



FAO/GLOBAL ENVIRONMENT FACILITY PROJECT DOCUMENT

Countries:	China
Project Title:	Demonstration of Estuarine Biodiversity Conservation, Restoration and Protected Area Networking in China
GEF Project ID:	4175
FAO Project ID:	609231
FAO Project Symbol:	GCP /CPR/045/GFF
GEF Agency:	Food and Agriculture Organization of the United Nations- FAO
Other Executing Partners:	State Oceanic Administration of China; Guangdong Provincial Bureau of Ocean and Fisheries; Shandong Provincial Bureau of Ocean and Fisheries
GEF Focal Area:	Biodiversity
Operational Programme:	
GEF Strategic Programme:	BD-SP 2; BD-SP 4
Duration:	Five years
Estimated Starting Date:	November 2012
Estimated Completion:	October 2017
Financing Plan:	GEF Allocation: USD 3 516 400
	Co-financing:
	State Government (cash) USD 50 300
	State Government (in-kind) USD 648 304
	Province of Guangdong (cash) USD 6 025 100
	Province of Guangdong (in-kind) USD 747 035
	Province of Shandong (cash) USD 3 352 600
	Province of Shandong (in-kind) USD 789 527
	FAO (cash) USD 139 300
	FAO (in-kind) USD 92 914
	Sub-total Co-financing: USD 11 845 080
	Total Project Budget: USD 15 361 480

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Date of endorsement:
September 30, 2009

EXECUTIVE SUMMARY

China has more than 1,500 rivers with significant basin drainage areas (> 1,000 km²) that run into the sea. All have formed discrete estuarine ecosystems, three of which are defined as large (i.e., greater than 450 thousand km² in area). Despite the significance of these highly productive and biologically rich systems the recent rapid growth in residential, commercial and industrial sectors in coastal areas and associated maritime transport centers particularly in the larger estuaries, have adversely affected most of China's major deltas. Major threats to the country's estuaries include: the reduction of freshwater inflows due to upstream diversions and impoundments; pollution loading associated with local and offsite industrialization and urbanization; non-sustainable use of natural resources (e.g., fishery resources); and habitat loss due primarily to urban and industrial expansion. In contrast to the country's terrestrial ecosystems, the collective response to these threats in China's estuarine ecosystems is still nascent in its development and faces a number of constraints. These include: (i) policy failures and gaps; (ii) lack of inclusion of biodiversity conservation criteria in local, regional and national socio-economic development plans; (iii) an absence of effective inter-institutional coordination mechanisms; (iv) monitoring mandates and efforts disbursed across a number of institutions with low levels of collaboration and sharing of data that constrain obtaining an accurate understanding of the "health" of these ecosystems; (v) low capacity to manage estuarine and marine protected areas (MPA); and (vi) lack of awareness and recognition of the significance of estuarine biodiversity by decision and policy makers and the public at large.

As China has made significant gains in the reduction of poverty and begins to reach economic standards comparable to the West, there has been a notable shift towards addressing other priorities including the improvement of environmental quality. For the conservation of estuarine wetland systems now is a propitious time to act and support conservation actions contributing to the development of experiences that can be up-scaled and applied to other estuaries both in China and the region. The goal of the Project is to improve existing efforts to conserve biodiversity in China's major estuarine ecosystems. The Project's specific objective is to mainstream the conservation of estuarine biodiversity in economic development sector plans and develop a series of "best practices" based on experiences derived from project supported field activities focusing on the creation of protected area networks and wetland conservation and restoration in the Yellow and Pearl River Estuaries. This would be achieved through: (i) addressing policy gaps and/or institutional failures serving to reinforce government efforts to create and conserve estuarine ecosystems; (ii) strengthening of individual marine protected areas (MPAs) to better achieve their conservation objectives; (iii) creation of new MPAs where gap analysis indicates that examples of critical habitats and species remain outside of conservation protection; (iv) establishment of MPA networks composed of existing and / or the inclusion of new protected areas; (v) restoration of degraded wetland habitats; (vi) facilitating closer collaboration and improved data collection and interpretation among agencies responsible for monitoring ecological conditions in the two Estuaries; (vii) building institutional capacity; (viii) promotion of increased public awareness of the long-term significance of biodiversity resources in these two deltaic ecosystems and the role MPAs and networks play in their conservation and management; and (ix) the development and dissemination of a series of "best practices." This goal would be achieved through the potential, additional phases of which the present Project would represent the initial phase. The Project directly supports priorities identified under the China Biodiversity Strategy and Action Plan (2010), National Wetland Conservation Program (2002-2030), National Wetland Strategy Circular # 50 (2004), 4th State Report to the CBD (2008) and the China-Biodiversity Partnership and Framework for Action (2007-2017). The Project will be executed in five years with a total estimated budget of USD 15.4 million provided by the following sources: (i) GEF: USD 3.5 million; (ii) Government of China (SOA): USD 0.7 million; (iii) Shandong Province: USD 4.1 million; (iv) Guangdong Province: USD 6.8 million; and (v) FAO: USD 0.2 million.

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Appendix 1: Quarterly Project Implementation Review (QPIR) format

Appendix 2: Project Implementation Review (PIR) format

GLOSSARY OF ACRONYMS

AOA	Assessment of Assessments
APR	Annual Project Implementation Review
AWP/B	Annual Work Plan & Budget
BD-SO	Biodiversity – Strategic Objective (GEF)
BD-SP	Biodiversity – Strategic Program (GEF)
BH	Budget Holder
BOD	Biological Oxygen Demand
BOF	Bureau of Ocean and Fisheries
CBPF	China – GEF Biodiversity Partnership and Framework for Action
CEERL	Coastal Ecosystem and Environmental Research Laboratory (SOA)
CEO	Chief Executing Officer (GEF)
DIC	Department of International Cooperation (SOA)
EMC	Environmental Monitoring Center
EOP	End of Project
EP	Executing Partner
EQ	Environmental Quality
FA	Focal Area
FAO	Food and Agriculture Organization of the United Nations
FPMIS	Field Project Management Information System
FSP	Full – size Project
GPBOF	Guangdong Provincial Bureau of Ocean and Fisheries
GEBs	Global Environmental Benefits
GEF	Global Environment Facility
GEFSEC	GEF Secretariat
GIS	Geographic Information System
IA	Implementing Agency
ICM	Integrated Coastal Management
LEC	Local Expert Committee
LOGFRAME	Logical Framework
LOP	Life of Project
LPSC	Local Project Steering Committee
LTO	Lead Technical Officer
LTU	Lead Technical Unit
MALG	Marine Affairs Leading Group (Guangdong Province)
MEP	Ministry of Environment
MEPD	Marine Environmental Protection Department (SOA)
METT	Monitoring Evaluation Tracking Tool
MOF	Ministry of Finance
MOU	Memorandum of Understanding
MPA	Marine Protected Area
M&E	Monitoring and Evaluation
MIS	Management Information System
MMA	Ministry of Environment
MTR	Mid-term Review
NBSAP	National Biodiversity Strategy and Action Plan
NGO	Non Governmental Organization
NNR	National Nature Reserve
NR	Nature Reserve
OP	Operational Programme
OR	Organizational Results
PA	Protected Areas
PCU	Project Coordination Unit
PDO	Project Development Objective

PEMSEA	Partnerships for the Environmental Management for the Seas of East Asia
PIF	Project Identification Form (GEF)
PIInR	Project Implementation Report
PIR	Project Implementation Review
PPD	Policy and Planning Department (SOA)
PPG	Project Preparation Grant (GEF)
PPR	Project Progress Report
PRC	People's Republic of China
PRE	Pearl River Estuary
PRODOC	Project Document
PSC	Project Steering Committee
PTM	Project Task Manager
PY	Project Year
QPIR	Quarterly Project Implementation Report
SC	Stakeholder Committee
SCCBD	South China Sea Biodiversity Project
SEIA	Strategic Environmental Impact Assessment
SFA	State Forest Agency
SIU	Site Implementation Unit
SMPA	Special Marine Protection Area
SOA	State Oceanic Administration
SOW	Scope of Work
SP	Strategic Program
SPBOF	Shandong Provincial Bureau of Ocean and Fisheries
STAP	Scientific and Technical Advisory Panel
TCDM	Field Programme, Monitoring and Coordination Service
TCI	Investment Centre Division (FAO)
TIO	Third Institute of Oceanography (SOA)
TOR	Terms of Reference
TWG	Technical Working Group
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNGA	United Nations General Assembly
USD	United States Dollar
WB	World Bank
YSLME	Yellow Sea Large Marine Ecosystem
YRE	Yellow River Estuary
YRNNR	Yellow River National Nature Reserve

1. BACKGROUND

1.1 General and Sectoral Context

China has more than 1,500 rivers with significant basin drainage areas (> 1,000 km²) that run into the sea. All have formed discrete estuarine ecosystems, three of which are defined as large (i.e., greater than 450 thousand km² in area). Despite the significance of these highly productive and biologically rich systems the recent rapid growth in residential, commercial and industrial sectors in coastal areas and associated maritime transport centers particularly in the larger estuaries, have adversely affected most of China's major deltas. Major threats to the country's estuaries include: the reduction of freshwater inflows due to upstream diversions and impoundments; pollution loading associated with local and offsite industrialization and urbanization; non-sustainable use of natural resources (e.g., fishery resources); and habitat loss due primarily to urban and industrial expansion.

In contrast to the country's terrestrial ecosystems, the collective response to these threats in China's estuarine ecosystems is still nascent in its development and faces a number of constraints. These include: (i) policy failures and gaps contributing to the loss and degradation of estuarine ecosystems; (ii) lack of inclusion of biodiversity conservation criteria in local, regional and national socio-economic development plans; (iii) an absence of effective inter-institutional coordination mechanisms needed to address the threats to these highly complex ecosystems at both national and local levels; (iv) monitoring mandates and efforts disbursed across a number of institutions with low levels of collaboration and sharing of data that constrain obtaining an accurate understanding of the "health" of these ecosystems; (v) low capacity to manage estuarine and marine protected areas (MPA) and use the existing MPAs more effectively as tools to conserve biodiversity of global significance; and (vi) lack of awareness and recognition of the significance of estuarine biodiversity by decision and policy makers and the public at large.

Despite the aforementioned threats and constraints the Government of China (PRC) has nevertheless achieved a number of milestones in the conservation of wetland ecosystems in recent years. As in other countries, a number of agencies responsible for one or more coastal – related conservation and protection functions have been created in recent years. At the State (central government) level, these include the State Oceanic Administration (SOA), Ministry of Environmental Protection and the Bureau of Fisheries and Management (under Ministry of Agriculture).¹ Most of these agencies are also represented at the provincial and often municipal levels (e.g., Marine and Fishery Management Departments and Environmental Protection Agency).

China has also made substantial progress in developing a national policy framework to address the country's coastal and marine environment. The existing framework has directly evolved from the Environmental Policy Law (1979) followed by Marine Environmental Protection (MEP) Law (1982) and Water Pollution Prevention and Control Law (1984) all of which at the time emphasized pollution control and prevention. This body of legislation was later revised and strengthened to place greater focus on conservation efforts including ecosystem conservation (e.g., the 2000 revision to the 1982 Marine Environmental Protection

¹ Other agencies include Maritime Safety Administration (Ministry of Transportation), State Development and Reform Commission, State Tourism Administration and the Navy.

Law).² These revisions were followed by the development of a National Wetland Conservation Program (2003) and a National Wetland Strategy (2004) though much of the focus of the latter was on inland wetland ecosystems. Coastal and marine ecosystem conservation was most recently recognized in the National Ocean Development Framework Plan (2008) which established a number of priorities of which the most relevant to the Project are the recognition of: (i) the need to establish a national marine ecosystem monitoring network, (ii) conservation of critical habitats, (iii) restoration of wetlands and controlling of invasive species and (iv) promoting the establishment and networking of MPAs. This Plan is being implemented by different ministries and agencies and includes the participation of local governments.

As China has made significant gains in the reduction of poverty and begins to reach economic standards comparable to the West, there has been a notable shift beginning with the 11th National Development Plan to address other priorities including the improvement of environmental quality; a shift that is likely to accelerate in the country's 12th Plan. For the conservation of estuarine wetland systems now is a propitious time to act on the aforementioned policies and new priorities by supporting actions and contributing to the development of experiences that can be up-scaled and applied to other estuaries both in China and the region. The Yellow and Pearl River estuarine ecosystems represent a wide range of habitats, threats and constraints as well as provide a number of successful examples of significant achievements in the conservation of wetland biodiversity. As result they have been selected as sites for the Project.

² The revised Marine Environmental Protection Law also provided for the classification of sea area into one of 10 function zones based on a range of technical criteria in support of environmentally sustainable development; a zonation scheme that includes marine conservation, fishery resource utilization and conservation zones.

2. RATIONALE

2.1 Problems and Issues to be Addressed

The Yellow (*Huanghe*) and Pearl (*Zhujiang*) Rivers have contributed to the formation of two of China's three largest deltas³ (see Map 1 in the Attachments Section). The Yellow River Estuary (YRE) is China's second longest river and runs into the Yellow (*Bohai*) Sea (Map 2). The Estuary is one of the largest in the world and measures approximately 100 km by 100 km (at its widest points) with an estimated area of 5,450 km² and a coastline of 589 km (drainage area is an estimated 795,000 km²). It is thought to be the most extensive, youngest and fastest growing estuarine wetland in the world increasing in area on average by 23 km² annually. This temperate estuarine ecosystem supports a wide range of habitats ranging from beaches, reeds, *Spartina* grass and sand and mudflats. The Estuary not only represents one of China's main spawning and feeding grounds but is also considered to be of international importance in providing critical habitat for some 265 species of migratory birds accounting for 22.3 % of all species reported for China, many of them of regional and international significance. As in most estuaries, there is a rich biodiversity that includes 608 species of higher plants, 922 invertebrates and 325 vertebrates of which 25 are mammals. In total, there is one species of plant and 68 species of animals dependent on the estuarine ecosystem that are classified as category I or II species.⁴

Despite its international importance for biodiversity, the Estuary has been affected by a number of on and off - site development activities that have significantly undermined its ecological structure, function and processes. On-site economic development that has adversely impacted the Estuary includes oil production, salt pans, mariculture ponds and agriculture. Off-site activities include the construction of upstream water impoundments, embankments, reinforcing dikes and the widening of river sections to facilitate ice flows all of which have modified natural patterns of water flow and nutrient and sediment deposition.

The provincial and municipal governments are well aware of the adverse impacts associated with many of these poorly planned activities and are moving to address them. Major achievements include the creation of the Dongying Integrated Coastal Management Committee (ICM Committee), the establishment of the Yellow River National Nature Reserve (YRNNR) with a total area of 1,530 km² and more recently the creation of five coastal/near-shore Special Marine Protection Areas (SMPAs)⁵ representing in aggregate an additional 3,221 km² area located adjacent to the YRNNR that has been brought under protection.⁶ Collectively, these 6 protected areas (PAs) protect the largest temperate coastal/near-shore ecosystem in coastal China and are tightly interconnected in terms of shared ecological processes.

In contrast to the temperate YRE, the Pearl River Estuary (PRE), situated in the south central region of Guangdong Province, is characterized by a sub-tropical environment typical of the

³ The third is the Yangtze River delta.

⁴ National endangered species in China are categorized into the following classes: (i) critically endangered (I), (ii) endangered (II) and (iii) vulnerable (III).

⁵ Special marine protection areas (SMPAs) are recognized in China's Marine Environmental Protection Law and its subsequent revisions (in 2004 and 2005) as areas created for "the conservation of marine ecological environment and the promoting of the sustainable development of marine resources."

⁶ These are the: (i) Shallow Sea Shellfish State-level SMPA, (ii) Lijin Benthic Fish State-level SMPA, (iii) Estuarine Ecology State-level SMPA, (iv) Laizhou Bay Razor Clam State-level SMPA and (v) Guangrao Polychaete State-level SMPA. All are under China's State Oceanic Administration (SOA) though their direct administration is at the district or county level. The YRNNR is under China's State Forest Administration (SFA).

South China Sea (Map 3). At its maximum, it measures some 150 km by 100 km wide with a water surface area of 2,400 km² and a coastline measuring approximately 450 km in length and represents the country's second largest estuary (drainage area is an estimated 450,000 km²). As a result of the number of rivers and density of waterways that make up the Estuary it is considered to be one of the most complex systems in the world. The Estuary is characterized by a diverse range of habitat that contributes to its high productivity and rich biological diversity. These include: mudflats, reeds, mangroves (13,067 km²) and coastal islands. Similar to the Yellow River Estuary, the Estuary represents an important stop for migratory birds between north Asia and Oceania and has been designated as Nationally Important Wetland in China's National Wetland Conservation Action Plan. The Estuary also provides habitat for what is thought to be the largest remaining populations (ca. 1,000) of the country's endangered Chinese White Dolphin (*Sousa chinensis*). The Pearl River Estuary also supports an estimated 569 species of higher plants, 50 species of amphibians and reptiles, 194 species of birds and 20 species of mammals. In total, there are 10 species of plants and 23 species of animals classified as category I or II that are dependent on the estuarine ecosystem. Major threats consist of declining water quality associated with rapid and often poorly planned industrial and urban development, wetland conversion for urban expansion over-fishing and conflicts associated with the large marine transport sector. As in the case of the Yellow River Estuary, substantial efforts have been made to conserve this important ecosystem. These include the creation of 22 wetland nature reserves (NR) with differing conservation objectives and administration authorities that represent in aggregate 4,270 km² in area or some 23 % of the total wetland area. Included in these NRs are an international RAMSAR site and the 460 km² Pearl River Estuary Chinese White Dolphin National Nature Reserve; a joint effort between Guangdong Province and Hong Kong government.

Of the two Estuaries, the YRE is much less administratively complex. The political jurisdiction of the Municipality of Dongying (Dongying City) overlaps with the mouth of the Yellow River. Moreover, the Municipality has set up a coordination committee for integrated coastal management (Dongying ICM Committee) chaired by the vice mayor in charge of coastal development and management. The specific mandate of the ICM Committee is to facilitate coordination between different sector agencies and resolve conflicts.

Whereas the YRE is characterized by being within the jurisdiction of one municipality, the PRE, located entirely in Guangdong Province, is bordered by 6 cities and two Special Administrative Regions (Hong Kong and Macau). In aggregate there are an estimated 12 million inhabitants that live in proximity to the Estuary itself. Fortunately one characteristic shared with YRE is the existence of an inter-sectoral coordinating group, the Marine Affairs Leading Group (MALG) created in 2008 and chaired by the Provincial Governor. As in the former case, its mandate is to resolve issues associated with the development of the marine economy including environmental conflicts. The MALG is supported by among other agencies, the Guangdong Marine and Fishery Department that provides policy advice on balancing marine economic development and conservation. The existence and active participation of the ICM Committee and MALG will be critical to the success of the Project and resources will be used to increase both their capacity and operational effectiveness.

With respect to the local policy framework, despite a significant body of State legislation to protect the environment one of the main challenges faced by China is the absence of the necessary "enabling" regulations at the provincial and/or municipal levels. This constrains

policy formulation that in turn contributes to a relative weak enforcement regime; an issue that is a priority for the Project.

The time is also propitious to promote the establishment of MPA networks in the two participating provinces (and China generally). In Shandong, the Provincial Government's Development Plan for Marine and Fisheries Protection is scheduled to be implemented in two phases over the period 2009 – 2020 and calls for the creation of 100 new PAs by 2020 encompassing a total area of 27,400 km². Now that the Provincial Marine and Fisheries Department has been allocated a budget for the Plan's implementation the creation of new MPAs is likely to be accelerated. The situation appears to be similar in the Pearl River Estuary where there is a high likelihood of the creation of additional MPAs in the near future to complement the 22 existing protected areas. Experiences, "lessons learned" and the dissemination of "best practices" in MPA management and creation of MPA networks will be highly relevant to the management of the existing and creation of new MPAs in the two sites.

The two pilot sites also provide ample opportunities to address wetland habitat restoration and conservation. The restoration of wetland habitat in the Yellow River Estuary will focus on degraded areas associated with abandoned oil/gas producing wells and salt pans, overgrazed grasslands and the restoration of ecosystem functions through return of natural water flows into designated areas. In the sub-tropical PRE, wetland restoration activities will focus on mangroves as there have already been several successful experiences in re-introduction of native species in the area. While much of the former mangrove habitat has for all intent and purposes been permanently lost (due to urban expansion and land reclamation so prevalent through the Estuary), there nevertheless exist opportunities to restore critical habitat characteristic of this ecosystem (e.g., abandoned aquaculture ponds where initial conditions will be restored as well as complemented by *ex situ* transplanting).

