

PROJECT DEVELOPMENT FACILITY

REQUEST FOR PIPELINE ENTRY AND PDF BLOCK B APPROVAL



AGENCY'S PROJECT ID:
GEFSEC PROJECT ID: 2602
COUNTRY: Egypt
PROJECT TITLE: Investment Fund for the Mediterranean Sea LME partnership: Alexandria Integrated Coastal Zone Management Project
GEF AGENCY: World Bank
OTHER EXECUTING AGENCY(IES):
DURATION: 18 months
GEF FOCAL AREA: IW
GEF OPERATIONAL PROGRAM: OP9
GEF STRATEGIC PRIORITY: IW-1 Catalyzing financial resources for implementation of agreed actions
ESTIMATED STARTING DATE: July 2005
ESTIMATED WP ENTRY DATE: June 2006
PIPELINE ENTRY DATE: MAY 2005

FINANCING PLAN (US\$)	
GEF ALLOCATION	
Project (<i>estimated</i>)	7,500,000
Project Co-financing (<i>estimated</i>)	70,000,000
PDF A*	
PDF B**	350,000
PDF C	
<i>Sub-Total GEF PDF</i>	350,000
PDF CO-FINANCING (details provided in Part II, Section E – Budget)	
IBRD/IDA/IFC	
Government Contribution	
Others	
<i>Sub-Total PDF Co-financing:</i>	
<i>Total PDF Project Financing:</i>	350,000

* Indicate approval date of PDFA:

** If supplemental, indicate amount and date of originally approved PDF:

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT:

Ms. Fayza Aboul Naga
 Minister of International Cooperation

Date
 09/28/2004

This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for approval. Approval is being sought for pipeline entry only at this stage.

Steve Gorman 
 GEF Executive Coordinator, World Bank
 Date: May 13, 2005

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PART I - PROJECT CONCEPT

A - SUMMARY

1. STRATEGIC FRAMEWORK

The countries of the Mediterranean Sea basin¹ face a variety of shared environmental problems that are transboundary in nature. Key to the success in addressing transboundary problems is the joint political commitment of all countries in the basin. With the support of the GEF, UNEP, UNEP/MAP, and FFEM, and consistent with the GEF Operational Strategy, the Mediterranean countries have collaborated within the context of the Barcelona Convention to revise the Transboundary Diagnostic Analysis prepared in 1997, and have agreed on the major transboundary environmental concerns for the basin. The Mediterranean countries have also worked together to set priorities related to these transboundary problems and have jointly agreed on what interventions are needed to address such priorities through two Strategic Action Programs (SAPs):

- The Strategic Action Program to Address Pollution from Land-Based Activities (SAP MED); and
- The Strategic Action Program for the Conservation of Mediterranean Marine and Coastal Biological Diversity (SAP BIO).

The two Strategic Action Programs are aimed at: (i) reducing land-based sources of marine pollution (SAP-MED) and (ii) protecting the biodiversity and living resources of the Mediterranean, as well as their habitats (SAP-BIO)

In order to accelerate on the ground implementation of the SAPs, and assist with the early implementation of the ICM Protocol, a collective effort for the protection of the environmental resources of the Mediterranean - the **Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem** - is being proposed by UNEP and the World Bank to all the countries of the Mediterranean and to all international cooperation Agencies, IFIs and bilateral and multi-lateral donors. The proposed Partnership – which builds upon the model and lessons learnt from the GEF Black Sea/Danube Partnership – is a basin-wide multi-stakeholder collaboration with the main objective to assist basin countries in implementing reforms and investments in key sectors that address transboundary pollution reduction, biodiversity decline, habitat degradation and living resources protection priorities identified in the two SAPs. The Partnership will serve as a catalyst in leveraging policy/legal/institutional reforms as well as additional investments for reversing degradation of this damaged large marine ecosystem its contributing freshwater basins, habitats and coastal aquifers. Interventions supported under the Strategic Partnership will be mainstreamed into the programs of the GEF Implementing and Executing Agencies.

¹ Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Morocco, Serbia and Monte Negro, Slovenia, Spain, Syria, Tunisia, and Turkey, are riparian countries. Bulgaria, FYR Macedonia and West Bank and Gaza are included as part of the broader Mediterranean basin. SAPs have been endorsed by all riparian countries and the EU. All countries except Cyprus, France, Greece, Israel, Italy, Malta, Monaco, Slovenia and Spain are eligible for GEF support.

The proposed Strategic Partnership consists of the two components reflecting each agency's comparative advantage:

- Regional Component: Implementation of Regional Activities for the Protection of the Environmental Resources of the Mediterranean and its Coastal Areas (UNEP)
- Investment Fund for the Mediterranean Sea Large Marine Ecosystem Partnership (World Bank).

