pretoria), and identification and engaging of key national partners (e.g. NMCP) for project implementation since the preparatory phase; building on linkages with existing GEF-funded and WHO-executed projects on Integrated Vector Management (IVM); and identification of key national stakeholders through existing framework for malaria control (e.g. the national technical working groups (TWG) on malaria) to develop MDAST.

8. Given that the countries have been fighting malaria through on-going programmes (e.g. NMCP) for decades and involving huge amount of funding, if the countries have their capacity further built and if they accept to use the tool (MDAST) for policy decisions on malaria control, the sustainability of the project benefits is “**Likely**” to happen.

9. The overall rating for the MDAST project based on the evaluation findings is **Moderately Satisfactory**.

### **C. Lessons learned**

10. Valuable lessons that emerged from the project are:

- All the outputs of the projects have been delivered and yet the objective of the project has not been achieved. Achieving all outputs does not necessarily mean effective impact of the project.
- The stakeholders indicated that the training workshop was too short and they considered that their capacity was not sufficiently built to confidently use MDAST. Activities need to be properly planned during project design to allow for adequate capacity building.
- Project implementation was cost-effective, owing to a number of factors including early establishment of partnerships amongst key partners, identification and engaging of key national partners, etc. Identification and adopting measures that promote efficiency ensures successful implementation of project.

### **D. Recommendations**

11. The recommendations for the post-project period and development and implementation of follow-up GEF projects and sustaining the results of MDAST project are:

- MDAST has not been used by countries due to inadequate training, lack of funds, or on-going implementation of existing strategy on malaria control. It is recommended that resources are made available (through follow up projects currently being developed) for further adequate training to properly build the capacity of stakeholders / policy makers on the use of MDAST. It is also recommended that actions are taken

at national level to promote the use of MDAST for any future decision making on malaria control.

- There are indications that MDAST will be replicated in other countries through follow up GEF funded projects. It is recommended that the implementing agencies should ensure that the capacities of countries are properly built to use MDAST. It is also recommended to promote adequate visibility of the project in the countries to ensure linkages between MDAST and on-going malaria control initiatives.

### Evaluation Ratings

Criterion	Summary Assessment	Rating
<b>A. Strategic relevance</b>	The project was very relevant to the mandate of UNEP that promotes chemical safety by providing policy advice, technical guidance and capacity building to developing countries.	<b>HS</b>
<b>B. Achievement of outputs</b>	All the planned activities have been undertaken and outputs successfully delivered.	<b>HS</b>
<b>C. Effectiveness: Attainment of project objectives and results</b>	Although MDAST has been successfully developed but to date, it has not been used yet to develop policies for malaria control in the three countries.	<b>MU</b>
1. Achievement of direct outcomes	The immediate outcome and three of the seven intermediate states have not occurred	<b>MU</b>
2. Likelihood of impact	MDAST not being used for policy decision	<b>U</b>
3. Achievement of project goal and planned objectives	Whilst key knowledge gaps have been identified and replication guidelines developed, MDAST is not being used by policy makers	<b>MU</b>
<b>D. Sustainability and replication</b>	Countries have not yet used MDAST for policy decision on malaria	<b>ML</b>
1. Financial	Countries are greatly benefitting from Global funds, costs of using MDAST are low	<b>HL</b>
2. Socio-political	Countries engaged in malaria control since the 1950's	<b>L</b>
3. Institutional framework	Adequate institutional framework exist in all countries (e.g. NMCP)	<b>HL</b>
4. Environmental	No environmental factor that can influence the future flow of project benefits has been identified	<b>HL</b>
5. Catalytic role and replication	Replication guidelines developed and there are indications that MDAST will be replicated in other countries through a GEF funded project	<b>S</b>

	(GEF ID: 4668)	
<b>E. Efficiency</b>	All outputs delivered despite delays	<b>S</b>
<b>F. Factors affecting project performance</b>		<b>S</b>
1. Preparation and readiness	Some weaknesses in project design	<b>S</b>
2. Project implementation and management	Adequately executed project	<b>HS</b>
3. Stakeholders participation and public awareness	No public awareness activities planned	<b>S</b>
4. Country ownership and driven-ness	National partners committed in project execution	<b>S</b>
5. Financial planning and management	Some co-funding did not materialize	<b>S</b>
6. UNEP supervision and backstopping	Adequate oversight provided allowed for timely completion of project activities	<b>HS</b>
7. Monitoring and evaluation		<b>S</b>
a. M&E Design	Standard monitoring design	<b>S</b>
b. Budgeting and funding for M&E activities	Funds allocated for independent evaluations on the low side	<b>S</b>
c. M&E Plan Implementation	All reports submitted	<b>S</b>
<b>Overall project rating</b>		<b>MS</b>

## I. Introduction

12. This report covers the terminal evaluation of medium size UNEP / GEF project on “*Malaria Decision Support Tool: Evaluating health, social and environmental impact and policy trade-off*” (GFL/2328-2760-4A60). The project duration was 36 months planned to commence in August 2009 and to be completed by July 2012. The sources of funding for this project of total budget of \$ 2,012,888, and that was implemented in Kenya, Tanzania and Uganda, were as follows:- GEF: \$ 999,000; Co-funding (kind and cash):- Countries: \$ 42,000; WHO: \$ 398,000; Duke University: \$ 423,888 and University of Pretoria: \$ 150,000

13. For this project, the implementing agency was the United Nations Environmental Programme (UNEP) and the executing partners were World Health Organization, Regional Office for Africa (WHO AFRO Office, Congo Brazzaville), Duke University and University of Pretoria. At national level, the major partners were the Ministries of Health.

14. In compliance with GEF<sup>1</sup> and the UNEP<sup>2</sup> evaluation policies, this terminal evaluation is carried out to promote accountability for the achievement of the project objectives through the assessment of results, effectiveness, processes and performance of stakeholders involved during project implementation.

## II. The Evaluation

### Objectives

15. This terminal evaluation was initiated and commissioned by the UNEP Evaluation Office, Nairobi, Kenya, and it has two primary objectives: (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, governments, the GEF and their partners.

### Approach, Evaluation criteria and Key Questions

16. A set of key questions have been identified and given in the terms of reference (TORs) (Annex 1) for this evaluation. These keys questions were based on the logical framework (outcomes) of the project documents, some more specific questions identified are:

- Did the project approach contribute towards the achievement of the development project objective “*To protect human health and the environment by promoting sustainable malaria control strategies the successful implementation of the Stockholm Convention on POPs*”?
- How successful was the project in developing a Malaria Decision Analysis Support Tool (MDAST) that incorporated incorporate health, social and environmental priorities for malaria control in Kenya, Tanzania, and Uganda?

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1 [http://www.thegef.org/gef/sites/thegef.org/files/documents/TE\\_guidelines7-31.project document](http://www.thegef.org/gef/sites/thegef.org/files/documents/TE_guidelines7-31.project%20document)

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



- To what extent did the project assist the countries in improving / increasing their capacities for evidence-based malaria control policy making through the use of MDAST?
- Was the project successful in helping the three countries in creating agendas for policy-relevant malaria research through development of MDAST and identification of key knowledge gaps?
- Has the project been able to elucidate the requirements for replication of MDAST in other malaria-prone countries around the world?

17. This report was also based on the specific list of review criteria given in the TORs (Annex 1). Evaluation findings and judgments were based on sound evidence and analysis, and clearly documented in the report. To the extent possible information was triangulated (i.e. verified from different sources) before any conclusion made.

18. As recommended in the TORs of this evaluation, the analytical tool, Review of Outcomes to Impacts (ROtI) tool, was used to describe the theory of change that occurred in the countries where the projects were implemented.

### **Timeframe, data collection and limitations of the evaluation**

19. The terminal evaluation was conducted between May and August 2014, and the evaluation timeline and itinerary are provided in Annex 2. The findings of the terminal evaluation was based on the following:

- (a) A **desk review** of project documents<sup>3</sup> including, but not limited to:
  - Relevant background documentation, inter alia UNEP and GEF policies, strategies and programmes pertaining to Persistence Organic Pollutants and malaria control strategies;
  - Project design documents; Annual Work Plans and Budgets or equivalent, revisions to the logical framework and project financing;
  - Project reports such as progress and financial reports from the executing partners to the Project Management Unit (PMU) and from the PMU to UNEP;
  - Steering Group meeting minutes; annual Project Implementation Reviews and relevant correspondence;
  - Documentation related to project outputs;
  - Relevant material published, e.g. in journals, books, at conferences or on the project web-site: <http://sites.duke.edu/mdast/>;
  - Notes from the Steering Committee meetings.
- (b) **Interviews**<sup>4</sup> with:
  - UNEP Task Manager and Fund Management Officer and other relevant staff in UNEP related activities as necessary;
  - Interviews with project management and technical support including the Regional Project Coordinator (based in Pretoria during the project life

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<sup>3</sup> A list of documents reviewed is given in Annex 3

<sup>4</sup> Face-to-face or through any other appropriate means of communication.

- and currently in Nairobi) and at Duke University, national partners and other partners to the extent possible;
  - Stakeholders involved with this project, including NGOs, regional and international organizations and institutes in the participating countries and regions Relevant staff of GEF Secretariat; and
  - Representatives of donor agencies and other organisations (if deemed necessary by the consultant).
- (c) **Country visits:** The evaluation consultant undertook visits to Kenya and Uganda, and interviewed national stakeholders including the national coordinators and major national stakeholders.

20. The list of persons interviewed during country missions and through Skype for this evaluation exercise is given in Annex 3.

21. In terms of limitations, although the national coordinators were contacted well in advance to organize the country visits, for various reasons it was not possible to interview a number of key persons. For example, in Kenya it was not possible to interview the two key WHO country officers who were responsible for the MDAST as both persons had already retired. It was also not possible to meet other WHO country officers despite request made by the consultant. In Uganda also, it was not possible to meet with the key WHO country officer as he was on mission to Geneva. The person was contacted by email and no response was received despite reminders. Similarly, it was not possible to interview the UNEP task manager (based in Nairobi) for the project during the mission to Kenya as he was out of office. However, it was possible to communicate with him through Skype<sup>5</sup> and by email.

22. Due to funds limitation, it was not possible to have a face to face interview with the Regional Coordinator of the Project (WHO AFRO) and Duke University. Interviews were carried out through Skype communication<sup>6</sup>.

### **III. The Project**

#### **A. Context**

23. Despite progress over the past decade in reducing the global burden of malaria, its prevention and control remains a complex challenge to health agencies in many countries. Anti-malaria programs can include two very different sets of approaches: treating the disease or treating the vector. Treating the disease includes prophylactic use of anti-malarial medication, early diagnosis and treatment, presumptive and preemptive treatment and – as yet undeveloped- vaccines. Many areas of the world now host malaria parasites that are resistant to the early, anti-malarial medications. The complementary approach, treating the vector, includes land use management, larviciding, pesticide application targeted to adult mosquitos, indoor residual spraying (IRS) and the use of insecticide-treated netting materials (ITN). For both disease and vector management approaches, social and behavioral factors play a key role

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<sup>5</sup> A Skype interview of 1 hour with the UNEP task manager occurred on 11 June 2014

<sup>6</sup> Interview on 6 June 2014 with Duke University and on 24 June 2014 with regional coordinator (WHO AFRO)

in determining how people respond to the malaria threat. Policymakers must pay attention to these behavioral factors in deciding among malaria control strategies.

24. Perhaps the most controversial strategy against malaria is the application of DDT in IRS programs. Spraying with DDT has been highly effective in suppressing malaria transmission in many developing countries, but DDT can also be toxic to wildlife and potentially to humans at a certain level. Under the Stockholm Convention on Persistent Organic Pollutants (POPs), countries are authorized to elect further use of DDT for malaria vector control when locally safe, effective and affordable alternatives are not available.

25. The project outlined five challenges that policy makers and practitioners face:

- a. The growing burden of malaria and other vector-borne diseases creates a high-stakes environment where bad policy decisions are extremely costly.
- b. Vector-borne disease control involves a multitude of actors at multiple scales.
- c. Choosing among different control options requires making difficult tradeoffs among competing health, social, and environmental objectives.
- d. Complicated dynamics, interdependencies, and uncertainties make it difficult to analyze the effects of vector-borne disease control strategies over time.
- e. Vector-borne diseases involve complex human-environment interactions that necessitate interagency, interdisciplinary analyses and responses.

26. In order to overcome the above listed challenges, the Malaria Decision Analysis Support Tool (MDAST) project aimed to develop an approach for improving comprehensive malaria control policy formation with an integrated decision analysis framework to guide the evaluation of alternative malaria control strategies. The framework intended to allow for the systematic analysis of sustainable malaria control strategies that are consistent with the successful implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs). It was therefore considered important that countries be able to measure the impacts of DDT and alternative interventions in order to adapt and improve their approaches.

27. The project was developed in a collaborative manner with various stakeholders involved in malaria control policy making and implementation, and planned to respond to a need for capacity building for improved policy formulation. The project intended to provide a direct path for improving comprehensive malaria control policy formation by developing an integrated decision analysis framework to guide the evaluation of alternative malaria control strategies. The MDAST framework aimed to simultaneously consider multiple outcomes and attributes of various combinations of malaria control options, including ecological and human health risks and benefits.

28. The key project partners were UNEP/GEF, WHO-AFRO, Ministry of Health, Uganda, Ministry of Health, Kenya, National Institute of Medical Research, Tanzania, University of Pretoria, and Duke University. Initially a large number of countries were considered for inclusion in the project. Kenya, Uganda, Tanzania were selected based on the

following criteria: 1) significant current human, economic and environmental burden of malaria; 2) strong interest in intersectoral approaches to malaria control; 3) ongoing consideration of the use of DDT for indoor residual spraying; 4) availability of local institutions interested in collaborating on this project and 5) ratification of the Stockholm Convention.

## **B. Objectives and components**

29. The objective of the project was to protect human health and the environment by promoting sustainable malaria control strategies that are consistent with the successful implementation of the Stockholm Convention on Persistent Organic Pollutants. The project was to promote evidence-based, multi-sectoral malaria control policy-making in Kenya, Tanzania, and Uganda, with the project serving as pilot for other malaria-prone countries. To accomplish this purpose, the decision analysis framework was intended to build on efforts over the past decade to mainstream Health Impact Assessment within WHO. The project was also designed to provide several global benefits, including the facilitation of the delivery of a tool which could be used globally, the development of strategies for global replications and the provision of lessons learnt for the development of tools to manage complex diseases of international significance.

30. The project focused on achieving four main outcomes:

- (1) Development of a Malaria Decision Analysis Support Tool (MDAST) that would jointly incorporate health, social and environmental priorities for malaria control in Kenya, Tanzania, and Uganda.
- (2) Increased capacity for evidence-based malaria control policy making through the use of MDAST in Kenya, Tanzania, and Uganda.
- (3) Creation of an agenda for policy-relevant malaria research through development of MDAST and identification of key knowledge gaps.
- (4) Elucidation of requirements for replication of MDAST in other malaria-prone countries around the world.

31. The project aimed to establish an inter-disciplinary network of practitioners and policymakers, and contribute to research, monitoring, and analytical capacity to make more informed and evidence-based decisions about alternative approaches to malaria prevention and treatment. The outcomes listed above were pursued through 8 specified activities (rather than components) which guided the project in its undertakings.

Activity 1: Draft prototype MDAST: the team planned to develop working schematics of the decision support tool model and refine the conceptual decision analysis framework for MDAST.

Activity 2: Conduct country-specific development activities to create initial MDAST for Tanzania, Kenya, and Uganda. Project partners intended to work closely together to coordinate a range of country-specific stakeholder engagement activities that furthered the user-driven development of the initial MDAST, including a project inception meeting, a stakeholder survey, and stakeholder workshops.

Activity 3: Identify institutional barriers to implementing optimal policies, as well as incentives for addressing these barriers.

Activity 4: Engage in country specific training, testing, and refinement activities. This was scheduled to occur through a variety of mechanisms including incorporating feedback from the workshops and the Steering Committee meetings, conducting stakeholder webinar consultations, developing the MDAST User Manual, conducting in-country expert consultations, and in-country workshops and training sessions.

Activity 5: Use country specific MDAST in value of information (VOI) analyses to identify key knowledge gaps and create policy-relevant research agenda.

Activity 6: Disseminate of project results and lessons learnt. Project partners planned the creation and maintenance of the MDAST website, the development of presentation tools on MDAST for stakeholders to use, participation at conferences and the development of publications related to MDAST.

Activity 7: Development of guidelines for replication in other countries affected by malaria.

Activity 8: Project coordination and management. WHO AFRO, as executing agency, nominated a regional coordinator who was responsible for project coordination and management and was assisted by a Project Steering Committee (PSC), which met annually and was also responsible for monitoring and evaluation of project progress.

### **C. Target areas/groups**

32. In October 2005, during the inception phase of the project, members of the project core team visited four countries (Kenya, Uganda, South Africa and Tanzania) to present the project concept to national authorities. The targeted groups were national malaria control program (NMCP) managers and other stakeholders closely linked to malaria control or research<sup>7</sup>. During those missions, the identified national partners for engaging dialogue were high level staff in the Ministries of Health and Environment, as well as research organizations, universities and other non-governmental organizations involved national malaria control programs or research. National stakeholders involved in the development of National Implementation Plans on Persistent Organic Pollutants (POPs) were also invited to participate in the dialogue.

33. Those targeted national stakeholders, involved in malaria control and or research became actively involved in the project. For example, the national project coordinator (NPC) in the three countries were from the Malaria Control Division (MCD), Ministry of Health (for Kenya), National Institute for Medical Research, Ministry of Health (for Tanzania) and the disease vector control division (DVCD), Ministry of Health (for Uganda). Furthermore, the members of the national committees responsible to implement and manage project activities at national level were mainly from different departments, engaged on malaria or disease control, of the Ministries of Health of the participating countries and from WHO country office. As mentioned in the project document<sup>8</sup>, the project anticipated the participation of a wide range of stakeholders from different sectors / groups including public health, environmental, industry and consumer groups in urban as well as rural areas.

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<sup>7</sup> Information taken from Annex 2 of project document.

<sup>8</sup> Section 3k), page 25 of project document

#### **D. Milestones/key dates in project design and implementation**

34. The idea to develop this medium size project (MSP) was initiated in 2005 during a conference on disease vector control that was organized at Duke University<sup>9</sup>. During this conference, WHO and Duke University discussed the possibility to collaborate for malaria control and agreed to develop a decision making tool to help African countries in taking the best and appropriate decisions for malaria control by taking into consideration the local cultural, economic, economic and ecological conditions of the countries.

35. As mentioned earlier (paragraph 21), the countries were involved in the design of the project. During the country visits undertaken in the countries in October 2005, the national in-country collaborators that would serve as critical link to the project were identified and they eventually became the national project coordinators for project implementation. These collaborators were: National Institute for Medical Research for Tanzania, Division of Malaria Control for Kenya and National Malaria Control Program for Uganda.

36. The Project Identification Form (PIF) that was then developed by World Health Organization and UNEP in collaboration with Duke University and University of Pretoria, and submitted to the Global Environment Facility (GEF) was approved on 25 February 2009<sup>10</sup>. The GEF approval date for the MSP was 17 March 2009 and it was 17 August 2009 for UNEP<sup>11</sup>.

37. The project was scheduled to start August 2009 for a duration of 3 years corresponding to a closure date of August 2012. However, due to delays in funds disbursement process from WHO to the contract partners and also from WHO to countries, a no cost extension was granted and the actual closure date was April 2013.

38. An inception workshop was organized on 9 March 2010 in Nairobi, Kenya. The purpose of the workshop, which was jointly organized by WHO and Duke University (co-executor of the project) and attended by representatives of the countries and UNEP, was to review the project proposal for a common understanding and to develop a work-plan. Stakeholder workshops were also held in August 2010 in the three countries. Finally, Expert Consultation Workshops were held in August 2011 in all three countries.

39. As planned in the project document, an independent midterm review was undertaken in August 2011. However, this review covered only activities in Tanzania, where a field mission was undertaken on 22 – 26 August 2011 by a consultant.

40. Demonstration and training workshops were organized in April 2012 in the three countries (Kenya: 23 April; Uganda: 25 April; Tanzania: 27 April) to demonstrate, train, and gain expert feedback on MDAST from key stakeholders in order to assess the model and strategies for its dissemination and implementation.

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<sup>9</sup> Data collected during interview with Duke University

<sup>10</sup> Information obtained from GEF website

<sup>11</sup> GEF website

41. A third and final project steering committee meeting was held on 6 – 7 august 2012 in Entebbe, Uganda to review project progress and to agree on timeline for the completion of the remaining activities.

42. The final report was submitted in June 2013, and the terminal evaluation of the project is being undertaken from May to July 2014.

### **E. Implementation arrangements**

43. The project was implemented by UNEP where a task manager was nominated and was responsible for overall project supervision. He was also responsible to review of the quality of draft project outputs, and he provided feedback to the project partners to ensure adequate quality.

44. The project was executed by WHO regional Office for Africa (WHO AFRO), and in that context a letter of agreement was signed between WHO and UNEP in August 2009 for the amount of \$999,000. As planned, WHO AFRO nominated a project regional coordinator (PRC) who was responsible for coordination at regional level. Duke University and the University of Pretoria were the co-executors of the project and were responsible to execute of the seven activities planned in the project document. In that context, they signed memoranda of understanding (MoU) with WHO for the amounts of \$ 356,100 (Duke University) and \$232,000 (University of Pretoria) respectively.

45. As stated in project document, a project steering committee (PSC) was set up, and it was constituted of WHO, UNEP, Duke University, University of Pretoria and representatives of countries. The PSC that met once annually was responsible to oversee, monitor and evaluate project progress.

46. At national level, the institutions that would serve as lead (national coordinator) for the project were already identified during the preparatory phases: for Kenya: Division of Malaria Control, Ministry of Health; for Tanzania: National Institute of Medical Research; and for Uganda: Vector Control Division, Ministry of Health. A memorandum of understanding was signed between WHO and each of the three countries for an amount of \$ 66,667 respectively. In the three countries, a committee, chaired by a national coordinator coming from the lead institution, and constituted mainly by representatives of vector control division, malaria control programs and WHO country office, was created to coordinate and implement activities. It should be pointed out that due to movement of personnel there was change of national coordinator both in Kenya and in Uganda. However, as the replacing coordinators in both countries were already members of the implementation committee, this change did not create much delays problems in project execution<sup>12</sup>.

### **F. Project financing**

47. Expected financing and co-financing taken from the project documents are given in Table 1. The co-funds that were actually mobilized are given later in the text (see Table, paragraph 110).

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<sup>12</sup> Interview data with national coordinators in Uganda and Kenya

Table 1: Financing and Co-financing and Sources

	Cash (\$)	In kind (\$)	Total (\$)
<b>GEF</b>	999,000		<b>999,000</b>
<b>Co-Financing</b>			
WHO	50,000	348,000	398,000
Countries		42,000	42,000
Duke University	50,000	373,888	423,888
University of Pretoria		150,000	150,000
<b>Sub-total Co-financing</b>	<b>100,000</b>	<b>913,888</b>	<b>1,013,888</b>
<b>Grand Total</b>			<b>2,012,888</b>

### G. Project partners

48. The main partners of the project included the institutions described in **Section III E** that were involved in the implementation and execution of the project. At national level, the main partners were the disease vector control and the malaria vector control divisions of the Ministries of Health, research institutions and universities. For example in Kenya, the Kenya Medical Research Institute and the University of Nairobi were actively involved in the project. In Uganda, the Department of Pathology, University of Makerere participated in the inception meeting and also provided data for the development of the analysis tool.

### H. Changes in design during implementation

49. No major revision of logical framework was required for the completion of planned project activities. However, the training workshop that was originally planned in the second year of implementation was finally undertaken in the third year. And as mentioned earlier (paragraph 26) due to delays in transfers of funds, a no cost extension was granted to allow for completion of project activities. Consequently, as a result of these (minor change and extension), the budget was twice revised, in December 2010 and January 2013 respectively, to reflect the actual expenditures and to re-phase unspent balances.

### I. Reconstructed Theory of Change of the Project

50. In terms of malaria control policy, the three countries are relying on insecticide treated nets (ITNs) and indoor residual spraying (IRS). In Uganda, the Ministry of Health proposed the reintroduction of DDT for IRS, but this has proven very controversial within the media and public<sup>13</sup>. In Tanzania, the use of DDT for IRS is restricted for epidemic prone districts, and in Kenya, pyrethroids-based pesticides have been used for IRS and the

<sup>13</sup> Information taken from Page 9 of project document



authorities have avoided the use of DDT for this purpose<sup>14</sup>. As can be seen, although DDT is not used in all the three countries, it remains however an option for malaria control.