Monitoring of environmental quality in the two Estuaries is divided among a number of different State, provincial and municipal agencies per their respective mandates. The main relevant institutions in the Yellow River are the Environmental Monitoring Center (EMC). The Center is administratively part of SOA's North Oceanic Administration and is responsible for a large number of stations that among other parameters include water quality, plankton, benthos, and fisheries. In the PRE, the relevant agency is SOA's EMC for the South Oceanic Administration. Other key agencies include China Ocean Surveillance, Ministry of Environment and municipal governments. Major constraints to the better use of monitoring data include: (i) improper analysis of the data and information collected, (ii) incomplete assessment of the status and health of the ecosystem, (iii) absence of data sharing among the principal data collectors, and (iv) low monitoring frequency given the data needs to ensure adequate ecosystem assessment and coverage. The Project would support greater collaboration among these agencies designed to give decision-makers and the public at large, more-informed view of the ecological status and health of the two Estuaries.

The long-term sustainability of the Project will depend on building the critical public and political support during the first five years needed to facilitate the development and implementation of possible future phases. Past efforts supported at the State, provincial and local levels will be built on and strengthened in support of project goals and objectives.

Finally, it is well to note that the number, size and complexity of China's estuarine ecosystems are vast in scale with few other countries providing comparable features and experiences to serve as useful comparators. The challenges faced by Chinese resource managers to ensure the long-term sustainability of the structure and processes of these critical

ecosystems and their continued provision of ecological “goods and services” are equally daunting and far exceed the available resources (both human and financial) to have any meaningful impact in the near-term. Nevertheless, as the country continues to modernize resources have increasingly been allocated to address environmental issues as demonstrated in the last two 5 year development plans; a trend that is likely to continue into the future and provides a sound foundation to build on over time. In this environment GEF resources, while minute given the geographical scale and complexity of issues involved, could make a significant impact if strategically targeted to address key issues and constraints affecting the future integrity of these ecosystems. It is this “philosophy” that has been incorporated into project design.

The goal of the Project is to improve existing efforts to conserve biodiversity in China’s major estuarine ecosystems. The Project’s specific objective is to mainstream the conservation of estuarine biodiversity in economic sector development plans and develop a series of “best practices” based on experiences derived from project supported field activities focusing on the creation of protected area networks and wetland conservation and restoration in the Yellow and Pearl River Estuaries. This would be achieved through: (i) addressing policy gaps and/or institutional failures to reinforce government efforts to create and conserve estuarine ecosystems; (ii) strengthening of individual marine protected areas (MPAs) to better achieve their conservation objectives; (iii) creation of new MPAs where gap analysis indicates that examples of critical habitats and species remain outside of conservation protection; (iv) promotion of the establishment of MPA networks composed of existing and / or creation of new protected areas; (v) restoration of degraded wetland habitats; (vi) facilitating closer collaboration and improved data collection and interpretation among agencies responsible for monitoring ecological conditions in the two Estuaries; (vii) building institutional capacity for mainstreaming the conservation of estuarine biodiversity and ecosystems into policies and development planning of economic sectors; (viii) promotion of increased public awareness of the long-term significance of biodiversity resources in these two deltaic systems and the role MPAs and networks play in their conservation and management; and (ix) the development and dissemination of a series of “best practices.”

2.2 Project Justification – Incremental Reasoning

Overall incremental consideration. Resources are not as much a constraint in China as marshalling the necessary political understanding and commitment to support the objectives of this project generating global environmental benefits as per China’s commitments under the UNCBD. The incremental value of the participation of GEF in this project is reflected in the mobilization of this support which in large part will come from local authorities availing of the opportunity to participate in a “prestigious” international project associated with GEF in partnership with an international UN agency together with being a recipient of the associated national and international expertise. During project preparation it was confirmed that the political commitment exists to support the Project at both the national and provincial levels. Project preparation focused on (successful) mobilization of the commitment in terms of co-financing to achieve the identified global environmental benefits at the municipal level in the two estuarine sites. This commitment allow for the ambitious scope of this project and will increase the chances of achieving a significant sustainable change in approaches to the conservation of estuarine wetland biodiversity which is perhaps the most significant “increment” associated with the GEF involvement in this project.

Incremental reasoning Component 1: Policy, planning and institutional arrangements

In the **baseline scenario for component 1** the State and to a latter extent local governments are aware of the challenging issues (as evidenced by the existence of the ICM and MALG committees in YRE and PRE respectively) resulting from poorly coordination of sector development programmes and the lack of mainstreaming conservation of estuarine biodiversity. However, the lack of systematic information on monitoring of threats and ecosystem health continues to constrain coordinated decision making at the ecosystem level. Additionally, the accumulative impact of poorly planned and executed economic development activities affecting the integrity of the two estuarine ecosystems and their ability to continue to provide a broad range of ecological “goods and services” is a recognized concern but the tools to provide coordinated policies and planning are still lacking. Illustrative examples include salt pans, aquaculture ponds, depleted oil wells and land reclamation. In the absence of the GEF Project, progress will be slow in transforming the local policy and institutional environment towards a more integrated, inter-agency approach needed to manage these highly complex estuarine ecosystems.

Alternatively, the “full” project with **incremental financial support from GEF**, building on past (successful) efforts in two of China’s three largest deltas, would serve to consolidate sector coordination and expand on existing efforts to conserve biodiversity in these critically important ecosystems. One of the main activities of the Project component 1 will be to focus on inter-institutional planning, policy formulation and coordination that will accelerate the on-going process of incorporating wetland biodiversity conservation activities into selected sectoral municipal and provincial institutional arrangements. The project will facilitate a strengthening of the role of ICM and the MALG and make them more effective in meeting their mandate through promoting an increased emphasis on biodiversity conservation and setting up an operation mechanism for data exchange and consulting and decision-making supporting ecosystems and biodiversity conservation. The incremental GEF financing and associated co-financing will also support the development and implementation of important policy instruments and planning tools to address cross sector impacts on biodiversity and the estuarine ecosystems including: (i) Strategic Environmental Impact Assessment (SEIA); (ii) a compensation mechanism for conserving ecosystem “goods and services”; (iii) a policy reform incorporating MPA networking in existing SOA regulations; (iv) legal recognition of MPA networks at the State and local levels; and (v) medium to long-term inter sectoral plans to facilitate a more collaborative approach among relevant technical agencies responsible for the environmental management of each of the two estuaries.

Incremental reasoning Component 2 : Strengthening of MPA networks and wetlands restoration

In the absence of the GEF “increment,” under the **baseline scenario for component 2** there is likely to be a continuation of financial resources in support of individual MPA specific efforts to conserve wetland biodiversity in both estuaries. There already exist a number of marine protected areas under different administrations and/or with different biodiversity conservation objectives in the YSE and PRE. Moreover, these activities may even increase (at least in the creation of new MPAs). However, this approach is operating under a MPA-by-MPA approach not able to address threats and the fragmentation in ecological connectivity in the estuaries wider ecosystems. The existing assemblage of MPAs largely exist in isolation and are only partly effective in meeting their objectives, particularly with respect to conservation of migratory species and strategic restoration initiatives to ensure ecological connectivity.

A priority in the **incremental scenario with GEF resources** will be to promote closer integration of existing protected areas at the State, provincial and municipal levels and where

gap analysis reveals estuarine habitats in need of conservation, the creation of new MPAs. Support will be provided for fostering two MPA networks (one for each project site) in order to seek cost-effective solutions promoting conservation efforts at a system level able to address the threats on ecological connectivity and conservation of ecosystem goods and services in the wider estuaries. More specifically the incremental GEF resources will be used to the strengthening of joint coordinating committees, joint training of MPA staff, common data bases and monitoring, regular information exchanges, joint patrols, shared research protocols and development of shared migratory species management plans (white dolphin and migratory birds). To allow each MPA to be a strong partner in the network the GEF incremental resources will also be used for up-dating the management plans for each MPA to take into consideration the network approach in co-management, biodiversity monitoring, and conservation of ecological connectivity. The incremental co-financing will be used for restoration of degraded wetland ecosystems to pre-existing conditions, functions and services supported by GEF financed landscape analysis and restoration design and monitoring of restoration results in terms of increased ecological goods and services. This incremental financing from GEF will allow for a more strategic, effective and long-term approach to restoration investments than the present ad hoc approach.

Incremental reasoning Component 3: Threat mitigation and monitoring

In the **baseline scenario for component 3** substantial monitoring activities are being conducted albeit diffused among a number of different State, provincial and municipal agencies reflecting fragmented and isolated sector perspectives that impede broader understanding of the status of biodiversity resources, the interaction and aggregative effect of multiple threats on specific habitats, and the ecological “health” of the estuaries as ecological systems. Monitoring programs, while significant in terms of effort and resources expended, rarely collaborate and data sharing is rare. The situation impedes decision-makers taking informed decisions on issues affecting the environmental sustainability of these critical ecosystems. Despite the national and global recognition of the significance of the two estuarine ecosystems, resulting in the establishment of MPAs, there are a growing number of threats affecting their integrity and ability to continue to provide ecological-based “goods and services” as the ones mentioned under component 1 baseline scenario above and Part II section A. In the baseline scenario the MPAs alone are not able to address these threats requiring an inter-sectoral approach.

Considering that no single project can address the range and magnitude of these threats in the **GEF incremental scenario** resources will be focused at supporting a sequential and catalytic approach starting with a prioritization process through two Assessment of Assessments (AoA) of threats to the estuaries and the development of two mitigation investment strategies to be discussed in the ICM (Yellow River, Shandong) and MALG (Pearl River, Guangdong) for further mainstreaming (supported under component 1) into economic sector development plans and in municipal level 13th 5 years development plans. Subsequently, GEF incremental and co-financing resources will support priority threat mitigation initiatives including working with local communities to provide the needed training, technical assistance and equipment to promote eco-farming of mitten crab (YRE) and provision of alternative employment opportunities and the promotion of sustainable tourism in Miaowan Coral NR and Hengqin Marine Park to reduce stress on adjacent coral and mangrove communities, respectively (PRE). In both estuaries the project will support the formation of local village conservation groups ecological compensation schemes for biodiversity and estuarine ecosystem conservation. To support decision-making and sustain the continued focus on mitigation of priority threats GEF incremental resources will also be used for the development and adoption of a comprehensive environmental and biodiversity monitoring

program building on existing sectoral and governmental agency efforts to increase effectiveness and utility of information collected.

Incremental reasoning Component 4: Capacity building and environmental education and Component 5: M&E and information replication of project results

In the current **baseline scenario** there is recognition of the need to move from an MPA-by-MPA centered approach to biodiversity conservation to a network and wider estuarine ecosystem approach with focus at mainstreaming the conservation of ecosystem goods and services including habitat function for estuarine migratory threatened species. However, capacities and experiences with cross sector management and conservation of biodiversity and valuation and sustainable use of ecosystem goods and services at an ecosystem level are scarce among provincial and local level government staff, local communities and productive sectors influencing the ecosystems. Despite the increased recognition of the importance of the estuarine goods and services among decision-makers the awareness in the wider population including new generations is still low.

The **incremental resources from GEF** in component 4 and 5 will be used to document the value of the conservation efforts supported by the other project components and subsequently disseminated through capacity building, environmental education and a series of “best practices” which will be a key outcome of the proposed project. Support will be provided at the State, provincial and local levels for: (i) training of senior officials and technical staff in ecosystem based management and conservation of estuaries biodiversity in economic sector development plans and through application of Strategic Environmental Impact Assessments; (ii) cross-site visits for managers and MPA staff and other technical staff from sectors using and impacting on estuarine ecosystems; (iii) curricula development in estuarine biodiversity values and conservation for primary and secondary schools on a pilot basis; (iv) creation and support for local volunteer groups (e.g., Reefcheck participants); (v) student lectures and competitions (e.g., painting competitions); and (vi) publication and dissemination of at least five “best practices” addressing key issues and results of the project such as policy gaps, institutional arrangements for better sector coordination and integrated planning in conservation efforts, MPA networking, conservation of migratory threatened species such as the White Dolphin and migratory birds, and wetland restoration and multi-agency monitoring of ecosystem “health” in large-scale estuarine ecosystems.

2.3 Project Consistency with GEF-4 Biodiversity Strategy

The Project directly addresses the following Strategic Programs (SP) in the GEF-4 Biodiversity Strategy: BD-SP # 2 - Increasing Representation of Effectively Managed MPAs in PA Systems; and BD-SP # 4 - Strengthening the Policy and Regulatory Framework for Mainstreaming Biodiversity. Specifically, the Project will support BD-SP #2 through providing support for the strengthening of existing and creating new MPAs to conserve marine biodiversity, creation and improved management effectiveness and financial sustainability of estuarine marine protected area networks, increasing wetlands habitat through ecological restoration and contributing to the promotion of sustainable income generating production and service provision activities to reduce pressure on biodiversity resources. In conformity with BD-SP #4 the Project will promote the incorporation of principles of biodiversity conservation into broader policy and regulatory frameworks through increasing institutional capacity, increasing awareness among policy and decision makers and mainstreaming biodiversity into productive sectors through the development of policy tools to promote the integration of biodiversity considerations in economic sectors development planning.

2.3 Project consistency with FAO's Comparative Advantages and Strategic Framework

FAO is a globally recognized leading international organization in the area of natural resources management and sustainable development. The Project will benefit from FAO's extensive work on conservation and management of natural resources (primarily forestry and fisheries resources) within the ecosystem context. Specifically in the case of China, FAO has a long record of cooperation with the Chinese government in natural resources management; programs and projects that include biodiversity conservation, forestry, fisheries conservation agriculture, integrated pest management and promoting sustainable aquaculture. The latest example contributing to this record is the on-going provision of technical assistance to support the Sustainable Management of Freshwater Aquaculture in Pingjiang County (Hunan Province) Project; a riparian county bordering Dongting Lake. Among other issues this project, supported through FAO's Technical Cooperation Programme, is evaluating and promoting the development of improved technologies designed to reduce environmental impacts of freshwater aquaculture in the County and through up scaling, eventually the Lake; an input directly relevant to the proposed project. In addition to these activities, FAO's Investment Center has supported a number of preparation and supervision missions of biodiversity conservation projects in China (primarily for GEF). Examples include: (i) the Protected Area's Management Component of the National Sustainable Forestry Development Project (2002) and (ii) Guangxi Integrated Forestry Development and Conservation Project (2006), both with the World Bank as Implementing Agency through the FAO-WB Cooperative Programme; and (iii) An IEM Approach to the Conservation of Biodiversity in Dryland Ecosystems (2008) with IFAD as GEF's Executing Agency through FAO's Investment Support Programme. Finally, given the Organization's administrative and financial support for project concepts through the provision of national Technical Cooperation Projects (TCP) grants, there is a unique opportunity to replicate the proposed project approach to other FAO supported initiatives both in China and elsewhere.

FAO has worked with other UN agencies in China in developing the UNDAF for 2011-2015. One of the outcomes to be achieved is to strengthen the policy and implementation mechanisms to manage natural resources. FAO, together with other UN agencies in China, will implement programmes to strengthen government capacity to effectively manage land and water resources, enhance government capacity to conserve biodiversity and ecosystems, empower communities to increasingly benefit from the development of eco-based livelihood resources and strengthen government capacity to develop and implement policies that ensure compliance with environmental health and safety requirements. With respect to in-country capacity, the FAO Office in Beijing has 6 professionals out of a total staff complement of 20. The project office was established in 1983 and has been directly involved in supporting the implementation of an estimated 150 projects since that time. Professional staff are backed up by technical support provided through FAO's Regional Office located in Bangkok as well as Headquarter based staff located in Rome. Project relevant divisions and departments include FAO's Land and Water Division (NRLW) and Forestry and Fisheries Departments. During GEF 4, FAO China has increased its involvement with GEF particularly with respect to biodiversity projects and has established good working relationships with the Chinese government at the national and provincial levels. The FAO Office in China has assigned programme staff for GEF projects including the preparation and implementation of the current one. Expertise will be mobilized both from the Organization itself as well as from the other sources (government institutions and international experts as necessary).

FAO's vision is a world free of hunger and malnutrition where food and agriculture contributes to improving the living standards of all, especially the poorest, in an economically, socially and environmentally sustainable manner. Reflecting the broad, multi-sectoral nature of the ecological approach adopted in project design, there are three Strategic Objectives (SO) in support of this vision and FAO's Strategic Framework directly relevant to the Project.

The first is Strategic Objective E "Sustainable Management of Forests and Trees." This SO is implemented through six Organizational Results (ORs) of which the most relevant to the Project is:

(i) OR E6: Environmental values of forests, trees outside forests and forestry are better realised; strategies for conservation of forest biodiversity and genetic resources, climate change, mitigation and adaptation, rehabilitation of degraded lands, and water and wildlife management are effectively implemented.

The second Strategic Objective is F: "Sustainable Management and Utilization of Natural Resources, including Land, Water, Air, Climate and Genetic Resources, for the Benefit of Present and Future Generations." This SO is implemented through six Organizational Results of which those that are most relevant to the project are:

(ii) OR F5: Countries have strengthened capacities to address emerging environmental challenges, such as climate change and bioenergy; and

(iii) OR F6: Improved access to, and sharing of knowledge for natural resource management

Finally, the Project supports Strategic Objective C: "Sustainable Management and Use of Fisheries and Aquaculture Resources" through:

(iv) OR C3: More effective management of marine and inland capture fisheries by FAO Members and other stakeholders has contributed to the improved state of fisheries resources, ecosystems and their sustainable use.

2.4 Consistency of the Project with National Priorities and Plans

The goals and objectives of Project are in full conformity with PRC's national priorities and plans in support of biodiversity conservation in the country's coastal estuarine ecosystems. As early as 1994, PRC in its "Action Plan for China Biodiversity Conservation" stated the goal of its second priority action was to upgrade the national protected areas and protected area (PA) network which included 7 wetland PAs among which were the Yellow and Pearl River delta areas. The Pearl and Yellow River Estuaries are included as priority areas in three of the 35 priority regions (South China Sea Protected Region; and the Yellow Sea and Bohai Sea Protected Region (YRE)) in the China National Biodiversity Conservation Strategy and Action Plan, 2011-2030 (NBSAP). The proposed project will support the implementation of in particular 10 of the 30 priority actions identified in the NBSAP which are: Action 1 Develop policies to enhance biodiversity conservation and sustainable use; Action 2 Improve the legal system of biodiversity conservation and sustainable use; Action 3 Establish and enhance bodies for biodiversity conservation and management and improve the inter-agency coordination mechanism; Action 4 Incorporate biodiversity conservation into relevant sectoral and regional planning and programmes (action 1-4 will mainly be addressed in component 1 of the proposed project and in addition action 4 will also be addressed in

component 3); Action 6 Reduce impacts of environment pollution on biodiversity (component 3 of the proposed project); Action 9 Undertake biodiversity monitoring and pre-warning (component 3); Action 12 Integrate the implementation and improvement of national nature reserve planning; Action 14 Standardize nature reserve development and improve the effectiveness of management of nature reserves (action 12 and 14 will be supported by component 2); Action 29 Establish mechanisms of public participation; and Action 30 Promote the establishment of biodiversity conservation partnerships (component 3 and 4 of the proposed project). The Project is also in conformity with China's "National Wetland Conservation Program (2002-2030)", which was adopted in 2003 by the State Council in which both the Pearl and Yellow River Estuaries were listed as priority areas.

Similarly, the Project is in full conformity with the National Wetland Strategy mandated by Circular # 50 of the State Council of 2004. The Strategy established the policy on wetland conservation that called for strengthening wetland management, changes in legislation, policy and funding mechanisms and a wetland conservation management system that is mainstreamed across sectors. Similarly in the country's "National Marine Economy Development Plan" approved by the State Council in 2003, the section on Marine Ecological Protection emphasized the need for conservation of special ecosystems and their biodiversity in areas such as estuaries and coastal wetlands and recommended increased support for capacity-building in existing MPAs and the importance of establishing new MPAs. Other sections of the Plan emphasized the importance of the protection of nursery grounds of fishery resources such as key fishing grounds and estuaries improvement (Conservation of Marine Biology Resources) and the need for an integrated approach to the management of estuarine environment and ecosystem protection explicitly mentioning the Pearl and Yellow River estuaries (Coastal, Estuarine and Mudflat Protection).

More recently, China's "11th Five-Year Plan for National Economic and Social Development" noted the need to conserve and rehabilitate coastal ecosystems specifically citing the Yellow and Pearl River estuaries. These priorities were supported by the respective provincial 11th Five – Year Plans. In 2008 the State Council approved the "Outline of Development and Planning the National Oceanic Program" that included as one of its basic principles the implementation of an ecosystem-based approach to coastal and oceanic management and the enhancement of the conservation of marine biodiversity, key marine ecosystems and the coastal landscape. It explicitly requested an acceleration of the formulation of comprehensive administration of the coastal environment in the Pearl River Estuary and adjacent waters.

The Project is also in direct conformity with the China – GEF Biodiversity Partnership and Framework for Action (CBPF) 2007-2017, the country's principal investment strategy for biodiversity conservation developed to facilitate dialogue with GEF and other financing agencies. Under this Framework, the Project will directly support three of the Framework's five priority themes. These are: (i) Improving Biodiversity Governance (Theme 1); (ii) Mainstreaming Biodiversity into Socio-Economic Sectors and Plans and Investment Decision-Making (Theme 2); and (iii) Investing Effectively in Reducing Biodiversity loss in Protected Areas (Theme 3). More specifically, it will support the following results identified in the CBPF: (i) financial flows to biodiversity conservation increase over current baseline (Result 4); (ii) the general public is supportive of conserving biodiversity (Result 5); (iii) biodiversity conservation and sustainable use is mainstreamed into local plans (Result 11); (iv) biodiversity conservation and poverty alleviation programs in China are mutually supportive (Result 13); (iv) national nature reserves (NNR) and provincial nature reserves

(PNRs) are effectively managed (Result 17); (v) NNRs and PNRs have stable and sufficient finance (Result 18); and (vi) in NNRs and PNRs, local communities, NGOs and/or the private sector are involved in PA co-management and development (Result 20).