The present Concept describes a proposed project to be implemented in Egypt under the Investment Fund of the Partnership (World Bank).

2. PROJECT RATIONALE

The proposed project is consistent with and will contribute to the ground implementation of the goals of the Strategic Action Programme (SAP) for the Mediterranean Sea in Egypt. The pollution discharge from land-based sources in the "hot spot" areas of Alexandria and El-Mex Bay, Egypt, will be addressed by targeted investments for pollution reduction, new financing mechanisms and local coastal management bodies, and technology transfer. Experiences from the demonstration project in Alexandria will be upstreamed to the national level to mainstream pollution reduction strategies, integrated coastal zone management (ICZM) and environmental objectives into sectoral and national planning in other similar highly degraded lagoon systems in Egypt and elsewhere in the region.

The project is blended with the Egypt: Pollution Abatement Project 2 (EPAP2), which will address industrial pollution in the Alexandria area. The GEF project and EPAP2 will promote environmental integration with the Lake Mariout component of the City Development Strategy (CDS) for Alexandria as well as the CDS-related Bank-financed project, Alexandria Growth Pole Project (AGPP). It will also be closely linked to the potential World Bank Water Supply and Sanitation Project which has received the green light from the Ministry of Housing to address the sewage situation in Alexandria with the new holding company.

Project development objective is: a) to reduce the load of land-based sources of pollution (industrial and domestic) entering the Mediterranean Sea in the "hot spots" of El-Mex Bay and Alexandria; and b) to protect/restore globally significant coastal heritage and ecosystem processes by supporting the Government of Egypt's efforts to develop and implement a National Coastal Zone Management Plan ..

Project global environment objective is: to implement the Strategic Action Plan (SAP-MED) towards the targets set for the discharge of municipal and industrial wastewater and contribute towards the GEF Partnership for the Mediterranean large Marine Ecosystem

B - COUNTRY OWNERSHIP

1. COUNTRY ELIGIBILITY

Egypt is eligible for GEF assistance in the International Waters Focal Area through the World Bank.

Egypt has had several successful GEF projects under the Biodiversity Focal Area, but is generally underrepresented in terms of GEF International Waters funding. The GEF/UNDP Lake Manzala project will be taken into consideration during the preparation of this project, as a good successful model for replication in Egypt and other countries in the region with similar conditions.

2. COUNTRY DRIVENNESS

The proposed project is an important block in the ongoing Environmental Dialogue between the Government of Egypt and the Bank. It is blended with the Egypt: Pollution Abatement Project II (EPAP II) which is addressing industrial pollution reduction in Lake Mariout and will be linked to a potential World Bank project on sewage in the City of Alexandria. It is closely coordinated with the City Development Strategy (CDS) for Alexandria which has identified the restoration of Lake Mariout as the main environmental priority for the city. It is also linked to a World Bank Project to implement the CDS action plan, Alexandria Growth Pole Project (AGPP), whose objective is to support Alexandria Governorate in its efforts to attract private investment, address high priority investment needs in infrastructure, land development around Lake Mariout, urban upgrading and creation of economic opportunities. The Governor of Alexandria, in a letter to the World Bank dated 9 of May 2004, has requested the Bank to apply for coastal zone funding for the city upgrading. Also, the Egyptian Government, through its Environmental Affairs Agency, which has since 1996, taken positive steps towards Integrated Coastal Zone Management (ICZM) has expressed its interest in an ICZM project in Alexandria. All resources and expertise of the Egyptian Environmental Affairs Agency (EEAA) will be made available to the project and the Egyptian government will provide a counterpart contribution to the project to facilitate its operation and implementation.

The Country Environmental Assessment (CEA) for Egypt shows that the high rate of urban development, expanding industrial and tourism activities, adversely affect the marine and coastal environment. The CEA suggests some urgent actions to strengthen ICZM in Egypt.

C – PROGRAM AND POLICY CONFORMITY

1. PROGRAM DESIGNATION AND CONFORMITY

The proposal is consistent with the IW OP 9: Integrated Land and Water Multiple Focal Area Operational Programme and its objectives to undertake a series of projects that involve helping countries to address transboundary environmental concerns degrading specific water bodies; and is consistent with the GEF's International Waters

Strategic Priority I *‘Catalyze financial resource mobilization for implementation of reforms and stress reduction measures agreed through TDA-SAP or equivalent processes for particular transboundary systems’* by building and strengthen institutional capacity for reducing land based sources of pollution, implementing coastal zone management at local and national levels, and provide support for targeted investments.