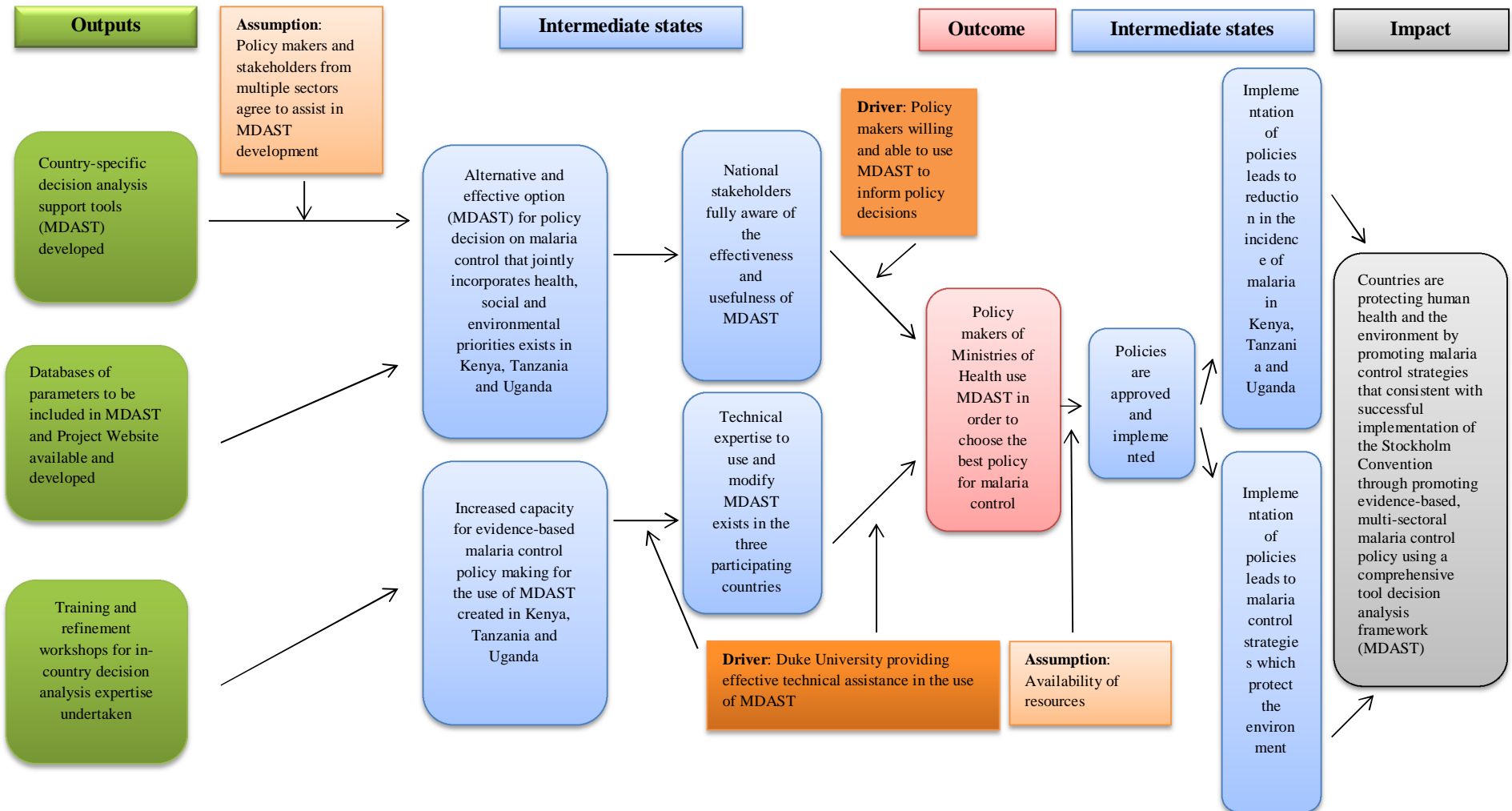
51. The theory of change that the project is intended to operate in the three countries is based on the premise of the availability of an alternative and effective option (MDAST) for policy decision on malaria control and that capacity has been built in the three countries for the actual and effective use / application of this alternative option. Based on this premise the **impact** of the project, and its global environmental benefits (GEBs), is that countries are protecting human health and the environment by promoting malaria control strategies that are consistent with successful implementation of the Stockholm Convention through promoting evidence-based, multi-sectoral malaria control policy with less reliance on DDT.

52. As illustrated in Figure 1, the most important driver towards project impact was the willingness of policy makers to use MDAST for informed policy decisions for malaria control. For the proper training of the end users of the analysis tool, effective technical assistance was expected from Duke University. Furthermore, the likelihood that the GEBs would be achieved depended on a number of assumptions including stakeholders agreeing to assist in the development of the analysis tool by providing the required data and on the availability of resources.

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<sup>14</sup> Ibid.

Figure 1: Theory of Change



## IV. Evaluation Findings

53. The assessment of the project was undertaken according to the set of criteria recommended in the TORs of this evaluation (Annex 1): (i) Strategic relevance; (ii) Achievement of outputs; (iii) Effectiveness; (iv) Sustainability and replication; (v) Efficiency; (vi) Factors affecting performance; and (vii) Complementarity with UNEP strategies and programmes.

### A. Strategic Relevance

54. The **objective** of the project that was “*to protect human health and the environment by promoting sustainable malaria control strategies that are consistent with the successful implementation of the Stockholm Convention on Persistent Organic Pollutants*” was fully relevant given that the three participating countries are parties to the Stockholm Convention. Furthermore, at the start of the implementation the project (August 2009) the three countries had already submitted National Implementation Plans (NIPs)<sup>15</sup> in which they have planned the phasing out of DDT for malaria control by promoting the use of alternatives.

55. The project was very relevant to the mandate of UNEP that promotes chemical safety by providing policy advice, technical guidance and capacity building to developing countries. In particular the project was very relevant to Decision 25/5 (February 2009) of the Governing Council of UNEP concerning global policies related to chemicals management and the development of a strategic approach to international chemicals management. Also, it is worthy to note that the Secretariat of the Stockholm Convention was hosted within UNEP at the time the project was being developed and implemented<sup>16</sup>.

56. One of the project’s outcomes was to reduce reliance on DDT, which is fully consistent with the GEF’s goal in the POPs focal area that is to protect human health and the environment by assisting countries to reduce and eliminate production, use, and releases of POPs<sup>17</sup>.

57. At the time when the project was designed, the objective was realistic given that the three countries were already engaged in malaria vector control through National Malaria Control Programmes within the Ministries of Health. Moreover, as stated in their NIPs submitted to the Stockholm Convention, the countries were committed to look for alternatives to DDT. Furthermore, the project partners Duke University and University of Pretoria had significant expertise on development of initiatives in global health, on vector management and malaria control in Africa. The budget allocated appears to be activity-based and is adequate to achieve the planned objective.

58. The overall rating for strategic relevance is **Highly Satisfactory**.

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<sup>15</sup> NIP submission dates from

<http://chm.pops.int/Implementation/NIPs/NIPSubmissions/tabid/253/Default.aspx>: Kenya: 14 April 2007; Tanzania: 12 June 2006; Uganda: 13 January 2009

<sup>16</sup> Since 2012, the three Conventions: Stockholm, Basel and Rotterdam have a common secretariat, and still located within UNEP.

<sup>17</sup> [http://www.thegef.org/gef/sites/thegef.org/files/documents/GEF\\_4\\_strategy\\_POP\\_Oct\\_2007.pdf](http://www.thegef.org/gef/sites/thegef.org/files/documents/GEF_4_strategy_POP_Oct_2007.pdf). GEF4 has been superseded by GEF5 and POPs falls under the GEF Chemicals Strategy.

## **B. Achievement of outputs**

59. The design of the project in terms of component, objective, outcome, outputs and activities was not detailed. In the project document, no components are mentioned, rather 7 Activities (Activities 1 to 7, excluding Activity 8 which is Project coordination and management) are given for the implementation of the project. Within each of the 7 Activities, specific activities are mentioned to achieve the goal of the main Activity. It would seem that activities correspond to components and, in general, the project design would have benefitted from using the correct terminology. The specific activities correspond to outputs associated to each of the Activities, but they are not clearly mentioned in the main text of the project document, they are rather given in the logical framework. The following paragraphs describe the achievement of outputs for each of the 7 Activities. It would have also been useful to define specific outcomes and explain the casual pathways leading from outputs (activities) to outcomes.

### **Activity 1: Draft prototype MDAST framework outlining options and consequences**

60. Activities to achieve Activity 1 have been undertaken successfully. Over 500 research references on malaria prevalence, malaria control methods, modeling of disease, infectious disease management have been reviewed for the development of the MDAST prototype.

61. The conceptual framework was developed by Duke University in collaboration with University of Pretoria. This framework is based on input of parameters that describe the local contextual factors including socio-economic factors, environmental conditions, malaria endemicity, insecticide and drug resistance and parasitological indices. Then the outcomes of malaria control policies, including health, environmental, and economic impacts, are derived from the input parameters based on relationships identified through the literature, expert interviews, and field-based experiments. Finally, each policy combination can then be described in terms of its negative and positive impacts. Policy combinations can then be compared across user-selected metrics, including inputs (e.g., cost or personnel requirements) and outcomes (e.g., predicted malaria morbidity and mortality by age group or insecticide exposure). This framework was further refined in consultation with inputs from countries.

62. Based on the conceptual decision analysis framework described above, the MDAST prototype was then developed using the decision analysis software Analytica® (Lumina Decision Systems, Inc., Los Gatos, CA).

### **Activity 2: Conduct country-specific development activities to create MDAST for Tanzania, Kenya, and Uganda**

63. This Activity was successfully completed through close collaboration between project partners: executors (Duke University, University of Pretoria (UoP), WHO) and countries. An inception workshop, attended by countries, WHO, UNEP, Duke University and UoP, was organized on 9 March 2010, in Nairobi, Kenya to officially launch the project and to develop a work plan for 1<sup>st</sup> year of the project.

64. A stakeholder survey<sup>18</sup> involving a wide range of stakeholders, and used in the development of the decision analysis tool was successfully organized in each of the three countries. The survey targeted ministries, non-governmental organizations (NGOs), universities and research institutes whose policy decisions and actions were likely to have impact on the status of malaria or influence malaria control decision-making in the respective countries. The surveys were organized by the lead national institution in each of the participating countries assisted by the WHO country office. For example, in Kenya, the Malaria Control Unit (MCU) was responsible to organize the survey, for which they developed the questionnaire in consultation with WHO and Duke University<sup>19</sup>. The analysis of the outcome of the surveys were carried out in August 2010 and there was a total of 97 respondents (Tanzania: 31, Uganda: 33, Kenya: 33). Significant results obtained from the surveys and aggregated across countries included:

- A belief that donor preferences and agendas were exerting too much influence on malaria policies in the country.
- A misalignment of the respondents' desired level of importance to be given to a range of objectives in deciding among alternative malaria control policies compared with the level of importance they felt those objectives were currently accorded (i.e., respondents on average thought that most relevant objectives were not being given enough consideration in malaria decision-making).
- A greater understanding of the importance of various factors in consideration of specific malaria control strategies, including costs, effectiveness, human health impacts, environmental health impacts, compliance/acceptance, financial sustainability, and vector resistance.

65. Stakeholder workshops<sup>20</sup> were held in each of the three participating countries in August 2010. The purpose of these workshops, organized jointly by WHO, Duke University and University of Pretoria and assisted by the WHO country office and the national coordinator, was to familiarize key stakeholders with the MDAST project and to collect inputs on malaria control decision-making. The University of Nairobi, Kenya and Department of Pathology, Makerere University, Uganda confirmed their active participation to these workshops<sup>21</sup>. For example, during the field mission in Uganda, the representative of the Makerere University shared his 25 years of research experience on vector resistance to pesticides during the workshop and contributed information on the methodology for malaria control. He also highlighted the point that the developers of the MDAST tool do not have first hands experience with malaria.

66. The information gained from these workshops was essential for the refining of the MDAST model to better address the full range of health, social, and environmental risks and benefits associated with alternative malaria control strategies.

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<sup>18</sup> Interview data: University of Nairobi, Kenya and Makerere University confirmed their participation in the surveys to the evaluation during field mission.

<sup>19</sup> Interview data

<sup>20</sup> Interview data

<sup>21</sup> Interview data

### **Activity 3: Identify institutional barriers to implementing optimal policies, as well as incentives for addressing these barriers**

67. Activities were successfully undertaken to complete this Activity. The identification was done through three specific activities: (i) literature review on barriers (ii) MDAST stakeholder on barriers (iii) Additional survey work on barriers

68. A literature review covering the period 1996-2011 on malaria policy barriers was conducted in July 2011. This structured review in identifying barriers to optimal outcomes allowed for opportunities to overcome these barriers. One of the findings of this literature search was that a literature on barriers to optimal malaria policy did not exist, per se, but rather there was a literature describing current shortcomings and potential for improvements in malaria control policy.

69. The stakeholders were also asked to give their feedback on potential barriers / gaps to malaria policy during survey undertaken in August 2010. According to feedback gathered by the evaluation during field mission, there was no particular problem to obtain responses / information from the different stakeholders contacted given the strong partnership that exists amongst these stakeholders already involved in malaria control<sup>22</sup>. 78% of respondent reported that additional stakeholders or organizations should be included in malaria policymaking and were not currently involved in this process. Those respondents also believed that local communities and researchers should have been included in malaria policymaking. Respondents in all three countries indicated that donors should have much less influence over policy-making than they currently have and policymakers should more frequently consider research in policymaking.

70. In-country expert consultations were held in all three project countries in August 2011. After a presentation on the MDAST model and participation in an interactive, hands-on demonstration, the country experts were asked about their perceptions on how critical various barriers were to the implementation and/or dissemination of MDAST for decision making through a questionnaire. The result of this survey, for which the barriers, mentioned in the questionnaire and listed below, were rated on a Likert scale from Very critical (5) to Less critical (1)<sup>23</sup>, was:

- Applicability to real life (4.0)<sup>24</sup>
- Acceptance by superiors (3.95)
- Limitations of relevant scientific research data (3.85)
- Donor preferences/agenda (3.75)
- Cost of implementing alternative strategies (3.7)
- Technological limitations (3.65)

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**22** Interview data from national coordinators of Kenya and Uganda.

**23** Each of the potential barriers listed in the questionnaire were rated by the respondents on a Likert scale from Very critical (rating 5) to Less Critical (rating 1)

**24** The rating given in parenthesis is the average of rating given by the 97 respondents to each of the barriers during the August 2011 in-country expert consultations carried out in the three countries.

- Uncertainty of outputs (3.6)
- Popular pressure/opinion (3.45)

71. In 2011, interviews and data collection activities that provided useful input to the understanding of certain barriers in each country were undertaken in Uganda and Tanzania. In Uganda, 34 stakeholders were interviewed for their perceptions of malaria and vector control, particularly with regards to the use of integrated vector management (IVM) (Mutero, *et al.*, 2012). The key barriers identified to vector management included budget shortcomings, a dependence on external funding, and a lack of internal political capacity to support vector control.

72. In Tanzania, interviews were conducted with 19 experts on the benefits and risks of insecticide treated nets and indoor residual spraying in order to gain information on risks of malaria control efforts which currently are characterized by high level of uncertainty. In particular, the exercise was sought to describe the tradeoffs between risks of malaria and risks of malaria control (risk-risk tradeoffs). The interviews revealed greater concern for the risk of DDT in IRS as compared to ICON (a pyrethroid). Moreover, the interviews also revealed that a majority of respondents considered the current risk (and burden) of malaria to be of much greater concern than the risks of malaria control regarding risk-risk tradeoffs.

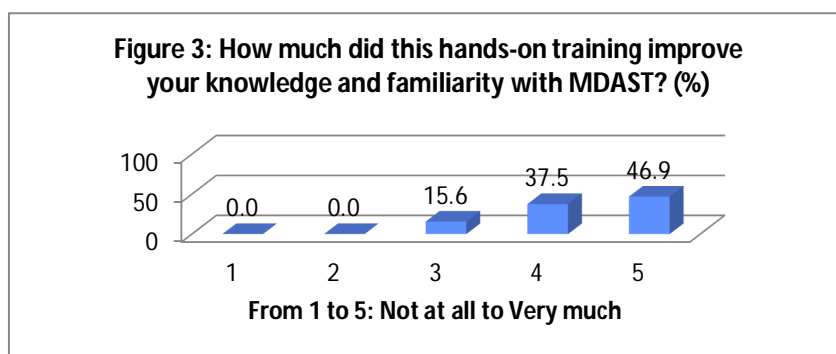
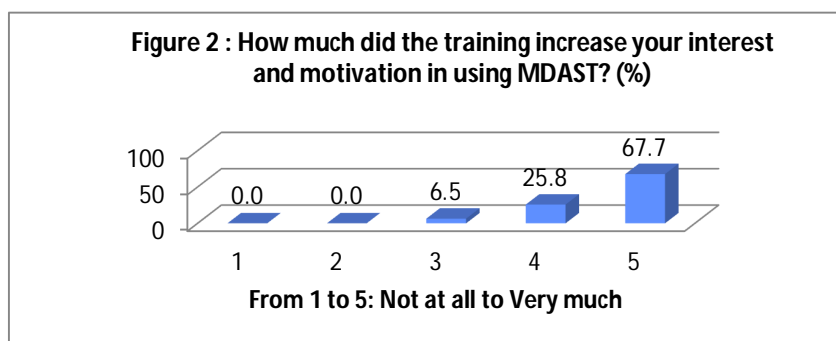
#### **Activity 4: Engage in-country specific training, testing, and refinement activities**

73. The purpose of Activity 4 was to engage in country-specific training, testing, and refinement activities of MDAST. Activities to achieve this goal were successfully undertaken and they required the active participation of in-country experts and stakeholders. This occurred through a variety of mechanisms including webinars, expert consultations and training workshops. In 2010, Stakeholder workshops were held in the three countries. In 2011, webinars were conducted on the tool with key in-country project partners. In addition, expert consultation sessions that were undertaken in August 2011 generated important feedback on the tool, highlighting areas where modifications would be valuable. The training workshops to build the capacity of national key stakeholders on the proper use / operation of MDAST for policy decision making were carried out in April 2012 in the three countries (Kenya: 23 April 2012; Uganda: 25 April 2012; Tanzania: 27 April 2012). At the end of the training workshops, a survey was undertaken to get the feedback of participants on the training session as well as on their satisfaction with the current version of the tool. Very positive response was obtained as showed in Figures 2 and 3. This was confirmed during the evaluation mission in Kenya and Uganda. The persons interviewed indicated that the training workshops were very interesting and very comprehensive. However, they pointed out that the training was too short (only one day) and more hands on training were needed to master the proper use of the tool<sup>25</sup>. The national coordinator from Uganda also indicated that 3 persons were being trained on one computer and this made the training more difficult<sup>26</sup>. Most persons interviewed mentioned the need for follow up and / or refresher training activities and / or mentoring as the proper use of MDAST required much more than 1 day of training.

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<sup>25</sup> Feedback from: Senior officers of NMCP, Uganda; Kenya National Coordinator; and officer from Malaria Control Division, Kenya

<sup>26</sup> Interview data



Note: Figures 2 and 3 are adapted from final report of MDAST project

#### **Activity 5: Use country-specific MDAST in value of information (VOI) analyses to identify key knowledge gaps and create policy-relevant research agenda**

74. For this Activity, activities have been successfully undertaken to achieve its goal. Regarding the value of information analyses for example, the information gaps were identified during MDAST development and they were related to the following areas: insecticide resistance, environmental and health damages from insecticides, and the effectiveness of larvicide alternatives. Gaps identification was achieved through literature review and communication with experts and local stakeholders.

75. For the selection of parameters, the project team identified in the literature what aspects and parameters of malaria transmission were appropriate for VOI analysis and evaluated a series of parameters using the latest version of MDAST which could be potential sources of uncertainty and substantially influential to the key outcome parameters of MDAST. Ultimately, two parameters in the area of insecticide resistance, two in the area of larviciding impact, along with a parameter of the baseline vector recruitment per person were chosen for VOI analysis. A case study was then used as example to illustrate how MDAST could be used to prioritize policy-relevant malaria research agenda in the project countries.

#### **Activity 6: Disseminate project results and lessons learned**

76. For the dissemination of project results, a number of activities have been undertaken including various workshops (e.g. 2011 and 2012 workshops), trainings (e.g. 2012 training



workshops), development of the MDAST website (<http://sites.duke.edu/mdast/>), the development of a slide set on MDAST for in-country partners to present to relevant stakeholders<sup>27</sup>, and research publications<sup>28</sup>. MDAST has also been disseminated in international conferences<sup>29</sup>. An MDAST User Manual that provides a detailed description and guide to the MDAST tool itself has also been developed and can be accessed at: <http://sites.duke.edu/mdast/manual/>.

### **Activity 7: Develop guidelines for replication in other countries**

77. The guidelines have been successfully developed, and the structure (and content) of these guidelines is:

- 1) The identification of characteristics forming an environment conducive to the success of MDAST:
  - Stakeholder involvement & commitment,
  - Governance & policymaking
  - Human resource availability & capacity
  - Data concerns.
- 2) A proposed process for the replication of MDAST
  - Viability to and commitment to MDAST in new country
  - Identification of lead institution
  - Engagement of stakeholders and development of tailor made MDAST
- 3) Areas of anticipated variation of MDAST across countries
  - Specific country characteristics and/or structure of interventions
  - Specific default parameter values
  - Country policymaking environment
  - In-country institutional lead partner for MDAST

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<sup>27</sup> As recommended by the Project Steering Committee, a slide set was drafted for in-country partners to use in presenting on MDAST and a set of these slides have been given to each of the three countries.

<sup>28</sup> (i) Kramer, R.A., Dickinson, K.L., Anderson, R.M., Fowler, V.G., Miranda, M.L., Mutero, C.M., Saterson, K.A., and Wiener, J.B. "Using Decision Analysis to Improve Malaria Control Policy Making," *Health Policy* 92 (2009): 133-140. (ii) Mutero, C.M., Schlodder, D., Kabatereine, N. and Kramer, R. "Integrated Vector Management for Malaria Control in Uganda: Knowledge, Perceptions and Policy Development," *Malaria Journal* 21 (2012): <http://www.malariajournal.com/content/pdf/1475-2875-11-21.pdf> (iii) Factors influencing malaria control policy-making in Kenya, Uganda and Tanzania. Clifford M Mutero, Randall A Kramer, Christopher Paul, Adriane Lesser, Marie Lynn Miranda, Leonard EG Mboera, Rebecca Kiptui, Narcis Kabatereine<sup>8</sup> and Birikinesh Ameneshewa: <http://www.malariajournal.com/content/13/1/305> (iv) Reduction of Malaria Prevalence by Indoor Residual Spraying: A Meta-Regression Analysis. Dohyeong Kim, Kristen Fedak and Randall Kramer: <http://www.ajtmh.org/content/87/1/117.short>

<sup>29</sup> (i) 6<sup>th</sup> Multilateral Initiative on Malaria (MIM) Pan-African Malaria Conference in 2013 (ii) BioMed Central Conference, ASTMH Annual Meeting (iii) EcoHealth Conference in 2012

- 4) Potential challenges to replicating MDAST (and opportunities for addressing these challenges).
- Countries may not be ideal candidates for implementing MDAST
  - Policy-makers may not immediately perceive a need for MDAST
  - Potential challenge to generate buy-in and commitment among potential new country partners
  - Potential a need to build trust and confidence in MDAST among stakeholders in potential candidate countries
  - Challenge for the MDAST project to harness MDAST expansion activities to benefit the tool and its networks
  - Secure funding for replication activities and to sustain support for continued implementation of MDAST
  - Ensure continued support of donors / external funding with regards to MDAST for in-country needs

78. Overall, all the planned activities have been undertaken and outputs successfully delivered. For these reasons, the rating is **Highly Satisfactory** for achievement of outputs.

### **C. Effectiveness: Attainment of project objectives and results**

79. The evaluation of effectiveness is based on the extent to which the objective of the project was achieved: *To promote evidence-based, multi-sectoral malaria control policymaking in three African countries through the use of a comprehensive framework for assessing the full range of health, social, and environmental risks and benefits associated with alternative malaria control strategies.* This exercise has been structured in three sub-sections as per the TORs of this evaluation.

