

## GEF PROJECT BRIEF

### 1. Identifiers

<b>Project Number</b>	<i>Implementing Agency Project Number not yet assigned</i>
<b>Project Title</b>	Combating living resource depletion and coastal area degradation in the Guinea Current LME through ecosystem-based regional actions: Phase 1
<b>Duration</b>	Three years, beginning June 2004; phase 2 to be requested in GEF-4
<b>Implementing Agencies</b>	United Nations Development Programme (UNDP) / United Nations Environment Programme (UNEP)
<b>Executing Agency</b>	United Nations Industrial Development Organization (UNIDO)
<b>Requesting Countries</b>	<i>Regional:</i> Angola, Benin, Cameroon, Congo, Democratic Republic of the Congo, Côte d'Ivoire, Gabon, Ghana, Equatorial Guinea, Guinea, Guinea-Bissau, Liberia, Nigeria, Sao Tome and Principe, Sierra Leone and Togo The countries are eligible under paragraph 9(b) of the GEF Instrument. The Strategic Action Programme is consistent with the relevant provisions of regional and global Conventions relating to International Waters to which the countries are signatories and/or contracting parties.
<b>Eligibility</b>	
<b>GEF Focal Areas</b>	International Waters with relevance to Biological Diversity
<b>GEF Programming Framework</b>	OP #9: Integrated Land and Water Component

### 2. Summary:

This project proposal “Combating Living Resources Depletion and Coastal Area Degradation in the Guinea Current LME through Ecosystem-based Regional Actions: Phase 1” has a primary focus on the priority problems and issues identified by the 16 GCLME countries that have led to unsustainable fisheries and use of other marine resources, as well as the degradation of marine and coastal ecosystems by human activities. The long-term development goals of the project are: 1) recover and sustain depleted fisheries; 2) restore degraded habitats; and 3) reduce land and ship-based pollution by establishing a regional management framework for sustainable use of living and non-living resources in the GCLME. Priority action areas include reversing coastal area degradation and living resources depletion, relying heavily on regional capacity building. The project focuses on nine demonstration projects, designed to be replicable and intended to demonstrate how concrete actions can lead to dramatic improvements. Sustainability will derive from this improved capacity, strengthening of national and regional institutions, improvements in policy/legislative frameworks, and the demonstration of technologies and approaches that will lead to improved ecosystem status. The priority problems of resource depletion, loss of biodiversity (including habitat loss and coastal erosion), and land- and sea-based pollution are all addressed through the interventions proposed here. The project has five main components with associated objectives identified by the root cause analysis carried out during the project preparation process: *i) Finalize SAP and develop sustainable financing mechanism for its implementation; ii) Recovery and sustainability of depleted fisheries and living marine resources including mariculture; iii) Planning for biodiversity conservation, restoration of degraded habitats and developing strategies for reducing coastal erosion; iv) Reduce land and sea-based pollution and improve water quality; and v) Regional coordination and institutional sustainability.* The activities to be undertaken will complement other projects in the region to provide a strong foundation for the long-term sustainable environmental management of the GCLME. A Transboundary Diagnostic Analysis (TDA) and preliminary Strategic Action Programme (SAP) have been prepared, serving as the basis for preparation of this project proposal. The full Global Environment Facility (GEF) project will update the TDA as part of a continuing process, and will endorse a regionally agreed SAP, following clarification of some aspects of the environmental status of the region, and initiate SAP implementation.

### **3. Costs and Financing (Million US \$)**

		US\$
<b>GEF:</b>	Project (Phase 1: GEF 3)	: \$12.133
	<u>PDF – B</u>	: <u>\$ 0.637</u>
	<b>Subtotal GEF</b>	: \$12.770

#### **Co-Financing \*:**

Governments (cash and in-kind)	\$29.861
US NOAA	: \$0.6
UNDP (in cash and kind)	: \$0.1
UNEP (in cash and kind)	: \$0.13
Norway	: \$2.085
**Private Sector	: \$0.6
<b>Subtotal Co-financing</b>	\$33.871
	:
<b>Total Project Cost</b>	<u>\$46.146</u>

\* Co-finance data represents total commitments over planned overall 5 year project time frame, Phases 1 (3 yrs, GEF-3) and 2 (2 years, GEF-4).

### **4. Associated Financing (Million US \$):**

Government baseline *	: \$799.986
<b>TOTAL</b>	: <u><u>\$846.132</u></u>

\* Baseline data represents total commitments over planned overall 5 year project time frame, Phases 1 (3 yrs, GEF-3) and 2 (2 years, GEF-4).

\*\* Discussions still ongoing with Oil Companies in Nigeria and other Private Sector Organizations for co-funding of the Nigeria and Ghana demonstration projects. UNIDO-ICS will inform of its financial contributions.

### **5. Operational Focal Point Endorsement(s):**

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<i>Benin:</i> Mr. Pascal ZOUNVEOU YAHA, GEF OFP Ministere de l'Environnement, de l'Habitat et de l'Urbanisme, Cotonou	12 August 2003
<i>Cameroon:</i> Ms. Justin NANTCHOU NGOKO Ministry of Environment and Forestry, Yaounde	12 September 2003
<i>Congo:</i> Mr. Joachim OKOURANGOULOU, Directeur Général de l'Environnement, Ministère de l'Economie Forestière et de l'Environnement, Brazzaville	4 August 2003
<i>Congo Dem. Rep.:</i> Mr. Vincent KASULU SEYA MAKONGA Directeur de Developpement Durable, Ministère des Affaires Foncières, Environnement et Tourisme, Kinshasa/Gombe	15 August 2003
<i>Cote d'Ivoire:</i> Mrs. Alimata KONE, Directress Adjoint Caisse Autonome d'Amortissement, Abidjan	10 September 2003
<i>Gabon:</i> Mr. Chris MOMBO NZATSI, Directeur Général de l'Environnement, Ministère de l'Economie forestière, des eaux, de la pêche, chargé de l'environnement et de la	8 August 2003

	protection de la nature, Libreville	
<i>Ghana:</i>	Mr. Edward OSEI NSEKYIRE, Chief Director Ministry of Environment, Science and Technology, Accra	31 July 2003
<i>Guinea Bissau:</i>	Mme. Matilde da Conceicao Gomes Lopes Directrice Général de l'Environnement, Ministère des Ressources Naturelles et de l'Environnement	11 September 2003
<i>Guinea:</i>	Mme. Kadiatou N'DIAYE, GEF Focal Point Manager, National Environment Directorate, Conakry	6 August 2003
<i>Guinea Equatorial:</i>	HE Don Fortunato OFA MBA Ministro, Ministro de Pesca y Medio Ambiente, Malabo	09 April 2003
<i>Liberia:</i>	Mr. Fodee KROMAH, Executive Director GEF Focal Point, National Environmental Commission of Liberia, Monrovia	30 July 2003
<i>Nigeria:</i>	Mr. Ayodele Adekunle OLOJEDE, GEF Focal Point Federal Ministry of Environment, Abuja	8 August 2003
<i>Sao Tome &amp; Principe:</i>	Mr. Lourenco MONTEIRO DE JESUS GEF Focal Point, INDES, Sao Tome	13 August 2003
<i>Sierra Leone:</i>	Mr. Stephen Cyril James JUSU, Director GEF Focal Point, Environment Protection Department Ministry of Lands, Country Planning and the Environment, Freetown	12 August 2003
<i>Togo:</i>	Mr. Yao Djiwomu FOLLY, Ing. Des Travaux des Eaux et Forets, Directeur de la Protection et du Controle de l'Exploitation de la Flore, Ministère de l'Environnement et des Ressources, Lome	7 August 2003

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## ACRONYMS

ACOPS	Advisory Committee for the Protection of the Seas
AfDB	African Development Bank
APR	Annual Programme/Project Report
BCLME	Benguela Current Large Marine Ecosystem
CBD	Convention on Biological Diversity
CBO	Community Based Organization
CCLME	Canary Current Large Marine Ecosystem
CECAF	Fishery Committee for the Eastern Central Atlantic
CEDA	Centre for Environment and Development in Africa
COMARAF	Training and Research for the Integrated Development of African Coastal Systems
CPUE	Catch per Unit Effort
CTA	Chief Technical Advisor
DIM	Data and Information Management
EIA	Environmental Impact Assessment
EQO	Environmental Quality Objective
ESI	Environmental Status Indicator
FAO	Food and Agriculture Organization of the United Nations
FEDEN	Foundation for Environmental Development and Education in Nigeria
GCC	Guinea Current Commission
GCLME	Guinea Current Large Marine Ecosystem
GEF	Global Environment Facility
GIS	Geographic Information System
GIWA	Global International Waters Assessment
GOG-LME	Gulf of Guinea Large Marine Ecosystem
HAB	Harmful Algal Bloom
IA	Implementing Agency
ICAM	Integrated Coastal Areas Management
ICARM	Integrated Coastal Area and River Basin Management
ICS-UNIDO	International Centre for Science and High Technology - UNIDO
ICZM	Integrated Coastal Zone Management
IGCC	Interim Guinea Current Commission
IMC	Inter-Ministerial Committee
IMO	International Maritime Organization
IOC-UNESCO	Intergovernmental Oceanographic Commission of UNESCO
IUCN	The World Conservation Union
IW:LEARN	International Waters (IW) Learning, Exchange and Resource Network Program
LBA	Land-Based Activities
LME	Large Marine Ecosystem
LOICZ	Land-Oceans Interactions in the Coastal Zone
M&E	Monitoring and Evaluation
MOU	Memorandum of Understanding
MPPI	Major Perceived Problems and Issues
NAP	National Action Plan
NEAP	National Environmental Action Plan
NEPAD	The New Partnership for Africa's Development
NFP	National Focal Point
NGO	Non-governmental Organization
NPA/LBA	National Programme of Action/Land-Based Activities
NOAA	National Oceanic and Atmospheric Administration

OP	Operational Program
PCU	Project Coordination Unit
PDF	Project Development Facility
PI	Process Indicator
PIR	Project Implementation Review
PPER	Project Performance and Evaluation Review
PSC	Project Steering Committee
RCU	Regional Coordination Unit
RPA/LBA	Regional Programme of Action/Land-Based Activities
SAP	Strategic Action Programme
TDA	Transboundary Diagnostic Analysis
UNDESA	United Nations Department of Economic and Social Affairs
TPR	Tri-Partite Review
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development
WACAF	West and Central African Action Plan
WHO	World Health Organization
WSSD	World Summit on Sustainable Development

## TABLE OF CONTENTS

<b>BACKGROUND AND CONTEXT – BASELINE COURSE OF ACTION.....</b>	<b>2</b>
INTRODUCTION.....	2
GEF PROGRAMMING CONTEXT .....	8
REGIONAL PROGRAMMING CONTEXT .....	12
NATIONAL PROGRAMMING CONTEXT .....	15
SYSTEM BOUNDARIES .....	16
MAJOR PERCEIVED PROBLEMS AND ISSUES .....	16
<b>RATIONALE AND OBJECTIVES (ALTERNATIVE COURSE OF ACTION) .....</b>	<b>20</b>
<b>PROJECT OUTCOMES/COMPONENTS .....</b>	<b>22</b>
<b>END OF PROJECT SITUATION (EXPECTED RESULTS).....</b>	<b>30</b>
<b>TARGET BENEFICIARIES .....</b>	<b>37</b>
<b>RISKS AND SUSTAINABILITY .....</b>	<b>38</b>
<b>GEF ELIGIBILITY .....</b>	<b>40</b>
<b>STAKEHOLDER PARTICIPATION.....</b>	<b>40</b>
<b>PROJECT IMPLEMENTATION, INSTITUTIONAL FRAMEWORK AND NATIONAL AND REGIONAL INSTITUTIONS.....</b>	<b>41</b>
<b>INCREMENTAL COSTS AND PROJECT FINANCING.....</b>	<b>42</b>
<b>MONITORING AND EVALUATION.....</b>	<b>43</b>
<b>LESSONS LEARNED AND TECHNICAL REVIEWS.....</b>	<b>46</b>
<b>LIST OF ANNEXES .....</b>	<b>47</b>
ANNEX A    INCREMENTAL COST ANALYSIS	48
ANNEX B    LOGFRAME MATRIX	81
ANNEX C    STAP ROSTER TECHNICAL REVIEW	102

## LIST OF FIGURES

Figure 1. Location map for the GCLME, indicating major currents .....	2
Figure 2. Satellite productivity map of GCLME/ Benguela LME region.....	3
Figure 3. Location map for the GCLME.....	3
Figure 4. Map of distribution of mangroves in the Niger Delta.....	4
Figure 5. MPPI to SAP Linkage .....	21
Figure 6. SAP to Project Brief Linkage .....	23

## LIST OF TABLES

Table 1: Ongoing or planned GEF regional projects related to the GCLME .....	10
Table 2. MPPIs and Their Impacts in the GCLME.....	188
Table 3: Components and Phases of the Project .....	31
Table 4. Workplan and Timetable.....	34
Table 5: Summary of Project Financing (US\$ million) .....	42
Table 6: Summary of Baseline and Incremental Costs and Domestic Environmental Benefits .....	433
Table 7. M&E Activities, Timeframes and Responsibilities .....	45

## BACKGROUND AND CONTEXT – BASELINE COURSE OF ACTION

### INTRODUCTION

1. The shared transboundary waters off the coast of western Africa are defined by the Guinea Current Large Marine Ecosystem (GCLME) that extends from Bissagos Island (Guinea Bissau) in the north to Cape Lopez (Gabon) in the south. The oceanography of the waters of the Democratic Republic of Congo, Republic of Congo and Angola is influenced to a considerable extent by the Guinea Current thus giving ample justification for including the three countries in the Guinea Current Large Marine Ecosystem (GCLME). Figure 1 shows the area of the Project, along with the major oceanographic features. The south equatorial current (SEC) forms a logical boundary between the Benguela Current LME to the South and the GCLME to the north. A similar diagram based on averaged satellite-derived ocean productivity estimates similarly demonstrates the SEC as the logical boundary between the two LMEs.

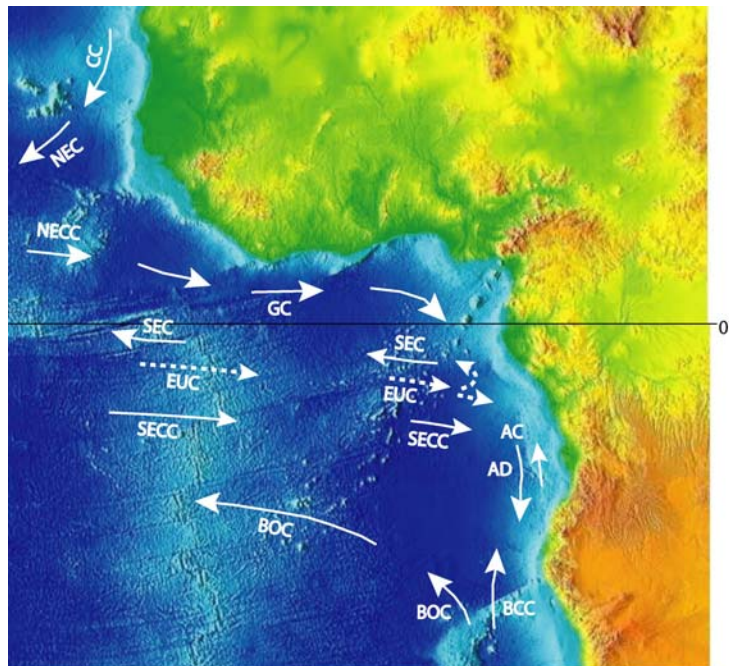


Figure 1 : Location map for the GCLME, indicating major currents

2. Therefore, the GCLME stretches from the coast of Guinea Bissau to Angola, covering sixteen countries (Angola, Benin, Cameroon, Congo, Democratic Republic of the Congo, Côte d'Ivoire, Gabon, Ghana, Equatorial Guinea, Guinea, Guinea-Bissau, Liberia, Nigeria, Sao Tome and Principe, Sierra Leone and Togo: see Figure 3). It embodies some of the major coastal upwelling sub-ecosystems of the world and is an important center of marine biodiversity and marine food production. Characterized by distinctive bathymetry, hydrography, chemistry, and trophodynamics, the Guinea Current System represents a Large Marine Ecosystem (LME) ranked among the most productive coastal and offshore waters in the world with rich fishery resources, oil and gas reserves, precious minerals, a high potential for tourism and serves as an important reservoir of marine biological diversity of global significance. The Guinea Current therefore represents a distinct economic and food fish security source with the continuum of coastal and offshore waters together with the associated near shore watersheds. Over-exploitation of fisheries, pollution from domestic and industry sources, and poorly planned and managed coastal developments and near-shore activities are, however, resulting in a rapid degradation of vulnerable



coastal and offshore habitats and shared living marine resources of the GCLME putting the economies and health of the populace at risk (see Transboundary Diagnostic Analysis, Annex E).

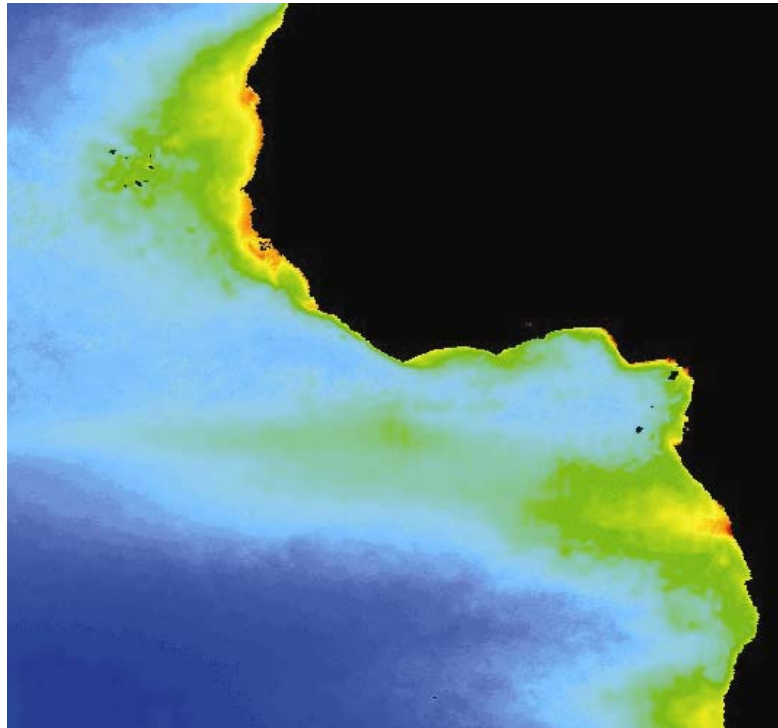


Figure 2: Satellite productivity map of GCLME/ Benguela LME region

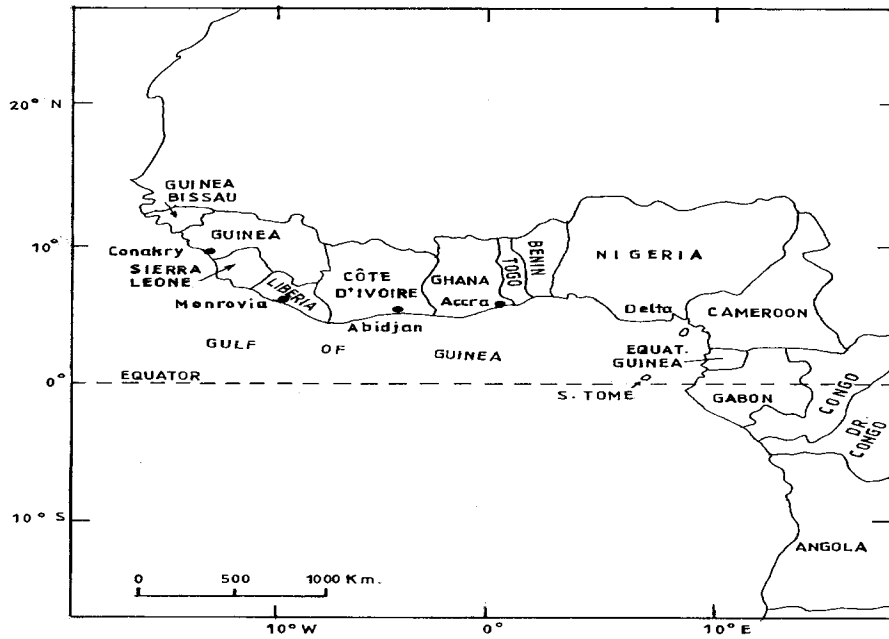


Figure 3: Location map for the GCLME

3. The GCLME is rich in biodiversity. The fisheries resources of the ecosystem includes a diverse assemblage of fishes including small pelagics, (sardinellas shad), large pelagics (tuna and billfish), crustaceans and molluscs (shrimp, lobster, cuttlefish, and demersal species (sparids and croakers). The presence of invertebrates such as intertidal molluscs (*Anadara sp.* *Crassostrea g.*,etc.), reptiles (turtles, crocodiles), marine mammals such as the West African manatee (*Trichechus senegalensis*), and some shark species demonstrate the variety of the species in the GCLME (World Bank Report, 1994). The remarkable collection of migratory birds, millions of which seasonally visit the West African coast and mainland regions, illustrates the importance of preserving and maintaining the existing wetlands in this part of Africa (UNEP Regional Seas Reports and Studies No. 171). Large concentrations of seabirds are found seasonally in and around Guinea Bissau: these include *Larus genei*, *Geochelidon nilotica*, *Sterna maxima lbididorsalis*, etc. The Gulf of Guinea islands, near Principe and Sao Tome also have sizeable sites with colonies of terns, noddies and boobies. It is because of this species diversity and fauna richness that conservation and preservation policy has been or is being undertaken by some GCLME countries through the creation and implementation of marine and coastal protected areas.

4. The coastal area also includes important terrestrial flora. Mangroves, typically *Rhizophora sp*, *Conocarpus sp*, *Avicennia sp*, *Mitragyna inermis*, *Laguncularia sp*, occur almost everywhere along the coasts in the GCLME and are dominant in certain places, such as the Niger Delta of Nigeria which has Africa's largest and the world's third largest mangrove forests (Figure 4). Mangrove forests provide the nutritional inputs to adjacent shallow channel and bay systems that constitute the primary habitat of a large number of aquatic species of commercial importance. The importance of mangrove areas as spawning and breeding grounds for many transboundary fish species and shrimps is well known. Presently the mangrove forests are under pressure from over-cutting (for fuel wood and construction timber) and from other anthropogenic impacts (e.g. pollution), thereby jeopardising their roles in the regeneration of living resources and as reservoirs of biological diversity (see TDA).

MAP OF NIGER DELTA SHOWING THE MANGROVE REGION

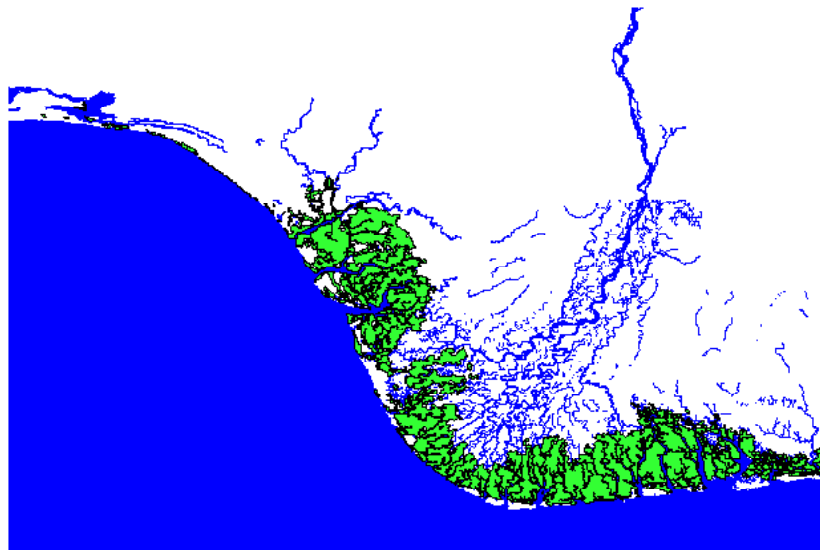


Figure 4: Map of distribution of mangroves in the Niger Delta

5. The densely populated coastal region is heavily dependent upon the biological resources of the GCLME. Approximately 40% of the region's 300 million people (more than 1/2 of the population of the African continent) live in the coastal areas of the GCLME, many of whom are dependent on the lagoons,

estuaries, creeks and inshore waters surrounding them for their food security and well being. Rivers, lagoons, and inshore and offshore waters of the GCLME serve as important sources of animal protein in the form of fish and shellfish, as well as provide significant income through the coastal fisheries. The Food and Agriculture Organization of the United Nations (FAO) estimates the total potential fisheries yield of the entire region to be in the neighborhood of 7.8 million tons per year. The rich fishery resources are of both local and transboundary importance with stocks supporting artisanal fisheries and offshore industrial fisheries from many nations. Most of these straddling and migratory stocks have attracted large commercial fishing fleets from around the world, especially from the former Soviet Union, European Union, Eastern Europe, Republic of Korea, and Japan. This wealth of estuaries, deltas, coastal lagoons and the nutrient-rich upwelling cold waters make a major contribution to the diversity of fish life in the GCLME region with an estimated 239 fish species, including *Sardinella aurita* and *maderensis*, *Thunnus albacares*, etc. as pelagic species; *Arius sp.*, *Pseudotolithus typus* and *senegalensis*, *Dentex sp.*, *Octopus vulgaris*, *Cynoglossus sp.*, and others as demersal species. Pelagic tuna fishing also constitutes an important industry in the GCLME region.

6. These marine and coastal areas, including their upstream freshwater regions, are at present affected by a number of anthropogenic activities: over-exploitation of fishery resources, impacts from the land-based settlements and activities from industrial, agricultural, urban and domestic sewage run-off and other mining activities such as oil and gas (in particular, off the coasts of Angola, Cameroon, Gabon and Nigeria). The depletion of living resources, uncertainty in ecosystem status (including climate change effects), deterioration of water quality, and loss of habitats (including coastal erosion) have been identified as significant transboundary environmental problems in the GCLME region (see section on major perceived problems and issues).

7. The region's fish stocks are under threat from overfishing. Since the 1960s, the offshore commercial fishing efforts have exerted extreme pressures on the resources, placing the fisheries at risk of collapse. This is exacerbated by the presence of local industrial fleets, predominantly nationally owned or part of joint ventures operating in each other's waters under bilateral agreements, as well as the existence of a large artisanal sector with strong traditional roots and powerful social and political impacts. Pelagic and demersal fisheries within the region are fully exploited with evidence showing that the landings of many species are currently declining. The decline in fish availability in the subsistence sector has led to the adoption of destructive fishing practices such as use of undersize meshes and blast fishing. Based on present consumption patterns and population growth rates, most of the countries, especially the large coastal cities of Lagos, Abidjan, Accra and Douala, will need significantly more fish by 2010 just to meet domestic demand. Despite nutritional requirements and current population growth rates, the industrial (commercial) fisheries sector in the countries surrounding the GCLME generally exports the trawl fisheries products to generate foreign exchange, exacerbating the food security situation in the region. Pressure on the coastal resources is therefore likely to increase significantly in the immediate future, but Catch per Unit Effort (CPUE) is already exceeding sustainable yields in some countries (Ajayi, 1994, The Status of Marine Fishery Resources of the Gulf of Guinea : In : Proc. 10<sup>th</sup> Session FAO, CECAF, Accra, Ghana, 10-13 October 1994) while species diversity and average body total lengths of the most important fish assemblages have declined. The GCLME project support from the GEF and other partners will assist the region to meet the WSSD target for maintaining and restoring fish stocks to levels that can "on an urgent basis and, where possible, no later than 2015" produce maximum sustained yields.

8. Uncertainty in ecosystem status makes it impossible to manage the natural resources effectively. Lack of national budget, inadequate regional capacity, and the general low socio-economic conditions in much of the region are responsible for this uncertainty in ecosystem status. Ecosystem knowledge is not a high priority in many of these countries; even if it were, capacity and institutions are lacking. The possible effects of climate change are also unknown; lacking knowledge of climate change impacts, effective management and establishment of sustainable development goals are clearly impossible.

9 Oil and other industrial activities have been identified as threats to the sensitive GCLME environment. Some of the countries in the region are oil producers and a few (e.g., Angola, Cameroon, Gabon and Nigeria) are net exporters. The increasing number of offshore platforms, pipelines, and various export/import oil terminals means an inevitable exposure to oil pollution. According to the World Bank (1995), oil producing companies in Nigeria discharge an estimated 710 tons of oil yearly into the coastal and marine environment. An additional 2100 tons originate annually from oil spills, on average. The patterns of onshore-offshore winds and ocean currents mean that oil introduced from any of the offshore or shore based petroleum activities translates easily into a regional problem. Most of the countries also have important refineries on the coast, only a few of which have proper effluent treatment plants, thereby adding to the threat of pollution from oil. Pipelines are at risk, given the unsettled coastal populations in some of the countries, where frequent pipeline breaches have occurred.