The Alexandria Integrated Coastal Zone Management project described herein is the first project from the MNA region proposed for GEF co-financing under the proposed World Bank/UNEP/GEF Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem to assist countries in implementing policy reforms and priority investments that address transboundary pollution reduction and biodiversity conservation priorities identified in two Strategic Action Plans (SAP) for the Mediterranean Sea. The Partnership would support capital investments, economic instruments, implementation of policy reforms, strengthening of public institutions and public participation through two elements: a regional technical assistance project, implemented by UNEP and an Investment Fund, implemented by the World Bank

The Investment Fund under the GEF partnership would primarily finance investments that support achieving the pollution reduction and biodiversity conservation targets agreed by the basin countries under SAP MED and SAP BIO, including domestic and industrial wastewater treatment; wetland restoration and/or construction; improved management of watershed and aquifers for habitat conservation and pollution reduction; protection of endangered natural habitats and sensitive areas.

The Alexandria Coastal Zone Management Project would assist the Government of Egypt and the Governorate of Alexandria towards meeting selected SAP MED targets. For municipal wastewater the target is to “By the year 2005, to dispose sewage from cities and urban agglomerations exceeding 100,000 inhabitants and areas of concern in conformity with the [LBS] Protocol”. The proposed targets for industrial development are “ By the year 2025, point source discharges and air emissions into the Protocol Area from industrial installations to be in conformity with the Protocol and other agreed international and national provisions; Over a period of 10 years, to reduce by 50% discharges, emissions and losses of substances that are toxic, persistent, and liable to bioaccumulate from industrial installations; Over a period of 10 years, to reduce by 50 % discharges, emissions, and losses of polluting substances from industrial installations in hot spots and areas of concern.”. Targets for physical alterations and destruction of habitats are “to safeguard the ecosystem function, maintain the integrity and biological diversity of species; and where practicable, to restore marine and coastal habitats that have been adversely affected by anthropogenic activities”.

The SAP MED targets would be achieved by activities at national level such as:

- by 2005, coastal cities and urban agglomerations of more than 100,000 inhabitants to be connected to a sewer system and dispose all waste water in conformity with a national regulation system:

- locate coastal outfalls of sewage so as to obtain and maintain agreed environmental quality criteria and avoid exposing shell fisheries, water intakes, bathing areas, and sensitive environments
- to promote the primary, secondary and where appropriate and feasible, tertiary treatment of municipal sewage discharge to rivers, estuaries and the sea;
- to promote the reuse of treated effluents for the conservation of water resources;
- to reduce discharges and emission of industrial pollutants as much as possible;
- to support programmes for integrated coastal zone management

2. PROJECT DESIGN

Problem Statement

The SAP MED has identified several “hot spots and sensitive areas” on the northern coast of Egypt, which for several decades has been witnessing a continuous increase in population, development and environmental degradation. Three of these “hot spots” are located around Alexandria (Alexandria, El-Mex Bay, Abu-Qir Bay).

In 1905, the 370,000 inhabitants of Alexandria lived in an area of about 4 square kilometers between the two harbors. Today, population is ten times higher and occupies an area of about 300 square kilometers, with an ever-increasing demand for new land development, including planned development of some 100 hectares of vacant land around lake Mariout .Due to the expansion of the City of Alexandria, Lake Mariout has been divided into five main basins by road infrastructure and is surrounded by urban and industrial development. The demand for new land around the low laying lake is extremely high and coastal areas are constantly encroached. The lake area today is only a fraction of what it used to be. Sewage and industrial wastewater, in addition to the inflow of nutrient-rich agricultural drainage water, have contributed to the degradation of water quality and biodiversity in the lake which suffers from serious eutrophication. Seven million cubic meter of water per day – almost equivalent to the flow of the Rosetta branch – is being pumped from Lake Mariout into the hot spot El-Mex Bay in the Mediterranean with impact on coastal biodiversity, cultural heritage and tourism in the whole Alexandria area.

With its combination of an incredible cultural heritage, thriving urban community, and one of the highest pollution loads to the Mediterranean, a GEF intervention in Alexandria offers unique opportunities to make a regionally significant a reduction of the pollution load reaching the Mediterranean Sea. The value added of GEF co-financing is essential for securing the estimated USD70 million investments forseen under EPAP2 and a strong incentive for the implementation of the CDS action plan and potential World Bank project on Water Supply and Sanitation. At the same time, improved environmental quality in the coastal areas would strengthen Alexandria’s competitiveness as a tourist destination as well as improve the livelihood for a large number of marginalized user groups such as fishing communities.

Project Components

To secure these global, national and local benefits three components are suggested a) strengthening the national framework for sustainable coastal management; b) pilot demonstration projects on reducing land-based pollution sources in the Alexandria area; and c) monitoring and evaluation.:

Component 1: Policy, Planning and Implementation Tools for Integrated Coastal Zone Management at national and local level.