#### **C1. Direct outcomes from reconstructed TOC**

80. To reconstruct the theory of change (Figure 1), seven intermediate states and one outcome have been identified for impact of the project, and they are listed below:

##### **Intermediate states:**

- (1) Alternative and effective option (MDAST) for policy decision on malaria control that jointly incorporates health, social and environmental priorities exists in Kenya, Tanzania and Uganda
- (2) Increased capacity for evidence-based malaria control policy making for the use of MDAST created in Kenya, Tanzania and Uganda
- (3) National stakeholders fully aware of the effectiveness and usefulness of MDAST
- (4) Technical expertise to use and modify MDAST exists in the three participating countries

- (5) Policies are approved and implemented
- (6) Implementation of policies leads to reduction in the incidence of malaria in Kenya, Tanzania and Uganda
- (7) Implementation of policies leads to malaria control strategies which protect the environment.

**Outcome:**

- Policy makers of Ministries of Health use MDAST in order to choose the best policy for malaria control

81. According to the findings of the evaluation, **intermediate states** (1) and (3) have occurred in the three participating countries. Indeed, refined, tested operational MDAST tools, developed with active participation of keys stakeholders through workshops, consultations and surveys, specific to each country are available. Through this participatory approach, the national stakeholders were fully aware of the availability and usefulness of MDAST that allowed to assess the full range of health, social, and environmental risks and benefits associated with alternative malaria control strategies. For example, the University of Nairobi, Kenya confirmed the usefulness of this tool as it allowed for better planning, monitoring and evaluation with regard to malaria control<sup>30</sup>.

82. Although training workshops to build capacity of key national stakeholders for the use of MDAST have been conducted (in April 2012, see **Section IVB**, Activity 4) in the three participating countries, the evaluation considers that the intermediate states (2) and (4) have not fully occurred. Indeed as mentioned earlier (see **Section IVB**, Activity 4), many stakeholders<sup>31</sup> interviewed indicated that despite the training being very interesting and very comprehensive they found its duration too short, and it was difficult for them to master its use properly in such a short time. They all indicated that further training and follow up was needed. Furthermore, as mentioned earlier, in Uganda three persons were being trained on one computer, which further added to the difficulty for an adequate capacity building<sup>32</sup>. During the country visits, except for the representative of University of Nairobi<sup>33</sup> who indicated that she effectively used the MDAST (for a few weeks only and afterwards she could not run the software due to licensing issue<sup>34</sup>) for her PhD work on malaria control. The evaluation also found out that none of the other persons interviewed<sup>35</sup> and having followed the training, never run or used MDAST, although they had a softcopy of the MDAST on their personal computer. In Tanzania, MDAST was also not used for policy decision as NMCP

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**30** Interview data

**31** Disease vector control division, Uganda; National Malaria Control Programme, Uganda, Malaria control division, Kenya;

**32** Interview data

**33** Department of Medical Physiology

**34** Analytica® (Lumina Decision Systems, Inc., Los Gatos, CA).

**35** National Coordinators of Kenya and Uganda; representative of NMCP of Uganda; officers of Malaria Control Division of Kenya, officers of disease vector control division of Uganda – See Annex 2 for persons interviewed

staff felt they needed more training to be able to use MDAST properly<sup>36</sup>. However, according to the NC, plans for the use of MDAST are under way, pending the availability of funds for further training.

83. As a result the **outcome** described above did not occur in any of the three participating countries. Indeed, in Uganda the stakeholders interviewed indicated that, as the training was too short, they were not confident enough to use / operate MDAST to develop strategies for malaria. In Kenya too, MDAST has not been used to develop malaria control strategies. Insufficient training was also mentioned as one of the reasons. However, the main reason mentioned was that the National Malaria Strategy covering the period 2009–2017 had already been developed in line with the Government’s first Medium-Term Plan of the Kenya Vision 2030, Millennium Development Goals, as well as Roll Back Malaria partnership goals and targets for malaria control<sup>37</sup>. This National Malaria Strategy was developed in close partnership and intensive discussion with the Ministries of Public Health and Sanitation and Medical Services, other Ministries of the Government of Kenya, and all implementing partners in malaria control. The estimated budget for this 2009 – 2017 National Malaria Strategy is \$ 1,020,858,785<sup>38</sup>. In that context, the interviewees in Kenya<sup>39</sup> indicated that although MDAST was discussed at the level of the national technical working group on malaria, to which all the stakeholders of the project were members, it was difficult to propose modifications (using MDAST) to this strategy already approved by the government and already in the implementation phase. They however indicated that MDAST could be used for low transmission zones, but further training on the use of MDAST would be required. To date, in Kenya MDAST is not being used for policies on malaria control.

84. As the policy makers of Ministries of Health did not use MDAST to choose the best policy for malaria control, automatically means that the **intermediate states** (5), (6) and (7) did not occur in the countries.

85. The rating for **Section C.1** (Direct outcomes from reconstructed TOC) is **Moderately Unsatisfactory**.

## **C2. Likelihood of impact using RoTI and based on reconstructed TOC**

86. A Review of Outcomes to Impacts (ROtI) analysis, which is described in the annex 6 of the TORs of this evaluation exercise (Annex 1), was made to assess progress made towards achievement of impact of project. The ROtI analysis identifies “intermediate states” (seven for this evaluation exercise, see previous section and Figure 1) which are transitional conditions between the project’s immediate outcomes (one for this evaluation exercise, previous section and Figure 1) and the intended impact and they are necessary conditions for achieving the impact of the project. It is theoretically possible to determine the Impact Drivers (significant factors that if present are expected to contribute to the realization of the intended impacts and can be influenced by the project, its partners and stakeholders) and the Assumptions (significant factors that if present are expected to contribute to the realization of the intended impacts but are largely beyond the control of the project). Based upon this

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<sup>36</sup> Interview data

<sup>37</sup> <http://www.c-hubonline.org/resources/kenyas-national-malaria-program-2009-2017-malaria-communication-strategy-2010-2013>

<sup>38</sup> Figure taken from the document: National Malaria Strategy 2009–2017 (see footnote 32 for the website)

<sup>39</sup> National coordinator and officers of malaria control division, Ministry of Health, Kenya

analysis it is possible to recognize if the project has produced sufficient changes, and to identify the intermediate states.

87. The reconstructed theory of change is already discussed in **Section III.I**, and the intermediate states and outcomes have also been discussed. As illustrated in Figure 1, two important drivers towards project impact have been identified and include policy makers able and willing to use MDAST to inform policy decisions and Duke University providing effective technical assistance in the use of MDAST. The project's outcomes in themselves are not sufficient to achieve the intended impact or GEBs. The likelihood that the GEBs will be achieved will depend on a number of assumptions including monitoring activities implemented at national level that would indicate governments' ownership of the project and their willingness to fulfill their obligations towards the Stockholm Convention, the availability of adequate human and financial resources to establish monitoring programmes and stability of skilled laboratory personnel to generate high quality data.

88. The ratings for the Review of Outcome to Impact Analysis are given in Table 2. The overall rating for impact of the project is **Moderately Unlikely (DC)** and is based on the following:

- Although an MDAST specific to each country has been successfully developed and in country capacity built to some extent, the policy makers in the countries are not using MDAST to develop policies for malaria control. In that context, a **D** rating is fully justified for immediate outcome.
- As discussed in the previous section (**IV.C1**), while two of the seven identified intermediate states have fully occurred and two others have occurred to some extent, however the last three have not materialized. For these reasons a **C** rating is given for intermediate states.
- Consequently a **DC** rating is obtained for Review of Outcome to Impact Analysis. As mentioned in **Section IV.C1**, further training is required for stakeholders to fully master the use of MDAST. Moreover, given the huge amounts of funding involved in malaria programmes (e.g. more than 1 billion US dollars planned for Kenya for the period 2009 – 2017, see **Section IV.C1**, paragraph 82), some interviewees<sup>40</sup> were of the opinion that WHO should consider some advocacy / promoting activities to convince decision makers to use MDAST.

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<sup>40</sup> National coordinators of Kenya and Uganda.

**Table 2: Results and ratings of Review of Outcome to Impact Analysis**

<b>Results rating of project entitled: Malaria Decision Analysis Tool (MDAST): Evaluating Health, Social and Environmental Impacts and Policy Tradeoffs.</b>								
<b>Objective:</b> To promote evidence-based, multi-sectoral malaria control policymaking in three African countries through the use of a comprehensive framework for assessing the full range of health, social, and environmental risks and benefits associated with alternative malaria control strategies								
			Rating (D – A)		Rating (D – A)		Rating (+)	Overall
Outputs	Intermediary	Outcomes		Intermediary		Impact (GEBs)		
1. Country-specific decision analysis support tools (MDAST) developed 2. Database of parameters to be included in MDAST and Project Website available and developed 3. Training and refinement workshops for in-country decision analysis expertise undertaken	1. Alternative and effective option (MDAST) for policy decision on malaria control that jointly incorporates health, social and environmental priorities exists in Kenya, Tanzania and Uganda 2. Increased capacity for evidence-based malaria control policy making for the use of MDAST created in Kenya, Tanzania and Uganda 3. National stakeholders fully aware of the effectiveness and usefulness of MDAST 4. Technical expertise to use and modify MDAST exists in the three participating countries	1. Policy makers of Ministries of Health use MDAST in order to choose the best policy for malaria control	<b>D</b>	1. Policies are approved and implemented 2. Implementation of policies leads to reduction in the incidence of malaria in Kenya, Tanzania and Uganda 3. Implementation of policies leads to malaria control strategies which protect the environment	<b>C</b>	Countries are protecting human health and the environment by promoting malaria control strategies that consistent with successful implementation of the Stockholm Convention through promoting evidence-based, multi-sectoral malaria control policy using a comprehensive tool decision analysis framework (MDAST)		<b>Moderately Unlikely</b>

		<b>Rating justification: D</b> The D rating is justified as although capacity of stakeholders to use MDAST has been built to some extent, the policy makers have not used MDAST to develop policies for malaria control		<b>Rating justification: C</b> The C rating is justified; the stakeholders, whose capacity has been built to some extent, are fully aware that an alternative option (MDAST) for evidence-based malaria control policy making exists in the country. However, these capacities are not being used and policies are not being developed and approved using MDAST		<b>Rating justification: DC</b> The DC rating corresponds to <b>moderately unlikely</b> that GEBs will be achieved.		
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### C3. Achievement of project goal and planned objectives

89. The outcomes and indicators proposed in the logical framework of the project document have been used to assess this section. Based on the four outcomes planned in the project and the twelve indicators given in the logical framework, the assessment for this section is reported in Table 3. According to the theory of change, only Outcome II mentioned in Table 3 is indeed an outcome, the three others are outputs.

Table 3: Assessment of planned project outcomes\*

Outcome	Indicators	Findings of the evaluation	Rating**
I. Malaria Decision Analysis Support Tool (MDAST) that jointly incorporates health, social and environmental priorities for malaria control in Kenya, Tanzania, and Uganda, developed	<ul style="list-style-type: none"> <li>MDAST exists for the three countries</li> <li>MDAST predicts likely consequences of different policies on health (e.g. malaria prevalence), social (e.g. poverty), and environmental (e.g. water quality) outcomes</li> </ul>	<ul style="list-style-type: none"> <li>MDAST developed according to each country's needs, gaps and specificities available in each country</li> <li>A discussed in <b>Section IV.C1</b>, MDAST is not currently being used to develop policies for malaria control in the countries</li> </ul>	<b>MU</b>
II. Increased capacity for evidence-based malaria control policy making through the regular use of MDAST in Kenya, Tanzania, and Uganda.	<ul style="list-style-type: none"> <li>MDAST used by policy makers in Ministries of Health in order to choose among policy options</li> <li>Policy makers consider range of health, environmental, social, and economic factors in formulating policy.</li> <li>MDAST incorporates and synthesize a range of evidence on the impacts of different malaria control policies.</li> </ul>	<ul style="list-style-type: none"> <li>MDAST is not being used in countries. See <b>Section IV.C2</b> for comments and possible actions.</li> <li>Same as above</li> <li>Same as above</li> </ul>	<b>U</b>
III. Creation of an agenda for policy-relevant malaria research through development of MDAST and identification of key knowledge gaps.	<ul style="list-style-type: none"> <li>MDAST serves as basis for value of information (VOI) analyses to identify national research priorities in the project countries.</li> <li>Collaboration between</li> </ul>	<ul style="list-style-type: none"> <li>Based on information gathered through surveys and workshops, VOI analyses have been done by MDAST developers and research agenda identified.</li> <li>As a result of gaps identified, some pilot research projects have</li> </ul>	<b>S</b>

	national and international researchers promoted to develop strategies for implementing agenda	been initiated (e.g. larviciding in Uganda <sup>41</sup> ). This was done through collaboration with University of Pretoria and International Centre of Insect Physiology and Ecology (ICIPE) <sup>42</sup> .	
IV. Elucidation of requirements for replication of MDAST in other malaria-prone countries around the world.	<ul style="list-style-type: none"> <li>• Reports developed that document the process of developing the MDAST and applying it to three project countries, and key steps and challenges are identified</li> <li>• Tools for MDAST development made available to other potential users through Regional workshop, publications and a website</li> </ul>	<ul style="list-style-type: none"> <li>• Based on the experience gained in the three countries, guidelines for replicating MDAST in other countries have been successfully developed (see <b>Section IV.B</b>, Activity 7)</li> <li>• Research papers (see footnote 28) on project have published and project website developed: (<a href="http://sites.duke.edu/mdast/">http://sites.duke.edu/mdast/</a>)</li> </ul>	<b>HS</b>

\*The outcomes considered here are those mentioned in the project document. \*\*Rating is for each outcome

90. The rating for **Section C.3** (Achievement of project goal and planned objectives) is **Moderately Satisfactory**.

91. The overall rating for **Section C** (Effectiveness: Attainment of project objectives and results) is **Moderately Unsatisfactory** reflecting the fact that although MDAST has been successfully developed, and to date, it has not been used yet to develop policies for malaria control in the three countries.

## **D. Sustainability and replication**

### **D1. Sustainability**

92. To sustain the outcomes and benefits of the projects, no strategy has been proposed in the project document. However, potential risks that could impact on the project's success have been identified in the project document and mitigation measures have been proposed accordingly<sup>43</sup>. The project document also mentioned that *"ultimately the sustainability of the project will depend on the acceptability of the tools and training developed, as well as support from relevant government agencies and stakeholders"*<sup>44</sup>. However, according to the findings of the evaluation, although adequate support has been obtained from the countries to develop MDAST, for reasons discussed in earlier sections (**IV.C1 and IV.C2**) MDAST has not yet been used for policy development on malaria control.

93. Sustainability factors that would affect progress towards project impacts as described in the ROTI analysis are discussed in the following paragraphs. As mentioned in the TORs of this evaluation (Annex 1), the factors are primarily considered under socio-political, financial, institutional, and environmental sustainability sections. Having in mind that

<sup>41</sup> Interview data with Disease Vector Control Division, Uganda

<sup>42</sup> The key person from University of Pretoria involved in the project was a staff of ICIPE on contract at University of Pretoria.

<sup>43</sup> Table 3 in Sustainability Section (3(i)) of the project document.

<sup>44</sup> Page 23 from Sustainability Section (3(i)) of the project document.



MDAST has not been used yet in the three countries, the following paragraphs examine the prospects for sustainability if MDAST happens to be used in the future.

*a) Socio-political sustainability.*

94. Country ownership, interest and commitment to the project are considered high as all the countries are Parties to the Stockholm Convention on POPs. In addition, as mentioned in the **Strategic Relevance Section (IV.A)**, the countries are already engaged in malaria control since decades, and according to their NIPs they are committed to look for alternatives to DDT. However, as discussed earlier (see paragraph 82), in Kenya given that a National Malaria Strategy for the period 2009 – 2017 was already developed, approved and under implementation, MDAST was not used. The tool has also not being used in Uganda and Tanzania for what appears to be lack of training. It can thus be considered that MDAST will not likely be used before 2017, but if it is, the conditions are present for its use to become sustainable.

95. Socio-political sustainability is rated as **Likely**.

*b) Financial resources sustainability.*

96. The fight against malaria involves huge costs. For example, as mentioned earlier (**Section IV.C1**), the budget for the 2009 – 2017 National Malaria Strategy for Kenya is estimated at \$ 1,020,858,785. Fortunately, a number of initiatives and funds have been created (e.g. the President's Initiative<sup>45</sup> or the Global Fund to fight Aids, Tuberculosis and Malaria<sup>46</sup> (GFATM) to assist countries in their endeavour of fighting malaria. In this context, for the period 2008 – 2012, Kenya, Tanzania and Uganda have benefitted from GFATM grants amounting to \$129,980,976, \$208,123,546 and \$ 128,770,789 (on average, annually) respectively<sup>47</sup>.

97. Given the very small amounts (mostly in kind) that would be required to sustain the project's impact (that is the use of MDAST to develop policies) **if MDAST would be used**, compared to the actual budget for malaria control, the rating for financial resources sustainability is **Highly Likely**.

*c) Institutional framework sustainability*

98. As mentioned earlier, all the participating countries of the projects have ratified the Stockholm Convention and are committed to look for alternatives to DDT and thus comply with Convention's obligations. In the three countries the Stockholm Convention has been institutionalised to some extent. For example, they have a nominated POPs Focal Point and have reinforced their national legislation to strictly manage the life cycle (manufacture, trade, use and release) of most POPs. Most countries have attended the COP (COP1 to COP6)

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<sup>45</sup> <http://www.pmi.gov/>

<sup>46</sup> <http://www.theglobalfund.org/en/>

<sup>47</sup> Data taken from the PIF approved in 2011 by GEF of the project proposal entitled “*Demonstration of effectiveness of diversified, environmentally sound and sustainable interventions, and strengthening national capacity for innovative implementation of integrated vector management (IVM) for disease prevention and control in the WHO AFRO Region.*” GEF ID: 4668

meetings. The three countries are engaged in post NIP activities. For example, Kenya and Uganda were engaged in the GEF funded project “*Supporting the Implementation of the Global Monitoring Plan of POPs in Eastern and Southern African countries*” that was completed in March 2012.

99. Being engaged in malaria control since the 1950’s, the countries have established the adequate institutional framework and governance. For instance, they have a dedicated division / department for malaria control found within the Ministry of Health, which is the National Malaria Control Programme / Division. Within this framework, there exists a technical working group that discusses issues related to diseases transmitted by vectors including malaria. MDAST was discussed in this technical working group, and most of the members of this group participated actively in MDAST development<sup>48</sup>. Just as Kenya, Tanzania<sup>49</sup> and Uganda both have national malaria strategic plans and they also have operational plans<sup>50</sup>.

100. The rating for Institutional framework sustainability is **Highly Likely, if MDAST** is indeed used in the countries.

*d) Environmental sustainability.*

101. No environmental factor that can influence the future flow of project benefits has been identified and, there do not appear to be any output or result that could affect the environment and, consequently, the sustainability of project benefits.

102. Environmental sustainability is rated as **Highly Likely**.

## **E. Catalytic role and Replication**

*a) Catalytic role*

103. As stated in the project, two of the four outcomes/outputs of the project were to develop a decision analysis tool (MDAST) for malaria control and to build capacity in the three participating countries for evidence-based malaria control policy through its use. While the project has successfully catalysed the development of specific tools (MDAST) for each country involving the active participation of key stakeholders, on the other hand, at this point in time it has not been successful to catalyse its use to develop policies on malaria control. As pointed out previously (See **section IV.C2**, paragraph 77 third bullet point) further training

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48 Interview data with stakeholders (NMCP, NC and DVC) in Kenya and Uganda

49 Medium term Malaria Strategic Plan 2008 – 2013 for Tanzania:  
<http://natnets.org/attachments/article/65/MTMSP%202008-2013.pdf>

50 [http://www.pmi.gov/docs/default-source/default-document-library/malaria-operational-plans/fy14/tanzania\\_mop\\_fy14.pdf?sfvrsn=10](http://www.pmi.gov/docs/default-source/default-document-library/malaria-operational-plans/fy14/tanzania_mop_fy14.pdf?sfvrsn=10): President’s Malaria Initiative, Uganda Malaria Operational Plan FY 2013; [http://www.pmi.gov/docs/default-source/default-document-library/malaria-operational-plans/fy14/tanzania\\_mop\\_fy14.pdf?sfvrsn=10](http://www.pmi.gov/docs/default-source/default-document-library/malaria-operational-plans/fy14/tanzania_mop_fy14.pdf?sfvrsn=10): President’s Malaria Initiative, Tanzania Malaria Operational Plan FY 2014

on the use of MDAST would be required and some advocacy activities are needed to convince decision makers to use of MDAST.

104. However, the project has catalysed some change in the countries. For example, in northern part of Uganda, IRS using DDT was rejected by the local population. With knowledge gained from the MDAST project, NMCP was able to develop a new strategy using carbamate instead of DDT, and this new intervention was in the end accepted by the local population<sup>51</sup>. In Kenya, the representative of the University of Nairobi<sup>52</sup> indicated that the project was a wide opener and allowed for better predictions. For example, MDAST allowed to predict the number of Rapid Diagnostic Test-kits (RDT) that would be needed for Kenya for the next 5 years, which was not possible before the project. This prediction was done in the context of her PhD research work, but not used for policy making.

#### *b) Replication*

105. Potential for replication is very high. Indeed, the project was designed for replication in other prone countries. As stated in the project document, this pilot project was developed to serve as prototype for improving malaria control decision making in other countries, as well as improving complex public health decision-making more broadly. And as planned, guidelines to facilitate dissemination and implementation of MDAST in other countries have been successfully carried (see **Section IV.B** Activity 7).

106. There are indications that this replication is likely to happen. The Project Manager (UNEP) indicated that in the GEF funded project *“Demonstration of effectiveness of diversified, environmentally sound and sustainable interventions, and strengthening national capacity for innovative implementation of integrated vector management (IVM) for disease prevention and control in the WHO AFRO Region”*, (GEF ID: 4668) for which the PIF has already been approved, MDAST would be implemented in some of the participating countries with technical expertise provided by Duke University<sup>53</sup>. This was confirmed by the Project Coordinator (WHO AFRO)<sup>54</sup>. Furthermore, in the context of another project, MDAST will be the focus of an up-coming workshop to be held in Dar Es Salaam.

107. Rating for catalytic role and replication is **Satisfactory**.

108. As the countries have not yet used MDAST for policy decision on malaria control, but these is deemed feasible and the results sustainable, the rating for Sustainability and Replication is **Moderately Likely**.

#### **F. Efficiency**

109. For the execution of the project, a mixed form of execution (agency and counterpart) was applied for implementation of project activities. As planned, the overall supervision and

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51 Information gathered during interview with senior medical officer, NMCP, Uganda

52 Interview data

53 Ibid

54 Ibid

management of the project was done by WHO AFRO through a project coordinator, and the technical aspect was sub-contracted to Duke University (\$ 356,100) and the University of Pretoria (\$232,000).

110. A number of measures to promote efficiency were identified in the project document and adopted during implementation and they include:

- i. Establishment of partnerships amongst key partners (WHO, UNEP, Duke University and University of Pretoria), and identification and engaging of key national partners (NMCP, MCD and DVCD) for project implementation since the preparatory phase (as early as 2005, see **Section III.C**).
- ii. Building on and linkages with existing GEF-funded and WHO-executed projects on Integrated Vector Management (IVM)<sup>55</sup>.
- iii. Identification of key national stakeholders through existing framework for malaria control (e.g. the national technical working groups (TCG) on malaria) to develop MDAST. Indeed, as indicated by the national coordinators of Kenya and Uganda during the evaluation mission, all the key stakeholders for malaria control are members of TCG and it was not difficult to get their engagement and active participation in the project. Consequently, response to the surveys carried out in August 2010 was high, as confirmed by the national coordinators of Kenya and Uganda during the evaluation mission.
- iv. Engagement of WHO country offices at local level facilitated implementation of activities at national level. For example, the funds that were transferred from WHO AFRO to Ministry of Health, Uganda were not transferred immediately to the Disease Vector Control Division (responsible for project implementation) and this delayed the process. Upon the initiative of WHO country office, who contacted the permanent secretary of the MOH, the funds were then released rapidly<sup>56</sup>.
- v. Organization of project steering committees back to back with national workshops<sup>57</sup>.
- vi. Good line of communication between PC (WHO), Duke University, University of Pretoria and national coordinators and other stakeholders. All the stakeholders interviewed during the evaluation mission indicated that the good communication that existed amongst them contributed to the successful implementation of project activities. The communication was mostly done through emails, and telephone communication was also used but less frequently.

111. The implementation approach applied and the cost-efficient measures adopted contributed to the completion of project within the planned cash budget. According to

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55 Four projects are mentioned in the project documents, page 11

56 Interview data from NC of Uganda

57 All the project steering committee meetings were organized back to back with either the inception workshop or stakeholder workshops, information gathered from progress reports and confirmed during interviews with WHO and UNEP

documents transmitted to the evaluation, only 79.4 % of the planned the total co-funds was mobilized. However, regarding cash co-funds, the project has been successful in mobilizing \$131,656 compared to the planned \$100,000 representing an increase of 31% (Table 4). As discussed in Section IV.B (Achievement of Outputs), all outputs have been successfully delivered for the seven planned Activities.