10. In addition to oil pollution, water quality in the coastal and marine areas is being degraded, largely as a result of land-based activities such as agriculture. Agriculture is an important activity in all the countries of the region. The use of chemical fertilisers and pesticides has markedly increased with the development of commercial agriculture and the advent of large plantations and the need to improve food production and protect human health against insect-borne diseases. Although organochlorine-based pesticides are still used, awareness of their danger has spread so the majority of pesticides are now organo-phosphorous and carbamate based. Run-off of these chemicals may reach surface or groundwater, where they may persist for long periods. Inorganic, especially nitrate and phosphate-based, fertilisers are being used on an increasing scale. Substantial quantities of nutrients originating from domestic and agricultural effluents, which are used in primary production, are carried to the sea through river outflows. It has been estimated that approximately 30% of fertilizers applied are actually utilised by the plants while the remainder finds its way into the atmosphere or into surface waters. These nutrients, when coupled with sewage pollution, are a serious threat increasing levels of eutrophication in near coastal waters and especially to lagoons and causing harmful algal blooms. The lagoons, as sensitive and significant habitats supporting biodiversity and inshore fisheries, are therefore being threatened by agricultural pollution. These excess nutrients, other pollution and sediments are transported to the GCLME via the rivers in the region, including the ten major rivers: Congo (Congo), Niger (Nigeria), Volta (Ghana), Wouri (Cameroon), Comoe, and Bandama (Côte d'Ivoire).

11. The physical destruction of coastal habitats, including critical wetlands, causes the loss of spawning and breeding grounds for most living resources in coastal waters and the loss of the rich and varied fauna and flora of the region including some rare and endangered species. Much of the destruction is related to often-haphazard physical development, which exerts phenomenal pollution pressures on this international body of water (WACAF Intersecretariat Co-ordination Meeting, Rome, 1993). Nearly all major cities, agricultural plantations, harbours, airports, industries as well as other aspects of the socio-economic infrastructure in the region are located at or near the coast. Results obtained during the Pilot Phase GOG-LME Project showed that in Ghana, 55 percent of the mangroves and significant wetlands around the greater Accra area have been decimated through pollution and overcutting. In Benin, the figure is 45 percent in the Lake Nokoué area, in Nigeria, 33 percent in the Niger Delta, in Cameroon, 28 percent in the Wouri Estuary, and in Côte d'Ivoire, about 60 percent in the Bay of Cocody. Urbanization and industrialization place increasing pressure on coastal habitats, both through direct physical pressure, and indirectly through pollution and declining water quality.

12. Alterations to river flow regimes from dam construction (for irrigation and power generation) together with high wave action have led to severe coastal erosion problems, issues of which are expected to be addressed in part in parallel GEF projects in the Volta and Niger River basins. These factors are combining to cause displacements of structures, people and economies of coastal communities and urban centres. Harbour construction activities have altered longshore current transport of sediments and in

many cases have led to major erosion and siltation problems. Erosion rates caused by port structures in Liberia, Togo, Benin and Nigeria sometimes reach a staggering 15-25 m per year and threaten infrastructure and services (Ibe and Queennec, 1989). Actions to control erosion around these ports are critically important to maintaining their vitality as sites for growing tourist, recreational, commercial, and defence needs.

13. Many of the water-related environmental threats identified in the region are transboundary in nature. The GCLME Transboundary Diagnostic Analysis (Annex E), formulated by the countries, fully lists the various transboundary environmental issues/problems, major root causes, transboundary impacts and consequences and possible measures to contain the threats. Some of these threats are already cause for concern. A few are already being addressed jointly between nations. Others are likely to grow in importance with human population growth and increased urbanisation and industrialisation in the stakeholder countries. These transboundary threats to ecosystem health are caused by human activities and natural variations which are part of the ecosystems, and some threats could be mitigated through efficient early warning systems.

14. Many transboundary threats (e.g., untreated waste) are also of local (national) importance. Actions in response to local pressures to reduce local impact will often serve also to reduce transboundary impact. Other actions at national levels, if not integrated with actions of neighboring countries, may merely displace the problem and even increase the overall transboundary impact. Other transboundary threats are more widely distributed and may be of a cumulative nature.

15. The sustainable use and management of the commonly shared resources of the GCLME poses a great challenge to the bordering countries. Concerted actions by the sixteen participating nations are absolutely essential to change present unsustainable use of these resources by introducing an ecosystem-based assessment and management system for sustainable use and management of resources at risk. One source of stress on the marine environment which is of growing international concern is the impact from capture fisheries, hence the need to develop, promote, and implement ecologically sound assessment and management practices in the marine fisheries sector so as to prevent loss of biodiversity and reduce habitat degradation. Available data suggest that, in addition to the obvious catches of fish for human needs, by-catches have a significant ecological impact and cause mortality amongst finfish (particularly the juveniles of commercial fish species), as well as amongst benthic invertebrates, marine mammals, turtles and birds. These by-catches need to be controlled. Mariculture offers the possibility of providing a food source that releases fishing pressure in the capture fisheries and provides livelihoods for rural coastal areas when fishing effort is reduced. However ecologically unsound mariculture practices can negatively impact wild resources. Development must proceed in a sound ecological manner to have fishery and food security benefits.

16. Recognizing the continuous negative changes in the health and productivity of the GCLME shared waterbody resulting from human impact and appreciating that living marine resources and pollutants in coastal and marine environments respect no political boundaries and few geographical ones, the countries resolved to work together to address their common concerns through suitable management options. Through various assessments carried out, the countries realized that the traditional sectoral approach to management had failed in bringing about the needed changes in environmental and living resource uses and resolved to adopt a holistic and multisectoral approach embodied in the large marine ecosystem concept. In so doing, the countries, through the Committee of Ministers of the six-country pilot phase Gulf of Guinea LME project with subsequent endorsement by the 10 new project countries, sought the assistance of UNIDO, UNDP, UNEP and GEF in implementing an LME project to cover the natural limits of the Guinea Current. The GEF made available two project preparation and development facility grants (PDF-B) to enable countries to prepare the necessary analyses and reviews. In accordance with the GEF Operational Strategy a Transboundary Diagnostic Analysis (TDA) and preliminary

Strategic Action Programme (SAP) were prepared through national and regional stakeholder consultations.

17. More specifically, the PDF project was responsible for:
- identifying overexploited fish stocks, biodiversity issues, degraded and threatened habitats, and point and non-point pollution sources;
  - undertaking a comprehensive review, synthesis, and analysis of existing data and information concerning the sources and fate of transboundary pollution as a building block on which to design appropriate actions;
  - reviewing existing national and regional fisheries and environmental legislation relating to the GCLME and its surrounding environment; and
  - providing a framework to support an ecosystem-based approach for the assessment and management of the GCLME fisheries and coastal zone based on scientific, institutional, legal, and regulatory structure needed to achieve and sustain the marine resources of the GCLME.

## GEF PROGRAMMING CONTEXT

18. The programming context of this project is the GEF Operational Programme No. 9 “Integrated Land and Water Multiple Focal Area”. This OP lists as an expected outcome *“the reduction of stress to the international waters environment in selected parts of all five development regions across the globe through participating countries making changes in their sectoral policies, making critical investments, developing necessary programs and collaborating jointly in implementing ... water resources protection measures (para 9.10).”* The OP also states that *“the goal is to help groups of countries utilise the full range of technical, economic, financial, regulatory, and institutional measures needed to operationalize the sustainable development strategies for international waters (para 9.2).”*

19. This project is thus in conformity with the GEF Operational Strategy and Operational Programmes, in particular with the above-mentioned OP #9 - International Waters: Integrated Land and Water Multiple Focal Area, where there is a focus on an integrated management approach to the sustainable use of [land and] water resources on an area-wide basis. It will also have relevance to OP #2 - Biodiversity in coastal and marine ecosystems, and specifically to aspects of eco-system management including elements of: targeted research, information sharing, training, institutional-strengthening, demonstrations, and outreach (or ‘extension’).

20. The GEF International Waters Operational Programme referred to above emphasizes the need to introduce and practice ecosystem-based assessment and management action while supporting “institutional building ... and specific capacity-strengthening measures so that policy, legal and institutional changes can be enacted in sectors contributing to transboundary environmental degradation.” This project supports institutional capacity building for long-term regional cooperation as well as helping to strengthen regional capacities in environmental management, monitoring of priority pollutants, public awareness, and preservation of transboundary living resources.

21. Under OP 9 several outputs from IW projects are envisaged. These include:
- a. a comprehensive transboundary environmental analysis identifying top priority multi-country ecosystem-based resource and environmental concerns (already in hand);
  - b. a strategic action programme consisting of expected baseline and additional actions needed to implement an integrated approach to land and water resources assessment and management (a draft is available; the SAP will be updated during the full project);
  - c. documentation of stakeholder participation to determine expected baseline and additional actions to be implemented as well as community involvement in the project; and

- d. implementation of measures related to integrated management of land and water resources that have incremental costs and that can generate global environmental benefits in several focal areas.

22. The project preparation process has addressed several of these issues (as indicated above). The proposed project will satisfy all of the above points. Ministries of environment, ministries with control of land and water resources, as well as new institutions created by the project will play a key role in the implementation of project activities, thus enhancing capacity within the institutions as well as complementing and strengthening existing national efforts to address environmental issues. Implementation of the final SAP will assist in the systematic assessment and conservation of natural resources and assist the countries in complying with their national and regional obligations under various international conventions. At a global level, the project and its SAP will have molded disparate regional and national activities into a coherent ecosystem-based assessment and management program for the globally important resources of the GCLME.

23. The present project also is consistent with the recent Draft GEF International Waters Focal Area Strategic Priorities in Support of WSSD Outcomes for FY 2003-2006. The document lists various priorities, including:

***Priority A. Catalyze financial resource mobilization for implementation of reforms and stress reduction measures agreed through TDA-SAP or equivalent processes for particular transboundary systems***

***Priority B. Expand global coverage of foundational capacity building addressing the two key program gaps and support for targeted learning.***

***Priority C. Undertake innovative demonstrations for reducing contaminants and addressing water scarcity issues.***

24. The present project contributes significantly to the WSSD targets for 1) introducing ecosystem-based assessment and management practices by 2010, and 2) recovering depleted fish stocks to maximum sustainable yield levels by 2015. It will directly assist in addressing key International Waters gaps, with a focus on ecosystem-based approaches to management of Large Marine Ecosystems (LMEs) that include fisheries resources and habitat. The project will also assist in achieving the targets for these priorities for addressing African Transboundary waters.

25. This project also is consistent with the “Action plan to respond to the recommendations of the Second GEF Assembly, the policy recommendations of the Third Replenishment, the Second Overall Performance Study of the GEF and the World Summit on Sustainable Development” as discussed and agreed at the May 2003 GEF Council Meeting. It is also consistent with the document “Strategic Business Planning: Direction and Targets,” also discussed and agreed at the May 2003 GEF Council Meeting. The following internal specific targets are consistent with the GCLME project:

Under Strategic Priority IW-1:

(b) By 2006, GEF will have catalyzed a Strategic Partnership among African coastal nations, implementing agencies, and global development partners aimed at reversing the depletion of fisheries resources in the Large Marine Ecosystems (LMEs) of Sub-Saharan Africa as a contribution to WSSD POI sustainable fisheries target.

Under Strategic Priority IW-2:

(a) By 2006, GEF will have increased by at least one-third the global coverage of representative water bodies (an additional 9-10) with country-driven, science based joint management programs with GEF assistance.

(c) By 2006, almost one-half of the 27 Large Marine Ecosystems (LMEs) located near developing countries will have country-driven, ecosystem-based management programs developed with GEF assistance that contribute to the WSSD POI “sustainable fisheries” target with a view to those programs being under implementation by 2010.

26. The GCLME project will both benefit and benefit from other GEF projects being undertaken in the region and on the global level. Table 1 shows the ongoing GEF regional activities related in some manner to the GCLME LME. Efforts will be made to ensure synergies among the projects and minimize duplication of work, by setting aside funds in this project to achieve project integration for these GEF activities. Examples of these projects include: A global GEF project on “reduction of environmental impact from tropical shrimp trawling through the introduction of by-catch reduction technologies and change of management” executed by FAO and implemented by UNEP is already assisting two countries (Cameroon and Nigeria) in the GCLME region in minimizing the impacts on fisheries of use of wrong mesh-sizes. The GCLME project would establish linkages with this GEF project in order that some of the best practices and innovative techniques learned could be replicated in the other GCLME countries. For coastal erosion, living resource management, conservation of biodiversity in coastal ecosystems and community management close linkages and coordination with the Volta River GEF project as well as the World Bank/GEF Coastal Biodiversity Management programme in Guinea Bissau and the World Bank/GEF Coastal Zone Integrated Management Programme in Benin Republic will help assure consistency in approaches, cohesiveness of GEF support and optimal use of GEF resources and avoid duplication efforts in these countries. Strong linkages and coordination will also be achieved with other upcoming GEF projects, through constant dialogue and communication, notably the World Bank/GEF Strategic Partnership to promote the sustainable governance of fisheries in African countries and the World Bank Guinea Coastal Zone Management programme. Under the World Bank “Strategic Partnership” regional project, country-level investments in sustainable fisheries will be implemented in concert with the GEF LME projects in Sub-Saharan countries. The initiative will work with the LME projects (the GCLME for part of the West and Central Africa region) to support the coastal countries in meeting the targets for sustainable fisheries set by the WSSD, including country-level monitoring, surveillance and enforcement of national laws and regulations with regard to fisheries and other marine and coastal resources. In essence, the "Strategic Partnership" would coordinate with and build upon the GCLME project to facilitate collaboration between national players for country-level fisheries investments and existing/planned sub-regional fisheries management bodies supported by GCLME project.

**Table 1: Ongoing or planned GEF IW, BD, POPs & MFA projects related to the GCLME**

Project	GEF Focal Area	GEF IA(s)	Countries	Est'd. GEF Financing	Est'd. Co-financing	Total Financing	Status
Addressing Transboundary Concerns in the Volta River Basin and its Downstream Coastal Area	IW	UNEP	Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali and Togo	\$5.7 m.	\$10.4 m.	\$16.1 m.	Approved
Reduction of Environmental Impact from Tropical Shrimp	IW	UNEP	Cameroon, Nigeria (part of global)	\$4.8 m.	\$4.4 m.	\$9.2 m.	Approved



Trawling through Introduction of By-catch Technologies and Change of Management							
Reducing Reliance on Agricultural Pesticide Use and Establishing a Community Based Pollution Prevention System in the Senegal and Niger River Basins	IW	UNEP	Benin, Guinea et al.	\$3.4 m.	\$4 m.	\$7.4 m.	Pdf-b
Development and Protection of the Coastal and Marine Environment in Sub-Saharan Africa	IW	UNEP	Cote d'Ivoire, Ghana, Nigeria et al.	\$0.75 m.	\$0.97 m.	\$1.72 m.	Approved
Reversing Land and Water Degradation Trends in the Niger River Basin	IW	UNDP/WB	Benin, Cameroon, Cote d'Ivoire, Guinea, Nigeria et al.	\$13 m.	\$16.7 m.	\$29.7 m.	Approved
Reduction of Environmental Impact from Coastal Tourism through Introduction of Policy changes and strengthening public-private partnerships	IW	UNEP	Cote d'Ivoire, Ghana, Nigeria	\$6 m.	\$7.5 m.	\$13.5 m.	Pipeline
Review of the Existing Agreements on River Basins in West Africa and development of a regional water protocol	IW	UNEP	Guinea, Nigeria, Benin, Cameroon, Cote d'Ivoire	TBD	TBD	TBD	Pdf-a
Benin ICARM Coastal Area Management	BD	WB	Benin	\$5 m.	\$25 m	\$30 m.	Pdf-b
Control of Exotic Aquatic Weeds in Rivers and Coastal Lagoons to Enhance and Restore Biodiversity	BD	UNDP	Cote d'Ivoire	\$3 m.	\$1.9 m.	\$4.9 m.	Approved
Coastal Wetlands Management	BD	WB	Ghana	\$7.2 m.	\$1.1 m.	\$8.3 m.	Approved
Guinean Coastal Zone Integrated Management and Preservation of Biodiversity	BD	WB	Guinea	\$5 m.	\$25 m.	\$30 m.	Pdf-b
Coastal and Biodiversity Management Program	BD	WB	Guinea-Bissau	\$5.1 m.	\$4.4 m.	\$9.5 m.	Pdf-b
Conservation of Marine Turtles and their Habitat in the	BD	UNEP	GCLME countries	\$0.75 m.	\$0.75 m.	\$1.5 m.	Pipeline

Atlantic Coast of Africa							
POPs Enabling Activity – Preparation of National Implementation Plan	POPs	UNEP	Benin, Cameroon, Cote d'Ivoire, Guinea	\$2 m.	----	\$2 m.	Approved
POPs Enabling Activity – Preparation of National Implementation Plan	POPs	UNIDO	Gabon, Ghana, Guinea-Bissau, Liberia, Nigeria, Togo, Sao Tome & Principe	\$3.5 m.	----	\$3.5 m.	Approved
Enhancement and Conservation of Ecosystem Functions for River Basins and Associated Coastal Areas in Central Africa	MFA	UNEP	Cameroon, Benin, Ghana	TBD	TBD	TBD	Pdf-a
Strategic Partnership for Sustainable Fisheries Management in the LMEs of SSA	IW	WB	Countries of Sub-Saharan Africa	TBD	TBD	TBD	PDF-b
<b>GRAND TOTALS</b>	----	----	----	<b>\$57.2 m.</b>	<b>\$94.1 m.</b>	<b>\$151.3 m.</b>	----

## REGIONAL PROGRAMMING CONTEXT

27. The outstanding accomplishments of the Pilot-Phase GEF Gulf of Guinea Large Marine Ecosystem (GOG LME) Project (1995 - 1999), as verified in Tri-Partite Review Reports and the Final In-Depth Evaluation, are ample proof of the catalytic and defining roles that GEF incremental funding can play. Some of the results achieved are included here. Annex K provides a more in-depth review of the pilot phase.

- adoption of Ministerial level ACCRA DECLARATION(1998) aimed at institutionalising a new ecosystem-wide paradigm consistent with GEF operational guidelines for joint actions in environmental and living resources assessment and management in the Gulf of Guinea and beyond;
- substantial progress in building regional and national water quality, productivity and fisheries assessment and management capabilities based on standardised methodologies;
- planning and implementation of two co-operative surveys( first in the western gulf in July/August, 1996 and second in the entire Gulf, in Feb/March, 1999) of demersal fish populations conducted by the six countries . The data, albeit limited, have served already as the basis for certain common national regulatory actions for the co-ordinated management of the fish stocks of the Gulf;
- definition of regional effluent standards based on a detailed survey of industries and recommendations made for the control and significant reduction of industrial pollution;
- deriving from the detailed industrial survey, a successful campaign for reduction, recovery, recycling and re-use of industrial wastes based on the concept of the <<waste stock exchange management system >> was launched in Ghana as a cost-effective waste management tool and will be extended to other project countries;

- initiation of co-operative monitoring of the productivity of the LME using ships of opportunity. The results give indications of the carrying capacity of the ecosystem which enables projections on food security and by extension, social stability in the sub- region;
- preparation of coastal profiles for the six project countries, followed by the development of national Guidelines for Integrated Coastal Areas Management (ICAM) and the preparation of draft national ICAM plans which were in different stages of adoption by the end of the Pilot Phase Project;
- establishment of cross-sectoral LME committees in the participating countries consistent with the cross sectoral approach implied in integrated management;
- accelerating the creation of national and regional data-bases, using harmonised architecture, as decision making support tools;
- facilitating the establishment of a functional non-governmental organisation (NGO) regional network;
- promoting active grassroots and gender participation in discussion, decision-making and interventions in environmental and resources management;
- active collaboration arrangements with other projects and organisations in the region;
- initiation of community-based mangrove restoration activities in all six project countries;
- successful completion of 41 training workshops with 842 participants ,416 in regional workshops and 426 in National ICAM workshops resulting in the setting up of a regional network of over 500 contactable specialists linked by electronic mail; and
- development of a preliminary Transboundary Diagnostic Analysis (TDA) for the Gulf of Guinea.

28. The Pilot Phase project, although limited to six countries, initiated the work of mitigating pollution pressures on International Waters of the Gulf of Guinea and stemming the loss of biological diversity and fisheries overexploitation by fostering regional co-operation predicated policies and strategies as well as joint institutional mechanisms. An Executive Summary of the Final In-Depth Evaluation is attached as Annex K.

29 Eager to preserve the gains of the pilot phase, the Ministers adopted "The Accra Declaration" (see Annex L) which aimed at institutionalising a new ecosystem-wide paradigm consistent with the GEF Operational Guideline for joint actions in the environmental and natural resources assessment and management in the Gulf of Guinea. The Ministers called for initiation of a second phase of an expanded project to include 10 additional countries to coincide with the natural limits of the Guinea Current Large Marine Ecosystem. The Ministers also addressed a letter to the UNDP Administrator requesting him to intervene with the GEF Secretariat for a substantial grant of US\$ 20 million for an expanded Second Phase Project (Annex M).

30. The environmental goals of the project are consistent with of the Abidjan Convention for Co-operation in the Protection, Management and Development of the Marine and Coastal Environment of the West and Central African Region adopted in March 1981. The Abidjan Convention and its Protocol on Cooperation in Combating Pollution in Cases of Emergency constitute the legal components of the West and Central African (WACAF) Action Plan. The Convention expresses the decision of the WACAF Region (from Mauritania to Angola at the time of adoption) to deal individually and jointly with common marine and coastal environmental problems. The Convention also provides an important framework through which national policy makers and resource managers can implement national control measures in the protection and development of the marine and coastal environment of the WACAF Region. The Emergency Protocol was designed with an orientation towards combating and operationally responding to massive pollution in case of marine accidental oil and chemical spills.

31. At its first meeting (Abidjan, 20-22 July, 1981), the newly constituted Steering Committee of the Convention defined the following priorities:

- Development of oil spill contingency plans
- Combating coastal erosion
- Prevention, monitoring and control of marine pollution
- Rational development of coastal zones
- Capacity building particularly in the areas of documentation and legislation on coastal and marine management.

32. Since its entry into force in August 1984, Parties to the Abidjan Convention have, with UNEP's assistance, undertaken a number of activities including:

- development of programmes for marine pollution prevention, monitoring and control in cooperation with IMO, FAO, UNIDO, IOC-UNESCO, WHO, IAEA, etc.
- development of programmes for monitoring, controlling and combating coastal erosion dominantly with UNESCO and UNDESA.
- development of national environmental impact assessment programmes for particular coastal sites
- development of national environmental legislation in cooperation with FAO and IMO.

33. As originally envisaged in the provisions of the Convention, the WACAF Regional Coordination Unit, was to co-ordinate the implementation of the West and Central African Action Plan and was to ensure the most efficient use of the regional sea through concerted actions by Member States and the optimal utilisation of their shared living resources. It was to co-ordinate regional (as opposed to national) development of the coastal and marine environment and to assist in the prevention and resolution of disputes that might arise between and among the Parties to the Convention. However, lack of resources for the Regional Coordination Unit (RCU) has adversely affected the implementation of the above-mentioned projects.

34. These weaknesses in the Abidjan Convention and its RCU are being addressed in a companion project, "Implementation of the NEPAD Partnership Programme as it relates to land-based pollution in the West and Central African -Regions as a contribution to the Abidjan Convention." This project, submitted for funding to the Government of Norway by the Coordination Office of the Global Program of Action for the Protection of the Marine Environment from Land-based Activities, will go hand-in-hand with the present project to develop increased capacity in the region. This project has five major components:

- **COMPONENT 1: STRENGTHENED WEST & CENTRAL AFRICAN REGIONS (WACAF/RCU)**
- **COMPONENT 2: NATIONAL PROGRAMMES OF ACTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT FROM LAND-BASED ACTIVITIES (NPA)**
- **COMPONENT 3: INTEGRATED COASTAL AREA &-RIVER BASIN MANAGEMENT (ICARM)**
- **COMPONENT 4: PHYSICAL ALTERATIONS AND DESTRUCTION OF HABITATS (PADH)**
- **COMPONENT 5: COORDINATION AND SUPPORT**

With a total budget of U.S. \$2.075 million, this project complements the proposed GEF project by addressing specific areas of the GEF project (IIg, IIIC, IVb, IVc, and Va).

35. There is an encouraging history of co-operation between the countries bordering the GCLME even if the results, outputs and impacts have been variable. Examples of collaborative activities under the Abidjan Convention include "Control of Coastal Erosion in West and Central Africa (WACAF/3)", "Manual on Methodologies for Monitoring Coastal Erosion in West and Central Africa (WACAF/6)", "Assessment and Control of Pollution in the Coastal and Marine Environment of West and Central Africa (WACAF/2 phases I and II)", and WACAF/11 on "Integrated Watersheds and Coastal Area Management

Planning and Development in West and Central African Region". The countries in the GCLME sub-region also participated in the continent wide UNDP/UNESCO Regional Project (RAF/87/038) on Training and Research for the Integrated Development of African Coastal Systems (COMARAF) and have experience of joint programming in the context of the Fishery Committee for the Eastern Central Atlantic (CECAF) under the aegis of FAO which has been trying to promote joint actions on living resource evaluation and fishery statistics.

36. Such activities have created a new awareness of mostly domestic issues and engendered a certain sense of urgency on environmental matters. However, their overall impact has been impaired by a lack of success in focusing on transboundary ecosystem-wide International Waters problems and the need to strengthen environmental and resource stewardship at both national and regional levels. This lack of focus has been exacerbated by the absence of a mechanism for funding incremental costs in the existing Regional Seas Programmes, and a lack of resources for an effective co-ordination Secretariat. A proposed strategy for revitalising both the Abidjan and Nairobi Conventions exists and was embodied in the GEF funded Medium Sized Project implemented by Advisory Committee for the Protection of the Seas (ACOPS) and which ended with a "Partnership Conference" in September 2002 on the sidelines of the World Summit on Sustainable Development (Rio + 10 Conference) in South Africa. There is little direct evidence that the strategy was successful.

37. Most of the new projects in the region under GEF funding including those of its co-operating Agencies (UNDP, World Bank and UNEP), such as the Canary and Benguela Currents LME Projects, the Niger, Senegal and Volta River Basins Projects, the Congo Basin Data and Information Management Project, the Control of Aquatic Weeds Project in Cote d'Ivoire, etc., have sought to draw attention to current inadequacies of national and regional institutions and programmes to address the large scale and complex transboundary problems that characterise International Waters. These institutions are consequently helping, through Incremental funding, the countries involved in these projects to resolve such problems by augmenting their capabilities and promoting collaboration to achieve regional institutionalisation of joint mechanisms for comprehensive and durable ecosystem wide management.

## **NATIONAL PROGRAMMING CONTEXT**

38. The participating countries are at various stages of industrialization and various levels of socio-economic development. The rapid economic development that has occurred in this region over the last decade has taken place largely at the expense of the living marine resources and the environment. A significant barrier to planning for more ecosystem-based and-sustainable modes of development has been the absence of adequate ecological and economic evaluation of habitats and the goods and services they provide, resulting in development decisions being made on the basis of short-term economic gains. Numerous actions are taking place at the national and regional levels to address the environmental problems that have resulted from the rapid pace of development and industrialization, which have occurred over the last decade. Nigeria, for example, has a national mangrove reforestation programme, and all countries have activities and programmes related to the conservation of significant biological diversity including wetlands. Many of the actions at a national level are undertaken outside the framework of integrated or coordinated joint programmes of action for the GCLME transboundary issues resulting in either significant duplication and overlap, or no action at all.

39. The lack of a regionally coordinated approach to preventive and remedial actions significantly reduces their effectiveness, and recognizing this the countries bordering the GCLME have initiated a number of joint programmes involving two or more countries within the region in the past including joint programming in the context of the Fishery Committee for the Eastern Central Atlantic (CECAF) under the aegis of FAO which has been trying to promote joint actions on living resource evaluation and fishery

statistics. The pilot phase Gulf of Guinea LME project further facilitated the strengthening of regional collaboration among some of the countries. There is an encouraging history of co-operation between the countries bordering the GCLME even if the results, outputs and impacts have been variable. Examples of collaborative activities under the Abidjan Convention 1981 include "Control of Coastal Erosion in West and Central Africa (WACAF/3)", "Manual on Methodologies for Monitoring Coastal Erosion in West and Central Africa (WACAF/6)", "Assessment and Control of Pollution in the Coastal and Marine Environment of West and Central Africa (WACAF/2 phases I and II)", and WACAF/11 on "Integrated Watersheds and Coastal Area Management Planning and Development in West and Central African Region".

40. In the absence of a GEF intervention, it is probable that the present types of sectoral-based interventions which have been demonstrated during the past twenty years as being ineffective in halting the pace of environmental degradation will continue. Without a concerted ecosystem-based regional approach to environmental management it is unlikely that the present rates of habitat degradation and living marine resources depletion will be slowed. The likely consequence of such a scenario is the loss of globally significant biological diversity during the next century, combined with collapse of fish stocks and food security in the region.

41. Unresolved territorial disputes are a source of sensitivity in the region. During the last several years the countries have demonstrated a willingness to co-operate in matters relating to environmental management, and there is an increasing recognition that the benefits resulting from co-operative environmental management actions are not dependent on the resolution of such sensitive issues. Recognizing the sensitivities of the area, however, it has been agreed that no activities shall be undertaken under this project in disputed areas of the GCLME, nor shall issues of sovereignty be addressed directly or indirectly through project activities.