This component would strengthen the capabilities of the Environmental Agency (EEAA) to undertake Integrated Coastal Zone Management by:

- develop a national vision for the coastal zone of Northern Egypt, based on Strategic Environmental Assessments (SEA) and Cost of Environmental Degradation Assessments (COED);
- a demonstration activity on the establishment of a management committee composed of local stakeholders of Lake Mariout;
- replication strategies to extend the experiences in Lake Mariout to other similar coastal areas.

The proposed project will, based on a participatory process engaging a broad range of local, regional, and national level stakeholders in identifying management and investment needs to ensure a sustainable development of Egypt's Mediterranean coastal areas. The national vision would put in place the enabling conditions to advance ICZM in Egypt such as building a constituency for promoting ICZM, strengthening the existing institutional and policy frameworks, conclude the work on a national ICZM plan and impose the necessary authority for implementation and enforcement. Particular focus would be put on supporting the participation of weaker user groups such as fishermen and local communities in this process.

Lake Mariout is one of four major northern delta lakes in Egypt (Mariout, Edku, Burollus, and Manzalah). This lake is one of the major sources of land based pollution to the El-Mex Bay and surrounding areas identified as a "hot spot" in the SAP. Traditionally, these lakes have produced about half of the total fish landings and income from fisheries in Egypt, but are now in different states of degradation.. As a consequence of the environmental degradation, Lake Mariout has changed from being the most productive fisheries resource of the four lakes, to the least productive in a couple of decades As a demonstration project on improving management in coastal lakes and lagoons in the Mediterranean, the GEF intervention would support an innovative local management approach in Lake Mariout. . The project would support the establishment of a inter-agency management body for Lake Mariout involving the major stakeholders under the leadership of the Governor of Alexandria. This management body would ensure the integration between the EPAP 2, the CDS, AGPP and the proposed GEF ICZM project.

The experiences from Alexandria will provide good replicable strategies for upstreaming environmental objectives in development planning in coastal areas with similar environmental conditions (coastal lakes, heavily polluted closed or semi-closed

coastal lagoons with multiple uses such as fisheries, recreation, biodiversity, etc.) which are common both in Egypt and elsewhere in the region. The replication of the following components will be of particular relevance: a) a forum for developing a local vision for coastal management, b) decentralization of natural resources management responsibilities (technical and financial) and decision making from central to regional and local level, c) defining roles and responsibilities of national, regional, and local authorities in the ICZM process, d) involvement, role and contribution of non-governmental stakeholders such as industry, private sector entities, and NGOs e) institutional strengthening and capacity building,

Component 2: Targeted investments to reduce the pollution reaching the Mediterranean Sea through Lake Mariout and improved management for the protection/recovery of valuable coastal systems. The second component will reduce the discharge of selected pollutants (to be defined under PDF B) in the hot spots of Alexandria and El-Mex Bay by X % (to be defined during PDF B) towards the targets of SAP-MED and the restoration of the Lake Mariout and adjacent coastal ecosystem.

It will include:

- A local ICZM action plan pollution reduction and environmental improvement;
- Demonstration projects to reduce the discharges of BOD, COD, TSS, and nutrients to the Mediterranean Sea using innovative technologies for enhanced primary treatment of sewage such as “beneficial microorganisms”, engineered wetlands and the re-use of treated sewage water.;

The management body established under component I will develop an ICZM plan for Lake Mariout, the Mariout Valley, and adjacent coastal areas consisting of a) an urgent action plan to reduce the load of pollutants to the Mediterranean and restore some basic functions which will allow Lake Mariout to maintain its own self-cleaning capacity to reduce pollutants (e.g. to function as an engineered wetland with improved efficiency for pollutant trapping and improved dilution by increased circulation of water); and b) a medium-term vision of improving the function of the lake and adjacent coastal systems. During the project preparation, a detailed circulation model and mass balance of the major pollutants will be done (based on the Adricosm project) for the Lake and surrounding coastal areas to define how much BOD, COD, TSS, and nutrients can be reduced by different management and investment alternatives.

The GEF component would mainly target sewage-related pollutants identified in the SAP which are being discharged via Lake Mariout to the Mediterranean hot spot of El-Mex Bay. Priority actions will consist of enhanced primary treatment in existing sewage treatment plants, including new biotechnology such as the use of “Beneficial Microorganism” developed by the EM Research Organization in Japan which will be tested on pilot scale to improve sewage treatment. Other actions would include the re-use of treated sewage water for irrigation purposes, which would have the dual benefit of reducing the large volumes of sewage water to be disposed of and reducing the pollution loads entering the Mediterranean. Investments for addressing major pollution reduction

measures will be provided by EPAP2 (industrial sources) and are discussed within the Alexandria Growth Pole Project (AGPP) and Water Supply and Sanitation Project.