Source	Planned co-financing (\$)			Actual co-financing (\$)			% mobilized
	Cash	In-kind	Total	Cash	In-kind	Total	
<b>WHO</b>	50,000	348,000	398,000	94,485	362,500	456,985	115
<b>University of Pretoria</b>	-	150,000	150,000	-	81,500	81,500	54
<b>Duke University</b>	50,000	373,888	423,888	37,171	187,187	224,358	52
<b>Government of Kenya</b>	-	14,000	14,000	-	14000	14,000	100
<b>Government of Uganda</b>	-	14,000	14,000	-	14000	14,000	100
<b>Government of Tanzania</b>	-	14,000	14,000	-	14000	14,000	100
<b>Total</b>	<b>100,000</b>	<b>913,888</b>	<b>1,013,888</b>	<b>131,656</b>	<b>673,187</b>	<b>804,843</b>	<b>79.4</b>

Table 4: Co-finance commitments by partners

112. According to feedback gathered during the evaluation mission, apart from the delays in funds transfer that caused the project to be extended by one year, and changes of national coordinators (discussed earlier) in Kenya and Uganda, which did not cause delays or problems, no particular problem that could have affected project efficiency occurred during the implementation process.

### **Timeliness of Execution**

113. The project was scheduled to start as from May 2009. However, the signature of Letter of Agreement (LOA) between UNEP, the implementation agency and WHO AFRO, the executing agency was done in August 2009, and the signature of contracts between WHO and the sub-contractors, Duke University and University of Pretoria, responsible for the actual execution of activities, occurred only in November 2009. This contractual process caused a delay of six months. A six month no cost extension was requested from WHO to allow for completion of activities by December 2012 as it was anticipated that activities would not be completed by May 2012.

114. From findings of the evaluation<sup>58</sup> and confirmed by the project coordinator (WHO), the relocation of administrative / financial system / hub of WHO from Geneva to Malaysia caused delays in funds transfer to countries and the two Universities, which led to delays in implementation of activities at national level. A second no cost extension was requested in December 2012 to allow for remaining activities to be completed.

115. As a result of delays in implementation and extensions, the budget of the project was twice revised in December 2010 and in January 2013 to reflect the actual expenditures and to re-phase unspent balances in the following years.

<sup>58</sup> Information taken from Revision document submitted to evaluation.

116. Despite the delays encountered, the project was successfully completed thanks to the dedication and hard work of the Project Coordinator, the co-executors (Duke University and University of Pretoria) and the national coordinators<sup>59</sup>. The final report of the project was submitted to UNEP in June 2013.

117. Although delays were encountered during project execution, all outputs have been delivered. For these reasons, the rating for Efficiency is **Satisfactory**.

## **G. Factors affecting performance**

### *a) Preparation and readiness.*

118. The project document contains relevant information to allow for the promotion of evidence based, multi-sectoral malaria policymaking in the three participating countries through the use of a comprehensive framework for assessing the full range of health, social, and environmental risks and benefits associated with alternative malaria control strategies. The objective was clear and realistic as the three countries were already engaged in malaria control programmes and were all committed to look for alternatives to DDT as stated in their NIPs (see **Section IV.A on Strategic Relevance**). The time frame planned for project execution is considered adequate.

119. However, the evaluation considers that the design of the project could have been improved by properly describing / giving the expected outcomes / outputs for each of the **Activities** (1 to 8) mentioned in the project document. The evaluation considers that using the term correct terminology, for example **Component** rather than **Activity** would have been more appropriate. It would have made the project document more comprehensive and avoided confusion regarding the term activity. Although the activities were properly described in the main text of the project document and in the intervention logic (Project Logical Framework), the causal pathways from project outputs (goods and services) through outcomes (changes in stakeholder behavior) towards impacts were not clearly and convincingly described. Furthermore, the evaluation considers that the design should have proposed clear linkages between the project (MDAST) and the existing process/procedures for policy decisions on malaria control in the countries. However, the evaluation considers that the proposed indicators and means of verification proposed in the logical framework were adequate for each of the outputs / outcomes mentioned in the logical framework to allow for effective and efficient implementation, monitoring and evaluation.

120. The key project partners: Duke University and University of Pretoria, have significant expertise on development of initiatives in global health, on vector management and malaria control in Africa. The participatory approach used by those key partners of the project to undertake a preparatory mission for development of the proposal is considered a very good strategy. Indeed, as mentioned earlier (see **Section III.C**), in October 2005 they undertook missions in the three countries to:

- Present the project concept to malaria control managers and other stakeholders and to solicit feedback on the utility of the proposed research activities

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<sup>59</sup> Data interview with PC and national coordinators during field visit. Confirmed by other partners of project during interviews.

- Obtain information needed to design a prototype decision analysis tool that will serve as “proof of concept”
- Gauge degree of national government interest in the project concept
- Identify potential partners for the project

121. During this mission, the key national partners and stakeholders were indeed identified (see Section III.C) and they were from departments / divisions of the Ministry of Health of the three countries dealing with malaria control, disease vector control or medical research. They were involved in the design of the proposal by providing national data on malaria control and status of DDT use in the country.

122. While the structure for overall and regional supervision, through the PC, is described in the project document, the evaluation considers that the project would have greatly benefitted with the inclusion of structures at national level including a national coordinator with a clearly defined role and terms of reference and mentioning specifically the major stakeholders like the NMCP.

123. The rating on preparation and readiness is **Satisfactory**, which reflects some weaknesses highlighted in the project design.

*b) Project implementation and Management*

124. The implementation followed the approach originally agreed upon by stakeholders and as planned in project document. The project was implemented by UNEP, from which a Task Manager was designated, and executed by WHO AFRO, from which a Project Coordinator (PC) was nominated. The project was co-executed by Duke University and University of Pretoria, who were responsible to directly execute the seven Activities mentioned in the project document. Consequently, yearly agreements were signed between WHO and the two co-executors: October 2009 (both); May 2011 (both); April 2012 (both); and May 2013 (Duke University only). The reason for yearly agreements instead of a single contract for the full project was to avoid the tendering exercise<sup>60</sup>.

125. The coordination, guidance and assistance of the WHO AFRO project coordinator was greatly appreciated by all the stakeholders including Duke University, University of Pretoria and the national coordinators<sup>61</sup>. They highlighted the promptness with which the PC responded (generally through emails) to all their queries related mostly to administrative issues like transfers of funds or organization of workshops. WHO was also very helpful in the development of survey questionnaires<sup>62</sup>.

126. The very good guidance and excellent technical assistance of Duke University and University of Pretoria was highlighted by stakeholders interviewed during the evaluation mission. In particular, they were very satisfied with the expert assistance provided during the development of MDAST, identification of gaps and training workshops. As mentioned earlier, they however found the training on MDAST too short to be able to properly master its use.

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60 Interview data with WHO AFRO

61 Interview data

62 Ibid

127. At national level, ad-hoc committees were set up and were chaired by a national coordinator: Vector Control Division (VCD), Ministry of Health (MOH) for Uganda; Malaria Control Division (MCD), MOH for Kenya; and National Institute for Medical Research (NIMR), MOH for Tanzania. These ad-hoc committees were constituted by the key national partners of the project. For example, in Uganda the committee was constituted by officers from VCD, NMCP and WHO county office and it was chaired by the NC (VCD) and co-chaired by NMCP. The committees met as and when required for the proper planning and implementation of activities. For example, in Uganda at the start of the project the committee met more regular, the first four meetings were held between 17 June 2010 and 25 August 2010. Then afterwards, the committee met less frequently; the 5<sup>th</sup> and 6<sup>th</sup> meetings were held in January 2011 and July 2011 respectively.

128. The evaluation findings seem to indicate that the ad-hoc committees performed satisfactorily. For example, the national coordinators in Kenya and Uganda stated that they were very successful in gathering information / data to develop MDAST thanks to a good response rate of surveys carried out in 2010 and some adaptive management measures<sup>63</sup>. For example, in Uganda, although there were delays in transfer of project funds (received from WHO AFRO) from the Ministry of Health to the Vector Control Division that was managing the project, the activities were nevertheless undertaken as scheduled. The NC asked the VCD officers to use their own funds to travel across the country for data gathering (through interviews / surveys). The officers agreed and they were eventually refunded from the project funds afterwards<sup>64</sup>.

129. According to feedback gathered from Duke University and confirmed by the RC, most of the recommendations made in the mid-term review (MTR) report were taken into consideration during the last phase of the project. For example, refinement of MDAST was made based on recommendation made by the MTR. However, the MTR recommendation to expand the applicability of MDAST to other vector borne diseases such as lymphatic filariasis or Human African trypanosomiasis (HAT) was not considered. While the potential value of MDAST for addressing control of other vector borne diseases (other than malaria) was recognized, it was believed this was outside the scope, stated objectives, and available resources of the project<sup>65</sup>.

130. The rating for Project Implementation and Management is **Highly Satisfactory**.

*c) Stakeholder participation and public awareness.*

131. The key project partners were UNEP/GEF, WHO-AFRO, VCD, Ministry of Health, Uganda, MCD, Ministry of Health, Kenya, NIMR, Tanzania, University of Pretoria, and Duke University. As mentioned before, the key national stakeholders were identified since the preparatory phase and they were responsible for project implementation at national level. They were also active participants in the project. For example, in Kenya MCD in collaboration with WHO developed the questionnaire for the stakeholder survey to gather information / data for the development of MDAST. In Uganda, VCD was responsible to undertake a pilot study on larviciding that provided data for MDAST development.

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63 Interview data

64 Interview data with NC of Uganda

65 Response from Duke University and WHO AFRO



132. Given its key role for malaria control in all the countries, NMCP was closely linked to the project and participated in all the project activities. In particular, NMCP was member of the ad-hoc committee to implement the project and it was a key partner in the development of MDAST by providing valuable information on existing malaria control programmes.

133. Other national stakeholders that were invited to participate in the stakeholder workshops and / or invited to submit data and information (through surveys or questionnaires) relative to the project include other Ministries (e.g. Water resources, Environment, Agriculture), Bureau of Standards, Organic Farmers Association, academic institutions (e.g University of Nairobi, Makerere University), health and other offices at district levels, and NGOs. In Kenya, members of parliament were also solicited to respond to the survey questionnaires, which they did positively.

134. No public awareness raising activities were planned in the project document. However, all the key national stakeholders (e.g. NMCP, stakeholders involved in malaria control or research) were fully engaged in the project activities, and it is anticipated that they are fully aware of the usefulness of MDAST and the possibilities that it offers to develop policies on malaria control.

135. The rating for Stakeholder participation and public awareness **is Satisfactory**.

*d) Country ownership and driven-ness.*

136. As stated in the section **Stakeholder Participation**, this project engaged mainly departments / divisions of the Ministry of Health that were responsible for the implementation of the project through an ad-hoc committee chaired by a national coordinator.

137. For project execution that was done in consultation with WHO country office and WHO AFRO, adequate support was provided by these departments / divisions of the Ministry of Health. For example, in Uganda the VCD officers were actively involved in carrying out the surveys across the country. In Kenya, the MCD developed the questionnaires for the surveys. The commitment of the officers allowed for the successful completion of the stakeholder survey during which useful information was obtained for the development and refinement of MDAST.

138. Despite the commitment of the officers involved in project implementation, the rating for Country Ownership and Driven-ness is **Moderately Satisfactory** as the three countries have not yet used MDAST for policy decision making on malaria control.

*e) Financial planning and management.*

139. The financial plan of the project and the detailed budgets including expected co-funding for the eight planned Activities were given in the project document. These budgets were based on the GEF approved budgets provided in the MSP brief. GEF support amounted to a total of \$999,000.

140. As a results of delays in the start of project implementation, a first revision was undertaken in December 2010. The reasons for this revision were:

- To reflect actual expenditures of \$254,151 for 2009 to the GEF trust fund, and to rephrase the unspent balance of \$81,149 thereby increasing the budget for the year 2010 to \$416,449.

- To note protracted delays in disbursement to the countries by the executing agency, hence the reason for the low rate of expenditure. The slow disbursement to countries was because the administrative/financial system hub of WHO has been moved from Geneva. This has resulted in a slowdown of receipt of most financial transfers to WHO for several months.
- Budget for 2011 and 2012 remain the same

141. A second revision was done in January 2013 and the reasons were:

- To reflect the actual expenditures to GEF trust funds as follows

2010: nil

2011: \$541,360

2012: \$200,449

To note that expenditures of \$292,182 for FY 2010 were recorded in FY 2011. Therefore, reflecting a NIL expenditure for 2010 and \$541,360 for 2011

- To rephrase the unspent balance of \$416,449 from the year 2010 as follows

2011: \$ 215,960

2012: \$188,489

2013: \$ 12,000

142. As planned, WHO established sub-contracts with Duke University (\$356,100) and University of Pretoria (\$323,000) the co-executors and with countries (\$ 67,000 to each country). As mentioned earlier to avoid a tendering exercise yearly agreements were signed with Duke University and the University of Pretoria. This was justified by the fact that the two universities were project development partners.

143. At implementing agency level, the funds were adequately managed and audited according to the UNEP rigorous internal procedures<sup>66</sup>. The detailed financial reports according to UNEP budget lines as well as actual expenses of funds (Annex 4) were made available to the evaluation team. A total of \$987,000 of the \$999,000 have been spent as at April 2013, the remaining \$12,000 represent the funds allocated for the terminal evaluation being undertaken presently. The actual funding figures are taken from financial sheets submitted by UNEP to the evaluation.

144. At the executing agency level, the funds have been strictly managed according to the WHO existing procedures<sup>67</sup>. For instance, the disbursement of funds were done strictly according to the terms of reference of the contracts, after submission of progress reports for example. For the co-executors (Duke University and University of Pretoria), the funds were managed by their respective financial system. There was no particular problem that occurred

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<sup>66</sup> Interview with UNEP funds management officer in UNEP.

<sup>67</sup> Interview with PC, WHO AFRO

during implementation process<sup>68</sup>. As per the contracts, along with technical progress the co-executors also submitted financial yearly reports to WHO.

145. At the country level, the funds were transferred from WHO to the Ministry of Health of the countries. As mentioned earlier, there were some delays that occurred due to relocation of the WHO administration/ financial system from Geneva. In Uganda also there was some delay in the transfer of funds from the Ministry of Health to the Disease Vector Control Division that was responsible to manage the project at national level.

146. Figures given in Table 4 (in **Section IV.E Efficiency**) indicate that not all the planned cash and in-kind co-funds have been effectively mobilized. However, whilst the expected cash co-funds from Duke University did not fully materialized, WHO contributed more than originally planned. As a result an additional of \$31,656 of total cash co-funds was leveraged, representing an increase of 31% compared to the planned cash co-funds. For the University of Pretoria, the reported difference in the estimate of in-kind co-fund was due the rand / dollar rate that decreased at a time when the rand was quite strong relative to the dollar and an increased strength of the dollar relative to the rand three years after. Secondly, there was another separately funded project that got underway after commencement of MDAST, and which reduced the co-finance need envisaged earlier for MDAST<sup>69</sup>. Despite the shortfall in the in-kind co-funds, the expected and excess cash co-funds that were timely transferred allowed for completion of project activities.

147. The rating on financial planning and management is **Satisfactory**.

*f) UNEP supervision and backstopping.*

148. The obligations of the implementing agency (UNEP) were clearly spelled out in the LOA signed in August 2009. In particular, in its role as GEF Implementing Agency, UNEP, through the PM, had to provide project oversight to ensure that GEF policies and criteria were adhered to and that the project meets its objectives and achieves expected outcomes in an efficient and effective manner.

149. The PM participated in the three planned project steering committee (PSC) meetings, and provided the necessary oversight. For example, he made sure that activities were planned according to the logical framework and according time line<sup>70</sup>. Routine oversight was done through frequent email communication with the PC, and he made sure that reports were submitted within acceptable delays. This was confirmed by the PC who indicated the good working relationship with PM, and acknowledged his adequate support and good guidance provided for the successful completion of activities. The Project Implementation Review reports were submitted to GEF on time.

150. A Fund Management Officer who was also responsible for oversight on the GEF funds administration maintained financial records for the GEF funds.

151. The rating on UNEP supervision and backstopping is **Highly Satisfactory**.

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68 Interview with Duke and Pretoria University

69 Information provided by email by University of Pretoria

70 Interview data with PM

*g) Monitoring and evaluation.*

### **Monitoring & Evaluation Design**

152. The monitoring & evaluation (M & E) design followed UNEP's standard monitoring and evaluation procedure. The project's logical framework provided as Annex 1 of the project document included objectively verifiable indicators, means of verification and assumptions for the project objectives, outcomes and outputs. For the output level, the M & E activities, responsible parties, and performance indicators as well as baseline information were described in Table 4 of the project document. Monitoring and progress reporting at project level (quarterly progress reports, PIRs, terminal evaluation, financial reporting, and audits), timing and responsible parties were also described in the project document<sup>71</sup> and in the terms of reference of LOA between UNEP and WHO.

153. The project budget included the costs for M& E activities. A costed M & E table<sup>72</sup> was given in the project document. The mid-term and terminal evaluation exercises were costed for a total amount of \$20,000, which the evaluation considers as low.

154. Rating for Monitoring & Evaluation Design is **Satisfactory**

### **M&E Plan Implementation**

155. As planned, the Project Steering Committee was set up and was constituted by UNEP, WHO AFRO, Duke University, University of Pretoria and representatives of the countries. The three planned meetings were held in March 2010, March 2011 and August 2012. As stated in the notes of meeting, the roles and responsibilities of all stakeholders and partners were highlighted during the first meeting, especially with regards to reporting progress. During the second and third meetings, project progress was discussed, work-plan reviewed and amended to account for delays and recommendations made. These are reflected in the notes of meetings made available to the evaluation.

156. As planned, a mid-term review was undertaken in August 2010 by an independent consultant. The evaluation mission that concerned only Tanzania was undertaken on 22 - 26 August 2011 in Dar-Es-Salaam. Eleven recommendations have been made, and as stated previously (**Section IV.F Project Management and Implementation**) ten of them have been implemented. The last was not considered as it was believed to be outside the scope and stated objectives of the project.

157. According to feedback gathered from the PC and the PM, progress and final reports as well as financial reports were timely submitted according to the revised timeline. The PIRs have also been timely submitted to GEF. However, additional funds had to be requested by the evaluation office to cover the costs for the terminal evaluation exercise<sup>73</sup>.

158. The rating on M & E implementation is **Satisfactory**.

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<sup>71</sup> Table 4 of project document

<sup>72</sup> Table 5 of project document

<sup>73</sup> Information gathered from UNEP evaluation office

## **H. Complementarity with UNEP strategies and programmes**

### **Linkage to UNEP's Expected Accomplishments and POW 2010-2011 and 2012-2013<sup>74</sup>**

159. The MDAST project was developed prior to the completion of the UNEP Medium Term Strategy 2010-2013 and related Programme of Work (POW) for the period 2010-2011. Nevertheless, there are complementarities with the expected accomplishments outlined in two of the six sub-programmes of the medium-term strategy.

160. The intended results of the project are consistent with UNEP's programmatic objectives and expected accomplishments under one of the cross-cutting priorities of its Medium-term Strategy 2010–2013: “*Harmful Substances and hazardous wastes*” that sets out to minimize the impact of harmful substances and hazardous waste on the environment and human beings.

### **Alignment with the Bali Strategic Plan (BSP)<sup>75</sup>**

161. One of the aspect of the project was to build capacity within the countries so as to enable them to promote evidence-based, multi-sectoral malaria control policy making through the use of a comprehensive framework. This is consistent with the Bali Strategic Plan for Technology Support and Capacity-building. In particular, it fully consistent with one of the objectives of the BSP, which is “*To use and sustain the capacity or technology obtained through training or other capacity-building efforts after such efforts have been completed*”.

## **Gender**

162. The project design did not explicitly make any provisions for consideration of gender as none of the activities planned in the project required persons of specific gender for achieving success. Generally there were no gender inequality and both genders were involved in all project activities including supervision and coordination. For example, two of the three national coordinators were females.

## **South-South Cooperation**

163. The MDAST project did not explicitly intend to promote South-South cooperation, which was not mentioned in the project document. Nevertheless, the project facilitated, to some extent, South-South Cooperation through the involvement of the three countries in the development of a common tool which was MDAST. Experience was shared through stakeholder meetings and during project steering committee meetings.

## **V. Conclusions and Recommendations**

### **A. Conclusions**

164. The GEF medium size project “*Malaria Decision Analysis Support Tool: Evaluating health, social and environmental impact and policy trade-offs*” was designed to protect

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74 <http://www.unep.org/PDF/FinalMTSGCSS-X-8.pdf>

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

human health and the environment by promoting sustainable malaria control strategies that are consistent with the successful implementation of the Stockholm Convention on Persistent Organic Pollutants. Specifically, the project was set out to promote evidence-based, multi-sectoral malaria control policy-making in Kenya, Tanzania, and Uganda through the use of a comprehensive framework (MDAST) for assessing the full range of health, social, and environmental risks and benefits associated with alternative malaria control strategies.

165. The major objective of this terminal evaluation was to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including its sustainability and replication potential. These criteria are addressed in **Part IV, Sections A** through to **F** of this report.

166. The project was highly relevant given that the three participating countries are parties to the Stockholm Convention. In particular, in their National Implementation Plans (NIPs)<sup>76</sup> they have planned the phasing out of DDT for malaria control by promoting the use of alternatives. The focus of the project remains very relevant to the mandate of UNEP mandate of UNEP that promotes chemical safety by providing policy advice, technical guidance and capacity building to developing countries. In particular the project was very relevant to Decision 25/5 (February 2009) of the Governing Council of UNEP concerning global policies related to chemicals management and the development of a strategic approach to international chemicals management. The intended results are particularly consistent with UNEP's programmatic objectives and expected accomplishments under its "*Harmful Substances and hazardous wastes*" sub-programme of its Medium-term Strategy 2010–2013.

167. Effectiveness of the project is considered moderately unsatisfactory as the outcome identified in the reconstructed theory of change "*Policy makers of Ministries of Health use MDAST in order to choose the best policy for malaria control*" did not occur. Although all the outputs for the seven planned Activities have been successfully delivered including a refined operational tool (MDAST) and training workshops, the stakeholders did not use MDAST for policy decision on malaria. In Uganda, they indicated that the training was too short for them to operate MDAST with confidence, and in that context they requested more training and follow up activities to further build their capacities on the use of MDAST. In Kenya, in addition to the need for further training, MDAST was not used as a National Malaria Strategy for the period 2009 – 2017 was already being implemented. And in Tanzania, the lack of funding was mentioned as being the reason MDAST not being used to develop strategies on malaria control.

168. Involvement of stakeholders at national level was satisfactory. Those actively involved in project were mainly from the Ministry of Health that included NMCP and DVCD. Stakeholders from other sectors like Ministry of Environment, Ministry of Agriculture, academic and research institutions were also involved and provided data for the development of MDAST.

169. Project implementation was cost-effective, owing to a number of factors, including early establishment of partnerships amongst key partners (WHO, UNEP, Duke University and University of Pretoria), and identification and engaging of key national partners (e.g. NMCP) for project implementation since the preparatory phase; building on and linkages

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76 NIP submission dates from

<http://chm.pops.int/Implementation/NIPs/NIPSubmissions/tabid/253/Default.aspx>: Kenya: 14 April 2007; Tanzania: 12 June 2006; Uganda: 13 January 2009

with existing GEF-funded and WHO-executed projects on Integrated Vector Management (IVM); and identification of key national stakeholders through existing framework for malaria control (e.g. the national technical working groups (TWG) on malaria) to develop MDAST.

170. Given that the countries have been fighting malaria through on-going programmes (e.g. NMCP) for decades and involving huge amount of funding, if the countries have their capacity further built and if they accept to use the tools (MDAST) for policy decisions on malaria control, the sustainability of the project benefits is likely to happen.

171. Ratings for the individual criteria are given in Table 5. The overall rating for the MDAST project based on the evaluation findings is **Moderately Satisfactory**.

