

# United Nations Environment Programme



## Eastern African Coastal and Marine Environment Resource Database and Atlas (EAF/14)

*Phase 2: Mozambique, Comoros, Seychelles & Tanzania  
EA/0401-95-03*

&

*Phase 3: Comoros, Kenya, Madagascar, Mauritius,  
Mozambique, Seychelles, & Tanzania EA/1100-96-20*

## Terminal Evaluation

Tim Huntington

April 2010



## TABLE OF CONTENTS

### *Executive Summary*

<b>1</b>	<b>INFORMATION AND BACKGROUND .....</b>	<b>1</b>
1.1	BRIEF OVERVIEW OF THE EVALUATED PROJECT .....	1
1.2	OVERVIEW OF THE EVALUATION.....	3
<b>2</b>	<b>PROJECT PERFORMANCE AND IMPACT .....</b>	<b>7</b>
2.1	ATTAINMENT OF OBJECTIVES AND PLANNED RESULTS.....	7
2.2	SUSTAINABILITY .....	14
2.3	CATALYTIC ROLE AND REPLICATION .....	18
2.4	STAKEHOLDER PARTICIPATION / PUBLIC AWARENESS.....	20
2.5	COUNTRY OWNERSHIP / DRIVENNESS.....	21
2.6	ACHIEVEMENT OF OUTPUTS AND ACTIVITIES.....	22
2.7	PREPARATION AND READINESS .....	26
2.8	IMPLEMENTATION APPROACH.....	27
2.9	FINANCIAL PLANNING .....	30
2.10	ASSESSMENT OF THE MONITORING AND EVALUATION SYSTEMS.....	33
2.11	UNEP SUPERVISION AND BACKSTOPPING .....	34
2.12	COMPLEMENTARITY WITH UNEP MEDIUM TERM STRATEGY AND PROGRAMME OF WORK.....	35
<b>3</b>	<b>CONCLUSIONS AND RATING.....</b>	<b>37</b>
<b>4</b>	<b>LESSONS LEARNED.....</b>	<b>42</b>
<b>5</b>	<b>RECOMMENDATIONS .....</b>	<b>44</b>

### Appendices

APPENDIX A: TERMS OF REFERENCE.....	45
APPENDIX B: LIST OF PEOPLE MET AND CONSULTED.....	58
APPENDIX C: LIST OF DOCUMENTS REVIEWED AND CONSULTED.....	60
APPENDIX D: SUMMARY CO-FINANCE INFORMATION AND A STATEMENT OF PROJECT EXPENDITURE BY ACTIVITY.....	61
APPENDIX E: POST-PROJECT RISK ASSESSMENT .....	62
APPENDIX F: THE EXPERTISE OF THE EVALUATION TEAM.....	63
APPENDIX G: THE EASTERN AFRICAN ACTION PLAN (THE NAIROBI CONVENTION) .....	72

# Terminal Evaluation Report: Eastern African Coastal & Marine Environment Resource Database and Atlas (EAF/14)

## Tables, Figures and Boxes

### Figures

FIGURE 1: SCHEMATIC OF EAF/14 'IMPACT PATHWAY' .....	8
--	---

### Tables

TABLE 1: EAF/14 PROJECT PHASES .....	2
TABLE 2: RATING RESULT SHEET FOR OUTCOMES AND PROGRESS TOWARDS 'INTERMEDIATE STATES' .....	11
TABLE 3: RATING SCALE FOR OUTCOMES AND PROGRESS TOWARDS 'INTERMEDIATE STATES' .....	12
TABLE 4: EXAMPLES OF ONGOING INITIATIVES UTILISING EAF/14 OUTPUTS .....	18
TABLE 5: ACTUAL OUTPUTS AGAINST EXPECTED OUTPUTS (PHASE 2) .....	23
TABLE 6: FINANCIAL EXPENDITURE TABLE .....	32
TABLE 7: OVERALL EVALUATOR RATINGS TABLE.....	40

### Boxes

BOX 1: CABLE LANDFALL PLANNING IN THE MOHÉLI, COMOROS .....	9
BOX 2: DATA PROVISION FROM THE KENYA WILDLIFE SERVICE.....	16
BOX 3: SWIOFP'S VIEWS OF THE STRENGTHS AND WEAKNESSES OF NCCHM .....	17
BOX 4: KILIFI DISTRICT DEVELOPMENT PROGRAMME EL NIÑO RECOVERY PROGRAMME .....	19

## Disclaimer and Report Information

This report has been prepared with the financial support of the United Nations Environment Program (UNEP).

The views expressed in this study are purely those of the author and does not necessarily reflect the views of the UNEP nor in any way anticipates their future policy in this area.

The content of this report may not be reproduced, or even part thereof, without explicit reference to the source.

Huntington, T.C. (2010). **Terminal Evaluation: Eastern African Coastal and Marine Environment Resource Database and Atlas (EAF/14). Phase 2: Mozambique, Comoros, Seychelles & Tanzania. Phase 3: Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles & Tanzania (EA/0401-95-03 and EA/1100-96-20).** Report to the UNEP Evaluation Office, Nairobi, Kenya. 44 pages plus appendices.

Tim Huntington, Windrush, Warborne Lane, Portmore, Lymington, Hampshire SO41 5RJ, UK

Tel: +44 (0)1590 610168

Fax: +44 (0)1590 636585

Email: [tim@consult-poseidon.com](mailto:tim@consult-poseidon.com)

URL: <http://www.consult-poseidon.com>

Version: Final Report

Report ref: 680-REG/R/01/B

Date issued: 21 April 2010

**Acronyms used**

ASCLME	.....	Agulhas and Somali Current Large Marine Ecosystem
CBD	.....	Convention on Biological Diversity
CHM	.....	Clearing House Mechanism
CNDRS	.....	Centre National de Documentation et de Recherche Scientifique (Comoros)
DEPI	.....	Division of Environmental Policy Implementation (UNEP)
DEWA	.....	Division of Early Warning and Assessment (UNEP)
DPSIR	.....	Driving forces, Pressure, State, Impact and Response
EAF	.....	Eastern African Fund
EC	.....	European Commission
EIA	.....	Environmental Impact Assessment
EOU	.....	Evaluation Office (UNEP)
ESRI	.....	Environmental Systems Research Institute, USA
EU	.....	European Union
FAO	.....	Food and Agriculture Organization
FMSCEDP	...	Fishery Management & Sustainable Coastal Environment Development Project
GEB	.....	Global Environmental Benefit
GEF	.....	Global Environment Facility
GIS	.....	Geographical Information System
GPA	.....	Global Programme of Action
GRID	.....	Global Resource Information Database
INRAPE	....	L'Institut National de Recherches pour l'Agriculture, Pêche et Environnement (Comoros)
KCDP	.....	Kenya Coastal Development Project
LCA	.....	Local Collaborating Agency
M&E	.....	Monitoring and Evaluation
MAPE	.....	Ministère de l'Agriculture de la Pêche et de l'Environnement (Comoros)
MoU	.....	Memorandum of Understanding
NCCHM	.....	Nairobi Convention Clearing House Mechanism
NCS	.....	Nairobi Convention Secretariat
NGO	.....	Non-governmental Organization
OCA PAC	....	Oceans and Coastal Areas Program Activity Centre
PPMR	.....	Programme Pluriannuel des Micro Réalisations (Comoros)
ROtI	.....	Review of Outcomes to Impacts
SMART	.....	Specific, Measureable, Achievable, Realistic, Timely
SRO	.....	Senior Research Officer
SWIOFP	.....	South West Indian Ocean Fisheries Project
UNCED	.....	United Nations Conference on Environment and Development (UNCED)
UNEP	.....	United Nations Environment Programme
WIOLaB	.....	WIOLaB project (Addressing land based activities in the Western Indian Ocean)
WWF	.....	World Wildlife Fund

## EXECUTIVE SUMMARY

This terminal evaluation covers the 'roll-out' phases 2 & 3 of the EAF/14 Eastern African Coastal & Marine Environment Resource Database and Atlas project. It takes place some seven years after project activities ceased. This unusually long gap between the project and the final evaluation, whilst losing some detail of the implementation period, has an advantage in that it is possible to examine the outcomes and intermediate states achieved as a result of the project outputs. This has therefore been the focus of this evaluation.

### Results of the Review

Conclusions for the eleven main evaluation categories are provided below:

**A. Attainment of project objectives and results:** the project phases have been effective in developing a lasting technical capability in GIS which remains fully relevant to current programmes and initiatives. Given the low budget, the project was also efficient, largely due to the lessons learned over Phase 1 e.g. training in-country and via mentoring.

*Rating: Overall 'Satisfactory' (Effectiveness – 'Satisfactory'; Relevance – 'Highly Satisfactory'; & Efficiency – 'Satisfactory').*

**B. Sustainability of project outcomes:** the country-level GIS units continue to function through a combination of recurrent Government funding with contributions from donors. This has been strongly supported by the sense of ownership resulting from the EAF/14 mentoring approach, especially in its final years. Financial needs are low, so long as there is a clear identification of responsibilities for data collection (not a GIS function). To date, the coordinating roles of the Local Collaborating Agencies (LCAs) is still clearly recognized. There are also some risks to sustainability, either through socio-political instability or through poorly defined institutional roles that results in both duplication and inefficient use of resources. There are no major environmental risks – indeed this is the *raison d'être* of GIS planning.

*Rating: Moderately likely (Financial – 'Moderately likely' Socio-political – 'Moderately likely'; Institutional framework & governance - 'Moderately likely'; & Environmental 'Likely').*

**C. Catalytic Role:** this project has been highly successful in stimulating the adoption of spatial resource planning and management. The presence of a central coastal & marine data deposit, plus an established GIS capability has encouraged both donors to link into this existing system and for other stakeholders (Government / private sector) to utilize the data products that are increasingly available.

*Rating: Highly satisfactory.*

**D. Stakeholders involvement:** during project implementation awareness building was mainly focused on institutional partners, thus building a framework for data exchange. The atlases appear to have been a major and lasting tool for engaging secondary schools and university students in coastal issues.

*Rating: Satisfactory.*

**E. Country ownership / driven-ness:** this project has been a source of considerable pride at national levels as it has demonstrated their capability to adopt and utilize modern spatial planning tools. This has largely been achieved by the high degree of in-country training under Phases 2 & 3 and the utilization of local datasets for applied management.

*Rating: Satisfactory.*

**F. Achievement of outputs and activities:** whilst Kenya, Comoros and Tanzania achieved all their required outputs, other countries were less successful due to suspension of donor funding. There were also considerable time delays and in some cases a reliance on external consultants to complete tasks (e.g. the Comoros atlas). In general, key project outcomes (e.g. datasets prepared and a GIS capacity developed) were universally achieved.

*Rating: Moderately satisfactory.*

**G. Preparation and readiness:** on the positive side, the experience of Phase 1 in Kenya ensured that these subsequent phases were much better prepared and able to adopt more appropriate approaches and tools that have contributed to its success. However it was let down by the highly unrealistic timeframe and the lack of risk assessment that might have prevented the poor performance in some countries. Given both the regional and phased nature of the programme, the above needs to be qualified:

1. Phase one provided a learning phase which should have been applied in Phase 2 & 3 in terms of time frame, capacity building, building ownership and formulation of a project advisory group.
2. The advisory group would negotiate with the donor to create a trust fund for the EAF/14 rather than a yearly voluntary contribution which was more risky than any other component of the project.
3. Poor performance by some countries was not due to inability of the countries to implement, but rather funds were not available to continue, and the countries were informed by UNEP accordingly.

*Rating: Moderately satisfactory*

**H. Implementation approach:** again the lack of a detailed and realistic risk assessment has reduced the effectiveness of project implementation in some countries. However overall the lessons learned from Phase 1 were well applied and the mentoring approach was practical and effective.

*Rating: Moderately satisfactory*

**I. Financial planning:** based on the limited evidence made available to the evaluator, financial planning was one of the weaker elements of the project. Country-level reporting was often late and accounting for the Belgian monies seems to have been poor e.g. it was not realized until 2006 that there was unspent funds for the NCCHM.

*Rating: Moderately satisfactory*

**J. Monitoring & Evaluation:** whilst the six-monthly reporting from the UNEP EAF/14 Project Coordinator was generally of good quality, there were no indicators established at project start, there was a lack of focus on the longer-term project outcomes and there were no country-level terminal evaluations. This was an important and innovative project and it would have been useful to have more ex-post evaluation once project activities ceased and thus have contributed to the design of the NCCHM.

*Rating: Unsatisfactory (M&E Design – ‘Unsatisfactory’; M&E Plan implementation – ‘Moderately unsatisfactory’; & Budgeting & funding for M&E activities – ‘Unsatisfactory’.*

**K. UNEP Supervision and backstopping:** UNEP supervision has been of a high standard. This is evidenced by the practical response to the curtailing of Belgian funding mid-way through the project and the support provided to the LCAs once the EAF/14 Project Coordinator left in 1997. However it has been let down by the long period between the cessation of project activities and this terminal evaluation.

*Rating: Satisfactory.*

Overall the project can be considered a qualified success as it proved an essential precursor to the regional Nairobi Convention Clearing House Mechanism. Perhaps its greatest success has been to provide the basic capacity for information-based spatial planning and integrated coastal resource management, a fact supported by the continued operation of the EAF/14 GIS units and their ongoing contribution to a variety of recurrent national and regional initiatives such as SWIOFP, WIOLaB and ASCLME. **Therefore, given the individual shortcomings of implementation in some countries, it is awarded an overall rating of ‘Moderately satisfactory’.** The full ratings are provided in Table 7 on page 40.

### **Lessons Learned**

This was an innovative project, focusing on building the capacity to utilize fairly advanced computer-based planning tools for coastal and marine resource management. It had already been through a pilot-testing phase in Kenya but the roll-out to a further number of countries with variable baseline capacity has resulted in further lessons being learned for future application. These are summarized below.

**Need for baseline capacity assessment and preemptive preparation:** the success of the project varied markedly from country to country in this regional project. Future regional project design should take account of the varied starting capacity and ensure that sufficient preparatory activities are integrated into project design to ensure that each country starts at the same point when the main implementation phase commences.

**Need for wider information exchange strategies and frameworks:** data exchange only functions efficiently when there are clearly defined institutional roles and responsibilities. Although the project Working Groups provided a functional working relationship during project implementation, in most cases this did not result in a long-term framework for data collection, compilation and dissemination. This can result in duplication and systemic inefficiency.

**Don’t over-rely on a few capable individuals:** This project relied on a limited number of individual for project success. Whilst this worked in some countries (e.g. Kenya and Comoros), this over-reliance on a few individuals resulted in the collapse of project activities in the Seychelles and Mozambique.

**Timely ex-post evaluation of project activities, outputs and outcomes:** This terminal evaluation has taken place some seven years after the cessation of the last project activities under Phases 2 and 3. Memories have faded and records have been lost in the countries. Furthermore the lack of a formal evaluation of Phase 3 (Phase 2 underwent a self-evaluation) may have impacted on the effectiveness of the subsequent development of the NCCHM. This was exacerbated by the lack of terminal reporting from the individual country participants.

### **Suggestions**

Given that the project activities are already complete, suggestions rather than recommendations have been made.

Three suggestions are made by this evaluation:

1. It is understood that a terminal evaluation of the EAF/14 follow-up project, the “Nairobi Convention Clearing House Mechanism” (EA/1025-06-02) is due shortly. Based on the experience of this current terminal evaluation, it is suggested that instead of the evaluator making visits to the different participating states, that a workshop is convened in a central location. 1-2 participants from each country would be invited and a formal process of joint, participatory evaluation conducted, facilitated by the main evaluator. This would focus on the eleven different evaluation categories (see Section 1.2.4) through a series of break-out and plenary sessions. This process would also include a joint elaboration of

potential impact pathways, utilizing the ROTI technique. It would conclude with a series of lessons learned for both LCAs and the implementing agency that will allow participants to strengthen GIS planning and implementation over future years.

2. A common theme from this evaluation has been the reliance on informal data sharing agreements in order to overcome the administrative inertia of developing formal memoranda of agreements. One possible approach is to develop protocols for data collection, sharing and archiving, as well as information provision and dissemination. These protocols should cover the identification and agreement of institutional roles and responsibilities, budgeting and cost-sharing, and would serve to improve efficiency, effectiveness and remove duplication and cooperation barriers.
3. In order to ensure continued momentum of project activities and ex-post outcomes, the composition of national working groups should be formally reviewed and if necessary expanded. This will allow fresh thinking to be introduced and new stakeholders to be represented as the outcomes become clearer. This would also allow a constant review of the needs of information clients and the development of strategies for prioritizing data collection at national and regional levels to ensure the EAF/14-derived systems remain relevant and credible. Allied to this, regular e.g. quarterly meetings need to be held to ensure the influence of the working groups on project activities.

## 1 INFORMATION AND BACKGROUND

---

### 1.1 BRIEF OVERVIEW OF THE EVALUATED PROJECT

#### 1.1.1 Background

1. The Eastern Africa region has some of the world's most valuable coastal and marine ecosystems and the mangrove forests, seagrass beds, seashores, lagoons and coral reefs provide essential habitats for a rich biodiversity of species. Compared to many regions, the Eastern Africa region is largely in a pristine state. However, human activities are rapidly degrading the marine and coastal environment. These problems have been attributed in part to low economic growth rates, poverty, rapid population growth and poor resource management.

2. Access to and use of the increasingly diverse, comprehensive data and information on coastal and marine environment is required by Contracting Parties to the *Nairobi Convention of the Eastern Africa Action Plan* (for the protection, management and development of the coastal and marine environment, hereafter referred to as the 'Nairobi Convention') in order to deal with the vast array of policy, management, scientific and other practical issues (see Appendix G, page 72 for more details on the Nairobi Convention). To accomplish this, the Nairobi Convention needs to be able to compile and link disparate sets of data and information to create the required information base and develop access services to quickly provide information to decision-makers. This ambition has now been essentially realized through the signing of Memoranda of Understanding with the different Member States to develop common data archiving standards and to share information through a Clearing House Mechanism (CHM) hosted by UNEP's Division of Early Warning and Assessment (DEWA). This process is being finalized over the beginning of this year.

3. This CHM is based on UNEP's Global Resource Information Database (GRID). Started in 1985, GRID was contracted by EAF/14 to construct the Kenya coastal database in 1994. The methodology was replicated at country level in Phase 2&3 of the project between 1996 – 2002. DEWA/GRID-Nairobi is one of UNEP's major centers for data and information management, with a unique, "value-adding" mandate in the handling of national, sub-regional and regional environmental statistics and data, which in turn supports the environment assessment and early warning activities of UNEP and its partners. GRID-Nairobi occupies an important niche in the global GRID Network. The center also functions as a support provider to the DEWA-Africa Programme in the area of capacity building for African countries using environmental information for decision-making and action.

4. The successful development of the CHM has been based upon the capacity of Member States to establish and maintain national geospatial databases at national level. This was the function of the 'Eastern African Coastal and Marine Environment Resources Database and Atlas' project (EAF/14), which was one of five sub-programs contributing to the Nairobi Convention<sup>1</sup>, and is the subject of this evaluation.

#### 1.1.2 The EAF/14 project (1993-2002)

5. The **overall objective** of EAF/14 (referred to as 'the Project') was "to develop national self reliance on all matters relating to the integrated management of the coastal and marine environment to ensure a balance between adequate protection, wise development and sustainability of resources".

6. The **specific objectives** were to assist the Governments of the Region to attain sustainable integrated development and environmental management of the marine and coastal areas and their resources through:

---

<sup>1</sup> The other sub-programmes included 'Protection and management of marine and coastal areas' (EAF/5), see Appendix G.

1. Strengthening the capacity of national institutions in collation of data on the coastal and marine environment, and in the storage, management and retrieval of such information
2. Develop, together with national institutions and the wider community, an electronic database system as a management tool towards integrated coastal area management (in collaboration with the EAF/5 project)
3. Develop, together with national institutions and the wider community, coastal resources maps
4. Strengthening the capability of national institutions in the use and management of an electronic database system and coastal resource maps (in collaboration with EAF/5 project)
5. Creating awareness and facilitate the participation of the private sector, the academic fraternity, NGO's, the wider community and the general public, in the decision-making regarding the management of coastal and marine resources, through the provision of data and information in the form of a coastal resources atlas

7. In 1993, UNEP initiated EAF/14 to be executed in five yearly phases, the first of which was an effective pilot project based around Kenya, with four follow-up phases planned to expand the scope of the work to other countries in the region:

**Table 1: EAF/14 Project Phases**

Title	Country coverage		Dates	
	<i>Proposed</i>	<i>Changes</i>	<i>Proposed</i>	<i>Actual</i>
<b>Phase 1</b> EA/5101-93.01	Kenya	As proposed	06/1993- 12/1995	06/1993- 12/1999
<b>Phase 2</b> EA/0401-95-03	Mozambique, Reunion, Seychelles, Tanzania.	Comoros and Kenya added, Reunion dropped	01/1995- 12/1995	01/1995- 12/2002
<b>Phase 3</b> EA/1100-96-20	Comoros, Kenya, Madagascar, Mauritius, Mozambique, Reunion, Seychelles, Somalia & Tanzania	Madagascar, Mauritius and Reunion dropped	01/1996- 12/1996	01/1996- 12/2002
<b>Phase 4 &amp; 5</b> EA/1100-97-	Comoros, Kenya, Madagascar, Mauritius, Mozambique, Reunion, Seychelles & Tanzania	Phase never initiated.	01/1997- 12/1998	Never initiated.

8. Project funding was originally through voluntary contributions from the DGIC (initially BADC, then DGDC), the Belgian overseas development agency. This amounted to some US\$1.65 million between 1992 and 1996. DGIC ceased funding the project in 1997. By 1996, UNEP had supported the project with an extra US\$ 279,148 from the Environment Fund. The in-kind contributions by the EAF/14 Lead Collaborating institutions run to hundreds of man months but is unquantified in monetary terms.

9. The EAF/14 project facilitated the production and distribution of comprehensive national assessment atlases on the status of coastal resources of Kenya (1998), Tanzania (2001) and Comoros (2002), organization of public awareness campaigns that generated interest in environmental issues, and acceptance and active participation of all stakeholders supporting the Convention. After resignation of the principal project coordinator in 1997, UNEP continued to implement the project, albeit with an extension of project duration beyond 1998. The final atlas of coastal resources (Comoros volume) was published in September 2002. Meanwhile a regional coastal resource assessment report was produced in 2002 (as a partial fulfillment of the intended Phase 5 of the Project) and an improved website and online database launched in June 2003, which was subsequently adopted and improved by the CHM.

### 1.1.3 Current status of EAF/14 and its successor projects

10. Although Phase 2 and Phase 3 activities ceased in 2002, the project has remained open. It is understood that this is because the regional integration activities expected to be conducted under Phases 4 and 5 were subsumed by the CHM project, 'Clearing House mechanism and information sharing system on the Eastern African coastal and marine environment (EA/1025-06-02). This commenced in May 2006 and is scheduled to end in the middle of 2010. Whilst the majority of funding for this new project is via the UNEP-GEF WIOLaB project (US\$ 195,000), it has also benefited from US\$ 167,335 unspent funds from the original Belgian contributions to the Eastern African Trust Fund used for EAF/14.

11. This evaluation is specifically for Phases 2 and 3. Phase 1 activities (in Kenya only) were subject to an interim 'tripartite' evaluation in June 1996 (Maesschalck *et al*, 1996). A Terminal Evaluation of the CHM project (EA/1025-06-02) is expected sometime during 2010.