## **SYSTEM BOUNDARIES**

42. The Guinea Current is the dominant feature of the shallow ocean off the coast of countries in western Africa stretching from Guinea Bissau in the north to Angola in the south. The distinctive bathymetry, hydrography, productivity and trophodynamics of this shallow ocean qualify it as a Large Marine Ecosystem (LME) and is indeed recognised as one of the sixty-four LMEs delineated globally.

43. The boundaries of the Guinea Current area can be defined geographically and oceanographically. Geographically, the GCLME extends from approximately 12 degrees N latitude south to about 16 degrees S latitude, and variously from 20 degrees west to about 12 degrees East longitude. From an oceanographic sense, the GCLME extends in a north-south direction from the intense upwelling area of the Guinea Current south to the northern seasonal limit of the Benguela Oceanographic Current (Figure 1). In an east-west sense, the GCLME includes the drainage basins of the major rivers seaward to the GC front delimiting the GC from open ocean waters (a time- and space-variable boundary).

## **MAJOR PERCEIVED PROBLEMS AND ISSUES**

44. The process of developing the sixteen-country Transboundary Diagnostic Analysis and preliminary Strategic Action Programme (TDA/SAP) included the formation of National committees in each participating country to prepare comprehensive, country-based analyses of water-related environmental problems and concerns. The assessments conducted included analyses of ecosystem-wide issues of environmental and resource sustainability from the perspective of system: 1) productivity, 2)

fish and fisheries, 3) pollution and ecosystem health, 4) socio-economics, and 5) governance in an effort to identify the most important transboundary natural resource management problems.

45. The first drafts of the national reports were submitted and evaluated at the Stocktaking workshop in May 2001, which prepared a comparative weighting of all identified major issues. On the basis of the national reports, a Transboundary Diagnostic Analysis (TDA) was prepared, reviewed and updated by country and regional experts in two subsequent meetings in April and June 2003. The results of the TDA provide the scientific, technical and socio-economic bases for the choice of priority actions proposed in this project and which served as the basis for development of a preliminary Strategic Action Programme (SAP) that would provide greater long-term, system wide, environmental and socio-economic benefits to the countries. Governments, NGO'S, economic sector operatives, the public and all other affected stakeholders participated in TDA formulation thus fostering broad based involvement and support for the project.

46. The TDA identifies the regional priorities among water-related problems and concerns, their socio-economic and sectoral root causes, and the extent to which the problems are transboundary in either origin or effect. The four major transboundary environmental problems/issues (MPPI) identified in the TDA are:

1. Decline in GCLME fish stocks and unsustainable harvesting of living resources;
2. Uncertainty regarding ecosystem status, integrity (changes in community composition, vulnerable species and biodiversity, introduction of alien species) and yields in a highly variable environment including effects of global climate change;
3. Deterioration in water quality (chronic and catastrophic) from land and sea-based activities, eutrophication and harmful algal blooms;
4. Habitat destruction and alteration including *inter-alia* modification of seabed and coastal zone, degradation of coastscapes, coastline erosion.

47. Table 2 outlines the major transboundary elements of the four major perceived problems identified in the GCLME, as well as their environmental and socio-economic impacts.

Table 2. MPPIs and Their Impacts in the GCLME

MPPI	Transboundary Elements	Environmental Impacts	Socio-economic Impacts
<p><i>I. Decline in GCLME fish stocks and unsustainable harvesting of living resources</i></p>	<ul style="list-style-type: none"> <li>• Loss of income from regional and global trade of marine products</li> <li>• Region-wide decrease in biodiversity of the marine living resources including the disappearance of high-quality critical natural resources</li> <li>• Region-wide destructive fishing techniques degrading mangrove habitats</li> <li>• Increasing catch effort on pelagic species such as tuna, sardinella</li> <li>• Non-compliance with the FAO Fisheries Code of Conduct</li> <li>• Region-wide pollution</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of biodiversity</li> <li>• Changes in food web</li> <li>• Changes in community structure due to over-exploitation of one or more key species</li> <li>• Increased vulnerability of commercially-important species</li> <li>• Long-term changes in genetic diversity</li> <li>• Stock reduction</li> <li>• Loss of predators</li> <li>• Habitat degradation due to destructive fishing technique</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced income</li> <li>• Loss of employment</li> <li>• Population migration</li> <li>• Conflicts between user groups</li> <li>• Loss of recreational opportunities</li> <li>• Decline in protein</li> <li>• Loss of income from regional and global trade in coastal products</li> </ul>
<p><i>II. Uncertainty regarding ecosystem status, integrity (changes in community composition, vulnerable species and biodiversity, introduction of alien species) and yields in a highly variable environment including the effects of climate change</i></p>	<ul style="list-style-type: none"> <li>• The major causes of climate change are global</li> <li>• Harvested fish species are shared between countries</li> <li>• Exotic species have been introduced into the GCLME from other regions</li> </ul>	<ul style="list-style-type: none"> <li>• Major change in ecosystem production</li> <li>• Changed ocean currents</li> <li>• Changed ocean temperature structure</li> <li>• Diminished role of ocean as CO<sub>2</sub> sink</li> <li>• Increased natural hazards</li> <li>• Increased droughts</li> <li>• Changes in upwelling frequency, location and intensity</li> </ul>	<ul style="list-style-type: none"> <li>• Lost earnings</li> <li>• Disruption of way of life</li> <li>• Destruction of property and lives</li> <li>• Reduced crop yields</li> <li>• Loss of tourism</li> </ul>
<p><i>III. Deterioration in water quality (chronic and catastrophic) from land and sea-based activities, eutrophication and harmful algal blooms</i></p>	<ul style="list-style-type: none"> <li>• Many of the rivers flowing into the GCLME are transboundary</li> <li>• Sea-based pollution can be transported across borders</li> <li>• Loss of regional tourism revenue</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced productivity</li> <li>• Much altered biodiversity</li> <li>• Red tides and algal blooms</li> <li>• Invasion of water weeds</li> <li>• Permanently changed LME</li> <li>• Introduction of exotic species.</li> <li>• Eutrophication</li> <li>• Bioaccumulation of toxics</li> <li>• Increased turbidity</li> </ul>	<ul style="list-style-type: none"> <li>• Economic loss</li> <li>• Disruption of communities</li> <li>• Increased sickness and death</li> <li>• Aesthetic loss and lower quality of life</li> <li>• Biodiversity loss</li> <li>• Reduced fishery yields</li> <li>• Loss of recreational value</li> <li>• Population migration</li> </ul>



<p><i>IV. Habitat destruction and alteration including inter-alia modification of seabed and coastal zone, degradation of coastscapes and coastal erosion</i></p>	<ul style="list-style-type: none"> <li>• Marine living resources are often migratory</li> <li>• Coastal zone habitats are the backbone for the productivity of marine and coastal habitats</li> <li>• The coastal habitats provide feeding and nursery grounds to migratory species</li> <li>• The coastal habitats are accumulating transboundary pollution</li> <li>• Degradation of coastal habitats contribute to the overall decline of regional and global biodiversity</li> <li>• Impact to migratory species and their habitats</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of spawning breeding grounds</li> <li>• Loss of rich and varied fauna and flora including endangered species</li> <li>• Loss of CO<sub>2</sub> sequestration</li> <li>• Loss of pollution buffer</li> <li>• Loss of flood and storm surge protection</li> <li>• Depletion of mangroves</li> <li>• Loss of natural productivity</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of global heritage</li> <li>• Decimation of life support systems</li> <li>• Forestry loss</li> <li>• Economic and aesthetic loss</li> <li>• Increased pollution</li> <li>• Increased flood and erosion risk</li> <li>• Loss of agricultural lands</li> <li>• Loss of cultural heritage</li> <li>• Reduction in income from fisheries</li> <li>• Loss of recreational areas</li> </ul>
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48. The identified Root Causes of the four transboundary environmental problems include:
- Complexity of ecosystem and high degree of variability (resources and environment),
  - Lack of an ecosystem-wide funded and coordinated assessment and management system for the productivity of coastal and marine living resources of critical importance to the nations bordering the GCLME,
  - Inadequate capacity development (human and infrastructure) and training,
  - Poor or ineffective legal framework at the regional and national levels; inadequate implementation of national regulatory instruments; lack of regional harmonization of regulations,
  - Inadequate implementation of available regulatory instruments,
  - Inadequate planning at all levels,
  - Lack of regional agreements;
  - Insufficient or inappropriate institutional structures;
  - Insufficient public/stakeholder involvement,
  - Inadequate financial mechanisms and support,
  - Poverty,
  - Insufficient financing mechanisms and support,
  - Lack of political will;
  - Inadequate monitoring, control, and surveillance; and
  - Absence of economic instruments for sustainability of environmental interventions.

49. The Transboundary Diagnostic Analysis provides more comprehensive information on the root causes and sources of the problems identified above. This document gives an initial iteration of the various actions and interventions to be taken under the headings of three overarching Ecosystem Quality Objectives supported by concrete targets, which are given below, to address the major perceived problems and issues through mitigation and/or elimination of the root causes.

## **RATIONALE AND OBJECTIVES (ALTERNATIVE COURSE OF ACTION)**

50. The overall development goals of this project are to 1) recover depleted fish stocks, 2) restore degraded habitat, and 3) reduce land and ship-based pollution and 4) create an ecosystem-wide assessment and management framework for sustainable use of living and non-living resources in the GCLME. Priority action areas rely heavily on regional capacity building. Sustainability will derive from this improved capacity, strengthening of national and regional institutions and improvements in policy/legislative frameworks.

51. The TDA identified the major perceived problems and issues (MPPI) in the region and then analyzed the root causes based on this analysis. The preliminary SAP lists three overarching Ecosystem Quality Objectives as a possible basis for long-term action to improve the GCLME environment. The following EQOs with their associated targets serve as the priority areas of intervention in the GCLME project:

### ***1) Sustainable Fisheries***

#### Preliminary Targets

- Populations of threatened species stabilized and/or recovering by 2010
- Fish populations restored to levels of mid-1970s by 2015 (based on the quality of available data)
- All commercially important fish species being fished sustainably with minimum by-catch and habitat impacts by 2015.

### ***2) High Quality Water to Sustain Balanced Ecosystem***

#### Preliminary Targets

- Reduce annual inputs of all priority land and sea-based pollutants to the marine environment by at least 10% by 2015
- Measurably improve water quality in two priority coastal hotspots in each country by 2010

### ***3) Balanced Habitats for Sustainable Ecology and Environment***

#### Preliminary Targets

- Zero net loss of mangroves by 2015
- Reduced areal coverage of eutrophied lagoons by 50% by 2015
- Measurably reduced coastal erosion at five sites by 2010

52. Each of the three over-arching EQOs addresses more than one of the MPPIs identified in the TDA. As such, implementing actions to achieve these EQOs will address the GCLME's MPPIs.

### ***1) Achieve Sustainable Fisheries***

Addresses the following MPPIs:

- Decline in GCLME fish stocks and non-optimal harvesting of living resources;
- Uncertainty regarding ecosystem status and yields in a highly variable environment including the effects of global climate change;
- Loss of biotic (ecosystem) integrity (changes in community composition, vulnerable species and biodiversity, introduction of alien species, etc.).

## 2) *High Quality Water to Sustain Balanced Ecosystem*

Addresses the following MPPIs:

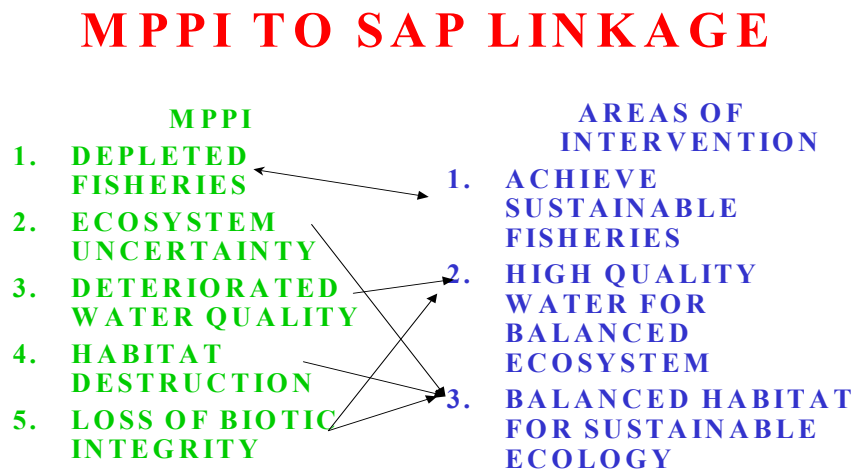
- Decline in GCLME fish stocks and non-optimal harvesting of living resources;
- Deterioration in water quality (chronic and catastrophic) due to pollution from land and sea-based activities, eutrophication and harmful algal blooms;
- Habitat destruction and alteration including *inter-alia* modification of seabed and coastal zone, degradation of coastscapes and coastline erosion;
- Loss of biotic (ecosystem) integrity (changes in community composition, vulnerable species and biodiversity, introduction of alien species, etc.).

## 3) *Balanced Habitats for Sustainable Ecology and Environment*

Addresses the following MPPIs:

- Decline in GCLME fish stocks and non-optimal harvesting of living resources;
- Deterioration in water quality (chronic and catastrophic) due to pollution from land and sea-based activities, eutrophication and harmful algal blooms;
- Habitat destruction and alteration including *inter-alia* modification of seabed and coastal zone, degradation of coastscapes and coastline erosion;
- Loss of biotic (ecosystem) integrity (changes in community composition, vulnerable species and biodiversity, introduction of alien species, etc.).
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Figure 5. Map of linkages between Major Perceived Problems and Issues with the Areas of Intervention (EQOs) identified in the SAP.



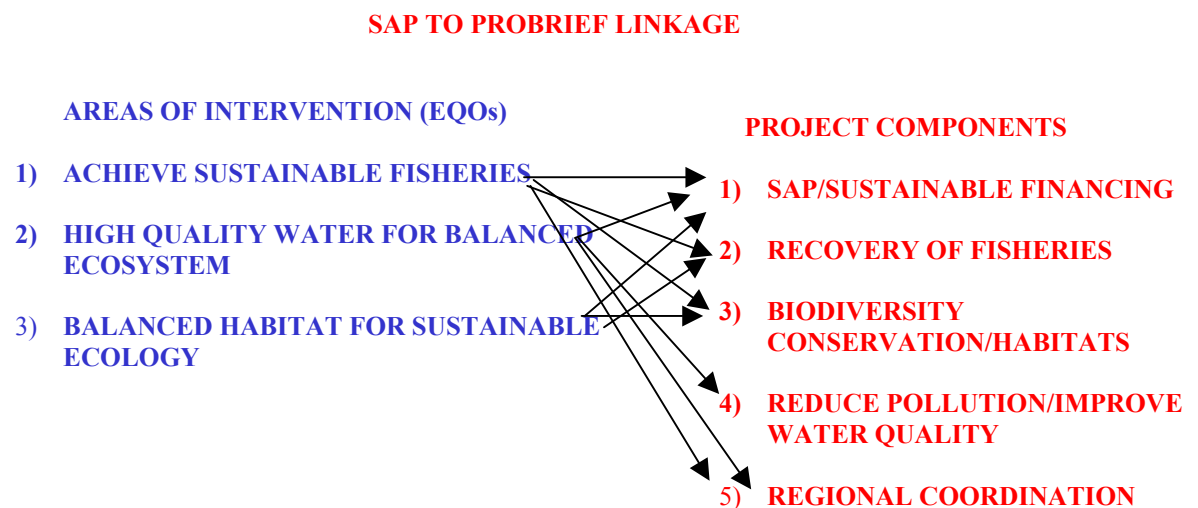
53. To satisfy the broad development goal and begin to achieve the identified EQOs with their targets, the project has five major components:

- 1) Finalize SAP and develop sustainable financing mechanism for its implementation
- 2) Recovery and sustainability of depleted fisheries and living marine resources including mariculture

- 3) Planning for biodiversity conservation, restoration of degraded habitats and developing strategies for reducing coastal erosion
- 4) Reduce land and sea-based pollution and improve water quality
- 5) Regional Coordination and Institutional Sustainability

54. Each of the above components includes activities that will lead to the achievement of at least one of the EQOs identified in the TDA and SAP, as follows:

Figure 6. Graphic linkages between the Areas of Intervention of the SAP (EQOs) and the Full Project Components.



## PROJECT OUTCOMES/COMPONENTS

55. The project is divided into five major components reflecting the priority ranking determined at the regional level by the Regional Scientific and Task Team. These five principal components offer the greatest potential project benefits in terms of environmental protection from both national and transboundary perspectives over the project's lifespan. The five principal components and their associated objectives were developed for the project based on the areas of threats identified by the TDA, and areas of intervention identified in the SAP. These major components have associated objectives, activities and results, which are listed below in summary form.

56. As a follow-on to the Pilot Phase GGLME project, this project is in the phase of early SAP implementation. Clearly identified in the process leading to this phase has been the need for regional and national demonstration projects to advance SAP implementation. A list of priority demonstration projects was developed, and then the demonstrations were assigned either to a single country, or for regional execution. The demonstration projects identified by this process are nine in number:

1. Fisheries: introduction and maintenance of an assessment and management system to achieve and support the long-term sustainability of the Fish and Fisheries of this ecosystem: regional execution
2. Environmental Information Management: regional execution

3. Marine productivity assessment: regional execution
4. Nypa Palm Clearance and Mangrove restoration: Nigeria
5. Waste Stock exchange management system: Ghana
6. Reduction of nutrient discharges: Togo
7. ICAM for Kribe-Limbe Lagoon: Cameroon
8. Low-cost protection from coastal erosion: Cote d'Ivoire
9. Protected area management: Benin

57. These nine demonstration projects all address key issues identified during the Pilot Phase and Preparatory Phase of the GCLME project. These demonstration projects are nested within the major areas of intervention as described below. Each demonstration project has an associated budget, regional or national management mechanism, and incremental cost analysis. Each demonstration project has significant co-financing from various sources, including the private sector.

<b>Demonstration Project</b>	<b>MPPI Addressed</b>	<b>EQO Addressed</b>	<b>Components</b>
Fisheries: introduction and maintenance of an assessment and management system to achieve and support the long-term sustainability of the Fish and Fisheries of this ecosystem management	<ul style="list-style-type: none"> <li>• Decline in GCLME fish stocks</li> <li>• Uncertainty regarding ecosystem status</li> </ul>	1) Sustainable Fisheries	COMP. I: Finalize TDA, SAP and NAPs COMP. II: Recovery and Sustainability of Depleted Fisheries
Environmental Information Management	<ul style="list-style-type: none"> <li>• Decline in GCLME fish stocks</li> <li>• Uncertainty regarding ecosystem status</li> <li>• Deterioration in water quality</li> <li>• Habitat destruction and alteration</li> </ul>	1) Sustainable Fisheries 2) High Quality Water to Sustain Balanced Ecosystem 3) Balanced Habitats for Sustainable Ecology and Environment	COMP. I: Finalize TDA, SAP and NAPs COMP. II: Recovery and Sustainability of Depleted Fisheries COMP. III: Planning for biodiversity conservation; restoration of degraded habitats COMP. IV: Reduce land- and sea-based pollution and improve water quality COMP. V: Regional coordination and institutional stability
Marine productivity assessment	<ul style="list-style-type: none"> <li>• Decline in GCLME fish stocks</li> <li>• Uncertainty regarding ecosystem status</li> <li>• Habitat destruction and alteration</li> </ul>	1) Sustainable Fisheries 3) Balanced Habitats for Sustainable Ecology and Environment	COMP. I: Finalize TDA, SAP and NAPs COMP. II: Recovery and Sustainability of Depleted Fisheries
Nypa Palm Clearance and Mangrove restoration	<ul style="list-style-type: none"> <li>• Uncertainty regarding ecosystem status</li> <li>• Habitat destruction and alteration</li> </ul>	3) Balanced Habitats for Sustainable Ecology and Environment	COMP. III: Planning for biodiversity conservation; restoration of degraded habitats
Waste Stock exchange management system	<ul style="list-style-type: none"> <li>• Deterioration in water quality</li> <li>• Habitat destruction and alteration</li> </ul>	2) High Quality Water to Sustain Balanced Ecosystem	COMP. IV: Reduce land- and sea-based pollution and improve water quality

	alteration		
Reduction of nutrient discharges	<ul style="list-style-type: none"> <li>Deterioration in water quality Habitat destruction and alteration</li> </ul>	<p>2) High Quality Water to Sustain Balanced Ecosystem</p> <p>3) Balanced Habitats for Sustainable Ecology and Environment</p>	COMP. IV: Reduce land- and sea-based pollution and improve water quality
ICARM for Kribe-Limbe Lagoon	<ul style="list-style-type: none"> <li>Deterioration in water quality Habitat destruction and alteration</li> </ul>	<p>3) Balanced Habitats for Sustainable Ecology and Environment</p>	<p>COMP. II: Recovery and Sustainability of Depleted Fisheries</p> <p>COMP. III: Planning for biodiversity conservation; restoration of degraded habitats</p> <p>COMP. IV: Reduce land- and sea-based pollution and improve water quality</p>
Low-cost protection from coastal erosion	<ul style="list-style-type: none"> <li>Habitat destruction and alteration</li> </ul>	<p>3) Balanced Habitats for Sustainable Ecology and Environment</p>	COMP. III: Planning for biodiversity conservation; restoration of degraded habitats
Protected area management	<ul style="list-style-type: none"> <li>Decline in GCLME fish stocks Uncertainty regarding ecosystem status</li> <li>Deterioration in water quality</li> <li>Habitat destruction and alteration</li> </ul>	<p>3) Balanced Habitats for Sustainable Ecology and Environment</p>	COMP. III: Planning for biodiversity conservation; restoration of degraded habitats

Annex P provides more detailed written description of the Demonstration Projects.

## COMPONENT I: FINALIZE TDA, SAP and NAPs AND DEVELOP SUSTAINABLE FINANCING MECHANISMS FOR SAP/NAP IMPLEMENTATION

58. **Objective:** Undertake strategic planning for concrete actions to develop sustainable fisheries, restore habitats and improve water quality in the GCLME, including the formulation of economic arrangements that will assure the sustainability of the action program.

59. **Subcomponents: Establish and maintain an ecosystem-wide pollution monitoring, assessment, and management system.**

Sub-Component: Fill data gaps and Update TDA

1.1 Identify and fill gaps for the TDA, including biodiversity, socio-economic conditions, legal/regulatory review, stakeholder analysis, hot spots, contaminant levels, etc.

1.2 Fill gaps in regional pollution monitoring methods/standards/etc. e.g. by training and at-sea demonstrations for contaminant levels in water, sediments, and biota (must be done to support task 1.1 above)

1.3 Update TDA following filling of gaps

Sub-Component: SAP/NAP Finalization

1.4 Prepare and endorse National Action Plans (NAP) to fully operationalize SAP interventions at national level in each GCLME country

1.5 Finalize and endorse regional Strategic Action Programme

Sub-Component: SAP Financing and Sustainability

1.6 Hold a donors' conference to mobilize commitments to SAP implementation

1.7 Formulate arrangements for sustainable financing of environmental management of the GCLME, including economic instruments and incentives to promote preventive measures to decrease both land and sea-based sources of pollution as well as adequate environmental and living marine resources management in the region

60. The activities under Component I focus on filling priority gaps in technical knowledge of the transboundary problems in the GCLME, completing a concrete regional SAP, and formulating sustainable financing arrangements. The TDA will be updated as part of this component. A targeted SAP will also be developed and endorsed as a part of this component and commitments for its implementation will be obtained. However, Component I cannot be viewed as an independent activity, as Components II through V will support Component I by providing the institutional arrangements and the concrete actions required to provide information, data, and guidance to the TDA and SAP. Component I as written above merely establishes the overall framework for TDA/SAP/NAP development, but this process will be fed with concrete outcomes from Components II through V below.

61. **Outcomes:**

- TDA updated and widely disseminated
- NAPs and Regional SAP developed and endorsed
- Commitments to SAP implementation obtained
- Sustainable financing arrangements formulated
- Economic instruments and incentives developed

## **COMPONENT II: RECOVERY AND SUSTAINABILITY OF DEPLETED FISHERIES AND LIVING MARINE RESOURCES INCLUDING MARICULTURE**

62. **Objective:** Establish an ecosystem-wide fisheries/LMR monitoring, assessment, and management system, fill technical gaps in understanding the current status of fisheries and take actions to aid in the recovery and sustainable use of living marine resources including development of mariculture in the GCLME (to support the TDA and SAP process)

63. **Subcomponents:**

- 2.1 Demonstrate regional stock assessment methods including regional surveys (**Regional Demonstration Project on Fisheries**)

- 2.2 Identify best methods and estimates for maximum sustainable yields for dominant commercially important fisheries species
- 2.3 Evaluate productivity with regards to its carrying capacity for living marine resources of the ecosystem (Regional Demonstration Project on Productivity)
- 2.4 Develop Regional Agreements and Regional Fisheries Commission
- 2.5 Assess and draft modifications to the National Legal Frameworks to achieve sustainable fisheries
- 2.6 Develop Fisheries Management Plans for at least three fisheries
- 2.7 Assess existing coastal aquaculture and mariculture and determine environmentally sustainable capacity for future development, including identification of investments and legislation for SAP

64. Activities under this component focus on sustainable development of the GCLME fisheries and living marine resources. Methods to assess regional stocks and evaluate productivity will be demonstrated in order to gain a better understanding of the current status of the GCLME fisheries and living marine resources. The legal capacity for addressing the problem of over-exploitation of fisheries will be addressed through the drafting of modifications of national legal frameworks and the development of regional agreements and establishment of a GCLME Commission. The development of coastal aquaculture and mariculture will be facilitated through the identification of investments.

65. **Outcomes:**

- Regional surveys demonstrated and stock assessment mechanism developed
- Maximum sustainable yields estimated
- Capacity for conducting carrying capacity analyses developed and analyses conducted
- Regional agreements and Regional Fisheries Commission developed
- Modifications to National Legal Frameworks to achieve sustainable fisheries drafted
- Fisheries Management Plans developed for at least three fisheries
- Environmentally sustainable capacity for aquaculture and mariculture determined

**COMPONENT III: PLANNING FOR BIODIVERSITY CONSERVATION, RESTORATION OF DEGRADED HABITATS AND DEVELOPMENT OF STRATEGIES FOR REDUCING COASTAL EROSION**

66. **Objective:** Undertake strategic planning for conserving biodiversity and integrated coastal management, demonstrate activities to restore priority degraded habitats, and develop strategies for reducing coastal erosion in the GCLME region (to support the TDA and SAP process)

67. **Subcomponents:**

- 3.1 Develop Regional Biodiversity Action Plan, including Protected Areas based on Biodiversity Action Plans (National Demonstration Project on Protected Areas)
- 3.2 Demonstrate restoration of priority mangrove areas (National Demonstration Project on mangrove restoration)



- 3.3 Demonstrate use of Integrated Coastal Area and River Basin Management (ICARM) and assess Physical Alteration and Destruction of Habitat (PADH) for habitat protection (National Demonstration Project on ICARM)
- 3.4 Assess status of introduced species and their threats to the biodiversity of the GCLME region; develop legal/regulatory mechanisms for their control
- 3.5 Perform gap analysis of national legislation and draft improvements to legislation regarding key elements of biodiversity identified in the TDA, introduced species and habitats, etc.
- 3.6 Develop cost-effective mitigation strategies for restoring natural littoral sediment flow/budget for protection of shorelines and critical coastal habitats, including studies, investments for SAP, and legal/regulatory mechanisms (National Demonstration Project on shoreline erosion)

68. The activities in this component focus on undertaking strategic planning for and taking actions to conserve regional biodiversity and restore priority-degraded habitats. Under this component, a Regional Biodiversity Action Plan will be developed identifying priority biodiversity areas of concern. Marine and coastal biodiversity elements of already existing National Biodiversity Action Plans will be utilized to avoid duplication. Priority mangrove areas, degraded critical habitats, will be restored as a national demonstration project. The legal basis for combating introduced species and for conserving biodiversity will be strengthened at the national level. Cost effective methods for addressing coastal erosion will be developed.

69. **Outcomes:**

- Regional Biodiversity Action Plan developed
- Demonstration of restoration of priority mangrove areas completed
- Use of ICARM and PADH demonstrated
- Status of introduced species and their threats to the region's biodiversity assessed
- Modifications to national biodiversity laws drafted
- Mitigation strategies for restoring eroded coastal areas developed

**COMPONENT IV: REDUCE LAND AND SEA-BASED POLLUTION AND IMPROVE WATER QUALITY**

70. **Objective:** Develop strategic programmes for reducing land and sea-based sources of transboundary pollution and enhance regional ability to address wastes, oil spills, and other major marine pollution incidents (to support the TDA and SAP process).