2.5 Past and related work –coordination with related initiatives

Relevant on-going and recently completed GEF supported projects from which lessons learned have been addressed in the project design and will be further taken into account during project implementation include the following:

(i) The GEF/UNDP Yellow Sea Large Marine Ecosystem (YSLME) Program established through GEF and the partner countries China and Republic of Korea scheduled to be completed in March 2011 (a possible new phase is currently under discussion). Major activities supported under this ecosystem-based sustainable management approach to the Yellow Sea LME and its respective watersheds particularly relevant to this project include: (a) the application of an ecosystem-based approach to the management of marine ecosystems and; (b) the development of pilot regional institutional and capacity building initiatives;

(ii) the GEF/UNDP/IMO supported Implementation of Sustainable Development Strategy for the Seas of East Asia (PEMSEA III) that began implementation in June 2009 and will support the following activities in China relevant to the proposed project: (a) integrated river basin and coastal area management programs in the Yellow Sea (which will include the Guanglihe River that drains into the Yellow River); and (b) the development of national ICM plans;

(iii) the findings of a recently completed mid-term review (MTR) of the GEF/UNDP Marine Biodiversity Management in the Coastal Area of China's South Sea (SCCBD) was taken into account during project preparation giving particular emphasis to: (a) strengthening institutional capacities in MPAs; (b) development and testing of tools to support conservation of marine biodiversity; and (c) promoting MPA approaches in four different ecosystems (including one in Guangdong Province);

(iv) the findings of the recent project evaluation of the just completed GEF/UNEP South China Sea and Gulf of Thailand relevant to the proposed project. China participated in four project activities (mangroves, sea grasses, wetlands, and land-based pollution control) and these experiences were taken into account in preparation especially as they pertained to the Pearl River Estuary; and

(v) the GEF/UNDP Wetland Biodiversity Conservation and Sustainable Use in China Project, which was initially a 5 year project totaling USD 34.6 million (M) in funding of which GEF provided USD 11.7 M. The project carried out activities at the national level and in four internationally important wetland sites in five provinces of which the Yancheng coastal marshes wetland site is the most relevant to the proposed project. Specific outcomes included: (i) the integration of wetland issues into the master coastal development plan; (ii) establishment of inter-departmental liaison groups responsible for wetland issues; and (iii) establishment and utilization of environmental education centers (more detail on the relevance of this project has been provided in Annex B in response to the relevant comment from the German Council Member at time of the review of the PIF at Work Program inclusion). Other project lessons learned that were reviewed during project design were: (i) Sustainable Management and Biodiversity Conservation of the Lake Aibi Basin (Council

Approved); (ii) Integrated Ecosystem and Water Resources Management in the Baiyangdian Basin; and (iii) Sanjiang Plain Wetlands Protection.

During project implementation the project will be coordinated with the following ongoing projects or projects under preparation: the three wetlands FAO/GEF/China projects *Securing biodiversity conservation and sustainable use in China's Dongting Lake protected area*, *Protection and Sustainable Use of Poyang Lake Wetland Ecosystem*, and *Conservation of biodiversity and sustainable land management in the soda saline-alkaline wetlands agro pastoral landscapes in the western area of the Jilin Province*; and the UNDP/GEF/China wetlands PA programme Main Streams of Life – Wetland PA System Strengthening for Biodiversity Conservation developed under the China Biodiversity Partnership and Framework for Action (CBPF, 2007 – 2017). In particular the coordination with the latter programme is important to identify synergies between the mainstreaming of conservation of in-lands wetlands biodiversity led by the Ministry of Forestry and estuarine wetlands biodiversity led by SOA. Cooperation and collaboration between the Project and these other GEF supported initiatives will be facilitated through the CBPF. The Government of China has a Directive Committee under the CBD (DC-CBD) chaired by the Ministry of Environmental Protection and with the participation of sector ministries and other government institutions including SOA. The DC-CBD is meeting 3-4 times a year to coordinate the countries implementation of projects and programmes contributing to the objectives of the CBPF including the new CBPF-MSL programme. This mechanism will insure the coordination of better incorporation of estuarine and wetlands biodiversity conservation in national policies, regulations and programmes as well as the coordination of the Estuarine project activities and sharing of best management and conservation practices and lessons learned with other wetlands projects and programmes in the countries. FAO will also support the coordination among these initiatives taking advantage of its involvement in the GEF5 CBPF-MSL Programme as GEF Agency for the Poyang Lake project.

In addition to these GEF supported activities there exist a number of other on-going national (e.g., 'World Ocean Week [Xiamen]' and the 'Marine Eco-civilization [Wenzhou] Forum'), bilateral (e.g., U.S.-China Marine and Fisheries Science and Technology Protocol) and multi-national activities (e.g., the World Bank's 2nd Guangdong Pearl River Delta Urban Environment, the BMZ/GTZ Project Wetland Biodiversity Conservation in China, and GEF Shandong Environment Projects). Possible synergies in the two sites will be secured through the inter-institutional committees ICM (Shandong) and MALG (Guangdong).

3. PROJECT FRAMEWORK

3.1 Project Goal and objective

The goal of the Project is to improve existing efforts to conserve biodiversity in China's major estuarine ecosystems. The Project's specific objective is to mainstream the conservation of estuarine biodiversity in economic sector development plans and develop a series of "best practices" based on experiences derived from project supported field activities focusing on the creation of protected area networks and wetland conservation and restoration in the Yellow and Pearl River Estuaries.

3.2 Project Components, Outputs and Outcomes

The proposed project has **five components**: (i) Policy, Planning and Institutional Arrangements; (ii) MPA Networking and Wetland Restoration; (iii) Threat Analysis, Mitigation and Monitoring; (iv) Capacity Building and Increasing Environmental Education and Public Awareness; and (v) Project Monitoring and Evaluation (M&E) and Replication of Project Results. The expected **project outcomes** are: (i) improved policies and policy formulation in support of biodiversity conservation in estuarine ecosystems; (ii) achievement of a more integrated approach towards planning for the conservation of biodiversity and associated habitats and ensuring the long-term "health" of the Yellow and Pearl River Estuarine ecosystems; (iii) improved institutional coordination demonstrated through strengthened policy formulation, decision-making and integrated planning in support of biodiversity conservation; (iv) improved ecological connectivity among participating MPAs in two estuaries; (v) improved management effectiveness of existing, participating MPAs (average METT values for estuarine MPAs increase with 10% in Shandong and Guangdong provinces); (vi) increased provision of ecological "goods and services" through the restoration of wetlands in two ecosystems (see details below under global environmental benefits); (vii) 5% increased investment for improved environmental quality in the two estuaries; (viii) reduced human – induced stress on critical habitats in the two estuaries (see details below under global environmental benefits); (ix) improved relationships between the local communities and the MPA staff; (x) improved decision-making to achieve ecosystem-based management in two estuaries; (xi) increased institutional capacity and political support for the conservation of biodiversity in the two project supported estuaries (recognition of principles of estuarine biodiversity conservation manifested through at least two 13th 5-years Sector Plans); (xii) increased public participation and awareness of the significance of biodiversity conservation and estuarine ecosystems (number of communities engaged in estuarine biodiversity conservation increased by 30 % over baseline levels in the two sites); and (xiii) evidence that "best practices" from the ecosystem-based approaches in the two sites is being taken up and replicated elsewhere in the province and country.

Component1: Policy, Planning and Institutional Arrangements.

Sub-component 1.A: Policy.

Policy instruments and regulations, identified to address sustainable management issues in the two estuaries, and which will be supported by the project include: (i) Strategic Environmental Impact Assessment (SEIA) to better address both on-site and off-site potential development activities that may affect the "health" of the estuarine ecosystem; (ii) a

compensation mechanism to provide a source of sustainable financing to stakeholders conserving and improving ecosystem “health” and its provision of “goods and services”; (iii) a policy reform incorporating MPA networking in existing SOA regulations; and (iv) legal recognition of MPA networks at the State and local levels.

Subcomponent 1.B: Planning

This subcomponent will provide support for the development of medium to long-term plans to facilitate a more collaborative approach among relevant technical agencies responsible for the environmental management of each of the two estuaries. Specific medium – to –long – term plans will be developed for: (i) restoration of wetlands; (ii) estuarine-based PA networking strategy; and (iii) long-term ecological health monitoring program.

Subcomponent 1.C: Institutional Arrangements

This subcomponent will build on the existence of the two multi-agency coordinating bodies, the Integrated Coastal Management (ICM) Committee in Dongying Municipality in Shandong Province and the Marine Affairs Leading Group (MALG) in Guangdong, to strengthen their role and make them more effective in meeting their mandate through promoting an increased emphasis on biodiversity conservation and setting up an operation mechanism for data exchange and consulting and decision-making supporting ecosystems and biodiversity conservation.

Component 2: MPA Networking and Wetland Restoration.

Subcomponent 2.A: MPA strengthening and networking

Criteria used to select MPAs to be strengthened and support initial networks were: (i) presence of species of international significance; (ii) presence of a mix of PAs administered by different bodies and/or administrative levels; (iii) the potential for coordination between different responsible agencies; (iv) diversity of ecosystems and commercial species represented; (v) likelihood of addressing key threats through a network approach; (vi) relevance to project goals and objectives; and (vii) availability of information and data. The MPAs that will be supported in Shandong Province YRE are: (i) Yellow River National Nature Reserve (under China’s State Forest Administration) and the five newly created Special Marine Protected Areas (SMPAs) under SOA (with direct administration at the district or county level). These are: (ii) Shallow Sea Shellfish State-level SMPA, (iii) Lijin Benthic Fish State-level SMPA, (iv) Estuarine Ecology State-level SMPA, (v) Laizhou Bay Razor Clam State-level SMPA and (vi) Guangrao Polychaete State-level SMPA. In Guangdong Province PRE 6 out of 22 MPAs were selected to be strengthened and participate in the forming of an initial network. These are the: (i) Pearl River Estuary Chinese White Dolphin State Level PA (Ministry of Agriculture); (ii) Neilinding-Futian State level PA (SFA); (iii) Dangan Islands and Qi’ao Provincial Level PA (PFD), (iv) Jiangmen Chinese White Dolphin Provincial Level PA (M&F Department); (v) Henggin Island and (vi) Miaowan Coral City Level PA (M & F Bureau).

The main emphasis of this component will be on strengthening the MPA network in each pilot site however, activities directed at strengthening individual MPAs will also be supported to bring all participating MPAs up to a basic minimum common level of capacity to benefit from a network approach. This includes support for the installation of a GIS system in 6 MPAs, which currently do not have such a system, to support biodiversity monitoring,

surveillance and management. Equipment for biodiversity monitoring and surveillance will be upgraded in each MPA financed partly by GEF resources and partly by co-financing. Finally, each of the 11 MPAs participating will be supported in upgrading their management plans to include in particular measures to support co-management, biodiversity monitoring, and biological connectivity at the MPA network level.

The networking activities themselves would emphasize the promotion of integrated planning, monitoring, law enforcement, joint staff training (in MPA management, GIS application and digital data management, and co-monitoring –surveillance, and –enforcement of conservation regulations among MPAs), and awareness raising and information dissemination among each of the participating MPAs through the establishment of a network coordination mechanism. A conservation gap analysis at the network level will be developed for each of the two project sites. This analysis will serve as the basis to identify the need of the establishment of new MPAs or extension of areas under conservation in already existing MPAs to address conservation gaps. The gap analysis will also be the basis for the development of a strategy for increased ecological connectivity to be implemented at the network level and through co-management arrangements with sectors impacting this connectivity. Co-management principles and approaches will be introduced at a network level with groups of MPAs with similar threats from local communities and production activities working together with private stakeholders and communities in implementing a co-management approach. For example the Pearl River Estuary Chinese White Dolphin National Nature Reserve and the Jiangmen Chinese White Dolphin Provincial Nature Reserve will work together with fishermen, factories, enterprises, and marine engineering projects managers around the reserves to involve them in the development of a co-management approach of the protection of Chinese white dolphins. Miaowan Coral Reef municipal Nature Reserve, Hengqin Marine Park (going to be set up 2014), Neilingding-Futian Mangrove National Nature Reserve, and Qi’ao-dangan Island Mangrove Provincial Nature Reserve will work together with community villages and enterprises, schools and tourist operators around the reserves to develop an approach to involve these stakeholders in the co-management of the Reserves.

Under the network approach benefits will also be sought resulting from increased cost-efficiencies achieved through shared infrastructure, equipment, monitoring and enforcement activities as well as improved management effectiveness associated with data and information sharing. For example, the project would promote coordinated monitoring and enforcement efforts among: (i) the Brigades of China Ocean Surveillance in project-supported SMPAs and the YRDSLNR; (ii) development of a joint spatial information system of biodiversity conservation; (iii) management plans for migratory species; and (iv) a system of sustainable financing for the participating SMPAs.

Subcomponent 2.B Wetland Restoration

Under this subcomponent pilot activities will be supported to restore selected estuarine habitats. Selected sites are: (i) degraded wetlands in Shandong project site (3,000 ha of which at least 1,000 ha will be grass wetlands (Yellow River); (ii) 110 ha of mangroves restored (Pearl River); and (iii) the creation of an additional 100 ha of wetland habitat through the removal of abandoned mariculture facilities in Hengqin Marine Park (Pearl River).

Component 3: Threat Mitigation and monitoring

Despite the national and global significance of the two estuarine ecosystems selected for inclusion in the Project as summarized above, there are a growing number of threats affecting their integrity and ability to continue to provide ecological-based “goods and services.” There is no single project that can address the range and magnitude of these threats. Rather the project design elected to adopt a sequential approach that addresses one or more specific issues during the life of the project while contributing to the development of a longer-term set of institutional arrangements that will provide an enabling environment for the development and implementation of possible subsequent phases to the Project that would continue to address some of the same issues as well as begin to include new threats.

Subcomponent 3.A: Threat analysis and mitigation

To provide an overview and allow for a prioritization process an Assessment of Assessments (AoA) of threats to the estuaries will be completed for each Estuary⁷ and two mitigation investment strategies will be developed and discussed in the ICM (Yellow River, Shandong) and MALG (Pearl River, Guangdong) for further mainstreaming into economic sector development plans and in municipal level 13th 5 years development plans. Threats mitigation initiatives supported by the project will in Yellow River, Shandong Province focus at: (i) non-sustainable land-use practices adversely affecting wetlands (e.g., livestock grazing and salt pans and mariculture pond construction) and (ii) over-fishing. Both issues will be addressed through working with local communities to provide the needed training, technical assistance and equipment to promote eco-farming of mitten crab (an estimated 25 ha. Of degraded wetlands under non-sustainable agricultural practices in the MPA core zone will be converted into eco-farming of mitten crabs); an economically and environmental sustainable production technology already proven in the areas. In Pearl River, Guangdong Province, project supported threat mitigation activities would support provision of alternative employment opportunities and the promotion of sustainable tourism in Miaowan Coral NR and Hengqin Marine Park to reduce stress on adjacent coral and mangrove communities, respectively. In both estuaries the project will support the formation of local village conservation groups ecological compensation schemes for biodiversity and estuarine ecosystem conservation.

Subcomponent 3.B: Estuarine biodiversity monitoring

The objective of this sub-component is to promote the development and adoption of a comprehensive environmental and biodiversity monitoring program building on existing sectoral and governmental agency efforts to increase effectiveness and utility of information collected leading to improved decision-making. To achieve these objectives, the sub-component will support the negotiation of inter-agency protocols leading to one or more of the following: (i) integrated data collection methodologies (e.g., in location of stations, common methodologies, inclusions of additional parameters, etc.); (ii) sharing of data; and (iii) publication of shared reports and data designed to give decision-makers and the public at larger, more-informed view of the ecological status and health of the two Estuaries.

Component 4: Capacity Building, Environmental Education and Awareness.

⁷ An Assessment of Assessments (AOA) was an initiative first launched by the UNGA in 2005 for the purpose of promoting a regular reporting process on the state of the marine environment. An AOA considers existing assessments and identifies main features, coverage gaps and assessment capacity. It is intended that this process would be initiated in the two Estuaries and support a regular reporting process (RP) in conformity with the UNGA’s original intent.

This component will support activities to ensure the long-term sustainability of achievements logged in the first 5 years of the Project and the mainstreaming of estuarine biodiversity and ecosystem conservation in economic sector development plans.

Subcomponent 4.A: Capacity building

This subcomponent will support activities at the State, provincial and local levels and focus on: (i) purchase of equipment for training, (ii) training of senior officials and technical staff in ecosystem based management and conservation of estuaries biodiversity in economic sector development plans and through application of Strategic Environmental Impact Assessments; (iii) international training of MPA managers and technical staff in other countries with advanced conservation approaches for estuarine ecosystems (such as Brazil) under south-south cooperation in: 1) co-management mechanisms for increased sustainability of estuarine MPAs; 2) ecosystem approach to estuarine biodiversity conservation involving sectors operating in the areas of influence of the MPAs; and 3) systematic monitoring of ecosystem health as an important component in biodiversity monitoring; (iv) cross-site visits for managers and MPA staff and other technical staff from sectors using and impacting on estuarine ecosystems; and (v) provision of both international and national technical assistance.

Subcomponent 4.B: Environmental education and increasing public awareness

The objective of this subcomponent is to increase public awareness and build the public and political support needed to ensure future phases of the project and increase chances of success to achieve the overall goal to “improve on existing efforts to conserve biodiversity in China’s major estuarine ecosystems.” Specifically under the sub-component the Project would support: (i) purchase of equipment (e.g., video and sound equipment), (ii) curricula development for primary and secondary schools on a pilot basis, (iii) creation and support for local volunteer groups (e.g., Reefcheck participants); (iv) student lectures and competitions (e.g., painting competitions); and (v) promotion of public fora for decision makers.

Component 5.B and C: M&E and replication of project results

The objective of this component is to ensure systematic data collection from the field to monitor and document project outcomes and to provide the means to compile, analyze and disseminate information on project background, progress and experiences and “lessons learned” derived from 5 years of project-supported activities that address such relevant issues as policy gaps, institutional arrangements, MPA networking, wetland restoration and multi-agency monitoring of ecosystem “health” in large-scale estuarine ecosystems. Specific activities that would be supported include: (i) creation of a project webpage; (ii) design and publication of a semi-annual newsletter; and (iii) publication and dissemination of at least five “best practices” addressing but not limited to one or more of the issues identified above. These systematic gathering of project experiences and products in “best practices” publications will be important for the scaling up of project experiences to other Chinese Estuarine MPA networks and the further mainstreaming of estuarine wetlands biodiversity and ecosystems conservation in sector policies and programmes in coordination with the GEF5 China CBPF-MSL programme (China Biodiversity Partnership and Framework for Action – Mainstreams of Life).

The project’s outputs and outcomes per components are presented in table 1 below.