## 1.2 OVERVIEW OF THE EVALUATION

### 1.2.1 Background

12. There have been a number of previous evaluations / Final Reports of the EAF/14 project as a whole (all phases). These include (in chronological order):

1. **Tripartite Evaluation of the UNEP Project 'Eastern African Coastal and Marine Environment Resources Database and Atlas (Phases I and partly Phase II).** June 1996. 22 pages plus appendices. Authors: Maesschalck, G., J. Kinyamario & I. Lethbridge (1996).
2. **Final Report (Phase One: Kenya).** Eastern African Coastal and Marine Environment Resources Database and Atlas. Author: Salif Diop (Senior Program Officer, UNEP / DEIA & EW). 1999
3. **In-Depth Evaluation of Project EA/1100-98-03:** Eastern African Coordinating Unit for the East African Action Plan of the Nairobi Convention and its Protocols. October 2000. Authors: Francis, J. & M. Ngoile, 2000.
4. **Final Report (Phase Two: Mozambique, Tanzania, Comoros, Kenya, Seychelles).** Eastern African Coastal and Marine Environment Resources Database and Atlas. Author: Johannes Akiwumi (Program Officer, GRID-Nairobi). 2003

13. Of these, only Report No. 1&3 (Maesschalck, G et al, 1996; Francis & Ngoile, 2000) are independent – all the others are self assessments. Although there were Final Reports for Phases 1 and 2 (dated 1999 and 2003 respectively), which both included an element of 'output to outcome' evaluation, no Final Report for Phase 3 has been completed.

14. As discussed above, this Terminal Evaluation comes some seven years after the last project activities in Phases 2 and 3 were completed. This presents an unusual opportunity to conduct an 'outcomes to impact analysis' with the benefit of hindsight. It is therefore important not to view the Phases 2 and 3 in isolation, but to understand the project's genesis through the pilot phase in Kenya as well as the subsequent proxy implementation of Phases 4 & 5 through the development of the Nairobi Convention Clearing House Mechanism (NCCHM).

### 1.2.2 Purpose and objectives

15. The objective of this terminal evaluation is to examine the contribution of the project towards the achievement of Expected Accomplishments and the extent, and magnitude of any project impacts to date. The evaluation will also determine the likelihood of future impacts, assess project performance and the implementation of planned project activities / outputs against actual results.

### 1.2.3 Key questions

16. The evaluation has focused on the following main questions:

1. To what extent did the project strengthen the capacity of national institutions in collation of data on the coastal and marine environment, and in the storage, management and retrieval of such information and data?
2. Did the project succeed in developing an electronic database system as a management tool towards integrated coastal area management?
3. Did the project succeed in developing coastal resources maps and atlases?
4. To what extent did the project strengthen the capability of national institutions in the use and management of an electronic database system and coastal resource maps?
5. To what extent did the project create awareness and facilitate the participation of the private sector, the academic fraternity, NGO's, the wider community and the general public, in the decision-making regarding the management of coastal and marine resources, through the provision of data and information in the form of a coastal resources atlas?

17. Given the timing of this evaluation after project activities were completed, it has also focused on the sustainability of the project activities. In order to do this, the evaluator developed an 'impact pathway' analysis to determine the outcomes, intermediate states and impacts of the project and evaluated the project against its success in achieving these (see methodology below).

### 1.2.4 Methodology

18. As required by the Terms of Reference (see Appendix A, on page 45), this terminal evaluation has been conducted using a participatory mixed-methods approach including the following:

1. Prior to the evaluation mission, the evaluator conducted a review of the project sub-documents for Phases 2 & 3, together with Phases 1, 4 & 5. In addition, the evaluator has reviewed the six-monthly progress reports produced by the Implementing Agency. The evaluator also downloaded and reviewed both the coastal resource atlases (where available). Finally the evaluator also examined the Final Reports for Phases 1 and 2.
2. Initial briefing with UNEP's Evaluation Office (EOU) in order to discuss the objectives and focus of this evaluation, and to finalize the evaluation methodology.
3. Initial briefing with UNEP's Division of Early Warning and Assessment (DEWA), who acted as the main Implementing Agency over Phases 1 & 2 (Originally UNEP - OCA/PAC, then the Water Division and now DEWA). This was intended to discuss the EAF/14 project and its context, including its original objectives, implementation mechanisms, funding and outcomes.
4. Field visits to the Lead Collaborating Agencies in Mombasa, Kenya and Moroni, Comoros. It is important to remember that these project phases closed some time ago and thus there were no project staff as such to meet, it was however possible to meet key figures involved in the project's implementation and assess the current condition and activities of the information centers established by EAF/14. The evaluation focus here was both on the process of implementation, as well as the sustainability of the data collection and activities.

5. Field visits to main stakeholders (e.g. (i) institutional partners both proving data and utilizing information and (ii) the wider community who have an interest in the coastal marine environment. Here a focus was made on the sustainability of collaboration agreements, data provision (from research partners), information needs (from GIS customers) and other elements of demand-driven information and data services.
6. An email questionnaire sent to (i) the other LCAs in Tanzania and the Seychelles and (ii) key members of the implementation team, including Lieven Bydekerke (a Junior Professional Officer on EAF/14) and others (see Appendix B, Table B for details).

19. In terms of the evaluation process itself, the evaluator has closely followed the evaluation criteria, parameters and rating mechanisms proposed in the Terms of Reference (see Appendix A). This includes the use of the ‘Review of Outcomes to Impacts’ (ROtI) method (GEF Evaluation Office, 2009) for the effectiveness of the project in achieving its objectives (Section 2.1.1) as well as the sustainability analysis (Section 2.2). This method was particularly appropriate in that, seven years after project completion, it was possible to map out the impact pathway with some certainty. This required that the evaluator visited organizations apart from the LCAs as, to quote the GEF guidance, “*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.*” (see Section 3.2.3 of GEF Evaluation Office, 2009).

20. One of the main outputs of this evaluation is to focus on lessons learned and their application to future project design. There should be less emphasis in the provision of recommendations, unless they are highly specific, practical and actionable.

21. Finally, it is important that the findings of this report are credible, robust and evidence-based.

### 1.2.5 Work Plan

22. The evaluation took place over a two month period and included a 10 day visit to the region. During this visit, the evaluator visited the UNEP headquarters in Nairobi to discuss the project with both the *Evaluation Office* as well as UNEP’s main project coordinating division, the *Division of Early Warning & Assessment* (DEWA). This was then followed by visits to two Member State participants, Mombasa (Kenya) and Moroni (Comoros) to meet with the national focal points as well as other project collaborators and stakeholders.

Dates	Location	Activity
22 Jan – 14 Feb 2010	UK home office	Preparation
15 – 16 Feb 2010	Nairobi, Kenya	Meetings with UNEP Evaluation & Oversight Unit and Division of Early Warning & Assessment
17 – 19 Feb 2010	Mombasa, Kenya	Meetings with KMFRI, Department of Fisheries, Coastal Development Agency (CDA), SWIOFP, Kenya Wildlife Service, Fishery Management & Sustainable Coastal Environment Development Project (FMSCEDP); and the National Environmental Management Agency (NEMA).
20 – 23 Feb 2010	Moroni, Comoros	Ministère de l’Agriculture de la Pêche et de l’Environnement (MAPE); Faculty of Science and Technology, University of Comoros; & National Oceanographic Data Centre, CNDRS
24 Feb – 10 Mar 2010	UK home office	Draft report preparation
08 Apr - 30 Apr 2010	UK home office	Final report preparation

### 1.2.6 Limitations of the TE and comments on the ToR

23. This Terminal Evaluation has taken place some seven years after the main implementation activities were finished. As a result it was not possible to meet many of the key people involved in implementation, especially at LCA level. In addition, both personal and institutional memories have dimmed, and in some cases (e.g. KMFRI) official project records were archived and irretrievable.

24. A additional constraint to the evaluation was the lack of (i) project progress and outcome indicators and (ii) anticipated risks in the project (sub)documents. This is examined further in Section 2.10.

25. Whilst this evaluation is conducted at regional level, project outcomes and impact will vary at national level. Given the time and limited scope of the country visits – combined with the departure of key project staff it has not been possible to provide a comparative evaluation for each Nairobi Convention Member State. However lessons, examples and case studies are drawn from the two countries visited (Kenya and Comoros) as well as responses from the wider email questionnaire circulated to other Member States that still retain project staff in the relevant units (e.g. Seychelles and Tanzania).

26. Allied to the above, it is noted that the evaluator was requested to visit Kenya and Comores, which happened to be two of the more successful countries e.g. two of the three that completed the atlases and not the other three countries that failed in this respect, either due to a cessation of funding (e.g. Madagascar and Mozambique), an insufficient capacity (e.g. Seychelles) or political problems (e.g. Somalia). Whilst effort has been made to contact the other four countries (Tanzania, Seychelles, Mozambique and Madagascar), the evaluation results will reflect the nature of project activities in the visited countries.

## 2 PROJECT PERFORMANCE AND IMPACT

---

27. This section provides the main evaluation of the project and, in this particular case, its outcomes and impacts. As discussed in the methodology, much of the analysis of the project activities has been conducted through a review of the project progress reports and, to a certain extent, discussions with project staff. However this was a greater challenge, as many of the participants have moved on since the project effectively ceased in 2002. Therefore our focus is more on the outcomes achieved and emerging impacts, and determining the causal links between these different elements. It is considered that this will yield the most profound lessons for similar projects in the future.

28. The methodology used follows that suggested by the Terms of Reference (see Appendix A). This provides a flow of inter-linked evaluation parameters and accompanying rating approaches. As suggested above, this evaluation will provide a particular focus on sustainability elements, which are strongly interrelated with subsequent evaluation questions.

### 2.1 ATTAINMENT OF OBJECTIVES AND PLANNED RESULTS

29. This part of the evaluation examines the extent to which the project's major relevant objectives were effectively and efficiently achieved and their relevance.

#### 2.1.1 Effectiveness

30. In order to assess the effectiveness of the Project, we have used the ROTI method to identify its outcomes, intermediate states and emerging impacts. This includes two main outputs, (i) an impact pathway analysis and (ii) a quantitative rating of the achievement towards the outcomes and progress towards 'intermediate states'. In this particular case, we are also able to comment upon the progress in achieving the anticipated impacts.

31. An 'impact pathway analysis' is provided overleaf in Figure 1. As the name suggests, this attempts to link the established project outputs (synthesized from the project sub-documents) with the likely outcomes, intermediate states and finally its overall impact. In addition, this analysis examines the different assumptions, impact drivers and risks that go to influence the way in which project outcomes might – or might not – move towards having an impact. These are usually external to the project and its influence, although should have been anticipated in the project design.

32. We have also ranked the Project in terms of its ability to achieve its outcomes and progress towards 'intermediate states' (see Table 2 on page 11). We have given the Project a ranking of BB i.e. **likely to achieve impact**. This is examined further below.

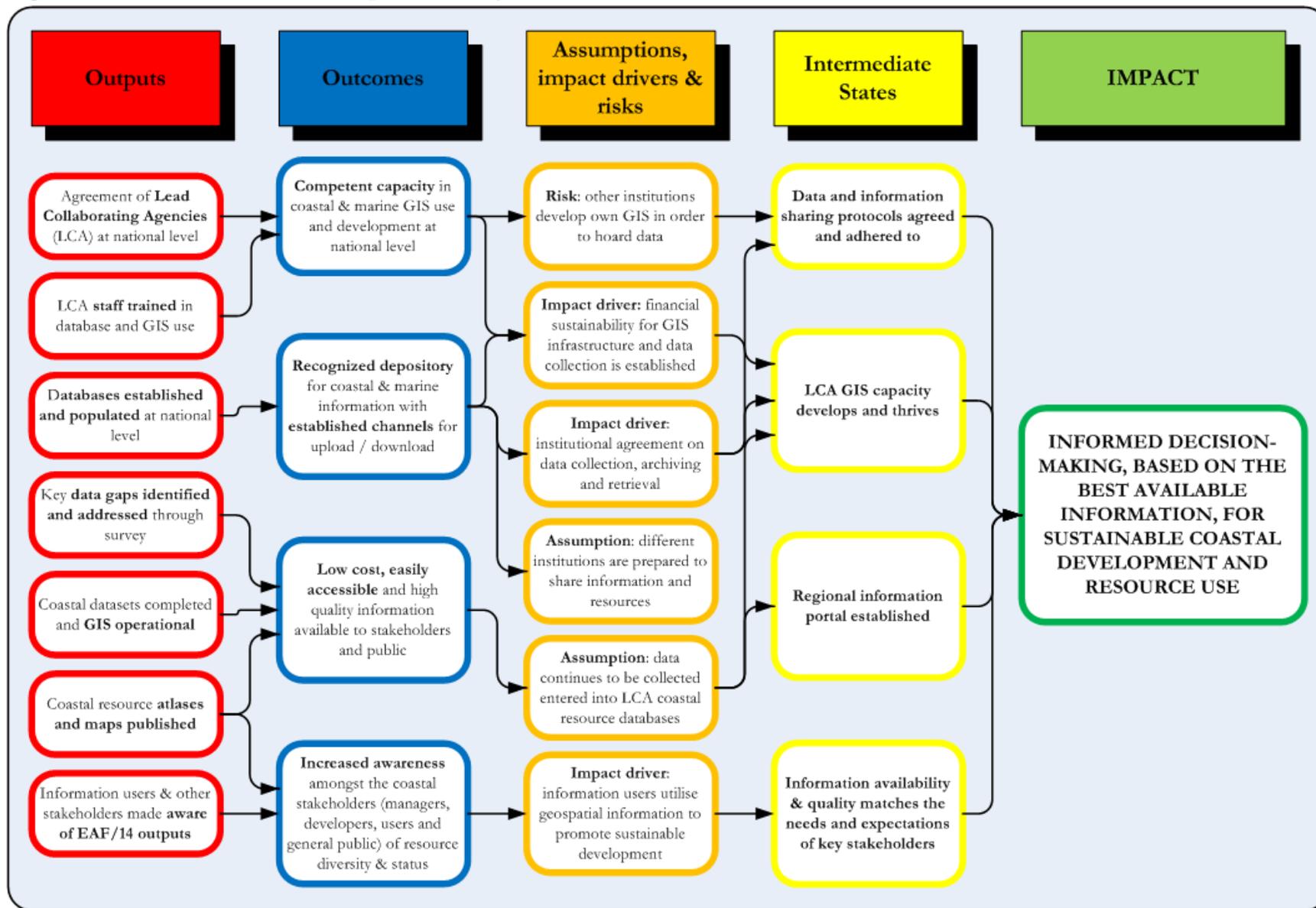
#### *Outcomes*

33. Four outcomes are anticipated from this Project. Whilst this evaluation has been conducted at a regional level, the findings from the visits to Kenya and Comoros have been considered and provided as examples in case studies.

**33.1. Competent capacity in coastal and marine GIS use and development at national level:** this evaluation could only establish the level of this outcome in the two countries visited, Kenya and Comoros.

- In Kenya, KMFRI appears to have developed a competent Coastal and marine GIS unit, headed up by a Senior Research Officer (SRO) with other three scientists using GIS regularly, supported by a number of technicians. Apart from the SRO, none of the three scientists originally trained by EAF/14 remain in KMFRI's technical staff, although two do use GIS in other institutes (both in Kenya). The current staff and GIS users have been trained elsewhere since the EAF/14 project was completed.

Figure 1: Schematic of EAF/14 'Impact Pathway'



- In the Comoros, the Ministère de l'Agriculture de la Pêche et de l'Environnement (MAPE) have designated a GIS Unit which is officially sanctioned as the national node for storing information on the coastal and marine environment. This is headed by a Chef de Département, who was the only person to receive full training in the Comoros under EAF/14 (a number of other people were trained in both Nairobi and Moroni under EAF/14 but lacked the capacity to absorb and utilize what is a highly technical subject). Seven years on, the unit is still functioning, although is dependent upon the wider expertise of the Chef de Département, despite his training a number of technical staff. This is considered more a reflection on the limited capacity-pool, esp. of English language speakers, rather than financial restrictions.

**33.2. Recognized depository for coastal and marine information with established channels for upload / download:** an important indicator for project success is whether unit of the LCA selected for EAF/14 as the national implementation partner remains the recognized national focal point for marine and coastal data (or has successfully transferred this responsibility to another institutional partner).

- In Kenya KMFRI remains the main institution responsible for holding marine and coastal data. This is supported by the continued use of the KMFRI Information & Data Management Program for new or upcoming projects such as the World Bank-funded Kenya Coastal Development Project (KCDP) and the GEF-funded South West Indian Ocean Fisheries Project (SWIOFP). However discussions with the latter identified perceived weaknesses to this position, including the dependence upon aging data. This was also confirmed by discussions with the Kenya Wildlife Service who said that whilst they were willing to share their extensive (but non-georeferenced) data with KMFRI, this was inhibited by a lack of both (i) a lack of data format and (ii) data exchange agreements. In addition there does not seem to be a formal recognition at Governmental level over the role of KMFRI (or other institutions) in coastal and marine information management and there is a potential for 'rival' systems to evolve if there is no Governmental strategy developed, although this may be resolved in the forthcoming ICZM Policy.
- In Comoros, as mentioned above the GIS unit of MAPE appears to have acceptance as the main coastal and marine information provider at national level. Set up in 2006, the unit has inherited all the EAF/14 databases which still provide many of the base layers used today. The GIS unit is to host the national information systems for the GEF-funded Agulhas and Somali Current Large Marine Ecosystem (ASCLME) project, linking with the Comoros Oceanographic Data Center (CNDRS) who will coordinate data provision. In addition, the unit is recognised as an important source of information for coastal planning (see Box 1 below).

**Box 1: Cable landfall planning in the Mohéli, Comoros**

In 2009 the national telephone provider in the Comoros were planning the landfall of a submarine cable in Itsamia, a small town in Mohéli. This site was close to a WIOLaB demonstration site and the Mohéli Marine Protected Area. They approached MAPE about geo-spatial information on vulnerable species and habitats, and using these agreed to change the cable route to a landfall by Hajnamoida instead.

- In Tanzania the Institute for Marine Sciences is the designated National Oceanographic Data Centre. The EAF/14 database provided the core for this datacenter, which is linked to two other databases (i) the fisheries database operated by the Fisheries Divisions (Zanzibar and Dar es Salaam) and (ii) the general environmental database operated by the National Environmental Management Council. These two databases are complimentary to that of EAF-14.

**33.3. Low cost, easily accessible and high quality information available to stakeholders and the public:** the number and variety of potential users of EAF/14 derived information is large. It includes *government*, such as core sector ministries (e.g. fisheries, environment and wildlife), other ministries involved in the development of the coastal zone and marine space, including transport, communications, urban development, education, and health; multi-sectoral agencies e.g. coastal development. It also includes private sector (the fishing industry, shipping, communications, etc.), NGOs (wildlife and biodiversity conservation, coastal community development and empowerment, etc) as well as the wider public, especially younger people through schools. In each case, it is important that information from EAF/14 be made easily available and at a reasonable cost (if cost-recovery is necessary).

- In Kenya, Comoros and Tanzania the project produced high quality coastal and marine resource atlases, that included maps either embedded in the document (Comoros in 2002 and Tanzania in 2001) or attached as additional sheets (Kenya in 1999). These have proved extremely popular and it is understood that there is still a considerable demand for hard copies, despite the fact they are now at least seven years old. This can be attributed to their comprehensive yet readable nature and their suitability for secondary school students and higher. Furthermore much of the information provides both basic facts on coastal and marine geography as well as baseline information on flora and fauna, and thus provides a useful and enduring 'state of the environment' account. The datasets also remain intact and have now been made available to the public via the NCCHM, all of which (except Comoros) appear to function. However there are some concerns over the increasing age and the need for greater detail in datasets (see Para. 33.2 above), also voiced by the Kenya Coastal Development Authority.
- These datasets are also made available to institutional partners, albeit largely through informal agreements, at no or low cost.
- The situation in the other Nairobi Convention partner countries is less certain. It is understood that in the Seychelles, project databases were handed over to a consultant contracted by UNEP in 2000 for the development of the Seychelles Marine Atlas. While the final report of the atlas was prepared, data used was never sent back. Thus the current GIS that is linked to the NCCHM does not contain any information derived from Phases 2 & 3 of EAF/14.

**33.4. Increased awareness amongst the coastal stakeholders (managers, developers, users & general public) of resource diversity and status:** discussions with key (non-LCA) stakeholders in the Comoros and Kenya suggest that the project outputs did increase awareness of the coastal and marine environment, mainly through the production and distribution of the atlases. As mentioned above, these have proved very popular, particularly in schools. Apart from the atlases, a review of the six-monthly progress reports suggests that the role of the project in awareness building seems to be limited.

34. Collectively the ability to achieve these outcomes is ranked at 'B', e.g. the project's intended outcomes were delivered, and were designed to feed into a continuing process, but with no prior allocation of responsibilities after project funding (see Table 3, page 12). This result has a number of caveats:

- In some cases e.g. Seychelles, Mozambique, Mauritius and Madagascar no atlases were produced. These countries would therefore received lower outcome rankings
- On the more positive side, some countries had a very positive outcome, with successfully achieved outcomes and with specific allocation of responsibilities after project funding (e.g. an 'A' rating).

**Table 2: Rating result sheet for outcomes and progress towards ‘intermediate states’**

Results rating of project entitled:		Eastern African Coastal & Marine Environment Resource Database and Atlas (EAF/14), Phases 1 & 2					
Outputs	Outcomes	Rating (D – A) <sup>2</sup>	Intermediary states	Rating (D – A)	Impact (GEBs)	Rating (+)	Overall
1. Agreement of Lead Collaborating Agencies (LCA) at national level	1. Competent capacity in coastal & marine GIS use and development at national level	B	1. Data and information sharing protocols agreed and adhered to	B	Informed decision-making, that is based on the best available information, for sustainable coastal development and resource use		BB
2. LCA staff trained in database and GIS use							
3. Databases established and populated at national level	2. Recognized depository for coastal & marine information with established channels for upload / download		2. LCA GIS capacity develops and thrives				
4. Key data gaps identified & addressed through survey							
5. Coastal datasets completed and GIS operational							
6. Coastal resource atlases and maps published							
7. Information users & other stakeholders made aware of EAF/14 outputs	4. Increased awareness amongst the coastal stakeholders (managers, developers, users & general public) of resource diversity & status		4. Information availability & quality matches the needs & expectations of key stakeholders				
<b>Rating justifications:</b>	All (except a few minor examples) outcomes were achieved. Phases 4 & 5 (e.g. regionalization of the databases) were not implemented, although the NCCHM did fulfill this need.	The near completion of the NCCHM suggests that Intermediate States 2 & 3 have been achieved. However there are still issues over data provision and sharing at national levels.	The system infrastructure and capacity is in place and continues to function. However the databases lack the detail to fully achieve the impact and lack fresh data, making them vulnerable to competition from other emerging regional information systems				

<sup>2</sup> See overleaf for rating scale

**Table 3: Rating scale for outcomes and progress towards ‘intermediate states’**

<b>Outcome Rating</b>	<b>Rating on progress toward Intermediate States</b>
<b>D:</b> The project’s intended outcomes were not delivered	<b>D:</b> No measures taken to move towards intermediate states.
<b>C:</b> The project’s intended outcomes were delivered, but were not designed to feed into a continuing process after project funding	<b>C:</b> The measures designed to move towards intermediate states have started, but have not produced results.
<b>B:</b> The project’s intended outcomes were delivered, and were designed to feed into a continuing process, but with no prior allocation of responsibilities after project funding	<b>B:</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 long term impact.
<b>A:</b> The project’s intended outcomes were delivered, and were designed to feed into a continuing process, with specific allocation of responsibilities after project funding.	<b>A:</b> 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.

### 2.1.2 Relevance

35. This part of the evaluation examines whether the project’s outcomes were consistent with wider UNEP program objectives. These are listed below, with a brief evaluation commentary:

- **Regional Seas Program:** the EAF/14 appears to have remained highly relevant to the Regional Seas Program (RSP). In particular, it has increased country ownership of resource management through the development of a self-sustaining decision-support tool. It also contributes to the implementation of the Beijing Declaration on furthering the implementation of the of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities in that it provides information on land-based activities and their impact on the coastal environment. It has also provided the basis for a number of oil spill contingency plans through an increased vulnerability and sensitivity mapping capability.
- **Eastern African Action Plan (i.e. the Nairobi Convention):** the Nairobi Convention essentially consists of an Action Plan and supporting Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, as well as two protocols (i) Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region and (ii) Protocol Concerning Co-operation in Combating Marine Pollution in Cases of Emergency in the Eastern African Region. The EAF/14 outcomes are considered to be important enabling steps to allowing the sustainable development and sound management of regional marine and coastal resources. In particular, low cost and easily accessible geo-referenced information allows the spatial protection of species and habitats and management of human activities that affect them. The continued operation of EAF/14 derived data centers strengthens and encourages the activities of institutions within the region involved in the study of marine and coastal resources and systems. The project has, primarily through the popular atlases, stimulated the growth of public awareness, at a number of levels of society, of the value, interest, and vulnerability of the region’s marine and coastal environment.