71. **Subcomponents:**

- 4.1 Facilitate development of regionally-integrated and consistent National Programmes of Action for Land-Based Activities in the GCLME region, including updating inventories of pollution and habitat hot spots
- 4.2 Develop and implement a Regional Programme of Action for Land-Based Activities in the GCLME region
- 4.3 Develop and promote region-wide adoption of a protocol on LBA for the Abidjan Convention
- 4.4 Conduct a regional assessment of maritime pollution prevention measures, contingency planning, and spill response capabilities

- 4.5 Develop regional systems for cooperation in cases of major marine pollution incidents (customs, communications, response, liability, and compensation)
- 4.6 Facilitate process to reform legislation in selected countries to adopt and implement international conventions (e.g., MARPOL, OPRC) as related to oil and gas activities
- 4.7 Strengthen, improve, and demonstrate methods to reduce nutrient influx to the marine environment (National Demonstration Project on Nutrient Reduction)
- 4.8 Develop investment opportunities for the SAP to reduce ecosystem threats identified in the updated TDA (National Demonstration Project on Waste Stock Exchange)

72. The activities under this component focus on improving the regional ability to conduct strategic planning for and undertake actions to address the major transboundary problem of land and sea-based pollution and thereby improve water quality in the GCLME. This component will enhance national and regional abilities to address land-based sources of pollution through the creation of strategic programmes of action for implementation of the GPA at the national and regional level. The legal basis for addressing land-based sources of pollution will be improved through the formulation and adoption of a Protocol on Land-Based Activities for the 1981 Abidjan Convention. The regional ability to address marine-based sources of pollution will be enhanced through a review of current pollution prevention measures and spill response capabilities. Additionally, a regional system for cooperation in cases of marine pollution incidents will be created. Investment opportunities for implementing priority SAP activities related to land and sea-based sources of pollution will be developed.

73. **Outcomes:**

- Regional monitoring training and demonstrations conducted
- Regionally-integrated and consistent National Programmes of Action for Land-Based Activities developed
- Regional Programme of Action for Land-Based Activities developed and implemented
- LBA Protocol for the Abidjan Convention developed and adopted
- Regional assessment of marine pollution prevention measures, contingency planning and spill response capabilities completed
- Regional system for cooperation in cases of major marine pollution incidents created
- Legislative reforms in selected countries to adopt and implement international conventions related to oil and gas activities facilitated
- Investment opportunities for the SAP to reduce ecosystem threats developed

## COMPONENT V: REGIONAL COORDINATION AND INSTITUTIONAL SUSTAINABILITY

74. **Objective:** Create a regional network with broad stakeholder participation and a sustainable institutional structure for addressing identified threats in the GCLME, including the development of a regional ecosystem commission and information system (this component will support the TDA and SAP process by providing the institutional arrangements for carrying out the project).

75. **Subcomponents:**

- 5.1 Develop regional project coordination mechanisms
- 5.2 Develop effective Steering Committees

5.3 Establish Intersectoral/ Interministerial/ Ministerial Coordination

5.4 Identify, strengthen and involve stakeholders

5.5 Develop Ecosystem Information System (EIS) for GCLME, including cooperation with other available regional EIS (Regional Demonstration Project on Environmental Information Systems)

5.6 Project Monitoring and Evaluation (M&E)

5.7 Develop regional coordination mechanism through the establishment of an Interim Guinea Current Commission, followed by a full-time Commission

5.8 Provide capacity building for the IGCC

76. This component will create a functioning network of institutions and individuals to address the GCLME environmental issues and root causes; identify the process for evolving institutional arrangements from the support of the GEF to ownership by Region; and develop strategies to sustain the effective network of institutions and individuals to address the GCLME environmental issues and root causes. The Programme Coordinating Unit (PCU) will be instrumental in coordinating the implementation of all project activities as well as in securing the requisite amount of transnational and cross-institutional collaboration (international and regional organizations and donors) necessary to the success of the Project. It is envisaged that a Guinea Current Commission (GCC) would be constituted and adopted by the countries during the process of completion of the full SAP. Recognizing that negotiations leading to a legal entity such as the GCC will take time, the immediate creation of an Interim Guinea Current Commission (IGCC) would be explored as soon as implementation of the full project begins. The IGCC would have clearly defined roles and responsibilities to be described in the SAP. As the IGCC matures, it will increasingly take leadership of the project and, eventually, the PCU of the project will become the coordinating unit of the IGCC (later the GCC). The IGCC will be expected to play the key role in updating, as necessary, the agreed SAP as the project is implemented. This updating will be completed towards the end of the full project.

77. **Outcomes:**

- Regional project coordination mechanism
- Steering Committee developed
- Intersectoral/ Interministerial/ Ministerial Coordination established in each country
- Stakeholders actively involved in project activities
- GCLME Environmental Information System established
- Project monitoring and Evaluation conducted
- Regional coordination mechanism developed
- Capacity developed for the IGCC
- GEF Process, Stress Reduction and Environmental Status Indicator Framework

## **END OF PROJECT SITUATION (EXPECTED RESULTS)**

78. The major expected results from completing the above five components and activities can be summarized as follows:

- Improved institutional structure to address priority regional issues, including a Guinea Current Commission, a Regional Fisheries Commission, and other regional and national bodies for conducting effective regional interventions for fisheries and biodiversity conservation and pollution prevention.
- Improved legal/management structure for addressing the priority regional issues, including a Protocol on Land Based Activities for the Abidjan Convention, a regional Biodiversity Action Plan, as well as legislative reforms for fisheries, land-based activities, and biodiversity
- Nine successful demonstration projects will serve as a basis for replication in the region and outside the region, as concrete steps towards achieving agreed environmental quality objectives.
- Nationally endorsed Strategic Action Program and NAPs with accompanying sustainable financing plan will lead the way towards continued incremental improvement to the GCLME based on a solid foundation of regional commitment and consensus

79. In addition to the major expected results above, the project will also result in:

- Improved knowledge assessment and actions toward recovery and sustainability of the current ecological status of the GCLME, including fish stocks and the priority transboundary concerns
- Enhanced regional political and stakeholder commitment to address priority transboundary problems through the development and preliminary implementation of a regional SAP
- Improved public participation in planning for and implementing activities to address the priority transboundary problems in the GCLME
- Increased ability to sustainably harvest living marine resources in the GCLME through improved legal basis, the development and implementation of fisheries monitoring, assessment and management plans, strengthened institutional capacity, and the assessment of mariculture carrying capacity
- Improved conservation of biodiversity and condition of priority habitats in the GCLME region through the development of a Regional Biodiversity Action Plan, demonstration projects, strengthened institutional capacity and an enhanced legal basis
- Enhanced regional capacity to mitigate eroded coastal areas
- Improved regional capacity to address land and sea-based pollution in the GCLME and thereby improve water quality through coordination, strategic planning, demonstration projects and an enhanced legal basis
- Effective coordination of project activities and preliminary SAP implementation through the establishment of a Regional Coordination Unit, Steering Committee and the development of a GCC
- Enhanced national and regional data and information acquisition, exchange and management systems to support decision-making

80. In order to achieve these results this project will be carried out in three major phases. First, assessments will be conducted to more accurately determine the current ecological status of the GCLME and its primary transboundary threats. This phase will be comprised of capacity building, assessments, and reviews of existing knowledge, combined with judicious and limited filling-in of the major gaps in knowledge and will result in an updated Transboundary Diagnostic Analysis. During the second phase, the Strategic Action Programme will be finalized. This phase will include development of management plans, agreements and strategies. The final phase of the project will include initial implementation of the agreed-upon SAP. An important part of the project is the implementation of identified regional and country demonstration projects that will facilitate early implementation of the SAP. It is understood that a consolidated effort undertaken in these initial six countries selected for the national demonstration projects will generate lessons that can be rapidly transferred and replicated throughout the region.

81. The TDA/NAP/SAP process, when completed will include the formulation of National (part of the NAP process) and Regional (part of the SAP process) Programmes of Action Land Based Activities. These NPAs and the RPA therefore will not be developed as a separate process, but rather as part of the TDA/NAP/SAP process. The SAP will fully assess the impact of economic growth in the region, map out alternative development scenarios that protect global environmental resources, and enable the sixteen member states to reach a consensus on priorities, targets, programmes, and projects to protect the shared resources of the GCLME. The SAP will include an estimation of the required financial resources and a strategy to mobilize these resources. GEF investment project proposals to implement selected transboundary elements of the SAP will be prepared using the incremental cost approach. The SAP is expected to play a key role in ensuring that global environmental benefits are provided in tandem with the facilitation of sustainable and environmentally sound economic development in the area over the coming decades. The process for the completion of the SAP will be designed to ensure that the SAP is action-oriented, locally owned, government supported, sustainable, and responsive to the local conditions. This, and the close attention to be paid to mobilizing resources for implementation of the SAP, will assure that it is implemented and not stored on shelves.

82. Leading to the completion and endorsement of the SAP, this Project will build on the concrete activities of Components II through V to provide information, data, and facilitation to the TDA/NAP/SAP process.

83. Table 3 outlines under which phases of the project the different subcomponents and their associated activities are included.

Table 3: Components and Phases of the Project

<b>Component/Sub-Component</b>	<b>Update TDA</b>	<b>SAP Development</b>	<b>SAP Implementation</b>
<b>I. Finalize SAP and develop sustainable financing mechanisms for its implementation</b>	√	√	√
Ia. Fill gaps in regional monitoring methods/standards/etc. by training and at-sea demonstrations for contaminant levels in water, sediments, and biota.	√		
Ib. Identify and fill gaps for the TDA, including biodiversity, socio-economic conditions, legal/regulatory review, stakeholder analysis, hot spots, contaminant levels, etc.	√		
Ic. Update TDA following filling of gaps.	√		
Id. Prepare and endorse National Action Plans.		√	
Ie. Finalize and endorse regional Strategic Action Programme.		√	
If. Hold a donors' conference to mobilize commitments to SAP implementation.		√	
Ig. Formulate arrangements for sustainable financing of environmental management of the GCLME.			√
Ih. Develop and recommend economic instruments and incentives to promote preventive measures to decrease both land and sea-based sources of pollution as well as adequate environmental management in the region.			√
<b>II. Recovery and sustainability of depleted fisheries and living marine resources including mariculture. (supporting Component I)</b>	√	√	√
IIa. Demonstrate regional stock assessment methods, including regional surveys (Regional Demonstration Project)			√
IIb. Identify methods and estimates for maximum sustainable yields for dominant commercially important fisheries species.			√
IIc. Evaluate productivity with regards to its carrying capacity for living marine resources of the ecosystem (Regional Demonstration Project).	√		
IId. Develop Regional Agreements and Regional Fisheries Commission			√
IIe. Assess and draft modifications to the national legal Frameworks to achieve sustainable fisheries.			√

Component/Sub-Component	Update TDA	SAP Development	SAP Implementation
IIf. Develop Fisheries Management Plans for at least three fisheries.		√	
IIg. Assess existing coastal aquaculture and mariculture and determine environmentally sustainable capacity for future development, including identification of investments and legislation for SAP.			√
<b>III. Planning for biodiversity conservation, restoration of degraded habitats and development of strategies for reducing coastal erosion. (Supporting Component I)</b>	√	√	√
IIIa. Develop Regional biodiversity Action Plan, including Protected Areas based on Biodiversity Action Plans (National Demonstration Project).		√	
IIIb. Demonstrate restoration of priority mangrove areas (National Demonstration Project).			√
IIIc. Demonstrate use of Integrated Coastal Area and River Basin Management (ICARM) and assess Physical Alteration and Destruction of Habitat (PADH) for habitat protection (National Demonstration Project).			√
IIId. Assess status of introduced species and their threats to the biodiversity of the GCLME region; develop legal/regulatory mechanisms for their control.	√	√	
IIIe. Perform gap analysis of national legislation and draft improvements to legislation regarding key elements of biodiversity identified in the TDA, introduced species and habitats, etc.			√
IIIf. Develop cost-effective mitigation strategies for restoring natural littoral sediment flow/budget for protection of shorelines and critical coastal habitats, including studies, investments for SAP, and legal/regulatory mechanisms (National Demonstration Project).			√
<b>IV. Reduce land and sea-based pollution and improve water quality (supporting Component I)</b>	√	√	√
IVa. Facilitate development of regionally integrated and consistent National Programmes of Action for Land-Based Activities, including updating inventories of pollution and habitat hot spots.		√	
IVb. Develop and implement a Regional Programme of Action for Land-Based Activities.		√	√
IVc. Develop a protocol on LBA for the Abidjan Convention			√
IVd. Conduct a regional assessment of maritime pollution prevention measures, contingency planning, and spill response capabilities.	√	√	
IVe. Develop regional systems for cooperation in cases of major marine pollution incidents (customs, communications, response, liability, and compensation).			√
IVf. Facilitate process to reform legislation in selected countries to adopt and implement international conventions (e.g., MARPOL< OPRC) as related to oil and gas activities.		√	
IVg. Strengthen, improve, and demonstrate methods to reduce nutrient influx to the marine environment (national Demonstration Project).			√
IVh. Develop investment opportunities for the SAP to reduce ecosystem threats identified in the updated TDA.			√
<b>V. Regional coordination and institutional sustainability. (supporting Component I)</b>	√	√	√
Va. Develop a regional project coordination mechanism.		√	
Vb. Develop effective Steering Committee.		√	
Vc. Establish Intersectoral/Interministerial/Ministerial Coordination.		√	
Vd. Identify, strengthen and involve stakeholders.		√	√
Ve. Develop Environmental Information System (EIS) for GCLME, including cooperation with other available regional EIS (Regional Demonstration Project).	√	√	√
Vf. Monitoring and Evaluation (M&E)		√	
Vg. Develop regional coordination mechanism (an Interim Guinea Current Commission, followed by a full-time Commission).			√
Vh. Provide capacity building for the IGCC.			√

84. The project approach will thus extend the introduction of ecosystem-based assessment and management from the areas adjacent to the countries that participated in the Pilot Phase, to the full extent of the influence of the Guinea Current LME, from Guinea-Bissau in the northwest, to Angola in the south. The proposed demonstration projects will contribute directly to the implementation of the Pilot Phase Project modular approach to ecosystem: 1) productivity, 2) fish and fisheries and other living resources, 3) pollution and ecosystem health, 4) socio-economics, and 5) governance. The projects will also contribute and facilitate the NEPAD's Environmental Action Plan implementation as well as contribute to the revitalization of the Abidjan Conventions by bringing harmonized environmental management efforts in combination with economic development and poverty alleviation. The project will maintain close linkages with mechanisms developed to address land and water-related environmental issues in the major river basins draining to the LME (Volta, Niger) and the neighboring GEF International Waters projects (Canary Current, Benguela Current). It will support the regional implementation of the Global Programme of Action for Protection of the Marine Environment from Land-Based Activities, relevant components of the Abidjan Convention and those of the Accra Ministerial Declaration.

85. The Workplan for these Components and Activities is presented below in Table 4. A full implementation plan will be developed by the staff of the Regional Coordination Unit immediately upon beginning its operation and will be submitted to the project Steering Committee for adoption.

Table 4. Workplan and Timetable

Component / Sub-Component	PHASE 1					
	Year 1		Year 2		Year 3	
<b>I. Finalize SAP and develop sustainable financing mechanisms for its implementation</b>						
Ia. Fill gaps in regional monitoring methods/standards/etc. by training and at-sea demonstrations for contaminant levels in water, sediments, and biota.						
Ib. Identify and fill gaps for the TDA, including biodiversity, socio-economic conditions, legal/regulatory review, stakeholder analysis, hot spots, contaminant levels, etc.						
Ic. Update TDA following filling of gaps.						
Id. Prepare and endorse National Action Plans.						
Ie. Finalize and endorse regional Strategic Action Programme.						
If. Hold a donors' conference to mobilize commitments to SAP implementation.						
Ig. Formulate arrangements for sustainable financing of environmental management of the GCLME; Develop and recommend economic instruments and incentives to promote preventive measures to decrease both land and sea-based sources of pollution as well as adequate environmental management in the region						
<b>II. Recovery and sustainability of depleted fisheries and living marine resources including mariculture.</b>						
Iia. Demonstrate regional stock assessment methods, including regional surveys (Regional Demonstration Project)						
Iib. Identify methods and estimates for maximum sustainable yields for dominant commercially important fisheries species.						
Iic. Evaluate productivity with regards to its carrying capacity for living marine resources of the ecosystem (Regional Demonstration Project).						
Iid. Develop Regional Agreements and Regional Fisheries Commission						
Iie. Assess and draft modifications to the national legal Frameworks to achieve sustainable fisheries.						
Iif. Develop Fisheries Management Plans for at least three fisheries.						
Iig. Assess existing coastal aquaculture and Mariculture and determine environmentally sustainable capacity for future development, including identification of investments and legislation for SAP.						



Component / Sub-Component	PHASE 1					
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<b>III. Planning for biodiversity conservation, restoration of degraded habitats and development of strategies for reducing coastal erosion.</b>					
IIIa. Develop Regional biodiversity Action Plan, including Protected Areas based on Biodiversity Action Plans (National Demonstration Project).						
IIIb. Demonstrate restoration of priority mangrove areas (National Demonstration Project).						
IIIc. Demonstrate use of Integrated Coastal Area and River Basin Management (ICARM) and assess Physical Alteration and Destruction of Habitat (PADH) for habitat protection (National Demonstration Project).						
IIId. Assess status of introduced species and their threats to the biodiversity of the GCLME region; develop legal/regulatory mechanisms for their control.						
IIIe. Perform gap analysis of national legislation, and draft improvements to legislation regarding key elements of biodiversity identified in the TDA, introduced species and habitats, etc.						
IIIf. Develop cost-effective mitigation strategies for restoring natural littoral sediment flow/budget for protection of shorelines and critical coastal habitats, including studies, investments for SAP, and legal/regulatory mechanisms (National Demonstration Project).						
<b>IV. Reduce land and sea-based pollution and improve water quality</b>						
IVa. Facilitate development of regionally integrated and consistent National Programmes of Action for Land-Based Activities, including updating inventories of pollution and habitat hot spots.						
IVb. Develop and implement a Regional Programme of Action for Land-Based Activities.						
IVc. Develop a protocol on LBA for the Abidjan Convention						
IVd. Conduct a regional assessment of maritime pollution prevention measures, contingency planning, and spill response capabilities.						
IVe. Development of regional systems for cooperation in cases of major marine pollution incidents (customs, communications, response, liability, and compensation).						
IVf. Facilitate process to reform legislation in selected countries to adopt and implement international conventions (e.g., MARPOL/OPRC) as related to oil and gas activities.						

Component / Sub-Component	PHASE 1					
	Year 1		Year 2		Year 3	
	IVg. Strengthen, improve, and demonstrate methods to reduce nutrient influx to the marine environment (national Demonstration Project).					
IVh. Develop investment opportunities for the SAP to reduce ecosystem threats identified in the updated TDA.						
<b>V. Regional coordination and institutional sustainability.</b>						
Va. Develop a regional project coordination mechanism.						
Vb. Develop effective Steering Committee.						
Vc. Establish Intersectoral/Interministerial/Ministerial Coordination.						
Vd. Identify, strengthen and involve stakeholders.						
Ve. Develop Environmental Information System (EIS) for GCLME, including cooperation with other available regional EIS (Regional Demonstration Project).						
Vf. Monitoring and Evaluation (M&E)						
Vg. Develop regional coordination mechanism (an Interim Guinea Current Commission, followed by a full-time Commission).						
Vh. Provide capacity building for the IGCC.						

## TARGET BENEFICIARIES

86. The primary target beneficiary of this project is the population of the Guinea Current countries, in particular the fishing communities with an emphasis on women (as reflected by the Stakeholding process). The project will contribute to the reduction of poverty in the region, by providing a roadmap to sustainable coastal riparian fisheries, and therefore to continued availability of a primary food source for the coastal population. The coastal zone population should benefit from each of the success criteria, which are expected to be rehabilitation of the fishery resources, sustainable aquaculture/mariculture, improved biodiversity protection, protected/restored habitats, improved water quality, and reduced rates of coastal erosion. Successful implementation of the GCLME should have direct benefits in terms of the improvement and protection of public health, of livelihoods of the local communities, and of the general quality of the coastal zone. Through these achievements, tourists in the region will enjoy clean and aesthetically pleasing recreational facilities. In the short-term, governments and institutions will benefit from institutional strengthening as a result of networking, training programmes, the provision of key items of equipment, and in particular from the development of GCLME SAP. Proper environmental assessments and pre-investment studies should facilitate the release of vital credits for improving waste management and for stimulating the development of key sectors.

87. The direct recipients of the project objectives will be:

- People of the region
- Governments of the region;
- National Focal Points;
- regional scientific and technical organizations;
- national, local and municipal governments in cooperating countries;
- technical organizations, universities, research institutes and private sector organizations (tourism, agriculture, fisheries, oil and gas industry, environmental consultancy firms, etc. in coastal states); and
- non-governmental organizations concerned with environmental management and conservation of natural resources.

88. The target beneficiaries will be:

- the resident population, and especially women, of the Guinea Current coastal zone, who will benefit from enhanced fishery resources (both as food and income supply), improved water quality, recreational opportunities (both at personal as well as income generating levels) and strengthened protection and management of natural habitats, improved basic access to food, sustainable income and livelihoods, and enhanced condition of and opportunities for women;
- fishermen whose livelihoods will benefit from the improved environmental quality as the result of the reduced transport of pollutants to the sea following implementation of new policies and investments; in addition, they will benefit from the sustainable management of the GCLME fisheries;
- regional tourists who visit the GCLME coastal zone and adjacent areas for a wide range of purposes;
- future generations of the human population both within and beyond region who will benefit from the opportunities created by the conservation of biodiversity in the region - the present project enables the present generations to respect the rights of future ones instead of transferring the consequences of irrational development to them; and
- the world population at large will benefit through the direct contribution made to the improvement of an important international water body and the demonstration effect which this project will have for other regional seas.

## RISKS AND SUSTAINABILITY

89. The long-term success of regional-scale marine ecosystem management programs, such as the one proposed here depend, *inter alia*, on the political willingness of the participating countries to cooperate, their willingness to continue project programs and approaches after the life of the GEF intervention, and the extent to which activities successfully engage system users of the resources that are the subject of intervention. For the long-term sustainability of the GCLME Program, it will be necessary for governments to have a clear vision that the benefits they will derive from the GCC and their own further investment in the project will be far greater than the costs which would accrue to them if these mechanisms were not in place.

90. In relation to political willingness, the level of project risk is seen as low/moderate in all of the countries. It might well have been expected that civil strife in Congo Democratic Republic, cote d' Ivoire and Liberia would have resulted in an uneven commitment of these countries to this project. This has not been the case, however. Interministerial involvement on the part of Congo Democratic Republic, Cote d' Ivoire and Liberia have been strong at every major meeting of the GCLME. There is a growing realization on the part of the countries that ecosystem sustainability is inextricably linked to food production, tourism, sanitation, population movements, and thus regional stability. The countries recognize that their ability to craft an integrated approach to the GCLME is therefore crucial to the development and maintenance of regional stability. The explicit commitment made by the sixteen countries through the contributions to the GEF MSP within the NEPAD environmental action plan in raising political awareness in the region, as well as actions already undertaken at the country levels, are the best indicators of the sound foundation for this project. Another strong indicator for regional commitment is regional participation in other initiatives including UNEP regional seas programme West and Central African Action Plan, the NEPAD coastal and marine environmental action plan and the FAO Central Eastern Atlantic Fisheries Commission (CECAF).

91. In addition to working closely with the regional initiatives discussed above, the present project will maintain close linkages with mechanisms developed to address land and water-related environmental issues in the major river basins draining into the LME (Volta, Niger) and the neighboring GEF International Waters projects (Canary Current, Benguela Current). It will support the regional implementation of the Global Programme of Action for Protection of the Marine Environment from Land-Based Activities, relevant components of the Abidjan Convention and those of the Accra Ministerial Declaration.

92. The risk of this GEF-initiated program and activities related to it ending after the life of the project are also seen as low. Country completion of the TDA, a jointly undertaken interministerial exercise characterized by strong cooperation and openness, led to the creation of the preliminary SAP. It is recognized that negotiations necessary to create the permanent Guinea Current Commission will take some time, perhaps as long as the project itself. Recognizing this, the countries have pledged themselves to immediately create the Interim Guinea Current Commission (IGCC) that will have specified functions and responsibilities. The countries will seek to adopt, through their appropriate national mechanisms, country specific policy/ institutional/legal reforms necessary to implement the agreed-upon recommendations of the IGCC.

93. Sustainability will also be enhanced by a progressive transfer of project leadership, overall project management and outcome production directly to the country-formed IGCC and, later, the GCC. The IGCC and eventually the GCC will assume the leadership role for the project as those institutions are formed and mature. The existing PCU would at that time become the Commission core Secretariat, with additional staff resources being provided by the countries themselves as deemed necessary by the Commission and the countries.

94. As a further demonstration of the regional commitment, the third meeting of the Steering Committee of GCLME, held in Abuja, Nigeria in June 2003, provided agreement on the following:

- The Meeting accepted the conclusions and recommendations of the 2nd Regional Technical and Scientific Task Team Workshop, including the Project Brief, TDA, preliminary SAP and the Project Budget, as modified during the Workshop and Meeting.
- The Meeting requested a one-page summary of the Interministerial Coordination process within each country.
- The Meeting agreed that this GEF project will provide a basis for a sustainable Regional Coordination Mechanism, for which the countries agreed to take financial responsibility at an appropriate time.
- The Meeting agreed that the Countries should proceed expeditiously towards a decision on the location of the PCU and the Chairs of the Working Groups.

95. The countries' ownership of the project is also shown by the endorsement of the GEF Project Brief. The countries have committed significant financial resources in support of the project, including in-kind contributions. The governments will also provide necessary scientific expertise to the GCLME Project from the national organizations, at-sea facilities for data collection, ship time, and meeting space as required.

## **GEF ELIGIBILITY**

96. All 16 participating countries are eligible for GEF assistance under paragraph 9b of the Instrument for the Restructured GEF. GEF's Operational Programme No. 9 "Integrated Land and Water Multiple Focal Area", states that *"the goal is to help groups of countries utilise the full range of technical, economic, financial, regulatory, and institutional measures needed to operationalize the sustainable development strategies for international waters. (para 9.2)"* Further, this OP lists as an expected outcome *"the reduction of stress to the international waters environment in selected parts of all five development regions across the globe through participating countries making changes in their sectoral policies, making critical investments, developing necessary programs and collaborating jointly in implementing ... water resources protection measures (para 9.10)"*.

97. The proposed project will help the riparian countries of the GCLME to overcome institutional and other barriers to collaboration. The proposed project coordinates among implementing agencies, regional development banks, countries, and other stakeholders, and generates programmatic benefits for the global environment that would not otherwise be achievable. GEF funds will support completion of the SAP. The process for completing the SAP will involve international donors, national and local governmental institutions, industries, and other key stakeholders that have important actions to take in restoring and protecting the GCLME environment.

## **STAKEHOLDER PARTICIPATION**

98. Stakeholder involvement has been recognized as an integral part of the development phase of the GCLME Program and will continue to be emphasized during the implementation of the Program. The seed for the GCLME Program was sown at the first Symposium of the Gulf of Guinea LME project in Abidjan, Cote d'Ivoire in 1998 and later endorsed by the Council of Ministers meeting in June 1998 in Accra Ghana. This endorsement paved the way for the development of a PDF Block B Grant Proposal to GEF, and its subsequent approval and implementation in 2001 to 2003. In May 2001 the First Regional GCLME Stocktaking Workshop, attended by approximately 100 stakeholders and regional and international experts, was held in Accra, followed by a formal meeting of key stakeholders. The attendance and proceedings of this workshop are attached to this document as Annex N.

99. A stakeholder participation plan for the GCLME Program is attached as Annex F. It indicates how the various stakeholders will be involved and at what stages. In order to attain sustainability, the activities are designed to address interests of large groups of stakeholders, and a significant portion of the budget is designed for this task. Major stakeholders in this project include: public sector, local government authorities, non-governmental organizations, professionals, civil society and the public including fisher-folk.

## PROJECT IMPLEMENTATION, INSTITUTIONAL FRAMEWORK AND NATIONAL AND REGIONAL INSTITUTIONS

100. Project Implementation. This project will be jointly implemented by UNDP and UNEP. This arrangement has been made in order to benefit from the comparative advantages of both organizations, each of which has large GEF International Waters portfolios utilizing the TDA/SAP approach to the protection and remediation of transboundary waterbodies. Specifically, UNDP will serve as IA for components: II (all); III-B, D, F; V-A, B, C, D, F. UNEP will serve as IA for components: I (all); III-A, C, E; IV (all); V-E, G, H. The resultant financial allocations for each agency, for Phase I, are as follows:

<b>Implementing Agency</b>	<b>Phase 1</b>
UNDP	\$6,738,672
UNEP	\$5,394,410
<b>Total</b>	<b>\$12,133,082</b>

101. The United Nations Industrial Development Organization (UNIDO) will be the Executing Agency for the project and in this capacity will seek to ensure that the sixteen GCLME countries work in concert with the regions' other GEF projects, as well as other bilateral and multilateral donor agencies in the region to define and address transboundary priority environmental issues within the framework of their existing responsibilities under the Abidjan Convention and relevant components of NEPAD.

102. The host country for the PCU will be determined based on criteria adopted by the Project Steering Committee. This process will begin once the Project Brief is accepted, and prior to the completion of the Project Document.

103. UNIDO, in consultation with UNDP and UNEP, will competitively recruit a full-time Chief Technical Advisor and other Senior Project Staff consistent with standard UNDP/UNEP procedures. The CTA will facilitate the successful execution of project activities. He/She will be responsible for the co-ordination of the day-to-day project activities and will assist governments of participating countries to provide expeditiously their respective inputs to the project.