Table 1: Project components, outcomes and outputs

Component	Outcomes	Outputs
1. Policy, Planning & Institutional Arrangements	<p>1.1 improved policies and policy formulation in support of biodiversity conservation in estuarine ecosystems;</p> <p>1.2 Achievement of a more integrated approach towards planning for the conservation of biodiversity and associated habitats and ensuring the long-term “health” of the Yellow and Pearl River Estuarine ecosystems;</p> <p>1.3 Improved institutional coordination demonstrated through strengthened policy formulation, decision-making and integrated planning in support of biodiversity conservation.</p>	<p>1.1.1 Two local government regulations providing for ecological compensation for biodiversity conservation and wetlands restoration</p> <p>1.1.2 Policy in support of Strategic EIA formulated and applied to economic development sector plans and programs in Dongying City (Yellow River) and Zhuhai City (Pearl River) including two draft municipal rules in conformity with State EIA Law recognizing Strategic EIA as policy tool.</p> <p>1.1.3 One national policy reform incorporating MPA networking in existing SOA regulations and two draft local MPA regulations supporting the creation of MPA networks</p> <p>1.2.1 Two long-term MPA integrated management and networking Plans developed</p> <p>1.2.2 Two medium to long-term restoration strategies for estuarine ecosystems developed</p> <p>1.2.3 Two plans and accompanying inter-agency protocols on medium to long-term ecosystem health monitoring</p> <p>1.3.1 Two existing estuarine institutional coordination mechanisms in Shandong (ICM) and Guangdong (MALG) operating effectively (data exchange protocols negotiated and implemented and frequent meetings with decisions documented in minutes).</p>
2. MPA Networking and Wetland Restoration	<p>2.1 Improved management effectiveness of existing, participating MPAs⁸</p> <p>2.2 Improved ecological connectivity among participating MPAs in the two Estuaries.</p> <p>2.3 Increased provision of ecological “goods and services” through the restoration of wetlands in two estuarine ecosystems. (Increased density of fish egg and fish larva of at least 10% in two sites –see section H below for baseline; increased presence of indicator migratory bird species - Oriental White Stork as quantified through census of nests from 3 to 10 (Shandong); and increased mangrove cover by 20% (baseline: 5% coverage of Qi’ao island in Guangdong)).</p>	<p>2.1.1 11 updated management plans including measures to support co-management, biodiversity monitoring, and biological connectivity at the MPA network level</p> <p>2.1.2 GIS system operating in 6 MPAs to support management, surveillance and monitoring.</p> <p>2.1.3 Equipment for surveillance and monitoring upgraded in 11 MPAs</p> <p>2.2.1 Two biodiversity conservation gap analyses and strategy for increased ecological connectivity completed</p> <p>2.2.2 At least one new provincial level MPA created with legal documentation</p> <p>2.2.3 Two MPA coordinating networking mechanisms established one for each of the two estuaries based on signed Memorandum of Understanding (MoU) and agreements on protocols on monitoring enforcement and information sharing in the 12 project supported MPAs</p> <p>2.3.1 2,000 ha of wetlands restored of which at least 1,000 ha of grasslands (YRE)</p> <p>2.3.2 110 ha of mangroves restored including the removal of abandoned mariculture facilities in Hengqin marine park (PRE).</p>
3. Threat mitigation and monitoring	<p>3.1 5% increased investment for improved environmental quality in the two estuaries.</p>	<p>3.1.1 Comprehensive analyses of threats to the ecological “health” of the two ecosystems (based on existing data and assessments – Assessment of Assessments (AOA)) and two investment strategies developed and implemented through mainstreaming</p>

⁸ Please see table under Section 6.2 Monitoring and Evaluations below for target values for increase in METT score for each participating MPA

	<p>3.2 Reduced human – induced stress on critical habitats in the two estuaries (degraded land reduced with 5,000 hectares in Shandong project area; effective management control over 60% of area in Miaowan MPA).</p> <p>3.3 Improved relationships between the local communities and the MPA staff</p> <p>3.4 Improved decision-making to achieve ecosystem-based management in two estuaries</p>	<p>at the municipal level in 13th 5-years Plans;</p> <p>3.2.1 Sustainable production and service activities generating local income and reducing stress on critical estuarine habitats developed and implemented based on: (a) eco-farming of mitten crab (YRE); and (b) ecotourism, ecological compensation, and PA employment in Hengqin Marine Park and Miaowan NR (PRE)</p> <p>3.3.1 Five local village conservation groups operating (Shandong); and 500 volunteers participating in MPA activities and formation of at least 1 local village conservation group (Guangdong).</p> <p>3.4.1 Two multi-agency, integrated monitoring plans developed and implemented.</p>
4. Capacity Building and Increasing Environmental Education and Public Awareness	<p>4.1 Increased institutional capacity and political support for the conservation of biodiversity in the two project supported estuaries (recognition of principles of estuarine biodiversity conservation manifested through at least two 13th 5-years Sector Plans</p> <p>4.2 Increased public participation and awareness of the significance of biodiversity conservation and estuarine ecosystems (number of communities engaged in estuarine biodiversity conservation increased by 30 % over baseline levels in the two sites).</p>	<p>4.1.1 In-country training for senior officials and technical staff in ecosystem-based management and conservation of estuaries including application of Strategic EIA (30 participants)</p> <p>4.1.2 Cross-site visits (20)</p> <p>4.1.3 20 MPA managers and technical staff have attended international training session under south-south cooperation in: 1) co-management mechanisms for increased sustainability of estuarine MPAs; 2) ecosystem approach to estuarine biodiversity conservation involving sectors operating in the areas of influence of the MPAs; and 3) systematic monitoring of ecosystem health as an important component in biodiversity monitoring</p> <p>4.1.4 Training courses for community volunteers (40)</p> <p>4.2.1 Curricula for primary and secondary schools development (4) and increased student awareness and knowledge of the significance of marine biodiversity conservation and the role of MPAs (200 students per year have received education)</p> <p>4.2.2 Increased stakeholder awareness for marine biodiversity conservation and estuarine ecosystems (1,000)</p> <p>4.2.3 Public fora (10) on ecosystem based management with decision-maker participation (200).</p>
5b & c. M&E and Replication of Project Results	<p>5.1 Project execution based on results-based management</p> <p>5.2 Evidence that “best practices” from the ecosystem-based approaches in the two sites is being taken up and replicated elsewhere in the province and country.</p>	<p>5.1.1 Project monitoring system operating providing systematic information on progress in meeting project outcome and output targets</p> <p>5.1.2 Midterm and final evaluations conducted</p> <p>5.2.1 Project website functioning and continuously updated sharing experiences and disseminating project information and results</p> <p>5.1.2 At least 5 publications of project-related “best-practices” and “lessons-learned” disseminated.</p>

3.3 Expected Global Environmental benefits

Projected global environmental benefits (GEBs) to be achieved through the Project include: (i) conservation of biodiversity of global significance (increased density of fish egg and fish

larva of at least 10% in two sites; increased presence of indicator migratory bird species (e.g., Oriental White Stork) by 20% as quantified through census of nests (Shandong); increased mangrove cover by 20% (Qi'ao island in Guangdong); and (ii) partial restoration of ecosystem integrity and recovery of its underlying functions and services (2,000 ha of wetlands restored of which at least 1,000 ha of *Spartina* grasslands (YRE); 110 ha of mangroves restored including the removal of abandoned mariculture facilities in Hengqin marine park (PRE)).

In addition to the quantified indicators included in the Results Framework the following quantitative outcomes are proposed to assess biodiversity conservation and baseline and monitoring system will be established in PY 1 as part of the project's M&E plan see Part I Section H above: (i) an increase in total bird visitation in the Pearl and Yellow River estuaries over their respective baselines; (ii) an increase in total number of migratory bird species in the Pearl and Yellow River estuaries over their respective baselines; (iii) stabilization of the populations of one or more threatened/ endangered species (Categories I and II) in the Pearl and Yellow River estuaries; (iv) an increase in the populations of one or more critically endangered/endangered species (e.g., Chinese White Dolphin [*Sousa chinensis*]); (v) creation of new MPAs representing (# km²) in total; and (vi) reduction in pollution threatening biodiversity (e.g., # of open oil wells in depleted reservoirs capped in Yellow River).

Finally, in addition to the above mentioned GEBs, the proposed Full-size Project (FSP) is expected to provide experiences and “lessons-learned” through the development of “best practices” in the development and promotion of MPA networks and wetland restoration, respectively, that could prove to be catalytic in launching similar approaches in other deltaic systems in both China and elsewhere in Asia.

3.4 Alternative Strategies Considered –costeffectiveness analysis

The GEF resources are minute in contrast to the size of the two estuaries and the number, magnitude and diversity of issues that threaten their long-term ecological health. To ensure these resources will make an impact, a decision was taken early in project preparation to focus on activities that potentially promise a significant and long-term payout. In general, China does not need more financial resources even in the environmental field. What the country does need is technical expertise, increased capacity and a sound institutional and policy framework that ensures that existing resources (whether national or foreign) are more effectively utilized in achieving their intended goals and objectives. These needs and corresponding activities were reflected in project design and arguably represent the only cost-effective approach available to reach the goal and objectives. At a more technical level, cost-efficiencies are expected to be generated by promoting: (i) development of comprehensive networks of marine protected ecosystems (as opposed to continuing channeling support to individual MPAs in isolation); (ii) promotion of collaborative institutional approaches to monitoring environmental quality and ecological “health” in selected estuarine ecosystems; and (iii) promoting increased cooperation and collaboration through strengthening the operational effectiveness of the existing inter-agency bodies in YRE (Dongying ICM Committee) and PRE (Marine Affairs Leading Group). Furthermore, as noted above, the receipt of GEF resources channeled through an international UN agency is often a source of pride in many public agencies in China and often facilitates achieving the necessary political commitment to take difficult decisions; a particularly cost-efficient means to an end. Finally, it is expected that experiences and “lessons-learned” generated by the Project from addressing the issues and constraints characteristic of the YRE and PRE will be up-scaled

through providing support for increased awareness among decision-makers and the public at large and the dissemination of information to other potentially interested “off-site” stakeholders. Clearly, if this experiences lead to other similar efforts in some of China’s other 1,500 estuaries, this would be a particularly cost-efficient outcome.

The only alternative considered was to reinforce the sectoral approach rather than promote a more comprehensive, inter-sectoral effort towards supporting the management of these highly complex estuarine ecosystems. This was rejected largely to the limited success this approach achieved in the past and the nature of the issues characterized by cross-boundary effects and inability to address them on a sectoral basis.

3.5 Sustainability

The use of GEF resources is primarily oriented towards promoting increased capacity in recipient institutions and as a result there is not likely to be any demonstrable financial sustainability at EOP with the possible exception of policy reforms leading to the establishment of ecological compensation mechanisms (sub-component 1 A). Over the longer term however, it is hoped that the long-term sustainability of project outcomes will be assured through increased public and political support for subsequent follow-on efforts. This would be achieved through the following project-supported activities: (i) studies and remedies addressing existing policy gaps and failures (subcomponent 1A); (ii) medium and long-term planning for MPA and MPA networks, wetland restoration and environmental monitoring (sub-component 1 B); (iii) institutional strengthening particularly at the municipal level (subcomponent 4 A); (iv) public environmental education and awareness (Component 4 B); and replication of results (subcomponent 5 C).

3.6 Assumptions and Risk

A list of risks, rating and risk management strategy incorporated in project design is presented below (Table 2).

Table 2: Risks for Achievement of Project Outcomes, their Rating and Respective Mitigation Strategies and Measures

<u>Risk</u>	<u>Rating Risk Type</u>	<u>Risk Mitigation Measures</u>
<u>Lack of Effective Project Coordination.</u> Failure to achieve close and collaborative cooperation between the many institutional stakeholders with vested interests in the two estuaries, both in the public and private sector, will significantly reduce the chances of the project to achieve its stated goal and objectives.	Medium to High	In the preparation of the PIF consultations at the national (Ministry of Finance), provincial (Departments of Finance and Oceans and Fisheries) and local (municipal) levels indicated there was widespread political and financial support for the Project. Resources in project preparation were used to support the needed public consultation and participation to broaden the existing political support for the Project to the community at large. During implementation, one of the main priority actions to be supported under the Project will be to promote increased inter-institutional coordination through supporting the Dongying’s existing Integrated Coastal Management Committee (Yellow River Estuary) and the Marine Affairs Leading Group (Pearl

		River Estuary). At the level of the MPA, the Project will strengthen the existing (or create new) inter-institutional coordinating committees and support the acceptance of principles of co-management with local communities.
<u>Slow Uptake of Policy Recommendations.</u> This risk is associated with the degree to which policy studies and recommendations in support of increased conservation of estuarine wetlands and associated biodiversity can be “mainstreamed” into provincial and municipal policy frameworks.	Medium	This risk has been partly mitigated by a recent shift in national and provincial government priorities beginning in 2007 placing greater emphasis on environmental quality. More specifically, this risk has been addressed in project design through: (i) supporting relevant policy reforms during the process of development of the 12 th provincial and municipal development plans; (ii) providing support for the creation of public fora to address issues and threats related to the conservation of biodiversity; (iii) increasing capacity in line agencies; and (iv) promoting a number of awareness raising activities in support of relevant policy reforms directed at both key decision makers as well as the public at large which may include site visits to areas where policy related studies and related activities are being supported. As a monitoring measure the Project would integrate tracking tools (in its M&E system) with well defined triggers to ensure a timely integration of policy reforms into municipal/county policy frameworks.
<u>Climate Change.</u> The Pearl and Yellow River basins are subject to extreme climate events (primarily precipitation and droughts), which appear to have increased in both intensity and frequency in recent years. These events are projected to continue or increase under most future climate change scenarios and would likely adversely impact the two deltaic systems, their respective habitats and biodiversity that they support as well as the livelihoods of community who depend on their respective resources.	Low	The PRC has taken actions to cope with climate change and applied integrated watershed management principles that would help to minimize the impact of changes on estuarine ecology through the adjustment in the timing and amounts of water released from upstream impoundments. Moreover, by strengthening management and promoting the improved environmental “health” of the deltaic systems, the Project would contribute to build the ecosystem’s resilience to climate change. Providing support to local communities through sustainable/alternative livelihoods would enable them to better cope with climate change impacts. Furthermore, the Project would forge linkages and synergies with other ongoing climate change adaptation activities in their respective delta regions and contribute to the knowledge base through its information dissemination and public awareness activities.
<u>Currency Risk.</u> Significant changes in foreign currency exchange rates may pose a risk to the achievement of all project outputs and outcomes.	Medium	This was addressed through incorporating appropriate price contingencies in the project budget and will continue to be monitored closely during implementation for the purpose of making cost-savings wherever possible through the 5 years life of project.

3.7 Fiduciary Risks

Fiduciary risks related to the Executing Partners's (SOA see section 4.2) management of funds and contracting and procurement processes and project progress and output quality monitoring will be secured through an assessment of SOA's fiduciary standards in terms of systems, procedures and staff capacities compared to required standards of FAO and GEF. SOA has been the executing partner for several international funded projects and based on their track record fiduciary risks related to funds management, transparency and competitiveness in procurement and contracting processes, and effective monitoring of project progress and results are expected to be low. However, based on the detailed assessment to be conducted in March 2012 before signature of the Execution Agreement an action Plan for Mitigation of any Eventual Fiduciary risks will be developed and agreed between FAO and SOA including dates and required documentation for completion to be submitted to FAO. Disbursement of funds will be subject to completion with all agreed actions (see also section 5.5).

4. IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS

4.1 Institutional Arrangements

The Project will be a multi-provincial project (with the participation of the Guangdong (PRE) and Shandong (YRE) provincial governments. China's State Oceanic Administration (SOA) will be the lead government counterpart and Executing Agency with overall responsibility for the Project and ensuring coordination and collaboration between the two provinces and the project's five components. SOA is an administrative agency subordinate to the Ministry of Land and Resources and is responsible for the supervision and management of the country's sea area, coastal environmental protection, protecting national maritime rights and organizing scientific and technical research within its territorial waters. Among other tasks SOA is responsible for the protection of the marine environment that includes the regulation of pollutants and their sources discharges and monitoring the environmental health of the sea area. The SOA's participation will be primarily through its Departments of International Cooperation (DIC), Policy and Planning (PPD) and Marine Environmental Protection (MEPD).

The SOA will further be responsible, together with FAO, for providing technical assistance, supervision and monitoring of the project components. In addition SOA will also be responsible for supporting selected technical outputs to include facilitating: (i) provincial policy formulation in support of wetlands restoration and conservation; (ii) cross- and multi-provincial training; and (iii) establishment and maintenance of a project website; and (iii) the publication and distribution of a series of "best practices".

Activities in the two participating provinces will be overseen by Site Implementation Units (SIUs) to be established in their respective Bureaus of Ocean and Fisheries (BOF) who will be co-executing partners. In addition, the two BOFs through their respective SIU would have the main responsibility for coordinating field level activities that involve more than one municipal government (e.g., in the case of a MPA networking).

FAO and SOA will work in close collaboration with executing agencies of other projects to identify opportunities and facilitate mechanisms to achieve synergies with relevant GEF-supported projects and projects supported by other donors or the Chinese government. These efforts will be facilitated through: (i) informal communications between the GEF Agencies; (ii) sharing of data and dissemination materials between projects; and (iii) strengthening of existing, permanent, financially sustainable, public fora in the two Estuaries composed of representatives of government agencies, private sector and civil society to address issues of common concern that effect the ecological health and productivity of the two project supported sites. To ensure that existing opportunities from coordination and collaboration between different initiatives are realized explicit coordination requirements have been included in the SIU's Scope of Work (SOW) and specific terms of reference (TORs) for the project manager and site coordinators and supported with a budgetary line item in the project budget and relevant reporting output included as part of the Project Progress Report. Inter-agency and project coordination will be facilitated by FAO's participation on the CBPFA partner roundtable and the GEF5 UNDP/China Wetlands Programme, project staff participation in relevant public fora, cross-site visits, exchange of information, postings on the project webpage and mailings of relevant publications and newsletter.

4.2 Implementation Arrangements

The Food and Agriculture Organization (FAO) will be the GEF Agency responsible for supervision, and provision of technical guidance during the implementation of the project. The Executing Partner (EP) responsible for the project execution will be the People's Republic of China (PRC) represented by the State Oceanic Administration (SOA)'s Department of International Cooperation (DIC). Specifically, the Project will be implemented through the creation of a Project Coordination Unit (PCU). The Provincial Bureaus of Oceans and Fisheries in Shandong and Guangdong will be co-executing partners supporting the day-to-day operations in the two sites through the creation of project offices (Site Implementation Units) in the BOFs in Dongying City (Shandong) and Guangzhou (Guangdong), respectively. The Project will be managed through the institutional structure depicted in Figure 1 below. Institutional arrangements for Shandong and Guangdong Provinces follow in Figures 2 and 3, respectively.

Figure 1. Institutional Arrangements for Implementation of the Demonstration of Estuarine Biodiversity Conservation, Restoration and Protected Area Networking in China Project

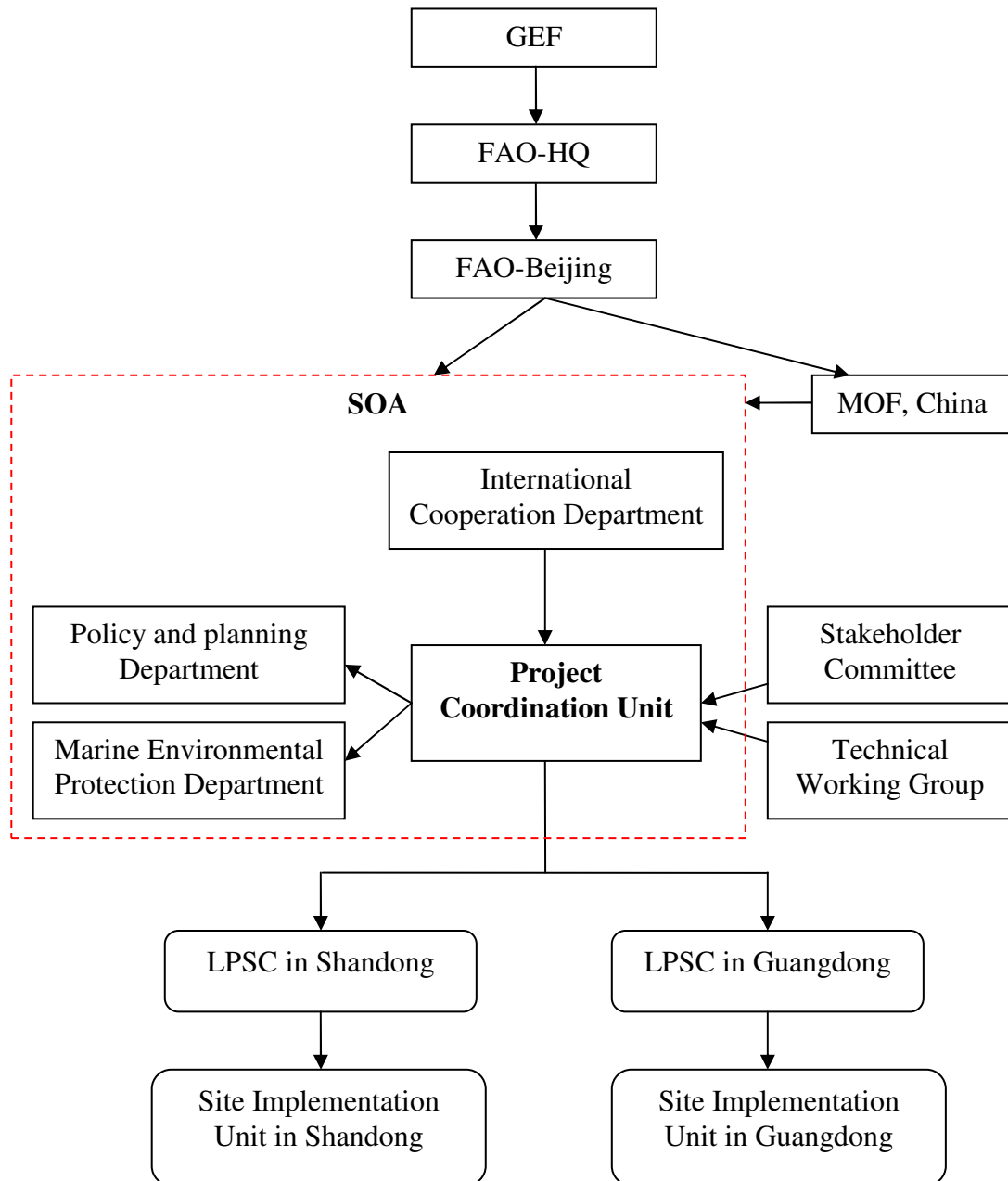


Figure 2. Institutional Arrangements to Support Project Implementation in Shandong Province