The medium-term action plan will identify investment opportunities focusing on projects and activities for pollution reduction, conservation and sustainable use of biodiversity and cultural heritage in lake and its surroundings. An important issue is to restore the lake ecosystem and water circulation pattern. Technology developed by the Adriatic Sea Integrated Coastal Areas and River Basin Management System – ADRICOSM – has successfully implemented near real time planning and management systems for urban drainage and wastewater utilities, and developed interfaces between river basin and coastal systems. This modeling of the lake system will be undertaken during the project preparation to test pollution reduction options, including the use of the vegetation cover in the lake as engineered wetlands for improving the self-cleaning capacity of the lake, and the impact on water quality, shorelines, and cultural heritage along the coastline of Alexandria.

Component 3: Project Management and Performance Monitoring.

This component will:

- Strengthen the capacity and improve the infrastructure of the EEAA at national and regional levels to undertake environmental monitoring; and
- provide EEAA with the necessary tool for performance monitoring, evaluation of project progress, and M&E reporting.
- Develop the necessary tools, including but not limited to a project website, for the dissemination of findings and results and replication at the national level as well as the regional level, feeding into the Regional Component of the Strategic Partnership. These results will also be presented at the regional meetings of MAP, the GEF Partnership and annual portfolio meetings.

The EEAA is responsible for Egypt's Sea and Coastal Zone policies, while different national authorities are responsible for their implementation. The Ministry of Defense and the EEAA are the main controlling and monitoring agencies, the Ministry of Water resources and Irrigation with its Shoreline Protection Authority is responsible for shoreline management, Ministry of Transport is responsible for shipping. The Tourism Development Authority and the Fisheries Development Authority are among the main users of the coastal areas. The Governorates also have an important role in managing coastal areas at the local level.

During project preparation the EEAA will be developing an monitoring and evaluation framework based on its governmental mandate. The Monitoring and Evaluation Framework would include a Results Framework, GEF IW M&E indicators, an assessment of the M&E capacity of the stakeholders and implementing parties, definition of clear responsibilities for monitoring and evaluation.

Baseline scenario (without the GEF involvement): According to the Transboundary Diagnostic Analysis for the Mediterranean Sea, the pollution load reaching the Mediterranean Sea via the three hot spots in the Alexandria area are significant with more than a third of the total BOD and COD loads as well as significant loads of heavy metals.

Lake Mariout is a significant source of pollution to the El-Mex Bay. Seven million cubic meter of water per day – almost equivalent to the flow of the Rosetta branch – is being pumped from the lake to the Mediterranean Sea. According to the Environmental Technical Report 8: Chemical and Biological Characterization of Lake Maryout which was part of the 1997 Final Report on the Alexandria Wastewater Project –Phase II, the Lake Mariout receives inflow from three sources: the Kalaa Drain (750,000 m³/day of discharges from the Eastern Treatment Plant, agriculture drainage and untreated sewage), the Omoum Drain (6.00million m³/day of agricultural irrigation drain) and the Western Treatment Plant, and West Noubaria Drain (1.54 million m³/day of agricultural irrigation drain). Groundwater may also enter the main basin. The Fisheries basin receives little direct inflow. The Northwest Basin receives direct discharge from several industries, while the Southwest Basin, the biggest basin receives inflow from the Omoum Drain. The lake also receives industrial waste, either directly or indirectly from some 194 industrial establishments surrounding the lake.

Although pesticides and heavy metals are found in water, sediments and biota in the lake, the final report for the Alexandria Wastewater project – Phase II (Environmental Technical Report 8: Chemical and Biological Characterization of Lake Mariout), suggest that these priority pollutants are not a major concern for the ecological function of Lake Mariout. Instead, the ecological community of the main basin is regulated by the sewage discharge which creates stressful condition for higher taxonomic groups. Sewage related pollutants (nutrients, BOD, COD, coliforms) in the main basin are considerably higher than in other basins. Also metal concentrations in sediments are higher. The sewage discharge into the lake is also reducing the oxygen levels and causing odors due to the release of hydrogen sulfide and methane.

Currently, the lake is only a small remnant of what it has been as large portions of the lake has been drained and converted to land. The remaining part of the lake is split up into several hydrologically separated basins. Lake Mariout has suffered severe ecological damage which has considerably reduced its value as a bird area and its potential for recreation, tourism, fishing, fishfarming as well as the livelihoods of fishermen communities whose income and health are severely affected by the environmental degradation.

Since the late 1970s, the City of Alexandria has been studying different wastewater alternatives, such as: a) disposal to Lake Mariout of secondary treated sewage;b) secondary treatment with lake by-pass; c) secondary treatment with polishing ponds in the main basin and sea disposal to the Mediterranean of primary treated sewage; and d) two land-based effluent disposal alternatives with reuse options. Identification of a final discharge location has been a major hurdle to overcome. During a first phase to

upgrade the Alexandria sewage system, the Eastern Treatment Plant (ETP) and the Western Treatment Plant (WTP) are in operation since 1993 discharging to Lake Mariout. Actions toward a more sustainable and stable sanitary drainage service under a Second Phase II have started and several studies have been carried out. The cost for upgrading the primary treatment to secondary treatment at the WTP is estimated to at least USD200 millions. Present investment projects are limited to expanding Phase I activities, such as upgrading the capacity of ETP from 410 to 607 cubic meters per day, and the WTP from 186 to 460 cubic meters per day.