104. UNIDO will explore the possibility of developing an MOU with IW: LEARN to assist the GCLME in accessing GEF LME experiences and information and for dissemination of lessons learned to the wider GEF community. Under the MOU, IW: LEARN will develop a Technical Support Facility to provide knowledge products and distance learning tools to serve the GCLME and other GEF IW projects in the region. Joint Operational Agreements specifying workplan, sustainability, implementation and cost-sharing arrangements will be developed as necessary for execution of identified joint pilot demonstration activities.

105. UNEP will continue to support the GCLME project through the Secretariat of the Abidjan Convention and the Chair of the Steering Committee of the Abidjan Convention. With regard to the Convention, UNEP will ensure complementarity between the specific targets of the project and the wider objectives of the WACAF Action Plan, especially as it concerns the updating of elements of the Abidjan Convention in line with recent realities (e.g. new International Conventions, new memberships, etc) and the development of additional Protocols in support of the Convention. UNEP and UNDP will, in addition, ensure effective liaison among the GCLME, CCLME and BCLME Projects, which together provide coverage for the geographic area defined by the Abidjan Convention. UNEP and UNDP will also be responsible for ensuring complementarity between, and leveraging necessary inputs from, pertinent ongoing GEF, World Bank, UNDP, UNEP, bilateral and multilateral regional and national projects within the GCLME, including those being executed by NGO's and the private sector.

106. US-NOAA will contribute scientific and technical assistance to the project in partnership with UNIDO, UNDP and UNEP. Participating US-NOAA staff will be sharing their considerable experience in ecosystem-based assessment and management practices with key persons from the recipient countries.

107. Institutional arrangements for this project are presented as Annex I. This schematic illustrates the participation of the Project Steering Committee, the Stakeholders, the PCU, and other parties in the Project.

108. The Regional Project Steering Committee which was formed during the Block-B Process and consists of one high-level official country representative from each of the sixteen countries, one representative each from AU (STRC) and AfDB, US-NOAA, the Centre for Environment and Development in Africa, Benin, (CEDA) and the Foundation for Environmental Development and Education in Nigeria (FEDEN) (representing NGO's, CBO's and the Civil Society), and representatives of the Implementing/Executing Agencies (UNDP, UNEP, UNIDO), will oversee the implementation of the full project. The Steering Committee will meet once a year to, *inter alia*, constitute and define TOR's for regional and national Scientific/Technical Advisory Committees, define modalities for setting up the country Inter-ministerial Committees, and formulate a Work Plan and Timetable for the Activities scheduled during the year. There will also be a ministerial level, inter-agency and institutional coordinating committee (Council of Ministers) which will meet annually to ensure that maximum use is made of the combined resources of the agencies and institutions with associated projects and to minimize duplication of effort. Participating agencies will include as invitees, among others, the signatories to the SAP.

109. Project Co-ordination and Management are concerned with regional co-ordination of the implementation of the project and related activities. Initial actions include: appointment of project staff; nomination of Government representatives to the Project Steering Committee and convening of the first meeting to agree on the framework master plan for project management and execution; appointment of National Focal Points to Chair the National Inter-ministerial Steering Committees and initial country visits by the regional co-ordination staff to meet with the National Steering Committees to prepare national workplans and budgets. In addition, particular attention will be paid to establishing strong linkages with the GEF BCLME and GEF Volta Basin and Niger Basin projects, among others.

110. The country Inter-ministerial Committees, whose main task is to promote and give validity to the cross-sectoral approach implied in the LME concept at the national level, will meet on an as-needed basis to be informed of the work of the Regional Steering Committee, to review the progress of national Scientific/Technical Advisory Committees charged with the implementation of project activities at the country level, and to facilitate important country political level commitment to the implementation of the project including sourcing for donor support.

111. The composition and functioning of the regional and national Scientific/Technical Advisory Committees is crucial to the success of the project. The demonstration projects for national execution in the six pilot phase countries will be placed under the supervision of the national Inter-ministerial Committees while the 3 regional demonstration projects will be ecosystem-wide, embracing all sixteen GCLME countries and guided by the Regional Project Steering Committee. The Regional Project Steering Committee will also maintain oversight of the implementation of the national demonstration projects.

112. Direct and ongoing oversight of project activities will be the responsibility of the PCU, with a planned transition of Steering Committee and Secretariat (PCU) to the IGCC and, upon ratification of a formal legal mechanism, the GCC. The Staff of the PCU will be responsible for maintaining a regional "flavour" in all country-level demonstration projects. The PCU will be comprised of a Chief Technical Advisor, four senior level technical experts, and requisite administrative and secretarial support. Consultants will be retained as necessary and priority will be given to the recruitment of consultants from the participating countries, as available.

## INCREMENTAL COSTS AND PROJECT FINANCING.

113. The overall cost of the project is US\$46.146 million. GEF financing is in the amount US\$12.133 million. Co-finance from National Governments, private industry, US-NOAA (\$600k), Partner UN Agencies, and the Government of Norway (\$2.084 million) are in the amount US\$33.871 million. The amount disbursed within each country will be dependent on a number of factors including competitive bidding for contracts and the availability of qualified consultants required for specific project activities. Full details of the cost of the project, including information related to the baseline, are to be found in Annex G.

Table 5: Summary of Project Financing (US\$ million)

Project Components	Co-financing Govts'	Co-financing other source	GEF PHASE I
1: Finalize SAP and develop sustainable financing mechanisms for its implementation.	1,408,500	0	1,350,626
2: Recovery and sustainability of depleted fisheries and living marine resources including mariculture.	5,235,532	645,200	2,353,230
3: Planning for biodiversity conservation, restoration of degraded habitats and development of strategies for reducing coastal erosion.	9,994,900	45,200	2,175,912
4: Reduce land and sea-based pollution and improve water quality.	11,846,110	1,826,050	1,727,778
5: Regional coordination and institutional sustainability.	1,376,400	998,400	3,947,769
<b>TOTALS</b>	<b>30,356,442</b>	<b>3,514,850</b>	<b>11,555,314</b>
PDF (B)			637,000
UNIDO			577,766
<b>Total Project Financing</b>	<b>30,356,442</b>	<b>3,514,850</b>	<b>12,770,082</b>

114. The incremental costs analysis is presented in summary in Table 6 below, and is based on the component costs and the discussion contained in Annex A. Annex A discusses the baseline activities, the alternative scenario, the domestic and global benefits of each, and provides the level of funding.



Table 6: Summary of Baseline and Incremental Costs and Domestic Environmental Benefits

Component	Baseline (B)	Alternative (A)	Country co-finance		
			Other co-finance	co-	GEF Phase I
<b>1: Finalize SAP and develop sustainable financing mechanisms for</b>	<b>7,076,000</b>	<b>9,835,126</b>	<b>1,408,500</b>	<b>0</b>	<b>1,350,626</b>
<b>2: Recovery and sustainability of depleted fisheries and living marine resources including mariculture.</b>	<b>13,598,551</b>	<b>21,835,513</b>	<b>5,235,532</b>	<b>645,200</b>	<b>2,353,230</b>
<b>3: Planning for biodiversity conservation, restoration of degraded habitats and development</b>	<b>552,266,237</b>	<b>564,482,249</b>	<b>9,994,900</b>	<b>45,200</b>	<b>2,175,912</b>
<b>4. Reduce land and sea-based pollution and improve water quality.</b>	<b>220,773,112</b>	<b>236,173,050</b>	<b>11,846,110</b>	<b>1,826,050</b>	<b>1,727,778</b>
<b>5. Regional coordination and institutional sustainability.</b>	<b>6,272,200</b>	<b>12,594,769</b>	<b>1,376,400</b>	<b>998,400</b>	<b>3,947,769</b>
<b>PDF-B</b>					<b>637,000</b>
<b>UNIDO</b>					<b>577,766</b>
<b>TOTAL PROJECT</b>	<b>\$799,986,100</b>	<b>846,132,474</b>	<b>29,861,442</b>	<b>3,514,850</b>	<b>12,770,082</b>

## MONITORING AND EVALUATION

115. Monitoring and Evaluation include a series of linked activities, including a complete Project Document, Project Implementation Review (PIR), Tripartite Reviews, Annual and Quarterly Project Reports (and thence to the GEF Project Implementation Review Process), Work Plan, and independent mid-term and final project Evaluations (see Table 7). Monitoring and evaluation begins with preparation of the Project Document, complete with logical framework matrix (LogFrame) developed according to strict M&E procedures, including clear indicators of implementation progress and means of verification. This Project Brief includes the required LogFrame matrix with progress indicators and verifiers.

116. Project objectives, outcomes and emerging issues will be regularly reviewed and evaluated annually by the PSC. Reporting (annual and quarterly) will be done in accordance with UNDP, UNEP and GEF rules and regulations. The annual programme/project report (APR) is designed to obtain the independent views of the main stakeholders of a project on its relevance, performance and the likelihood of its success. The APR form has two parts. Part I asks for a numerical rating of project relevance and performance as well as an overall rating of the project. Part II asks for a textual assessment of the project, focusing on major achievements, early evidence of success, issues and problems, recommendations and lessons learned. The APR will be prepared by the Chief Technical Adviser, after consultation with the relevant Stakeholders, and will be submitted to the UNIDO for certification and the Principal Project Representative (PPR), the UNDP Resident Representative in the PCU host

country, for approval. Quarterly progress reports will be prepared in the same procedures. The Stakeholder review will focus on the logical framework matrix and the performance indicators. Stakeholders could include a letter to the PPR that they have been consulted and their views taken into account.

117. The project will be subject to the various evaluation and review mechanisms of the UNDP and UNEP, including, the Tri-Partite Review (TPR), and an external Evaluation and Final Report prior to termination of the Project. The project will also participate in the annual Project Implementation Review (PIR) of the GEF. The PIR is mandatory for all GEF projects that have been under implementation for at least a year at the time that the exercise is conducted. Particular emphasis will be given to emerging GEF policy with regard to monitoring and evaluation in the context of GEF IW projects. Relevant Process Indicators, Stress Reduction Indicators, and Environmental Status Indicators will be developed that will serve to inform the M&E process and be adopted by the participating countries as tools for long-term monitoring of SAP implementation. These three indicators will be more explicitly identified and incorporated into the project as project outcomes during year one of the project, and completion of the negotiations necessary to form the GCC would be a Process Indicator at the end of the project. Another especially important Process Indicator will be the updated SAP that will be created towards the end of the project. The project logframe has been specifically designed in a way that lends itself to the straightforward identification of Process, Stress Reduction, and Environmental Status Indicators

118. **During year one of the project, the project will identify Process Indicators (PIs), Stress Reduction Indicators (SRIs) and Environmental Status Indicators (ESIs) relevant to the SAP/EQOs and these would be used to monitor the project and SAP implementation starting in year two. These indicators will be reviewed, as part of the initial monitoring and evaluation exercise and upon their adoption will become a basis for the ongoing SAP monitoring and evaluation process.** The Logframe Analysis incorporated into the Project Brief and this Project Document shall be used in significant measure to assist in the identification of the relevant indicators. It is expected that as with many other GEF IW projects, many of the indicators to be employed during the life of the project will be PIs. These would include, *inter alia*, such indicators as the establishment and successful functioning of the IGCC, active negotiations leading to the eventual GCC, State of the Ecosystem Reports, the establishment and effective functioning of Inter-Ministerial Committees (IMCs), and work to assess the extent and condition of non-harvested species (e.g. policy, legal, institutional reforms etc). SRIs might include, *inter alia*, implementation of recommendations and agreements regarding the harvesting levels of specific stocks, improved forecasting techniques with resulting positive environmental, economic and social benefits for the participating countries, explicit measures for the protection of vulnerable species, and improved predictability of the GCLME resulting in decreased levels of uncertainty of management decisions taken both nationally and regionally. While ESIs are likely to become more apparent after the life of the GEF project, there are likely to be some ESIs that are likely to be realized during implementation. These ESIs would include, *inter alia*, the establishment of protected areas, reduced pressure on, and documented healthier stocks of vulnerable species and measurable improvement of water quality in those areas selected for pilot activities in identified hotspots (e.g. cleaner waters/sediments, restored habitats, sustainably managed fisheries etc). The development of indicators is part of the GCLME Strategic Action Programme (SAP) Process. The project would also develop by year three (i.e. towards the end of Phase 1) a baseline illustrating activities completed and those scheduled for Phase 2 from which the progress towards achieving the stated Environmental Quality Objectives would be measured.

119. In addition to the monitoring and evaluation described above, independent monitoring of the project will be undertaken by a contracted supervision firm, using a balanced group of experts selected by UNIDO, UNEP and UNDP. The extensive experience by UNIDO, UNEP and UNDP in monitoring large programs will be drawn upon to ensure that the project activities are carefully documented. There will be two evaluation periods, one at mid-term and another at the end of the Program. The mid-term evaluation and a summary of response/follow-up actions taken will be submitted with the planned Phase 2 request in GEF-4.

120. The mid-term review will focus on relevance, performance (effectiveness, efficiency and timeliness), issues requiring decisions and actions and initial lessons learned about project design, implementation and management. The final evaluation will focus on similar issues as the mid-term evaluation but will also look at early signs of potential impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. Recommendations on follow-up activities will also be provided.

121. Approximately **US\$300,000** will be allocated for monitoring and evaluation (M&E) and Tri-partite Reviews (TPRs) that will be undertaken by independent experts and UNDP & UNEP. This figure will be the subject of ongoing review and budgetary adjustments will be made as necessary. The evaluation process will be carried out according to standard procedures and formats in line with GEF requirements. The process will include the collection and analysis of data on the Program and its various projects including an overall assessment, the achievement of clearly defined objectives and performance with verifiable indicators, annual reviews, and description and analysis of stakeholder participation in the Program design and implementation. Explanations will be given on how the monitoring and evaluation results will be used to adjust the implementation of the Program if required and to replicate the results throughout the region. As far as possible, the M&E process will be measured according to a detailed workplan and a Logical Framework Analysis approach developed and tabulated in the project document.

122. In addition to the standard UNIDO, UNDP, UNEP and GEF procedures outlined above, the project will benefit from (at minimum) annual Project Steering Committee Meetings (PSC). The PSC is the primary policy-making body for the GCLME project. The CTA will schedule and report on the Steering Committee Meetings.

123. Meetings can also be organized ad hoc at the request of the CTA and/or on request by a majority of the participating countries. The Steering Committee will approve the final results of such meetings.

124. In summary tabular form, the M&E Process for the GCLME will be as follows:

Table 7. M&E Activities, Timeframes and Responsibilities

Activity	Responsibilities	Timeframes
1. Drafting Project Planning Documents: Prodoc, LogFrame (including indicators), M&E Plan	UNIDO, UNDP, UNEP staff and consultants and other pertinent stakeholders	During project design stage
2. M&E Plan	UNIDO, UNDP, UNEP, project development specialists	During project design stage
3. Work Plan	CTA, with UNIDO, UNEP and UNDP	Annually (first year: inception report)
4. Quarterly Operational Reports (QORs)	UNIDO and PPR	Quarterly
5. Annual Programme/Project Reports (APRs)	The Steering Committee, working closely with UNIDO and the CTA in consultation with Project stakeholders	Annually
6. Tripartite Review (TPR)	Governments, UNIDO, UNDP, UNEP, project team, beneficiaries and other stakeholders	Annually
7. Project Implementation Review (PIR)	UNIDO, UNDP, UNEP, project team, GEF's M&E team	Annually, between June and September
8. Mid-term and Final evaluations	UNIDO, UNDP, UNEP, project team, independent evaluators	At the mid-point and end of project implementation.
9. Terminal Report	UNDP Country Office, CTA	At least one month before the end of the project

## **LESSONS LEARNED AND TECHNICAL REVIEWS**

125. Just as in the pilot phase project, the GCLME project will be involved from the start in the GEF International Waters Learning Exchange and Resources Network Program (IW: LEARN). IW: LEARN is a distance education program whose objective is to strengthen the management of International Waters by facilitating information sharing and learning among Transboundary Waters Management (TWM) constituencies. IW: LEARN will improve GEF IW projects' information base, replication efficiency, transparency, stakeholder ownership and sustainability of benefits through:

- A. Facilitation of access to information on transboundary water resources among GEF IW projects
- B. Structured learning among GEF IW projects and cooperating partners
- C. Biennial International Waters Conferences
- D. Testing innovative approaches to strengthen implementation of the IW portfolio
- E. Fostering partnerships to sustain benefits of IW: LEARN and associated technical support

Many of the ideas presented in this Project Brief have benefited from lessons learned from past GEF International Waters projects. These ideas cover project implementation modality, the M&E Process, the identification of objectives and tasks, and the public participation component. The project would seek (and also fund) assistance of IW: LEARN in the development of a standard website following the IW: LEARN listed criteria as well as an information dissemination tool based on the Distance Learning Information Sharing Tool (DLIST) methodology developed by IW: LEARN/World Bank and ECOAfrica.

## LIST OF ANNEXES

### Required Annexes:

- Annex A. Incremental Cost Annex**
- Annex B. Logframe Matrix**
- Annex C. STAP Roster Technical Review**
- Annex C1. Implementing Agency Response to STAP/IA Comments**

### Optional Annexes:

- Annex D Detailed List of Activities**
- Annex E Preliminary Transboundary Diagnostic Analysis**  
(Separate document.)
- Annex F Public Involvement Plan Summary**  
Summary of how various Stakeholders will be involved in the GCLME, including governance, management, and implementation, along with reference to the major Objectives/Components where their participation is identified.
- Annex G Baseline Activities and Co-financing**  
Based on input from the countries, as well as UNIDO, UNEP and UNDP, the baseline and co-financing were identified to assist in the Incremental Cost Analysis.
- Annex H List of Publications Prepared During the PDF-B**  
Published materials available describing the process and steps taken to develop the Preliminary TDA and the Project Brief.
- Annex I Institutional Arrangements**  
Schematic of the Implementation Structure for the GCLME, including governance, management, regional activities, and national activities.
- Annex J Copies of GEF Operational Focal Point Endorsement Letters**
- Annex K Summary of Final Review of Pilot Phase GGLME**
- Annex L Accra Declaration**
- Annex M Ministers' letter to GEF requesting full project support**
- Annex N Accra Meeting participants and conclusions**
- Annex O Copies of Government, UN and other donor co-financing commitments**
- Annex P Demonstration project summaries**

## ANNEX A

### INCREMENTAL COST ANALYSIS

#### Broad Development Goal

A1. The countries bordering the Guinea Current LME face strong coastal area degradation and living resources depletion. Though possessing different socio-economic conditions and being on differing development paths, the threats to their common environment provide the glue that sustains a strong dialogue amongst these states. Based on the Preliminary TDA process, the major perceived problems and issues the countries face were determined to be:

5. Decline in GCLME fish stocks and unsustainable harvesting of living resources;
6. Uncertainty regarding ecosystem status, integrity (changes in community composition, vulnerable species and biodiversity, introduction of alien species) and yields in a highly variable environment including effects of global climate change;
7. Deterioration in water quality (chronic and catastrophic) from land and sea-based activities, eutrophication and harmful algal blooms;
8. Habitat destruction and alteration including *inter-alia* modification of seabed and coastal zone, degradation of coastscapes, coastline erosion.

The identified Root Causes of the four transboundary environmental problems include:

- Complexity of ecosystem and high degree of variability (resources and environment);
- Inadequate capacity development (human and infrastructure) and training
- Poor or ineffective legal framework at the regional and national levels; inadequate implementation of national regulatory instruments; lack of regional harmonization of regulations,
- Inadequate implementation of available regulatory instruments
- Inadequate planning at all levels
- Insufficient public involvement
- Inadequate financial mechanisms and support
- Poverty
- Insufficient financing mechanisms and support
- Lack of political will

**A2. The overall development goal of this project is to create a regional management framework for sustainable use of living and non-living resources in the GCLME. Priority action areas include reversing coastal area degradation and living resources depletion, relying heavily on regional capacity building. Sustainability will derive from this improved capacity, strengthening of national and regional institutions and improvements in policy/legislative frameworks.**

#### Baseline

A3. The GCLME is an important global resource. The GCLME, ranked among the most productive coastal and offshore waters in the world, includes vast fishery resources, oil and gas reserves, precious minerals, a high potential for tourism and serves as an important reservoir of marine biological diversity of global significance. The Guinea Current therefore represents a distinct economic and food fish security source with the continuum of coastal and offshore waters together with the associated near shore watersheds. These habitats and the living resources are threatened by anthropogenic activities including

overexploitation of fisheries resources, pollution from land-based sources of pollution and degradation of coastal areas including through erosion. Each country has its own legal/regulatory structure to address these issues, but none has a National Programme of Action and there is no Protocol for the Abidjan Convention. Global benefits can be optimized by incremental improvements to the national approaches.

A4. The GCLME countries are signatories to many, but not all, international environmental conventions and agreements. The countries are often weak in complying with the conventions that they do participate in, however; the present activities would assist the countries in meeting compliance with several international conventions.

A5. Regional monitoring and collaboration in the area of transboundary issues is weak-to-non-existent. Missing are mechanisms to provide regional collaboration on transboundary issues in the form of a regional coordination unit, regionally agreed environmental quality standards, regionally agreed environmental monitoring protocols and methods, and the like. Effective and quantitative regional assessments of these transboundary issues have not been possible because of this lack of coordination.

A6. In spite of the lack of a sub-regional environmental framework among the GCLME countries, the countries participate in numerous bodies that work together on various aspects of coastal degradation and protection of living marine resources (e.g., Abidjan Convention and the WACAF Action Plan), though none has specific authority on the areas addressed in this project. This national willingness to participate in sub-regional affairs provides a strong foundation for further successful regional cooperative efforts.

A7. A substantial proportion of the assured co-financing by governments is derived from the existing staff and recurrent budgets of the involved ministries and government departments. It is anticipated that project activities will strengthen the influence of these ministries at a national level and hence encourage substantial increases in the recurrent budgets of the departments concerned in the future. The countries already contribute financially to regionally coordinated actions and such contributions are anticipated to increase as a consequence of this project.

## **Global Environmental Objectives**

A9. This project is a result of the participating countries' commitment to address land-based and sea-based threats to prevent further damage to the GCLME's transboundary environmental resources. The global environmental objective being pursued is to improve sectoral policies and activities that are responsible for the most serious root causes of priority transboundary environmental concerns of the GCLME.

A10. The establishment of a GCLME-wide cooperative regime for land and sea-based activities will contribute to environmentally sustainable economic development in and around the region. An ad hoc system of national level measures to manage land and sea-based sources will be unsuccessful when applied to a contiguous natural system such as the GCLME unless a regional coordination mechanism exists. This project will strengthen that mechanism and develop measures to assure long-term sustainability of that mechanism.

A11. The rich biodiversity of mammals, corals, turtles, birds, and other marine species in the GCLME represents a major contribution to the overall global biodiversity. In order to avoid further losses of biodiversity in the GCLME, the health of this degraded ecosystem must be improved, and a Strategic Action Programme must be agreed upon and implemented.

A12. By providing a framework for the reduction and mitigation of coastal degradation and the sustainable use of living and non-living marine resources, the project will contribute to an improved global environment.

A13. This project will create the necessary conditions and framework for concerted actions to protect globally important environmental resources. The present project is consistent with the GEF Operational Strategy of April 1996, specifically with the GEF's strategic emphasis on International Waters and Biodiversity, as well as the GEF Operational Programme No. 9 "Integrated Land and Water Multiple Focal Area". The project will incorporate the priorities delineated in the relevant environmental agreements to which any or all of the participating countries are involved. The present project also is consistent with the recent Draft GEF International Waters Focal Area- Strategic Priorities in Support of WSSD Outcomes for FY 2003-2006, as discussed under "GEF Programming Context."

### **GEF Project Activities**

A14. Under the alternative GEF scenario, the development processes and forces are re-shaped in order to safeguard the globally important environment. This would be accomplished by GEF provision of catalytic support for incremental costs associated with the revision and upgrading of the Transboundary Diagnostic Analysis (TDA) and preparation and endorsement of a Strategic Action Programme (SAP) for the GCLME. The SAP will consist of a set of legal, policy and institutional reforms and investments, together with capacity building and institutional strengthening, to address the priority transboundary concerns of land and sea-based sources of pollution, depletion of marine resources and degradation of coastal areas as identified in the preliminary TDA (optional Annex E).

A15. In particular, the project will provide technical assistance to strengthen both national and regional capacities for the implementation of the SAP. The SAP will rely on the cost-effectiveness of joint efforts made by the participating countries. In addition, cooperative programmes in data sharing and legislative reforms will be conducted to enhance regional collaboration to implement the SAP.

A16. The incremental cost of the alternative activities of this project will ensure that plans and investments will be designed with global (transboundary) environmental considerations in mind.

A17. The GEF alternative would support a regionally led initiative to promote the management and conservation of the coastal and marine resources of the GCLME. It would greatly facilitate the abilities of co-operating countries to address transboundary environmental issues and common natural resources management concerns at the regional level. The GEF alternative would allow for the realization of a dynamic action-oriented work programme for the successful implementation of the SAP, to be undertaken on an accelerated basis with support from a variety of sources. These goals would be realized through support for the following specific immediate project components:

- 1) Finalize SAP and develop sustainable financing mechanism for its implementation
- 2) Recovery and sustainability of depleted fisheries and living marine resources including mariculture
- 3) Planning for biodiversity conservation, restoration of degraded habitats and developing strategies for reducing coastal erosion
- 4) Reduce land and sea-based pollution and improve water quality
- 5) Regional Coordination and Institutional Sustainability

A18. This project has leveraged approximately US\$32.136 million (29,861,442 from countries, plus 2,075,000 from Norway, UNEP and UNDP) to finance the activities of GEF/SAP focal points, provide logistical support and personnel, set-up institutional arrangements, provide sourcing of information, and



support consultations, meetings and missions. The participating states, agencies, private sector and other donors have provided commitments (see Annex O) of their co-financing to the project as follows (5 years, Phases 1 and 2):

Angola	US\$	<b>1,096,000</b>
Benin	US\$	<b>550,000</b>
Cameroon	US\$	<b>1,965,500</b>
Congo	US\$	<b>211,850</b>
Cote d'Ivoire	US\$	<b>964,500</b>
Dem. Rep. of Congo	US\$	<b>184,500</b>
Equatorial Guinea	US\$	<b>495,000</b>
Gabon	US\$	<b>362,000</b>
Ghana	US\$	<b>5,860,000</b>
Guinea	US\$	<b>2,626,000</b>
Guinea Bissau	US\$	<b>2,205,500</b>
Liberia	US\$	<b>164,092</b>
Nigeria	US\$	<b>11,210,000</b>
Sao Tome & Principe	US\$	<b>496,000</b>
Sierra Leone	US\$	<b>1,443,000</b>
Togo	US\$	<b>522,500</b>
NOAA	US\$	<b>600,000</b>
UNEP/UNDP	US\$	<b>230,000</b>
Norway	US\$	<b>2,084,850</b>
Alpha Filtration	US\$	<b>600,000</b>
<b>TOTAL</b>	<b>US\$</b>	<b>33,871,292</b>

### **System Boundary**

The area of intervention is defined as follows:

A20. The countries of the GCLME: Belize Angola, Benin, Cameroon, Congo, Democratic Republic of the Congo, Côte d'Ivoire, Gabon, Ghana, Equatorial Guinea, Guinea, Guinea-Bissau, Liberia, Nigeria, Sao Tome and Principe, Sierra Lone and Togo

A21. The boundaries of the Guinea Current study area can be defined geographically and oceanographically. Geographically, the GCLME extends from approximately 12 degrees N latitude south to about 16 degrees S latitude, and variously from 20 degrees west to about 12 degrees East longitude. From an oceanographic sense, the GCLME extends in a north-south direction from the intense upwelling area of the Guinea Current south to the northern seasonal limit of the Benguela Oceanographic Current (Figure 1). In an east-west sense, the GCLME includes the drainage basins of the major rivers seaward to the GC front delimiting the GC from open ocean waters (a time- and space-variable boundary).



ANNEX A  
INCREMENTAL COST MATRIX

Component	Sub-Component	Cost Category	Cost (US\$)	Domestic Benefits	Global Environmental Benefits
I) Finalize SAP and develop sustainable financing mechanisms for its implementation	1a) Fill gaps in regional monitoring methods/ standards/etc. by training and at-sea demonstrations for contaminant levels in water, sediments and biota	Baseline	1,858,000	Each country at present has its own approach to monitoring and standards are not uniform throughout the region. There are many gaps in monitoring water, sediments and biota.	Regional benefits cannot be accrued from existing piecemeal monitoring programs, which vary from country to country.
		Alternative	2,458,240	Filling the gaps in regional monitoring methods/ standards will allow effective monitoring and ease cross-border exchange of data and information.	Regional assessments of water and sediment quality and biota will be possible only with a complete and standardized approach to monitoring and standards.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	349,000 203,240		
	1b) Identify and fill gaps for the TDA, including biodiversity, socio-economic conditions, legal/regulatory review, stakeholder analysis, hot spots, contaminant levels, etc.	Baseline	1,349,500	The countries continue to collect data that will benefit the updated TDA.	There is no integration across countries, so global benefits are not recognized..
		Alternative	2,288,230	The TDA process is a useful framework for understanding the relative effects and impacts of human activities on the environment, and helps focus interventions to the most critical pathways. Domestic benefits will ensue by focusing interventions in those critical	The TDA will provide an understanding and ranking of the transboundary (global) environmental problems, and recommend interventions to optimize the global environmental benefits. This process is highly participatory, and allows funds and interventions to focus on priority transboundary areas.