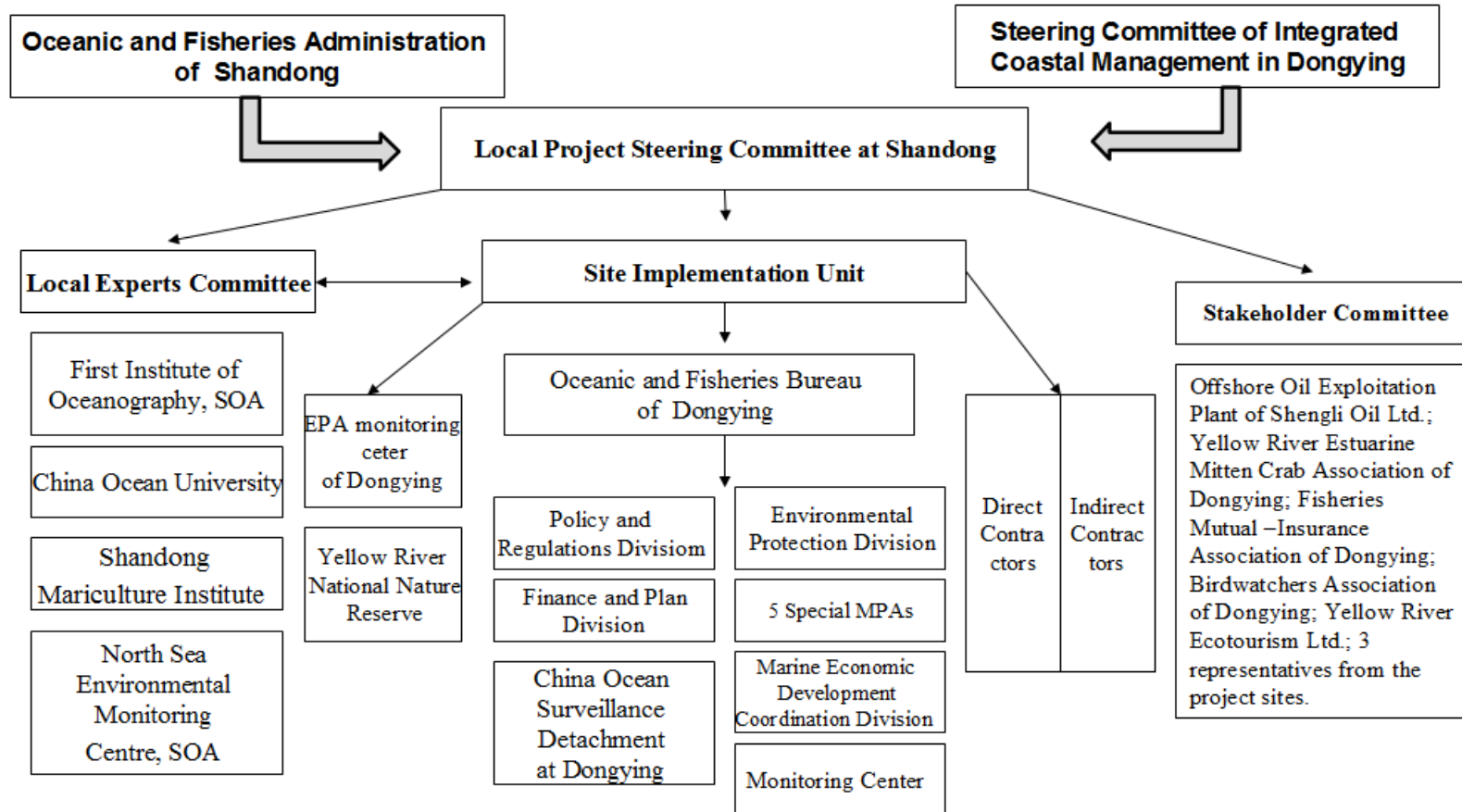
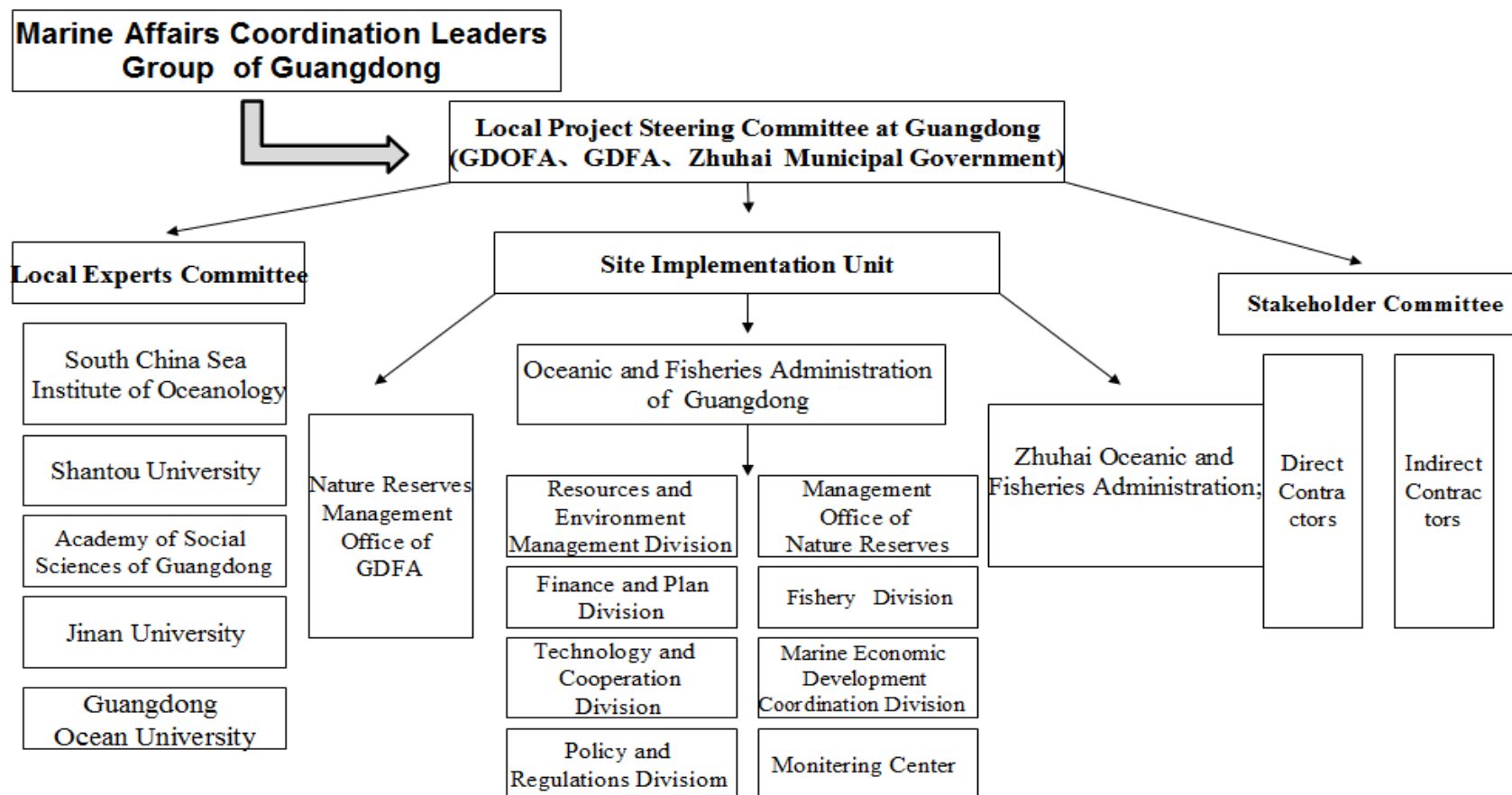


Figure 3. Institutional Arrangements to Support Project Implementation in Guangdong Province



The main institutional units responsible for project implementation are the following:

GEF Agency

The Food and Agriculture Organization (FAO) will be the GEF Agency of the Project. FAO will provide supervision and technical guidance services during the project execution. Administration of the GEF grant will be in compliance with the rules and procedures of FAO, and in accordance with the agreement between FAO and the GEF Trustee.

As the GEF agency for the project, FAO will:

- Manage and disburse funds from GEF in accordance with the rules and procedures of FAO;
- Enter into an Execution Agreement with State Oceanic Administration of China (SOA) as the national executing agency for the provision of services to the project;
- Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers and the rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all activities concerned conservation, restoration and PA networking in the eustarine ecosystems in Guangdong and Shandong provinces;
- Carry out at least one supervision mission per year; and
- Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, on project progress and provide financial reports to the GEF Trustee.

The FAO Representative in China, assisted by the FAO Project Task Manager (see below), will be the Budget Holder (BH) and responsible for the management of the GEF resources and all aspects in the Execution Agreement that will be signed between FAO and SAO. As a first step in project start-up, the FAO Representation in China will establish an interdisciplinary Project Task Force within FAO to guide the implementation of the project. The FAO Representative will in particular be responsible for: (1) disbursement of GEF funds to SOA based on satisfactory reporting on project progress and statement of expenditures (see section 5.5 on disbursements and section 6.3 on reporting); (2) financial reporting and supervision of SOA's financial management and use of resources (see section 5.5 on financial management and section 6.3 on reporting), including clearance of Budget Revisions for submission to TCI/GEF Coordination Unit for approval; (3) supervision of contracting and procurement processes executed by SOA (see section 5.6 below); and (4) submission of Quarterly Project Implementation Reviews (QPIRs) (see Appendix 1) to the Regional Office for Asia and Pacific (RAP) and to TCI/GEF Coordination Unit.

The FAO Representative will in consultation with the LTU and the GEF Coordination Unit give no-objection to Annual Work Plans and Budgets submitted by SOA. Disbursement of GEF funds for the provision of goods, minor works, and services to the project will be carried out by the FAO Representative in accordance with the provisions of the Execution Agreement. The disbursement will be carried out upon submission by the SAO to the FAO Representation of four-monthly financial statements of expenditures, procurement and contract documentation, and disbursement requests based on an updated Annual Work Plan and Budget (AWP/B) including detailed budget for the following four months period to be cleared and approved by the Representative and a Project Progress Report to be approved by the FAO Lead Technical Unit (LTU), the Latin America, Caribbean, East Asia and Pacific

Service in the Investment Centre Division (TCIO) of the Technical Cooperation Department. The Budget Holder will submit the Project Progress Report to the TCI GEF Coordination Unit for clearance and uploading on the FPMIS.

A Project Task Manager (PTM) will be appointed by FAO in the FAO Office in China, in consultation with the LTU and the GEF Unit. The PTM will, under direct supervision of the FAO Representative in China, support the FAO Representative in the supervision of financial management, project progress, procurement and contracting processes, and in the provision of technical guidance to the project, in close consultation with the LTU, and the Project Task Force. The PTM will be paid from GEF fee resources and will have the following main tasks:

- Review project progress reports from SOA and submit them to the LTU for approval and subsequently to the GEF Coordination in the Investment Centre Division (TCI) for final approval and uploading on the FPMIS;
- Review, provide comments, and advise the FAO Representative on giving no-objection to AWP/B in consultation with the LTU and the GEF Coordination;
- Review procurement and contract documentation submitted by SOA for procurement and contracts to be financed by GEF resources and advise the FAO Representative on giving no-objection, in close consultation with the LTU and the GEF Coordination;
- Review SAO project statement of expenditures using GEF resources and Cash Transfer Requests of GEF resources in accordance with the AWP/B and previous Cash Transfer Requests submitted by SOA and advise the FAO Representative on his/her clearance of statements of expenditures and approval of cash transfers in consultation with the LTU and the GEF Coordination;
- Review reports on executed co-financing to be submitted by SOA;
- Conduct periodic supervision missions;
- Prepare quarterly project implementation reviews (QPIRs) (Appendix 1) to be submitted to the FAO LTU for comments before submitting to the FAO Representative for approval and subsequently to the GEF Coordination for final approval and upload in FPMIS;
- Support the LTU in preparation of the annual Project Implementation Review (PIR) report (Appendix 2);
- Represent FAO in the Project Steering Committee (see below) and interview and selection panels for key project positions to be financed by GEF resources;
- In consultation with the FAO Evaluation Office, the LTU and the GEF Coordination Unit, support the organization of the mid-term and final evaluations, contribute to the development of an eventual agreed adjustment plan in project execution approach and supervise its implementation.

The FAO Lead Technical Unit, TCIO, will provide technical advice and backstopping to the project and support the FAO Project Task Manager in responding to requests from SOA for guidance on specific technical issues during project execution. The LTU will:

- review and give no-objection to TORs for consultancies and contracts to be performed under the project and to CVs and technical proposals short-listed by the SOA for key project positions, goods, minor works, and services to be financed by GEF resources;
- supported by the FAO Project Task Manager, review and clear final technical products delivered by consultants and contract holders financed by GEF resources before the final payment can be processed;

- assist with review and provision of technical comments to draft technical products/reports on request from the SOA during project execution;
- review and approve project progress reports submitted by SOA to the FAO Representation in Ecuador in coordination with the FAO Project Task Manager;
- support the FAO Representative in reviewing, revising and giving no-objection to AWP/B submitted by the SOA and to be approved by the Project Steering Committee;
- prepare the annual Project Implementation Review report (Appendix 2), supported by the FAO Project Task Manager and inputs from the SOA, to be submitted for clearance and completion by the GEF Coordination (TCI) which will subsequently submit the PIR to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The LTU must ensure that SOA has provided information on co-financing provided during the course of the year for inclusion in the PIR;
- field annual (or as needed) project supervision missions;
- review and revise TORs for the mid-term evaluation, participate in review mission including the mid-term workshop with all key project stakeholders, development of an eventual agreed adjustment plan in project execution approach, and supervise its implementation supported by the FAO Project Task Manager.

The **GEF Coordination Unit (TCI)** will review and approve project progress reports, project reviews, and financial reports and budget revisions. The GEF Coordination Unit will review and clear the annual PIR and undertake supervision missions if considered necessary. The PIRs will be included in the FAO GEF Annual Monitoring Review submitted to GEF by the GEF Coordination Unit. The GEF Coordination Unit will also participate in the mid-term and final evaluations and the development of corrective actions in the project implementation strategy in the case needed to mitigate eventual risks affecting the timely and effective implementation of the project. The GEF Coordination Unit will in collaboration with the FAO Finance Division request transfer of project funds from the GEF Trustee based on six-monthly projections of funds needed.

The **FAO Finance Division** will clear budget revisions, provide annual Financial Reports to the GEF Trustee and, in collaboration with the GEF Coordination Unit, call for project funds on a six-monthly basis from the GEF Trustee.

National level

Ministry of Finance (MOF) is the GEF Operational Focal point of China responsible for coordinating the programming of GEF resources and overseeing the China GEF portfolio with the GEF Agencies. MOF will be the recipient of GEF grant on behalf of the Chinese Government. MOF's specific responsibilities will be: (i) transfer of funds to SOA as the Executing partner; (ii) monitoring and review of financial reports and their submission to FAO accompanied by work plan, budget and funds transfer requests for subsequent reporting period; (iii) management of a special grant account⁹; and (iv) organization of post-evaluation (national evaluation of the project).

State Oceanic Administration (SOA) will be the **project Executing Partner** directly responsible for technical implementation of project activities, day-to-day monitoring as well

⁹ This is subject to final decision by the Chinese government on if the funds can be transferred directly from FAO to a project account managed by SOA

as financial management and purchase of goods, minor works, and services (procurement) in accordance with own rules and procedures adjusted to FAO rules and regulations. SOA will enter into an Execution Agreement with FAO allowing for the purchase of goods, minor works, and services needed to execute the project. FAO will ensure that the SOA rules and procedures for project execution are acceptable in accordance with FAO rules and regulations and GEF minimum fiduciary standards, and SOA will follow in particular rules defined in the Execution Agreement. The Execution Agreement will outline in details the roles and responsibilities of SOA and procedures with respect to financial management, procurement, recruitment, project progress reporting, financial reporting and audit, copyright, and other legal aspects of collaboration.

SOA will use its own financial management, output and outcome monitoring, and procurement systems and procedures adjusted to FAO Rules and GEF minimum fiduciary standards. SOA will submit six-monthly statements of expenditures, procurement and contract documentation for prior clearance (see section 5.5 and 5.6 below), and cash transfer requests based on the updated AWP/B including a detailed budget for the following six months period, and annual audited financial statements to the FAO Representation in China. Further, SOA will prepare and submit to the FAO Representation Project Progress Reports, annual Work Plans and budgets, and all documentation needed for the preparation of the annual PIR (see section 6.3 below).

The institutional arrangements for project implementation provide for the use of the existing structure within the SOA. The SOA's participation will be primarily through its Departments of International Cooperation (DIC), Policy and Planning (PPD) and Marine Environmental Protection (MEPD).

- **Department of International Cooperation (DIC)** is the focal point for all formal exchanges and collaboration with international agencies. The Department will be responsible for: (i) planning and monitoring of the technical aspects of the Project, including regular project visits and monitoring progress in achieving project outcomes and outputs, preparation and submission to FAO of periodic progress and technical reports, and regular consultations with beneficiaries and contractors; (ii) chairing the Project Steering Committee and annual Tripartite Review meetings; (iii) developing and reviewing work plans; (iv) procuring goods and services on a transparent and competitive basis (e.g., review and approval of TOR/specifications for personnel/contractors/vendors and required bidding documentation, and awarding and entering into contracts of recruitment or procurement with support from FAO China Office); (v) maintaining a separate project account for project funds; (vi) ensuring funds are used in accordance with agreed work plans and project budget; (vii) preparing, authorizing and adjusting commitments and expenditures; (viii) ensuring timely disbursements, financial recording and reporting against output based budgets and work plans (in English); (ix) managing and maintaining budgets, including tracking commitments, expenditures and planned expenditures against output based budget and work plan (in English); (x) coordinating the financing from FAO/GEF with that from other sources; (xi) resource mobilization of baseline and co-finance as contemplated in the project document; and (xii) maintaining productive, regular and professional communication with FAO and other project stakeholders to ensure the smooth progress of project implementation.

- **Policy and Planning Department (PPD)** is responsible for the provision of advice on policy formulation and national plans within the remit of the Agency. For project purposes PPD will have the responsibility to: (i) prepare regulations on marine management; (ii) prepare policy and planning initiatives related to marine affairs development, economic

development and function oriented zones; and (iii) provide suggestions on marine economic structure and marine production composition.

- **Department of Marine Environmental Protection (MEPD)** will be responsible for the: (i) coordination of marine environmental protection affairs; (ii) development of the marine environmental monitoring and assessment sub-component; (iii) design of the marine ecological compensation policy activity; (iv) oversight for the marine biodiversity and marine ecological environmental conservation; (v) management of the the marine nature reserves and Special MPAs; and (vi) organizing marine monitoring network.

3rd Institute of Oceanography (TIO), located in Xiamen (Fujian Province) in the southeast of the country, is a comprehensive marine research institute based on Southeast China Sea. Its role in project implementation will be to: (i) provide science and technological support on biodiversity conservation, restoration and PA networking; (ii) provide technical opinions and guidance to the project; (iii) provide advise on biodiversity assessment and field surveys; (iv) provide training in participatory protected area management, community involvement and environmental and ecosystem monitoring.

The role of the **Coastal Ecosystem and Environmental Research Laboratory (CEERL)** in the Project will be to provide: (i) scientific and technological support on biodiversity conservation, restoration and PA networking; (ii) periodic advice to and evaluation of the Project; and (iii) support each of the project's two Local Project Steering Committee (LPSC).

Project Steering Committee (PSC). The PSC's specific responsibilities will be policy formulation, facilitating cooperation between SOA and the participating provincial bureaus in support of the Project at the regional level, advising the PCU on other on-going and planned activities, facilitating collaboration between the FSP and other GEF-supported projects and/or sector agencies, and if needed, conflict resolution. The PSC will meet minimally 2 times per year and will review the Semiannual Progress and Financial Reports and approve the annual Work Plan and Budget (see section 6.3).

Technical Working Group (TWG) will be a technical body created to support the Project and composed of SOA technical staff representing all departments participating in the Project (e.g., PPD and MEPD) and FAO. The main tasks of the TWG are to provide technical advice to the PSC, backstop the PCU on request, advise the Unit on other on-going and planned activities and facilitate collaboration between the FSP and other GEF-supported projects and/or sector agencies. Specifically the TWG will be responsible for: (i) technical evaluation of project progress, (ii) evaluation if project objectives and outcomes can be met within the allocated time frame, and (iii) identification of possible solutions and/or changes in project activities when technical issues arise in the course of project implementation. The TWG is scheduled to meet formerly twice a year to review the draft Semiannual Progress Report and next year AWP/B. In addition, it will meet on an *ad hoc* basis as required.