- **UNCED (Convention on Biological Diversity & Agenda 21):** EAF/14 outputs have also contributed to achieving the goals of the CBD, through enabling better MPA planning and potentially the zoning of permitted activities such as fishing and other extractive industries. This is demonstrated by the integration of EAF/14 outputs with current resource planning project such as the South West Indian Ocean Fisheries Project (SWIOFP) and former projects, for example provision of key information to decision makers such as in the zoning of Mafia Island and Mnazi Bay marine protected areas in Tanzania<sup>3</sup>.
- **Millennium Development Goals:** EAF/14 outcomes contribute mainly towards the MDG Goal 7 (Environmental Sustainability). In particular, the development of a multi-user information system has facilitated sustainable development (MDG 7 Target 1) through improved impact assessment and greater awareness of the diversity and fragility of coastal ecosystems. The information contained in EAF/14 databases may also allow greater spatial protection, and thus reduced marine and coastal biodiversity loss (MDG 7 Target 2). There is also evidence that EAF/14 outputs might assist in achieving the other MDG goals, including Goal 2 (universal education) (EAF/14 base maps have been used extensively by the Comoros Ministry of Education in developing their education strategy), and Goal 8 (develop a global partnership for development) through greater self-sufficiency in information generation and dissemination.

36. In summary, EAF/14 outcomes remain consistent with the Nairobi Convention goals and objectives, as well as those of other UNEP and UN programmes and initiatives. As such, it has been rated as **'highly satisfactory'** in terms of its continuing relevance.

### 2.1.3 Efficiency

37. The efficiency of the EAF/14 was probably the hardest element to evaluate. In total, Phases 2 and 3 cost just under US\$ 1 million, of which 74% was funded by the Regional Trust Fund for East African Region (Special Contribution by the Belgian Government) and the remaining 26% by UNEP's Environment Fund. There were also substantial but unquantified 'in kind' contributions by the Member States in terms of staff and data centre hosting costs. This funding followed that of Phase 1 (EA/5101-93-01) in Kenya (*c.* US\$ 470,804), which provides the basis for some quantitative analysis. If one considers that Phases 2 and 3 assisted a further two countries (Comoros and Tanzania) to reach the same level (e.g. the successful production of atlases), as well as an additional degree of capacity building for a further two countries (Mozambique and Seychelles), at around double the cost of Phase 1, then the project can be considered as efficient. This was mainly achieved though a great focus on in-country training (via a low cost but highly effective JPO, Mr. Lieven Bydekerke) and the greater utilization of datasets relevant to each LCA.

38. Discussions with key stakeholders suggested that no major gains in efficiency could have been gained by any alternative approach and reinforces the use of pilot phases to the efficiency of project methodologies. Therefore this project has been rated as **'satisfactory'** in terms of its overall efficiency.

---

<sup>3</sup> For more information, see the self evaluation report for EA/0401-95-03

## 2.2 SUSTAINABILITY

39. Sustainability is understood as the probability of continued long-term project-derived outcomes and impacts (see Table 2 and Figure 1) after the project funding ends. This evaluation benefits from around eight years of hindsight and is thus able to consider the level to which outcomes have been sustained since the cessation of project activities in 2002.

40. The reader is also directed to **Appendix E: Post-project risk assessment** (page 62) which considered the main external risk factors to sustainability. This indicates that overall there is a **medium risk** to the sustainability of project outcomes, based on a combination of political stability, environmental conditions and social, cultural & economic factors.

### 2.2.1 Financial resources

41. During the evaluation, uncertain financial sustainability was frequently quoted by the LCAs to be a major impediment to the continuing contribution of EAF/14 outcomes to sustainable coastal and marine resource development. In particular, uncertain or intermittent funding to data collection, input and dissemination were raised. However, in the view of this evaluator, the maintenance of the core outcomes of EAF/14 are not necessarily financially demanding, and the demand for additional financial resources is often a proxy for other issues e.g. insufficient understanding and emphasis on demand-driven information generation by senior staff.

42. A review of the EAF/14 outcomes outlined in Figure 1 on page 8 supports this analysis:

- **Competent capacity for marine and coastal GIS use:** the emphasis of Phases 2 & 3 (as opposed to Phase 1) was on training of trainers. As a result there is a growing core of GIS specialists and technicians in each LCA that can take on and train further staff. It is accepted that there is the need for further basic training as the software develops, but given the increasing baseline competency in personal computer use and the development of more user-friendly GIS programs and web interfaces, these are not considered to be a major financial demand.
- **Recognized depository for marine and coastal information:** once a data centre has achieved sufficient physical and human capacity to act as a central depository, then the additional financial needs are minor. Discussions in Kenya and the Comoros suggested that additional hardware needs were usually met through existing procurement systems and were not considered a barrier to functionality. A greater threat maybe the commitment of senior staff to maintaining an information depository, especially if the process for formulating and demanding information is poorly designed.
- **Low-cost, easily accessible and high quality information provision:** the focus here is on the availability of high quality data as required by stakeholders. In most cases it is the responsibility of the information centre to both assess data needs and sources. However it is not their responsibility to collect this data in the first place. The evaluator's view is that in most cases there is a surfeit of data available in the region – the problem lies in ensuring its quality and availability to the information center. Therefore the overall cost burden is relatively light.

43. The presumption that maintaining a data depository is not financially-demanding is also supported by discussions with one of their new regional partners, SWIOFP. SWIOFP maintains that it is their role to generate data (or, say, facilitate the generation of electronic, geo-referenced fisheries statistics) and the function of the LCA data depository is to be able to store this data and allow cross-referencing with other, existing data sets via a suitable access portal. Therefore this project has been rated as '**moderately likely**' in terms of its ability to achieve overall financial sustainability.

### 2.2.2 Socio-political

44. The potential for project outcomes to progress to intermediate states and then to a long-term impact can be influenced by external factors, including social and political risks. These are considered external to institutional factors relating to the LCAs and the other partner organizations in coastal and marine data provision.

45. As a region, the socio-political situation is variable between the different NC Member States<sup>4</sup>. The *Comoros* has a particularly volatile political history, with more than 20 coups or attempted coups since gaining independence from France in 1975. More recently, in March 2008, African Union and Comorian forces seized Anjouan from rebel forces. This together with a long-standing rift with France over possession of Mayotte, as well as a low education level and high unemployment, suggests some degree of continuing instability. *Tanzania* is in the bottom ten percent of the world's economies in terms of per capita income but recent banking reforms have helped increase private-sector growth and investment and continued donor assistance and solid macroeconomic policies supported a positive growth rate, despite the world recession. In *Kenya*, continuing power struggles within the coalition government, post-election violence in early 2008, coupled with the effects of the global financial crisis on remittance and exports, reduced estimated GDP growth below 2% in 2008 and 2009. Whilst relatively stable politically, the *Seychelles* economy has suffered from food and oil price shocks, a foreign exchange shortage, high inflation, large financing gaps and the global recession and in 2009, GDP fell nearly 9% due to declining tourism.

46. In translating these factors into risk for EAF/14 outcomes, there are a number of issues. Firstly the financial commitment to maintaining data depositories, modest as they might be (see Section 2.2.1 above) may be at risk in a declining fiscal climate. Secondly, given that coastal communities are often low income and vulnerable to external socio-political shocks, their commitment to coastal and marine resource conservation may be eroded by overwhelming socio-economic pressures. Thirdly the lack of investment in a stable power infrastructure and internet connectivity has (and continues to) disrupt both GIS development, data exchange and access to the national CHM portal in Comoros and partly in Tanzania. In general, therefore, the potential for socio-political risks that might impact the outcomes of EAF/14 are ranked as 'medium' (see Appendix E) and has been rated as 'moderately likely' to achieve socio-economic sustainability.

### 2.2.3 Institutional framework and governance

47. A favorable institutional framework and governance climate is particularly important to the sustainability of EAF/14 outcomes. This is because of two elements: firstly the data centers are usually small units within larger Ministries or fisheries research organizations and are thus vulnerable to internal politics and priorities. Secondly, an essential factor is the ability of the LCA to communicate with (i) upstream data providers – both within the LCA and outside – and (ii) information users, most likely from external institutions. These two elements are examined separately below.

- **Data centers as functioning, sustainable units:** the evidence from the site visits to Mombasa and Moroni, and remote communication with Tanzania, suggest that the data centers continue to be well supported by the host LCAs. Operational funding appears to be adequate, although major hardware replacement still depends upon new projects – however it can be strongly argued that this continued investment in GIS would not have happened without the EAF/14 project. In all cases, the original GIS units established by

---

<sup>4</sup> Information in this socio-political risk analysis is mainly derived from the CIA World Fact Book (<https://www.cia.gov/library/publications/the-world-factbook/>)

EAF/14 are still the designated depository for coastal and marine data. One potential risk mentioned was that of changing institutional structure - for instance in Kenya there is a possibility that KMFRI might change to a Directorate with a possible move from Mombasa to Nairobi – this would have obvious implications in terms of their ability to communicate with coastal stakeholders.

- **Data centers in relation to upstream data providers and downstream information clients:** again, the site visits suggest that the EAF/14 GIS units have developed some linkages with upstream and downstream organizations. However there are a number of serious concerns here:
  - a. Most data provision is *ad hoc*. There is a need for better structured strategy for data provision, including joint data needs assessments (with both data providers and information clients), agreements on primary data providers for key data sets and monitoring programmes, agreements on data collection and recording protocols, etc. See Box 2 below for a case in point.

**Box 2: Data provision from the Kenya Wildlife Service**

The Kenya Wildlife Service (KWS) conducts extensive coastal environmental monitoring, including of sea turtle rookeries and nursery areas, dugongs and other iconic fauna, often supported by aerial surveys and ground-truthing. However much of this useful geo-referenced data remains undigitized. The main issues are a lack of formal data exchange agreement between KWS (and its GIS Unit in Nairobi) and KMFRI and more fundamentally, no protocols or systems for recording spatial data for easy transfer to GIS, although the Survey of Kenya has forwarded a policy paper to the Cabinet (Government) on a National Spatial Data Infrastructure (NSDI). This could then be addressed through simple joint training and coordination.

- b. Allied to the point above, in Kenya at least there is no official agreement on the roles different institutions might play in the management of coastal data and information. As a result, there is scope for a duplication of roles and the development of competing information systems, thus reducing the incentive for data & information sharing and is a poor use of finite resources. Discussions with some LCAs and their partners revealed some questions over the appropriateness of marine research institutes as central depositories for multi-disciplinary coastal information. For instance, there is an argument that a less sector-focused organization might be a more appropriate institution to hold this data e.g. the Coastal Development Agency in Mombasa.
- c. In very few cases is there a formal agreement or ‘Memorandum of Understanding’ (MoU) with either data providers or information clients. Such agreements are required to formalize partnerships, to agree individual responsibilities and provide a framework for data / information exchange protocols. Without these, there is greater uncertainty over the partnership, its requirements and institutional accountability. The main reasons cited is that (i) they are considered to complicate matters and take a long time to develop, (ii) they are often stalled by senior officials who lack the interest or capacity to ‘champion’ such an agreement through what can be a complicated approval process and (iii) information exchange tends to be more efficient if handled through informal contacts that avoid bureaucratic or procurement procedures.

48. A third concern over the institutional sustainability is a minor one, this being the perceived changing structure for spatial data management within UNEP. For instance when conceived, the EAF/14 project was first under OCA/PAC, then progressed to the Water Branch and now is under the direct responsibility of DEWA. Whilst not a major issue, there is the potential for confusion from stakeholders as well as a loss in institutional memory and commitment to the EAF/14 process.

49. In general, therefore, EAF/14 has been rated as ‘**moderately likely**’ in terms of the sustainability of institutional and governance frameworks.

#### 2.2.4 Environmental

50. Although there are some environmental risks to the Eastern Africa region e.g. drought, cyclones and over the longer-term, rising sea levels, these are not considered major risks or threats to the sustainability of project outcomes. Indeed the EAF/14 products constitute a very important tool for improving environmental and disaster management.

51. The environmental benefits of this project are potentially highly positive, as it should provide planners, managers and developers to make their decisions with better information on the spatial distribution of marine and coastal resources and thus reduce the potential for resource or user conflicts. However this depends upon the ability of the project’s ‘descendants’ to expand and update coastal and marine databases.

52. There are serious concerns that in some EAF/14 LCAs this might not be the case. A number of potential users (e.g. the South West Indian Ocean Fisheries Project SWIOFP) raised specific concerns over the lack of recent data on the NCCHM, as well as the patchiness and lack of detail (see Box 3 below).

#### Box 3: SWIOFP's views of the strengths and weaknesses of NCCHM

SWIOFP has used the NCCHM portal but generally finds there is insufficient information to be really valuable. The data sets are too basic, at too broad a scale and in many cases outdated. One example was given – there is no information on coastal fisheries production, even at a basic level, despite this information being collected by all countries for submission to FAO<sup>5</sup>.

SWIOFP will both generate data and require processed information. It recognises the importance other EAF/14 derived national nodes and not wishing to “re-inventing the wheel”, fully intends to work with them and NCCHM. It sees a strong role in DEWA to catalyse these changes and reflect them in the quality of the NCCHM. SWIOFP will also work with other information systems, such as IOC UNESCO, OBIS and IRD biodiversity mapping. However it intends to exchange all data with NCCMH via KMFRI (as the project’s data centre) as well as other national nodes.

53. There are positive signs as well – for instance the Kenya Department of Fisheries in Mombasa intends to computerize their fisheries statistics database (e.g. catches and landings by time and location) and upload this to the Kenya CHM portal via KMFRI.

54. In general, therefore, EAF/14 has been rated as ‘**likely**’ in terms of achieving environmental sustainability.

---

<sup>5</sup> EAF/14 initially requested regional and global bodies such as FAO to share their data (or even metadata), but there was no response. EAF/14 LCA provided a status of what was currently available in the country based on the prescribed list of parameters. Then LCA facilitated field surveys to fill gaps in the list of parameters within the available fund limits. The net result of the EAF/14 resource database was to identify data gaps and so effectively catalyse for research, data provision or even follow-up projects like SWIOFP and ASCLME. (Theuri Mwangi, pers. comm., comments on draft Final Report).

## 2.3 CATALYTIC ROLE AND REPLICATION

55. Whilst the main visible outputs of the EAF/14 project were the coastal and marine resource atlases, the most profound outcomes were the development of functional GIS units with a recognized capacity for storing and processing data. In all cases this GIS capacity did not exist before the project and one of the project's greatest successes has been the use of this newly installed capacity to catalyze coastal and marine data management in the region. This is explored further below.

### 2.3.1 Foundational and enabling activities

56. This element of the evaluation examines the foundational and enabling activities, focusing on policy, regulatory frameworks, and national priority setting and relevant capacity resulting from the project. In general, EAF/14 has established both (i) the physical means for the processing, analysis and display of spatial coastal and marine resource data and (ii) the human capacity to do so. As a result, the emerging GIS units have enabled both government planning and subsequent development projects to harness their capacity and thus expand their quality and usefulness. This can be visualized from the number of subsequent partnerships that have resulted from the EAF/14 initiative (see Table 4 below).

**Table 4: Examples of ongoing initiatives utilising EAF/14 outputs**

Institution	Programme	Data types	Comments
KMFRI	Kenya Coastal Development Project	<i>Fisberies</i> e.g. jurisdictions (EEZ & territorial), stock boundaries, landing sites, catch statistics (via Dept of Fisheries); <i>Biodiversity</i> e.g. sensitive habitats; <i>Terrestrial</i> : watershed boundaries and utilization	Data needs hosted by KMFRI but coordinating data via Min. of Planning in Nairobi
	SWIOFP	High seas and EEZ fisheries in the SW Indian Ocean. Includes jurisdictions, fishing patterns, catches and key biodiversity indicators. Also research cruise and observer data.	Data needs via KMFRI. But will share with other regional databases e.g. DEW and ORBIS.
CDA, Kenya	Regional Master Plan for Coastal Province	Jurisdictional boundaries; terrestrial and marine user maps, zoning	Zoning via Min. of Physical Planning. Will share data with KMFRI
KWS, Kenya	On-going monitoring	MPAs, data on vulnerable species (e.g. sea turtle nesting sites), coral reefs.	Have a lot of data but lack capacity and process to share with KMFRI. Have data centre in Nairobi.
MAPE, Comoros	PPMR	Health and education microprojects.	GIS conducted based on EAF/14 hardware and base maps.
	National Biosafety Framework	Development of a National Biosafety Framework under the Cartagena Convention.	
IMS, Tanzania	GEF MPA	Delimitation of Mafia Island & Mnazi Bay MPAs.	
ASCLME, South Africa		Data needs under review	CHM nodes are being used for metadata management for the ASCLME Project

57. **Kenya:** the EAF/14 base maps and habitat distribution data have enabled the preparation of habitat sensitivity mapping in the form of the KenSea project ([http://www.depha.org/maps/Kenya/previewmaps/Kenya\\_Sensitivity\\_Atlas\(KenSea\)Report,Mar\\_2006.pdf](http://www.depha.org/maps/Kenya/previewmaps/Kenya_Sensitivity_Atlas(KenSea)Report,Mar_2006.pdf)). It is estimated that over three-quarters of the data used for KenSea was directly derived from EAF/14 datasets. Other examples of follow-up work includes a UNEP funded study on groundwater pollution early warning system in Mombasa and assessment and early warning planning e.g. areas vulnerable to ground water pollution.

58. **Comoros:** the development of a capable GIS unit has resulted in a number of new resource planning projects in forestry, marine and coastal sensitivity mapping and coastal community development, with funding from a range of institutions such as UNEP, the European Commission, World Bank and FAO. Pre-project, there was a GIS database established specifically for biosafety protocols. As shown in the table above, a CD-based GIS system was developed for fulfilling the Comoros commitments to the Cartagena Convention on biosafety and the EAF/14 derived GIS unit catalyzed the move to a web-based system, that is now used both by the Government and the University of Comoros. The unit has been called upon during major environmental days such as the World Environment Day to showcase environmental trends in the country using GIS.

59. **Tanzania:** data and maps were provided to the GEF-funded Marine Protected Area project in Tanzania, UNDP Zanzibar Sustainable Project, Tanzania/USA Coastal Management Partnership, Tanzania's National Environment Management Council oil spill sensitivity maps, and environmental policies and legislation at the national level through the provision of key information to decision makers, e.g. delimitation of Mafia Island & Mnazi Bay MPAs.

60. **Madagascar:** despite there being no formal MoU signed with Madagascar, it is understood that the EAF project has stimulated the development of a coastal GIS capacity, which now feeds into their national CHM portal, the Nairobi Convention CHM, and the UNEP-GRID portal.

61. **Seychelles:** Several databases pertaining to the environment are being developed at the moment in Seychelles. One to take note of is the NCCHM web portal metadatabase. As Seychelles is not big and does not generate large amounts of data, it now encompasses other environmental related data and metadata.

### 2.3.2 Demonstration activities

62. Whilst the physical legacy of EAF/14 is limited to the individual GIS units at country level there are two levels of potential for demonstration effects:

- **Increasing in-county GIS capacity through 'training of trainers' and fostering interest and awareness of the capability of GIS systems:** both within KMFRI and MAPE (the two EAF/14-derived institutions visited) there is now a small cadre of GIS specialists and technicians capable of using and developing the system. In both cases most of these staff have been trained since project completion, either with formal tuition (mainly through additional projects) or more frequently through 'on the job' training and demonstration. This is definitely an indicator of the catalytic effect of the project, although numbers are still small and thus vulnerable to staff loss or transfer.
- **Catalyzing the implementation of similar systems in neighboring countries within sub-Saharan Africa and elsewhere:** the EAF/14 project has had a strong demonstration effect at continental level. It is understood that the UNEP/GEF Volta River Basin Project for "Addressing Transboundary Concerns in the Volta River Basin and its Downstream Coastal Area" now starting a similar portal (6 countries) based on EAF based CHM and that Tanzania is also examining a similar portal system at Provincial level.

#### Box 4: Kilifi District Development Programme El Niño Recovery Programme

In Kenya, the EAF/14 LCA (KMFRI) successfully demonstrated how GIS can be applied to different needs. As a result, the Kilifi District Development Programme El Niño Recovery Programme adopted a GIS approach with funding from GTZ over 1997-1998. This project mapped infrastructure, road, schools, hospitals, bridges, with attributes to assist with rehabilitation. KMFRI trained district heads on basic GIS, including GPS, data entry, simple mapping for reporting.

### 2.3.3 Investment

63. As illustrated above, the EAF/14 derived GIS capacity has resulted in further donor investment in national information systems, both in terms of increasing data availability as well as funding additional hardware and staff training. It is considered that without this basic capacity, these projects would have developed project-based information systems with limited sustainability. As suggested by SWIOFP, donors are seeking to base their information needs on established systems that have already demonstrated their capability and long-term viability.

### 2.3.4 Project champions

64. There is no doubt that the project succeeded in Kenya and Comoros due to the diligence and commitment of the national leading experts. This consideration is supported by the failure of the Seychelles to produce an atlas, which was largely down to the absence of such a champion (the main person involved was unfortunately left for greener pastures and the GIS database manager was unavailable for much of the project lifetime as he was training overseas). The good news is that the same GIS database manager is currently establishing a national GIS unit in Seychelles. This highlights the vulnerability of projects which focus on a few individuals. Even at this stage, the continuing success of the EAF/14 derived data depositories is still highly dependent upon these individuals.

65. EAF/14 has been rated as **'highly satisfactory'** in terms of its catalytic role & replication.

## 2.4 STAKEHOLDER PARTICIPATION / PUBLIC AWARENESS

66. National workshops and seminars were organized by each country for the governmental, NGO and the public in order to first identify and then sensitize coastal managers, planners and stakeholders on issues of management and development of the coastal environment and its resources. Following the reduction in voluntary funding, the project could not support all anticipated national workshops of local stakeholders in the countries. However, based on the country-visits made by the evaluator, a reasonable outreach was achieved by the programme.

67. In terms of direct institutional stakeholders, the project developed a number of partnerships that continue today. This process has also been assisted by the recent launch of the NCCHM, which has rekindled partnerships. The fact that, in Kenya for instance, a large number of interested parties attended the launch at their own cost suggests that there is considerable interest in the outcomes of EAF/14 and the subsequent NCCHM.

68. It is understood that EAF/14 promoted awareness of project activities in particular and the utility of GIS in coastal resource management in general. According to the various project progress reports, these were mostly in the form of poster displays and presentations to institutional stakeholders, rather than the general public. Given the highly technical nature of the project deliverables, this was a valid approach and has no doubt contributed to the strong support that the LCAs received from partner institutions during and since the project.

69. Wider public awareness of the project activities was not a main EAF/14 focus. However the atlases have proved to be a valuable education and awareness building tools that are still in demand today. These have proved particularly popular in secondary schools and universities where they often form the basis for courses on environmental management. Perhaps their greatest strength is that much of the material contained within these atlases is basic and enduring, thus ensuring their relevance after nearly a decade since they were published. Equally those countries where no such atlas was produced have lost a valuable resource, although both the Seychelles and Mauritius have since produced similar documents (e.g. State of the Environment).

70. In general, therefore, EAF/14 has been rated as **'satisfactory'** in terms of its stakeholder participation and public awareness.