The Egypt: Pollution Abatement Project EPAP 2 would provide a financial mechanism and incentives for reducing industrial pollution in Lake Mariout by providing attractive loans to financially viable industrial enterprises for pollution reduction measures in the Alexandria area. EPAP 2, however, does presently not have a mechanism to address non-industrial pollutants, coastal management and protection/restoration of valuable coastal heritage and ecosystems or the use of biotechnology such as engineered wetlands and beneficial microorganisms..

Alternate scenario (with GEF involvement): The combined impact of the GEF component and EPAP 2 would reduce the pollution load reaching the hot spots El-Mex Bay and Alexandria through Lake Mariout. Improved quality of the 6 million cubic meter/day of water pumped from the lake into the El-Mex Bay (by far the largest point source of pollution in the Alexandria area and a very significant point source at regional level) will also have positive impact on marine biodiversity. The GEF project would preliminary target sewage-related pollutants (BOD,COD, TSS, and nutrients) by enhancing primary treatment, and use of beneficial microorganisms and engineered wetlands.

The GEF project will also develop an institutional framework for ICZM in Egypt and test an innovative management approach to reduce coastal degradation in Lake Mariout and surrounding areas. The management body for Lake Mariout, under the leadership of the Governor of Alexandria would have widespread authority in planning and executing actions to protect the lake and surrounding coastal areas. It would also have its own budget allocation from involved stakeholders and test economic incentives (such as user fees, tariffs, etc) to stimulate investments in pollution reduction. Based on the experiences from the GEF project in Lake Manzala, the project would support targeted investments in engineered wetlands for in pollution reduction (sewage), and other application of biotechnology such as beneficial microorganisms.. The protection/restoration of globally significant biodiversity, ecosystems and cultural heritage implemented by the established management committee for Lake Mariout, would complement the pollution reduction measures towards restoring the Lake. By the active involvement of the EEAA, the experiences of the local management body for Lake Mariout will be upstreamed to be used in national ICZM policy development and replicated elsewhere.

3. SUSTAINABILITY (INCLUDING FINANCIAL SUSTAINABILITY)

The environmental degradation of Lake Mariout and surrounding coastal areas is the major environmental concern for the Governorate of Alexandria.

The Governor of Alexandria has decided to address the issue of managing Lake Mariout by the establishment of one single body to be responsible for improving the environmental conditions. Today, about 14 different authorities have a role in the management of the lake and the formal establishment of this body, supported by the necessary authority and financial resources is a promising step and the composition and legal/management/financial authority will be supported by the project. Supplemented by the technical and financial assistance from the EPAP 2 and the proposed GEF project, the political support and public demand for improved environmental management guarantees the sustainability of this process beyond the life of the GEF project

4. REPLICABILITY

This project, as part of the GEF Partnership Investment Fund, will contribute to the design and implementation of replication strategies expected for each demonstration project which are :

- a. Define the replication context for each demonstration, i.e.: the number, location, areas/sites in the Mediterranean where the specific technology/practice could apply;
- b. Outline a strategy aimed at promoting actual replication of each demonstration implemented under the Investment Fund Element of the Strategic Partnership, or the Regional Element, identify and implement ad hoc dissemination programs, including site visits and exchanges, etc;
- c. Evaluate the overall expected impact of the full replication.

The World Bank , as the lead agency for the EPAP 2, the CDS and the proposed GEF project will be well placed to ensure that the pollution reduction measures, Strategic Environmental Assessments, management models and other experiences developed under the project will be disseminated through a website consistent with IW:Learn guidelines, and presented at regional meetings of MAP, the GEF Partnership and annual portfolio meetings can be replicated elsewhere and upstreamed to policy development at national/regional level. The pollution of coastal lakes, lagoons and other valuable habitats is common both in Egypt (other coastal lakes) and other countries in the region. Within the SAP, several hot spots (Lagoon of Nador, Morocco; coastal areas of Ghazaouet, Algeria; and Bizert Lagoon in Tunisia) were identified with similar environmental problems. The comprehensive approach to address multiple pollution sources demonstrated in this project can therefore be of relevance to other polluted hot spots or historically significant sites in the Mediterranean as well as in the Red Sea.