Criterion	Summary Assessment	Rating
<b>A. Strategic relevance</b>	The project was very relevant to the mandate of UNEP that promotes chemical safety by providing policy advice, technical guidance and capacity building to developing countries.	<b>HS</b>
<b>B. Achievement of outputs</b>	All the planned activities have been undertaken and outputs successfully delivered.	<b>HS</b>
<b>C. Effectiveness: Attainment of project objectives and results</b>	Although MDAST has been successfully developed but to date, it has not been used yet to develop policies for malaria control in the three countries.	<b>MU</b>
1. Achievement of direct outcomes	The immediate outcome and three of the seven intermediate states have not occurred	<b>MU</b>
2. Likelihood of impact	MDAST not being used for policy decision	<b>U</b>
3. Achievement of project goal and planned objectives	Whilst key knowledge gaps have been identified and replication guidelines developed, MDAST is not being used by policy makers	<b>MU</b>
<b>D. Sustainability and replication</b>	Countries have not yet used MDAST for policy decision on malaria	<b>ML</b>
1. Financial	Countries are greatly benefitting from Global funds	<b>HL</b>
2. Socio-political	Countries engaged in malaria control since the 1950's	<b>L</b>
3. Institutional framework	Adequate institutional framework exist in all countries (e.g. NMCP)	<b>HL</b>
4. Environmental	No environmental factor that can influence the future flow of project benefits has been identified	<b>HL</b>
5. Catalytic role and replication	Replication guidelines developed and there are indications that MDAST will be replicated in	<b>S</b>

	other countries through a GEF funded project (GEF ID: 4668)	
<b>E. Efficiency</b>	All outputs delivered despite delays	<b>S</b>
<b>F. Factors affecting project performance</b>		
1. Preparation and readiness	Some weaknesses in project design	<b>S</b>
2. Project implementation and management	Adequately executed project	<b>HS</b>
3. Stakeholders participation and public awareness	No public awareness activities planned	<b>S</b>
4. Country ownership and driven-ness	National partners committed in project execution	<b>S</b>
5. Financial planning and management	Some co-funding did not materialize	<b>S</b>
6. UNEP supervision and backstopping	Adequate oversight provided allowed for timely completion of project activities	<b>HS</b>
7. Monitoring and evaluation		<b>S</b>
a. M&E Design	Standard monitoring design	<b>S</b>
b. Budgeting and funding for M&E activities	Funds allocated for independent evaluations on the low side	<b>S</b>
c. M&E Plan Implementation	All reports submitted	<b>S</b>
<b>Overall project rating</b>		<b>MS</b>

Table 5: Summary Assessment and Ratings using Evaluation Criterion\*

\* HS: highly satisfactory, S: satisfactory; HL: Highly likely; L: Likely

## B. Lessons Learned

172. Valuable lessons emerged during the terminal evaluation, including lessons related to technical aspects, project design as well as to overall management of the project.

- All the outputs of the projects have been delivered and yet the objective of the project has not been achieved. Achieving all outputs does not necessarily mean effective impact of the project.
- The stakeholders indicated that the training workshop was too short and they considered that their capacity was not sufficiently built to confidently use MDAST. Activities need to be properly planned during project design to allow for adequate capacity building.
- Project implementation was cost-effective, owing to a number of factors including early establishment of partnerships amongst key partners, identification and



engaging of key national partners, etc. Identification and adopting measures that promote efficiency ensures successful implementation of project.

### **C. Recommendations**

173. As the project has ended and a number of challenges have been highlighted, the following recommendations look ahead to the post-project period and development and implementation of follow-up GEF projects and sustaining the results of MDAST project.

- MDAST has not been used by countries due to inadequate training, lack of funds or on-going strategy on malaria control. It is recommended that resources are made available (through follow up projects currently being developed) for further adequate training to properly build the capacity of stakeholders / policy makers on the use of MDAST. It is also recommended that actions are taken at national level to promote the use of MDAST for any future decision making on malaria control.
- There are indications MDAST will replicated in other countries through follow up GEF funded projects. It is recommended that the implementing agencies should ensure that the capacities of countries are properly built to use MDAST by an adequate project design. It is also recommended to promote adequate visibility of the project in the countries to ensure linkages between MDAST and on-going malaria control initiatives.

## Annex 1: Terms of Reference

### TERMS OF REFERENCE

#### Terminal Evaluation of the UNEP/GEF project

“Malaria Decision Support Tool: Evaluating health, social and environmental impact and policy trade-off”

#### PROJECT BACKGROUND AND OVERVIEW

#### 2. Project General Information

Table 1. Project summary

<b>GEF project ID:</b>	3346	<b>IMIS number:</b>	GFL/2328-2760-4A60
<b>Focal Area(s):</b>	Persistent Organic Pollutants	<b>GEF OP #:</b>	
<b>GEF Strategic Priority/Objective:</b>	Strategic Program 3: Partnering in the Demonstration of Feasible, Innovative Technologies and Best Practices for POPs Reduction	<b>GEF approval date:</b>	17 March 2009
<b>UNEP approval date:</b>	8 <sup>th</sup> May 2009	<b>First Disbursement:</b>	September 2009
<b>Actual start date:</b>	November 2009	<b>Planned duration:</b>	3 years
<b>Intended completion date:</b>	July 2012	<b>Actual or Expected completion date:</b>	30 April 2013
<b>Project Type:</b>	Medium-sized	<b>GEF Allocation:</b>	USD 999,000
<b>PDF GEF cost:</b>	Nil	<b>PDF co-financing*:</b>	Nil
<b>Expected MSP/FSP Co-financing:</b>	USD 1,013,888	<b>Total Cost:</b>	2,012,888
<b>Mid-term review/eval. (planned date):</b>	18 months after the project began	<b>Terminal Evaluation (actual date):</b>	Feb 2014
<b>Mid-term review/eval.</b>	22-26 Aug 2011	<b>No. of revisions:</b>	One

<b>(actual date):</b>			
<b>Date of last Steering Committee meeting:</b>	Aug 2012	<b>Date of last Revision:</b>	16/12/2010
<b>Disbursement as of 30 April 2013:</b>	USD 987,000	<b>Date of financial closure:</b>	N/A
<b>Date of Completion:</b>	N/A	<b>Actual expenditures reported as of 30 April 2013:</b>	USD 987,000
<b>Total co-financing realized as of 30 April 2013:</b>	USD 804,843	<b>Actual expenditures entered in IMIS as of 30 April 2013:</b>	USD 786,511
<b>Leveraged financing:</b>			

## 2. Project rationale

1. Despite progress over the past decade in reducing the global burden of malaria, its prevention and control remains a complex challenge to health agencies in many countries. Anti-malaria programs can include two very different sets of approaches: treating the disease or treating the vector. Treating the disease includes prophylactic use of anti-malarial medication, early diagnosis and treatment, presumptive and preemptive treatment and – as yet undeveloped- vaccines. Many areas of the world now host malaria parasites that are resistant to the early, anti-malarial medications. The complementary approach, treating the vector, includes land use management, larvicides, pesticide application targeted to adult mosquitos, indoor residual spraying (IRS) and the use of insecticide-treated netting materials (ITN). For both disease and vector management approaches, social and behavioral factors play a key role in determining how people respond to the malaria threat. Policymakers must pay attention to these behavioral factors in deciding among malaria control strategies.
2. Perhaps the most controversial strategy against malaria is the application of DDT in IRS programs. Spraying with DDT has been highly effective in suppressing malaria transmission in many developing countries, but DDT can also be toxic to wildlife and potentially to humans at a certain level. Under the Stockholm Convention on Persistent Organic Pollutants (POPs), countries are authorized to elect further use of DDT for malaria vector control when locally safe, effective and affordable alternatives are not available.
3. The project outlined five challenges that policy makers and practitioners face:
  - a. The growing burden of malaria and other vector-borne diseases creates a high-stakes environment where bad policy decisions are extremely costly.
  - b. Vector-borne disease control involves a multitude of actors at multiple scales.
  - c. Choosing among different control options requires making difficult tradeoffs among competing health, social, and environmental objectives.
  - d. Complicated dynamics, interdependencies, and uncertainties make it difficult to analyze the effects of vector-borne disease control strategies over time.
  - e. Vector-borne diseases involve complex human-environment interactions that necessitate interagency, interdisciplinary analyses and responses.
4. In order to overcome the above listed challenges, the Malaria Decision Analysis Support Tool (MDAST) project aimed to develop an approach for improving comprehensive malaria

control policy formation with an integrated decision analysis framework to guide the evaluation of alternative malaria control strategies. The framework intended to allow for the systematic analysis of sustainable malaria control strategies that are consistent with the successful implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs). It was therefore considered important that countries be able to measure the impacts of DDT and alternative interventions in order to adapt and improve their approaches.

5. The project was developed in a collaborative manner with various stakeholders involved in malaria control policy making and implementation, and planned to respond to a need for capacity building for improved policy formulation. The project intended to provide a direct path for improving comprehensive malaria control policy formation by developing an integrated decision analysis framework to guide the evaluation of alternative malaria control strategies. The MDAST framework aimed to simultaneously consider multiple outcomes and attributes of various combinations of malaria control options, including ecological and human health risks and benefits.
6. The key project partners were UNEP/GEF, WHO-AFRO, Ministry of Health, Uganda, Ministry of Health, Kenya, National Institute of Medical Research, Tanzania, University of Pretoria, and Duke University. Initially a large number of countries were considered for inclusion in the project. Kenya, Uganda, Tanzania were selected based on the following criteria: 1) significant current human, economic and environmental burden of malaria; 2) strong interest in intersectoral approaches to malaria control; 3) ongoing consideration of the use of DDT for indoor residual spraying; 4) availability of local institutions interested in collaborating on this project and 5) ratification of the Stockholm Convention.

### 3. Project objectives and components

7. The **objective** of the project was to protect human health and the environment by promoting sustainable malaria control strategies that are consistent with the successful implementation of the Stockholm Convention on Persistent Organic Pollutants. The project intended to provide several global benefits, including the facilitation of the delivery of a tool which could be used globally, the development of strategies for global replications and the provision of lessons learnt for the development of tools to manage complex diseases of international significance.
8. The overall **purpose** of the project was to promote evidence-based, multi-sectoral malaria control policy-making in Kenya, Tanzania, and Uganda, with the project serving as pilot for other malaria-prone countries. To accomplish this purpose, the decision analysis framework was intended to build on efforts over the past decade to mainstream Health Impact Assessment within WHO.
9. The project focused on achieving four main **outcomes**:
  - (1) Development of a Malaria Decision Analysis Support Tool (MDAST) that would jointly incorporate health, social and environmental priorities for malaria control in Kenya, Tanzania, and Uganda.
  - (2) Increased capacity for evidence-based malaria control policy making through the use of MDAST in Kenya, Tanzania, and Uganda.
  - (3) Creation of an agenda for policy-relevant malaria research through development of MDAST and identification of key knowledge gaps.

(4) Elucidation of requirements for replication of MDAST in other malaria-prone countries around the world.

10. The project aimed to establish an inter-disciplinary network of practitioners and policymakers, and contribute to research, monitoring, and analytical capacity to make more informed and evidence-based decisions about alternative approaches to malaria prevention and treatment. The outcomes (see point 9) were pursued through 7 specified **activities** which guided the project in its undertakings.

Activity 1: Draft prototype MDAST: the team planned to develop working schematics of the decision support tool model and refine the conceptual decision analysis framework for MDAST.

Activity 2: Conduct country-specific development activities to create initial MDAST for Tanzania, Kenya, and Uganda. Project partners intended to work closely together to coordinate a range of country-specific stakeholder engagement activities that furthered the user-driven development of the initial MDAST, including a project inception meeting, a stakeholder survey, and stakeholder workshops.

Activity 3: Identify institutional barriers to implementing optimal policies, as well as incentives for addressing these barriers.

Activity 4: Engage in country specific training, testing, and refinement activities. This was scheduled to occur through a variety of mechanisms including incorporating feedback from the workshops and the Steering Committee meetings, conducting stakeholder webinar consultations, developing the MDAST User Manual, conducting in-country expert consultations, and in-country workshops and training sessions.

Activity 5: Use country specific MDAST in value of information (VOI) analyses to identify key knowledge gaps and create policy-relevant research agenda.

Activity 6: Dissemination of project results and lessons learnt. Project partners planned the creation and maintenance of the MDAST website, the development of presentation tools on MDAST for stakeholders to use, participation at conferences and the development of publications related to MDAST.

Activity 7: Development of guidelines for replication in other countries affected by malaria.

**Table 2. Project objectives, outcomes and outputs**

Development Objective	
To protect human health and the environment by promoting sustainable malaria control strategies that are consistent with the successful implementation of the Stockholm Convention on Persistent Organic Pollutants	Countries are applying new framework and guidelines for malaria vector control as promoted by WHO

(POPs).	
<b>Project Objectives and indicators</b>	
To promote evidence-based, multi-sectoral malaria control policymaking in three African countries through the use of a comprehensive framework for assessing the full range of health, social, and environmental risks and benefits associated with alternative malaria control strategies.	<ul style="list-style-type: none"> <li>• Decision analysis support tool developed and implemented in all three project countries</li> <li>• Malaria control policies are informed by evidence from previous policies, field tests, expert judgment, etc.</li> <li>• Framework and guidelines adopted for use in improving the implementation of NIPs in project countries</li> <li>• Framework and guidelines made available to WHO for incorporation into global monitoring and evaluation system for malaria control</li> </ul>
<b>Outcomes and indicators</b>	
<i>1. Development of a Malaria Decision Analysis Support Tool (MDAST) that jointly incorporates health, social and environmental priorities for malaria control in Kenya, Tanzania, and Uganda.</i>	<ul style="list-style-type: none"> <li>• MDAST exists for three project countries</li> <li>• MDAST predicts likely impact of different policies on health (e.g., malaria prevalence), social (e.g., poverty), and environmental (e.g., water quality) outcomes</li> </ul>
<b>2.</b> Increased capacity for evidence-based malaria control policy making through the regular use of MDAST in Kenya, Tanzania, and Uganda.	<ul style="list-style-type: none"> <li>• MDAST used by policy makers in order to choose among policy options</li> <li>• Policy makers consider range of health, environmental, social, and economic factors in formulating policy</li> <li>• MDAST incorporates and synthesizes a range of evidence on the impacts of different malaria control policies</li> </ul>
<b>3.</b> Creation of an agenda for policy-relevant malaria research through development of MDAST and identification of key knowledge gaps.	<ul style="list-style-type: none"> <li>• MDAST serves as basis for value of information (VOI) analyses to identify research priorities</li> <li>• Collaboration with researchers promoted to develop strategies for implementing agenda</li> </ul>
<b>4.</b> Elucidation of requirements for replication of MDAST in other malaria-prone countries around the world.	<ul style="list-style-type: none"> <li>• Reports developed that document the process of developing the MDAST and applying it to three project countries, and key steps and challenges are identified</li> <li>• Tools for MDAST development made available to other potential users</li> </ul>
<b>Outputs</b>	
<b>1.1.</b> Three country-specific, comprehensive decision analysis support tools developed  (Activities 1-4)	
<b>1.2.</b> Stakeholders and policy makers engaged in development of MDAST  (Activities 1-4)	
<b>1.3.</b> In-country decision analysis expertise developed	

(Activities 1-7)	
<b>1.4.</b> Databases of parameters to be included in MDAST constructed and made available to stakeholders  (Activity 1)	
<b>2.1.</b> Structured interviews, surveys, and preliminary workshops completed in three countries  (Activity 2)	
<b>3.1.</b> Institutional barriers and incentives matrix developed  (Activity 3)	
<b>3.2.</b> Incentives matrix used to identify policy incentives necessary to make alternatives attractive to individuals, the private sector, and governments  (Activity 3)	
<b>4.1.</b> Training and refinement workshops conducted in each country  (Activity 4)	
<b>4.2.</b> Technical expertise in development, use, and modification of MDAST developed  (Activity 4)	
<b>5.1.</b> Policy-relevant research priorities identified  (Activity 5)	
Strategy for collaborating with researchers to address research priorities developed  (Activity 5)	
Project results disseminated through workshops, publications, and website  (Activity 6)	
Guidelines for adaptation of MDAST to other project countries developed  (Activity 7)	

Source: Logical Framework

#### 4. Executing Arrangements

14. The **Implementing Agency** for the project was the United Nations Environment Programme (UNEP). In this capacity, UNEP had overall responsibility for the implementation of the project, project oversight, and co-ordination with other GEF projects.
15. The **Executing Agency** for the project was **WHO Regional Office for Africa (WHO-AFRO)**. A regional project coordinator was recruited and hosted in the University of Pretoria. The coordinators main tasks were to coordinate the activities among the participating countries and to implement regional level activities.
16. At the beginning of the project a **Project Steering Committee (PSC)** was set up to direct and oversee the project implementation. The Steering Committee was intended to be composed of representatives from UNEP, WHO, University of Pretoria, Duke University, participating countries and financial contributors. Managers of other projects with similar objectives, including the African Stockpile Project and the regional project on DDT alternatives in Central America and Mexico, Middle East and North Africa, Africa and South East Asia and Pacific were planned to be invited to facilitate exchange and learning.
17. A **Regional Project Steering Committee** was intended to coordinate and oversee activities across several sectors in support of the objectives at national level. It was envisaged that this committee would meet once a year, each time in a different country. Additional meetings were going to be organized by teleconference depending on needs. To the extent possible, National Focal Points on POPs were going to be invited to ensure coordination.

#### 5. Project Cost and Financing

18. The estimated project costs at design stage and associated funding sources are presented in Table 3. Table 4 gives an overview of leveraged co-financing by partner at the project completion.

**Table 3. Estimated project cost**

Activity	GEF	U. of Pretoria cofinance	Duke U. cofinance	WHO cofinance	Countries cofinance	Total project funds
<b>1</b>	140000	24000	65000	20000	3000	252000
<b>2</b>	175000	35000	40000	60000	9000	319000
<b>3</b>	114000	15000	85000	0	0	214000
<b>4</b>	205000	30000	45000	100000	9000	389000
<b>5</b>	96000	8000	85888	0	0	189888



<b>6</b>	82000	15000	40000	120000	6000	263000
<b>7</b>	67100	8000	21000	60000	0	165100
<b>8</b>	119900	15000	42000	38000	15000	229900
<b>Total</b>	<b>999000</b>	<b>150000</b>	<b>423888</b>	<b>398000</b>	<b>42000</b>	<b>2012888</b>

Source: Project Document

**Table 4: Co-finance commitments by regional partners**

<b>Partner</b>	<b>Planned co-financing</b>	<b>Actual co-financing</b>
<b>WHO</b>	398000	456985
<b>University of Pretoria</b>	150000	81500
<b>Duke University</b>	423888	224358
<b>Government of Kenya</b>	14000	14000
<b>Government of Uganda</b>	14000	14000
<b>Government of Tanzania</b>	14000	14000
<b>Total</b>	<b>1013888</b>	<b>804843</b>

Source: Final report

## **6. Implementation Issues**

19. The MTR was conducted in August 2011, but it reviewed the project's progress in Tanzania only. It concluded that *considerable progress had been made on the MDAST prototype* and it noted two aspects for improvement. Firstly, there seemed to be a lack of well trained personnel at the Health Facilities where most of the data was to be collected and therefore there appeared to be a need to strengthen capacity for quality data collection. Availability of good quality data appears especially important as the tool results depend on it. Secondly, the reviewer noted a potential problem in the interpretation of the results and mentioned that this may present a major barrier if some of the key issues including resistance, outdoor transmission and others were not going to be addressed.
20. Additionally, the MTR noted that the management structure of the project seemed to lack a focal operational leadership point with the expertise or the mandate to guide development of the MDAST at the country level.
21. The project appears to have suffered from cash flow problems and disbursements from WHO-AFRO to participating partners were done with sometimes significant delays. This could have resulted in delays in the implementation of the activities and, in turn, negative impacts on the project outcomes.
20. According to the final report, the average response in each country indicated that stakeholders would be likely (or very likely) to use a tool like MDAST, and that they thought policymakers

in their country would find MDAST useful. The evaluation should consider the extent to which stakeholders and specifically policy makers have been using MDAST and whether this is contributing to making informed decisions on malaria control strategies.

21. According to the final report, the project strove to achieve a balance between the level of user friendliness of the tool and the number of parameters used. However, some stakeholders indicated during the workshops that, for example, more insecticides and larvicides should have been included. The team response seemed to be to include a wider selection for the users in an effort to achieve the correct balance. This appeared to be a major concern in order to ensure the success of the project.
22. Overall, it was considered that the success of the project largely depended on meaningful stakeholder engagement. This was necessary during the development phase in order to receive feedback on technical issues and to prepare the ground for the future use of the tool by stakeholders in general and policy makers in particular. A good understanding and appreciation of the benefits of the tool for the selection of malaria control strategies needed to be built during the project life in order to ensure the use of the tool after the project ended.

## TERMS OF REFERENCE FOR THE EVALUATION

### Objective and Scope of the Evaluation

In line with the UNEP Evaluation Policy<sup>77</sup>, the UNEP Evaluation Manual<sup>78</sup> and the Guidelines for GEF Agencies in Conducting Terminal Evaluations<sup>79</sup>, the Terminal Evaluation of the Project “Malaria Decision Support Tool: Evaluating health, social and environmental impact and policy trade-off” will be undertaken after the 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 learning, feedback, and knowledge sharing through results and lessons learned among UNEP, the GEF and their executing partners – WHO-Afro, Duke University and national partners in particular. Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation. It will focus on the following sets of key questions, based on the project’s expected outcomes, which may be expanded by the consultant as deemed appropriate:

To what extent did the project succeed in developing a Malaria Decision Support tool that jointly incorporates health, social and environmental priorities for malaria control in Kenya, Tanzania, and Uganda? To what extent is the tool being used by the targeted countries? To what extent is the use of the tool leading to improvements in malaria decision making processes? To what extent did the project achieve a balance between the need to incorporate multiple parameters and the level of user friendliness of the tool?

To what extent has the project impacted the capacity for evidence-based malaria control policy making in Kenya, Tanzania and Uganda?

To what extent has the project enabled the creation of an agenda for policy-relevant malaria research through the development of MDAST? Were any existing knowledge gaps identified and to what extent were they filled?

To what extent did the project clarify the requirements for replication of MDAST in other malaria-prone countries? As MDAST is now about to be used in other countries, is there any evidence that adoption of MDAST in other countries can be attributed to the clarification work conducted by the project?<sup>80</sup>

Stakeholder engagement was considered a key element for the success of the project (see point 22). To what extent was the project successful in identifying and engaging relevant stakeholders? To what extent are the stakeholders now using MDAST to improve malaria control strategies? To what extent

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<sup>77</sup> <http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationPolicy/tabid/3050/language/en-US/Default.aspx>

<sup>78</sup> <http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationManual/tabid/2314/language/en-US/Default.aspx>

<sup>79</sup> [http://www.thegef.org/gef/sites/thegef.org/files/documents/TE\\_guidelines7-31.pdf](http://www.thegef.org/gef/sites/thegef.org/files/documents/TE_guidelines7-31.pdf)

<sup>80</sup> A new project called AFRO-II is currently being developed to extend the use to MDAST to other Sub-Saharan countries still using DDT. It will start from Swaziland and aim to replicate the work in other countries through a train the trainer approach.

are current stakeholder activities after the end of the project ensuring the long term sustainability of the results?

### Overall Approach and Methods

The Terminal Evaluation of the Project “Malaria Decision Support Tool: Evaluating health, social and environmental impact and policy trade-off” will be conducted by an independent consultant under the overall responsibility and management of the UNEP Evaluation Office (Nairobi), in consultation with the UNEP GEF Liaison Officer (Geneva), and the UNEP Task Manager at UNEP/DTIE (Nairobi).

It will be an in-depth evaluation using a participatory approach whereby key stakeholders are kept informed and consulted throughout the evaluation process. Both quantitative and qualitative evaluation methods will be used to determine project achievements against the expected outputs, outcomes and impacts.

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

- (a) A **desk review** of project documents and others including, but not limited to:

Relevant background documentation, inter alia UNEP and GEF policies, strategies and programmes pertaining to Persistence Organic Pollutants and malaria control strategies;  
Project design documents; Annual Work Plans and Budgets or equivalent, revisions to the logical framework and project financing;  
Project reports such as progress and financial reports from the executing partners to the Project Management Unit (PMU) and from the PMU to UNEP; Steering Group meeting minutes; annual Project Implementation Reviews and relevant correspondence;  
Documentation related to project outputs;  
Relevant material published, e.g. in journals, books, at conferences or on the project web-site: <http://sites.duke.edu/mdast/> ;  
Notes from the Steering Committee meetings.

Interviews with:

UNEP Task Manager and Fund Management Officer and other relevant staff in UNEP related activities as necessary;  
Interviews with project management and technical support including the project coordinator (based in Pretoria during the project life and currently in Nairobi) and at Duke University, national partners and other partners to the extent possible;  
Stakeholders involved with this project, including NGOs, regional and international organizations and institutes in the participating countries and regions Relevant staff of GEF Secretariat; and Representatives of donor agencies and other organisations (if deemed necessary by the consultant).

**Country visits.** The evaluation consultant will visit at least one project country, with priority to be given to Kenya or Uganda, and interview local stakeholders. To the extent possible, the views of other countries should be sought via email and teleconferences.