## 2.5 COUNTRY OWNERSHIP / DRIVENNESS

71. Discussions at KMFRI in Mombasa and MAPE in Comoros suggests a high degree of country ownership has resulted from the project. This was not always so – under Phase 1 much of the training was conducted in Nairobi by ESRI and UNEP. Whilst an essential step when the GIS capacity (both in terms of equipment as well as human skills) was low, this left project staff disenfranchised. However this was addressed under Phases 2 & 3 as training was increasingly conducted *in situ* in the Lead Collaborating Agency facilities. This allowed increasing confidence in developing local data sets and the expansion of the databases into valuable resource centers in their own right. With the subsequent development of the Nairobi Convention CHM, there is now considerable pride in the open access to nationally developed and owned databases.

### 2.5.1 Level of country ownership

72. The lessons learned from Phase 1 and the methodology adopted under Phases 2 & 3 have resulted in high levels of country ownership, especially in Kenya and Tanzania where most of the outputs were produced in-house within the LCAs, albeit with some UNEP assistance. An important reason for this is the use of a Junior Professional Officer (JPO) over 1997– 2001 who spent a considerable amount of his time mentoring the LCA staff in their own facilities, as well as from afar. This has allowed the LCAs to develop their own datasets and hardware set-ups, and the JPO also provide a trouble shooting service to address the inevitable minor problems (e.g. hardware issues, GIS programming and data inclusion) that occurred.

73. In some countries the level of country ownership is less, mainly due to in-house capacity restraints. In the case of both Comoros and the Seychelles, both lacked the capacity to produce the coastal and marine resource atlases and this was outsourced to consultants (although this also failed to produce the atlas in the Seychelles). In the Comoros this action did not seem to have a long-term impact, as the atlas is still a source of pride and continued to be utilized to date.

74. Based on the site visits to Kenya and the Comores, there was an evident ability to utilize project outputs to promote the conservation and management of marine and coastal resources. In both cases there has been considerable subsequent additionality to both the datasets and the in-country capacity, and the EAF/14 outputs have been widely used, especially for MPA planning (esp. in Tanzania), the development of sensitivity maps for oil spill contingency plans (Kenya and the Comoros). In the Comoros, the EAF/14 datasets have been used widely across different sectors, with a particular focus on education, health and forestry. In addition their utility has been recognized by the private sector (see Box 1: Cable landfall planning in the Mohéli, Comoros).

### 2.5.2 Level of country commitment

75. At this point, some eight years after the cessation of project activities, it is difficult to gauge the level of country commitment to the project. On the positive side, each country willingly signed up to their sub-projects and assigned both staff and physical facilities to the project. From discussions in Mombasa and Moroni this support appeared to remain strong throughout the project, no doubt benefiting from its high profile and the awareness activities undertaken.

76. One critical constraint was the availability of suitable staff for capacity-building. A number of staff first provided for training in Comoros did not have the baseline capacity to undertake this highly technical work and there was a high fall-out rate. This is, to a certain extent, understandable as this was the first time these government departments had been exposed to GIS.

77. Post-project there seems to be continuing support to the GIS units that have evolved from EAF/14. In all cases they are still the designated depository for coastal and marine resource data and continue to be supported by incoming projects (see Table 4: Examples of ongoing initiatives utilising EAF/14 outputs on page 18). When the Contracting Parties requested for an information sharing system to meet their needs in the implementation of the Nairobi Convention (Nairobi Convention Decision 4/8, July2004), most of the EAF/14 LCAs were nominated by their respective Governments to spearhead the process. They are now the national nodes for the NCCHM and thus responsible for contributing to regional information needs at a national level. There are, however, some concerns over some elements of this commitment e.g.

- A lack of national, and to a lesser extent regional, strategy for data provision and information sourcing.
- Whilst it is not the role of GIS units to collect data (nor burden the cost of data collection), the commitment of a number of countries to data sourcing and updating critical time-sensitive datasets appears to be low. This inevitably impacts on the value of the data depository and the demand for access to the information it can generate.
- A continuing loss of trained staff to other, non-GIS activities. For instance in Kenya, of the four scientists originally trained by EAF/14, three have left. However this is not a complete loss as all still work in Kenya (one as a Deputy Director in the KMFRI administration, one works for UNEP/GEF WIOLaB in Nairobi and the other works on pollution studies at Mombasa Polytechnic University College).

78. In general, given the continued commitment to the use of GIS for coastal resource management and the sustained support to the EAF/14-derived data depositories, the project has been rated as ‘**satisfactory**’ in terms of country ownership / driven-ness.

## **2.6 ACHIEVEMENT OF OUTPUTS AND ACTIVITIES**

### **2.6.1 Delivered outputs**

79. The main outputs of Phases 2 & 3 were designed to be:

80. **Main output:** Delivery at the regional, national and local level of a decision-making tool for integrated coastal area management.

81. **Specific outputs:** as follows (abbreviated from the project documents)

- a. establishment of national In-Country Working Groups
- b. country reports on the status of available data and information on the coastal areas
- c. at least two resource persons and two technicians per LCA trained in the operation and population of the coastal GIS database;
- d. at least one resource person from each country trained in the interpretation of satellite data and the development of satellite image maps;
- e. a project progress newsletter distributed three times a year
- f. a coastal resource atlas with integrated maps for free distribution;
- g. a GIS database of the coastal and marine environment fully operational (hardware and software included), installed at the LCAs.

82. A comparative analysis of the expected against the actual outputs of Phase 2 (see table overleaf) was completed by the EAF/14 project.

**Table 5: Actual outputs against expected outputs (Phase 2)**

Expected Outputs	Actual outputs to date against overall project work plan.
Establishment of national In-Country Working groups in Mozambique, Comoros, Seychelles and Tanzania, each composed of nine members and the In-Country Coordinator, to facilitate data collation at the country level;	Lead Collaborating Agencies were identified in 1995 and working groups established in 1996 <u>Tanzania</u> (University of Dar-es-Salaam, Institute of Marine Sciences, Zanzibar) <u>Comoros</u> (Ministère du Développement Rural, de la Pêche et de l'Environnement, Direction Générale de l'Environnement, Moroni) <u>Mozambique</u> (Ministério para a Coordenação da Accção Ambiental (MICOA), Coastal Zone Management Unit, Maputo) <u>Seychelles</u> ( Division of Environment, Ministry of Environment and Transport, Victoria, Mahe)
4 country reports (Mozambique, Comoros, Seychelles and Tanzania ) on the status of available data and information on the coastal zone;	Four country reports (Mozambique, Comoros, Seychelles and Tanzania ) on the status of available data and information on the coastal zone (including cartographic material, satellite data, information related to the parameters listed in Annex I of the project document) was prepared by each country in 1996.
At least one resource person per Lead Collaborating Agency trained in the operation of the coastal GIS database,	1-3 resource persons in each country were trained in their respective countries and in Nairobi in the operation of the coastal GIS database by an ESRI GIS consultant hired by the project in 1996 and regularly by the project's GIS analyst, Mr. Lieven Bydekerke from 1997-2000.
At least one technician per LCA trained in Digitizing and data entering techniques into the GIS database;	At least 3 technicians per Lead Collaborating Agency were trained in digitizing and data entering techniques into the GIS database by the project's GIS analyst frequently between 1997 - 1999.
At least one resource person from each country trained in the interpretation of satellite data and the development of satellite image maps;	The project facilitated the organization of a training workshop in satellite image interpretation in 1996 in Nairobi by Remote Sensing Information Ltd. At least 2 resource person participated. Participants were drawn from Tanzania, Comoros, Seychelles, Kenya, Mozambique and Madagascar. FAO- Africover Eastern Africa was identified and contracted in November 1998 to carry out the satellite image interpretation for Tanzania and trained one person. Funds were insufficient to do the same for Comoros and Mozambique.
Project newsletter 3 times a year, with information on progress on the implementation of project activities & other relevant information in the field of resource maps and related GIS in CZM.	A project newsletter distributed three times a year, giving information on progress achieved in the implementation of project activities and other relevant information in the field of resource maps and related GIS in coastal zone management was distributed by the project regularly.

Source: From UNEP, 2003

83. The EAF/14 project was susceptible to institutional, political, financial and economic risks (see Appendix E) which often resulted in temporary delays and sometimes disruptions. In such cases the project achieved all intermediary objectives (e.g. capacity-building) or direct deliverables especially in database development, but in some cases failed to produce key final deliverables such as atlases and comprehensive map suites. However efforts were made to

restructure or extend the closing date of the project and its related country-based sub-projects on the assumption that this would result in the project reaching its objectives.

84. **Programmatic problems:** a lack of a full time GIS expert working with the database managers at the LCAs delayed anticipated progress in establishing national GIS databases in 1996. A GIS expert was only available in June 1997 through a secondment by the Flemish Government. The project document had initially relied on in-house assistance which was not financially factored in the project.

85. **Institutional problems:** given that the project involved a sizeable number of countries and thus a higher level of co-ordination among various participating countries, significant delays were experienced. At this terminal stage these are not viewed as a major problem as managed to deliver most of its anticipated outputs. The main institutional issues were as follows, by country (UNEP, 2003):

86. Seychelles

- The Seychelles also indicated that the proposed time frame for completion of project activities could not be guaranteed because the Ministry of Environment, which is the lead collaborating agency, was understaffed with many responsibilities of coordinating and implementing various ongoing environmental projects in the country.
- In May 1997, the former in-country EAF/14 GIS database manager had left the country early in the year for further training in GIS development and management. Later 1998/1999 the national coordinator of the project left and the project relied on the assistance of the manager of the Nairobi Convention Regional Coordinating Unit in Seychelles to carry on with the activities of the project on a voluntary basis. This was really challenging to the project.
- In October 1998 the EAF/14 project lead collaborating agency in Seychelles contract a consultant to write up the Coastal resources atlas textbook of Seychelles. While the first draft was reviewed June 1999 the project never received the other drafts as agreed in the consultancy agreement.
- After the database was sent to Nairobi over 2000 / 2001 for completion, it was never received back in the Seychelles.

87. Comoros

- In Comoros, the designated EAF/14 in-country database manager 'disappeared' through political upheavals. Until November 1997, no digitizing or database development had been initiated.
- Civil strife, lack of personnel remuneration and significant delays in the release of funds from the Comoros Central Bank was another major delay. The project had to hire three local consultants (ideally working group members who had lost their employment) to develop the database and text write-up instead of the agreed honoraria in the initial sub-project document.

88. Mozambique

- Lack of human and financial capacity led to delays in database development as the GIS manager available could not cope with the workload. An intern from the University assisted the GIS manager in 1998.
- The floods that inundated the towns of Chokwe, Xai-Xai and Chibuto in Mozambique in the year 2000 hampered progress on the implementation of the EAF/14 project. The in-country project Coordinator, as senior government officer and coastal zone advisor to the Ministry of Coordination of Environment Affairs (MICOA), was involved in a number of operations in the course of the year aimed at the restoration of the country's

devastated regions. The Project expressed concerns towards further delays in textbook write-up.

- In the year 2001 the in-country project Coordinator Ms. Helena Motta took up a new post with the WWF-Mozambique. No replacement was made and the textbook write-up stalled.

89. Tanzania

- The project lost through death two key persons: a member of the in-country working group in 2000 and a professional photographer in 1999. A considerable delay was experienced before replacements could be identified.

### 2.6.2 Soundness and effectiveness of the methodologies used

90. The pilot project (Phase 1) in Kenya proved to be a major learning experience and ensured that the methodology adopted for Phases 2 & 3 was much more effective. The major changes included (UNEP, 1996; Maesschalck *et al*, 1996; and Francis and Ngoile, 2000):

- A narrower and focused set of specifications for data collection;
- A refocusing of GIS training from formal tuition (at ESRI in Nairobi) to ‘on the job’ training in the LCAs through a mentoring approach. The appointment of a JPO over 1997 – 2001 was a key part of this;
- Integration of the mapping outputs with the text book to form a single ‘atlas’; and
- Better coordination with the donor agency, including development of an MoU and approval processes for budget modification. However the MoU was never signed.

### 2.6.3 Credibility of Project outputs

91. The three atlases produced by the project have been widely accepted as unique spatial baselines assessments of marine and coastal resources in Kenya, Comoros and Tanzania. Whilst they are not necessarily sufficient to influence policy, since they were designed to provide an assessment of the coastal and marine resources, they demonstrate the power of GIS to illustrate the diversity and vulnerability of the coast and its resources. They are generally well written and produced, which in themselves provides a degree of inbuilt credibility. As such they have a valuable role in education and awareness-raising, both at national and regional levels.

92. The other outputs worth considering in this context are the datasets themselves. It is beyond the scope of this evaluation to examine these in detail, so no real comments can be made on their robustness or quality. Discussions with various stakeholders did raise concerns over the patchiness and low level of detail of information now available through the NCCHM, and this has definitely damaged the image of the system as a comprehensive information provider for the region. However, in the opinion of this evaluator, the continued use of the system as the main portal for data collation demonstrates the faith in the overall concept of national data nodes accessible directly online or via a regional portal. It is also recognized that good quality data is still being processed and that the NCCHM is not yet completed. However there is a strong need to review the needs of information clients and to develop strategies for prioritizing data collection at national and regional levels to ensure the EAF/14 derived systems remain relevant and credible.

93. Whilst Kenya, Comoros and Tanzania achieved all their required outputs, other countries were less successful. There were also considerable time delays (see Section 2.8) and in some cases a reliance on external consultants to complete unfinished tasks (e.g. the Comoros atlas). In general, key project outcomes (e.g. datasets prepared and a GIS capacity developed) were universally achieved so the project has been rated as ‘**moderately satisfactory**’ in terms of its achievement of outputs and activities.

## 2.7 PREPARATION AND READINESS

94. The 'pilot project' Phase 1 in Kenya was an important learning experience for the roll-out of the project to the rest of the region over Phases 2 and 3. The major change in approach, where by training was moved from Nairobi out to *in situ* training in the LCAs, made a major contribution to the sense of country ownership. The inclusion of a Junior Professional Officer to provide in country training and support was major element in this success.

95. The project objectives, expected outputs and components are clearly stated in the various programme documents and sub-documents, although lacking in detail in places. For instance more information on the expected use to the databases and the potential information clientele would have been useful to focus the long-term objectives of the development work, although it is understood these were well covered in subsequent workshops organized by the LCAs). Another example is a lack of clarity of the function of the In-Country Working Group – this should have been a key mechanisms to develop an established partnership for data provision, information management and its subsequent dissemination. Whilst informal linkages have been developed, an almost universal weakness of the project outcomes has been the lack of a coastal information strategy and strategic partnership.

96. The major weakness of the project design was the strange phasing and the very short timeframe allowed. The original project concept (UNEP, 1992) envisaged a realistic five year timeframe from 1993 to 1997, whilst the final Phase 2 and Phase 3 documents were both set for twelve months which, based on the Phase 1 experience, was totally inadequate.

97. A second weakness of project preparedness was the limited level of baseline capacity assessment. At the start of the project in each country, the project requested the specific national government environment Focal Point (to UNEP) to nominate an institution that was capable of implementing the project based on a given set of requirements (personnel, hardware/software, financial endowment, previous work in coastal and marine). Each country was to list expected challenges from the implementation of the project. Except Seychelles (which listed challenge of personnel capacity) all the others stated they had no problem. This was the basis for entering into an MoU between UNEP and the LCA. This worked well at an institutional level, but there were weaknesses at an individual level. For instance, of the 7-10 persons trained by the project in Comoros, apart from one individual, none have adopted these skills as their language and basic computer skills were too weak. Another baseline capacity issue was related to power and internet connection infrastructure. A case in point is that an expensive and powerful database server was supplied to each partner for the NCCHM, yet it remains unused in the Comoros because the mains supply voltage is too low and unstable.

98. Despite the weaknesses in the timeframe and initial capacity assessment, Phases 2 & 3 of this project have been ranked as '**moderately satisfactory**' in terms of preparedness and readiness. The reason for this positive outcome is mainly due to the experience of Phase 1 implementation and the lessons both learned and adopted for the subsequent phases.

## 2.8 IMPLEMENTATION APPROACH

### 2.8.1 Adherence to project design

99. Phasing of the project: all five proposed phases of the project were designed in 1992. Whilst Phase 1 of the project (i.e. the piloting of the project approach in Kenya) was standalone, the two next phases (i.e. those under evaluation) were not time-bound phases as such, but appear to be an artifact of the Belgian funding mechanisms rather than discreet, phased projects. An examination of the project proposals for Phases 2 & 3 show they are almost identical, except for (i) an expansion of the activities to more countries; (ii) a given phase had a set of interlinked activities to be carried out so that the next phase was actually for completion of these activities and introduction of the remaining other activities of the same project e.g. an inclusion of map preparation and distribution, and operationalization of the GIS systems in the lead collaborating agencies. Given the overlap between these phases, and the fact that they ran almost concurrently over the same period suggests that a single project document would have been more appropriate.

100. Timing of the projects: the most obvious change in the project design was the considerable lengthening of the project duration. Phase 2 was supposed to be for 12 months (over 1995) but actually lasted eight years; likewise Phase 3 was also supposed to be for 12 months (over 1996) but also lasted until 2002, a total period of seven years (see Table 1, page 2 for details). The design of Phase 2 originally anticipated a two year project duration, which was based upon the experience of the pilot phase (1) in Kenya. However “following the restructuring of UNEP’s Fund Program of activities, including the change of budget lines at the end of the biennium 1994 - 1995, all UNEP projects were required to be completed and closed at the end of 1995. This was to allow the start of a new project format for project activities after 1995. Hence, the original idea of covering the next four years of the project (1995 - 1999) by one UNEP project document had to be dropped, and to be replaced by a one year project, ending in December 1995, allowing the 1996, 1997 and 1998 phases to be in line with a new UNEP project format” (Phase 2 Project Proposal, 1994).

101. Considering the challenges poised on projects operated jointly with collaborating agencies, especially in developing countries and as exemplified by this project, rigidity in time frames for project execution needed to be eased. The EAF/14 project relied on busy government personnel engaged in other activities and who did not always find enough time to manage the project. This was an added cause for the considerable project time overrun. It may be noted that delays resulted in improved coordination and participation in Tanzania, which, in the end, contributed to the successful implementation of the project. Through the project, a ‘white paper’ on Menai Bay and Misali Bay marine protected areas was submitted to Tanzania Parliament for recognition of these two areas. On the other hand, however, delays dampened the project momentum and tended to damage the otherwise excellent project image in Mozambique and Seychelles. Without a formidable financial support as communicated by the donor, working group members had to seek after better offers.

102. The initially proposed timing of these phases appears to be completely unrealistic, given that the project was being expanded to a further four countries over 1995 (Comoros, Mozambique, Seychelles and Tanzania) and four more (Madagascar, Mauritius, Reunion and Somalia) in 1996. This was further compounded in that UNEP did not have local representatives in any of these countries, thus necessitating a remote, mentoring approach.

103. Changes in Phase 2 implementation: Phase 2 went through seven revisions. Essentially these were:

- (a) Include Comoros and Kenya
- (b) Delete all activities in Reunion, Mauritius, and Madagascar following suspension of voluntary contribution to the project by the Belgian Government
- (c) Replace Letters of Agreement with four separate sub-projects (Comoros, Tanzania, Seychelles and Mozambique)
- (d) Extend project through to 1997 (as recommended by Maesschalck et al, 1996), then to 31 December 2000 to allow completion of sub-project activities, and finally to 31 December 2002 to complete activities in the Comoros and Tanzania sub-projects.
- (e) re-phasing and re-allocation of fund balances.

### 2.8.2 Responsiveness to evaluation

104. As has been documented above, the project responded well to the evaluation of Phase 1 (UNEP, 1999). Since then, there has been no further evaluation until 2003 when Phase 2 & 3 project activities were effectively ceased. Otherwise the project management has been effectively steered by the six-monthly progress reports, whose outputs appear to have been well adopted by recipients.

### 2.8.3 Issues that have affected adaptability

105. **Regional management level:** the main issue affecting the project was the decision of the Belgian Administration for Development Cooperation (BADC) in Brussels to reduce the funding of EAF/14 in 1997. This inevitably affected a number of activities at country levels, as well as jeopardizing the synergies developed by the EAF/14 project with other regional initiatives (e.g. the Indian Ocean Commission, RECOSCIX-WIO, and the Intergovernmental Oceanographic Commission). It also triggered the resignation of the EAF/14 Project Coordinator, Dr. Dirk Van Speybroeck in October 1997. As a result, the UNEP Office of Fund Management revised the three EAF/14 project documents to reflect their duration and budgetary allocations from the available funds. In addition this was successfully mitigated through the engagement of a Junior Professional Officer (JPO) from 1997 – 2001, which was also one of the main recommendations of the tripartite review of Phase 1 & 2 in 1996 (Maesschalck *et al*, 1996).

106. The project document did not anticipate the establishment of a project board and a project management team, to guide and assist the project coordinator and his team with strategic planning and implementation decisions. Delays in the production of project deliverables could have been anticipated by policy decisions issued at an early stage in project implementation by a senior management board. The gap left following resignation of the project coordinator could have been filled. Consequently the project experienced over-extension of the technical backup capacity, when a key staff, in particular the project coordinator, left the implementing agency (UNEP) in 1997. The substantive office in UNEP should have put in place a team to continue operations through the institutionalization of the project rather than rely on individuals.

107. **Country-specific issues:** various issues evolved over both phases in the focal countries, which are briefly analyzed below:

- (a) Comoros: civil strife impacted early implementation of the project. This instability meant that Government financial support was weak and there were significant delays in the release of funds from the Comoros Central Bank. Three local consultants were hired and were significant factor in ensuring that the Comoros atlas was produced. As a Francophone country, the Comoros suffered as much of the project planning, GIS software and training was conducted in English.
- (b) Kenya: Kenya benefited from the Phase 1 pilot study, as well as much of the early training being in Nairobi. Otherwise no particular implementation issues were reported to the evaluator over Phases 2 and 3.
- (c) Mozambique: a lack of human and financial capacity led to delays in database development as the GIS manager available could not cope with the workload, so an intern from the University assisted the GIS manager in 1998. Major floods in 2000 hampered progress on the implementation of the EAF/14 project due to the additional demand on the in-country Project Coordinator as a senior government officer and coastal zone advisor to the Ministry of Environment. In 2001 she left the Government and no replacement was made so the textbook write-up was stalled (UNEP, 2003).
- (d) Seychelles: the main recipient of GIS training went to Canada in 1996, returning in 2001 and thus was missed through the main part of the project (the GIS Unit was effectively shut over 1997 – 2001). As a result, despite bringing in a consultant the Seychelles atlas was never completed.
- (e) Tanzania: the project lost two key persons: a member of the in-country working group in 2000 and a professional photographer in 1999. A considerable delay was experienced before replacements could be identified.

108. In general the implementation approach over Phases 2 and 3 of the project was a marked improvement from Phase 1, with greater levels of country engagement and in-country mentoring and training. There were still, however, a number of implementation issues that affected the outputs from a number of national participants that might have been avoided through a thorough risk analysis. In general Phases 2 and 3 have been ranked as **‘moderately satisfactory’** in terms of its implementation approach.

## 2.9 FINANCIAL PLANNING

### 2.9.1 Overview

109. This terminal evaluation has not been able to make a detailed assessment of the quality and effectiveness of financial planning and control over the project's lifetime. This is due to the lack of available records at national level – as the project activities effectively ceased in 2004, most detailed financial records have been archived and were not made available to the evaluator

110. According to the Phase 2 self-evaluation (UNEP, 2003), this Phase spent US\$419,224 from the Belgian-funded 'Eastern African Trust Fund' and a further US\$230,002 from the UNEP Environment Fund. This evaluation also reports that the approved original financial commitment of the EAF/14 project [Phase 2] was insufficient to procure satellite images of the eastern Africa coastal region and support capacity building of the participating LCAs through provision of equipment (computers & plotters) but this was enabled by the Environment Fund allocation. Satellite images were procured under Phase 2, while activities related to production, validation of satellite image maps and training were covered under Phase 3.

111. One issue was an apparent lack of clarity over the availability of funds remaining in the 'Eastern African Trust Fund'. It was not until end of 2004 that it was realized that there was US\$ 167,335 still available in the fund, which was subsequently utilized for development of the NCCHM.