Component	Sub-Component	Cost Category	Cost (USDS)	Domestic Benefits	Global Environmental Benefits
				areas.	
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	247,500 691,230		
	Ic) Update TDA following filling of gaps	Baseline	730,000	The countries continue to collect data that will benefit the updated TDA.	There is no integration across countries, so global benefits are not recognized..
		Alternative	1,190,054	The TDA process is a useful framework for understanding the relative effects and impacts of human activities on the environment, and helps focus interventions to the most critical pathways. Domestic benefits will ensue by focusing interventions in those critical areas.	The TDA will provide an understanding and ranking of the transboundary (global) environmental problems, and recommend interventions to optimize the global environmental benefits. This process is highly participatory, and allows funds and interventions to focus on priority transboundary areas.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	111,500 151,852		
	Id) Prepare and endorse National Action Plans	Baseline	975,500	The absence of funding has hampered the ability of GCLME countries to consider National Action Plans.	The absence of funding has hampered the ability of GCLME countries to consider National Action Plans.
		Alternative	1,781,304	A National Action Plan will serve as a blueprint for the country to improve both its local marine/coastal environment and the broader GCLME..	National Action Plans will serve to operationalize national level activities towards addressing priority transboundary water resource issues.
		Increment			

Component	Sub-Component	Cost Category	Cost (USDS)	Domestic Benefits	Global Environmental Benefits
		GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	195,500 274,304		
	<a href="#">Ie) Finalize and endorse regional Strategic Action Programme</a>	Baseline	757,500	A regional SAP will not be completed and endorsed under baseline conditions.	A regional SAP will not be completed and endorsed under baseline conditions.
		Alternative	1,164,158	A Strategic Action Programme represents a regionally agreed programme of action for improving the environment and reducing man-made stresses on the environment. The process of broad stakeholder inclusion will strengthen sustainability, and focus efforts on priority areas.	The SAP is an integral part of the GEF process, building on the TDA outcome to focus interventions to those issues having a dominant Transboundary nature. The SAP process fosters regional consensus-building, and commitments of all countries and external partners to improve the environment in a prioritized, coordinated fashion.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	116,500 290,158		
	<a href="#">If) Hold a donors' conference to mobilize commitments to SAP implementation</a>	Baseline	313,000	Limited national finance for SAP implementation, targeting primarily domestic issues.	Insufficient finance for SAP implementation
		Alternative	499,379	Funding of SAP activities will be secured, leveraging national contributions to SAP implementation and improving the GCLME environment.	Donor commitments to funding SAP implementation will benefit the regional and global environment because priority protection efforts will be undertaken.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance	93,500		

Component	Sub-Component	Cost Category	Cost (USDS)	Domestic Benefits	Global Environmental Benefits
		Others Co-Finance			
	Ig) Formulate arrangements for sustainable financing of environmental management of the GCLME	Baseline	1,092,500	National budgets are stressed and adequate budget is not provided for environmental matters. Minimal application of economic instruments in addressing priority water-related issues in the GCLME	There currently is no GCLME-wide regional financing mechanism for regional land-based and sea-based pollution prevention, control and monitoring. No application of economic instruments to address transboundary environmental issues in GCLME
		Alternative	1,595,131	New and innovative financing arrangements permit countries to finance national commitments to the NAPs/SAP; Economic instruments will help alleviate national budget shortfalls in the area of environmental intervention. Alternative economic instruments can provide fresh revenue sources to encourage sustainability	Global benefits will ensue from provision of sustainable financing relatively secure from the vicissitudes of fluctuations in national budgets. Sustainability will help assure long-term improvements to global environmental resources. Sustainability is the key to maximizing global environmental benefits. By exploring new economic instruments and incentives, a solid financing package may result.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	295,000 30,000		
I) Finalize SAP and develop sustainable financing mechanisms for its implementation	Total Angola	GOV Co-finance	3,500		
	Total Benin	GOV Co-finance	0		
	Total Cameroon	GOV Co-finance	288,500		
	Total Congo	GOV Co-finance	197,500		
	Total Democratic Republic of the Congo	GOV Co-finance	52,000		
	Total Cote d'Ivoire	GOV Co-finance	126,000		
	Total Gabon	GOV Co-finance	161,000		
	Total Ghana	GOV Co-finance	0		
	Total Equatorial Guinea	GOV Co-finance	0		
	Total Guinea	GOV Co-finance	0		

Component	Sub-Component	Cost Category	Cost (USDS)	Domestic Benefits	Global Environmental Benefits
	Total Guinea-Bissau	GOV Co-finance	350,500		
	Total Liberia	GOV Co-finance	0		
	Total Nigeria	GOV Co-finance	0		
	Total Sao Tome and Principe	GOV Co-finance	0		
	Total Sierra Leone	GOV Co-finance	166,500		
	Total Togo	GOV Co-finance	63,000		
	<b>Total Objective</b>	<b>GOV Co-finance</b>	<b>1,408,500</b>		
II) Recovery and sustainability of depleted fisheries and living marine resources, including Mariculture	IIa) Demonstrate regional stock assessment methods including regional surveys (Regional Demonstration Project)	Baseline	5,048,066	Current knowledge of regional stocks is incomplete. Stock assessment information is lacking, limited or outdated in most countries. Only irregular trawl and acoustic surveys exist in national waters.	Current knowledge of regional stocks is incomplete. There is a lack of reliable statistics on the regional stocks of major commercial fishes.
		Alternative	9,014,022	Improving national capabilities for assessing fish stocks will enable national governments to set more appropriate fishing limits and thereby improve fish stocks.	Improved regional capacity for assessing and monitoring fish stocks will assist in preserving priority transboundary species and promoting sustainable fisheries in the GCLME.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance NOAA	2,631,532 1,034,424 300,000		
	IIb) Identify methods and estimates for maximum sustainable yields for dominant commercially important fisheries species	Baseline	2,034,000	Few activities have been done at the national level to estimate maximum sustainable yields.	No tools for estimating maximum sustainable yields of shared fish stocks in use.
		Alternative	2,785,737	Estimating maximum sustainable yields for dominant commercially important species will improve national capacity to establish and monitor fishing	Determining sustainable yields will improve regional efforts to protect transboundary fish stocks and promote sustainable fisheries in the GCLME.

Component	Sub-Component	Cost Category	Cost (USDS)	Domestic Benefits	Global Environmental Benefits
				limits, thereby creating sustainable fisheries.	
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance NOAA	332,000 15,300 \$300,000		
	IIC) Evaluate productivity with regards to its carrying capacity for living marine resources of the ecosystem (Regional Demonstration Project)	Baseline	1,928,635	Few national activities of this sort take place under baseline conditions. There are only limited capabilities for assessing the carrying capacity of the GCLME.	Few national activities of this sort take place under baseline conditions. Knowledge of productivity with regards to its carrying capacity is incomplete. There are only limited capabilities for assessing the carrying capacity of the GCLME.
		Alternative	3,903,835	Improved knowledge of productivity will assist national governments to set limits for and monitor the sustainable use of living marine resources of the ecosystem.	Improved knowledge of productivity with regards to its carrying capacity will assist in the regional protection and sustainable use of transboundary living marine resources of the ecosystem.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	334,200 1,019,500		
	IId) Develop Regional Agreements and Regional Fisheries Commission	Baseline	262,500	Few bilateral and multilateral fisheries agreements exist and there currently is no regional fisheries commission. Majority of fisheries management being done at national level without regional coordination.	Bilateral and multilateral fisheries agreements are not complete. No regional fisheries agreements are in place. There region lacks a fisheries management mechanism.
		Alternative	675,081	Developing regional agreements and a regional commission will assist in the improved capacity for	Regional agreements and a regional management mechanism will improve regional capacity for establishing, monitoring and enforcing sustainable yields of transboundary stocks.



Component	Sub-Component	Cost Category	Cost (USD\$)	Domestic Benefits	Global Environmental Benefits
				monitoring and enforcement of fisheries yields, thereby enhancing sustainable domestic use of fish resources.	
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	56,500 152,081		
	Iie) Assess and draft modifications to the National Legal Frameworks to achieve sustainable fisheries	Baseline	1,033,200	National fisheries legislation exists in all GCLME countries, but is inconsistent, sometimes incomplete and enforcement is lacking.	National fisheries legislation exists in all GCLME countries, but is inconsistent, sometimes incomplete and enforcement is lacking.
		Alternative	1,556,575	An assessment of the national legal/ regulatory regime will assist the country in focusing improvements to the regime in those areas where the gaps are the widest. An improved national legal basis for fisheries management will improve capacity for monitoring and enforcing the development of sustainable fisheries.	Regional benefits will accrue from knowing comparability and extent of harmonization of laws so interventions can focus on improving those weaknesses to assure global benefits. Improved and consistent national fisheries legislation based upon enhanced fish stock assessments will increase regional capacity for sustainable management of regional stocks.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	223,000 92,925		
	IIf) Develop Fisheries Management Plans for at least three fisheries	Baseline	1,175,000	Only limited application of fisheries management planning to few domestic stocks	No coordinated fisheries management planning for shared fish stocks.
		Alternative	2,729,700	Demonstrations of fisheries management plans for at least	The development of fisheries management plans will improve management of regional and transboundary fish

Component	Sub-Component	Cost Category	Cost (USD\$)	Domestic Benefits	Global Environmental Benefits
				three fisheries will improve national capacities for the management of sustainable fisheries.	stocks.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	1,397,000		
	Iig) Assess existing coastal aquaculture and Mariculture and determine environmentally sustainable capacity for future development, including identification of investments and legislation for SAP	Baseline	2,117,150	Poorly planned and unsustainable mariculture exists in the countries. Existing mariculture regulations contain insufficient environmental safeguards.	There is not regional approach to mariculture and no regional regulations or agreements on mariculture development. There is a lack of data on the transboundary effects of mariculture in the GCLME.
		Alternative	2,486,002	Environmentally sustainable coastal aquaculture and mariculture will provide improved national food security and alternative forms of employment for coastal populations.	Environmentally sustainable coastal aquaculture and mariculture will reduce pressure on transboundary fish stocks by improving regional food security and providing an alternative source of revenue.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Norway co-finance Others Co-Finance	261,300 39,000 \$45,200		
II) Recovery and sustainability of depleted fisheries and living marine	Total Angola	GOV Co-finance	375,000		
	Total Benin	GOV Co-finance	85,000		
	Total Cameroon	GOV Co-finance	280,000		
	Total Congo	GOV Co-finance	14,350		

Component	Sub-Component	Cost Category	Cost (US\$)	Domestic Benefits	Global Environmental Benefits
resources, including Mariculture	Total Democratic Republic of the Congo	GOV Co-finance	82,000		
	Total Cote d'Ivoire	GOV Co-finance	227,000		
	Total Gabon	GOV Co-finance	47,000		
	Total Ghana	GOV Co-finance	0		
	Total Equatorial Guinea	GOV Co-finance	0		
	Total Guinea	GOV Co-finance	2,050,000		
	Total Guinea-Bissau	GOV Co-finance	508,000		
	Total Liberia	GOV Co-finance	30,182		
	Total Nigeria	GOV Co-finance	100,000		
	Total Sao Tome and Principe	GOV Co-finance	200,000		
	Total Sierra Leone	GOV Co-finance	1,167,000		
	Total Togo	GOV Co-finance	70,000		
	<b>Total Objective</b>	<b>GOV Co-finance</b>	<b>5,235,532</b>		
	<b>Norway</b>	<b>Co-Finance</b>	<b>\$45,200</b>		
	<b>NOAA</b>	<b>Co-Finance</b>	<b>600,000</b>		
III) Planning for biodiversity conservation, restoration of degraded habitats and development of strategies for reducing coastal erosion	IIIa) Develop Regional Biodiversity Action Plan, including Protected Areas based on Biodiversity Action Plans (National Demonstration Project)	Baseline	8,680,500	Basic regulations for biodiversity protection exist at the national level, but are inconsistent and lack enforcement.	There currently is no regional agreement or management framework for biodiversity protection in the GCLME.
		Alternative	10,408,891	A Regional Biodiversity Action Plan will serve as a blueprint for the national governments to preserve priority biodiversity and habitats in the GCLME.	A regional plan will signal strong regional commitment to biodiversity protection and will help to ensure that priority global and transboundary species and their habitats are protected.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	662,500 519,377		

Component	Sub-Component	Cost Category	Cost (USDS\$)	Domestic Benefits	Global Environmental Benefits
	IIIb) Demonstrate restoration of priority mangrove areas (National Demonstration Project)	Baseline	15,877,800	Few activities of this sort take place at the national level under baseline conditions. Only Nigeria has a significant program.	Limited restoration activities and only at national level, with little regard for broader threats to and needs of ecosystem.
		Alternative	18,004,800	Each country will benefit from knowledge gained from demonstration projects in the region as the information will be widely shared and can assist countries in making investment decisions on habitat restoration activities.	The Regional Biodiversity Action Plan will benefit from having demonstrated methods of habitat restoration. Important breeding and nursing grounds for transboundary fish stocks will have been restored
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	1,237,000 240i,000		
	IIIc) Demonstrate use of Integrated Coastal Area and River Basin Management (ICARM) and assess Physical Alteration and Destruction of Habitat (PADH) for habitat protection (National Demonstration Project)	Baseline	18,847,000	ICARM principles and PADH not currently being applied in countries in the region.	ICARM principles and PADH not currently being applied in the region.
		Alternative	22,581,200	Each country will benefit from knowledge gained from the demonstration project in the region and experiences shared with other freshwater-coastal cases in sub-Saharan Africa as the information will be widely available and shared. This can	The LBA protocol to the Abidjan Convention will benefit from having demonstrated methods of integrated management of river basins and coastal zones.

Component	Sub-Component	Cost Category	Cost (USD\$)	Domestic Benefits	Global Environmental Benefits
				assist countries in making policy decisions on the integrated management of river basin and coastal zone under the National Action Plans.	
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Norway co-finance Others Co-Finance	2,865,000 824,000   \$45,200		
	III(d) Assess status of introduced species and their threats to the biodiversity of the GCLME region; develop legal/regulatory mechanisms for their control	Baseline	55,531,500	Status of introduced species and their threats to national coastal resources is poorly understood. The national legal/regulatory mechanisms for their control are weak.	Status of introduced species and their threats to broader GCLME is poorly understood. Regional legal/regulatory mechanisms for their control non-existent.
		Alternative	56,673,958	An assessment of the status and threats posed by introduced species will enable countries to make policy and investment decisions regarding the management and mitigation of introduced species to their national waters. An enhanced legal/regulatory mechanism will help to control the spread of introduced species.	An assessment will help to clarify the transboundary threats posed by introduced species. A regional legal/regulatory control mechanism will help to mitigate these threats.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	852,000 200,958		

Component	Sub-Component	Cost Category	Cost (USD\$)	Domestic Benefits	Global Environmental Benefits
	IIIe) Perform gap analysis of national legislation and draft improvements to legislation regarding key elements of biodiversity identified in the TDA, introduced species, and habitats, etc.	Baseline	716,500	In sufficient understanding of key gaps in national legislation and reforms needed.	No Transboundary, regional view of pertinent legislation has taken place.
		Alternative	1,061,054	An independent review of the national legal/ regulatory regime will assist the countries in focusing improvements to the regime in those areas where the gaps are the widest. Policy, legal, and regulatory reform will benefit domestic environmental objectives.	Regional benefits will accrue from knowing comparability and extent of harmonization of laws and drafting of reforms that focus on improving the identified weaknesses to assure global benefits.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	96,000 16,800		
	III f) Develop cost-effective mitigation strategies for restoring natural littoral sediment flow/budget for protection of shorelines and critical coastal habitats, including studies, investments for SAP, and legal/regulatory mechanisms (National Demonstration Project)	Baseline	452,612,937	Countries investing sizeable sums in erosion control and habitat protection but with insufficient integration of biodiversity elements.	National erosion control and habitat protection activities don't take into account transboundary issues such as cross-border sediment flows, effects of river modification on downstream sediment budgets, and spawning/nursing grounds for transboundary fish stocks.
		Alternative	457,829,916	Each country will benefit from knowledge gained from demonstration projects in the	The SAP will benefit from having standardized and demonstrated methods for protecting coastlines and coastal habitats. Increased availability of spawning and nursery

Component	Sub-Component	Cost Category	Cost (USD\$)	Domestic Benefits	Global Environmental Benefits
				region, as the information will be widely available and widely shared, and can assist in countries making investment decisions for protecting coastlines and coastal habitats.	habitat for migratory fish species.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	4,282,400 374,778		
III) Planning for biodiversity conservation, restoration of degraded habitats and development of strategies for reducing coastal erosion	Total Angola	GOV Co-finance	240,000		
	Total Benin	GOV Co-finance	70,000		
	Total Cameroon	GOV Co-finance	1,132,000		
	Total Congo	GOV Co-finance	0		
	Total Democratic Republic of the Congo	GOV Co-finance	30,000		
	Total Cote d'Ivoire	GOV Co-finance	352,000		
	Total Gabon	GOV Co-finance	59,000		
	Total Ghana	GOV Co-finance	0		
	Total Equatorial Guinea	GOV Co-finance	0		
	Total Guinea	GOV Co-finance	90,000		
	Total Guinea-Bissau	GOV Co-finance	359,000		
	Total Liberia	GOV Co-finance	24,400		
	Total Nigeria	GOV Co-finance	7,510,000		
	Total Sao Tome and Principe	GOV Co-finance	40,000		
	Total Sierra Leone	GOV Co-finance	54,000		
	Total Togo	GOV Co-finance	34,500		
		<b>Total Objective</b>	<b>GOV Co-finance</b>	<b>9,994,900</b>	
	<b>Norway</b>	<b>Co-finance</b>	<b>\$45,200</b>		
IV) Reduce land and sea-based pollution and improve water quality	IVa) Facilitate development of regionally-integrated and consistent National Programmes of Action for	Baseline	153,884,750	Limited planning and implementation of GPA-LBA by participating countries; continued pollution and degradation of coastal waters.	Transboundary pollutant emissions by GCLME countries continue to increase in parallel with national development.

Component	Sub-Component	Cost Category	Cost (USD\$)	Domestic Benefits	Global Environmental Benefits
	Land-Based Activities, including updating inventories of pollution and habitat hot spots				
		Alternative	158,248,022	A National Programme of Action will serve as a blueprint for the country to improve its marine and coastal environment by controlling land-based sources. Countries can benefit from pollution hot spot and habitat analysis by prioritizing budget expenditures on the basis of real knowledge.	National Programmes of Action signal individual country commitments to controlling land-based activities contributing to transboundary water degradation.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	3,831,285 288,215		
	IVb) Develop and implement a Regional Programme of Action for Land-Based Activities	Baseline	974,447	Countries currently address land-based activities in a piecemeal fashion, lacking a National GPA-LBA Plan of Action.	National efforts do not take into consideration the Transboundary impacts of land-based activities originating from their country.
		Alternative	1,779,047	Regional Programme of Action ensures coordination and harmonization of National GPA-LBA Action Plans	A Regional Programme of Action will globalize the benefits of National Programmes of Action by setting common standards, common activities of concern, common levels of commitment and common activities among all countries.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Norway co-finance Others Co-Finance	\$256,550   \$548,050		
	IVc) Develop a protocol	Baseline	\$795,280	Country commitments under	No legal commitment of GCLME countries to protection of



Component	Sub-Component	Cost Category	Cost (USDS)	Domestic Benefits	Global Environmental Benefits
	on LBA for the Abidjan Convention			Abidjan Convention continue not to include commitments to GPA-LBA.	GCLME through GPA-LBA implementation.
		Alternative	1,702,170	Countries legally obligated under Abidjan Convention to implement GPA-LBA.	A protocol on LBA for the Abidjan Convention will globalize the benefits of National Programmes of Action by setting common standards, common activities of concern, common levels of commitment and common activities among all countries.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Norway co-finance Others Co-Finance	\$228,890    \$678,000		
	IVd) Regional assessment of marine maritime pollution prevention measures, contingency planning, and spill response capabilities	Baseline	\$62,952,130	Limited country capacity to prevent, plan for and respond to maritime pollution.	Continued threat of transboundary maritime pollution events.
		Alternative	70,309,907	By conducting a regional assessment, each country will develop a more accurate idea of maritime pollution risks to its coastal environment as part of the prioritization process for SAP interventions	Improved understanding of regional threats from maritime pollution and needed reforms and capacity building.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	6,967,470 244,649		
	IVe) Development of regional systems for cooperation in cases of	Baseline	455,500	National networks for emergency response exist in some countries, but funding is	Under baseline conditions, the region does not have adequate capacity to address major transboundary marine pollution incidents.

Component	Sub-Component	Cost Category	Cost (US\$)	Domestic Benefits	Global Environmental Benefits
	major marine pollution incidents (customs, communications, response, liability, and compensation)			lacking and implementation is poor. No regional cooperation mechanism exists.	
		Alternative	750,000	The development of regional systems for cooperation will minimize duplication of efforts at the national level and enable countries to better control and cleanup spills that impact their marine/coastal natural resources.	The GCLME countries will be better able to protect globally significant biodiversity and habitats from major marine pollution incidents.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	114,500 60,000		
	IVf) Facilitate process to reform legislation in selected countries to adopt and implement international conventions (e.g., MARPOL, OPRC) as related to oil and gas activities	Baseline	193,510	Limited national implementation of key maritime environmental conventions.	Continued threats of transboundary maritime pollution incidents due to lack of or weak implementation of key maritime conventions.
		Alternative	373,471	Legal, and regulatory reform will benefit domestic environmental objectives. Reduced risk to national marine and coastal resources from maritime pollution	Reduced risk of transboundary maritime pollution events due to adoption and improved implementation of key maritime conventions.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-	44,280 105,681		

Component	Sub-Component	Cost Category	Cost (US\$)	Domestic Benefits	Global Environmental Benefits
		Finance Others Co-Finance			
	IVg) Strengthen, improve, and demonstrate methods to reduce nutrient influx to the marine environment (National Demonstration Project)	Baseline	979,495	Continued problems with coastal eutrophication in many GCLME countries. Existing national capacities for effective marine contaminant reduction and mitigation are usually weak and poorly focused.	Ongoing threat of transboundary nutrient pollution/eutrophication. Continued degradation of globally significant lagoon habitat.
		Alternative	2,541,530	Each country will benefit from knowledge gained from demonstration projects in the region as the information will be widely available and shared, and can assist in countries making investment decisions for reducing nutrient influx to the marine environment. Environmental conditions improved in at least one demonstration area.	The Regional Programme of Action will benefit from having demonstrated methods to reduce nutrient influx to the marine environment. Adoption and replication of effective nutrient control strategies will reduce the longer-term risk of broader GCLME-wide eutrophication.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	226,135 1,029,233 600,000		
	IVh) Develop investment opportunities for the SAP to reduce ecosystem threats identified in the updated TDA	Baseline	538,000	Limited national focus on resource mobilization for SAP/NAP implementation.	Insufficient finance to implement SAP actions addressing priority transboundary issues.
		Alternative	852,306	Finance mobilized to implement SAP/NAPs protects and restores selected national coastal and marine resources.	Global benefits will ensue from the development of investment opportunities for reducing ecosystem threats identified in the TDA. Sustainability will help assure long-term improvements to global environmental resources.
		Increment			

Component	Sub-Component	Cost Category	Cost (USDS)	Domestic Benefits	Global Environmental Benefits
		GOV Co-finance	177,000		
		GEF Co-Finance	137,306		
		Private Sector Co-Finance			
		Others Co-Finance			
IV) Reduce land and sea-based pollution and improve water quality	Total Angola	GOV Co-finance	477,500		
	Total Benin	GOV Co-finance	315,000		
	Total Cameroon	GOV Co-finance	208,000		
	Total Congo	GOV Co-finance	0		
	Total Democratic Republic of the Congo	GOV Co-finance	7,000		
	Total Cote d'Ivoire	GOV Co-finance	207,000		
	Total Gabon	GOV Co-finance	60,500		
	Total Ghana	GOV Co-finance	5,800,000		
	Total Equatorial Guinea	GOV Co-finance	0		
	Total Guinea	GOV Co-finance	411,000		
	Total Guinea-Bissau	GOV Co-finance	473,000		
	Total Liberia	GOV Co-finance	105,610		
	Total Nigeria	GOV Co-finance	3,500,000		
	Total Sao Tome and Principe	GOV Co-finance	156,000		
	Total Sierra Leone	GOV Co-finance	25,500		
	Total Togo	GOV Co-finance	100,000		
	<b>Total Objective</b>	<b>GOV Co-finance</b>	<b>11,846,110</b>		
	<b>Norway</b>	<b>Co-finance</b>	<b>1,226,050</b>		
	<b>Private Sector</b>	<b>Co-finance</b>	<b>600,000</b>		
V) Regional coordination and institutional sustainability	Va) Develop a regional project coordination mechanism	Baseline	2,725,200	Countries in the region have some form of institutional framework for coastal and marine resources protection, but no effective regional project coordination mechanism currently exists.	No effective regional project coordination mechanism now exists; this effort will provide an exchange and cooperation mechanisms to address transboundary problems.
		Alternative	7,935,074	Existing national mechanisms will be strengthened by regional cooperation and focus. A GEF	A GEF project unit will catalyze and coordinate the GCLME countries towards reduction of land-based and marine sources of pollution, biodiversity and habitat loss, and

Component	Sub-Component	Cost Category	Cost (USD\$)	Domestic Benefits	Global Environmental Benefits
				project unit will bring additional resources and capacity to the region.	sustainable use of marine living resources.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Norway co-finance Others Co-Finance	633,900 2,287,266   \$768,400		
	Vb) Develop effective Steering Committee	Baseline	361,500	Most interactions are bilateral, not GCLME-wide..	No regional mechanism in place for government, donor and other stakeholder coordination, consultation, strategic planning and M&E in promoting multi-country integrated sustainable management of the GCLME.
		Alternative	659,092	An effective Steering Committee will ensure better utilization of scarce GEF resources.	Effective mechanisms exist to ensure broad stakeholder involvement in the development and implementation of SAP/NAPs for the GCLME..
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	79,000 145,728		
	Vc) Establish Intersectoral/ Interministerial/ Ministerial Coordination	Baseline	313,500	Limited interministerial coordination exists in the country, but needs to be improved upon for project execution and SAP implementation.	Limited interministerial coordination exists in the country, but needs to be improved upon for project execution and SAP implementation.
		Alternative	612,000	Intersectoral/ Interministerial/ Ministerial Coordination will help to ensure effective multi-sectoral approach to developing and implementing SAP/NAPs at national level.	Ensures that a coordinated multi-sectoral approach is taken in addressing the priority transboundary environmental problems of the GCLME.
		Increment			

Component	Sub-Component	Cost Category	Cost (US\$)	Domestic Benefits	Global Environmental Benefits
		GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	98,500 120,000		
	Vd) Identify, strengthen and involve stakeholders	Baseline	796,000	Existing stakeholders at national level are not well identified or organized for addressing priority GCLME issues.	Lack of uniformity of stakeholder participation in environmental decision-making generates disparate public buy-in for environmental actions. Little evidence for multi-country stakeholder bodies/mechanism nor those that focus on transboundary issues.
		Alternative	1,774,505	Regional stakeholder strengthening will increase national impact of stakeholder inputs to national environmental issues.	Identification and involvement of appropriate stakeholders in TDA/SAP/NAP processes in transboundary context
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	135,000 516,353		
	Ve) Develop Environmental Information System (EIS) for GCLME, including cooperation with other available regional EIS (Regional Demonstration Project)	Baseline	893,000	Countries in the region have national environmental data centres, but there is no regional information system and only limited sharing of data.	Countries in the region have national environmental data centres, but there is no regional information system and only limited sharing of data.
		Alternative	2,082,600	The creation of a regional environmental information system will provide domestic benefits through development of technical capacity and protocols for the collection and sharing of environmental data.	The data and information management system will provide transboundary (global) benefits through developing technical capacity to collect regional environmental information and assist in the prioritization of threats and the interventions to mitigate these threats.
		Increment			

Component	Sub-Component	Cost Category	Cost (USDS)	Domestic Benefits	Global Environmental Benefits
		GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	194,000 665,600		
	Vf) Monitoring and Evaluation (M&E)	Baseline	430,000	Not a part of the baseline program.	Not a part of the baseline program.
		Alternative	1,048,580	Effective and timely project monitoring and evaluation will ensure better utilization of scarce GEF resources.	More effective use of GEF resources will help maximize global environmental benefits by minimizing overlap and fostering adaptive project management.
		Increment GOV Co-finance GEF Co-Finance UDNP Co-Finance UNEP Co-Finance	90,000 179,470 100,000 130,000		
	Vg) Develop regional coordination mechanism (an Interim Guinea Current Commission, followed by a full-time Commission)	Baseline	150,000	Coordination principally occurs only at the national level.	No regional coordination mechanism currently exists so very limited opportunity to address transboundary and biodiversity issues using an ecosystem approach..
		Alternative	416,258	A regional coordination mechanism will help countries to harmonize policies and legislation and to share experiences and best practices in protecting their coastal and marine resources.	A GCC will serve to institutionalize and sustain monitoring and implementation of the SAP/NAPs and other commitments made under the project to ecosystem-based management of the GCLME. Establishing linkages with the Abidjan Convention and other LME projects, resources will be used more effectively, helping to maximize global environmental benefits by minimizing overlap.
		Increment GOV Co-finance GEF Co-Finance Private Sector Co-Finance Others Co-Finance	29,500 33,352		
	Vh) Provide capacity building for the IGCC	Baseline	603,000	Not a part of the baseline program.	Not a part of the baseline program.