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

The evaluation will assess the project with respect to a **minimum set of evaluation criteria** grouped in six categories: (1) Strategic Relevance; (2) Attainment of objectives and planned result, which comprises the assessment of outputs achieved, effectiveness and likelihood of impact; (3) Sustainability and replication; (4) Efficiency; (5) Factors and processes affecting project performance, including preparation and readiness, implementation and management, stakeholder participation and public awareness, country ownership and driven-ness, financial planning and management, UNEP supervision and backstopping, and project monitoring and evaluation; and (6) Complementarity with the UNEP strategies and programmes. The evaluation consultants can propose other evaluation criteria as deemed appropriate.

**Ratings.** All evaluation criteria will be rated on a six-point scale. However, complementarity of the project with the UNEP strategies and programmes is not rated. Annex 3 provides detailed guidance on how the different criteria should be rated and how ratings should be aggregated for the different evaluation criterion categories.

In attempting to attribute any outcomes and impacts to the project, 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 and trends in relation to the intended project outcomes and impacts. This 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 and trends 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.

As this is a terminal evaluation, particular attention should be given to learning from the experience. Therefore, the “*Why?*” question should be at front of the consultants’ minds all through the evaluation exercise. This means that the consultants needs to go beyond the assessment of “*what*” the project performance was, and make a serious effort to provide a deeper understanding of “*why*” the performance was as it was, i.e. of processes affecting attainment of project results (criteria under category 3). This should provide the basis for the lessons that can be drawn from the project. In fact, the usefulness of the evaluation will be determined to a large extent by the capacity of the consultants to explain “*why things happened*” as they happened and are likely to evolve in this or that direction, which goes well beyond the mere review of “*where things stand*” today.

## **4. Evaluation criteria**

### ***J. Strategic relevance***

The evaluation will assess, in retrospect, whether the project’s objectives and implementation strategies were consistent with: i) Sub-regional environmental issues and needs; ii) the UNEP mandate and policies at the time of design and implementation; and iii) the GEF Strategic Program on Partnering in the Demonstration of Feasible, Innovative Technologies and Best Practices for POPs Reduction, strategic priorities and operational programme(s).

The evaluation will also assess whether the project objectives were realistic, given the time and budget allocated to the project, the baseline situation and the institutional context in which the project was to operate.

### ***K. Achievement of Outputs***

The evaluation will assess, for each component, the project's success in producing the programmed results as presented in Table 2 above, both in quantity and quality, as well as their usefulness and timeliness. It will briefly explain the degree of success of the project in achieving its different outputs, cross-referencing as needed to more detailed explanations provided under Section F (which covers the processes affecting attainment of project objectives).

### ***L. Effectiveness: Attainment of Objectives and Planned Results***

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

The evaluation will reconstruct the Theory of Change (ToC) of the project based on a review of project documentation and stakeholder interviews. The ToC of a project depicts the causal pathways from project outputs (goods and services delivered by the project) over outcomes (changes resulting from the use made by key stakeholders of project outputs) towards impact (changes in environmental benefits and living conditions). The ToC will also depict any intermediate changes required between project outcomes and impact, called intermediate states. The ToC further defines the external factors that influence change along the pathways, whether one result can lead to the next. These external factors are either drivers (when the project has a certain level of control) or assumptions (when the project has no control).

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

- (b) Evaluation of the **achievement of direct outcomes as defined in the reconstructed ToC**. These are the first-level outcomes expected to be achieved as an immediate result of project outputs.

Assessment of the **likelihood of impact** using a *Review of Outcomes to Impacts* (ROtI) approach as summarized in Annex 8 of the TORs. Appreciate to what extent the project has to date contributed, and is likely in the future to further contribute to changes in stakeholder behaviour as a result of the project's direct outcomes, and the likelihood of those changes in turn leading to changes in the natural resource base, benefits derived from the environment and human living conditions.

Evaluation of the **achievement of the formal project overall objective, overall purpose, goals and component outcomes** using the project's own results statements as presented in the original logframe and any later versions. This sub-section will refer back where applicable to sub-sections (a) and (b) to avoid repetition in the report. To measure achievement, the evaluation will use as much as appropriate the indicators for achievement proposed in the Logical Framework Matrix (Logframe) of the project, adding other relevant indicators as appropriate. Briefly explain what factors affected the project's success in achieving its objectives, cross-referencing as needed to more detailed explanations provided under Section F.

There are some effectiveness questions of specific interest which the evaluation should consider:

**To what extent did the project design incorporate sufficient components to ensure the engagement of all relevant stakeholders?**

**To what extent did the project ensure that the necessary data for the development and use of the tool could be assembled by the participating countries?**

### ***M. Sustainability and replication***

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

Four aspects of sustainability will be addressed:

- a) *Socio-political sustainability.* Are there any social or political factors that may influence positively or negatively the sustenance of project results and progress towards impacts? Is the level of ownership by the main national and regional stakeholders sufficient to allow for the project results to be sustained? Are there sufficient government and stakeholder awareness, interests, commitment and incentives to execute, enforce and pursue the programmes, plans, agreements, monitoring systems etc. prepared and agreed upon under the project?
- b) *Financial resources.* To what extent are the continuation of project results and the eventual impact of the project dependent on continued financial support? What is the likelihood that adequate financial resources<sup>81</sup> will be or will become available to implement the programmes, plans, agreements, monitoring systems etc. prepared and agreed upon under the project? Are there any financial risks that may jeopardize sustenance of project results and onward progress towards impact?
- c) *Institutional framework.* To what extent is the sustenance of the results and onward progress towards impact dependent on issues relating to institutional frameworks and governance? How robust are the institutional achievements such as governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. required to sustaining project results and to lead those to impact on human behaviour and environmental resources?
- d) *Environmental sustainability.* Are there any environmental factors, positive or negative, that can influence the future flow of project benefits? Are there any project outputs or higher level results that are likely to affect the environment, which, in turn, might affect sustainability of project benefits? Are there any foreseeable negative environmental impacts that may occur as the project results are being up-scaled?

**Catalytic role and replication.** The *catalytic role* of GEF-funded interventions is embodied in their approach of supporting the creation of an enabling environment and of investing in pilot activities which are innovative and showing how new approaches can work. UNEP and the GEF also aim to support activities that upscale new approaches to a national, regional or global level, with a view to

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<sup>81</sup> Those resources can be from multiple sources, such as the public and private sectors, income generating activities, other development projects etc.

achieve sustainable global environmental benefits. The evaluation will assess the catalytic role played by this project, namely to what extent the project has:

- (c) *catalyzed behavioural changes* in terms of use and application by the relevant stakeholders of: i) technologies and approaches show-cased by the demonstration projects; ii) strategic programmes and plans developed; and iii) assessment, monitoring and management systems established at national and regional level;

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

contributed to *institutional changes*. An important aspect of the catalytic role of the project is its contribution to institutional uptake or mainstreaming of project-piloted approaches in the regional and national demonstration projects;

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

contributed to sustained follow-on financing (*catalytic financing*) from Governments, the GEF or other donors;

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

*Replication*, in the context of GEF projects, is defined as lessons and experiences coming out of the project that are replicated (experiences are repeated and lessons applied in different geographic areas) or scaled up (experiences are repeated and lessons applied in the same geographic area but on a much larger scale and funded by other sources). The evaluation will assess the approach adopted by the project to promote replication effects and appreciate to what extent actual replication has already occurred or is likely to occur in the near future. What are the factors that may influence replication and scaling up of project experiences and lessons? To what extent did the results achieved under outcome 4 lead to the replication of the project in other countries? To what extent is the replication of the use of the MDAST tool directly attributable to the results produced by the project?

## N. Efficiency

The evaluation will assess the cost-effectiveness and timeliness of project execution. It will describe any cost- or time-saving measures put in place in attempting to bring the project as far as possible in achieving its results within its programmed budget and (extended) time. It will also analyse how delays, if any, have affected project execution, costs and effectiveness. Wherever possible, costs and time over results ratios of the project will be compared with that of other similar interventions. The evaluation will give special attention to efforts by the project teams to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. to increase project efficiency all within the context of project execution. The evaluation will consider the extent to which project disbursement could have been made in a more efficient manner thereby minimising the risk of negative impacts on project activities.

There are is an efficiency question of specific interest which the evaluation should consider:

- **To what extent did the Executing Agency facilitate the effective implementation of the project, including through the timely disbursement of payments? To what extent did any delays impact the delivery of the project outcomes and what lessons can be learnt for**



future projects? What lessons can be learnt from this project which may help improve future projects?

### *O. Factors and processes affecting project performance*

**Preparation and readiness.** This criterion focusses on the quality of project design and preparation. Were project stakeholders<sup>82</sup> adequately identified? Were the project's objectives and components clear, practicable and feasible within its timeframe? Were the capacities of executing agencies properly considered when the project was designed? Was the project document clear and realistic to enable effective and efficient implementation? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project implementation? Were counterpart resources (funding, staff, and facilities) and enabling legislation assured? Were adequate project management arrangements in place? Were lessons from other relevant projects properly incorporated in the project design? What factors influenced the quality-at-entry of the project design, choice of partners, allocation of financial resources etc.? Were GEF environmental and social safeguards considered when the project was designed<sup>83</sup>? Was the available technical knowledge sufficiently utilised during the project design phase (also see point 23 above)?

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

- (d) Ascertain to what extent the project implementation mechanisms outlined in the project document have been followed and were effective in delivering project outputs and outcomes. Were pertinent adaptations made to the approaches originally proposed? For example, was a suitable national structure implemented following the recommendation issued by the MTR (see point 20)?

Evaluate the effectiveness and efficiency of project management by WHO-AFRO and how well the management was able to adapt to changes during the life of the project.

Assess the role and performance of the units and committees established and the project execution arrangements at all levels.

Assess the extent to which project management as well as national partners responded to direction and guidance provided by the Steering Committees and UNEP supervision recommendations.

Identify operational and political / institutional problems and constraints that influenced the effective implementation of the project, and how the project partners tried to overcome these problems. How did the relationship between the project management team (WHO-AFRO), the national coordinators and the project partners develop?

Assess the extent to which MTR recommendations were followed in a timely manner.

Assess the extent to which the project implementation met GEF environmental and social safeguards requirements.

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<sup>82</sup> Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or stake in the outcome of the project. The term also applies to those potentially adversely affected by the project.

<sup>83</sup> <http://www.thegef.org/gef/node/4562>

**Stakeholder participation and public awareness.** The term stakeholder should be considered in the broadest sense, encompassing project partners, government institutions, private interest groups, local communities etc. The TOC analysis should assist the evaluators in identifying the key stakeholders and their respective roles, capabilities and motivations in each step of the causal pathway from activities to achievement of outputs and outcomes to impact. The assessment will look at three related and often overlapping processes: (1) information dissemination between stakeholders, (2) consultation between stakeholders, and (3) active engagement of stakeholders in project decision making and activities. The evaluation will specifically assess:

- (e) the approach(es) used to identify and engage stakeholders in project design and implementation. What were the strengths and weaknesses of these approaches with respect to the project's objectives and the stakeholders' motivations and capacities? What was the achieved degree and effectiveness of collaboration and interactions between the various project partners and stakeholders during design and implementation of the project?

the degree and effectiveness of any public awareness activities that were undertaken during the course of implementation of the project; or that are built into the assessment methods so that public awareness can be raised at the time the assessments will be conducted;

how the results of the project (strategic programmes and plans, monitoring and management systems, sub-regional agreements etc.) promote participation of stakeholders in decision making.

**Country ownership and driven-ness.** The evaluation will assess the performance of national partners involved in the project, as relevant:

- (f) In how far has the national partners assumed responsibility for the project and provided adequate support to project execution, including the degree of cooperation received from the various public institutions involved in the project and the timeliness of provision of counter-part funding to project activities?

To what extent has the national and regional political and institutional framework been conducive to project performance?

How responsive were the national partners to WHO-AFRO and the project partners' coordination and guidance, and to UNEP supervision?

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

- (g) Verify the application of proper standards (clarity, transparency, audit etc.) and timeliness of financial planning, management and reporting to ensure that sufficient and timely financial resources were available to the project and its partners;
- (h) Appreciate other administrative processes such as recruitment of staff, procurement of goods and services (including consultants), preparation and negotiation of cooperation agreements etc. to the extent that these might have influenced project performance;

Present to what extent co-financing has materialized as expected at project approval (see Table 1, 4 and 5). Report country co-financing to the project overall, and to support project activities at the national level in particular. The evaluation will provide a breakdown of final actual costs and co-financing for the different project components (see tables in Annex 4).

Describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective. Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector.

Analyse the effects on project performance of irregularities (if any) in procurement, use of financial resources and human resource management, and the measures taken by WHO-AFRO or UNEP to prevent such irregularities in the future. Appreciate whether the measures taken were adequate.

**UNEP supervision and backstopping.** The purpose of supervision is to verify the quality and timeliness of project execution in terms of finances, administration and achievement of outputs and outcomes, in order to identify and recommend ways to deal with problems which arise during project execution. Such problems may be related to project management but may also involve technical/institutional substantive issues in which UNEP has a major contribution to make. The evaluators should assess the effectiveness of supervision and administrative and financial support provided by UNEP including:

- (i) The adequacy of project supervision plans, inputs and processes;  
The emphasis given to outcome monitoring (results-based project management);  
The realism and candour of project reporting and ratings (i.e. are PIR ratings an accurate reflection of the project realities and risks);  
The quality of documentation of project supervision activities; and  
Financial, administrative and other fiduciary aspects of project implementation supervision.

Monitoring and evaluation. The evaluation will include an assessment of the quality, application and effectiveness of project monitoring and evaluation plans and tools, including an assessment of risk management based on the assumptions and risks identified in the project document. The evaluation will appreciate how information generated by the M&E system during project implementation was used to adapt and improve project execution, achievement of outcomes and ensuring sustainability. M&E is assessed on three levels:

- (j) *M&E Design.* Projects should have sound M&E plans to monitor results and track progress towards achieving project objectives. An M&E plan should include a baseline (including data, methodology, etc.), SMART indicators and data analysis systems, and evaluation studies at specific times to assess results. The time frame for various M&E activities and standards for outputs should have been specified. The evaluators should use the following questions to help assess the M&E design aspects:

Quality of the project logframe (original and possible updates) as a planning and monitoring instrument; analyse, compare and verify correspondence between the original logframe in the Project Document, possible revised logframes and the logframe used in Project Implementation Review reports to report progress towards achieving project objectives;

SMART-ness of indicators: Are there specific indicators in the logframe for each of the project objectives? Are the indicators measurable, attainable (realistic) and relevant to the objectives? Are the indicators time-bound?

Adequacy of baseline information: To what extent has baseline information on performance indicators been collected and presented in a clear manner? Was the methodology for the baseline data collection explicit and reliable?

Arrangements for monitoring: Have the responsibilities for M&E activities been clearly defined? Were the data sources and data collection instruments appropriate? Was the frequency of various monitoring activities specified and adequate? In how far were project users involved in monitoring?

Arrangements for evaluation: Have specific targets been specified for project outputs? Has the desired level of achievement been specified for all indicators of objectives and outcomes? Were there adequate provisions in the legal instruments binding project partners to fully collaborate in evaluations?

Budgeting and funding for M&E activities: Determine whether support for M&E was budgeted adequately and was funded in a timely fashion during implementation.

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

the M&E system was operational and facilitated timely tracking of results and progress towards projects objectives throughout the project implementation period;  
annual project reports and Progress Implementation Review (PIR) reports were complete, accurate and with well justified ratings;  
the information provided by the M&E system was used during the project to improve project performance and to adapt to changing needs.

*Use of GEF Tracking Tools.* These are portfolio monitoring tools intended to roll up indicators from the individual project level to the portfolio level and track overall portfolio performance in focal areas. Each focal area has developed its own tracking tool<sup>84</sup> to meet its unique needs. Agencies are requested to fill out at CEO Endorsement (or CEO approval for MSPs) and submit these tools again for projects at mid-term and project completion. The evaluation will verify whether UNEP has duly completed the relevant tracking tool for this project, and whether the information provided is accurate.

### ***P. Complementarities with UNEP strategies and programmes***

UNEP aims to undertake GEF funded projects that are aligned with its own strategies. The evaluation should present a brief narrative on the following issues:

- (k) *Linkage to UNEP's Expected Accomplishments and POW 2010-2011 and 2012-2013.* The UNEP MTS specifies desired results in six thematic focal areas. The desired results are termed Expected Accomplishments. Using the completed ToC/ROI analysis, the evaluation should comment on whether the project makes a tangible contribution to any of the Expected Accomplishments specified in the UNEP MTS. The magnitude and extent of any contributions and the causal linkages should be fully described. Whilst it is recognised that UNEP GEF projects designed prior to the production of the UNEP Medium Term Strategy 2010-2013 (MTS)<sup>85</sup> would not necessarily be aligned with the Expected Accomplishments articulated in those documents, complementarities may still exist and it is still useful to know whether these projects remain aligned to the current MTS.

*Alignment with the Bali Strategic Plan (BSP)*<sup>86</sup>. The outcomes and achievements of the project should be briefly discussed in relation to the objectives of the UNEP BSP.

*Gender.* Ascertain to what extent project design, implementation and monitoring have taken into consideration: (i) possible gender inequalities in access to and the control over natural resources; (ii) specific vulnerabilities of women and children to environmental

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<sup>84</sup> [http://www.thegef.org/gef/tracking\\_tools](http://www.thegef.org/gef/tracking_tools)

<sup>85</sup> <http://www.unep.org/PDF/FinalMTSGCSS-X-8.pdf>

<sup>86</sup> <http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf>

degradation or disasters; and (iii) the role of women in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation. Appreciate whether the intervention is likely to have any lasting differential impacts on gender equality and the relationship between women and the environment. To what extent do unresolved gender inequalities affect sustainability of project benefits?

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

## 5. The Consultants' Team

For this evaluation, the evaluation team will consist of one consultant. The consultant should have experience in project evaluation. A Master's degree or higher in the area of environmental sciences or a related field and at least 10 years' experience in chemical use and management, with a preference for specific expertise in the area of malaria control and management of persistent organic pollutants is required. Local knowledge of the malaria situation and control strategies in Kenya, Uganda and Tanzania is highly desirable.

By undersigning the service contract with UNEP/UNON, the consultants 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.

## 6. Evaluation Deliverables and Review Procedures

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

The review of design quality will cover the following aspects (see Annex 9 for the detailed project design assessment matrix):

- Strategic relevance of the project
- Preparation and readiness (see paragraph 25);
- Financial planning (see paragraph 30);
- M&E design (see paragraph 33(a));
- Complementarities with UNEP strategies and programmes (see paragraph 34);
- Sustainability considerations and measures planned to promote replication and upscaling (see paragraph 23).

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

The evaluation framework will present in further detail the evaluation questions under each criterion with their respective indicators and data sources. The evaluation framework should summarize the information available from project documentation against each of the main evaluation parameters. Any gaps in information should be identified and methods for additional data collection, verification and analysis should be specified.

The inception report will also present a tentative schedule for the overall evaluation process, including a draft programme for the country visit and tentative list of people/institutions to be interviewed.

The inception report will be submitted for review and approval by the Evaluation Office before the evaluation team travels to the closing workshop in Trinidad.

**The main evaluation report** should be brief (no longer than 35 pages – excluding the executive summary and annexes), to the point and written in plain English. The evaluation team will deliver a high quality report in English by the end of the assignment. The report will follow the annotated Table of Contents outlined in Annex 1. It must explain the purpose of the evaluation, exactly what was evaluated and the methods used (with their limitations). The report will present evidence-based and balanced findings, consequent conclusions, lessons and recommendations, which will be cross-referenced to each other. The report should be presented in a way that makes the information accessible and comprehensible. Any dissident views in response to evaluation findings will be appended in footnote or annex as appropriate. To avoid repetitions in the report, the authors will use numbered paragraphs and make cross-references where possible.

**Review of the draft evaluation report.** The evaluation team will submit the zero draft report latest two weeks after attending visiting one of the project countries to the UNEP EO and revise the draft following the comments and suggestions made by the EO. Once a draft of adequate quality has been accepted, the EO will share this first draft report with the UNEP Task Manager, who will ensure that the report does not contain any blatant factual errors. The UNEP Task Manager will then forward the first draft report to the other project stakeholders, in particular WHO-AFRO, Duke University and the national partners for review and comments. Stakeholders may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions. It is also very important that stakeholders provide feedback on the proposed recommendations and lessons. Comments would be expected within two weeks after the draft report has been shared. Any comments or responses to the draft report will be sent to the UNEP EO for collation. The EO will provide the comments to the evaluation team for consideration in preparing the final draft report.

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

Submission of the final Terminal Evaluation report. The final report shall be submitted by Email to the Head of the Evaluation Office, who will share the report with the Director, UNEP/GEF Coordination Office and the UNEP/DTIE Task Manager. The Evaluation Office will also transmit the final report to the GEF Evaluation Office.

The final evaluation report will be published on the UNEP Evaluation Office web-site [www.unep.org/eou](http://www.unep.org/eou). Subsequently, the report will be sent to the GEF Office of Evaluation for their review, appraisal and inclusion on the GEF website.

As per usual practice, the UNEP EO will prepare a **quality assessment** of the first draft and final draft report, which is a tool for providing structured feedback to the evaluation consultants. The quality of the report will be assessed and rated against the criteria specified in Annex 4.

The UNEP Evaluation Office will assess the ratings in the final evaluation report based on a careful review of the evidence collated by the evaluation consultant and the internal consistency of the report. Where there are differences of opinion between the evaluator and UNEP Evaluation Office on project

ratings, both viewpoints will be clearly presented in the final report. The UNEP Evaluation Office ratings are the final ratings that will be submitted to the GEF Office of Evaluation.

## 7. Logistical arrangement

This Terminal Evaluation will be undertaken by an independent evaluation consultant contracted by the UNEP Evaluation Office. The consultant will work under the overall responsibility of the UNEP Evaluation Office and will consult with the EO on any procedural and methodological matters related to the evaluation. It is, however, the consultants' individual responsibility to arrange for their travel, visa, obtain documentary evidence, plan meetings with stakeholders, organize field visits (if any), and any other logistical matters related to the assignment. The UNEP Task Manager and WHO-Afro will, where possible, provide logistical support (introductions, meetings, transport etc.) for the country visit, allowing the consultants to conduct the evaluation as efficiently and independently as possible.

## 8. Schedule of the evaluation

Activity	Date (s)
Start of the evaluation	20 March 2014
Inception report	21 April 2014
Comments from Evaluation Office	25 April 2014
Field visits	27 – 30 April 2014
Zero Draft report	12 May 2014
Comments from Evaluation Office	19 May 2014
First draft report	30 May 2014
Comments from stakeholders	16 June 2014
Final report	25 June 2014

The consultant will be hired under an individual Special Service Agreement (SSA). There are two options for contract and payment: lumpsum or “fees only”.

**Lumpsum:** The contract covers both fees and expenses such as travel, per diem (DSA) and incidental expenses which are estimated in advance. The consultants will receive an initial payment covering estimated expenses upon signature of the contract.

**Fee only:** The contract stipulates consultant fees only. Air tickets will be purchased by UNEP and 75% of the DSA for each authorised travel mission will be paid up front. Local in-country travel and communication costs will be reimbursed on the production of acceptable receipts. Terminal expenses and residual DSA entitlements (25%) will be paid after mission completion.