112. This evaluation has not explored the details of financial control at individual country level, but it is understood that whilst fund disbursement was well monitored (with the exception of the ability to estimate unspent funds in the Belgian Trust Fund noted above), the accountability of in country expenditure was weak. For instance, it is understood that the Seychelles has never actually submitted a final expenditure report and UNEP is still following up on the case. The FMO is still following up with the outstanding expenditures with the Seychelles.

### 2.9.2 Impacts of the reduction in Belgian funding

113. In August 1997, the donor agency of the EAF/14 project, the Belgian Administration for Development Cooperation (BADC) informed UNEP that contribution amounting to 15 million Belgian Francs (15,000,000 BEF or about US\$ 450,000 equivalent) could not be made for the EAF/14 project activities scheduled for 1998. BADC requested UNEP to adjust the EAF/14 work plan and budget and to explore possibilities of reducing or delaying some activities and to review the collaboration agreements negotiated with some countries. Because of the reduced funding (UNEP, 2003):

- a. Collaboration agreements, budgeted for up to US\$ 160,000, that were negotiated with Madagascar and Mauritius (and planned for Reunion) for the implementation of the EAF/14 project were suspended;
- b. Suspension of the production, printing and distribution of national coastal resource maps and accompanying textbook budgeted at US\$ 48,000 for Mozambique and Seychelles. Unfortunately, these countries had already made draft resource maps and the textbook chapters had been written.
- c. Suspension of production and distribution of the Eastern Africa Atlas of Coastal Resources (c. 50,000 US\$), an amalgamation of the national coastal resource maps meant to be a reference Atlas for coastal management in the Eastern Africa Region under Phases 4 and 5.
- d. Suspension of satellite image interpretation exercise for Mozambique, Comoros and Seychelles estimated at US\$35,000 despite having been procured through UNEP funds.

- e. Suspension of some of the major negotiated synergies between the EAF/14 project and other sub-regional organizations in the field of training, data and information exchange estimated at US\$~32,000.
- f. Suspension of a 2-3 years financial sustainability support of the established GIS Units in the collaborating countries estimated at US\$30,000.
- g. Resignation of the EAF/14 Project Coordinator, Dr. Dirk Van Speybroeck, effective October 1997 primarily to salvage funds, amounting to US\$95,000 in 1998 in favour of procurement of software, computers and personnel costs of the GIS analyst and project assistant.

114. The donor agency, BADC, requested to have a draft Memorandum of Understanding (MoU) between UNEP and BADC revised to reflect the reduced funding amounting to 15 million BEF (€450,000 US\$) before it could be signed by the Belgian Government. The MoU was to pave way for the establishment of a new trust fund for the EAF/14 project in 1997 and beyond and interests accrued used for the implementation of the project. By December 1997, the MoU had not been signed by the Belgian Government, leading to a loss of an estimated US\$ 40,000 as interest in 1997 alone. The MoU was never signed.

115. A breakdown of the known expenditure is provided in the table overleaf. This has been populated using a variety of sources, including the programme (and sub-programme) documents and the Phase 2 self-evaluation (UNEP, 2003) and has been reviewed by the FMO.

116. It should also be mentioned that no country level 'final statement of accounts' or 'terminal evaluations' (as required in the MoUs with UNEP) were produced. This has further eroded the financial accountability of the project. Nevertheless, cash advances made to countries were based on submission of progress reports and expenditure statements. On its part, UNEP made cash advances that were less than the amount requested, but sufficient for the stated activities. This ensured that the countries were constantly in touch with the project. In this way, UNEP monitored the implementation of the EAF/14 project activities and attainment of outputs. It is important to note that at country level, only US\$250 was allocated to interim progress reporting and no funds were allocated to the terminal report. With no fund balances to claim from UNEP, the LCAs may have lacked the incentive to submit their terminal reports. On the other hand, when Tanzania delayed in submitting its final report in 2001/2002, an allocation of US\$ 2,000 covering the cost of atlas distribution was withheld by the project despite the funds being committed in 2004-2005.

117. In general, therefore, EAF/14 has been rated as '**moderately satisfactory**' in terms of its financial planning.

Table 6: Financial Expenditure Table

Financing (Type/Source)	UNEP own financing (mill US\$)		Member State (mill US\$)		Other* (mill US\$)		Total (mill US\$)		Total Disbursement (mill US\$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
- Grants	281,932	255,967			727,719	727,719	1,009,651	983,686	1,009,651	983,686
EA/0401-95-03	255,967	230,002	-	-	419,224	419,224	675,191	649,226	675,191	649,226
EA/1100-96-20	25,965	25,965	-	-	308,495	308,495	334,460	334,460	334,460	334,460
- Credits										
- In-kind support										
Comoros										
Kenya										
Madagascar										
Mauritius										
Mozambique										
Reunion										
Seychelles										
Somalia										
Tanzania										
- Other (*)										
<b>Totals</b>										

\* Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies (e.g. Belgian Government), NGOs, the private sector and beneficiaries.

## 2.10 ASSESSMENT OF THE MONITORING AND EVALUATION SYSTEMS

118. At the time when this project was planned (1992) there was no requirement for inclusion of a logical framework approach in UNEP projects, nor the establishment of objectively verifiable indicators<sup>6</sup>. As a result the Project Proposal included needs, activities, results and outputs but no performance or process indicators. This said, the main project milestones (e.g. establishment of Working Groups, production of atlases) have provided reasonable performance indicators from which to determine the achievement of the main outputs from the project.

119. Project monitoring was conducted through half-yearly<sup>7</sup> progress reports produced by UNEP in Nairobi. These included a running assessment of the status of activities (inc. the level of activity accomplishment in percentage terms), as well as a problem / resolution analysis. These reports were produced by the UNEP Project Coordinator with information from the LCAs based on progress reports submitted. It is understood that the LCAs themselves did not conduct any form of technical M&E at national level (since it was not required in the sub-projects, although they were supposed to report on financial expenditure), which has weakened the overall monitoring of project activities and the capacity-building effect that this might have had. The LCAs were required to submit (i) *monthly interim progress reports*<sup>8</sup> to UNEP (detailing the activities undertaken, the results achieved, and the difficulties encountered) and (ii) a *terminal report* detailing the activities undertaken in the sub-project, lessons learned and any recommendations to improve the efficiency of similar activities in the future.

120. No such terminal reports were produced at country level. The reasons given to the evaluator include:

- Seychelles did not complete the work and the UNON Fund Office is still following on the case on unreported cash advance balance of US\$ 15,000. Our efforts to reach out to the Nairobi Convention Regional Coordinating Unit in Seychelles did not yield much. The case is still pending.
- In Mozambique, the EAF/14 national coordinator left for WWF. Our efforts to seek for replacement from the Ministry for Coordination of Environmental Affairs (MICOA) did not yield [a result].
- In Tanzania, the terminal report was not provided because UNEP (Fund Office) did not transfer the final balance of US\$ 2,000 to the Institute of Marine Sciences required for the distribution of the Tanzania Atlas, although these funds were committed.
- In Comoros, the EAF/14 project coordinator left the Ministry to join the EU funded Indian Ocean Commission. The current Chef de Département temporarily held the position, but as a consultant.

121. The last status report seen by the evaluator was a brief two page matrix produced by DEWA on 9 December 2002. No progress reports after 2002, even though the project was technically still 'open', although activities were minimal. Unlike Phase 2 (UNEP, 2003), there was no final self-evaluation of Phase 3.

122. In general, the M&E planning in the original Project Proposal and the sub-project proposals at country level was weak. There was no detailed prescription for the monthly<sup>6</sup> interim reports at national level, nor for the Coordinator's six-monthly reports and the country terminal reports. As discussed above, there was no indicator framework, and whilst the physical outputs acted as proxy indicators, there was little requirement to monitor the evolution of GIS capacity within the LCAs,

---

<sup>6</sup> This became a requirement for UNEP projects in about 2004

<sup>7</sup> The 12 month period July 2000 to June 2001 was covered in a single report

<sup>8</sup> Amended to quarterly reports in the MoUs

nor the development of a wider data provision and demand partnership with the Working Groups. In addition there was no analysis of risks to project activities or outcomes (only assumptions) which might have significantly improved the speed and thoroughness of project implementation. This is particularly so for those countries that struggled for various reasons (e.g. civil strife in the Comoros and capacity issues in the Seychelles).

123. The implementation of project M&E was also weakened by the absence of any terminal reporting from any of the LCAs. This is a particular issue and is regretted at national level as it is felt a major opportunity lost to learn lessons from the project.

124. In general, the M&E systems for this project (Phases 2 & 3) were ranked as **unsatisfactory** because such a requirement was not factored in the project document and in the sub-projects negotiated with the countries. This is because (i) the M&E plan was insufficiently detailed and lacked key elements such as indicators and a risk assessment; (ii) whilst satisfactory at UN coordination level, there was a lack of M&E at national level, particularly in terms of any country-wise terminal evaluation; and (iii) at country level, only US\$250 was allocated to interim progress reporting and no funds were allocated to the terminal report.

## **2.11 UNEP SUPERVISION AND BACKSTOPPING**

125. With a regional project such as this, a strong central coordination is essential. This is reinforced by a common work programme, shared training resources and common outputs. This 'programme' level supervision was provided by the UNEP Task Manager assigned to the project, although the day-to-day supervision was provided by the EAF/14 Project Coordinator (Dr. Dirk Van Speybroeck) up until his resignation in 1997 and was thereafter subsumed by UNEP.

126. In general the level of backstopping from UNEP was considered to be very good and contributed to the success of the project despite some difficult challenges. In the visits to Mombasa and Moroni to speak to the LCAs there, no adverse issues were raised regarding UNEP support when asked.

127. With the development of the Nairobi Convention Clearing House Mechanism in 2006, UNEP has effectively supported the further contribution of the EAF/14 outputs to coastal and marine resource information provision. One weakness of the UNEP supervision has been noted earlier in this evaluation, this being the lack of emphasis on developing data provision / information dissemination partnerships at national level. Whilst this has evolved naturally, it is often informal and therefore vulnerable to external pressures (see Section 2.2.3). This is partially due to the lack of outcome monitoring (itself a victim of the lack of process indicators) by UNEP towards the long-term structure of information provision on the coast.

128. As discussed in Section 2.10, the six-monthly progress reports have generally been sufficiently detailed, realistic and useful.

129. In summary UNEP's project supervision was responsive and effective in the face of considerable challenges, esp. in the absence of an overall Project Coordinator from Oct 1997 onwards. However, the lack of country terminal reports and this late programme terminal evaluation means it is only rated as '**satisfactory**'.

## 2.12 COMPLEMENTARITY WITH UNEP MEDIUM TERM STRATEGY AND PROGRAMME OF WORK

### 2.12.1 Linkage to UNEP's Expected Accomplishments

130. The UNEP *Mid Term Strategy (2010 – 2013)* consists of six themes (UNEP, 2008). The relevance of EAF/14 is briefly discussed against each of these below<sup>9</sup>:

- **Climate change:** climate change has the potential to affect the coastal and marine environments through sea level rise, ocean acidification and rising air and sea temperatures. A geo-referenced system with baseline data from the late 1990's will be of obvious use in monitoring these changes. However it is important that datasets are comparable and kept up to date. If so, GIS has great potential for strengthening the ability of countries to integrate climate change responses into national development processes.
- **Disasters and conflicts:** again GIS can aid both disaster risk reduction planning for coastal issues such as tsunamis, storms and other natural disasters. In particular the integration of digital elevation models allows estimates of storm surge zones, and combined with habitat vulnerability mapping, can allow estimates of potential short and long-term damage and thus allow mitigation planning. The multi-sectoral nature of data integration is a key element to this, but does demand upon a strong information sharing and management strategy which is still absent from most of the region. The KENSEA project in Kenya (2006) and its follow-up tsunami modeling (2007) benefitted largely from the EAF/14 datasets and atlas.
- **Ecosystem management:** much of the information within the current country systems is baselines physical and bio-geographic data – as yet there appears to be little integration with natural resource management e.g. of fisheries and seabed assets. However the potential is there, and with the increasing involvement of SWIOFP and ASCLME, as well as the planned integration of national fisheries statistics databases, this is an emerging reality. Combined with the existing extensive ecological databases, this should facilitate a path to the ecosystem-based management of fisheries and other coastal resources.
- **Environmental governance:** Phases 2 and 3 have fostered the integration of national and regional environmental priorities which is now embedded in the NCCHM. The multi-sectoral nature of GIS will also support the identification of inter-linkages between multilateral environmental agreements and providing national and international stakeholders with information for sound decision-making.
- **Harmful substances and hazardous waste:** the integration of land-based pollution sources into the GIS via WIOLaB will assist stakeholders for managing harmful chemicals and hazardous waste in a more environmentally sound manner, including through better technology and best practices. It is notable that the WIOLaB project has developed a Strategic Action Programme on land-based sources of pollution for adoption by member countries in March 2010 during the sixth conference of the contracting parties to the Nairobi Convention.
- **Resource efficiency:** sustainable consumption and production: the GIS should assist defining the spatial boundaries and quantification when producing Life Cycle Assessments.

---

<sup>9</sup> It should be noted that EAF/14 Phases 2 & 3 were undertaken over 1996 – 2002, so their relevance to this current strategy should be considered in this context

### 2.12.2 Project contributions and coherence to the Bali Strategic Plan

131. EAF/14 has a number of relevant outcomes to the objectives of the *Bali Strategic Plan for Technology Support and Capacity-building* (UNEP, 2004). This includes:

- To use and sustain the capacity or technology obtained through training or other capacity-building efforts after such efforts have been completed (Objective a(v));
- To develop national research, monitoring and assessment capacity to support national institutions in data collection, analysis and monitoring of environmental trends and in establishing infrastructure for scientific development and environmental management, in order to ensure sustainability of capacity-building efforts (Objective a(vi));
- To enable collaboration with all relevant stakeholders and provide a basis for a comprehensive approach to developing partnerships, including public-private partnerships (Objective f);
- To enhance delivery by UNEP of technology support and capacity-building, within its mandate, to developing countries as well as to countries with economies in transition based on best practices from both within and outside UNEP, including by mainstreaming technology support and capacity-building throughout UNEP activities (Objective i); and
- To promote, facilitate and finance, as appropriate, access to and support of environmentally sound technologies and corresponding know-how, especially for developing countries as well as countries with economies in transition (Objective j).

132. In the evaluator's view, perhaps the project's greatest success is not the physical outputs (databases and atlases) but the real increase in the capacity – and confidence- of these countries to engage with GIS technology and to utilize it for their own management needs.

### 2.12.3 South-South Cooperation

133. In 1978, the United Nations established the Unit for South-South Cooperation to promote South-South trade and collaboration within its agencies. South-South Cooperation is a term historically used by policymakers and academics to describe the exchange of resources, technology, and knowledge between developing countries, also known as countries of the global South.

134. This project has put in place a mechanism for the provision and exchange of coastal and marine environmental information, especially between members of the Nairobi Convention. It has allowed the building of national and regional datasets, thus enabling greater self-dependence for resource management decision-making. At present this is mainly restricted to marine habitat conservation, but has the potential to improve fisheries management and access to regional renewable resources, which are currently heavily influenced by more developed nations with large high seas fleets.

### 3 CONCLUSIONS AND RATING

---

135. This terminal evaluation covers the ‘roll-out’ phases 2 & 3 of the EAF/14 Eastern African Coastal & Marine Environment Resource Database and Atlas project. It takes place some seven years after project activities ceased. This unusually long gap between the project and the final evaluation, whilst losing some detail of the implementation period, has an advantage in that it is possible to examine the outcomes and intermediate states achieved as a result of the project outputs. This has therefore been the focus of this evaluation.

136. Conclusions for the eleven main evaluation categories are provided below:

**A. Attainment of project objectives and results:** the project phases have been effective in developing a lasting technical capability in GIS which remains fully relevant to current programmes and initiatives. Given the low budget, the project was also efficient, largely due to the lessons learned over Phase 1 e.g. training in-country and via mentoring.

*Rating: Overall ‘Satisfactory’ (Effectiveness – ‘Satisfactory’; Relevance – ‘Highly Satisfactory’; & Efficiency – ‘Satisfactory’).*

**B. Sustainability of project outcomes:** the country-level GIS units continue to function through a combination of recurrent Government funding with contributions from donors. This has been strongly supported by the sense of ownership resulting from the EAF/14 mentoring approach, especially in its final years. Financial needs are low, so long as there is a clear identification of responsibilities for data collection (not a GIS function). To date, the coordinating roles of the LCAs is still clearly recognized. There are also some risks to sustainability, either through socio-political instability or through poorly defined institutional roles that results in both duplication and inefficient use of resources. There are no major environmental risks – indeed this is the *raison d’être* of GIS planning.

*Rating: Moderately likely (Financial – ‘Moderately likely’ Socio-political – ‘Moderately likely’; Institutional framework & governance - ‘Moderately likely’; & Environmental ‘Likely’.*

**C. Catalytic Role:** this project has been highly successful in stimulating the adoption of spatial resource planning and management. The presence of a central coastal & marine data deposit, plus an established GIS capability has encouraged both donors to link into this existing system and for other stakeholders (Government / private sector) to utilize the data products that are increasingly available.

*Rating: Highly satisfactory.*

**D. Stakeholders involvement:** during project implementation awareness building was mainly focused on institutional partners, thus building a framework for data exchange. The atlases appear to have been a major and lasting tool for engaging secondary schools and university students in coastal issues.

*Rating: Satisfactory.*

**E. Country ownership / driven-ness:** this project has been a source of considerable pride at national levels as it has demonstrated their capability to adopt and utilize modern spatial planning tools. This has largely been achieved by the high degree of in-country training under Phases 2 & 3 and the utilization of local datasets for applied management.

*Rating: Satisfactory.*

**F. Achievement of outputs and activities:** whilst Kenya, Comoros and Tanzania achieved all their required outputs, other countries were less successful due to suspension of donor funding. There were also considerable time delays and in some cases a reliance on external consultants to complete tasks (e.g. the Comoros atlas). In general, key project outcomes (e.g. datasets prepared and a GIS capacity developed) were universally achieved.

*Rating: Moderately satisfactory.*

**G. Preparation and readiness:** on the positive side, the experience of Phase 1 in Kenya ensured that these subsequent phases were much better prepared and able to adopt more appropriate approaches and tools that have contributed to its success. However it was let down by the highly unrealistic timeframe and the lack of risk assessment that might have prevented the poor performance in some countries. Given both the regional and phased nature of the programme, the above needs to be qualified:

1. Phase one provided a learning phase which should have been applied in Phase 2 & 3 in terms of time frame, capacity building, building ownership and formulation of a project advisory group.
2. The advisory group would negotiate with the donor to create a trust fund for the EAF/14 rather than a yearly voluntary contribution which was more risky than any other component of the project.
3. Poor performance by some countries was not due to inability of the countries to implement, but rather funds were not available to continue, and the countries were informed by UNEP accordingly.

*Rating: Moderately satisfactory*

**H. Implementation approach:** again the lack of a detailed and realistic risk assessment has reduced the effectiveness of project implementation in some countries. However overall the lessons learned from Phase 1 were well applied and the mentoring approach was practical and effective.

*Rating: Moderately satisfactory*

**I. Financial planning:** based on the limited evidence made available to the evaluator, financial planning was one of the weaker elements of the project. Country-level reporting was often late and accounting for the Belgian monies seems to have been poor e.g. it was not realized until 2006 that there was unspent funds for the NCCHM.

*Rating: Moderately satisfactory*

**J. Monitoring & Evaluation:** whilst the six-monthly reporting from the UNEP EAF/14 Project Coordinator was generally of good quality, there were no indicators established at project start, there was a lack of focus on the longer-term project outcomes and there were no country-level terminal evaluations. This was an important and innovative project and it would have been useful to have more ex-post evaluation once project activities ceased and thus have contributed to the design of the NCCHM.

*Rating: Unsatisfactory (M&E Design – ‘Unsatisfactory’; M&E Plan implementation – ‘Moderately unsatisfactory’; & Budgeting & funding for M&E activities – ‘Unsatisfactory’.*

**K. UNEP Supervision and backstopping:** UNEP supervision has been of a high standard. This is evidenced by the practical response to the curtailing of Belgian funding mid-way through the project and the support provided to the LCAs once the EAF/14 Project Coordinator left in 1997. However it has been let down by the long period between the cessation of project activities and this terminal evaluation.

*Rating: Satisfactory.*

137. Overall the project can be considered a qualified success as it proved an essential precursor to the regional Nairobi Convention Clearing House Mechanism. Perhaps its greatest success has been to provide the basic capacity for information-based spatial planning and integrated coastal resource management, a fact supported by the continued operation of the EAF/14 GIS units and their ongoing contribution to a variety of recurrent national and regional initiatives such as SWIOFP, WIOLaB and ASCLME. **Therefore, given the individual shortcomings of implementation in some countries, it is awarded an overall rating of ‘Moderately satisfactory’.** The full ratings are provided in Table 7 on page 40.

Table 7: Overall Evaluator Ratings Table

Criterion	Sub-criteria	Evaluator's Summary Comments	Rating	
<b>A. Attainment of project objectives and results (via ROtI)</b>	A.1. Effectiveness - overall likelihood of impact achievement	Atlases realized in only three countries which restrained effectiveness. However most EAF/14 outcomes remain effective today	S	S
	A.2. Relevance	Still remains relevant to current UNEP / GEF programming	HS	
	A.3. Efficiency	Good value for money compared to Phase 1.	S	
<b>B. Sustainability of project outcomes</b>	B.1. Financial	Whilst considered a barrier, financial requirements are considered minor and should not be a barrier to sustainability	ML	ML
	B.2. Socio-political	No major issues over the project lifetime, although there is a risk to sustainability from political instability in particular	ML	
	B.3. Institutional framework & governance	The project failed to establish sustainable inter & intra institutional strategies and agreements for data provision, archiving and information provision. However this has been achieved to a certain extent through informal systems.	ML	
	B.4. Environmental	There are no major environmental factors that might affect the sustainability of the project outcomes. Indeed, they are a major tool in improving environmental management and disaster management.	L	
<b>C. Catalytic Role</b>		The development of a GIS capacity in each country has allowed many projects and Government initiatives to incorporate spatial mapping techniques which would have been otherwise absent.		HS
<b>D. Stakeholders involvement</b>		Mainly restricted to institutional partners, although the atlases were important mechanisms for creating awareness, esp. amongst students.		S
<b>E. Country ownership / driven-ness</b>		In-country, mentored training over P2 & P3 has resulted in a high degree of 'ownership', esp. in Kenya and Tanzania. However there was greater dependence on consultants in Seychelles and the Comoros.		S
<b>F. Achievement of outputs and activities</b>		Whilst Kenya, Comoros and Tanzania achieved all their required outputs, other countries were less successful. There were also considerable time delays and in some cases a reliance on external consultants to complete tasks (e.g. the Comoros atlas). In general, key project outcomes (e.g. datasets prepared and a GIS capacity developed) were universally achieved.		MS

Criterion	Sub-criteria	Evaluator's Summary Comments	Rating	
<b>G. Preparation and readiness</b>		Despite moderate short-comings in the timeframe and initial capacity-assessment, the experience of Phase 1 implementation and the lessons both learned and adopted for the subsequent phases contributed to its readiness.	<b>MS</b>	
<b>H. Implementation approach</b>		Although marred by a poor risk analysis that blighted implementation in some countries, the overall approach successfully learned from the lessons of Phase 1.	<b>MS</b>	
<b>I. Financial planning</b>		Financial planning has been marred by poor country-level financial reporting (recurrent and terminal).	<b>MS</b>	
<b>J. Monitoring &amp; Evaluation</b>	E.1. M&E Design	The M&E plan was insufficiently detailed and lacked key elements such as indicators and a risk assessment	U	U
	E.2. M&E Plan implementation (use for adaptive management)	Whilst satisfactory at UN coordination level, there was a lack of M&E at national level, particularly in terms of any country-wise terminal evaluation. However the LCAs appear to have responded to the recommendations of the central six monthly reporting.	MU	
	E.3. Budgeting & funding for M&E activities	At country level, only US\$250 was allocated to interim progress reporting and no funds were allocated to the terminal report.	U	
<b>K. UNEP Supervision and backstopping</b>		UNEP project supervision was responsive and effective in the face of considerable challenges, esp. in the absence of an overall Project Coordinator from Oct 1997 onwards.	<b>S</b>	

**Keys:**

Rating	Project objectives and results (A)	Project M&E (J)
<b>Highly Satisfactory (HS):</b>	<i>No shortcomings</i> in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.	No shortcomings in the project M&E system.
<b>Satisfactory (S):</b>	<i>Minor shortcomings</i> in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.	Minor shortcomings in the project M&E system.
<b>Moderately Satisfactory (MS):</b>	<i>Moderate shortcomings</i> in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.	Moderate shortcomings in the project M&E system.
<b>Moderately Unsatisfactory (MU):</b>	<i>Significant shortcomings</i> in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.	Significant shortcomings in the project M&E system.
<b>Unsatisfactory (U):</b>	<i>Major shortcomings</i> in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.	Major shortcomings in the project M&E system.
<b>Highly Unsatisfactory (HU):</b>	<i>Severe shortcomings</i> in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.	The Project had no M&E system.