The proposed project will make use of the experiences of the UNDP-GEF Medwet Coast Project and in particular the activities in Lake Burulus (another Egyptian Northern Lake that is open to the Mediterranean) where the MedWet Coast Project is

developing a management plan for the Lake and an institutional set up for implementation and overall management of the Lake has been established with various level of committees that include all stakeholders, similar to what is suggested in this proposal. Also, the experiences of technology demonstrated by the UNDP-GEF project on Engineered Wetlands in Lake Manzala will be used in issues related to improving the self-cleaning capacity of the wetlands in Lake Mariout.

5. STAKEHOLDER INVOLVEMENT/INTENDED BENEFICIARIES

The GEF project will support innovative implementation approaches for environmental protection in coastal areas. It will support the establishment of local multi-stakeholder management committees which will identify investments in environmental improvements which will benefit local environmental agencies, local community groups and other stakeholders. The management of Lake Mariout is presently split under up to 14 different authorities, and the number of stakeholders is far wider involving fishermen communities, private sector enterprises and NGO's.

During project preparation, a comprehensive stakeholder identification will be completed and options for their involvement in the management of the lake will be identified.

Since Lake Mariout Development is one of the CDS three component, all proposals, including this GEF initiative, has been discussed during the meetings of the CDS Partnership Forum, which gathers key city stakeholders to reach a shared vision of the city development and priorities until 2020.

D - FINANCING

1) FINANCING PLAN

Component 1: Policy, Planning and Implementation Tools for Integrated Coastal Zone Management – USD3,500.000

Component 2: Targeted investments for urgent actions needed to restore the self-cleaning capacity of Lake Mariout and the protection/recovery of valuable coastal systems – USD5,000.000

Component 3: Project Management and Performance Monitoring – USD1,000,000

2) CO-FINANCING

The GEF project will be blended with the Egypt: Pollution Abatement Project 2 which consist of USD20 from IBRD, USD40 million from Japan and USD10 million from the Carbon Fund.

E - INSTITUTIONAL COORDINATION AND SUPPORT

1) CORE COMMITMENTS AND LINKAGES

During the Annual Meetings of the World Bank/IMF, the representatives of the Egyptian Government reconfirmed their commitments to the parent programme, EPAP2, which together with the proposed GEF project form a perfect “blended operation”.

At the implementing side, the Egyptian Environmental Affairs Agency (EEAA) and the Governorate of Alexandria have been working together to produce the Concept Note. EEAA has designated its Alexandria Regional Branch Office to become the key counterpart during implementation.

2) CONSULTATION, COORDINATION AND COLLABORATION BETWEEN AND AMONG IMPLEMENTING AGENCIES, EXECUTING AGENCIES, AND THE GEF SECRETARIAT, IF APPROPRIATE.

The PCN has been discussed and received inputs from the Egyptian Environmental Affairs Agency and the Governorate of Alexandria during a working group meeting of the City Development Strategy (CDS) the 21st of September 2004 and discussed with the Governorate of Alexandria and the EEAA 23 September 2004. Further discussions on preparatory work and implementation arrangements will be held with the EEAA and the Governorate 20-25 May 2005.

The project is submitted to the GEF to be implemented within the framework of the GEF Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem. It was included in the Concept paper for the World Bank-GEF investment Fund for Pollution Reduction in the Mediterranean Sea discussed at the Stocktaking meeting in Trieste, Italy, 11 – 12 October 2004.

3) IMPLEMENTATION/EXECUTION ARRANGEMENTS

The project will be implemented by the Governorate of Alexandria in close collaboration with the Egyptian Environmental Affairs Agency through the Management Committee established for Lake Mariout.

A detailed framework for Monitoring and Evaluation will be developed during project preparation.

PART II - PROJECT DEVELOPMENT PREPARATION

A - DESCRIPTION OF PROPOSED PDF ACTIVITIES

The pollution load in the hot spots in the Alexandria area are of regional significance (more than a third of BOD and COD, as well as significant heavy metal and oil pollution) which severely affect water quality, biodiversity, cultural heritage and tourism along in the Mediterranean coast. Despite considerable efforts to advance a National Integrated Coastal Zone Management Plan in Egypt, this work has not been completed. As a result, the development pressures and related coastal problems are tremendous which was highlighted in the Country Environmental Assessment (CEA) completed in 2004. The cost of environmental degradation in the coastal areas of Egypt is presently being assessed by the Mediterranean Environmental Technical Assistance Programme (METAP) in two pilot areas.

The Investment Fund for the Mediterranean Sea LME partnership: Alexandria Integrated Coastal Zone Management Project described in this document will assist the Government of Egypt towards reaching the targets of the SAP-MED. PDF B grants are sought to carry out the following activities:.