Project Coordination Unit (PCU) will be established in SOA's Department of International Cooperation located in Beijing and will be responsible for day-to-day project operations. The role of the PCU will be, in close consultation with the PSC and TWG members, to ensure the coordination and execution of the Project through the timely and efficient implementation of annual work plans. The PCU will act as secretariat to the PSC. It will coordinate work and follow closely the implementation of project activities, handle day-to-day project issues and requirements, coordinate project interventions with other on-going activities and ensure a high degree of national and local inter-institutional collaboration, monitor project progress

and ensure the timely delivery of inputs and outputs. It will be responsible for implementing the project's M&E plan, managing its monitoring system and communication programme, the elaboration of Semiannual Project Progress and Financial reports and assist in the preparation of the annual Project Implementation Review (PIR) and midterm and final evaluations of the Project. This would be achieved by preparing and coordinating the implementation of the AWP/B. Reports on these activities, and project activities, outputs and financial expenditures and status for the previous year will form part of the Annual Work Plan submitted to the PSC via DIC's Project Coordinator, TWG and FAO. The PCU will consist of a full-time, national project manager, reporting and contract's officer, administrative assistant and translator to be hired financed by GEF resources that will strengthen the SOA's capacity to comply with all FAO rules and procedures under the execution of the GEF funds. In addition the PCU will consist of staff from DIC financed by SOA. SOA will also provide office space, equipment and utilities and finance logistics and travel as a counterpart contribution to project management.

Provincial Level

Marine Affairs Leading Group (MALG). The mandate of Guangdong's MALG is to (i) discuss and resolve the issues and problems in the development of marine economy in Guangdong Province; (ii) lead, organize and coordinate marine affairs in Guangdong province; and (iii) develop and implement relevant strategies and plans of marine affairs. The head of the Group is the Governor of the Province Development and Reform Committee and the following bureaus: Finance, Human Resource and Social Security, Education, Water Resources, Environmental Protection, Land Resources Tourism and Marine Affairs. The MALG's operational office is located in the Provincial Marine and Fishery Department which is responsible for the routine affair treatment, coordinating and organizing policy research on the issues and problems related to marine economic development and marine conservation, organizing the planning for marine development and protection. The role of the MALG in project implementation will be to provide overall policy guidance to project-supported activities in Guangdong Province and facilitate inter-agency collaboration and cooperation and resolve any issues (if required) that may impede project progress.

Dongying City Integrated Coastal Management Committee (ICM Committee). Dongying City has set up a coordination committee for integrated coastal management (Dongying ICM Committee) chaired by the vice mayor in charge of coastal development and management. The specific mandate of the ICM Committee is to facilitate coordination between different sector agencies and resolve conflicts. Its role in the Project will be similar to Guangdong's MALG. In addition, the Project's SIU will be housed in the ICM Committee (see below).

Local Project Steering Committee (LPSC). One LPSC will be established in each site to facilitate implementation of project activities. The main tasks of the LPSC will be to: (i) implement various decisions and resolutions of the Project Steering Committee (PSC); and (ii) take decisions in the course of the practical organization, coordination and implementation of the project. The site implementation unit (SIU) managers will liaise directly with their respective LPSC, which will be comprised of representatives from relevant agencies at provincial level and local municipalities, counties and sites, and at least one member from the Stakeholder Committee (SC – see below). The level of participation of LPSC will be finalized early in project year (PY) 1 in agreement with SOA and FAO. Specific LPSC membership will be reported to the PSC and will ensure that project implementation activities are open to other relevant agencies input. Each LPSC will approve the work plan developed for their respective

site. Government officials or other co-funder representatives from the private or bilateral entities on the LPSC will be responsible for ensuring that co-funding support is provided in a timely and effective manner.

In Shandong Province, the LPSC will be chaired by the DDG of Shandong Provincial Marine and Fisheries Department and include representation from the following divisions: Planning and Financial Affairs, Environmental Protection, Science and Foreign Cooperation, and representatives from the Dongying Marine and Fisheries Bureau. In Guangdong, the LPSC will be chaired by the DD of the Guangdong Marine and Fisheries Bureau.

Site Implementation Unit (SIU). One SIU will be established in each of the two participating provinces. The mandate of the SIUs will be to: (i) execute and coordinate the Project and advise the LPSC and implement its resolutions; (ii) organize workshops and annual meetings for the Project for monitoring project progress and develop work plans with detailed budget for the next year to be approved by the LPSC; (iii) fulfill day-to-day project management tasks; and (iv) monitor progress in achieving project output and outcomes at the site and contribute to the six-monthly Project Progress Reports. In Shandong, the SIU will be based in Dongying City's existing Integrated Coastal Management (ICM) Committee (operating under an expanded Terms of Reference). The SIU will be chaired by the director-general of Dongying Marine and Fisheries Bureau and include representatives from the Bureau's following sections: Planning and Financial Affairs; Fisheries and Sea Management and Utilization; the Yellow River Estuary State Level Nature Reserve; and the China Ocean Surveillance (Dongying Detachment). In Guangdong Province the SIU will be chaired by Director of Marine Resource and Environment with representatives from the Resource and Environment Division, Finance and Planning Division, Fishery Division, Marine Economic Development Coordination Division, Monitoring Center and the Policy and Regulations Division. GEF support for the SIU will be used to contract one full-time Site Implementation Coordinator per SIU while local government will provide all additional staff, office space and logistical support as a counterpart contribution.

Local Expert Committees (LEC). Local Expert Committees will be established in each of the participating provinces. The mandate of the LEC will be to: (i) provide advice and evaluation to the Project; (ii) resolving science and technological issues occurring in the course of project implementation; and (iii) providing advice and recommendations to the LPSC. Shandong Province's LEC will be chaired by a representative of SOA's First Institute of Oceanography and include representatives from China Ocean University, North Sea Environmental Monitoring Centre, Shandong Mariculture Institute, Yellow River Estuary State Level Nature Reserve and the Marine Environmental Monitoring and Forecasting Center (Dongying). The LEC in Guangdong Province will be chaired by Shantou University, with representation from the South China Sea Institute of Oceanography, Guangdong Ocean University, the Academy of Social Science of Guangdong, Den University and Jinan University.

Stakeholder Committees (SC). Two SCs will be established, one in each participating province. The mandate of the SCs will be to: (i) provide advice on relevant policies, actions and measures; (ii) provide new ideas and thinking on relevant topics for consideration to include as possible project activities; and (iii) promote communications between the government agencies and the public. The composition of the project stakeholder committee in Shandong Province will include representatives from: (i) Offshore Oil Exploitation Plant of Shengli Oil Ltd., (ii) Yellow River Estuarine Mitten Crab Association of Dongying, (iii) Fisheries Mutual Insurance Association of Dongying, (iv) Birdwatchers Association of

Dongying, (v) Yellow River Ecotourism Ltd., and (vi) 3 representatives from the project sites to be designated early in project year 1. In Guangdong Province, the SC will be composed of representatives from the following provincial bureaus; Forest, Water Resources, Environmental Protection, Land of Resources, Tourism, Marine Affairs, Hongkang-Zhuhai-Macao Bridge Management. In addition, there will be representatives from the Pearl River Estuary Gaolangang Chemistry Factory, Zhuhai Longsheng Fry Culture Ltd., and the mariculture industry.

5. FINANCIAL AND PROCUREMENT MANAGEMENT

5.1 Financial Plan

The total cost of the project will be USD xx million, to be financed through a USD 3.5 million GEF grant and USD 11.8 million in co-financing from: (i) State Oceanic Administration (USD 0.7 million); (ii) Shandong Provincial Bureau of Ocean and Fisheries (USD 4.1 million); (iii) Guangdong Provincial Bureau of Ocean and Fisheries (USD 6.7 million); and iv) FAO (USD 0.2 million). Table 3 below shows the cost by component and subcomponent and by sources of financing and table 4 shows the sources and type of confirmed co-financing. The FAO will, as the GEF Agency, **only be responsible** for the execution of the GEF resources and the FAO co-financing.

Table 4: Project Cost by Component/Subcomponent

Component/subcomponent	The Government (SOA)	Shandong Province	Guangdong Province	FAO	Total Co-financing	% Co-financing	GEF	% GEF	Total
Component 1: Policy, Planning, and Institutional Arrangements	-	203,052	218,509	42,025	463,586	60%	304,465	40%	768,050
Subcomponent 1.1: Policy	-	55,448	56,383	21,013	132,843	50%	132,027	50%	264,871
Subcomponent 1.2: Planning	-	66,613	54,303	-	120,916	50%	122,652	50%	243,568
Subcomponent 1.3: Institutional Arrangements	-	80,991	107,823	21,013	209,826	81%	49,786	19%	259,612
Component 2: Strengthening and Networking and Wetland Restoration	-	2,482,641	4,090,320	44,126	6,617,086	85%	1,143,724	15%	7,760,811
Subcomponent 2.1: MPA Strengthening	-	1,004,856	1,329,306	-	2,334,162	76%	726,524	24%	3,060,687
Subcomponent 2.2: MPA Networking	-	258,601	73,821	22,063	354,485	54%	302,861	46%	657,346
Subcomponent 2.3: Wetland Restoration	-	1,219,184	2,687,192	22,063	3,928,439	97%	114,339	3%	4,042,779
Component 3: Threat Analysis, Mitigation and Monitoring	-	816,447	1,985,663	94,982	2,897,092	82%	620,663	18%	3,517,755
Subcomponent 3.1: Threat Analysis and Mitigation	-	229,812	77,952	46,333	354,096	67%	170,883	33%	524,979
Subcomponent 3.2: Monitoring	-	586,636	1,907,711	48,649	2,542,995	85%	449,780	15%	2,992,776
Component 4: Capacity Building and Environmental Education	-	398,082	119,163	51,082	568,326	42%	788,830	58%	1,357,156
Subcomponent 4.1: Capacity Building	-	28,461	47,305	51,082	126,847	22%	444,827	78%	571,674
Subcomponent 4.2: Environmental Education and Public Awareness	-	369,621	71,858	-	441,479	56%	344,004	44%	785,483
Component 5: M&E and Replication of Project results	25,160	27,448	27,448	-	80,055	21%	307,564	79%	387,619
Subcomponent 5.1: Monitoring and Evaluation	25,160	27,448	27,448	-	80,055	38%	133,051	62%	213,106
Subcomponent 5.2: Replication of Results	-	-	-	-	-	0%	174,514	100%	174,514
Project Management	673,444	214,458	331,034	-	1,218,936	78%	351,153	22%	1,570,089
Total Project	698,604	4,142,127	6,772,135	232,214	11,845,081	77%	3,516,400	23%	15,361,480

Table 4: Source and type of confirmed co-financing

<i>Name of Co-financier (source)</i>	<i>Classification</i>	<i>Type</i>	<i>Project</i>	<i>%</i>
State Oceanic Administration	National Government	Cash	50,300	0.4
State Oceanic Administration	National Government	In-kind	648,304	5.5
Guangdong Provincial Bureau of Ocean and Fisheries	Local Govt.	Cash	6,025,100	50.9
Guangdong Provincial Bureau of Ocean and Fisheries	Local Govt.	In-kind	747,035	6.3
Shandong Provincial Bureau of Ocean and Fisheries	Local Govt.	Cash	3,352,600	28.3
Shandong Provincial Bureau of Ocean and Fisheries	Local Govt.	In-kind	789,527	6.7
FAO	GEF Agency	Cash	139,300	1.2
FAO	GEF Agency	In-kind	92,914	0.8
Total Co-financing			11,845,080	100

5.2 GEF and Government Inputs

In light of the growing importance that China is placing on environmental quality there is an increasing availability of financial resources to support improved environmental quality. Moreover, the Government of China will provide a substantial amount of co-financing primarily in support of restoration of wetlands, MPA infrastructure and equipment, investment in provision of alternative livelihoods and strengthening of environmental monitoring amounting to USD 11,845,080. As a result, the requested GEF grant will be allocated mainly in support of capacity building, policy studies, preparation of plans and technical assistance to leverage some of the future resources allocated for improved environmental quality of the estuarine ecosystems that together will increase the likelihood of the Project achieving its objective.

5.4 FAO Input

FAO co-financing will be used to support technical assistance

5.5 Financial Management and Reporting on GEF Resources

Financial management and reporting in relation to the GEF resources will be carried out in accordance with FAO's rules and procedures and as described in the Execution Agreement between FAO and SOA. In accordance with the project budget, FAO shall provide cash advances in US dollars up to the total of USD 3 516 400.

SOA shall provide project execution services in accordance with own regulations, rules and procedures adjusted to FAO rules and regulations and GEF minimum fiduciary standards as established in the Execution Agreement to ensure that the project funds are properly administered and expended. SOA shall maintain a project account for the funds received from FAO in accordance with accepted accounting standards.

Financial statements and reporting

All financial reporting shall be in US dollars, and any exchange differences accounted for within the GEF-approved US dollar project budget. Within one month of the end of each six month, i.e. on or before 31 July and 31 January, SOA shall submit six-monthly statements of expenditure of GEF resources to the FAO Office in China (see format in Execution Agreement Annex 6.C).

The purpose of the financial statement is to list the expenditures incurred on the project on a six monthly basis so as to monitor project progress and to reconcile outstanding advances during the four month period. The financial statement shall contain information that forms the basis of a periodic financial review and its timely submission will be a prerequisite to the continued disbursements of funds to SOA.

SOA shall prepare annual financial reports on the use of the GEF resources to be submitted with the 2nd six monthly Project Progress Report, showing amount budgeted for the year, amount expended since the beginning of the year, including un-liquidated obligations (commitments) as follows:

1. Details of project expenditures on an subcomponent-by-subcomponent basis, reported in line with project budget lines as set out in the project budget included in this Project Document annex 1, as at 31 December each year.
2. A final statement of account in line with the project budget included in the Project Document annex 1, reflecting actual final expenditures under the project, when all obligations have been liquidated.
3. An annual budget revision will be prepared for review and clearance of the FAO Representation in China, LTU, and the GEF Coordination Unit. The budget revision will be posted in the FPMIS by the GEF Coordination Unit.

These financial reports are submitted by the SOA to the FAO Representation in China and reviewed and cleared by the FAO Representative supported by the Project Task Manager and monitored by the LTU and FAO GEF Coordination.

Financial reports for submission to the donor (GEF) will be prepared in accordance with the provisions in the Financial Procedures Agreement with the GEF Trustee and submitted by the FAO Finance Division (CSFE).

Disbursements of Funds

FAO shall transfer the amount of **USD 3 516 400** of GEF funds payable in instalments as outlined below, to SOA to carry out the GEF financed project activities as described in this Project Document. SOA shall prepare and submit to FAO together with the Annual Work Plan a detailed budget to facilitate the predictability of the needed funds for the year. The first instalment of USD 175 820 (5 percent of the approved GEF amount) shall be advanced to SOA within two weeks following signature of the Execution Agreement subject to submission by SOA to FAO of all progress and completion reports on all actions agreed in the mitigation plan of fiduciary risks (as referred to in section 3.7).

Subsequently, SOA shall prepare and submit to FAO cash transfer requests (see format Execution agreement Annex 5) based on the updated AWP/B including the budget for the following six month together with the six-monthly statements of expenditures of GEF resources. The second and subsequent instalments shall be advanced to the SOA within two weeks upon submission of a satisfactory financial statements of expenditures report, project progress reports (see section 6.4 below), and an updated AWP/B including the budget for the following six month. The FAO Representative in China supported by the FAO Project Task Manager should certify that reporting requirements under the terms of the Execution Agreement have been met and that project progress reports for the activities completed have

been submitted to and accepted by FAO as showing satisfactory management and use of GEF resources. Reports should be submitted to the LTU, and the GEF Coordination for review. All reports should be posted on the FPMIS.

Responsibility for Cost Overruns

FAO will make available to the Executing Partner a financial contribution in the amount of **USD 3 516 400** (three million five hundred and sixteen thousand and four hundred United States Dollars). SOA shall utilize the GEF project funds in strict compliance with the project document. SOA shall be authorized to make variations not exceeding 20 percent on any total output budget line of the project budget provided that the total allocated for the specific budgeted project component is not exceeded. Any variations exceeding 20 percent on any total subcomponent budget line, that may be necessary for the proper and successful implementation of the project, shall be subject to prior consultations with and approval by FAO. In such a case, a revision to the FAO-GEF budget in the project document should be prepared by SOA and approved by the FAO Representative in China, the LTU and the GEF coordination. Cost overruns shall be the sole responsibility of SOA.

Audit

SOA will ensure external audit of its accounts and records in relation to activities and expenditures related to the project. The audit reports will be provided to FAO and may be shared with the GEF Trustee if this is requested. SOA shall submit to FAO an **annual externally audited financial statement of the GEF project account** within three months following the completion of each annual accounting period during the project.

5.6 Procurement and Contracting

SOA will procure the equipment and services provided for in the detailed budget Annex 1 and AWP/B following its own rules and regulations in compliance with generally accepted international standards for public sector procurement as detailed in the Execution Agreement. SOA will ensure that its procurement rules and procedures and their implementation ensure that the procurement process is transparent and competitive and that all actions agreed in the mitigation plan of fiduciary risks are completed and reported to FAO before the first disbursement of funds (see section 3.7 above).

Before the commencement of procurement, SOA shall complete the project procurement plan to be reviewed at the project inception and cleared by the FAO Representative in China. The procurement plan shall be updated by SOA every six months and submitted to and cleared by the FAO Representative in China with the six-monthly financial statement of expenditure report, PPRs, and Cash Transfer Requests for the next instalment of funds. FAO supervision of contracting and procurement processes will be executed as follows:

- a. All individual consultants contracts for an amount > USD 20 000 will be subject to FAO participation in selection panel and prior clearance of contracting process, Terms of Reference (TORs) and Curriculum Vitae (CVs).
- b. All consultant firms/NGOs contracts will be subject to FAO prior clearance of contracting process, TOR and technical proposals.

- c. There will be no single procurement of goods (non-expendable procurement) for an amount > USD 100 000. All procurement of goods will be subject to FAO prior clearance of bidding process, material and offers (single procurement amount < USD 100 000 and > USD 50 000) or technical specifications and price quotation comparison (single procurement amount < USD 50 000).
- d. All documentation related to non-expendable procurement and procurement of non-consultancy services in relation to training and workshops events shall be submitted to FAO for post review together with the six-monthly financial statements and expenditure reports.

6. OVERSIGHT, MONITORING, EVALUATIONS AND REPORTING

6.1 Oversight and reviews

Project oversight will be carried out in a balance between periodic validation by the Project Steering Committee and FAO. Project oversight will be facilitated by: (i) establishing appropriate levels of management authority to provide timely direction, coordination, control and review; (ii) ensuring project management accountability; (iii) documenting project transactions and results through traceability of related documents throughout the implementation of the project; (iv) ensuring that the Project is developed within the planned activities applying established standards and guidelines; (v) continuously identification and monitoring of project risks and risk mitigation strategies; and (vi) ensure all project outputs are produced in accordance with the Project Document and Log Frame (Annex 2).

Project oversight will take into account: (i) schedule; (ii) planned versus budgeted expenses; (iii) actual versus planned expenses; (iv) cost projections; (v) timely deliver of inputs; (vi) timely achievement of outputs and outcomes; (vii) review of risks and assessment of risk mitigation strategies; and (viii) stakeholder feedback. At any time during project execution, underperforming subcomponents may be required to undergo additional assessments, implement changes to improve performance or be halted until remedies have been identified and implemented. Additionally, oversight activities provide information, judgments, and recommendations to the project management team during project reviews and in support of project decision milestones.

FAO will provide oversight and monitor the progress of the GEF financed activities and outputs largely through the recording and verification of inputs, including financial disbursements and technical levels-of-effort, and the six-monthly project progress reports (PPRs see section 6.3 below) and periodic supervision and backstopping missions. Financial inputs (disbursements) will be largely drawn from FAO's financial management system, while technical inputs will be drawn from PPRs, and reports produced by the project M&E Unit. The monitoring system will specifically compare financial disbursements to technical activities programmed in the AWP/B and identify and assess any significant discrepancies between the two.

A detailed schedule of project reviews will be developed by the project management, in consultation with FAO and other project implementation partners, during the early stages of project initiation, and incorporated in the Project Inception Report. Such a schedule will include methodologies and tentative time frames for project progress, reviews and evaluation reports.

Project Revisions

The following types of revisions may be made to this project document with the approval of the FAO GEF Coordination Unit only, provided that the PRC and other signatories of the legal Agreement express their no-objection to the proposed changes:

- (i) minor revisions. Those revisions that do not involve significant changes in the immediate objectives, outcomes, outputs or activities of the project, but are caused by the rearrangement of inputs already agreed to or by cost increases due to inflation. These minor amendments are changes in the project design or implementation that could include,

inter alia, changes in the specification of project outputs that do not have significant impact on the project outcomes or scope, changes in the work plan or specific implementation targets or dates, renaming of implementing entities, or reallocation of grant proceeds not affecting the project's scope.

(ii) revisions to annexes. Revisions in, or addition to, any of the annexes of the project document.

(iii) annual revisions. Mandatory annual revisions which rephrase the delivery of agreed project outputs.

All minor revisions shall be reported in the second semester sixmonthly Project Progress Report and in budget revisions.