Rating	Sustainability (B)
<b>Likely (L):</b>	No risks affecting this dimension of sustainability.
<b>Moderately Likely (ML):</b>	Moderate risks that affect this dimension of sustainability.
<b>Moderately Unlikely (MU):</b>	Significant risks that affect this dimension of sustainability
<b>Unlikely (U):</b>	Severe risks that affect this dimension of sustainability.

## 4 LESSONS LEARNED

138. This was an innovative project, focusing on building the capacity to utilize fairly advanced computer-based planning tools for coastal and marine resource management. It had already been through a pilot-testing phase in Kenya but the roll-out to a further number of countries with variable baseline capacity has resulted in further lessons being learned for future application. These are summarized below:

139. Need for baseline capacity assessment

<b>Context:</b>	The success of the project varied markedly from county to country in this regional project. Future regional project design should take account of the varied starting capacity and ensure that sufficient preparatory activities are integrated into project design to ensure that each country starts at the same level when the main implementation phase commences.
<b>Prescriptive action:</b>	<p>The baseline capacity and risks associated with successful implementation need to be assessed during project design. This includes:</p> <ul style="list-style-type: none"> <li>• Establishment of baseline capacity levels at both institutional and individual levels. Once established, these capacities need to be assessed and any gaps addressed through preparatory activities prior to main project start. Defining capacity indicators can start at this point.</li> <li>• Based on this, when designing regional projects, do not assume that the same sub-project documents and budgets can be used for each country (as was the case in this project). Time and funds for preparatory activities may be needed where capacities are weaker than the proposed baseline.</li> <li>• Conduct a risk assessment to determine (i) the internal risks to project implementation (as part of the baseline capacity assessment) and the external risks to sustainability (see Appendix E).</li> <li>• Be realistic about the time needed for both preparation activities and implementation.</li> </ul>
<b>Application:</b>	Whilst mainly applies to multi-country, regional programmes, but also to single state interventions. Primarily the responsibility of the implementing agency and should take place during the design stage.

140. Need for wider information exchange strategies and frameworks

<b>Context:</b>	Data exchange only functions efficiently when there are clearly defined institutional roles and responsibilities. Although the project Working Groups provided a functional working relationship during project implementation, in most cases this did not result in a long-term framework for data collection, compilation and dissemination. This can result in duplication and systemic inefficiency.
<b>Prescriptive action:</b>	In a situation where there are multiple actors with unique roles operating in a competitive environment, there needs to be clear institutional mandates for data sourcing, compilation and dissemination at both national and regional levels. This needs to be determined firstly via policy and resulting strategy decision and then followed by an agreed framework of data providers, depositories and access nodes. These should be supported by MoUs or other mechanisms to clearly specify roles, responsibilities, expectations and where appropriate, cost recovery measures.
<b>Application:</b>	Needs to be considered in project design and if donor-funded, integrated into any agreement with the main recipients and guarantors.

141. Don't overly rely on a few capable individuals

<b>Context:</b>	This project relied on a limited number of individual for project success. Whilst this worked in some countries (e.g. Kenya and Comoros) , this over-reliance on a few individuals resulted in the collapse of project activities in the Seychelles and Mozambique.
<b>Prescriptive action:</b>	Ensure there are a critical number of capable persons to allow for the inevitable loss of staff during project implementation. If necessary, develop a contingency plan to replace key staff if they are critical to project success.
<b>Application:</b>	Needs to be considered both during project design as well as built into inception and subsequent reporting

142. Timely ex-post evaluation of project activities, outputs and outcomes

<b>Context:</b>	This terminal evaluation has taken place some seven years after the cessation of the last project activities under Phases 2 and 3. Memories have faded and records have been lost. Furthermore the lack of a formal evaluation of Phase 3 (Phase 2 underwent a self-evaluation) may have impacted on the effectiveness of the subsequent development of the NCCHM. This was exacerbated by the lack of terminal reporting from the individual country participants.
<b>Prescriptive action:</b>	Ensure that a fully participatory ex-post evaluation takes place in a timely fashion, preferably whilst the teams are in place and in any case within six months of the last project activities.
<b>Application:</b>	Stipulated within the M&E plan and ensured by overall implementing agency.

## 5 RECOMMENDATIONS

---

143. Given that the project activities are already complete, suggestions rather than recommendations have been made.

144. Three suggestions are made by this evaluation:

1. It is understood that a terminal evaluation of the EAF/14 follow-up project, the “Nairobi Convention Clearing House Mechanism” (EA/1025-06-02) is due shortly. Based on the experience of this current terminal evaluation, it is suggested that instead of the evaluator making visits to the different participating states, that a workshop is convened in a central location. 1-2 participants from each country would be invited and a formal process of joint, participatory evaluation conducted, facilitated by the main evaluator. This would focus on the eleven different evaluation categories (see Section 1.2.4) through a series of break-out and plenary sessions. This process would also include a joint elaboration of potential impact pathways, utilizing the ROtI technique. It would conclude with a series of lessons learned for both LCAs and the implementing agency that will allow participants to strengthen GIS planning and implementation over future years.
2. A common theme from this evaluation has been the reliance on informal data sharing agreements in order to overcome the administrative inertia of developing formal memoranda of agreements. One possible approach is to develop protocols for data collection, sharing and archiving, as well as information provision and dissemination. These protocols should cover the identification and agreement of institutional roles and responsibilities, budgeting and cost-sharing, and would serve to improve efficiency, effectiveness and remove duplication and cooperation barriers.
3. In order to ensure continued momentum of project activities and ex-post outcomes, the composition of national working groups should be formally reviewed and if necessary expanded. This will allow fresh thinking to be introduced and new stakeholders to be represented as the outcomes become clearer. This would also allow a constant review of the needs of information clients and the development of strategies for prioritizing data collection at national and regional levels to ensure the EAF/14-derived systems remain relevant and credible. Allied to this, regular e.g. quarterly meetings need to be held to ensure the influence of the working groups on project activities.

## Appendix A: Terms of Reference

### Terminal Evaluation of the UNEP project

“Eastern African Coastal and Marine Environment Resource Database and Atlas (EAF/14), Phase 2: Mozambique, Reunion, Seychelles, and Tanzania, and Phase 3: Comoros, Kenya, Madagascar, Mauritius, Mozambique, Reunion, Seychelles, Somalia and Tanzania (EA/0401-95-03 and EA/1100-96-20)

## 1. PROJECT BACKGROUND AND OVERVIEW

### Project rationale

The nations of the Eastern African Region are depending more and more on the coastal zone for their livelihood and well-being, but at the same time the natural habitats and ecosystems which sustain these resources are being destroyed or stressed through pollution, various developments and other impacts. Governments of the region have recognized the importance of their marine and coastal areas and the environmental threats that they face. In their endeavor to address the problem, the Governments came together within the framework of UNEP’s Regional Seas Program to form the Eastern African Action Plan (the Nairobi Convention).

This formed the basis for a programme of activities comprising:

- (i) Protection and management of marine and coastal areas (EAF/5)
- (ii) Assessment and control of pollution in the coastal and marine environment (EAF/6)
- (iii) Contingency planning for marine pollution emergencies (EAF/7)
- (iv) Addressing problems of coastal erosion and siltation (EAF/10)
- (v) Environmental impact assessment (EAF/11)
- (vi) Coastal and marine environment resources database and atlas (EAF/14)

This project comprises the activity EAF/14, coastal and marine environment resources database and atlas, which was executed through three project phases. This evaluation will cover the project phases 2 and 3, which were continuation of UNEP project FP/EA/5101-93.01 “Eastern African coastal and marine environment resource database and atlas Phase 1, Kenya” (June 1993-December 1995). Phase two was scheduled to be executed from January 1995 through December 1995 in Mozambique, Reunion, Seychelles, and Tanzania, and phase three from January 1996 through December 1996 in Comoros, Kenya, Madagascar, Mauritius, Mozambique, Reunion, Seychelles, Somalia and Tanzania. Thus the total duration of both phase 2 and 3 was estimated at 24 months. The project prepared the way for majority of institutions in Eastern Africa to have access both to the hardware and the software, as well as the expertise needed to make full interactive use of the potential offered by a georeferenced electronic database.

The project’s goal was that the beneficiaries of the GIS database, the country map sets and the Coastal Resource Atlas of Eastern Africa would be the people of Eastern Africa who, in the face of development must make hard decisions affecting the coastal environment and resources. The comprehensive information database and atlas was planned to enhance better planning and sounder-based decisions, which were aimed to lead into wiser use of resources, help to reduce wastage of non-renewable resources, to avoid conflicts, and to ensure sustainability for future generations.

**The overall objective of the project** was “*to develop national self reliance on all matters relating to the integrated management of the coastal and marine environment to ensure a balance between adequate protection, wise development and sustainability of resources*”.

The specific objectives were stated as:

To assist the Governments of the Region to attain sustainable integrated development and environmental management of the marine and coastal areas and their resources through:

- (i) Strengthening the capacity of national institutions in collation of data on the coastal and marine environment, and in the storage, management and retrieval of such information
- (ii) Develop, together with national institutions and the wider community, an electronic database system as a management tool towards integrated coastal area management (in collaboration with the EAF/5 project)
- (iii) Develop, together with national institutions and the wider community, coastal resources maps
- (iv) Strengthening the capability of national institutions in the use and management of an electronic database system and coastal resource maps (in collaboration with EAF/5 project)
- (v) Create awareness and facilitate the participation of the private sector, the academic fraternity, NGO's, the wider community and the general public, in the decision-making regarding the management of coastal and marine resources, through the provision of data and information in the form of a coastal resources atlas

**Relevance to Other Programmes**

This project directly responded to the following priority issues defined by the UNEP Program Planning for the 1994-1995 biennium: International consensus building, national environmental management support, and environmental assessment, information for decision making and disaster prevention, preparedness and response, and for the 1996-1997 biennium: Sustainable management and use of natural resources, and global and regional servicing and support. The project was in line with UNEP's core activities for the biennium 1994-1995, in particular with the activities "policy development" and "information for public awareness". In addition, the project also recognized the emphasis given by the United Nations Conference on Environment and Development (UNCED), and contributed to the implementation of the Convention on Biological Diversity and to Agenda 21.

**Executing Arrangements**

The implementing agency for this project was UNEP through its former Oceans and Coastal Areas Program Activity Centre (OCA/PAC), and the Global Resource Information Database Program Activity Centre (GRID/PAC) (currently located in the Division of Early Warning and Assessment, DEWA).

**Project Activities**

The project comprised of nine interlinked activities:

- (i) Establishment of in-country working groups
- (ii) Search, assessment and collation of existing data and information
- (iii) Acquisition and interpretation of satellite images, production of satellite image maps, training in satellite image interpretation
- (iv) Development of database and GIS on the coastal environment, entering data and information, training in digitizing and data entry
- (v) Coastal ecological survey to remedy significant gaps in the data
- (vi) Development and production of text book on coastal resources
- (vii) Production of coastal environment resources map and text book
- (viii) Training in and promotion of the use of resource maps and atlases for coastal area management
- (ix) Dissemination of project output within the country

**Budget**

	<b><u>1995 EA</u></b>		
Special contribution by the Belgian Government to the Eastern African Trust Fund (phase two)	419,224		
<b>Total cost of the project</b>	419,224		
	<b><u>1996 EA</u></b>	<b>13% support cost</b>	<b><u>Total</u></b>
Special contribution by the Belgian Government to the Eastern African Trust Fund (phase three)	273,004	35,490	308,494 <sup>10</sup>
<b>Total cost of the project</b>	273,004	35,490	308,494

---

<sup>10</sup> 1994 contribution, paid in January 1995 (10,000,000 BEF)

## TERMS OF REFERENCE FOR THE EVALUATION

### 1. Objective and Scope of the Evaluation

The objective of this terminal evaluation is to examine the contribution of the project towards the achievement of Expected Accomplishments and the extent, and magnitude of any project impacts to date. The evaluation will also determine the likelihood of future impacts, assess project performance and the implementation of planned project activities / outputs against actual results. The evaluation will focus on the following main questions:

1. To what extent did the project strengthen the capacity of national institutions in collation of data on the coastal and marine environment, and in the storage, management and retrieval of such information and data?
2. Did the project succeed in developing an electronic database system as a management tool towards integrated coastal area management?
3. Did the project succeed in developing coastal resources maps and atlases?
4. To what extent did the project strengthen the capability of national institutions in the use and management of an electronic database system and coastal resource maps?
5. To what extent did the project create awareness and facilitate the participation of the private sector, the academic fraternity, NGO's, the wider community and the general public, in the decision-making regarding the management of coastal and marine resources, through the provision of data and information in the form of a coastal resources atlas?

### 2. Methods

This terminal evaluation will be conducted as an in-depth evaluation using a participatory mixed-methods approach, during which the UNEP Program / Project Manager, key representatives of the executing agencies and other relevant staff are kept informed and consulted throughout the evaluation. The consultant will liaise with the UNEP Evaluation Office and the responsible UNEP Officer on any logistic and/or methodological issues to properly conduct the review in as independent a way as possible, given the circumstances and resources offered. The draft report will be delivered to the Evaluation Office and circulated to UNEP Program / Project Manager, key representatives of the executing agencies. Any comments or responses to the draft report will be sent to the UNEP Evaluation Office for collation and the consultant will be advised of any necessary or suggested revisions.

The findings of the evaluation will be based on multiple approaches:

1. A desk review of project documents including, but not limited to:
  - (a) The project documents, outputs, monitoring reports (such as progress and financial reports to UNEP) and relevant correspondence.
  - (b) Notes from the (Steering) Group meetings.
  - (c) Other project-related material produced by the project staff or partners.
  - (d) Relevant material published on the project web-site.
2. Interviews with project management and technical support.
3. Face-to-face and telephone interviews with intended users for the project outputs and other stakeholders involved with this project, including in the participating countries and international bodies. The Consultant shall determine whether to seek additional information and opinions from representatives of donor agencies and other organizations. As appropriate, these interviews could be combined with an email questionnaire, online survey, or other electronic communication.

4. Interviews with the UNEP Project / Program Manager and Fund Management Officer, and other relevant staff in UNEP dealing with management of the coastal and marine environment -related activities as necessary. The Consultant shall also gain broader perspectives from discussions with other relevant UNEP staff.
5. Field visits to project staff and target audiences. A visit will also be made to project partners in at least one or two countries and key audiences for the project's outputs will be canvassed for their opinions in relation to the project in these countries.

### Key Evaluation principles

In attempting to evaluate any outcomes and impacts that the project may have achieved, evaluators should remember that the project's performance should be assessed by considering the difference between the answers to two simple questions "*what happened?*" and "*what would have happened anyway?*". These questions imply that there should be consideration of the baseline conditions and trends in relation to the intended project outcomes and impacts. In addition it implies 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 evaluator, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgments about project performance.

### 3. Project Evaluation Parameters and Ratings

The success of project implementation will be rated on a scale from 'highly unsatisfactory' to 'highly satisfactory'. In particular the evaluation shall **assess and rate** the project with respect to the eleven categories defined below<sup>11</sup>.

It should be noted that many of the evaluation parameters are interrelated. For example, the 'achievement of objectives and planned results' is closely linked to the issue of 'sustainability'. Sustainability is understood as the probability of continued long-term project-derived outcomes and impacts and is, in turn, linked to the issues of 'catalytic effects / replication' and, often, 'country ownership' and 'stakeholder participation'.

#### A. **Attainment of objectives and planned results:**

The evaluation should assess the extent to which the project's major relevant objectives were effectively and efficiently achieved or are expected to be achieved and their relevance. Any project contributions to the achievement of UNEP Expected Accomplishments<sup>12</sup> should be clearly highlighted.

- *Effectiveness*: Evaluate the **overall likelihood of impact achievement**, taking into account the "achievement indicators", the achievement of outcomes and the progress made towards impacts. UNEP's Evaluation Office advocates the use of the **Review of Outcomes to Impacts (ROtI)** method (described in Annex 7) to establish this rating. The analysis should specify whether the project has plausible causal pathways that link project activities to the achievement of Expected Accomplishments. It should also specify whether the intervention is likely to have any lasting differential impacts in relation to gender.

---

<sup>11</sup> However, the views and comments expressed by the evaluator need not be restricted to these items.

<sup>12</sup> UNEP Expected accomplishments are specified in the 2010- 2011 Programme of Work and the 2010-2013 Medium Term Strategy. <http://www.unep.org/PDF/FinalMTSGCSS-X-8.pdf>

- *Relevance:* In retrospect, were the project's outcomes consistent with those of the programme frameworks and thematic subprogrammes? Ascertain the nature and significance of the contribution of the project outcomes to the Regional Seas Program, the Eastern African Action Plan, CBD and other UNEP thematic subprogrammes. To what extent does the project intervention link to the achievement of the MDGs (in particular Goal 7)?
- *Efficiency:* Was the project cost effective? Was the project the least cost option? Was the project implementation delayed and if it was, then did that affect cost-effectiveness? Assess the contribution of cash and in-kind co-financing, and any additional resources leveraged by the project, to the project's achievements. Did the project build on earlier initiatives; did it make effective use of available scientific and / or technical information? Wherever possible, the evaluator should also compare the cost-time vs. outcomes relationship of the project with that of other similar projects.

## B. Sustainability:

Sustainability is understood as the probability of continued long-term project-derived outcomes and impacts after the project funding ends. The evaluation will identify and assess the key conditions or factors that are likely to contribute or undermine the persistence of benefits after the project ends. Some of these factors might be outcomes of the project, e.g. stronger institutional capacities or better informed decision-making. Other factors will include contextual circumstances or developments that are not outcomes of the project but that are relevant to the sustainability of outcomes. The evaluation should ascertain to what extent follow-up work has been initiated and how project outcomes will be sustained and enhanced over time. **Application of the ROtI method** described in Annex 7 will also assist in the evaluation of sustainability.

Five aspects of sustainability should be addressed: financial, socio-political, institutional frameworks and governance, environmental (if applicable). The following questions provide guidance on the assessment of these aspects:

- *Financial resources.* Are there any financial risks that may jeopardize sustenance of project outcomes and onward progress towards impact? What is the likelihood that financial and economic resources will not be available once the project funding ends (resources can be from multiple sources, such as the public and private sectors, income generating activities, and trends that may indicate that it is likely that in future there will be adequate financial resources for sustaining project's outcomes)? To what extent are the outcomes and eventual impact of the project dependent on continued financial support?
- *Socio-political:* Are there any social or political risks that may jeopardize sustenance of project outcomes and onward progress towards impacts? What is the risk that the level of stakeholder ownership will be insufficient to allow for the project outcomes to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project?
- *Institutional framework and governance.* To what extent is the sustenance of the outcomes and onward progress towards impacts dependent on issues relating to institutional frameworks and governance? What is the likelihood that institutional and technical achievements, legal frameworks, policies and governance structures and processes will allow for, the project outcomes/benefits to be sustained? While responding to these questions consider if the required systems for accountability and transparency and the required technical know-how are in place.

- *Environmental.* Are there any environmental risks that can undermine the future flow of project environmental benefits? The TE should assess whether certain activities in the project area will pose a threat to the sustainability of the project outcomes. For example; construction of dam in a protected area could inundate a sizable area and thereby neutralize the biodiversity-related gains made by the project; or, a newly established pulp mill might jeopardize the viability of nearby protected forest areas by increasing logging pressures; or a vector control intervention may be made less effective by changes in climate and consequent alterations to the incidence and distribution of malarial mosquitoes. Would these risks apply in other contexts where the project may be replicated?

### C. Catalytic Role and Replication

The catalytic role of UNEP is embodied in its approach of supporting the creation an enabling environment, investing in activities which are innovative and show how new approaches and market changes can work, and supporting activities that can help upscale new approaches to a national (or regional) level to sustainably achieve global environmental benefits.

In general this catalytic approach can be separated into are three broad categories of activities: (1) “**foundational**” and enabling activities, focusing on policy, regulatory frameworks, and national priority setting and relevant capacity (2) **demonstration** activities, which focus on demonstration, capacity development, innovation, and market barrier removal; and (3) **investment** activities (rarely if ever undertaken exclusively by UNEP) with high rates of co-funding, catalyzing investments or implementing a new strategic approach at the national level.

The three categories approach combines all the elements that have been shown to catalyze results in international cooperation. Evaluations in the bilateral and multilateral aid community have shown time and again that activities at the micro level of skills transfer—piloting new technologies and demonstrating new approaches—will fail if these activities are not supported at the institutional or market level as well. Evaluations have also consistently shown that institutional capacity development or market interventions on a larger scale will fail if governmental laws, regulatory frameworks, and policies are not in place to support and sustain these improvements. And they show that demonstration, innovation and market barrier removal do not work if there is no follow up through investment or scaling up of financial means. (From GEF OPS4)

In this context the evaluation should assess the catalytic role played by this project by consideration of the following questions:

- **INCENTIVES:** To what extent have the project activities provided incentives (socio-economic / market based) to contribute to catalyzing changes in stakeholder behavior?
- **INSTITUTIONAL CHANGE:** To what extent have the project activities contributed to changing institutional behaviors?
- **POLICY CHANGE:** To what extent have project activities contributed to policy changes (and implementation of policy)?
- **CATALYTIC FINANCING:** To what extent did the project contribute to sustained follow-on financing from Government and / or other donors? (this is different from co-financing)
- **PROJECT CHAMPIONS:** To what extent have changes (listed above) been catalyzed by particular individuals or institutions (without which the project would not have achieved results)?

(Note: the ROtI analysis should contribute useful information to address these questions)

Replication approach, in the context of UNEP projects, is defined as lessons and experiences coming out of the project that are replicated or scaled up in the design and implementation of other projects. Replication can have two aspects, replication proper (lessons and experiences are replicated in different geographic area) or scaling up (lessons and experiences are replicated within the same geographic area but funded by other sources).

Is the project suitable for replication? If so, has the project approach been replicated? If no effects are identified, the evaluation will describe the strategy / approach adopted by the project to promote replication effects.

**D. Stakeholder participation / public awareness:**

This consists of three related and often overlapping processes: information dissemination, consultation, and “stakeholder” participation. Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or stake in the outcome of the UNEP project. The term also applies to those potentially adversely affected by a project. The evaluation will specifically:

- Assess the mechanisms put in place by the project for identification and engagement of stakeholders in each participating country and establish, in consultation with the stakeholders, whether this mechanism was successful, and identify its strengths and weaknesses.
- Assess the degree and effectiveness of collaboration/interactions between the various project partners and institutions during the course of implementation of the project.
- Assess the degree and effectiveness of any various public awareness activities that were undertaken during the course of implementation of the project.

**E. Country ownership / driven-ness:**

This is the relevance of the project to national development and environmental agendas, recipient country commitment, and regional and international agreements. The evaluation will:

- Assess the level of country ownership. Specifically, the evaluator should assess whether the project was effective in providing and communicating information that catalyzed action in participating countries to improve decisions relating to the conservation and management of coastal and marine environment in each country.
- Assess the level of country commitment to the generation and use of research related to the management of coastal and marine environment during and after the project, including in regional and international fora.