Component	Sub-Component	Cost Category	Cost (USD\$)	Domestic Benefits	Global Environmental Benefits
		Alternative	811,900	Improved capacity for the regional coordination mechanism will help to ensure that its actions are effective and provide the most national and regional benefits.	Improved capacity for the regional coordination mechanism will help to ensure that its actions are effective and provide the most regional benefits.
		Increment			
		GOV Co-finance	116,500		
		GEF Co-Finance	92,400		
		Private Sector Co-Finance			
		UNDP Co-Finance	0		
		UNEP Co-Finance	0		
V) Regional coordination and institutional sustainability	Total Angola	GOV Co-finance	0		
	Total Benin	GOV Co-finance	80,000		
	Total Cameroon	GOV Co-finance	57,000		
	Total Congo	GOV Co-finance	0		
	Total Democratic Republic of the Congo	GOV Co-finance	13,500		
	Total Cote d'Ivoire	GOV Co-finance	52,500		
	Total Gabon	GOV Co-finance	34,500		
	Total Ghana	GOV Co-finance	60,000		
	Total Equatorial Guinea	GOV Co-finance	0		
	Total Guinea	GOV Co-finance	75,000		
	Total Guinea-Bissau	GOV Co-finance	515,000		
	Total Liberia	GOV Co-finance	3,900		
	Total Nigeria	GOV Co-finance	100,000		
	Total Sao Tome and Principe	GOV Co-finance	100,000		
	Total Sierra Leone	GOV Co-finance	30,000		
	Total Togo	GOV Co-finance	255,000		
		<b>Total Objective</b>	<b>GOV Co-finance</b>	<b>1,376,400</b>	
	<b>Norway</b>	<b>Co-finance</b>	<b>768,400</b>		
	<b>UNDP</b>	<b>Co-finance</b>	<b>100,000</b>		
	<b>UNEP</b>	<b>Co-finance</b>	<b>130,000</b>		



ANNEX A SUMMARY INCREMENTAL COST MATRIX

Component	Sub-Component	Baseline (B)	Alternative (A)	Increment (A-B)		
				Gov'ts	Other	GEF
I) Finalize SAP and develop sustainable financing mechanisms for its implementation	Ia) Fill gaps in regional monitoring methods/ standards/etc. By training and at-sea demonstrations for contaminant levels in water, sediments, and biota	1,858,000	2,458,240	349,000		203,240
	Ib) Identify and fill gaps for the TDA, including biodiversity, socio-economic conditions, legal/regulatory review, stakeholder analysis, hot spots, contaminant levels, etc.	1,349,500	2,288,230	247,500		691,230
	Ic) Update TDA following filling of gaps	730,000	1,190,054	111,500		151,852
	Id) Prepare and endorse National Action Plans	975,500	1,781,304	195,500		247,304
	Ie) Finalize and endorse regional Strategic Action Programme	757,500	1,164,158	116,500		0
	If) Hold a donors' conference to mobilize commitments to SAP implementation	313,000	499,379	93,500		0
	Ig) Formulate arrangements for sustainable financing of environmental management of the GCLME	1,092,500	1,595,131	295,000		30,000
	Angola	12,500		3,500		
	Benin	0		0		
	Cameroon	1,150,000		288,500		
	Congo	2,170,000		197,500		
	Democratic Republic of the Congo	496,000		52,000		
	Cote d'Ivoire	621,000		126,000		
	Gabon	690,000		161,000		
	Ghana	0		0		
	Equatorial Guinea	0		0		
	Guinea	0		0		
	Guinea-Bissau	1,558,000		350,500		
	Liberia	0		0		
	Nigeria	0		0		
Sao Tome and Principe	0		0			

Component	Sub-Component	Baseline (B)	Alternative (A)	Increment (A-B)		
				Gov'ts	Other	GEF
	Sierra Leone	211,500		166,500		
	Togo	167,000		63,000		
	<b>Total Objective</b>	<b>7,076,000</b>	<b>10,976,496</b>	<b>1,408,500</b>	<b>0</b>	<b>1,320,626</b>
II) Recovery and sustainability of depleted fisheries and living marine resources, including Mariculture	IIa) Demonstrate regional stock assessment methods including regional surveys (Regional Demonstration Project)	5,048,066	9,014,022	2,631,532	300,000	1,034,424
	IIb) Identify methods and estimates for maximum sustainable yields for dominant commercially important fisheries species	2,034,000	2,785,737	332,000	300,000	15,300
	IIc) Evaluate productivity with regards to its carrying capacity for living marine resources of the ecosystem (Regional Demonstration Project)	1,928,635	3,903,835	334,200		1,019,500
	IId) Develop Regional Agreements and Regional Fisheries Commission	262,500	675,081	56,500		152,081
	IIe) Assess and draft modifications to the National Legal Frameworks to achieve sustainable fisheries	1,033,200	1,556,575	223,000		92,925
	IIf) Develop Fisheries Management Plans for at least three fisheries	1,175,000	2,729,700	1,397,000		
	IIg) Assess existing coastal aquaculture and Mariculture and determine environmentally sustainable capacity for future development, including identification of investments and legislation for SAP	2,117,150	2,486,002	261,300	45,200	39,000
	Angola	1,180,000		375,000		
	Benin	170,000		85,000		
	Cameroon	1,175,000		280,000		
	Congo	2,743,000		14,350		
	Democratic Republic of the Congo	440,000		82,000		
	Cote d'Ivoire	1,080,000		227,000		
	Gabon	344,000		47,000		
	Ghana	0		0		
	Equatorial Guinea	0		0		
	Guinea	2,275,000		2,050,000		

Component	Sub-Component	Baseline (B)	Alternative (A)	Increment (A-B)		
				Gov'ts	Other	GEF
	Guinea-Bissau	2,070,000		508,000		
	Liberia	23,051		30,182		
	Nigeria	650,000		100,000		
	Sao Tome and Principe	1,000,000		200,000		
	Sierra Leone	125,500		1,167,000		
	Togo	323,000		70,000		
	<b>Total Objective</b>	<b>13,598,551</b>	<b>23,150,952</b>	<b>5,235,532</b>	<b>645,200</b>	<b>2,353,230</b>
III) Planning for biodiversity conservation, restoration of degraded habitats and development of strategies for reducing coastal erosion	IIIa) Develop Regional Biodiversity Action Plan, including Protected Areas based on Biodiversity Action Plans (National Demonstration Project)	8,680,500	10,408,891	662,500		519,377
	IIIb) Demonstrate restoration of priority mangrove areas (National Demonstration Project)	15,877,800	18,004,800	1,237,000		240,000
	IIIc) Demonstrate use of Integrated Coastal Area and River Basin Management (ICARM) and assess Physical Alteration and Destruction of Habitat (PADH) for habitat protection (National Demonstration Project)	18,847,000	22,581,200	2,865,000	45,200	824,000
	IIId) Assess status of introduced species and their threats to the biodiversity of the GCLME region; develop legal/regulatory mechanisms for their control	55,531,500	56,673,958	852,000		200,958
	IIIe) Review and update national legislation and draft Perform gap analysis of national legislation, and draft improvements to legislation regarding on key elements of biodiversity identified in the TDA, introduced species, and habitats, etc.	716,500	1,061,054	96,000		16,800
	IIIff) Develop cost-effective mitigation strategies for restoring natural littoral sediment flow/budget for protection of shorelines and critical coastal habitats, including studies, investments for SAP, and legal/regulatory mechanisms (National Demonstration Project)	452,612,937	457,829,916	4,282,400		374,778
	Angola	510,000		240,000		
	Benin	320,000		70,000		
	Cameroon	2,630,000		1,132,000		

Component	Sub-Component	Baseline (B)	Alternative (A)	Increment (A-B)		
				Gov'ts	Other	GEF
	Congo	805,500		0		
	Democratic Republic of the Congo	545,000		30,000		
	Cote d'Ivoire	1,990,687		352,000		
	Gabon	233,000		59,000		
	Ghana	0		0		
	Equatorial Guinea	0		0		
	Guinea	850,000		90,000		
	Guinea-Bissau	1,500,000		359,000		
	Liberia	24,550		24,400		
	Nigeria	542,500,000		7,510,000		
	Sao Tome and Principe	200,000		40,000		
	Sierra Leone	40,500		54,000		
	Togo	117,000		34,500		
	<b>Total Objective</b>	<b>552,266,237</b>	<b>566,559,819</b>	<b>9,994,900</b>	<b>45,200</b>	<b>2,175,913</b>
IV) Reduce land and sea-based pollution and improve water quality	IVa) Facilitate development of regionally-integrated and consistent National Programmes of Action for Land-Based Activities, including updating inventories of pollution and habitat hot spots	153,884,750	158,248,022	3,831,285		288,215
	IVb) Develop and implement a Regional Programme of Action for Land-Based Activities	974,447	1,779,047	256,550	548,050	0
	IVc) Develop a protocol on LBA for the Abidjan Convention	795,280	1,702,170	228,890	678,000	0
	IVd) Regional assessment of marine maritime pollution prevention measures, contingency planning, and spill response capabilities	62,952,130	70,309,907	6,967,470		244,649
	IVe) Development of regional systems for cooperation in cases of major marine pollution incidents (customs, communications, response, liability, and compensation)	455,500	750,000	114,500		60,000
	IVf) Facilitate process to reform legislation in selected countries to adopt and implement international conventions (e.g., MARPOL, OPRC) as related to oil and gas activities	193,510	373,471	44,280		105,681

Component	Sub-Component	Baseline (B)	Alternative (A)	Increment (A-B)		
				Gov'ts	Other	GEF
	IVg) Strengthen, improve, and demonstrate methods to reduce nutrient influx to the marine environment (National Demonstration Project)	979,495	3,141,530	226,135	600,000	1,029,233
	IVh) Develop investment opportunities for the SAP to reduce ecosystem threats identified in the updated TDA	538,000	852,306	177,000		0
	Angola	2,937,600		477,500		
	Benin	870,000		315,000		
	Cameroon	955,000		208,000		
	Congo	2,000,000		0		
	Democratic Republic of the Congo	100,000		7,000		
	Cote d'Ivoire	1,232,000		207,000		
	Gabon	319,500		60,500		
	Ghana	6,580,000		5,800,000		
	Equatorial Guinea	0		0		
	Guinea	2,575,000		411,000		
	Guinea-Bissau	2,185,000		473,000		
	Liberia	91,512		105,610		
	Nigeria	200,000,000		3,500,000		
	Sao Tome and Principe	645,000		156,000		
	Sierra Leone	30,500		25,500		
	Togo	252,000		100,000		
	<b>Total Objective</b>	<b>220,773,112</b>	<b>237,156,453</b>	<b>11,846,110</b>	<b>1,826,050</b>	<b>1,727,778</b>
V) Regional coordination and institutional sustainability	Va) Develop a regional project coordination mechanism	2,725,200	7,935,074	633,900	768,400	2,287,266
	Vb) Develop effective Steering Committee	361,500	659,092	79,000		145,728
	Vc) Establish Intersectoral/ Interministerial/ Ministerial Coordination	313,500	612,000	98,500		120,000
	Vd) Identify, strengthen and involve stakeholders	796,000	1,774,505	135,000		516,353
	Ve) Develop Environmental Information System (EIS) for GCLME, including cooperation with other available regional EIS (Regional Demonstration Project)	893,000	2,082,600	194,000		665,600

Component	Sub-Component	Baseline (B)	Alternative (A)	Increment (A-B)		
				Gov'ts	Other	GEF
	Vf) Monitoring and Evaluation (M&E)	430,000	1,048,580	90,000	230,000	179,470
	Vg) Develop regional coordination mechanism (an Interim Guinea Current Commission, followed by a full-time Commission)	150,000	416,258	29,500		33,352
	Vh) Provide capacity building for the IGCC	603,000	811,900	116,500		0
	Angola	0		0		
	Benin	170,000		80,000		
	Cameroon	290,000		57,000		
	Congo	0		0		
	Democratic Republic of the Congo	205,000		13,500		
	Cote d'Ivoire	323,000		52,500		
	Gabon	199,500		34,500		
	Ghana	346,000		60,000		
	Equatorial Guinea	0		0		
	Guinea	1,170,000		75,000		
	Guinea-Bissau	2,585,000		515,000		
	Liberia	4,700		3,900		
	Nigeria	550,000		100,000		
	Sao Tome and Principe	180,000		100,000		
	Sierra Leone	78,000		30,000		
	Togo	171,000		255,000		
	<b>Total Objective</b>	<b>6,272,200</b>	<b>15,340,009</b>	<b>1,376,400</b>	<b>998,400</b>	<b>3,947,769</b>
	<b>Total Project Costs</b>	<b>799,986,100</b>		<b>29,861,442</b>	<b>3,514,850</b>	<b>12,133,082</b>
	<b>UNIDO</b>		<b>991,067</b>			<b>577,766</b>
	<b>PDF-B</b>		<b>637,000</b>			<b>637,000</b>
	<b>Total Project Budget</b>	<b>799,986,100</b>	<b>854,811,796</b>	<b>29,861,442</b>	<b>3,514,850</b>	<b>13,347,848</b>

## ANNEX B

### LOGFRAME MATRIX

Component	Intervention Logic	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
	<p>Long-term Development/Environment Objective: To create a regional management framework for sustainable use of living and non-living resources in the GCLME.</p>	<p>Regional coordination office established by end of year 1;            Updated TDA available and agreed upon;            Revised SAP available and endorsed at Ministerial level;            Agreed set of environmental indicators to monitor progress of SAP implementation;            Protocol to the Abidjan Convention of land-based activities;            National Plans of Action completed;            Establishment of IGCC</p>	<p>Steering Committee (SC) annual reports; Project files and documents;            Working group and technical reports;            Annual project review; Country Interministerial Coordinating Committee reports</p>	<p>Assumes continued national commitment to the regional program at each sector level, including offer of national resources. The ability of SC and RCU to formulate and implement community-based solutions relies on the support of national agencies through coordinated (but independent) actions. The GEF project will create a model that can be adopted in the future as a permanent activity of the individual national sectors. Broad stakeholder participation will be essential to achieve sustainability.</p>
	<p>Project Purpose: Updating of Transboundary Diagnostic Analysis (TDA) and formulation of a Strategic Action Programme (SAP). Facilitation of the initial steps implementing SAP to manage shared coastal and marine resources and achieve sustainable development for the GCLME. Develop a mechanism to objectively measure effects of management actions.</p>		<p>TDA published and broadly disseminated;            Countries endorse SAP;            National and donor commitments to financing SAP;            Project files and working group reports</p>	<p>Remedial actions can be costly and/or unpopular in some sectors. A well-designed monitoring and evaluation program will provide objective technical information with which to assess the success (or failure) of specific management actions and can be used to adjust future actions.</p>

<i>Component 1: Finalize SAP and develop sustainable financing mechanisms for its implementation</i>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
<b>OUTCOMES</b>	<ul style="list-style-type: none"> <li>Regional monitoring capacity developed</li> <li>TDA updated and widely disseminated</li> <li>NAPs and Regional SAP developed and endorsed</li> <li>Commitments to SAP implementation obtained</li> <li>Sustainable financing arrangements formulated</li> <li>Economic instruments and incentives developed</li> </ul>	<p>Completion of TDA</p> <p>Endorsement of NAPs and Regional SAP</p> <p>Sustainable financing arrangements report</p> <p>Economic instruments report</p>	<p>Existence of TDA, Project files</p> <p>Letters of endorsement, Project files</p> <p>Working group reports, Project files</p> <p>Working group reports, Project files</p>	
<b>ACTIVITIES</b>	<p>1a) Fill gaps in regional monitoring methods/standards/etc. by training and at-sea demonstrations for contaminant levels in water, sediments, and biota.</p> <ul style="list-style-type: none"> <li>Develop and implement regional training courses in monitoring methods for coastal and marine pollution (oceanography, chemistry)</li> <li>Perform regional at-sea sampling for practical training in acquisition of sediment, water-column, and biota samples for characterization of priority pollutants</li> </ul>	<p>Training courses completed and at least 5 training sessions held.</p> <p>At-sea sampling conducted and priority pollutants characterized</p>	<p>RCU files, training course curricula</p> <p>RCU files, sampling completion reports</p>	Assumes countries will allow monitoring of their coastal waters.
	<p>1b) Identify and fill gaps for the TDA, including biodiversity, socio-economic conditions, legal/ regulatory review, stakeholder analysis, hot spots, contaminant levels, etc.</p> <ul style="list-style-type: none"> <li>Develop work plan for filling gaps based on initial TDA, after reviewing and refining the gaps</li> <li>Develop regional working groups to fill gaps</li> <li>Acquire new data through targeted field sampling and analysis</li> </ul>	<p>Work plan completed</p> <p>Regional working groups developed</p> <p>Targeted field sampling and analysis conducted</p>	<p>RCU files</p> <p>Working group reports</p> <p>Working group reports</p>	Assumes additional data are available to fill in gaps from initial TDA.



<b>Component 1: Finalize SAP and develop sustainable financing mechanisms for its implementation</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>	
	Ic) Update TDA following filling of gaps <ul style="list-style-type: none"> <li>• Establish regional TDA working group</li> <li>• Using new data from project and other sources, update TDA</li> <li>• Widely disseminate TDA to stakeholders, governments, and other regional project</li> </ul>	Working groups established TDA updated  TDA disseminated	Working group reports Project files  Project website, project files	Assumes additional data are available to fill in gaps from initial TDA.
	Id) Prepare and endorse National Action Plans <ul style="list-style-type: none"> <li>• Develop training modules for development of National Action Plans</li> <li>• Implement national and regional training on National Action Plans</li> <li>• Establish national teams to develop NAPs</li> <li>• Perform internal consensus-building for NAP through broad stakeholder, intersectoral and Interministerial processes</li> <li>• Obtain national endorsement of NAP at highest level</li> </ul>	Training modules developed  Training implemented  Teams established  Consensus-building performed  National endorsement obtained	Training materials, project files  Training meeting reports, project files Project files  Project files, APR  Endorsement letters	Assumes countries use NAP money wisely and develop NAPs.
	Ie) Finalize and endorse regional Strategic Action Programme <ul style="list-style-type: none"> <li>• Develop regional working group for SAP following development of draft NAPs</li> <li>• Through national and regional workshops, develop consensus on elements of updated SAP</li> <li>• Finalize SAP</li> <li>• Obtain endorsement of SAP at highest levels in each country</li> </ul>	Regional working group developed  National and regional workshops held  SAP finalized SAP endorsement obtained	Working group meeting notes, project files  Workshop reports, project files  Project files SC meeting minutes, endorsement letters	Assumes continued national commitment to the project.
	If) Hold a donors' conference to mobilize commitments to SAP implementation <ul style="list-style-type: none"> <li>• After SAP is endorsed, organize and host a donors' meeting to mobilize commitments to SAP implementation</li> <li>• Formalize SAP commitments through appropriate memoranda, agreements, etc., at national or regional level as appropriate</li> </ul>	Donors' meeting held  SAP commitments obtained	Meeting notes, project files  Memoranda or agreements, project files	Assumes continued donor and national commitment to implementing SAP activities.

<b>Component 1: Finalize SAP and develop sustainable financing mechanisms for its implementation</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>	
	<p>Ig) Formulate arrangements for sustainable financing of environmental management of the GCLME</p> <ul style="list-style-type: none"> <li>• Develop consultation process to determine costs for long-term environmental management, who pays, how it is paid, and legal and operational aspects (links with Interim Guinea current Commission)</li> <li>• Develop linkages with existing institutional arrangements (regional and supra-regional, such as the Abidjan Convention), and international collaborations (such as with IMO)</li> </ul>	<p>Consulting process determined and suggestions for payments of costs made</p> <p>Linkages established with existing institutional arrangements</p>	<p>TORs, Project files</p> <p>Letters of intent/commitment by relevant institutions and authorities</p>	<p>Financial and motivational means must be identified to develop national institutions and the private sector into sustainable contributors of the project.</p>
	<p>Develop and recommend economic instruments and incentives to promote preventive measures to decrease both land and sea-based sources of pollution as well as promote adequate environmental management in the region</p> <ul style="list-style-type: none"> <li>• Identify tools such as conservation easements, land-use zoning, property rights, and other types of incentives to control pollution and encourage the adoption of less polluting technologies</li> <li>• Identify incentives for private sector participation in monitoring and prevention of pollution</li> <li>• Identify and assist in the improved quantification of economic benefits of land-based and maritime pollution prevention, including, for example, reduced insurance costs, protection of tourism assets, fisheries resources, etc.</li> </ul>	<p>Economic incentives identified</p> <p>Private sector incentives identified</p> <p>Economic benefits identified and quantified</p>	<p>Project files; Final report</p> <p>Project files; Final report</p> <p>Project files; Final report</p>	<p>Assumes economic incentives will lead to reductions in pollution.</p>

<i>Component 2: Recovery and sustainability of depleted fisheries and living marine resources including Mariculture.</i>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
<b>OUTCOMES</b>	<ul style="list-style-type: none"> <li>Regional surveys demonstrated and stock assessment mechanism developed</li> <li>Maximum sustainable yields estimated</li> <li>Capacity for conducting carrying capacity analyses developed and analyses conducted</li> <li>Regional agreements and Regional Fisheries Commission developed</li> <li>Modifications to National Legal Frameworks to achieve sustainable fisheries drafted</li> <li>Fisheries Management plans developed for at least three fisheries</li> <li>Environmentally sustainable capacity for aquaculture and Mariculture determined</li> </ul>	<p>Regional stock assessment demonstration project completed Report on maximum sustainable yields Carrying capacity analyses completed</p> <p>Establishment of Regional Fisheries Commission Legal modifications drafted</p> <p>Management plans in place</p> <p>Report on aquaculture capacity completed</p>	<p>Demonstration project completion report, Project files</p> <p>Working group report, Project files</p> <p>Working group report, Project files</p> <p>Existence of Regional Fisheries Commission Working group report, Project files</p> <p>Working group report, Project files</p> <p>Working group report, Project files</p>	
<b>ACTIVITIES</b>	<p>IIa) Demonstrate regional stock assessment methods including regional surveys (Regional Demonstration Project)</p> <ul style="list-style-type: none"> <li>Review of existing data and diagnosis of condition of stocks</li> <li>Develop common methodology for joint regional stock assessment and perform initial joint regional stock assessment.</li> <li>Perform demonstration of a Regional Survey, including oceanography, ecological, and introduced species sampling</li> <li>Determine a mechanism for an on-going 1-2 year stock assessment</li> </ul>	<p>Fisheries stocks status reports Common methodology developed</p> <p>Regional Survey demonstrated</p> <p>Mechanism for on-going stock assessment determined</p>	<p>Status reports, Project files</p> <p>Stock assessment, Project files</p> <p>Project files</p> <p>Project files</p>	Assumes the countries will agree to perform a joint stock assessment. The risk is low since this is one of the priority actions identified during the PDF-B phase.
	<p>IIb) Identify methods and estimates for maximum sustainable yields for dominant commercially important fisheries species</p> <ul style="list-style-type: none"> <li>Through workshops, develop draft methods for estimating maximum</li> </ul>	Workshops held, Draft methods developed	Workshop notes, Project files	Assumes countries will agree on methodology for estimating maximum sustainable yields for dominant fisheries and that countries will agree to implement and adhere to fishery yields.

<b>Component 2: Recovery and sustainability of depleted fisheries and living marine resources including Mariculture.</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
	<p>sustainable yields for dominant fisheries</p> <ul style="list-style-type: none"> <li>Based on demonstration of regional stock assessment, estimate maximum sustainable yields for dominant fisheries</li> <li>Through the Guinea Current Fisheries Commission (see Component II, subcomponent 4), perform annual or every-two-year estimates of maximum sustainable yields for purposes of setting fisheries quotas no commercial important species in the region</li> </ul>	<p>Maximum sustainable yields estimated</p> <p>Maximum sustainable yields estimated annually or every two years</p>	<p>Working group reports, Project files</p> <p>GCFC reports, project files</p>	
	<p>IIc) Evaluate productivity with regards to its carrying capacity for living marine resources of the ecosystem (Regional Demonstration Project)</p> <ul style="list-style-type: none"> <li>Perform iterative series of analysis of carrying capacity (productivity assessments and plankton surveys regional demonstration project)</li> <li>Review existing state-of-knowledge and preliminary carrying capacity analysis (retrospective) and define gaps</li> </ul>	<p>Analyses completed and published</p> <p>Analysis completed and gaps defined</p>	<p>TORs, Demonstration project completion report, Project files</p> <p>Project files</p>	<p>Relies on political will to fund ongoing regional efforts for conducting studies on living marine resources.</p>
	<p>II d) Develop Regional Agreements and Regional fisheries Commission</p> <ul style="list-style-type: none"> <li>Develop, negotiate, endorse and ratify regional agreement for sustainable use of fisheries resources</li> <li>Establish a Guinea Current Fisheries Commission and explore mechanism for sustainability</li> </ul>	<p>Regional agreement ratified</p> <p>GCFC established</p>	<p>SC meeting minutes, ratification of regional agreement</p> <p>Existence of GCFC</p>	<p>Assumes that countries are willing to ratify and adhere to regional fisheries agreements. The risk is low since this is one of the priority actions identified during the PDF-B phase.</p>
	<p>IIe) Assess and draft modifications to the National legal Frameworks to achieve sustainable fisheries</p> <ul style="list-style-type: none"> <li>Review existing national laws and regulations on fisheries and Mariculture and pertinent international agreements such as FAO Code of Conducts</li> </ul>	<p>Review completed</p>	<p>Report completed, Project files</p>	<p>Assumes that countries are willing to revise and harmonize national legal frameworks.</p>

<b>Component 2: Recovery and sustainability of depleted fisheries and living marine resources including Mariculture.</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
	(various), straddling stocks, WSSD fisheries agreements, etc. <ul style="list-style-type: none"> <li>• Draft modifications to national laws and regulations on fisheries</li> <li>• Facilitate the approval of new or reformed laws and regulation in fisheries</li> </ul>	Legal modifications drafted  Approval of legal changes facilitated	Legal review and modifications completed, Project files  Project files	
	IIf) Develop fisheries Management Plans for at least three fisheries <ul style="list-style-type: none"> <li>• Develop and facilitate Regional fisheries management plans, including regional recovery programme for at least three single or multi-species stock using adaptive approach fisheries.</li> <li>• Through the Guinea Current Fisheries Commission, conduct adaptive management of these fisheries</li> </ul>	Fisheries management plans developed including regional recovery programme  Fisheries management plans implemented; status report published	Working group reports, Project files  Project files	Maintenance of sustainable fish populations will require the reduction of system stresses, including chemical contamination and fishing pressure. Such remedial actions directly affect individuals or organizations now doing business in the region and identification/ education of stakeholders will be necessary for compliance with these actions.
	IIg) Assess existing coastal aquaculture and Mariculture and determine environmentally sustainable capacity for future development, including identification of investments and legislation for SAP <ul style="list-style-type: none"> <li>• Review existing status and trends and environmental impact of coastal aquaculture and Mariculture</li> <li>• Determine maximum practical limits on coastal aquaculture and Mariculture based on analysis of environmental effects of such activities</li> <li>• Develop guidelines for best environmental practices as they relate to aquaculture and Mariculture</li> <li>• At national levels, assure laws and regulations governing coastal aquaculture and Mariculture reflect the limits developed under this project and best environmental practices</li> </ul>	Status and trends report completed  Maximum limits determined  Guidelines for best environmental practices developed  Modifications to coastal and aquaculture laws drafted.	Working group reports  Working group reports, Project files  Working group reports, Project files  Legal analysis, Project files	Implementation of best environmental practices requires the full participation of stakeholders.

<b>Component 2: Recovery and sustainability of depleted fisheries and living marine resources including Mariculture.</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
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<b>Component 3: Planning for biodiversity conservation, restoration of degraded habitats and development of strategies for reducing coastal erosion</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
<b>OUTCOMES</b>	<ul style="list-style-type: none"> <li>Regional Biodiversity Action Plan developed</li> <li>Demonstration of restoration of priority mangrove areas completed</li> <li>Use of ICARM and PADH demonstrated</li> <li>Status of introduced species and their threats to the region's biodiversity assessed</li> <li>Modification to national biodiversity laws drafted</li> <li>Mitigation strategies for restoring eroded coastal areas developed</li> </ul>	<p>Demonstration projects completed</p> <p>Status of introduced species better understood</p> <p>Mitigation strategies developed</p>	<p>Project files, Existence of Regional Biodiversity Action Plan</p> <p>Demonstration project completion reports, Project files</p> <p>Working group reports, Project files</p> <p>Working group reports, Project files</p> <p>Working group reports, Project files</p>	
<b>ACTIVITIES</b>	<p>IIIa) Develop Regional Biodiversity Action Plan, including Protected Areas based on Biodiversity Action Plans (National Demonstration Project)</p> <ul style="list-style-type: none"> <li>Organize a workshop to identify the elements for a regional Biodiversity Action Plan, including National Activity 1. Review existing national practices of coastal habitat use, conservation, and restoration, protected areas, list of rare and endangered species, etc.</li> <li>Elaborate a draft regional Biodiversity Action Plan and carry out a broad regional consultation on the proposed regional Biodiversity Action Plan. Using National Biodiversity Action Plans and other sources, identify priority biodiversity areas and issues of regional</li> </ul>	<p>Workshop held and report completed on biodiversity</p> <p>Draft regional Biodiversity Action Plan completed and disseminated</p>	<p>Workshop meeting notes, Project files</p> <p>SC meeting minutes, Project website, Project files</p>	Assumes national commitment to adopting a regional biodiversity strategy and willingness to endorse regional biodiversity agreements.