The payment schedule for both consultants will be linked to the acceptance of the key evaluation deliverables by the Evaluation Office:

**Final inception report: 20 percent of agreed total fee**  
**First draft main evaluation report: 40 percent of agreed total fee**  
**Final main evaluation report: 40 percent of agreed total fee**

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

If the consultants fail to submit a satisfactory final product to UNEP in a timely manner, i.e. within one month after 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 1. Annotated Table of Contents of the main evaluation deliverables

### INCEPTION REPORT

Section	Notes	Data Sources	Max. number of pages
<b>1. Introduction</b>	Brief introduction to the project and evaluation.		1
<b>2. Project background</b>	Summarise the project context and rationale. How has the context of the project changed since project design?	Background information on context	3
<b>3. Review of project design</b>	Summary of project design strengths and weaknesses. Complete the Template for assessment of the quality of project design (Annex of the Terms of Reference).	Project document and revisions, MTR/MTR if any.	2 + completed matrix in annex of the inception report
<b>4. Reconstructed Theory of Change</b>	The Theory of Change should be reconstructed, based on project documentation. It should be presented with one or more diagrams and explained with a narrative.	Project document narrative, logical framework and budget tables. Other project related documents.	2 pages of narrative + diagram(s)
<b>5. Evaluation framework</b>	<p>The evaluation framework will contain:</p> <ul style="list-style-type: none"> <li>Detailed evaluation questions (including new questions raised by review of project design and ToC analysis) and indicators</li> <li>Data Sources</li> </ul> <p>It will be presented as a matrix, showing questions, indicators and data sources.</p>	Review of all project documents.	5
<b>6. Evaluation schedule</b>	<ul style="list-style-type: none"> <li>Revised timeline for the overall evaluation (dates of travel and key evaluation milestones)</li> <li>Tentative programme for the country visit</li> </ul>	Discussion with project team on logistics.	2
<b>7. Distribution of responsibilities among within the evaluation team</b>	Distribution of roles and responsibilities among evaluation consultants (may be expanded in Annex)		1

<b>6. Annexes</b>	<p>A- Completed matrix of the overall quality of project design</p> <p>B- List of individuals and documents consulted for the inception report</p> <p>C- List of documents and individuals to be consulted during the main evaluation phase</p>		
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## MAIN REPORT

<b>Project Identification Table</b>	An updated version of the Table 1 (page 1) of these TORs
<b>Executive Summary</b>	Overview of the main findings, conclusions and recommendations of the evaluation. It should encapsulate the essence of the information contained in the report to facilitate dissemination and distillation of lessons. The main points for each evaluation parameter should be presented here (with a summary ratings table), as well as the most important lessons and recommendations. Maximum 4 pages.
<b>I. Introduction</b>	A very brief introduction, mentioning the name of evaluation and project, project duration, cost, implementing partners and objectives of the evaluation.
<b>II. The Evaluation</b>	Objectives, approach and limitations of the evaluation
<b>III. The Project</b>	
A. Context	Overview of the broader institutional and country context, in relation to the project's objectives, including changes during project implementation
B. Objectives and components	
C. Target areas/groups	
D. Milestones/key dates in project design and implementation	
E. Implementation arrangements	
F. Project financing	Estimated costs and funding sources
G. Project partners	
H. Changes in design during implementation	
I. Reconstructed Theory of Change of the project	
<b>IV. Evaluation Findings</b>	
A. Strategic relevance	This chapter is organized according to the evaluation criteria presented in section II.4 of the TORs and provides factual evidence relevant to the
B. Achievement of outputs	

C. Effectiveness: Attainment of project objectives and results <ul style="list-style-type: none"><li>i. Direct outcomes from reconstructed TOC</li><li>ii. Likelihood of impact using RoTI and based on reconstructed TOC</li><li>iii. Achievement of project goal and planned objectives</li></ul>	questions asked and sound analysis and interpretations of such evidence. This is the main substantive section of the report. Ratings are provided at the end of the assessment of each evaluation criterion.
D. Sustainability and replication	
E. Efficiency	
F. Factors affecting performance	
G. Complementarity with UNEP strategies and programmes	
<b>V. Conclusions and Recommendations</b>	
A. Conclusions	This section should summarize the main conclusions of the evaluation, told in a logical sequence from cause to effect. It is suggested to start with the positive achievements and a short explanation why these could be achieved, and, then, to present the less successful aspects of the project with a short explanation why. The conclusions section should end with the overall assessment of the project. Avoid presenting an “executive summary”-style conclusions section. Conclusions should be cross-referenced to the main text of the report (using the paragraph numbering). The overall ratings table should be inserted here (see Annex 2).
B. Lessons Learned	Lessons learned should be anchored in the conclusions of the evaluation. In fact, no lessons should appear which are not based upon an explicit finding of the evaluation. Lessons learned are rooted in real project experiences, i.e. based on good practices and successes which could be replicated or derived from problems encountered and mistakes made which should be avoided in the future. Lessons learned must have the potential for wider application and use. Lessons should briefly describe the context from which they are derived and specify the contexts in which they may be useful.
C. Recommendations	As for the lessons learned, all recommendations should be anchored in the conclusions of the report, with proper cross-referencing. Recommendations are actionable proposals on how 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), specific in terms of who would do what and when, and set a measurable performance target. In some cases, it might be useful to propose options, and briefly analyse the pros and cons of each option.  It is suggested, for each recommendation, to first briefly summarize the finding it is based upon with cross-reference to the section in the main report where the finding is elaborated in more detail. The recommendation is then stated after this summary of the finding.
Annexes	These may include additional material deemed relevant by the

	<p>evaluator but must include:</p> <ol style="list-style-type: none"> <li>1. Response to stakeholder comments received but not (fully) accepted by the evaluators</li> <li>2. Evaluation TORs (without annexes)</li> <li>3. Evaluation program, containing the names of locations visited and the names (or functions) and <u>contacts (Email)</u> of people met</li> <li>4. Bibliography</li> <li>5. Summary co-finance information and a statement of project expenditure by activity (See annex of these TORs)</li> <li>6. Brief CVs of the consultants</li> </ol>
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### **Important note on report formatting**

Reports should be submitted in Microsoft Word .doc or .docx format. Use of Styles (Headings etc.), page numbering and numbered paragraphs is compulsory from the very first draft report submitted.

Examples of UNEP GEF Terminal Evaluation Reports are available at **[www.unep.org/eou](http://www.unep.org/eou)**.

## Annex 2. Evaluation Ratings

The evaluation will provide individual ratings for the evaluation criteria described in section II.4 of these TORs. Most criteria will be rated on a six-point scale as follows: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Sustainability is rated from Highly Likely (HL) down to Highly Unlikely (HU). In the conclusions section of the report, ratings will be presented together in a table, with a brief justification cross-referenced to the findings in the main body of the report.

<i>Criterion</i>	<i>Summary Assessment</i>	<i>Rating</i>
<b>A. Strategic relevance</b>		HS → HU
<b>B. Achievement of outputs</b>		HS → HU
<b>C. Effectiveness: Attainment of project objectives and results</b>		HS → HU
1. Achievement of direct outcomes		HS → HU
2. Likelihood of impact		HS → HU
3. Achievement of project goal and planned objectives		HS → HU
<b>D. Sustainability and replication</b>		HL → HU
1. Financial		HL → HU
2. Socio-political		HL → HU
3. Institutional framework		HL → HU
4. Environmental		HL → HU
5. Catalytic role and replication		HS → HU
<b>E. Efficiency</b>		HS → HU
<b>F. Factors affecting project performance</b>		
1. Preparation and readiness		HS → HU
2. Project implementation and management		HS → HU
3. Stakeholders participation and public awareness		HS → HU
4. Country ownership and driven-ness		HS → HU
5. Financial planning and management		HS → HU

<i>Criterion</i>	<i>Summary Assessment</i>	<i>Rating</i>
<i>A. Strategic relevance</i>		HS → HU
<i>B. Achievement of outputs</i>		HS → HU
6. UNEP supervision and backstopping		HS → HU
7. Monitoring and evaluation		HS → HU
a. M&E Design		HS → HU
b. Budgeting and funding for M&E activities		HS → HU
c. M&E pPlan Implementation		HS → HU
<b>Overall project rating</b>		HS → HU

**Overall project rating.** The overall project rating should consider parameters ‘A-E’ as being the most important with ‘C’ and ‘D’ in particular being very important.

**Rating for effectiveness: Attainment of project objectives and results.** An aggregated rating will be provided for the achievement of direct outcomes as determined in the reconstructed Theory of Change of the project, the likelihood of impact and the achievement of the formal project goal and objectives. This aggregated rating is not a simple average of the separate ratings given to the evaluation sub-criteria, but an overall judgement of project effectiveness by the consultants.

**Highly Satisfactory (HS):** The project had no shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

**Satisfactory (S):** The project had minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

**Moderately Satisfactory (MS):** The project had moderate shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

**Moderately Unsatisfactory (MU):** The project had significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

**Unsatisfactory (U)** The project had major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

**Highly Unsatisfactory (HU):** The project had severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

**Ratings on sustainability.** According to the GEF Office of Evaluation, all the dimensions of sustainability are deemed critical. Therefore, the overall rating for sustainability will be the lowest rating on the separate dimensions.

On each of the dimensions of sustainability of the project outcomes will be rated as follows.

**Highly Likely (HL):** There are no risks affecting this dimension of sustainability.

**Likely (L):** There are very few risks affecting this dimension of sustainability.

**Moderately Likely (ML):** There are moderate risks that affect this dimension of sustainability.

**Moderately Unlikely (MU):** There are significant risks that affect this dimension of sustainability

**Unlikely (U):** There are severe risks that affect this dimension of sustainability.

**Highly Unlikely (HU):** There are very severe risks that affect this dimension of sustainability.

**Ratings of monitoring and evaluation.** The M&E system will be rated on M&E design, M&E plan implementation, and budgeting and funding for M&E activities (the latter sub-criterion is covered in the main report under M&E design). M&E plan implementation will be considered critical for the overall assessment of

the M&E system. Thus, the overall rating for M&E will not be higher than the rating on M&E plan implementation.

**Highly Satisfactory (HS):** There were no shortcomings in the project M&E system.

**Satisfactory(S):** There were minor shortcomings in the project M&E system.

**Moderately Satisfactory (MS):** There were moderate shortcomings in the project M&E system.

**Moderately Unsatisfactory (MU):** There were significant shortcomings in the project M&E system.

**Unsatisfactory (U):** There were major shortcomings in the project M&E system.

**Highly Unsatisfactory (HU):** The Project had no M&E system.

### Annex 3. Project costs and co-financing tables

#### Project Costs

Component/sub-component	Estimated cost at design	Actual Cost	Expenditure ratio (actual/planned)

#### Co-financing

Co financing (Type/Source)	IA own Financing (mill US\$)		Government  (mill US\$)		Other*  (mill US\$)		Total  (mill US\$)		Total Disbursed (mill US\$)
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
- Grants									
- Loans									
- Credits									
- Equity investments									
- In-kind support									
- Other (*)									
-									
-									
<b>Totals</b>									

\* This refers to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.



## Annex 4. Quality Assessment of the Evaluation Report

All UNEP evaluation reports are subject to a quality assessment by the Evaluation Office. The quality assessment is used as a tool for providing structured feedback to the evaluation consultants. The quality of the draft evaluation report is assessed and rated against the following criteria:

Substantive report quality criteria	UNEP EO Comments	Draft Report Rating	Final Report Rating
<b>A. Strategic relevance:</b> Does the report present a well-reasoned, complete and evidence-based assessment of strategic relevance of the intervention?	Draft report:  Final report:		
<b>B. Achievement of outputs:</b> Does the report present a well-reasoned, complete and evidence-based assessment of outputs delivered by the intervention (including their quality)?	Draft report:  Final report:		
<b>C. Presentation Theory of Change:</b> Is the Theory of Change of the intervention clearly presented? Are causal pathways logical and complete (including drivers, assumptions and key actors)?	Draft report:  Final report:		
<b>D. Effectiveness - Attainment of project objectives and results:</b> Does the report present a well-reasoned, complete and evidence-based assessment of the achievement of the relevant outcomes and project objectives?	Draft report:  Final report:		
<b>E. Sustainability and replication:</b> Does the report present a well-reasoned and evidence-based assessment of sustainability of outcomes and replication / catalytic effects?	Draft report:  Final report:		
<b>F. Efficiency:</b> Does the report present a well-reasoned, complete and evidence-based assessment of efficiency?	Draft report:  Final report:		
<b>G. Factors affecting project performance:</b> Does the report present a well-reasoned, complete and evidence-based assessment of all factors affecting project performance? In particular, does the report include the actual project costs (total and per activity) and actual	Draft report:  Final report:		

co-financing used; and an assessment of the quality of the project M&E system and its use for project management?			
<b>H. Quality and utility of the recommendations:</b> Are recommendations based on explicit evaluation findings? Do recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can they be implemented?	Draft report:  Final report:		
<b>I. Quality and utility of the lessons:</b> Are lessons based on explicit evaluation findings? Do they suggest prescriptive action? Do they specify in which contexts they are applicable?	Draft report:  Final report:		
<b>Other report quality criteria</b>			
<b>J. Structure and clarity of the report:</b> Does the report structure follow EO guidelines? Are all requested Annexes included?	Draft report:  Final report:		
<b>K. Evaluation methods and information sources:</b> Are evaluation methods and information sources clearly described? Are data collection methods, the triangulation / verification approach, details of stakeholder consultations provided? Are the limitations of evaluation methods and information sources described?	Draft report:  Final report:		
<b>L. Quality of writing:</b> Was the report well written? (clear English language and grammar)	Draft report:  Final report:		
<b>M. Report formatting:</b> Does the report follow EO guidelines using headings, numbered paragraphs etc.	Draft report:  Final report:		
<b>OVERALL REPORT QUALITY RATING</b>		0.00	0.00

A number rating between 1 and 6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1.

## **Annex 5. Documentation list for the evaluation to be provided by the UNEP Task Manager**

- Project design documents
- Project supervision plan, with associated budget
- Correspondence related to project
- Supervision mission reports
- Steering Committee meeting documents, including agendas, meeting minutes, and any summary reports
- Project progress reports, including financial reports submitted
- Cash advance requests documenting disbursements
- Annual Project Implementation Reports (PIRs)
- Management memos related to project
- Other documentation of supervision feedback on project outputs and processes (e.g. comments on draft progress reports, etc.).
- Project revision and extension documentation
- Updated implementation plan for the recommendations of the Mid-Term Evaluation
- Project Terminal Report (draft if final version not available)
- GEF Tracking Tool for the relevant focal area

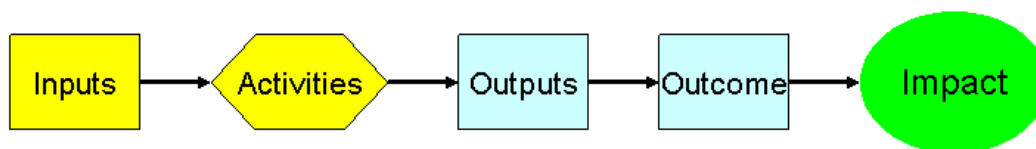
## Annex 6. Introduction to Theory of Change / Impact pathways, the ROI Method and the ROI Results Score sheet

Terminal evaluations of projects are conducted at, or shortly after, project completion. At this stage it is normally possible to assess the achievement of the project's outputs. However, the possibilities for evaluation of the project's outcomes are often more limited and the feasibility of assessing project **impacts** at this time is usually severely constrained. Full impacts often accrue only after considerable time-lags, and it is common for there to be a lack of long-term baseline and monitoring information to aid their evaluation. Consequently, substantial resources are often needed to support the extensive primary field data collection required for assessing impact and there are concomitant practical difficulties because project resources are seldom available to support the assessment of such impacts when they have accrued – often several years after completion of activities and closure of the project.

Despite these difficulties, it is possible to enhance the scope and depth of information available from Terminal Evaluations on the achievement of results through rigorous review of project progress along the pathways from outcome to impact. Such reviews identify the sequence of conditions and factors deemed necessary for project outcomes to yield impact and assess the current status of and future prospects for results. In evaluation literature these relationships can be variously described as 'Theories of Change', Impact 'Pathways', 'Results Chains', 'Intervention logic', and 'Causal Pathways' (to name only some!).

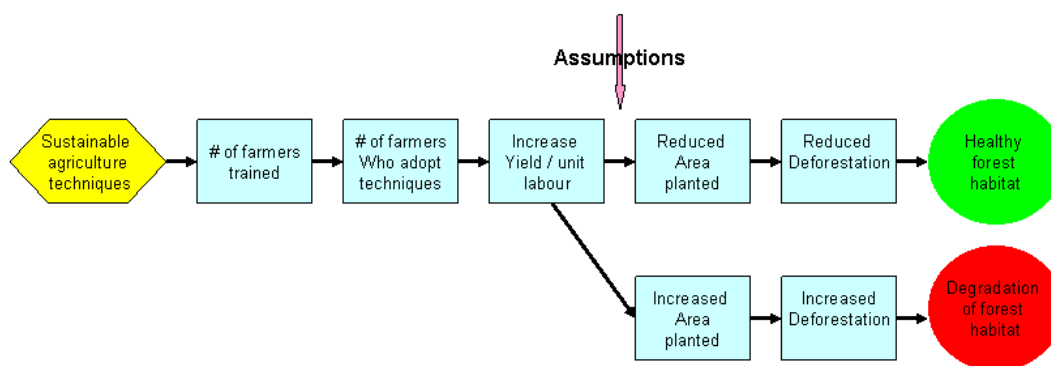
### Theory of Change (ToC) / impact pathways

Figure 1 shows a generic impact pathway which links the standard elements of project logical frameworks in a graphical representation of causal linkages. When specified with more detail, for example including the key users of outputs, the processes (the arrows) that lead to outcomes and with details of performance indicators, analysis of impact pathways can be invaluable as a tool for both project planning and evaluation.



**Figure 1. A generic results chain, which can also be termed an 'Impact Pathway' or Theory of Change.**

The pathways summarise casual relationships and help identify or clarify the assumptions in the intervention logic of the project. For example, in the Figure 2 below the eventual impact depends upon the behaviour of the farmers in using the new agricultural techniques they have learnt from the training. The project design for the intervention might be based on the upper pathway assuming that the farmers can now meet their needs from more efficient management of a given area therefore reducing the need for an expansion of cultivated area and ultimately reducing pressure on nearby forest habitat, whereas the evidence gathered in the evaluation may in some locations follow the lower of the two pathways; the improved farming methods offer the possibility for increased profits and create an incentive for farmers to cultivate more land resulting in clearance or degradation of the nearby forest habitat.



**Figure 2. An impact pathway / TOC for a training intervention intended to aid forest conservation.**

The GEF Evaluation Office has recently developed an approach to assess the **likelihood of impact** that builds on the concepts of Theory of Change / causal chains / impact pathways. The method is known as Review of Outcomes to Impacts (ROtI)<sup>87</sup> and has three distinct stages:

- a. Identifying the project's intended impacts
- b. Review of the project's logical framework
- c. Analysis and modelling of the project's outcomes-impact pathways: reconstruction of the project's Theory of Change

The **identification of the projects intended impacts** should be possible from the 'objectives' statements specified in the official project document. The second stage is to **review the project's logical framework** to assess whether the design of the project is consistent with, and appropriate for, the delivery of the intended impact. The method requires verification of the causal logic between the different hierarchical levels of the logical framework moving 'backwards' from impacts through outcomes to the outputs; the activities level is not formally considered in the ROtI method<sup>88</sup>. The aim of this stage is to develop an understanding of the causal logic of the project intervention and to identify the key 'impact pathways'. In reality such processes are often complex: they might involve multiple actors and decision-processes and are subject to time-lags, meaning that project impact often accrues long after the completion of project activities.

The third stage involves analysis of the 'impact pathways' that link project outcomes to impacts. The pathways are analysed in terms of the '**assumptions**' and '**drivers**' that underpin the processes involved in the transformation of outputs to outcomes to impacts via **intermediate states** (see Figure 3). **Project outcomes** are the direct intended results stemming from the outputs, and they are likely to occur either towards the end of the project or in the short term following project completion. **Intermediate states** are the transitional conditions between the project's direct outcomes and the intended impact. They are necessary changes expected to occur as a result of the project outcomes, that are expected, in turn, to result into impact. There may be more than one intermediate state between the immediate project outcome and the eventual impact.

**Drivers** are defined as the significant, external factors that if present are expected to contribute to the realization of the intended impacts and **can be influenced** by the project / project partners & stakeholders. **Assumptions** are the significant external factors that if present are expected to contribute to the realization of the intended

<sup>87</sup> GEF Evaluation Office (2009). ROtI: Review of Outcomes to Impacts Practitioners Handbook.

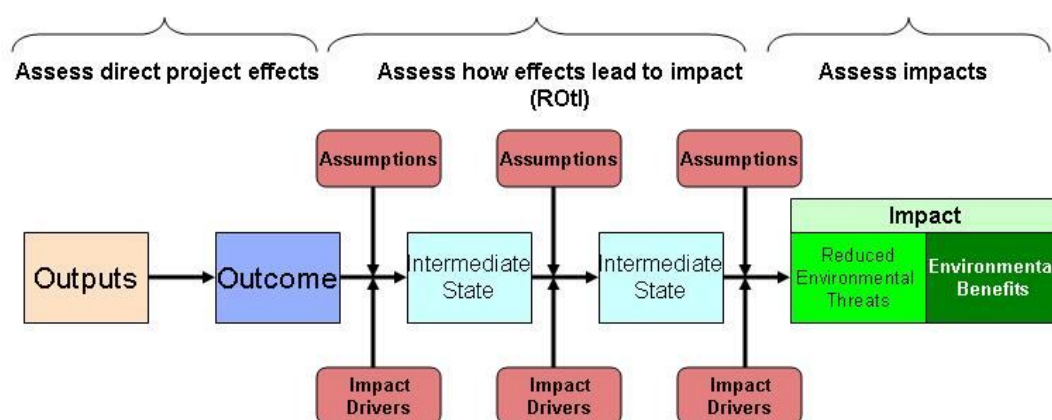
[http://www.gefweb.org/uploadedFiles/Evaluation\\_Office/OPS4/Roti%20Practitioners%20Handbook%2015%20June%202009.pdf](http://www.gefweb.org/uploadedFiles/Evaluation_Office/OPS4/Roti%20Practitioners%20Handbook%2015%20June%202009.pdf)

<sup>88</sup> Evaluation of the efficiency and effectiveness in the use of resources to generate outputs is already a major focus within UNEP Terminal Evaluations.

impacts but are largely **beyond the control of the project** / project partners & stakeholders. The drivers and assumptions are considered when assessing the likelihood of impact, sustainability and replication potential of the project.

Since project logical frameworks do not often provide comprehensive information on the processes by which project outputs yield outcomes and eventually lead, via ‘intermediate states’ to impacts, the impact pathways need to be carefully examined and the following questions addressed:

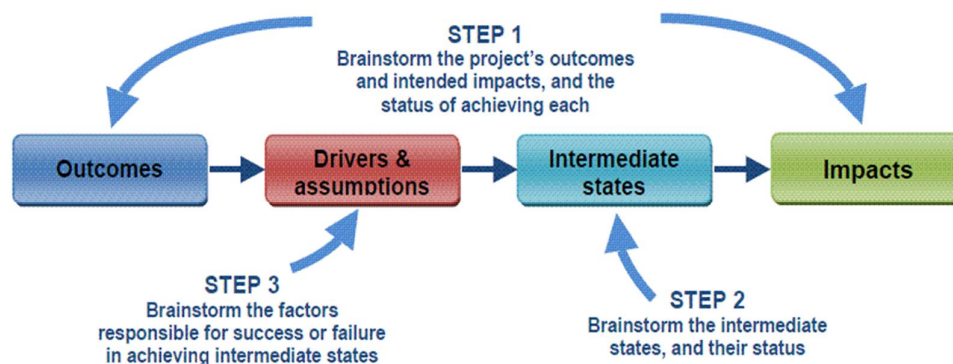
- Are there other causal pathways that would stem from the use of project outputs by other potential user groups?
- Is (each) impact pathway complete? Are there any missing intermediate states between project outcomes and impacts?
- Have the key drivers and assumptions been identified for each ‘step’ in the impact pathway.



**Figure 3. A schematic ‘impact pathway’ showing intermediate states, assumptions and impact drivers<sup>89</sup> (adapted from GEF EO 2009)**

In ideal circumstances, the Theory of Change of the project is reconstructed by means of a group exercise, involving key project stakeholders. The evaluators then facilitate a collective discussion to develop a visual model of the impact pathways using cards and arrows taped on a wall. The component elements (outputs, outcomes, intermediate states, drivers, assumptions, intended impacts etc.) of the impact pathways are written on individual cards and arranged and discussed as a group activity. Figure 4 below shows the suggested sequence of the group discussions needed to develop the ToC for the project.

<sup>89</sup> The GEF frequently uses the term “impact drivers” to indicate drivers needed for outcomes to lead to impact. However, in UNEP it is preferred to use the more general term “drivers” because such external factors might also affect change processes occurring between outputs and outcomes.



**Figure 4. Suggested sequencing of group discussions (from GEF EO 2009)**

In practice, there is seldom an opportunity for the evaluator to organise such a group exercise during the inception phase of the evaluation. The reconstruction of the project's Theory of Change can then be done in two stages. The evaluator first does a desk-based identification of the project's impact pathways, specifying the drivers and assumptions, during the inception phase of the evaluation, and then, during the main evaluation phase, (s)he discusses this understanding of the project logic during group discussions or the individual interviews with key project stakeholders.

Once the Theory of Change for the project is reconstructed, the evaluator can assess the design of the project intervention and collate evidence that will inform judgments on the extent and effectiveness of implementation, through the evaluation process. Performance judgments are made always noting that project contexts can change and that adaptive management is required during project implementation.