**F. Achievement of outputs and activities:**

- Delivered outputs: Assessment of the project’s success in producing each of the programmed outputs, both in quantity and quality as well as usefulness and timeliness.
- Assess the soundness and effectiveness of the methodologies used for developing the technical documents and related management options in the participating countries
- Assess to what extent the project outputs produced have the weight of scientific authority / credibility, necessary to influence policy and decision-makers, particularly at the national level.

**G. Preparation and Readiness**

Were the project’s objectives and components clear, practicable and feasible within its timeframe? Were the capacities of executing institution and counterparts properly considered when the project was designed? Were lessons from other relevant projects properly incorporated in the project design? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project implementation? Were counterpart resources (funding, staff, and facilities), enabling legislation, and adequate project management arrangements in place?

## H. Assessment monitoring and evaluation systems.

The evaluation shall 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 Terminal Evaluation will assess whether the project met the minimum requirements for 'project design of M&E' and 'the application of the Project M&E plan' (see minimum requirements 1&2 in Annex 4). UNEP projects must budget adequately for execution of the M&E plan, and provide adequate resources during implementation of the M&E plan. Project managers are also expected to use the information generated by the M&E system during project implementation to adapt and improve the project.

## I. Implementation approach:

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

- Ascertain to what extent the project implementation mechanisms outlined in the project document have been closely followed. In particular, assess the role of the various committees established and whether the project document was clear and realistic to enable effective and efficient implementation, whether the project was executed according to the plan and how well the management was able to adapt to changes during the life of the project to enable the implementation of the project.
- Assess the extent to which the project responded the mid term review / evaluation (if any).
- Evaluate the effectiveness and efficiency and adaptability of project management and the supervision of project activities / project execution arrangements at all levels (1) policy decisions: Steering Group; (2) day to day project management in each of the country executing agencies.
- Identify administrative, operational and/or technical problems and constraints that influenced the effective implementation of the project.

The evaluation should also consider the following:

- How effectively has UNEP delivered the project as 'One UNEP' through effective collaboration across UNEP Divisions and with collaborating partners?
- To what extent does the project implementation approach foster South-South collaboration?

## M&E during project implementation

- *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 (see Annex 4) 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 evaluator should use the following questions to help assess the M&E design aspects: SMART-ness of Indicators

- Are there specific indicators in the log frame for each of the project objectives and outcomes?
- Are the indicators relevant to the objectives and outcomes?
- Are the indicators for the objectives and outcomes sufficient?
- Are the indicators quantifiable?

#### Adequacy of Baseline Information

- Is there baseline information?
- Has the methodology for the baseline data collection been explained?
- Is desired level of achievement for indicators based on a reasoned estimate of baseline?

#### Arrangements for Monitoring of Implementation

- Has a budget been allocated for M&E activities?
- Have the responsibility centers for M&E activities been clearly defined?
- Has the time frame for M&E activities been specified?

#### 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?
- *M&E plan implementation.* A Terminal Evaluation should verify that:
  - an M&E system was in place and facilitated timely tracking of results and progress towards projects objectives throughout the project implementation period (perhaps through use of a logframe or similar);
  - biannual project reports were complete, accurate and provided a good representation of actual project performance;
  - that the information provided by the M&E system was used during the project to improve project performance and to adapt to changing needs;
  - and that projects had an M&E system in place with proper training for parties responsible for M&E activities.
- *Budgeting and Funding for M&E activities.* The terminal evaluation should determine whether support for M&E was budgeted adequately and was funded in a timely fashion during implementation.

## **J. Financial Planning**

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

- Assess the strength and utility of financial controls, including reporting, and planning to allow the project management to make informed decisions regarding the budget and allow for a proper and timely flow of funds for the payment of satisfactory project deliverables.
- Present the major findings from the financial audit if one has been conducted.
- Identify and verify the sources of any co- financing as well as any leveraged and associated financing.
- Assess whether the project has applied appropriate standards of due diligence in the management of funds and financial audits.

- The evaluation should also include a breakdown of final actual costs and co-financing for the project prepared in consultation with the relevant UNEP Fund Management Officer of the project (table attached in Annex 1 Co-financing and leveraged resources).

#### K. UNEP Supervision and Backstopping

The purpose of supervision is to work with the executing agency in identifying and dealing with problems which arise during implementation of the project itself. Such problems may be related to project management but may also involve technical/substantive issues in which UNEP has a major contribution to make. The evaluator should assess the effectiveness of supervision / project management and administrative and financial support provided by UNEP including:

- (i) the adequacy of project supervision plans, inputs and processes;
- (ii) the emphasis given to outcome monitoring (results-based project management);
- (iii) the realism / candor of project reporting i.e. are progress reports an accurate reflection of the project realities and risks;
- (iv) the quality of documentation of project supervision activities; and
- (v) financial, administrative and other fiduciary aspects of project implementation supervision.

In summary, accountability and implementation support through technical assistance and problem solving are the main elements of project supervision (Annex 6).

The **ratings will be presented in the form of a table**. Each of the eleven categories should be rated separately with **brief justifications** based on the findings of the main analysis. An overall rating for the project should also be given. The following rating system is to be applied:

HS	= Highly Satisfactory
S	= Satisfactory
MS	= Moderately Satisfactory
MU	= Moderately Unsatisfactory
U	= Unsatisfactory
HU	= Highly Unsatisfactory

#### L. Complementarity with UNEP Medium Term Strategy and Program of Work

The evaluation should present a brief narrative to cover the following issues:

*Linkage to UNEP's Expected Accomplishments.* The UNEP Medium Term Strategy specifies desired results in six thematic focal areas. The desired results are termed Expected Accomplishments. Using the completed ROtI 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 any contributions, and the causal linkages should be fully described.

*Project contributions that are in-line with the Bali Strategic Plan (BSP)*<sup>13</sup>. The outcomes and achievements of the project should be briefly discussed in relation to the objectives of the UNEP BSP.

*South-South Cooperation* 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.

---

<sup>13</sup> <http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf>

#### 4. **Evaluation Report Format and Review Procedures**

The report should be brief, to the point and easy to understand. It must explain; the purpose of the evaluation, exactly what was evaluated and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should be presented in a way that makes the information accessible and comprehensible and include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

**The evaluation will rate the overall implementation success of the project and provide individual ratings of the eleven implementation aspects as described in Section 1 of this TOR. The ratings will be presented in the format of a table with brief justifications based on the findings of the main analysis.**

Evidence, findings, conclusions and recommendations should be presented in a complete and balanced manner. Any dissident views in response to evaluation findings will be appended in an annex. The evaluation report shall be written in English, be of no more than 50 pages (excluding annexes), use numbered paragraphs and include:

- i) An **executive summary** (no more than 3 pages) providing a brief overview of the main conclusions and recommendations of the evaluation;
- ii) **Introduction and background** giving a brief overview of the evaluated project, for example, the objective and status of activities; UNEP Evaluation Office requires that a TE report will provide summary information on when the evaluation took place; places visited; who was involved; the key questions; and, the methodology.
- iii) **Scope, objective and methods** presenting the evaluation's purpose, the evaluation criteria used and questions to be addressed;
- iv) **Project Performance and Impact** providing *factual evidence* relevant to the questions asked by the evaluator and interpretations of such evidence. This is the main substantive section of the report. The evaluator should provide a commentary and analysis on all eleven evaluation aspects (A – K above) and include a section on the relevance of the project to, and contribution towards, the delivery of the Strategic Plan (BSP)<sup>14</sup> where the outcomes and achievements of the project should be briefly discussed in relation to the objectives of the UNEP BSP.
- v) **Conclusions and rating** of project implementation success giving the evaluator's concluding assessments and ratings of the project against given evaluation criteria and standards of performance. The conclusions should provide answers to questions about whether the project is considered good or bad, and whether the results are considered positive or negative. The ratings should be provided with a brief narrative comment in a table (see Annex 1);
- vi) **Lessons (to be) learned** presenting general conclusions from the standpoint of the design and implementation of the project, based on good practices and successes or problems and mistakes. Lessons should have the potential for wider application and use. All lessons should 'stand alone' and should:
  - Briefly describe the context from which they are derived
  - State or imply some prescriptive action;
  - Specify the contexts in which they may be applied (if possible, who when and where)

---

<sup>14</sup> <http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf>

- vii) **Recommendations** suggesting *actionable* proposals for improvement of the current project. In general, Terminal Evaluations are likely to have very few (perhaps two or three) actionable recommendations.

*Prior to each recommendation*, the issue(s) or problem(s) to be addressed by the recommendation should be clearly stated.

A high quality recommendation is an actionable proposal that is:

1. Feasible to implement within the timeframe and resources available
2. Commensurate with the available capacities of project team and partners
3. Specific in terms of who would do what and when
4. Contains results-based language (i.e. a measurable performance target)
5. Includes a trade-off analysis, when its implementation may require utilizing significant resources that would otherwise be used for other project purposes.

- viii) **Annexes** may include additional material deemed relevant by the evaluator but must include:

1. The Evaluation Terms of Reference,
2. A list of interviewees, and evaluation timeline
3. A list of documents reviewed / consulted
4. Summary co-finance information and a statement of project expenditure by activity
5. Details of the project's 'impact pathways' and the 'ROtI' analysis
6. The expertise of the evaluation team. (brief CV).

TE reports will also include any formal response / comments from the project management team and/or the country focal point regarding the evaluation findings or conclusions as an annex to the report, however, such will be appended to the report by UNEP Evaluation Office.

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

## Appendix B: List of people met and consulted

### A. People met

Date & location	Organization	Name (Title)	Email
15 Feb 2010, Nairobi	UNEP Evaluation Office	Segbedzi Norgbey (Chief)	Segbedzi.Norgbey@unep.org
		Tiina Piironen (Evaluation Officer)	tiina.piironen@unep.org
	UNEP Division of Early Warning and Assessment	Theuri Mwangi (Coordinator)	Theuri.mwangi@unep.org
16 Feb 2010, Nairobi	UNEP Division of Early Warning and Assessment	Johannes Akiwumi (Task Manager)	Johannes.Akiwumi@unep.org
17 Feb 2010, Mombasa	Kenya Marine Fisheries Research Institute (Information & Data Management Program)	Harrison Onganda (Senior Research Officer)	hochieng2003@yahoo.com
18 Feb 2010, Mombasa	Coastal Development Agency	Mwanasiti Bendera (Head of Research)	sitibendera@cdakenya.org
		Brian Otiende (Ass. Environment Off.)	bryoa@yahoo.com
	Kenya Wildlife Service	Josephine Mutiso	mutisojosephine@yahoo.com
	Department of Fisheries (Marine and Coastal Fisheries Directorate)	Elizabeth Muklwa (Chief Fisheries Off., Environment & Conservation)	enuenbif@yahoo.com
		Shikami Akweyu (Chief Fisheries Off.)	shikamik@gmail.com
19 Feb 2010, Mombasa	Kenya Marine Fisheries Research Institute	Johnson Kazunga (Executive Director)	jkazunga@kmfri.co.ke
	Fishery Management & Sustainable Coastal Environment Development Project (FMSCEDP)	Jacqueline Uku (Project manager)	<a href="mailto:kcdp@kmfri.co.ke">kcdp@kmfri.co.ke</a>
	South West Indian Ocean Project (SWIOFP)	Rondolph Payet (Regional Executive Secretary)	<a href="mailto:rpayet@gmail.com">rpayet@gmail.com</a>
	Kenya Marine Fisheries Research Institute (Information & Data Management Program)	Harrison Onganda (Senior Research Officer / National Focal Point to the Nairobi Convention)	hochieng2003@yahoo.com

Date & location	Organization	Name (Title)	Email
22 Feb 2010, Moroni	Ministère de l'Agriculture de la Pêche et de l'Environnement (MAPE)	Mr. Farid Anasse (Chef de Département SIG / Point Focal National de la Convention de Nairobi)	farid_anasse@yahoo.fr
	Facility of Science and Technology, University of Comoros	Ibrahim Kassim (Senior Lecturer/GIS)	Kassim_ibra@yahoo.fr
23 Feb 2010, Moroni	National Oceanographic Data Centre, CNDRS	Ahmed Abdoul Karim (Coordinator)	A_abdoulkarim@yahoo.fr

***B. People consulted (by email or telephone)***

Organization	Name (Title)	Email	Response
UNEP Fund Management Office	Hussein Abby-Farrah	<a href="mailto:Hussein.abby-farrah@unep.org">Hussein.abby-farrah@unep.org</a>	Commented on draft Final Report
Institute of Marine Science, Tanzania	Christopher A. Muhando	<a href="mailto:muhando@ims.udsm.ac.tz">muhando@ims.udsm.ac.tz</a>	Received 22 February 2010
Aghulas & Somali Current LME Project	Lucy Scott	<a href="mailto:Lucy.scott@aslme.org">Lucy.scott@aslme.org</a>	Received 02 March 2010
Planning & Environment Division, Seychelles	Justin Prosper	<a href="mailto:j.prosper@env.gov.sc">j.prosper@env.gov.sc</a>	Received 09 March 2010

### Appendix C: List of documents reviewed and consulted

**Francis, J. and M. Ngoile (2000).** In-Depth Evaluation of Project EA/1100-98-03: Eastern African Coordinating Unit for the East African Action Plan of the Nairobi Convention and its Protocols. K0135053 030501. October 2000. 45 pages plus appendices.

**GEF Evaluation Office (2009).** Review of Outcomes to Impacts - Practitioner's Handbook. GEF Evaluation Office with Conservation Development Centre. Draft, June 2009. 33 pages. See [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)

**Maesschalck, G., J. Kinyamario & I. Lethbridge (1996).** Tripartite Evaluation of the UNEP Project 'Eastern African Coastal and Marine Environment Resources Database and Atlas (Phases I and II). Na. 96-7862 140896. June 1996. 22 pages plus appendices.

**UNEP (1992).** Project Concept: Eastern African Coastal and Marine Environment Resource Database and Atlas. UNEP Oceans and Coastal Areas Programme Activity Centre. August 1992. 18 pages.

**UNEP (1999).** Final Report. Phase One: Kenya. Eastern African Coastal and Marine Environment Resources Database and Atlas. Author: Salif Diop (Senior Program Officer, UNEP / DEIA&EW). 1999

**UNEP (2003).** Final Report. Phase Two: Mozambique, Tanzania, Comoros, Kenya, Seychelles. Eastern African Coastal and Marine Environment Resources Database and Atlas. Author: Johannes Akiwumi (Program Officer, GRID-Nairobi). 2003

**UNEP (2004).** Bali Strategic Plan for Technology Support and Capacity-building. Twenty-third session of the Governing Council, Global Ministerial Environment Forum. Nairobi, 21-25 February 2005. UNEP/GC.23/6/Add.1. 9 pages.

**UNEP (2008).** United Nations Environment Programme: Medium-term Strategy 2010–2013. Environment for Development. UNEP/GCSS.X/8. 30 pages

**Appendix D: Summary co-finance information and a statement of project expenditure by activity**

See Table 6 on page 32.

**Appendix E: Post-project risk assessment**

**A. Internal Risk (project management)**

Not relevant to terminal evaluation (project activities have been completed)

**B. External risks to sustainability**

Risk Factor	Indicator of Low Risk	Indicator of Medium Risk	Indicator of High Risk	Low	Medium	Substantial	Not Applicable	To be determined	Notes
<b>Political stability</b>	Political context is stable and safe	Political context is unstable but predictable and not a threat to project implementation	Very disruptive and volatile		✓				Variable from country to country. Mainly stable, but some indicators of volatility.
<b>Environmental conditions</b>	Project area is not affected by severe weather events or major environmental stress factors	Project area is subject to more or less predictable disasters or changes	Project area has very harsh environmental conditions		✓				Some countries at risk to cyclones and localized drought, but can largely be tracked and mitigated.
<b>Social, cultural and economic factors</b>	There are no evident social, cultural and/or economic issues that may affect project performance and results	Social or economic issues or changes pose challenges to project implementation but mitigation strategies have been developed	Project is highly sensitive to economic fluctuations, to social issues or cultural barriers		✓				Again variable across the region, in terms of GDP and other economic and social indicators. But generally sound.
<b>Capacity issues</b>	Sound technical and managerial capacity of institutions and other project partners	Weaknesses exist but have been identified and actions is taken to build the necessary capacity	Capacity is very low at all levels and partners require constant support and technical assistance		✓				Although the project resulted in large capacity gains, staff movement as well as variable buy-in to the project at senior levels suggests a medium risk to long-term sustainability.

## Appendix F: The expertise of the evaluation team

<b>1. Name:</b>	<b>Tim Huntington</b>		
<b>2. Date of birth:</b>	25 June 1962		
<b>3. Nationality:</b>	British		
<b>4. Civil status:</b>	Married (3 dependant children)		
<b>5. Contact details</b>	☎ +44 1590 610168; 📞 +44 7879 664988; ✉ <a href="mailto:tim@consult-poseidon.com">tim@consult-poseidon.com</a>		
<b>6. Education:</b>	<ol style="list-style-type: none"> <li>1. M.Sc. in Applied Fish Biology, Plymouth, 1986 - 1987</li> <li>2. B.Sc. (with Honours) in Biological Sciences (2:1), Portsmouth, 1980 - 1983</li> </ol>		
<b>7. Present position:</b>	Director of the <i>Poseidon Aquatic Resources Management Ltd</i>		
<b>8. Key qualifications</b> ( <i>linked to relevant experience overleaf, left click mouse to follow</i> )	<ul style="list-style-type: none"> <li>• <b><a href="#">Aquaculture</a></b>: strategic and technical development of sustainable aquaculture, inc. risk assessment, environmental certification and analysis.</li> <li>• <b><a href="#">Capacity development</a></b>: institutional analysis and human capacity development.</li> <li>• <b><a href="#">Coastal management &amp; EIA</a></b>: integration of fisheries and aquaculture with other coastal users through appropriate EIA and CZM approaches.</li> <li>• <b><a href="#">Ecosystems-based fisheries</a></b>: studies and technical assistance in developing an ecosystem approach to fisheries management and conservation.</li> <li>• <b><a href="#">Fisheries &amp; aquaculture certification</a></b>: policy studies on the role of certification in fisheries and aquaculture. Lead auditor for MSC fisheries, single and group chain of custody assessments. Auditor on the Seafish 'Responsible Fisheries Scheme', responsible for SE England (Poole to Boston).</li> <li>• <b><a href="#">Sector planning</a></b>: planning and policy development for fisheries and aquaculture.</li> <li>• <b><a href="#">Project design, monitoring &amp; evaluation</a></b>: programme design and ex-ante, mid-term and ex-post monitoring and evaluation in the fisheries sector</li> <li>• <b><a href="#">Specialist studies</a></b>: number of technical studies in fisheries and aquaculture.</li> <li>• Over 24 years experience, inc. 15 years in <b>team leader</b> and <b>lead auditor</b> roles.</li> </ul>		
<b>9. Other skills:</b>	<p>Computer literate – Word, Excel, Access, Project, Visio, FrontPage &amp; QuickBooks</p> <p>Training in stakeholder and gender issues in environmental impact (DFID, 1993)</p>		
<b>10. Professional bodies:</b>	Member and Director (2000 – 2004) of <i>CoastNET</i> (UK representative body of <i>EuroCoast</i> , a policy guidance organisation promoting sustainable coastal management)		
<b>11. Language skills</b>	<b>5 highest to 1 lowest</b>		
<i>Language</i>	<i>Reading</i>	<i>Speaking</i>	<i>Writing</i>
English	5	5	5
French	2	1	2
Arabic	0	2	0
Spanish	1	1	0

## 12. Specific experience:

### Aquaculture (see also [EIA](#))

[Return to heading](#)

- **Europe:** [Impact of aquaculture](#) (EC, 2009). Team leader of a study to evaluate the impact of aquaculture on the objectives of the Water Framework Directive and Marine Strategy Framework Directive.
- **Global:** [Aquaculture policy formulation](#) (FAO, 2008). Facilitator at an Expert Consultation in Rome. Presented a background briefing report and prepared draft guidelines for good practise.
- **Thailand:** [Risk assessment in aquaculture](#) (FAO, 2007). Facilitator and rapporteur at an Expert Consultation in Rayong in Thailand developing a risk assessment methodology for aquaculture in Asia
- **UK:** [Aquaculture strategy for the Solway Firth](#) (Solway Firth Partnership, 2006-2007). Team leader / coastal planner preparing an aquaculture strategy for the third largest inter-tidal habitat in the UK.
- **Europe:** [Aquaculture development in sensitive coastal environments](#) (EC, 2005-2006). Team leader of an impact assessment producing guidelines for aquaculture planning and management.
- **Europe:** [Aquaculture employment patterns in the EU](#) (EC / Framian, 2005). Assessment of employment in the aquaculture industry in the UK as part of a EU wide study.
- **UK:** [Sustainable fish feeds and Scottish aquaculture](#) (RSPB/ SWT / WWF, 2004). Review of raw material sources of fish feeds used in Scottish aquaculture and an assessment of their relative sustainability.
- **Europe:** [Forward study of Community aquaculture](#) (EC, 1999). Recommended environmental management measures for aquaculture that balance the continued growth of these important rural industries.
- **UK:** [Aquaculture potential in SW England](#) (SW Pesca Ltd, 1998). Provided EIA guidelines for future coastal and inland aquaculture consistent with coastal management approaches.
- **Norway and Iceland:** [Aquaculture study](#) (Private client, 1991). Investigation of markets for natural salmonid feed colorants. Determined mill buyer preferences as well as end user and legislative trends.
- **UK:** [Aquaculture planning](#) (Private client, 1989). Expert witness to support an objection to a Section 29 Nature Conservation Order which prevented the expansion and development of a trout farm.
- **UK:** [Farm Manager](#) (Kames Fish Farming Ltd, 1984 – 1985). Large marine and freshwater trout cage farm, responsible for day to day husbandry, production and management reporting, and production of fry.

### Capacity development and institutional strengthening

[Return to heading](#)

- **Kuwait:** [Capacity building for marine science & fisheries research in Kuwait](#) (KISR/Arthur D. Little, 2009). Reviewed the emerging research priorities & recommended a research programme to address these.
- **Ireland:** [Review of the fisheries control system](#) (DCMNR, 2007). Institutional Specialist restructuring the newly independent control agency to maximise efficient and effective regulation of marine fisheries.
- **Indonesia:** [Institutional assessment of fisheries and aquaculture in post-tsunami Aceh](#) (FAO, 2006). Analysed institutional arrangements for fisheries and aquaculture governance and

how they could be strengthened through better coordination and information flow, capacity building and other measures.

- **Latin America and Sub-Saharan Africa:** [Concept notes for capacity building in fisheries \(FAO, 2004\)](#). Preparation of concept notes for capacity building programmes to assist individuals, institutions and the wider enabling environment to manage sustainable development of fisheries.
- **Red Sea and Gulf of Aden:** [Marine conservation strategy \(PERSGA, 2004\)](#). Development of a long term strategy for the regional management of coastal conservation in the Red Sea and Gulf of Aden.
- **Global:** [Strategy for human capacity building in fisheries \(FAO, 2003-2004\)](#). Prepared the current FAO strategy on building human capacity in fisheries and marine ecosystem management.
- **Bangladesh: Third Fisheries Project (ODA/World Bank, 1989-1994)**. Long-term TA counterpart to the Project Director planning, monitoring and reporting of all project activities in fisheries management.