<b>Component 3: Planning for biodiversity conservation, restoration of degraded habitats and development of strategies for reducing coastal erosion</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
	<ul style="list-style-type: none"> <li>concern</li> <li>Promote the endorsement and implementation of the regional Biodiversity Action Plan. Review existing and proposed protected areas, and develop regional strategy for protected areas</li> <li>Review existing and proposed rare and endangered species, and develop regional list of rare and endangered species requiring special protection</li> <li>Through a participatory process, develop, review and nationally endorse Regional Biodiversity Action Plan</li> </ul>	<p>Regional Biodiversity Action Plan promoted and regional protected areas strategy developed</p> <p>List of rare and endangered species completed</p> <p>Regional Biodiversity Action Plan nationally endorsed</p>	<p>Working group reports, Project files</p> <p>Working group reports, Project files</p> <p>National letters of endorsement, SC meeting minutes, Project files</p>	
	<p>IIIb) Demonstrate restoration of priority mangrove areas (National Demonstration Project)</p> <ul style="list-style-type: none"> <li>Identify priority mangrove areas in the region (Nigeria for restoration, based on ecosystem approach</li> <li>Finalize adaptive management and implementation plan for restoration of mangrove areas, including clearing, cleaning, planting, monitoring, and annual review of restoration approaches</li> <li>Monitor, evaluate, and disseminate results of Demonstration Project</li> </ul>	<p>Priority mangrove areas identified</p> <p>Restoration plan completed</p> <p>Results widely disseminated</p>	<p>Demonstration project progress reports, Project files</p> <p>Demonstration project progress reports, Project files</p> <p>Demonstration project completion report, Project website, Project files</p>	Assumes that the restoration project completed in Nigeria could be replicated in other coastal countries.
	<p>IIIc) Demonstrate use of Integrated Coastal Area and River Basin Management (ICARM) and assess Physical Alteration and Destruction of Habitat (PADH for habitat protection (National Demonstration Project)</p> <ul style="list-style-type: none"> <li>Using ICARM and PADH methodology, finalize approach for demonstration project on Integrated</li> </ul>	<p>Demonstration project approach completed</p>	<p>Demonstration project progress reports, Project files</p>	Assumes country willingness to implement ICARM principles

<b>Component 3: Planning for biodiversity conservation, restoration of degraded habitats and development of strategies for reducing coastal erosion</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>	
	Coastal Management <ul style="list-style-type: none"> <li>Implement demonstration project. Monitor, evaluate and disseminate results of Demonstration Project</li> </ul>	Demonstration project completed and results disseminated	Demonstration project completion report, Project website, Project files	
	III d) Assess status of introduced species and their threats to the biodiversity of the GCLME region; develop legal/regulatory mechanisms for their control <ul style="list-style-type: none"> <li>Prioritize national and regional risks and threats from introduced species by researching the numbers, ecological niches, and spread of introduced species, as well as their method of introduction (based in part on results of regional survey of Component II)</li> <li>Working with IMO and GloBallast, determine extent of introduction of alien species in ballast water, through cooperation with regional task force, communication and public awareness, training, port biota baseline surveys (part of national activities and regional survey in demonstration project of Component I), risk assessment and incorporation into National Regional Action Plans</li> </ul>	Risk prioritization completed  Extent of species introduced through ballast water determined and mitigation measures implemented	Working group reports, Project files  Working group reports, Project website, Project files, Regional task force MOU	Proposals for regulation and control of exotic species must be agreed upon and implement by all countries in order for them to be effective due to the inherent transboundary nature of exotic species.
	III e) Perform gap analysis of national legislation and draft improvements to legislation regarding key elements of biodiversity identified in the TDA, introduced species, and habitats, etc. <ul style="list-style-type: none"> <li>Review existing national laws and regulations on biodiversity</li> <li>Draft modifications to national laws and regulations on biodiversity</li> </ul>	Legal and regulatory review completed Legal modifications drafted	Working group reports, Project files  Working group reports, Project files	Effective environmental resource protection derives from a combination of regulatory and non-regulatory actions. Before recommendations for effective regulatory changes can be made, a survey of existing national and international regulations needs to be performed.



<i>Component 3: Planning for biodiversity conservation, restoration of degraded habitats and development of strategies for reducing coastal erosion</i>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>	
	<ul style="list-style-type: none"> <li>Facilitate the approval of a new or reformed laws and regulation in biodiversity</li> <li>Relying on existing information such as National Environmental Action Plans and other previous documents, determine gaps in laws of each of the 16 GCLME countries, concerning land-based activities, marine-based pollution, introduced species, fisheries, and related areas of concern</li> </ul>	<p>New laws and/or regulations approved</p> <p>Gap analysis completed</p>	<p>Copies of approved laws/regulations, Project files</p> <p>Working group reports, Project files</p>	
	<p>III(f) Develop cost-effective mitigation strategies for restoring natural littoral sediment flow/budget for protection of shorelines and critical coastal habitats, including studies, investments for SAP, and legal/regulatory mechanisms (National Demonstration Project)</p> <ul style="list-style-type: none"> <li>As part of filling gaps in TDA, review regional littoral sediment budgets and evaluate changes to sediment budget arising from human activities (damming rivers, interrupting littoral sediment drift, sand mining, etc.)</li> <li>Based on priorities of human impacts on littoral sediment budgets, recommend cost-effective mitigation strategies for restoring littoral transport and sand resources (e.g., dredging in reservoirs and restoring sediment to rivers; redesign and modification of major shoreline structures interrupting littoral transport such as in ports, harbors, breakwaters, etc.; elimination of beach and near-shore sand mining</li> <li>Review existing incidences and baseline</li> </ul>	<p>Regional sediment budgets reviewed and included in TDA</p> <p>Recommendations for cost effective mitigation strategies completed</p>	<p>TDA, Project website, Project files</p> <p>Working group reports, Project files</p>	<p>Assumes country and/or donor willingness to fund mitigation strategies for restoring natural littoral sediment flow. In some cases, sediment flow is disrupted by critical national infrastructure such as dams and ports so there is a risk that action will not be taken. Countries have identified coastal erosion as a priority issue, however, and have expressed willingness to address the problem so the risk is minimal.</p>

<b>Component 3: Planning for biodiversity conservation, restoration of degraded habitats and development of strategies for reducing coastal erosion</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
	information on coastal erosion and develop strategies for coastal erosion control (National Demonstration Project: Cote D'Ivoire)	National demonstration project completed and results disseminated	Demonstration project completion reports, Project files, Project website	

<b>Component 4: Reduce land and Sea-based pollution and improve water quality</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
<b>OUTCOMES</b>	<ul style="list-style-type: none"> <li>Regionally-integrated and consistent National Programmes of Action for Land-Based Activities developed</li> <li>Regional Programme of Action for Land-Based Activities developed and implemented</li> <li>LBA Protocol for the Abidjan Convention developed</li> <li>Regional assessment of marine pollution prevention measures, contingency planning and spill response capabilities completed</li> <li>Regional system for cooperation in cases of major marine pollution incidents created</li> <li>Legislative reforms in selected countries to adopt and implement international conventions related to oil and gas activities facilitated</li> <li>Investment opportunities for the SAP to reduce ecosystem threats developed</li> </ul>	<p>National and Regional Programmes of Action focus on priority land-based sources</p> <p>Regional pollution prevention measures assessed and cooperation system in place</p> <p>Legal modifications drafted</p>	<p>Existence of National and Regional Programmes of Action; Project files</p> <p>Existence of LBA Protocol</p> <p>Working group reports; Project files</p> <p>Project files</p> <p>Working group reports, Project files</p> <p>Workshop reports, Project files</p>	
<b>ACTIVITIES</b>	<p>IVa) Facilitate development of regionally-integrated and consistent National Programmes of Action for Land-Based Activities, including updating inventories of pollution and habitat hot spots</p> <ul style="list-style-type: none"> <li>Assist countries in developing realistic and regionally-integrated National</li> </ul>			Assumes countries will use the NPA money wisely and will develop NPAs.

<b>Component 4: Reduce land and Sea-based pollution and improve water quality</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
	<p>Programmes of Action from land-based sources of pollution and activities</p> <ul style="list-style-type: none"> <li>• Determine and address training needs in the region for LB sources of pollution and activities and sources</li> <li>• Develop Regional/ Governmental/ Private Sector partnerships on LB activities and sources of pollution</li> <li>• Identify, strengthen, and involve Stakeholders in LBS issues in the Region, including their involvement in Monitoring and Evaluation, as well as development of performance indicators</li> <li>• Develop and implement a West and Central African regional node of the GPA Clearinghouse Mechanism</li> </ul>	<p>Contracts to countries to develop NPAs, NPAs developed</p> <p>Training needs assessed and curricula developed; Training workshops held</p> <p>Partnerships developed on land-based activities</p> <p>Public participation plan developed and implemented, stakeholders fully involved</p> <p>GPA Clearinghouse Mechanism established</p>	<p>Existence of NPAs, SC meeting minutes, APR, Project files</p> <p>Workshop curricula, Workshop reports, Project files</p> <p>MOU letters on partnership, Project files</p> <p>Existence of Public Participation Plan, Project files, Project website</p> <p>Existence of GPA Clearinghouse Mechanism, Clearinghouse materials, newsletter, website</p>	
	IVb) Develop and implement a Regional Programme of Action for Land-Based			Assumes willingness of private sector and civil society to partner with governments

<b>Component 4: Reduce land and Sea-based pollution and improve water quality</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
	<p>Activities</p> <ul style="list-style-type: none"> <li>Based on National Programmes of Action, develop a Regional Programme of Action for Land-Based Activities facilitating partnerships between national governments and regional organizations in the private sector and civil society</li> <li>Work with governments and stakeholders to obtain broad support for Regional Programme of Action and NPAs</li> <li>Promote the Regional Programme of Action and broadly distribute RPA through public awareness campaign</li> </ul>	<p>Regional Programme of Action developed</p> <p>Support garnered for Regional Programme of Action</p> <p>Regional Programme of Action broadly disseminated</p>	<p>Existence of Regional Programme of Action, Project files</p> <p>Letters of support and partnership agreements between governments and private sector, Project files</p> <p>Project website, Project files</p>	<p>and regional organizations to promote the Regional Programme of Action. The private sector and civil society have already participated in the beginning stages of this project to some degree so the risk of their not participating is low.</p>
	<p>IVc) Develop a protocol on LBA for the Abidjan Convention</p> <ul style="list-style-type: none"> <li>Identify, strengthen and involve key stakeholders in preparation and development of protocol through sub-regional and regional stakeholder workshops as well as legal and technical expert meetings</li> <li>Review gaps in National regulatory/ legislative framework including the review of the status of the appropriate regional/ international convention by GCLME participating countries, and assist in developing plans for those that have not yet ratified the Abidjan Convention</li> <li>Develop, negotiate, ratify and obtain approval for the Protocol to the Abidjan Convention with Annexes on Land-Based Activities and sources of Pollution</li> </ul>	<p>Stakeholder and legal and technical expert meetings held</p> <p>Legal/regulatory gaps reviewed and ratification of Abidjan Convention assisted</p> <p>Protocol drafted, distributed and ratified</p>	<p>Meeting notes, Project files</p> <p>Legal/regulatory report; Ratification of Abidjan Convention by all GCLME countries, Project files, Convention Secretariat</p> <p>Project files, Convention Secretariat</p>	<p>None</p>
	IVd) Regional assessment of marine			Assumes willingness on part of port

<b>Component 4: Reduce land and Sea-based pollution and improve water quality</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>	
	<p>maritime pollution prevention measures, contingency planning, and spill response capabilities</p> <ul style="list-style-type: none"> <li>• Conduct a survey of the existing integrated approach/ system for the management of all types of marine wastes in port cities and towns</li> <li>• Conduct a survey/ study on port reception facility requirements and costs in some of the countries</li> <li>• Review the region's maritime infrastructure with particular regard for survey and inspection requirements as set out in IMO Conventions</li> <li>• Assess marine pollution, preparedness and response system for oil spill, and spill-combating equipment needs in each of the countries</li> <li>• Provide advisory services to address specific maritime safety and marine environmental problems on the request of the countries of the region and for the organization and implementation of activities related to <i>Prevention of Pollution from Shipping Activities-Implementation of MARPOL 73/73; Port State Control (PSC); Marine Pollution Preparedness and Response</i>; assist with the development/ completion of National Contingency Plans</li> <li>• Implement training through global/ regional/ national seminars, workshops, etc., and individual fellowships; provide assistance in developing the national systems for oil spill response (institutional capacity building)</li> <li>• Assess equipment, facilitating the</li> </ul>	<p>Marine waste management survey completed</p> <p>Survey on port reception facility requirements completed Review of maritime infrastructure completed</p> <p>Assessment of oil spill response completed</p> <p>Advisory services provided by technical working group and countries requesting assistance</p> <p>Global/regional/national seminars and workshops held, National systems for oil spill response developed</p>	<p>Working group reports, Project files</p> <p>Working group reports, Project files</p> <p>Working group reports, Project files</p> <p>Working group reports, Project files</p> <p>Technical working group reports on requests from countries for assistance, Project files</p> <p>Seminar and workshop reports, Project files, Report on national system for oil spill response</p>	<p>owners/authorities and national/regional maritime authorities to enact modifications, harmonize guidelines and cooperate to prevent/mitigate spills.</p>

<b>Component 4: Reduce land and Sea-based pollution and improve water quality</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
	provision of pollution response equipment, and production and dissemination of training materials, etc. <ul style="list-style-type: none"> <li>• Create public awareness regionally on certain aspects of the project activities</li> </ul>	Assessment equipment completed and training materials developed  Public awareness raised	Existence of training materials, Project files  Project website, Public awareness materials, Project files	
	IVe) Development of regional systems for cooperation in cases of major marine pollution incidents (customs, communications, response, liability, and compensation) <ul style="list-style-type: none"> <li>• Evaluate need for and duties of regional emergency response centers</li> <li>• Develop sub-regional/ regional contingency plans and agreement for cooperation</li> <li>• Develop sub-regional/ regional/ inter-regional systems for cooperation in cases of major marine pollution incidents</li> </ul>	Emergency response center evaluation completed Contingency plan and cooperation agreements completed Cooperation systems developed	Project files  Existence of cooperation agreements, Project files  Working group reports, Project files	Assumes countries will agree to cooperate on joint emergency preparedness and response
	IVf) Facilitate process to reform legislation in selected countries to adopt and implement international conventions (e.g., MARPOL, OPRC) as related to oil and gas activities <ul style="list-style-type: none"> <li>• Hold high-level meeting of government officials and parliamentarians with IMO and other personnel to discuss conventions related to oil and gas sector, including their benefits and obligations</li> <li>• If requested, provide technical assistance to countries in translating the provisions of the Conventions into their national legislation</li> </ul>	Meeting held to discuss conventions  Technical assistance provided	Meeting notes, Project files  Technical working group files, Project	Assumes commitment of countries to reform legislation and implement international conventions.

<b>Component 4: Reduce land and Sea-based pollution and improve water quality</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
			files	
	<p>IVg) Strengthen, improve, and demonstrate methods to reduce nutrient influx to the marine environment (National Demonstration Project)</p> <ul style="list-style-type: none"> <li>Based on an identified priority nutrient input, conduct demonstration project on controlling nutrient fluxes to the coastal environment</li> <li>Monitor, evaluate and broadly disseminate the results of the Demonstration Project throughout the region</li> </ul>	<p>Demonstration project on controlling nutrient fluxes completed</p> <p>Results broadly disseminated</p>	<p>Demonstration project reports, Project files</p> <p>Project website, Project files</p>	Assumes that capable and responsible parties will execute the projects.
	<p>IVh) Develop investment opportunities for the SAP to reduce ecosystem threats identified in the updated TDA</p> <ul style="list-style-type: none"> <li>Based on demonstration projects, and through broad stakeholder involvement, conduct two regional workshops to develop ideas for investment opportunities for the SAP to reduce ecosystem threats</li> <li>Based on priority investments identified through the public participation process, develop at least three of these investments for the SAP process</li> </ul>	<p>Workshops held and investment opportunities developed</p> <p>Three investments developed</p>	<p>Workshop reports, Project files</p> <p>Project files</p>	Assumes country/donor/private sector willingness to make investments in reducing ecosystem threats.

<b>Component 5: Regional coordination and institutional sustainability</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
<b>OUTCOMES</b>	<ul style="list-style-type: none"> <li>Regional project coordination mechanism</li> <li>Steering Committee developed</li> <li>Intersectoral/Interministerial/ Ministerial Coordination established</li> <li>Stakeholders actively involved in project activities</li> <li>GCLME Environmental Information</li> </ul>	<p>RCU, Steering Committee and Intersectoral/Interministerial/ Ministerial Coordination mechanism in place</p> <p>Public participation plan implemented</p>	<p>Project files, SC meeting minutes</p> <p>Stakeholder plan and report</p>	

<b>Component 5: Regional coordination and institutional sustainability</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
	<ul style="list-style-type: none"> <li>System established</li> <li>Monitoring and Evaluation conducted</li> <li>Regional coordination mechanism developed</li> <li>Capacity developed for the IGCC</li> </ul>	<p>EIS in place</p> <p>Effective IGCC in place</p>	<p>Project website, Project files, Existence of EIS</p> <p>Monitoring reports, Project files</p> <p>IGCC meeting minutes</p>	
<b>ACTIVITIES</b>	<p>Va) Develop a regional project coordination mechanism</p> <ul style="list-style-type: none"> <li>Staff, equip, and start a Regional Coordination Unit (RCU)</li> <li>Develop national project coordination structures in each country, and linkages with the RCU</li> </ul>	<p>Coordination office opened and staff hired, 8 regional coordination meetings held by end of year 4</p> <p>National project coordination structures developed</p>	<p>SC meeting minutes</p> <p>SC meeting minutes, Project files</p>	<p>The program must effectively communicate the issues and the suggested remedies to the national sectors and be responsive to national real and perceived needs.</p>
	<p>Vb) Develop effective Steering Committee</p> <ul style="list-style-type: none"> <li>Demonstrate value of project to high National Officials to assure continued project support at high levels</li> <li>Conduct once or twice-yearly Steering Committee meetings for Governance of Project and Project M&amp;E</li> <li>Include broad stakeholder participation in Steering Committee activities to assure project clarity and transparency through providing observer status to civil society and NGOs</li> </ul>	<p>5-10 Steering Committee meetings held by end of year 4</p> <p>Stakeholders involved in SC meetings and SC activities</p>	<p>SC meeting minutes</p> <p>SC meeting minutes</p>	<p>The program must effectively communicate the issues and the suggested remedies to the national sectors and be responsive to national real and perceived needs.</p>
	<p>Vc) Establish Intersectoral/ Interministerial/ Ministerial Coordination</p> <ul style="list-style-type: none"> <li>Determine appropriate national Intersectoral, Interministerial, and/or Ministerial coordination requirements to assure broad participation in project</li> <li>Establish clear communications procedures nationally and regionally to track, monitor and facilitate project execution</li> </ul>	<p>Coordination requirements determined</p> <p>Clear communications established</p>	<p>SC meeting minutes, Project files</p> <p>SC meeting minutes, Project files</p>	<p>The program must effectively communicate the issues and the suggested remedies to the national sectors and be responsive to national real and perceived needs.</p>
	<p>Vd) Identify, strengthen and involve stakeholders</p> <ul style="list-style-type: none"> <li>Develop a public participation and</li> </ul>	<p>PPA workplan developed and</p>	<p>SC meeting minutes, UNDP/UNEP</p>	<p>Routine and effective involvement by stakeholder in planning, management and decision-making can only be</p>



<b>Component 5: Regional coordination and institutional sustainability</b>	<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
<ul style="list-style-type: none"> <li>• awareness (PPA) workplan for the project</li> <li>• Implement the PPA workplan involving national experts, private sector, NGOs and other interested parties</li> <li>• Establish regional information networks and information exchange mechanisms to disseminate information in West and Central Africa through newsletters, a web page, and publications on the progress of the project in order to enhance the replication of successful experiences (within the framework of the Abidjan Convention)</li> <li>• Integrate private sector involved in GCLME development (industry, shipping, fisheries, tourism) into activities of this project, as appropriate as sub-contractor, consultant or co-sponsor of specific activities</li> <li>• Promote international support and networking for the action program including a mechanism for periodic independent reviews and reporting of results; this should include a role for IMO</li> <li>• Develop and conduct training workshops for stakeholders</li> </ul>	<p>approved by SC and UNEP/UNDP PPA committee established and holds 8 meetings</p> <p>Country-based and regional workshops held</p> <p>Website developed and online</p> <p>Newsletters and publications created and distributed to 400 stakeholders</p> <p>Private sector actively participating in project in workshops and working groups and as co-sponsor of activities</p> <p>Independent reviews conducted and results reported</p> <p>Training workshops held</p>	<p>review reports</p> <p>PPA committee meeting reports, Stakeholders' participation reports</p> <p>Workshop meeting notes, Project files</p> <p>Existence of website</p> <p>Existence of public awareness materials</p> <p>Workshop reports, Working group reports, SC minutes</p> <p>Project files</p> <p>Reports from training courses</p>	<p>accomplished by on-going encouragement, strengthened capacities and financial commitment by donors and countries.</p> <p>Barriers to broaden stakeholder participation must be removed.</p> <p>The project assumes support of the private sector in funding and carrying out activities.</p>
<p>Ve) Develop Environmental Information System (EIS) for GCLME, including cooperation with other available regional EIS (Regional Demonstration Project)</p> <ul style="list-style-type: none"> <li>• Building on existing institutional arrangement where feasible, establish a Data and Information Management System for the GCLME to facilitate the updating of the TDA and data sharing with other regional projects</li> <li>• Develop mechanisms for the sharing of</li> </ul>	<p>DIMS established</p> <p>Data sharing mechanisms</p>	<p>Existence of DIMS, Demonstration project completion report</p> <p>Project files</p>	<p>Assumes that capable and responsible parties will execute the projects.</p>

<b>Component 5: Regional coordination and institutional sustainability</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
	<p>data and information for input into the Data and Information Management System for the GCLME</p> <ul style="list-style-type: none"> <li>• Create standards and protocols for the collection, processing, analysis and compilation of data and GIS information</li> <li>• Develop a centralized system for access and distribution of the data to the organizations involved in the GCLME project, as well as other stakeholders</li> <li>• Support all aspects of the GCLME project in their data and information requirements</li> </ul>	<p>developed and in place</p> <p>Standards and protocols created</p> <p>Data distribution system developed</p> <p>Project data needs supported</p>	<p>Working group reports, Project files</p> <p>Demonstration project completion reports, Project files</p> <p>Project files</p>	
	<p>Vf) Monitoring and Evaluation (M&amp;E)</p> <ul style="list-style-type: none"> <li>• Perform annual TPR, APR, PIR</li> <li>• Perform mid-term and final evaluations</li> <li>• Develop GEF IW indicators and monitoring system to evaluate progress on achieving indicators</li> </ul>	<p>Reviews completed</p> <p>Evaluations completed</p> <p>Indicators and monitoring system developed</p>	<p>Project files, UNDP/UNEP/UNIDO reports</p> <p>Project files, UNDP/UNEP/UNIDO reports</p>	None.
	<p>Vg) Develop regional coordination mechanism (an Interim Guinea Current Commission, followed by a full-time Commission)</p> <ul style="list-style-type: none"> <li>• Develop regional consensus on the responsibilities, duties, structure, and authorities of a GCC and linkages to the Abidjan Convention and other LME projects (e.g., BCLME)</li> <li>• Through a regional agreement, formally establish the GCC</li> <li>• Develop sustainable financing mechanisms for the GCC</li> </ul>	<p>Regional consensus developed</p> <p>GCC established</p> <p>Sustainable financing mechanism developed</p>	<p>Agreement on GCC, Project files, SC meeting minutes</p> <p>Regional agreement signed, SC meeting minutes, Project files</p> <p>Project files, SC meeting minutes</p>	Financial and motivational means must be identified to develop national institutions and/or the private sector into sustainable contributors to the project.
	<p>Vh) Provide capacity building for the IGCC</p> <ul style="list-style-type: none"> <li>• Once the responsibilities, duties and authorities of the GCC are established and agreed upon, develop training</li> </ul>	<p>Training modules developed</p>	<p>Project files, GCC reports</p>	Assumes country support for a regional coordination mechanism.

<b>Component 5: Regional coordination and institutional sustainability</b>		<b>Objectively Verifiable Indicators</b>	<b>Sources of Verification</b>	<b>Assumptions and Risks</b>
	modules to enhance capacities of this body <ul style="list-style-type: none"> <li>Facilitate the start-up of the GCC through technical assistance, transfer of equipment and communications facilities</li> </ul>	Technical assistance, equipment and communications facilities provided	Project files, GCC reports	

## ANNEX C

### STAP REVIEW AND RESPONSE

#### C: REVIEW:

Combating living resource depletion and coastal area degradation in the Guinea Current LME through ecosystem-based regional actions

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#### Basis for the proposal:

The Guinea Current Large Marine Ecosystem (GCLME), the shared transboundary waters off the coast of western Africa, is an important reservoir of rich marine biological diversity of global significance and an important world fishery. Due to increasing urbanization and industrialization in the region, this marine ecosystem has been threatened by a number of anthropogenic activities such as over-exploitation of fishery resources, impacts from the land-based settlements and activities from industrial, agricultural, urban and domestic sewage run-off and other mining activities. The depletion of living resources, uncertainty in ecosystem status (including climate change effects), deterioration of water quality, and loss of habitats (including coastal erosion) have been identified as significant transboundary environmental problems in the GCLME region. Hence, there is an increasing recognition among the countries in this region that co-operation in establishing a regional management framework for sustainable use of living and non-living resources in the GCLME is urgently needed.

#### Goals and expected outcomes:

The overall development goal of this project is to create a regional management framework for sustainable use of living and non-living resources in the GCLME. Priority action areas include reversing coastal area degradation and living resources depletion, relying heavily on regional capacity building. Sustainability will derive from this improved capacity, strengthening of national and regional institutions and improvements in policy/legislative frameworks. This project proposal aims to build at the regional level an environment of collaboration and partnership, in which stakeholders at all levels can join hands to address environmental problems of the GCLM. An important outcome of this project proposal is a strategic Action Programme (SAP) to be agreed on at an intergovernmental level. A Transboundary Diagnostic Analysis (TDA) and preliminary Strategic Action Programme (SAP) have been prepared, serving as the basis for preparation of this project proposal and will further elaborated in this project. The SAP shall encompassing targeted and costed action programmes, as well as recommended legal framework for improved regional co-operation in managing marine environmental concerns.

The project is divided into five main components, namely, i) Finalise SAP and develop sustainable financing mechanism for its implementation; ii) Recovery and sustainability of depleted fisheries and living marine resources including mariculture; iii) Planning for biodiversity conservation, restoration of degraded habitats and developing strategies for reducing coastal erosion; iv) Reduce land and sea-based pollution and improve water quality; and v) Regional co-ordination and institutional sustainability. The activities to be undertaken will complement other projects in the

region to provide a strong foundation for the long-term sustainable environmental management of the GCLME.

Comments:

The project design focuses around a development objective that is " to create a regional management framework for sustainable use of living and non-living resources in the GCLME in order to protect and restore the health of the GCLME and its natural resources". The Project Brief Document, with its objectives and output, has 5 components and a total of 37 activities encompassing all elements to effectively assess and manage the resources of the GCLME. The main objective of each component is clearly stated and outputs clearly identified. The nine demonstration projects designed to be replicable and intended to demonstrate how concrete actions can lead to dramatic improvements. The intended users of the project outputs are clearly identified, and the direct beneficiaries of the project include government authorities and their affiliated institutions, private sector and NGOs. The ultimate beneficiaries of the project are the populations dependent on the GCLME.

This project is foreseen as being useful in building institutional capacity in the region. The enthusiasm and strong support of the various stakeholders, especially of the Governments themselves, are very much needed in order to foster a regional approach to finding solutions to their common problems. In addition, co-operation among international organisations is foreseen as necessary for the development and co-ordination of the project. Hence, a consortium of entities, both inter- and non-governmental, will be involved in its execution and thus ensuring quality outputs. The outstanding accomplishments of the Pilot-Phase GEF Gulf of Guinea Large Marine Ecosystem (GOG LME) Project (1995 - 1999), and the history of co-operation between the countries bordering the GCLME under the Abidjan Convention, indicate the existence of important on-going national and regional initiatives and collaboration. Hence, the collaborative actions initiated by this proposal should be able to be sustained once the stakeholders realize the significant benefit from such incremental actions. Finally, the SAP to be elaborated in this proposal is certainly quite comprehensive and effective. Overall, my review concludes that the immediate objectives and the outputs and activities of the project can be successfully achieved with co-operation among all stakeholders involved.

**C1: RESPONSE: NO RESPONSE TO THE STAP REVIEW IS REQUIRED.**