6.2 Monitoring and Evaluations

Establishment of project monitoring system. Monitoring and evaluation of progress in achieving project results and objectives will be done based on the targets and indicators established in the Project Results Framework (Annex 2 and summarized in table 1 section x.x above). The project Monitoring and Evaluation Plan has been budgeted at USD 159 800 (see table in the end of this section below). Monitoring and evaluation activities will follow FAO and GEF monitoring and evaluation policies and guidelines. The project monitoring and evaluation system will also facilitate learning and mainstreaming of project outcomes in estuarine conservation policies and economic sector development plans supported also by component 1 and 4.

At the initiation of implementation of the GEF Full-size Project (FSP), the project coordination unit (PCU), to be created and located in China's State Oceanic Administration's (SOA) Department of International Cooperation (DIC), will set up a project progress monitoring system strictly coordinated with subsystems in each of the site Implementation Units (SIU) in the two participating Bureaus of Ocean and Fisheries in Shandong and Guangdong Provinces. Participatory mechanisms and methodologies for systematic data collection and recording will be developed in support of outcome and output indicator monitoring and evaluation. During the inception workshop (see below), M&E related tasks to be addressed will include: (i) presentation and clarification (if needed) of the project's Results framework with all project stakeholders; (ii) review of the M&E indicators; (iii) identification of the required baseline information needed to support the M&E program; (iv) drafting the required clauses to include in consultants' contracts to ensure they complete their M&E reporting functions (if relevant); and (v) clarification of the respective M&E tasks among the Project's different stakeholders. One of the main outputs of the workshop will be a detailed monitoring plan agreed to by all stakeholders.

Types of Monitoring and responsible partners. The day-to-day monitoring of FSP implementation will be driven by the preparation and implementation of an annual work plan and budget (AWP/B). The preparation of the AWP/B will represent the product of a unified planning process. As a tool, it will identify the actions proposed for the coming project year and provide the necessary details to monitor their implementation. Site-specific inputs to the AWP/B will be prepared based on participatory planning with local stakeholders and coordinated through the PCU and facilitated through M&E workshops. These inputs would be consolidated by the respective provincial SIU before forwarding them to the PCU and

eventual on-forwarding to the PSC for their review and approval. Once received and reviewed by the latter, they will be forwarded to FAO and the other co-financiers. The annual work plan will be developed in a manner consistent with the project's Log Frame to ensure adequate fulfillment and monitoring of project outputs and outcomes.

Following the approval of the FSP, the project's first year work plan and budget (AWP/B) will be adjusted (either reduced or expanded in time) to synchronize it with an annual reporting calendar. In subsequent years, the FSP work plan and budget will follow an annual preparation and reporting cycle as specified in section 6.3 below.

The M&E tasks and responsibilities clearly defined in the aforementioned monitoring plan will be achieved through: (i) day-to-day monitoring of project progress (PCU and SIUs); (ii) technical monitoring of biodiversity and ecosystem "health" indicators (SIUs in coordination with other relevant participating provincial technical units); (iii) site-specific ecosystem-based monitoring plans prepared in association with participating communities as part of the public awareness component; (iv) midterm and final evaluation (independent consultants); and (v) continual oversight, monitoring and supervision missions (FAO).

Outcome and Impact Indicators. To monitor project outputs and outcomes including contributions to global environmental benefits specific indicators have been established in the Results Framework (see Annex A). The framework's indicators and means of verification will be applied to monitor both project performance and impact. Following FAO's monitoring procedures and progress reporting formats data collected will be of sufficient detail to be able to track specific activities, outputs and outcomes and flag project risks early on. Output target indicators will be monitored on a six-monthly basis and outcome target indicators will be monitored on an annual basis if possible or as part of the mid-term and final evaluations. Below is listed the selected biological outcome indicators included in the Results Framework and their baseline:

Outcome 2.3: Increased provision of ecological "goods and services" through the restoration of wetlands in two estuarine ecosystems (increased density of fish egg and fish larva of at least 10% in two sites; increased presence of indicator migratory bird species (e.g., Oriental White Stork) as quantified through census of nests increased to 10 nets (Shandong); increased mangrove cover by 20% (Qi'ao island in Guangdong)).

1. Baseline of Yellow River Estuary:

i. Density of fish egg and fish larva in Yellow River Estuary/m³

Year		2006	2007	2008	2009	2010
Density	Fish eggs	1.48		1.02	0.74	0.19
	Fish larvae	0.05		0.03	0.093	0.11

ii. There were 3 nests of Oriental White Stork in Yellow River Estuary in 2011.

2. Baseline of Pearl River Estuary:

i. Density of fish egg and fish larva

Year	month	Sample location	Average density
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			<i>fish egg</i> (ind/m ³)	<i>fish larva</i> (ind/m ³)
2007	June	Shiziyang	0.037	0.192
2008	May	Longxue island	2.909	0.589
	September		0.904	0.673
	July	Longxue island	0.047	2.135
2009	May	Humen bridge	0.229	0.075
	September	Hengqin island	1.155	0.122
2010	December	Hengqin island	0.501	0.205
2011	March	lingdingyang	1.501	0.33
	September		0.615	0.085

iv. Mangrove coverage in Qi'ao island 2012 is 5% (sample area: 10m*10m)

During project implementation under the Environmental “Health” Monitoring sub-component (sub-component 3 B), studies to establish the baseline for other biological monitoring indicators (e.g., levels of BOD in estuarine waters, species diversity and population size, etc.) to be included in the monitoring system are budgeted for and will be supplemented with local resources. These indicators will be selected through the convening of a technical workshop of experts tasked with the identification of appropriate parameters and values to establish baseline conditions and monitor environmental and biodiversity status. These will be used to assess improved ecosystem “health” likely to entail changes in presence, abundance and/or diversity of indicator species and indices measuring biodiversity “richness”.

To monitor the outcome in terms of improved management effectiveness of participating MPAs (outcome 2.1) the BD Focal area METT scorecard will be used. In the below table baseline scores 2012 and targets by the end of the project is listed for each participating MPA.

PA Present Score (2012) Proposed target score by the end of the project

PA	Present Score (2012)	Proposed target score by the end of the project
Yellow River National Nature Reserve (YRNNR)	61	75
Shallow Sea Shellfish State-level SMPA	39	60
Lijin Benthic Fish State-level SMPA	43	60
Estuarine Ecology State-level SMPA,	42	60
Laizhou Bay Razor Clam State-level SMPA	45	60
Guangrao Polychaete State-level SMPA	44	60
Pearl River Estuary Chinese White Dolphin National Reserve	57	75
Jiangmen Chinese White Dolphin Provincial	40	65
Miaowan Coral Reef municipal reserve	41	60
Hengqin Marine Park (expected to be set up in 2014)	12	60
Neilingding-Futian Mangrove National nature reserve	53	72
Qi'ao-dangan island Mangrove provincial nature reserve	52	68

Inputs into M&E. The main sources of information to support the M&E program will be: (i) baseline studies; (ii) M&E participative monitoring and workshops with beneficiaries; (iii) on-site monitoring of the implementation of threat mitigation measures and project improvements in ecological “health” of pilot sites in the two estuarine ecosystems; (iv) project progress reports prepared by the PCU with inputs from the SIUs; (v) consultants reports; (vi) mid-term and post project impact and evaluation studies completed by independent consultants; (vii) financial reports and budget revisions; (viii) quarterly project implementation reports (QPIRs) prepared by the FAO Office in Beijing (budget holder); and (ix) FAO supervision mission reports.

Mid-term and Final Evaluation. An independent Mid-Term Evaluation (MTE) will be undertaken towards the end of the third project year to review progress and effectiveness of implementation in terms of achieving project objective, outcomes and outputs. Findings and recommendations of this evaluation will be instrumental for bringing improvement in the overall project design and execution strategy for the remaining period of the project’s term if necessary. FAO will arrange for the MTE in consultation with project management. The evaluation will, *inter alia*:

- (i) review the effectiveness, efficiency and timeliness of project implementation;
- (ii) analyze effectiveness of partnership arrangements;
- (iii) identify issues requiring decisions and remedial actions;
- (iv) propose any mid-course corrections and/or adjustments to the implementation strategy as necessary; and
- (v) highlight technical achievements and lessons learned derived from project design, implementation and management.

An independent Final Evaluation (FE) will be carried out three months prior to the terminal review meeting of the project partners. The FE would aim to identify the project impacts and sustainability of project results and the degree of achievement of long-term results. This Evaluation would also have the purpose of indicating future actions needed to expand on the existing Project in subsequent phases and disseminate information to management authorities responsible for the management of other Chinese estuarine ecosystems to assure continuity of the processes initiated in the GEF/SOA FSP.

Some critical issues to be evaluated in the midterm and final evaluations will be: (i) progress in and biodiversity conservation impacts of applying Strategic Environmental Impact Assessments in economic sector development planning; (ii) the functioning and effectiveness of the institutional coordination mechanisms in Shandong (ICM) and Guangdong (MALG) in developing and implementing integrated planning in support for biodiversity and estuarine ecosystem; (iii) the level of capacities and involvement of MPA and Bureaus of Ocean and Fisheries staff in MPA networking mechanism and strengthening processes of each MPA and progress in outcomes in terms of improved management effectiveness at the network and individual MPA levels; (iv) progress in monitoring and achieving improvements in key estuarine biodiversity indicators; (v) the reflection of increased systematic information on estuarine biodiversity and ecosystem threats and “health” in mitigation actions in economic sector development plans and municipal 13th 5 year development plans; (vi) the level of local awareness on the importance of estuarine biodiversity and ecosystems and involvement of men as well as women in local income generating sustainable production and activities and services and in the conservation work of the MPAs.

6.3 Reporting Schedule

Specific reports that will be prepared under the M&E program are: (i) Project inception report (PInR); Annual Work Plan and Budget (AWP/B); (iii) Project Progress Reports (PPRs); (iv) Quarterly Project Implementation Reports (QPIRs); (v) annual Project Implementation Review (PIR); (vi) Technical Reports; (vii) co-financing Reports; and (viii) Terminal Report. In addition, assessment of the GEF Monitoring Evaluation Tracking Tools (METTs) against the baseline (completed during project preparation) will be required at midterm and final project evaluation.

Project Inception Report. After FAO approval of the project and signature of the Execution Agreement an inception workshop will be held. Immediately after the workshop, SOA will prepare a project inception report in consultation with the FAO Project Task Manager and other project partners. The report will include a narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. It will also include a detailed First Year Annual Work Plan and Budget (AWP/B). As part of the AWP/B, a detailed budget for the project's first full year of implementation will accompany the inception report and include all monitoring and supervision requirements. The draft report will be circulated to FAO and the Project Steering Committee for review and comments before its finalization, no later than three months after project start-up.

Annual Work Plan and Budget (AWP/B): SOA will submit to the FAO Representation in China an Annual Work Plan and Budget which will be divided into monthly timeframes detailing the activities and progress indicators that would guide implementation during the year of the Project. As part of the AWP/B, a detailed project budget for the activities to be implemented during the year should be included together with all monitoring and supervision activities required during the year. With the support from the PTM, the FAO Representative will give no-objection to the AWP/B in consultation with the LTU and the GEF Coordination. (See AWP/B format in Execution Agreement Annex 6.B)

Project Progress Reports (PPR)

SOA will submit to the FAO Representation in China six-monthly project progress reports to be submitted no later than July 31 (covering the period January through June) and 31 January (covering the period July through December). The 2nd six months period report should accompany the following year's draft Annual Work Plan and Budget (AWP/B) and the 1st six months period report should be accompanied by the updated AWP/B, for review and no-objection by FAO. The PPR are used to identify constraints, problems or bottlenecks that impede timely implementation and take appropriate remedial action. PPRs will be prepared based on the systematic monitoring of output and outcome indicators identified in the project's Log Frame. The FAO Project Task Manager will review the progress reports and submit them to the Lead Technical Unit (LTU) for approval and subsequently to the GEF Coordination for final approval and uploading on FPMIS. (See PPR format in Execution Agreement Annex 6.A).

Quarterly Project Implementation Reports (QPIR)

The FAO Project Task Manager, with inputs from SOA Project Progress Reports and supervision activities will prepare quarterly reports which entail regular review of the project

to compare approved work plans with actual performance, and to take corrective action as required. (See QPIR format in Appendix 1)

Project Implementation Review (PIR)

The LTU supported by the FAO Project Task Manager, with inputs from SOA, will prepare an annual Project Implementation Review (PIR). The PIR will be submitted to the GEF Coordination in TCI for review and approval. The GEF Coordination will submit the final report to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. (See PIR format in Appendix 2)

Technical Reports

Technical reports will be prepared to document and share project outcomes and lessons learned. The drafts of any technical reports must be submitted by SOA to the FAO Representation in China who will share it with the LTU and the GEF Coordination for review and clearance, prior to finalization and publication. Copies of the technical reports will be distributed to the Project Steering Committee and other project partners as appropriate. These will also be posted on the FAO FPMIS.

Co-financing Reports

SOA will be responsible for collecting the required information and reporting on in-kind and cash co-financing provided by SOA, Shandong and Guangdong Provincial Bureaus of Ocean and Fisheries and eventual other partners not foreseen in the Project Document. SOA will provide the information in a timely manner and will transmit such information to FAO. The report is to be submitted on or before 31 July covering the period July (the previous year) to June. (See co-financing report format in Execution Agreement Annex 6.D).

Terminal Report

Within two months of the project completion date SOA will submit to FAO a draft Terminal Report, including a list of outputs detailing the activities taken under the Project, “lessons learned” and any recommendations to improve the efficiency of similar activities in the future. This report will specifically include the findings of the final evaluation as described above. A final project review meeting is expected to take place in the beginning of 2017. (See instructions for Terminal Report in Execution Agreement Annex 6.E).

GEF-4 Tracking Tool. Following the GEF policies and procedures, the tracking tool for biodiversity focal area will be submitted at three moments: (i) with the project document at CEO endorsement; (ii) at the project’s mid-term evaluation; and (iii) with the project’s terminal evaluation or final completion report.

Table 5 below provides a summary of the main M&E reports, responsible parties and timeframe.

Table 5: Budgeted Monitoring and Evaluation Plan Summary

Type of M&E Activity	Responsible Parties	Time-frame	Budgeted costs
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Type of M&E Activity	Responsible Parties	Time-frame	Budgeted costs
Inception Workshop)	SOA/PCU, FAO Project Task Manager (PTM) supported by the FAO LTU, BH, and the GEF Coordination Unit (TCI)	Within two months of project start up	US \$ 10 000
Project Inception Report	SOA/PCU, FAO PTM cleared by FAO LTU and BH	Immediately after workshop	-
Field based impact monitoring	SOA/PCU, participating provincial bureaus and other relevant line agencies.	Continually	US \$ 64 000 (4 % of time of the Project Manager (PM), technical workshops for identification of ecological quality indicators and M&E workshops)
Supervision visits and rating of progress in PPRs and PIRs	SOA/PCU, FAO LTU and GEF Coordination Unit (TCI)	Annual or as required	The visits of the FAO LTU and the GEF Coordination Unit will be paid by GEF agency fee. The visits of the PM/PCU will be paid from the project travel budget
Project Progress Reports	SOA/PCU, with inputs from SIUs and other partners	Semi-annual	US \$ 5 800 (3% of the time of the PM and the project site implementation coordinators)
Quarterly Project Implementation Reports	FAO PTM and BH cleared by the LTU and monitored by the FAO Regional Office for Asia and the Pacific in Bangkok	Quarterly	Paid by the agency fee
Project Implementation Review report	FAO PTM and LTU supported by the SOA/PCU and SIUs and cleared and submitted by the GEF Coordination Unit (TCI) to the GEF Secretariat	Annual	Paid by GEF agency fee
Co-financing Reports	SOA/PCU and SIUs	Annual	US \$ 4 000 (1% of the time of the PM and the project site implementation coordinators and 3% of the time of the reporting and contracts officer)
Technical reports	SOA/PCU, PTM/LTU	As appropriate	-
Mid-term Evaluation	External Consultant, FAO independent evaluation unit in consultation with the project team including the GEF Coordination Unit (TCI) and other partners	At mid-point of project implementation	US \$ 36 000 for external consultant. In addition the agency fee will pay for expenditures of FAO staff time and travel
Final evaluation	External Consultant, FAO independent evaluation unit in consultation with the project team including the GEF Coordination Unit (TCI) and other partners	At the end of project implementation	US \$ 40 000 for external consultant. In addition the agency fee will pay for expenditures of FAO staff time and travel
Terminal Report	SOA/PCU, PTM/LTU, TSCR report Unit	At least one month before end of project	-
Total Budget			US \$ 159 800

6.4 Communication and Visibility

Giving high visibility to the Project and ensuring effective communications in support of the project's message has been addressed in a number of activities that have been incorporated into its design. These include: (i) the establishment of a public forum under Component 4 that will bring all key stakeholders from the public and private sectors and civil society to discuss and seek solutions to issues of common concern affecting the YRE and PRE estuarine ecosystems. At a more general level, the Project's Environmental Education and Increasing Public Awareness sub-component (Sub-component 4 B) will build on and strengthen the already large number of activities on-going in the two Estuaries region focused on promoting increased environmental awareness. Activities that will be supported specifically through the sub-component include: (i) printed publications (brochures, leaflets, flyers, newsletters and other publications to project activities and results); (ii) audiovisual media (films); and (iii) public events. Finally, for the more distant community including other stakeholders in China and beyond project communication and visibility will be supported primarily through: (i) the creation of a website, (ii) publication of a tri-mestrial newsletter and the publication and dissemination of a series of "best practices" based on the experiences and "lessons learned" during the 5 year implementation phase.

7. PROJECT APPRAISAL

7.1 Social

As described above, there are substantial socio-economic differences that define the two Estuaries. The YRE, while one of the largest in the world, is overlapped administratively by Dongying Municipality comprising approximately 2 million inhabitants. The major economic sectors are dominated by the oil industry (Shengli Oil Fields) and related industries (petrochemistry, saline chemicals, papermaking, machinery, electronics, construction, building materials, foodstuff processing, pneumatic tires and rubber, textile and light industries). There nevertheless exists a significant rural population that depend on the main primary sectors farming, livestock grazing, fishing and salt producers in the project area. On-site economic development that has adversely impacted the Estuary includes oil production, salt pans, mariculture ponds and agriculture. Off-site activities include the construction of upstream water impoundments, embankments, reinforcing dikes and the widening river sections to facilitate ice flows all of which have modified natural patterns of water flow and nutrient and sediment deposition.

PRE in contrast is bordered by 6 cities and two Special Administrative Regions and in aggregate represents some 12 million inhabitants that live in proximity to the Estuary. The Province of Guangdong is one of the richest and most industrialized of all of China's provinces. Major threats consist of declining water quality associated with rapid and often poorly planned industrial and urban development, wetland conversion for urban expansion over-fishing and conflicts associated with the large marine transport sector. No adverse social impacts are expected from project-related activities. The major activities (in terms of financial resources) consist of: (i) conversion of abandoned aquaculture facilities, salt pans and depleted oil wells back into wetland habitat; (ii) support for a collaborative approach to monitoring the ecological "health" of the two estuarine ecosystems; and (iii) capacity building (including equipment and infrastructure) of existing MPAs and the creation of MPA networks. Community participation in these activities, particularly the last one, is being encouraged through the promotion of volunteer organizations and support for a number of public outreach activities. From a socio-economic perspective perhaps the more relevant project supported activities consist of: (i) provision of incentives in the form of TA, training and support for equipment to families to encourage a voluntary shift from subsistence farming and/or fishing to a much more lucrative farming of mitten crab in areas in the core and adjacent areas of the Yellow River National NR (Shandong Province) targeting an estimated 3,000 fishermen and/or agriculturalists. This technique has been proven and a market exists and is growing in the project area. This approach will not only allow families to stay in the NR but will substantially increase their income; and (ii) provision of alternative employment in ecotourism and/or MPA management in Hengqin Marine Park (Guangdong Province) and targeting an estimated 10 – 15 families whose livelihoods depending on a declining natural resource base. The other project activities are likely to have no direct socio-economic on local communities (policy, planning, institutional arrangements and capacity building) or will be positive (environmental education and increasing public awareness) and the promotion of community-based activities to reduce dependence on a declining resource base through provision of alternative [e.g., ecotourism] and / or sustainable production and income generating activities [e.g., mariculture].

7.2 Stakeholder Consultation

Consultation of potential stakeholders during project preparation was substantially supported through the GEF Project Preparation Grant (PPG). Specifically it included: (i) an inception workshop, technical workshops (17) and general stakeholder consultative workshops (6). Moreover, in two draft studies leading to an update of the knowledge base for each estuarine ecosystem, a detailed institutional analysis was compiled that included further definition of major stakeholder groups and relevant institutional actors and their roles, responsibilities and resources. More specifically, the inception workshop included representatives of the major institutional stakeholders at the State, provincial and municipal levels and included private sector and civil society representation. The technical workshops included invited researchers and technicians with expertise and knowledge of the two Estuaries. The two general stakeholder workshops supported in project preparation were designed to solicit inputs from members of civil society and associations that depend on the ecosystems' provision of environmental "goods and services." This included environmental and socio-economic NGOs, user associations (e.g., fisher and tourist associations) and religious groups. The main objective of the latter was to enlarge and consult with other stakeholders who depend on the long-term ecological health of the two Estuaries and whose support will be critical to the Project's success. Finally, the two policy/decision-maker workshops focused more on the key decision makers whose support will also be required to support an integrated management approach to the management of these ecosystems. The series of workshops served their purpose and provided critical inputs into project design while building awareness and public support for the Project. Workshop minutes are in the project files.