#### Coastal management & environmental impact assessment (EIA) [Return to heading](#)

- **UK:** [Review of industry, Government and other action to improve the sustainability of fish and shellfish production and consumption \(Defra, 2009 – 2010\)](#). Environmental product lifecycle analysis.
- **UK:** [Marine Protected Area \(MPA\) management in Scotland \(Scottish Government, 2008\)](#). Team leader of a study to integrate the OSPAR MPA commitments with the EC Habitat and Birds Directives.
- **UK:** [Impact of aquaculture in tourism \(Scottish Aquaculture Research Forum, 2008\)](#).
- **UK:** [Strategic Environmental Assessment - European Fisheries Fund \(Defra, 2007 – 2008\)](#). Team leader assessing the impacts and possible mitigation strategy of the UK EFF Operational Programme.
- **China:** [Pollution and coastal mariculture \(Homarus, 2007\)](#). Investigated the impact of alleged oil spill on coastal aquaculture in Shandong Province. Prepared preliminary production economic impact models.
- **Ireland:** [Environmental assessment of bottom mussel culture \(Irish Fisheries Board, 2007\)](#). Assessed the issues involved and recommended a strategic approach to minimise environmental impacts.
- **UK:** [Barnstaple river crossing fisheries impact study \(Halcrow, 2004\)](#). Assessed impact of a temporary causeway on migratory salmonids and determined appropriate mitigation during construction.
- **Japan:** [Seabed benthic recovery following ship grounding \(ITOPF / Homarus, 2003\)](#). Assessed the likely rate and nature of seabed recovery after the grounding of the car carrier *M.V. Hual Europe*.
- **UK:** [Regional EIA for Marine Aggregate Extraction \(East Channel Association / Haskoning, 2001 - 02\)](#). Strategic assessment of the impacts on fish stocks and fishing activities in the English Channel.
- **Libya:** [Fisheries impact of a fibre optic cable route \(Metoc PLC / Alcatel, 2001\)](#). Assessed impacts of cable laying and operation on fisheries and recommended alternative route and cable protection scenarios.
- **Sri Lanka: Coastal Resource Management Project (Macalister Elliott & Partners, 2000)**. MEP staff consultant preparing technical proposal for ADB's CRMP 'Institutional Strengthening' component.

- **China: Coastal Resource Conservation and Environmental Management (Asian Development Bank, 1999 - 2000).** Environmental monitoring specialist preparing a coastal resource plan for the Bohai Sea.
- **Bolivia: Development of artisanal fisheries and aquaculture (EC D-G 1B, 1998).** Assessed sustainability issues of fisheries and aquaculture. Designed and gave a 2-day course in EIA preparation.
- **China: Capacity building for integrated coastal management in the Northern South China Sea (UNDP, 1998)** Developed GIS-based zoning for fisheries and aquaculture development in 3 different sites.
- **Colombia: Environmental assessment of the shrimp farming industry (CENIACUA, 1997).** Assisted an industry body to prepare a strategic plan for minimising the environmental impacts of shrimp farming.
- **Belize: Environmental capacity assessment of cage aquaculture (CDC, 1997).** Determined the potential the site's carrying environmental capacity and impacts on its conservation and recreational values.
- **Egypt: Red Sea Coastal and Marine Resources Management Project (GEF/World Bank, 1998).** Improved the capacity to plan coastal management, esp. for tourism, fisheries and marine conservation.
- **Belize: Aquaculture in coastal zone management (GEF/UNDP, 1997).** Produced planning and EIA guidelines for aquaculture development. Gave training courses in EIA and sustainable aquaculture practices.
- **Zimbabwe: Aquaculture EIA (CDC, 1997).** Team leader of a detailed environmental assessment for a large (4 000 t per annum) tilapia cage culture project on Lake Kariba.
- **UK: River Test Fisheries EIA (Scott Wilson Kirkpatrick / Environment Agency, 1995).** Impact assessment of river engineering works on salmonid migration and proposed mitigation approaches.
- **Yemen: Fourth Fisheries Development (EC, 1995).** Conducted a rapid, semi-quantitative assessment of the marine resources, users and impacts of the southern Yemen coast.
- **Belize: Aquaculture EIA (Starich Inc./CDC, 1996 )** Team leader preparing an EIA for a major shrimp and fin fish farming project, inc. an environmental mitigation and management plan.

#### Ecosystem-based fisheries

[Return to heading](#)

- **Bangladesh: [Assessment of small-scale fisheries](#) (WorldFish, 2007).** Assess the current status of coastal SSF in order to develop a code of conduct for 'resilient fisheries' and recommend further courses of action.
- **Global: [Review of abandoned, lost and discarded fishing gear](#) (FAO, 2007).** Assessment of the magnitude, impacts and success of efforts to reduce ALDFG and recommendations for new approaches.
- **Europe: [Use of feed fish in aquaculture feeds and the implications for food security and poverty alleviation](#) (FAO, 2006 - 07).** Assessed likely future usage patterns to determine their environmental and socio-economic consequences and recommended actions to mitigate these.
- **Europe: [Preparation of a project brief for the conservation and sustainable use of the Mediterranean](#) (FAO, 2006).** Project brief for a jointly co-financed (FAO, UNEP-MAP, RAC/SPA & WWF-MedPo) pan-Mediterranean MPA network and sustainable fishing programme for successful submission to GEF.

- **Global:** [Strategy for EC fisheries research in third country waters](#) (EC DG Fish, 2005-2006). Prepared an EC strategy and action plan framework for research contributing to sustainable fisheries.
- **EU:** [Impact assessment of 'ghost fishing'](#) (EC DG Fisheries, 2005). Assessed the environmental impacts of ghost fishing and specified mitigating measures following consultation with industry groups.
- **Sub-Saharan Africa:** [Selection criteria for large marine ecosystem projects](#) (FAO/GEF/World Bank / WWF, 2005). Evaluation framework for projects funded by the Sustainable Fisheries Investment Fund.
- **UK:** [Marine BAP for SE England](#) (Hampshire & Isle of Wight Wildlife Trust, 2004). Review of current regional marine biodiversity action planning approaches and their appropriateness for SE England.
- **Global:** [Sustainability of industrial fisheries used for fish meal & fish oil](#) (RSPB, 2004). Identified criteria to measure the sustainability of industrial fisheries used for reduction to fishmeal and fish oil.
- **Europe:** [Assessment of environmental variables for inclusion in the CFP](#) (EC, 2003-04). Determined the environmental variables should be included in EU Member State data collection programmes.
- **West Africa:** [Review of fishing activity the status of fish stocks in the high seas areas of CECAF](#) (FAO, 2003). Assessment of the fish stock status in the high seas areas of the FAO CECAF region.
- **Bangladesh:** [IV Fisheries Project - Aquatic Resources Development, Management and Conservation](#) (GEF / World Bank, 2001 - 2004). Biodiversity studies of coastal ecosystems to provide essential information for formulating future fisheries development policy, esp. sustainable shrimp aquaculture.
- **Global:** [Assessment of world fisheries by-catch issues](#) (FAO, 2002). Examined regional programmes aimed at the reduction of discards to assist address key environmental, social and economic issues.
- **PERSGA & ROPME:** [Strategy for biodiversity conservation and MPA development](#) (EC, 2001) Prepared a strategy for biodiversity conservation & MPAs for key habitats in the Red Sea & Arabian Gulf.
- **Study on the valuation and restoration of biodiversity damage for environmental liability** (EC, 2000). Assisted establish an environmental liability regime to ensure the restoration of damaged environments.
- **Yemen:** [Socotra biodiversity conservation](#) (Global Environment Facility / UNDP, 1996). Team leader preparing the marine elements of a biodiversity conservation programme for GEF funding.

## Fisheries and aquaculture certification

[Return to heading](#)

- Assessments under the [Marine Stewardship Council \(MSC\)](#) standard for responsible fisheries (with Moody Marine) include:
  - **Canada:** [Scotia-Fundy haddock fishery](#) (GEAC, 2009). Principle 2 (ecosystem impacts).
  - **Maldives:** [Pole & line and handline tuna fisheries](#) (2009). Lead assessor on pre- and full assessments.
  - **UK:** [MSC assessments of four North Sea fisheries](#) (2008 – present). Lead assessor on Scottish haddock & *Nephrops* fisheries, the southern North Sea *Nephrops* fishery & responsible for Principle 2 (ecosystem impacts) on the Skagerrak, Kattegat & Norwegian Deeps prawn fishery.

- **Kenya, Tanzania and Uganda:** [Pre-assessment of a major Lake Victoria fishery](#) (Lake Victoria Fisheries Organisation, 2008). Determined the potential for certification against the MSC principles.
- **Western & Central Pacific:** [Pre-assessment of tuna fisheries](#) (FFA, 2007). Lead assessor.
- **UK:** [NESFC sea bass and lobster fisheries](#) (NESFC, 2006 - 2007). Team leader
- **UK:** [Hastings' Dover sole & pelagic fisheries](#) (2004). Responsible Principle 2' e.g. ecosystem impacts.
- **UK:** [North Sea herring fishery](#) (PFTA, 2003). Responsible 'Principle 2' e.g. ecosystem impacts.
- **UK: Design of a decision-making tool for sustainable fish sourcing (private client, 2008).** Design of a sustainable (ecology / economic / social) purchasing tool for a major UK multiple retailer.
- **Global. [Summary of experience of small-scale fisheries with environmental and social certification schemes](#) (FAO, 2007)** Design of case studies to examine the opportunities, constraints, and cost and benefits to small-scale fisheries of certification and labelling schemes under varied conditions.
- **Bangladesh: [Quality and environmental certification of shrimp farming](#) (DFID, 2002).** Examined the potential for environmental certification (inc. organic) of the coastal shrimp farming industry.
- **Global: [Sustainable Fisheries Certification – Chain of Custody Issues](#) (Marine Stewardship Council, 2002).** Position papers for the MSC Technical Advisory Board to update the 'chain of custody' audit process.
- **Global: [Feasibility study for the environmental certification of aquaculture](#) (Marine Stewardship Council, 2001).** Assessed the demand and scope for the environmental certification of aquaculture.
- **World-wide: Sustainable Tuna Sourcing Study (Private client, 2001).** Prepared environmental guidelines for the sourcing of sustainable supplies of fresh yellowfin tuna for the UK multiple retail market.
- **UK: Competitiveness of fisheries products (EC, 1991).** Evaluated opportunities for ACP products, purchaser requirements and the ability of ACP producers to meet product quality and price criteria.
- **UK: Seafish 'Responsible Fisheries Scheme'.** Audited over 49 vessels throughout South-East England (Weymouth to King's Lynn) to this environmental and quality standard since 2007.
- **Global: MSC Chain of custody audits (Private clients, 2001 – present).** Conducted 'chain of custody' audits to ensure that materials are derived from fisheries certified to the MSC responsible fisheries standard. Clients have included FalFish, Migros, Pret a Manger, Le Maison auz Quat' Saison.

## Project development and evaluation

[Return to heading](#)

- **Global: [Interim evaluation on establishing financial measures for the implementation of the CFP 2007-2013](#) (EC 2010).** Poseidon project management and responsible for external relations elements.
- **East Africa: [Terminal evaluation of the Eastern African Coastal and Marine Environment Resource Database and Atlas](#) (UNEP, 2010).** Includes visits to Nairobi, Mombasa and the Comoros.
- **Europe: Shadow evaluation of the EC's FIFG 2000-2006 expenditure programme (Pew Charitable Trusts, 2009 – 2010).** Providing core team expertise on environmental and social impacts.

- **Indian Ocean:** [Mid-term evaluation of the Regional Tuna Tagging Project](#) (EC, 2009).
- **Vietnam:** [Mid-term Review of the Fisheries Sector Programme Support, Phase II](#) (DANIDA, 2008). Fisheries specialist on a three person team assessing progress to date and recommending further actions.
- **Global:** [Impact Assessment of the EC Shark Action Plan](#) (EC, 2008). Team leader of a multi-disciplinary team evaluating the environmental, economic and social impacts of the EC IPOA for sharks.
- **Global:** [ACP Fish II](#) (EC, 2006). Prepared a major fisheries development programme for the ACP countries to mainstream fisheries sector planning into regional economic planning and trade development.
- **Vietnam:** [Review of the Fisheries Management Information System](#) (DANIDA, 2006). Evaluated a fisheries information system developed under Danida's Fisheries Sector Programme Support initiative.
- **Mauritius and Tanzania:** [Evaluation of Fisheries Agreements with the EU](#) (EC DG Fish, 2004-06). Study evaluating the marine fisheries in order to assist the EC in preparing a new fisheries partnership agreements based on the resource sustainability, environmental and social impacts of EU fleet access.
- **Red Sea and Gulf of Aden:** [Project Completion Evaluation](#) (PERSGA, 2005). Evaluated the success of 8 coastal conservation pilot projects, based on LFAs prepared through earlier assistance in 2003.
- **Vietnam:** [Fisheries Sector Programme Support II](#) (DANIDA, 2005). Pre-appraisal of the 2nd phase of a major fisheries sector development project to make recommendations for future Programme support.
- **Yemen:** [Fish Handling, Safety and Quality Improvement Project](#) (WTO, 2005). Prepared a project to provide SPS-related capacity-building assistance to private sector fish processing companies.
- **Global:** [Strategic Partnership for a Sustainable Fisheries Investment Fund in the Large Marine Ecosystems of Sub-Saharan Africa](#) (FAO, 2005). Prepared programme monitoring and evaluation criteria based on the objectives of the Strategic Partnership and the WSSD poverty reduction and fisheries targets.
- **Yemen:** [Fisheries sector project preparation](#) (EC DG Development, 2005). Prepared technical and financing requirements for fisheries information system development and seafood quality control projects.
- **UK:** [Mid-term evaluation of FIFG expenditure](#) (DEFRA, 2003). Review of the FIFG expenditure to satisfy spending criteria for fishing industry grants.
- **Regional:** [Evaluation of the NAFO onboard observer programme](#) (EC, 2002). Evaluated the cost-benefits of providing of scientific data through the EC on-board observer programme for the NW Atlantic.

## Sector and policy planning

[Return to heading](#)

- **Sultanate of Oman:** [Outline review of critical issues affecting the fisheries sector](#) (World Bank, 2009). Briefing paper on the current status, opportunities and challenges to Oman's fisheries sector.
- **UK:** [An Economic Approach to Long Term Reform of Access to Fisheries for the Inshore Fleet](#) (Defra, 2009). Expertise in England's inshore fisheries fleet, how it operates and potential for development.

- **UK: [Developing Scottish 'Inshore Fisheries Group' Management Plans](#) (Scottish Government, 2009).** Developed management plans that address high level objectives based on locally determined actions.
- **Mauritius: [Port Louis Master Plan Study](#) (MPA/Halcrow, 2007).** Forecast fisheries traffic into Port Louis and identified the future needs for quay & land-based infrastructure for fish landing and processing.
- **UK: [Fisheries development strategy](#) (East of England Development Agency, 2006).** Examined aquaculture and recreational fishing for a fisheries development strategy for the East of England region.
- **UK: [NW Seafood regional study](#) (NW Seafoods Ltd, 2005).** Cost-benefit analysis of options for the refurbishment or rebuilding of the market auction hall at Fleetwood in the NW of England.
- **Europe: [Design of a Community Fisheries Control Agency](#) (DG Fisheries, 2004).** Assessment of the benefits/costs of the CFCA for the monitoring, control and surveillance (MCS) of EU fishing activities.
- **Red Sea and Gulf of Aden: [Strategic Action Plan](#) (PERSGA Secretariat, 2003).** Ran a regional training workshop on monitoring and evaluation methodologies for biodiversity conservation as part of the SAP.
- **Uganda: [Business plan for the Kajjansi Aquaculture R&D Centre](#) (DFID, 2003).** Strategic Business Plan including a research policy framework, funding options and a management plan for the research centre.
- **UK: [St. Ives harbour enhancement and preservation study](#) (Penwith District Council, 2002).** Proposed ways of improving the harbour, supporting management and dealing with conflict management issues.
- **UK: [Fleetwood and Whitehaven Fishing Regeneration Study](#) (Gov. of the North West, 2002).** Developed a sector plan in the face of declining stocks as well as rapid social and economic change.
- **British Indian Ocean Territory: [Feasibility for resettling the Salomon and Peros Banhos Atolls](#) (FCO, 2001 - 2002).** Assessed the fisheries & aquaculture potential of the Chagos Archipelago.
- **Sultanate of Oman: [Khasab Harbour Development](#) (WS Atkins, 2001).** Prepared a fisheries sector appraisal for the Musandam region for a multidisciplinary study of the development of Khasab Harbour.
- **Yemen: [Mid-term development plan for the Socotra Archipelago](#) (EC, 1999).** Prepared a coastal and fisheries development plan for the next 10 years for this unique archipelago off the Horn of Africa.
- **UK: [Economic evaluation of inland fisheries](#) (UK Environment Agency, 1998-2001).** Directed a project designed to place an economic value on the UK's freshwater fisheries.
- **UK: [Fleetwood fishing industry strategy](#) (Wyre Borough Council, 1999).** Assessed port waste, environmental, health and safety management systems to recommend management and control systems.
- **Sultanate of Oman: [10 Year development plan for fisheries](#) (Government, 1999).** In consultation with the fish processing industry, prepared a long-term strategy for market development.

- **Nigeria: [Fisheries resettlement study](#) (Private client, 2008).** Assessed the impact of resettling coastal fisheries communities as a result of a LNG development.
- **Global: [Review of the use of Spirulina for human and animal feed use](#) (FAO, 2006).** Prepared a FAO Technical Paper on the use of the unicellular *Spirulina* algae as a nutritional source for both humans and fish.
- **Scotland: [Fish waste utilisation study](#) (Scottish Environment Protection Agency, 2004).** Examined options for the disposal and recovery of waste materials from Scottish aquaculture and fish processing.
- **Sultanate of Oman: [Sardine drying improvement](#) (Government, 1991).** Analysed the domestic and export markets for dried sardines and determined of the cost-effectiveness of up-grading fish drying technology.

### 13. Professional Experience Record

2001 to date	Founder and director of Poseidon Aquatic Resource Management Ltd, UK
1994 to 2001	Director and Environmental Project Coordinator, Macalister Elliott and Partners Ltd, UK
1986 to 1994	Senior consultant with Fisheries Development Ltd, UK
1987 to 1989	Processing plant manager, United Gulf Fisheries, Sultanate of Oman
1984 to 1985	Trout farm manager, Kames Fish Farming Ltd, UK

### 14. Other:

- PADI Open Water Diver Certificate
- Experienced report editor and compiler.
- Formal computer training workshops in Word and Excel for project counterparts.
- Interests: travelling, nature conservation & running.

### 15. Peer reviewed publications:

- Hedley, C & **T. Huntington** (2009). [Regulatory and Legal Constraints for European Aquaculture](#). Study Directorate General for Internal Policies Policy Department B: Structural & Cohesion Policies, European Parliament. 102p.
- Macfadyen, G. and **T. Huntington** (2009). [Certification and Sustainable Fisheries](#). *UNEP Division of Technology, Industry and Economics*. 86 p.
- Macfadyen, G., **T. Huntington** and R. Cappell (2009). [Abandoned, lost and otherwise discarded fishing gear](#). *UNEP Regional Seas Reports and Studies*, No. 185; *FAO Fisheries and Aquaculture Technical Paper*, No. 523. Rome, UNEP/FAO. 115 p.
- Habib, M.A.B.; Parvin, M.; **Huntington, T.C.** and Hasan, M.R. (2008). [A review on culture, production and use of spirulina as food for humans and feeds for domestic animals and fish](#). *FAO Fisheries and Aquaculture Circular*. No. 1034. Rome, FAO. 33p.
- Wilson, G., A.R.G. Price, **T.C. Huntington** and S.C. Wilson (2003). Environmental status of Yemen's Gulf of Aden coast determined from rapid field assessment and satellite imagery. *Aquatic Ecosystem Health and Management*, 6(2): 119-129

## Appendix G: The Eastern African Action Plan (the Nairobi Convention)

Governments of the Eastern African Region have recognized the importance of their marine and coastal areas and at the same time, the environmental threats that they face. In their endeavor to address the problem, the Governments came together within the framework of UNEP's Regional Seas Program. After a detailed preparatory process, the Conference of Plenipotentiaries on the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region took place in Nairobi, in June 1985, and adopted the following instruments:

- **Action Plan** for the Protection, Management and Development of the marine and Coastal Environment of the Eastern African Region;
- **Convention** for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (which entered into force in 1996) and its two Protocols:
- **Protocol** concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region;
- **Protocols** concerning Co-operation in Combating Marine Pollution in Cases of Emergency; and,
- Four conference **Resolutions** dealing with programme implementation and with institutional and financial arrangements.

The agencies involved in the implementation of the Action Plan include UNDP, ECA, FAO, UNESCO, IOC, WHO, WMO, IMO, UNIDO, IAEA, IUCN, and UNEP.

The Governments decided that UNEP should act as the Secretariat of both the Action Plan and the Convention. This role has now been transferred to the Eastern African Regional Coordinating Unit which became operational in January 1997.

The above decisions form the basis for a programme of activities comprising:

- a. Protection and management of marine and coastal areas (EAF/5)
- b. Assessment and control of pollution in the coastal and marine environment (EAF/6)
- c. Contingency planning for marine pollution emergencies (EAF/7)
- d. Addressing problems of coastal erosion and siltation (EAF/10)
- e. Environmental impact assessment (EAF/11)
- f. Coastal and marine environment resources database and atlas (EAF/14)*

### *The First Meeting of the Contracting Parties*

After the entering into force of the Nairobi Convention in May 1996, the first meeting of the contracting parties of the Nairobi Convention was convened by the Executive Director of UNEP and hosted by the Government of Seychelles in Mahé, from 17 to 18 March 1997. The meeting formally approved the establishment of a Regional Coordinating Unit for the Eastern African Action Plan (EAF/RCU). The offer made by the Government of Seychelles to host the EAF/RCU on St. Anne island, Victoria, was unanimously accepted by the Contracting Parties. Mr. R. Congar, UNEP senior Program Officer, was appointed the EAF/RCU interim Coordinator.

The first Meeting of the Contracting Parties was conducted in an unmistakable framework of willingness towards regional cooperation and regional integration in matters related to the sustainable development of the marine and coastal environment. The Contracting Parties approved the 1997-1998 workplan for the EAF/RCU, and decided that an ad hoc technical and legal working group be established to consider the feasibility and modalities of updating the Nairobi Convention and its related Protocols. The Contracting Parties further welcomed the interest expressed by South Africa to join the Nairobi Convention and requested the Secretariat to facilitate the process of

accession. During the meeting, the Secretariat received very clear indications from member States, and international organizations alike, of their commitment to formalize collaboration both at the programmatic and the project level. The European Union in particular, through its “Appui aux programmes environnementaux dans les pays membres de la Commission de l’Océan Indien (COI)”, has requested for a close collaboration with the ongoing UNEP projects EAF/5 Protection and Management of the Marine and Coastal Areas of the Eastern African Region, and EAF/14 Eastern African Coastal and Marine Environment Resources Database and Atlas. The latter was designed to implement part of Activity 4.4.3 “Multi-sectoral survey and assessment of pilot sites”, of the EAF/5 project, dealing with the survey of base-line data, development and establishment of a computerized database system, training of experts in GIS, image processing and the management and use of the computerized database system and the mapping of the acquired data.

### ***The Arusha Resolution***

The Arusha Resolution on Integrated Coastal Zone Management in Eastern Africa including Island States (April 1993) recognized the importance of the Nairobi Convention on the Protection, Management and Development of the Coastal and Marine Environment in Eastern African Region and related protocols for the regional follow-up of this resolution; and encouraged Governments, which had not done so, to decide upon their ratification or accession in the shortest possible time. Following the deposit of the instrument of accession by Tanzania in 1996, and in accordance with Article 29(2) of the Convention, the Convention entered into force on 30 May 1996.

The present project proposal is in line with the Arusha Resolution that called for, amongst others, the importance for the countries of the Eastern African Region to give emphasis to the sustainable development and integrated management of coastal areas for the primary benefit of coastal communities. The Resolution more specifically calls for:

- strengthening management capabilities of relevant agencies, particularly at the local level, for effective management of the overall environment, especially coastal areas,
- investing in public education and awareness programmes to create a broader and stronger constituency for proper management of coastal areas, and
- provide information, including documentation on indigenous knowledge relevant to coastal development and management, particularly in providing a diagnostic profile of the coastal areas; resource valuation and environmental accounting; identification and analysis of resource use conflicts and their resolutions; policy and management options as well as investment opportunities.

The full text can be accessed at:

[http://www.unep.org/NairobiConvention/The\\_Convention/index.asp](http://www.unep.org/NairobiConvention/The_Convention/index.asp)