- Strategic Environmental Assessment (SEA) of two – three Mediterranean coastal areas to define potential pollution reduction and development scenarios and their environmental implications. These SEAs would contribute towards building up the National Vision on how to implement SAP MED and how ICZM should be promoted in Egypt:
- Establishment of a multi-sectoral Management Committee for Lake Mariout which under the Governor of Alexandria would be responsible for the identification of key environmental issues to be included in the GEF project. The PDF B activities would support the establishment of this committee by providing options on its legal status, executive powers and financial authority as well as an extensive consultation process with involved stakeholders.
- Establish a near real time observing system and circulation model for Lake Mariout and adjacent coastal areas for priority pollutants identified by the TDA. The model would be based on similar models developed by the Adriatic Sea Integrated Coastal Areas and Riverbasin Management System (ADRICOSM). This circulation model would be necessary for defining the pollution reaching the hot spots in the Mediterranean Sea, mass balance of major pollutants reaching the Mediterranean Sea through Lake Mariout, efficiency of different pollution reduction options and identify best solutions for using existing wetlands as “engineered wetlands”
- Preparation of a Monitoring and Evaluation Framework including Results Framework, GEF IW M&E indicators, an assessment of the M&E

- Preparation of GEF Project Document

B - PDF BLOCK B (OR C) OUTPUTS

- Two – three Strategic Environmental Assessments for selected coastal areas of the Mediterranean coast
- Lake Mariout Management committee established
- Draft Stakeholder Proposal
- Lake Mariout Circulation model completed
- GEF Project Document

C - JUSTIFICATION

Land-based sources of pollution and environmental degradation of the Mediterranean coast of Egypt are of regional significance, posing a threat to sustainable development. Policy reforms and investments in pollution reduction are urgently needed to comply with SAP-MED and achieving the targets of the LBS Protocol. The policy reforms to complete a National ICZM Plan in Egypt need to be re-enforced. Strategic Environmental Assessment (SEA) and Cost of Environmental Degradation (COED) have become successful communication tools in the region to build awareness and increase stakeholder participation on environmental issues. By increasing use of these tools, the project will support the efforts of the Government of Egypt towards a common vision for the Mediterranean coast, an area full of user conflicts driven by traditional land use patterns, new development trends and global changes. Advancing the national ICZM policy is vital for a sustainable use of Egypt's coastal areas as well as an important contribution to towards a regional Protocol on ICZM within the Mediterranean Action Plan.

In addition to the SEAs, the innovative management structure proposed for Lake Mariout must be in place before the start of the project implementation. The establishment of the Mariout Lake Management Committee, as an independent body, is unprecedented in Egypt but may be a very useful mechanism for ICZM.

Water flows and balances in the coastal lakes in Egypt are highly engineered. Still the information about pollution load is fragmented and integrated approaches to water resource and coastal management have not been applied. While data on discharge of pollutants may be available for certain sectors, the reliability of this information is still debated by stakeholders. This is particularly true in Lake Mariout, which is surrounded by a tremendous socio-economic land use pressure with serious consequences. SEA, as described above, is a useful tool for building development scenarios around the lake, but. New technology to develop near real

time models have been successfully been developed and applied by the ADRICOSM project both at local level on the Adriatic coast, but also at sub-regional Mediterranean level. A module of this model for lake Mariout and the surrounding hot spot areas in El Mex Bay, Alexandria and Abu Kir Bay would be necessary to assess mass balances of pollutants and for efficient identification of control measures

D - TIMETABLE

The PDF activities will be concluded within one year from the funding becoming available

E – BUDGET

Strategic Environmental Assessments (two to three areas)

Consultants	60,000 USD
Training for staff	30,000 USD
Stakeholder consultation and awareness building	30,000 USD
Publication and dissemination	8,000 USD

Establishment of Lake Mariout Management Committee

Consultant (legal/management/financial options)	12,000 USD
Start-up support and capacity building	20,000 USD

Near real time circulation model for Lake Mariout

Consultants	40,000 USD
Capacity building of local staff	50,000 USD
Monitoring	40,000 USD

Elaboration of GEF Project Document

Consultants	20,000 USD
Staff training and consultation	20,000 USD

TOTAL	350,000 USD
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Co-financing Sources				
Name of Co-financier (source)	Classification	Type	Amount (US\$)	Status

Sub-Total Co-financing				

PART III – RESPONSE TO REVIEWS

A - CONVENTION SECRETARIAT

The project team is thankful for the comments provided by the GEF Secretariat which all have been addressed in the revised version.

B - OTHER IAS AND RELEVANT EXAS

The project team appreciated the valuable comments from UNDP, which have been included in the revised version. The project will certainly take into consideration the previous experiences from the MedWetCoast project in Lake Burulus, as well as the experiences from the project on Engineered Wetlands in Lake Manzala. The project team also appreciated the comments to address the situation of local fishing communities which have suffered from the environmental degradation in Lake Mariout.

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