The Review of Outcomes towards Impact (ROtI) method requires ratings for outcomes achieved by the project and the progress made towards the 'intermediate states' at the time of the evaluation. According to the GEF guidance on the method; *"The rating system is intended to recognize project preparation and conceptualization that considers its own assumptions, and that seeks to remove barriers to future scaling up and out. Projects that are a part of a long-term process need not at all be "penalized" for not achieving impacts in the lifetime of the project: the system recognizes projects' forward thinking to eventual impacts, even if those impacts are eventually achieved by other partners and stakeholders, albeit with achievements based on present day, present project building blocks."* For example, a project receiving an "AA" rating appears likely to deliver impacts, while for a project receiving a "DD" this would be very unlikely, due to low achievement in outcomes and the limited likelihood of achieving the intermediate states needed for eventual impact (see Table 1).

**Table 1. Rating scale for outcomes and progress towards 'intermediate states'**

Outcome Rating	Rating on progress toward Intermediate States
D: The project's intended outcomes were not delivered	D: No measures taken to move towards intermediate states.
C: The project's intended outcomes were delivered, but were not designed to feed into a continuing process after project funding	C: The measures designed to move towards intermediate states have started, but have not produced results.
B: The project's intended outcomes were delivered, and were designed to feed into a continuing process, but with no prior allocation	B: The measures designed to move towards intermediate states have started and have produced results, which give no indication that they can progress towards the intended

of responsibilities after project funding	long term impact.
A: The project's intended outcomes were delivered, and were designed to feed into a continuing process, with specific allocation of responsibilities after project funding.	A: The measures designed to move towards intermediate states have started and have produced results, which clearly indicate that they can progress towards the intended long term impact.

Thus a project will end up with a two letter rating e.g. AB, CD, BB etc. In addition the rating is given a '+' notation if there is evidence of impacts accruing within the life of the project. The possible rating permutations are then translated onto the usual six point rating scale used in all UNEP project evaluations in the following way.

**Table 2. Shows how the ratings for 'achievement of outcomes' and 'progress towards intermediate states' translate to ratings for the 'Overall likelihood of impact achievement' on a six point scale.**

Highly Likely	Likely	Moderately Likely	Moderately Unlikely	Unlikely	Highly Unlikely
AA AB BA CA BB+ CB+ DA+ DB+	BB CB DA DB AC+ BC+	AC BC CC+ DC+	CC DC AD+ BD+	AD BD CD+ DD+	CD DD

In addition, projects that achieve documented changes in environmental status during the project's lifetime receive a positive impact rating, indicated by a "+". The overall likelihood of achieving impacts is shown in Table 11 below (a + score above moves the double letter rating up one space in the 6-point scale).

The ROTi method provides a basis for comparisons across projects through application of a rating system that can indicate the expected impact. However it should be noted that whilst this will provide a relative scoring for all projects assessed, it does not imply that the results from projects can necessarily be aggregated. Nevertheless, since the approach yields greater clarity in the 'results metrics' for a project, opportunities where aggregation of project results might be possible can more readily be identified.

Results rating of project entitled:							
Outputs	Outcomes	Rating (D - A)	Intermediate states	Rating (D - A)	Impact (GEBs)	Rating (+)	Overall
1.	1.		1.		1.		
2.	2.		2.		2.		
3.	3.		3.		3.		



	<b>Rating justification:</b>		<b>Rating justification:</b>		<b>Rating justification:</b>		

### Scoring Guidelines

The achievement of **Outputs** is largely assumed. Outputs are such concrete things as training courses held, numbers of persons trained, studies conducted, networks established, websites developed, and many others. Outputs reflect where and for what project funds were used. These were not rated: projects generally succeed in spending their funding.

**Outcomes**, on the other hand, are the first level of intended results stemming from the outputs. Not so much the number of persons trained; but how many persons who then demonstrated that they have gained the intended knowledge or skills. Not a study conducted; but one that could change the evolution or development of the project. Not so much a network of NGOs established; but that the network showed potential for functioning as intended. A sound outcome might be genuinely improved strategic planning in SLM stemming from workshops, training courses, and networking.

### Examples

***Funds were spent, outputs were produced, but nothing in terms of outcomes was achieved.*** People attended training courses but there is no evidence of increased capacity. A website was developed, but no one used it. (Score – D)

***Outcomes achieved but are dead ends; no forward linkages to intermediate states in the future.*** People attended training courses, increased their capacities, but all left for other jobs shortly after; or were not given opportunities to apply their new skills. A website was developed and was used, but achieved little or nothing of what was intended because users had no resources or incentives to apply the tools and methods proposed on the website in their job. (Score – C)

***Outcomes plus implicit linkages forward.*** Outcomes achieved and have *implicit forward linkages* to intermediate states and impacts. Collaboration as evidenced by meetings and decisions made among a loose network is documented that should lead to better planning. Improved capacity is in place and should lead to desired intermediate outcomes. Providing implicit linkages to intermediate states is probably the most common case when outcomes have been achieved. (Score - B)

***Outcomes plus explicit linkages forward.*** Outcomes have *definite and explicit forward linkages* to intermediate states and impacts. An alternative energy project may result in solar panels installed that reduced reliance on local wood fuels, with the outcome quantified in terms of reduced C emissions. Explicit forward linkages are easy to recognize in being concrete, but are relatively uncommon. (Score A)

**Intermediate states:**

The **intermediate states** indicate achievements that lead to Global Environmental Benefits, especially if the potential for scaling up is established.

**“Outcomes” scored C or D.** If the outcomes above scored C or D, there is no need to continue forward to score intermediate states given that achievement of such is then not possible.

***In spite of outcomes and implicit linkages, and follow-up actions, the project dead-ends.*** Although outcomes achieved have *implicit forward linkages* to intermediate states and impacts, the project dead-ends. Outcomes turn out to be insufficient to move the project towards intermediate states and to the eventual achievement of GEBs. Collaboration as evidenced by meetings and among participants in a network never progresses further. The implicit linkage based on follow-up never materializes. Although outcomes involve, for example, further participation and discussion, such actions do not take the project forward towards intended intermediate impacts. People have fun getting together and talking more, but nothing, based on the implicit forwards linkages, actually eventuates. **(Score = D)**

***The measures designed to move towards intermediate states have started, but have not produced result, barriers and/or unmet assumptions may still exist.*** In spite of sound outputs and in spite of explicit forward linkages, there is limited possibility of intermediate state achievement due to barriers not removed or unmet assumptions. This may be the fate of several policy related, capacity building, and networking projects: people work together, but fail to develop a way forward towards concrete results, or fail to successfully address inherent barriers. The project may increase ground cover and or carbon stocks, may reduce grazing or GHG emissions; and may have project level recommendations regarding scaling up; but barrier removal or the addressing of fatal assumptions means that scaling up remains limited and unlikely to be achieved at larger scales. Barriers can be policy and institutional limitations; (mis-) assumptions may have to do with markets or public – private sector relationships. **(Score = C)**

***Barriers and assumptions are successfully addressed.*** Intermediate state(s) planned or conceived have feasible direct and explicit forward linkages to impact achievement; barriers and assumptions are successfully addressed. The project achieves measurable intermediate impacts, and works to scale up and out, but falls well short of scaling up to global levels such that achievement of GEBs still lies in doubt. **(Score = B)**

***Scaling up and out over time is possible.*** Measurable intermediate state impacts achieved, scaling up to global levels and the achievement of GEBs appears to be well in reach over time. **(Score = A)**

**Impact:** Actual changes in environmental status

“Intermediate states” scored B to A.

Measurable impacts achieved at a globally significant level within the project life-span. . (Score = '+')

Template for the assessment of the Quality of Project Design – UNEP  
Evaluation Office September 2011

Relevance		Evaluation Comments	Prodoc reference
Are the intended results likely to contribute to UNEPs Expected Accomplishments and programmatic objectives?			
Does the project form a coherent part of a UNEP-approved programme framework?			
Is there complementarity with other UNEP projects, planned and ongoing, including those implemented under the GEF?			
Are the project's objectives and implementation strategies consistent with:	i) Sub-regional environmental issues and needs?		
	ii) the UNEP mandate and policies at the time of design and implementation?		
	iii) the relevant GEF focal areas, strategic priorities and operational programme(s)? (if appropriate)		
	iv) Stakeholder priorities and needs?		
<b>Overall rating for Relevance</b>			
<b>Intended Results and Causality</b>			
Are the objectives realistic?			
Are the causal pathways from project outputs [goods and services] through outcomes [changes in stakeholder behaviour] towards impacts clearly and convincingly described? Is there a clearly presented Theory of Change or intervention logic for the project?			
Is the timeframe realistic? What is the likelihood that the anticipated project outcomes can be achieved within the stated duration of the project?			
Are the activities designed within the project likely to produce their intended results			
Are activities appropriate to produce outputs?			
Are activities appropriate to drive change along the intended causal pathway(s)			
Are impact drivers, assumptions and the roles and capacities of key actors and stakeholders clearly described for each key causal pathway?			
<b>Overall rating for Intended Results and causality</b>			

Efficiency			
Are any cost- or time-saving measures proposed to bring the project to a successful conclusion within its programmed budget and timeframe?			
Does the project intend 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?			
<b>Overall rating for Efficiency</b>			
Sustainability / Replication and Catalytic effects			
Does the project design present a strategy / approach to sustaining outcomes / benefits?			
Does the design identify the social or political factors that may influence positively or negatively the sustenance of project results and progress towards impacts? Does the design foresee sufficient activities to promote government and stakeholder awareness, interests, commitment and incentives to execute, enforce and pursue the programmes, plans, agreements, monitoring systems etc. prepared and agreed upon under the project?			
If funding is required to sustain project outcomes and benefits, does the design propose adequate measures / mechanisms to secure this funding?			
Are there any financial risks that may jeopardize sustenance of project results and onward progress towards impact?			
Does the project design adequately describe the institutional frameworks, governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. required to sustain project results?			
Does the project design identify environmental factors, positive or negative, that can influence the future flow of project benefits? Are there any project outputs or higher level results that are likely to affect the environment, which, in turn, might affect sustainability of project benefits?			
Does the project design foresee adequate measures to catalyze behavioural changes in terms of use and application by the relevant stakeholders of (e.g.):	i) technologies and approaches show-cased by the demonstration projects;		
	ii) strategic programmes and plans developed		
	iii) assessment, monitoring and management systems established at a national and sub-regional level		
Does the project design foresee adequate measures to contribute to institutional changes? [An important aspect of the			

catalytic role of the project is its contribution to institutional uptake or mainstreaming of project-piloted approaches in any regional or national demonstration projects]		
Does the project design foresee adequate measures to contribute to policy changes (on paper and in implementation of policy)?		
Does the project design foresee adequate measures to contribute to sustain follow-on financing (catalytic financing) from Governments, the GEF or other donors?		
Does the project design foresee adequate measures to create opportunities for particular individuals or institutions (“champions”) to catalyze change (without which the project would not achieve all of its results)?		
Are the planned activities likely to generate the level of ownership by the main national and regional stakeholders necessary to allow for the project results to be sustained?		
<b>Overall rating for Sustainability / Replication and Catalytic effects</b>		
<b>Risk identification and Social Safeguards</b>		
Are critical risks appropriately addressed?		
Are assumptions properly specified as factors affecting achievement of project results that are beyond the control of the project?		
Are potentially negative environmental, economic and social impacts of projects identified?		
<b>Overall rating for Risk identification and Social Safeguards</b>		
<b>Governance and Supervision Arrangements</b>		
Is the project governance model comprehensive, clear and appropriate?		
Are roles and responsibilities clearly defined?		
Are supervision / oversight arrangements clear and appropriate?		
<b>Overall rating for Governance and Supervision Arrangements</b>		
<b>Management, Execution and Partnership Arrangements</b>		
Have the capacities of partner been adequately assessed?		
Are the execution arrangements clear?		
Are the roles and responsibilities of internal and external		

partners properly specified?			
<b>Overall rating for Management, Execution and Partnership Arrangements</b>			
Financial Planning / budgeting			
Are there any obvious deficiencies in the budgets / financial planning			
Cost effectiveness of proposed resource utilization as described in project budgets and viability in respect of resource mobilization potential			
Financial and administrative arrangements including flows of funds are clearly described			
<b>Overall rating for Financial Planning / budgeting</b>			
Monitoring			
Does the logical framework: <ul style="list-style-type: none"> <li>capture the key elements in the Theory of Change for the project?</li> <li>have 'SMART' indicators for outcomes and objectives?</li> <li>have appropriate 'means of verification'</li> <li>adequately identify assumptions</li> </ul>			
Are the milestones and performance indicators appropriate and sufficient to foster management towards outcomes and higher level objectives?			
Is there baseline information in relation to key performance indicators?			
Has the method for the baseline data collection been explained?			
Has the desired level of achievement (targets) been specified for indicators of Outcomes and are targets based on a reasoned estimate of baseline??			
Has the time frame for monitoring activities been specified?			
Are the organisational arrangements for project level progress monitoring clearly specified			
Has a budget been allocated for monitoring project progress in implementation against outputs and outcomes?			
Overall, is the approach to monitoring progress and performance within the project adequate?			
<b>Overall rating for Monitoring</b>			
Evaluation			
Is there an adequate plan for evaluation?			

Has the time frame for Evaluation activities been specified?		
Is there an explicit budget provision for mid term review and terminal evaluation?		
Is the budget sufficient?		
<b>Overall rating for Evaluation</b>		



## Annex 2: Evaluation timeline, itinerary and list of persons interviewed

### Revised timeline

Activity	Date
Start of contract	24 March 2014
Inception report to EO	12 May 2014
Field mission: Mission to Nairobi Mission to Kampala	17 - 20 May 2014 21 - 24 May 2014
Zero draft evaluation report to EO	18 July 2014
EO's comments on zero draft evaluation report	25 July 2014
First draft evaluation report	27 July 2014
First draft evaluation report circulated to stakeholders for comments	28 July 2014
Consolidated comments to consultant	10 August 2014
Final evaluation report	15 August 2014
End of contract	15 August 2014

### Itinerary and persons met

Kenya: 17 – 20 June 2014			
Date	Time	Venue	Persons met / comments
Saturday 17 June 2014	15H55	Arrival in Kenya	
Sunday 18 June 2014	Whole day	Fair View Hotel	Reading of documents
Monday 19 June 2014	9H00 – 10H00	Malaria Control Division, Ministry of Health, Nairobi	Planning of visit with Dr Kiambo Ngagi, Programme Officer, Deputy Chief Medical Entomologist/epidemiologist, MCD, <a href="mailto:KNjagi@domckkenya.or.ke">KNjagi@domckkenya.or.ke</a>
	10H00 – 11H00	Malaria Control Division, Ministry of Health, Nairobi	Dr (Mrs) Teresa Kinyari Mwendwa, Department of Medical Physiology Clinical Epidemiologist, University of Nairobi, <a href="mailto:tmwendwa@uonbi.ac.ke">tmwendwa@uonbi.ac.ke</a>
	11H00 – 12H00	Malaria Control Division, Ministry of Health, Nairobi	Paul Kiptoo – Vector control Unit, Public Health officer Email N/A
	12H00 – 13H00	Malaria Control Division, Ministry of Health, Nairobi	Dr Rebecca Kiptui, Deputy Head, Malaria Control Division, <a href="mailto:rebekiptui@gmail.com">rebekiptui@gmail.com</a>
	14H00 – 16h00	UNEP at Gigiri	Elisa Calcaterra, UNEP, Evaluation Officer; Leena Darlington, UNEP Funds officer; Irene Kanyi, UNEP Programme Officer
Tuesday 20 June 2014	10H00 – 12H30	Safari Park Hotel	Dr Clifford Mutero*, ICIPE (University of Pretoria), <a href="mailto:cmutero@icipe.org">cmutero@icipe.org</a>
	14H00	Fairview Hotel	The person from Kenya Medical Research Institute did not come for the interview
Wednesday 21		Departure from	

June 2014		Nairobi to Kampala	
Thursday 22 June 2014	9H00 – 10H00	Disease Vector Control Division (DVCD), Ministry of Health, Kampala	Planning of evaluation mission with Dr Edridah Muheki Tukahebwa, Head of Disease Vector Control Division, National Project Coordinator, <a href="mailto:edmuheki@gmail.com">edmuheki@gmail.com</a>
	10H00 – 10H30	DVCD, Ministry of Health, Kampala	Anatol Maranda Byaruhanga, trainer of health workers, DVCD, <a href="mailto:marandaanatol@yahoo.com">marandaanatol@yahoo.com</a>
	10H30 – 11H30	DVCD, Ministry of Health, Kampala	Dr Denis Rubahika, Senior Medical Officer, NMCP, Deputy chair of ad-hoc committee for MDAST, <a href="mailto:denisrubahika@yahoo.com">denisrubahika@yahoo.com</a>
	11H30 – 12H10	DVCD, Ministry of Health, Kampala	Lakwo Thomson Luroni, Senior Entomologist & Program Manager DVCD, email N/A
	14H00 – 15H00	University of Makerere	Prof Bimenya, Department of Pathology, University of Makerere, <a href="mailto:gsbinenya@chs.mak.ac.ug">gsbinenya@chs.mak.ac.ug</a>
Friday 23 June 2014	9H30 – 11H00	DVCD, Ministry of Health, Kampala	Dr Edridah Muheki Tukahebwa, Head of Disease Vector Control Division, National Project Coordinator
Saturday 24 June 2014		Departure to Mauritius	

#### Persons interviewed through Skype

Date	Time	Person interviewed
2 June 2014	17H00 – 18H00	Dr Randall Kramer, Duke University (Skype), <a href="mailto:kramer@duke.edu">kramer@duke.edu</a>
11 June 2014	14H00 – 15H00	Jan Betlem, ex-Task Manager, UNEP, currently Head of Monitoring, UNEP (Skype)
24 June 2014	15H00 – 16H00	Dr (Mrs) Birkinesh Ameneshewa, Project Coordinator, WHO AFRO (Skype), <a href="mailto:ameneshewab@who.int">ameneshewab@who.int</a>
11 August 2014		Dr Leonard, MBoera, NC, Tanzania (Questionnaire), <a href="mailto:lmboera@nimr.or.tz">lmboera@nimr.or.tz</a>

### **Annex 3: List of documents consulted**

1. Project Document
2. PIRs
3. Minutes of PSCs
4. Progress reports of contractors
5. Final and Progress reports of project
6. Progress reports of Uganda
7. Minutes of meetings for Uganda ad-hoc committees
8. Survey report of Kenya
9. Survey questionnaire for Kenya
10. Extension request
11. Revisions for project
12. Copy of LOA between UNEP and WHO
13. Copies of Contracts between sub-contractors (Duke University and University of Pretoria) and WHO
14. Progress and final expenditure reports
15. Co-finance reports
16. Mid Term Review Report

## Annex 4: Expenditures of GEF trust funds according to budget lines

project number		3346				
project execution partner		WHO				
project reporting period:		From: November 2009		To: April 2013		
<b>Project:</b> MDAST:Evaluating Health, Social and Environmental impacts and Policy Tradeoffs						
UNEP BUDGET LINE/OBJECT OF EXPENDITURE		YEAR				Total
		2009	2010	2011	2012	
		US\$	US\$	US\$	US\$	US\$
20	SUB-CONTRACT COMPONENT					
	2100 Sub-contracts (MoU's/LA's for UN cooperating agencies)					-
	2101 World Health Organization	25,000.00	-	83,531.00	(10,988.00)	97,543.00
	2102					-
	2103					-
	2199 Sub-Total	25,000.00	-	83,531.00	(10,988.00)	97,543.00
	2200 Sub-contracts (MoU's/LA's for non-profit supporting organizations)					
	2201 University of Pretoria	18,667.00	-	195,333.00	103,000.00	317,000.00
	2202 Duke University	19,667.00	-	213,496.00	108,477.00	341,640.00
	2203 Govt of Uganda	60,605.00	-	41,000.00	1.00	101,606.00
	2204 Govt of Kenya	60,606.00	-	-	-	60,606.00
	2205 Govt of Tanzania	60,606.00	-	-	(1.00)	60,605.00
	2299 Sub-Total	220,151.00	-	449,829.00	211,477.00	881,457.00
	2300 Sub-contracts (commercial purposes)					
	2301					-
	2302					-
	2303					-
	2399 Sub-Total	-	-	-	-	-
	2999 Component Total	245,151.00	-	533,360.00	200,489.00	979,000.00
	5500 Evaluation (consultants fees/travel/DSA, admin support, etc. internal projects)					-
	5501 Mid Term Review		-	8,000.00	-	8,000.00
	5599 Sub-Total	-	-	8,000.00	-	8,000.00
	TOTAL BEFORE UNEP PARTICIPATION COSTS	245,151.00	-	541,360.00	200,489.00	987,000.00
	UNEP PARTICIPATION COSTS					
	5500 Evaluation (consultants fees/travel/DSA, admin support, etc. internal projects)					
	5582 Terminal Evaluation					-
	5599 Sub-Total	-	-	-	-	-
	TOTAL COSTS	245,151.00	-	541,360.00	200,489.00	987,000.00

Name: Dr Birkinsh Ameneshewa  
(duly authorized official of UN Entity)

Signature:




# Annex 5: Expenditures of co-funds according to UNEP budget lines

Cofinance report Final Jul 2013 Revised Aug13

REPORT OF PLANNED AND ACTUAL CO-FINANCE BY BUDGET LINE																
(Please prepare one worksheet per source of co-finance)																
Project title:		MDAST: Evaluation of Health, Social and Environmental Impacts and Policy Tradeoffs														
Project number:		3346														
Project executing WHO		GFL-2228-pppp-rmm														
Project reporting period:		Nov-09														
From:		Nov-09														
To:		Apr-13														
UNEP BUDGET LINE*																
		WHO			Duke University			Project Government contributions			In-kind Cofinance			Total		
		Planned (A)	Actual (B)	Planned (C)	Actual (D)	Planned (E)	Actual (F)	Planned (G)	Actual (H)	Planned (I)	Actual (J)	Planned (K)	Actual (L)	Planned (M)	Actual (N)	
		50000.00	94485.00	50000.00	94485.00	0.00	0.00	348000.00	362500.00	0.00	0.00	150000.00	81500.00	396000.00	456985.00	
2101	World Health Organization	50000.00	94485.00	50000.00	94485.00	0.00	0.00	348000.00	362500.00	0.00	0.00	150000.00	81500.00	396000.00	456985.00	
2199	Sub-Total	50000.00	94485.00	50000.00	94485.00	0.00	0.00	348000.00	362500.00	0.00	0.00	150000.00	81500.00	396000.00	456985.00	
2201	University of Pretoria	0.00	0.00	50000.00	37171.00	14000.00	14000.00	0.00	0.00	373888.00	187187.00	0.00	0.00	150000.00	81500.00	
2202	Duke University	0.00	0.00	50000.00	37171.00	14000.00	14000.00	0.00	0.00	373888.00	187187.00	0.00	0.00	150000.00	81500.00	
2203	Govt of Uganda	0.00	0.00	50000.00	37171.00	14000.00	14000.00	0.00	0.00	373888.00	187187.00	0.00	0.00	150000.00	81500.00	
2204	Govt of Kenya	0.00	0.00	50000.00	37171.00	14000.00	14000.00	0.00	0.00	373888.00	187187.00	0.00	0.00	150000.00	81500.00	
2205	Govt of Tanzania	0.00	0.00	50000.00	37171.00	14000.00	14000.00	0.00	0.00	373888.00	187187.00	0.00	0.00	150000.00	81500.00	
2299	Sub-Total	0.00	0.00	50000.00	37171.00	14000.00	14000.00	0.00	0.00	373888.00	187187.00	0.00	0.00	150000.00	81500.00	
2999	Component Total	50000.00	94485.00	50000.00	37171.00	42000.00	42000.00	348000.00	362500.00	373888.00	187187.00	150000.00	81500.00	615888.00	347658.00	
5501	Mid Term Review	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5599	Sub-Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5999	Component Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOTAL COSTS		50000.00	94485.00	50000.00	37171.00	42000.00	42000.00	348000.00	362500.00	373888.00	187187.00	150000.00	81500.00	1013888.00	804943.00	

\* The actual expenditures should be reported in accordance with the specific budget lines of the approved budget (Appendix 2) of the project document in Annex 1

Name:	Dr. B. Amenshewa	Title:	
Signature:		Date:	1-Aug-13
Authorized official of Executing Agency		Project Manager (Coordinator)	

## **Annex 6: The Consultant**

**Nee Sun (Robert) CHOONG KWET YIVE, PhD**

### **Profile**

Currently, associate professor in Chemistry at the University of Mauritius teaching Analytical and Physical Chemistry at under graduate and post graduate levels. Research interests include environmental pollution by heavy metals, POPs and PAHs. Expertise in project development and evaluation.

### **Education**

PhD Chemistry, University of Montpellier, France