7.3 Environment

The Project's stated goal is "to improve existing efforts to conserve biodiversity in China's major estuarine ecosystems. The Project's specific objective is to mainstream the conservation of estuarine biodiversity in economic sector development plans and develop a series of "best practices" based on experiences derived from project supported field activities focusing on the creation of protected area networks and wetland conservation and restoration in the Yellow and Pearl River Estuaries. The Project will be beneficial to the environment and if adequately implemented, in the absence of impacts associated with adverse, non-project related externalities, will leave the "health" of the two Estuaries, at least in specified pilot sites, measurably improved from the existing baseline conditions. More specifically, the Project is based on the assumption that "best practices" derived from the experiences and lessons learned from the five year implementation phase that will be up-scaled either to other sites in one or both of the participating Estuaries and/or will be adopted elsewhere in China. Based on this "philosophy" and the recognition that to achieve the stated goal a long-term political and public commitment supported with adequate financing will be required, many of the activities supported in the first phase 5 year project are designed to build an enabling environment that will support further commitment in possible future phases. In the short-term (i.e., the 5 year life of project), positive, measurable impacts on the environment are expected to be achieved primarily through: (i) the strengthening of selected MPAs; (ii) mitigation of selected threats affecting the "health" of the two estuarine ecosystems; and (iii) the restoration of selected wetland areas. Specific impacts that are expected to accrue include: (i) the conservation of biodiversity of global importance and (ii) improved environmental health; the latter achieved through investments to: (a) promote the transformation on non-sustainable land use and fishing practices to sustainable (e.g., ecofarming of mitten crab) and/or

alternative livelihoods (e.g., ecotourism); (b) capping selected oil wells; and (c) restoring abandoned oil lands, salt pans and aquaculture ponds to natural wetlands habitat; the only significant investments in the Project.

ANNEXES

ANNEX 1. PROJECT BUDGET

Component 1: Policy, Planning, and Institutional Arrangements	Component 2: Strengthening and Networking and Wetland Restoration	Component 3: Threat Mitigation and Monitoring	Component 4: Capacity Building and Environmental Education	Component 5: M&E and Replication of Project Results
Subcomponent 1.A: Policy	Subcomponent 2.A1: MPA Strengthening	Subcomponent 3.A: Threat Analysis and Mitigation	Subcomponent 4.A: Capacity Building	Subcomponent 5.A: Project management
Subcomponent 1.B: Planning	Subcomponent 2.A2: MPA Networking	Subcomponent 3.B: Monitoring	Subcomponent 4.B: Environmental Education and Public Awareness	Subcomponent 5.B: Monitoring and Evaluation
Subcomponent 1.C: Institutional Arrangements	Subcomponent 2.B: Wetland Restoration			Subcomponent 5.C: Replication of Results

BUDGET (GEF FINANCING)																				Expenditures by year								
Oracle code and description	Unit	No. of units	Unit cost	Component 1:				Component 2:				Component 3:			Component 4:			Component 5:			PM	Total GEF	Year 1	Year 2	Year 3	Year 4	Year 5	
				1.A	1.B	1.C	Total	2.A1	2.A2	2.B	Total	3.A	3.B	Total	4.A	4.B	Total	5.B	5.C	Total								
5570 International Consultants																												
International consultants (pers. day)	day	4	565				0				0				0	2,155		2,155			0	2,155	1,025		1,130			
Capacity buildibg specialist	month	2	6,465				0				0				0	12,930		12,930			0	12,930	6,465	6,465				
Sub-total international Consultants				0	0	0	0	0	0	0	0	0	0	0	0	15,085	0	15,085	0	0	0	0	15,085	7,490	6,465	1,130	0	0
Project Manager	month	60	1,394	13,940			13,940		12,407		12,407		6,970	6,970	6,970	6,970		6,970			0	43,357	83,644	16,728	18,122	20,588	11,318	
Reporting and contract officer	month	60	1,225	12,198			12,198		10,857		10,857		6,100	6,100	6,100	6,100		6,100			0	38,248	73,502	14,700	14,700	14,700	14,702	
Project assistant	month	60	697	6,970			6,970		6,204		6,204		3,485	3,485	3,485	3,485		3,485			0	21,679	41,823	8,364	9,594	7,994	8,694	
Translator	month	60	1,046	10,456			10,456		9,306		9,306		5,230	5,230	5,230	5,230		5,230			0	32,518	62,740	12,547	12,547	12,547	12,552	
2 Project site implementation coordinators (GD and SD)	month	120	915	9,149	9,149	9,149	27,446		9,149	9,149	18,297		9,149	9,149	18,297	9,149	9,149	18,297			0	27,446	109,783	21,957	21,957	21,957	21,955	
Policy specialist	month	4	3,398	13,593			13,593				0				0			0			0		13,593	3,398	3,398	3,398	3,398	

BUDGET (GEF FINANCING)																				Expenditures by year									
Oracle code and description	Unit	No. of units	Unit cost	Component 1:				Component 2:				Component 3:			Component 4:			Component 5:			PM	Total GEF	Year 1	Year 2	Year 3	Year 4	Year 5		
				1.A	1.B	1.C	Total	2.A1	2.A2	2.B	Total	3.A	3.B	Total	4.A	4.B	Total	5.B	5.C	Total									
Planning specialist	month	6	3,992		3,495		3,495	993	10,555			11,548			0	8,908			8,908			0		23,951	2,719	8,118	7,861	2,533	2,719
MPA mangement specialist	month	34	3,363				0	114,325				114,325			0							0	114,325	20,175	50,438	36,988	3,363	3,362	
Alternative livelihood specialist	month	10	3,485				0					0	34,853		34,853						0		34,853	6,971	6,971	6,971	6,971	6,971	
Environmental Monistring specialist	month	2	3,481				0					0		6,962	6,962						0		6,962		3,481		3,481		
Capacity buildibg specialist	month	4	3,444				0					0			0	13,776					0		13,776	3,444	3,444	3,444		3,444	
Environmental education specialist	month	6	3,259				0					0			0		19,552		19,552		0		19,552	6,518	13,034				
Sub-total national Consultants				66,306	12,644	9,149	88,098	115,318	58,477	9,149	182,944	44,002	37,896	81,897	53,617	28,700	82,317	0	0	0	163,247	598,503	117,521	165,803	136,448	94,532	84,199		
5570 Sub-total consultants				66,306	12,644	9,149	88,098	115,318	58,477	9,149	182,944	44,002	37,896	81,897	68,702	28,700	97,402	0	0	0	163,247	613,588	125,011	172,268	137,578	94,532	84,199		
5650 Contracts																													
Policy analysis and study (50% GEF)	study	1	4,139	4,139			4,139					0			0						0		4,139	4,139					
SEIA study and local policy draft (50% GEF)	study	1	6,954	6,954			6,954					0			0						0		6,954		6,954				
Ecological compensation study and local policy draft (50% GEF)	study	1	7,302	7,302			7,302					0			0						0		7,302			7,301			
Abandones oil well policy draft (50% GEF)	study	1	7,667	7,667			7,667					0			0						0		7,667				7,667		
MPA regulation and local policy draft (50% GEF)	study	1	7,667	7,667			7,667					0			0						0		7,667				7,667		
MPA integrated management study and network strategy	study	1	17,385		17,385		17,385					0			0						0		17,385		17,385				
Long term ecosystem health monitoring plan	study	1	14,603		14,603		14,603					0			0						0		14,603			14,603			
MPA integrated management and networking strategy study (50% GEF)	study	1	6,085		6,085		6,085					0			0						0		6,085		6,084				
Ecosystem restoration analysis and study (50% GEF)	study	1	15,517		15,517		15,517					0			0						0		15,517			15,517			

BUDGET (GEF FINANCING)																				Expenditures by year								
Oracle code and description	Unit	No. of units	Unit cost	Component 1:				Component 2:				Component 3:			Component 4:			Component 5:			PM	Total GEF	Year 1	Year 2	Year 3	Year 4	Year 5	
				1.A	1.B	1.C	Total	2.A1	2.A2	2.B	Total	3.A	3.B	Total	4.A	4.B	Total	5.B	5.C	Total								
Ecosystem health and monitoring study and plan (75% GEF)	study	1	35,206		35,206		35,206															35,206		35,206				
Updating and improving provincial MPA assessment methodologies	study	1	15,334		15,334		15,334															15,334				15,334		
Digital management system for GIS	lump sum	2	17,386				0	34,771														34,771		34,771				
Development of GIS compatible GIS	lump sum	4	17,386				0	69,542														69,542		69,542				
Mangrove ecological restoration protocol	lump sum		9,935				0	9,935														9,935	9,935					
Biodiversity gap analysis	lump sum	2	16,144				0		24,216													24,216	24,215					
Integrated monitoring protocols	lump sum	1	15,659				0		15,659													15,659	15,659					
MPA networking system plan (50% GEF)	lump sum	1	16,274				0		16,274													16,274				16,274		
GIS development for co-management (50% GEF)	lump sum	1	19,177				0		19,177													19,177			19,177			
Integrated MPA monitoring and data sharing	lump sum	3	14,387				0		43,161													43,161			14,387	14,387	14,387	
Landscape analysis and land use change	lump sum	2	4,569				0			9,138												9,138	4,569			4,569		
Ecological restoration protocol and guidelines	lump sum	1	9,934				0			9,934												9,934	9,934					
Satellite images analysis (50% GEF)	lump sum	2	7,153				0			14,307												14,307	7,153					7,153
Baseline survey and restoration study (50% GEF)	lump sum	1	11,922				0			11,922												11,922	11,922					
Restoration design and engineering plans (50% GEF)	lump sum	1	29,903				0			29,903												29,903	29,903					
Wetland observation and landscape changes analysis (50% GEF)	lump sum	1	17,510				0			17,510												17,510						17,509

BUDGET (GEF FINANCING)																				Expenditures by year								
Oracle code and description	Unit	No. of units	Unit cost	Component 1:				Component 2:				Component 3:			Component 4:			Component 5:			PM	Total GEF	Year 1	Year 2	Year 3	Year 4	Year 5	
				1.A	1.B	1.C	Total	2.A1	2.A2	2.B	Total	3.A	3.B	Total	4.A	4.B	Total	5.B	5.C	Total								
Ecosystem services and restoration result assessment (50% GEF)	lump sum	1	12,478				0			12,478	12,478						0			0		12,478						12,478
Assessment of Assessments (AoA)	lump sum	1	17,385				0				0	17,385					17,385			0		17,385		17,385				
Threat assessment of eco-system health	lump sum	2	13,756				0				0	27,512					27,512			0		27,512	13,756					13,756
Ecological Assessment of Assessments (AoA) [50% GEF]	lump sum	1	8,279				0				0	8,279					8,279			0		8,279	8,278					
Social economy and industry survey (baseline) [50% GEF]	lump sum	1	9,562				0				0	9,562					9,562			0		9,562		9,562				
Threat assessment of ecosystem health and mitigation (50% GEF)	lump sum	2	6,878				0				0	13,756					13,756			0		13,756	6,878					6,878
Post-project EIA (50% GEF)	lump sum	1	7,547				0				0	7,547					7,547			0		7,547						7,547
Integrated monitoring indicators developed	lump sum	2	16,557				0				0		33,114				33,114			0		33,114	33,114					
Primary school curriculum development	lump sum	2	12,169				0				0						24,338			24,338		24,338		24,338				
Middle school curriculum development	lump sum	4	12,794				0				0						51,174			51,174		51,174		25,587		25,587		
Core collection in EEC	lump sum	2	22,601				0				0						45,202			45,202		45,202		45,202				
Mid-term evaluation	lump sum	1	36,035				0				0									36,035		36,035			36,035			
Final evaluation	lump sum	1	39,729				0				0									39,729		39,729						39,729
5650 Sub-total Contracts				33,729	104,129	0	137,857	114,248	118,486	105,191	337,924	84,041	33,114	117,155	0	120,714	120,714	75,764	0	75,764	0	789,414	144,983	326,488	107,020	91,485	119,437	
5900 Travel																												
Travel for PSC meetings (35 participants x 5 meetings)	Trips	175	600				0				0									105,000		105,000	21,000	21,000	21,000	21,000	21,000	
5900 Sub-total travel				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105,000	105,000	21,000	21,000	21,000	21,000	21,000	21,000	
5023 Training																												

BUDGET (GEF FINANCING)																					Expenditures by year						
Oracle code and description	Unit	No. of units	Unit cost	Component 1:				Component 2:				Component 3:			Component 4:			Component 5:			PM	Total GEF	Year 1	Year 2	Year 3	Year 4	Year 5
				1.A	1.B	1.C	Total	2.A1	2.A2	2.B	Total	3.A	3.B	Total	4.A	4.B	Total	5.B	5.C	Total							
Workshop on ecological conservation	workshop	2	5,881	11,761			11,761															11,761		5,881	5,881		
SEIA Assessment regulation workshop	workshop	1	9,309	9,309			9,309															9,309			9,309		
Peer review meetings (50% GEF)	meet	3	2,284	6,851			6,851															6,851		2,284	2,284	2,284	
Data exchange protocols between MAFLG	workshop	3	5,800			17,399	17,399															17,399	5,800	5,800	5,800		
Co-ordinating meeting (20% GEF)	meet	5	2,781			13,907	13,907															13,907	2,781	2,781	2,781	2,781	2,781
Stakeholder's annual consultations (20% GEF)	meet	5	1,866			9,332	9,332															9,332	1,866	1,866	1,866	1,866	1,866
Management plan workshop	workshop	12	10,363				0	117,891				117,891										117,891		28,164	79,365		10,363
MPA management (50% GEF)	course	2	25,130				0				50,261											50,261			25,130		25,130
Digital data management	course	2	9,399				0				18,799											18,799		9,399			9,399
Information sharing and co-enforcement	workshop	2	9,623				0				19,246											19,246		9,623	9,623		
Conservation technology and GIS application	course	1	5,464				0				5,464											5,464		5,464			
MPA speciality courses	course	2	5,744				0				11,488											11,488		5,744			5,744
METT assessment	lump sum	1	10,413				0				10,413											10,413			10,413		
Local skill training	lump sum	1	5,204				0						5,204									5,204	5,204				
Eco-tourism training for local villagers	lump sum	2	13,229				0						26,457									26,457		13,229			13,229
Eco-farming experience exchange	workshop	3	2,740				0						8,221									8,221		2,740	2,740	2,740	

BUDGET (GEF FINANCING)																					Expenditures by year						
Oracle code and description	Unit	No. of units	Unit cost	Component 1:				Component 2:				Component 3:			Component 4:			Component 5:			PM	Total GEF	Year 1	Year 2	Year 3	Year 4	Year 5
				1.A	1.B	1.C	Total	2.A1	2.A2	2.B	Total	3.A	3.B	Total	4.A	4.B	Total	5.B	5.C	Total							
Integrated monitoring protocols training	workshop	7	12,594				0					89,436	89,436				0			0		89,436	25,507	25,507	25,507	12,914	
Integrated ecosystem "health" monitoring plan	workshop	6	9,239				0					55,434	55,434				0			0		55,434	18,478	36,956			
Integrated monitoring protocol development	lump sum	4	12,729				0					50,914	50,914				0			0		50,914	25,457	25,457			
Review & evaluation meetings	meeting	4	10,363				0					41,450	41,450				0			0		41,450			20,725		20,725
Joint meeting of agencies (57% GEF)	meeting	10	13,559				0					141,537	141,537				0			0		141,537	28,307	28,307	28,307	28,307	28,307
Training courses	course	8	13,244				0						0	104,664		104,664				0		104,664	26,058	26,058	13,244	26,058	13,244
Cross-sites visits (50% GEF)	pers. visits	45	456				0						0	112,818		112,818				0		112,818	17,427	33,984	17,427	26,554	17,427
Estuarine ecosystem core module	lump sum	3	15,492				0						0	45,733		45,733				0		45,733		15,492	14,750	15,492	
Training for public awareness in volunteers	lump sum	2	5,464				0						0	14,405		14,405				0		14,405		14,405			
International training sessions (50% GEF)	person	20	1,683				0						0	33,656		33,656				0		33,656	16,828	16,282			
Project management training	lump sum	2	24,245				0						0	48,490		48,490				0		48,490	24,245	24,245			
Painting competition (50% GEF)	lump sum	2	6,389				0						0		12,778	12,778				0		12,778			12,778		
Public decision-maker forum (50% GEF)	meeting	2	13,417				0						0		26,834	26,834				0		26,834				26,834	
Ecological camps (50% GEF)	lump sum	2	7,502				0						0		15,005	15,005				0		15,005		7,502			7,502
PSC meeting	meeting	5	6,047				0						0							0	30,237	30,237	6,047	6,047	6,047	6,047	6,047
Annual workplan preparation (15% GEF)	workshop	10	2,086				0						0							0	19,488	19,488	3,898	3,898	3,898	3,898	3,898
Coordination of PM with local project partners	meeting	10	1,400				0						0							0	16,057	16,057	3,211	3,211	3,211	3,211	3,211
PCU M&E meetings	meeting	5	3,660				0						0							0	18,298	18,298	3,660	3,660	3,660	3,660	3,660
GD M&E meetings	meeting	5	3,660				0						0							0	18,298	18,298	3,660	3,660	3,660	3,660	3,660
SD M&E meetings	meeting	5	3,660				0						0							0	18,298	18,298	3,660	3,660	3,660	3,660	3,660
5023 Sub-total training				27,921	0	40,637	68,558	117,891	115,670	0	233,561	39,882	378,771	418,653	360,508	54,617	415,124	54,894	0	54,894	65,781	1,256,571	222,092	371,851	312,807	198,337	151,481
6000 Expendable procurement																											

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BUDGET (GEF FINANCING)																				Expenditures by year									
Oracle code and description	Unit	No. of units	Unit cost	Component 1:				Component 2:				Component 3:			Component 4:			Component 5:			PM	Total GEF	Year 1	Year 2	Year 3	Year 4	Year 5		
				1.A	1.B	1.C	Total	2.A1	2.A2	2.B	Total	3.A	3.B	Total	4.A	4.B	Total	5.B	5.C	Total									
Publications of reports and draft regulation (50% GEF)	copies	100	3.7	374			374															374							
Report and publications	3 copy	400	9	3,698			3,698															3,698		925	925	1,849			
Reports (networking strategy)	copies	200	5.2		1,042		1,042															1,042		1,042					
Reports (ecological health monitoring plan)	copies	200	5.5		1,095		1,095															1,095			1,095				
Reports (restoration plan)	copies	400	9.4		3,742		3,742															3,742			1,871	1,871			
Management plan publication	lump sum	12	5,933				0	70,345														70,345			22,883	47,462			
Training manuals	copies	200	7.7				0		1,535													1,535			768		768		
Ecofarming handbook	copies	300	9.9				0						2,959									2,959		986	986	986			
Training materials	copies	200	9.1				0								1,827							1,827		914		914			
Textbook publication (primary)	copies	4000	6.95				0									27,816						27,816		27,816					
Textbook publication (secondary)	copies	4000	6.95				0									27,816						27,816		27,816					
Poster design and printing	copies	1000	21.96				0									21,958						21,958	4,392	4,392	4,392	4,392	4,392		
Brochure design and printing	copies	5000	3.66				0									18,298						18,298	3,660	3,660	3,660	3,660	3,660		
Painting collection publication	copies	2000	15.3				0									44,085						44,085				44,085			
Webpage	lump sum	5	4,896.6				0															24,483	24,483	24,483	4,897	4,897	4,897	4,897	4,897
Newsletter	editions	15	914.9				0															13,723	13,723	13,723	2,745	2,745	2,745	2,744	2,745
Best practices	lump sum	5	26,163.8				0															130,819	130,819					130,819	
Other publications	time	5	1,097.8				0															5,489	5,489	5,489	1,098	1,098	1,098	1,098	1,098
6000 Sub-total expendable procurement				4,072	5,879	0	9,952	70,345	1,535	0	71,880	2,959	0	2,959	1,827	139,973	141,800	0	174,514	174,514	0	401,105	16,790	76,289	45,692	113,957	148,377		
6100 Non-expendable procurement																													
Server	unit	6	3,477				0	21,566			21,566											21,566		14,082	3,650	3,834			

BUDGET (GEF FINANCING)																					Expenditures by year							
Oracle code and description	Unit	No. of units	Unit cost	Component 1:				Component 2:				Component 3:			Component 4:			Component 5:			PM	Total GEF	Year 1	Year 2	Year 3	Year 4	Year 5	
				1.A	1.B	1.C	Total	2.A1	2.A2	2.B	Total	3.A	3.B	Total	4.A	4.B	Total	5.B	5.C	Total								
Mobil PDAs	unit	6	3,477				0	21,566				21,566				0				0		21,566		14,082	3,650	3,834		
Spotting camera	unit	1	1,987				0	1,987				1,987				0				0		1,987	1,987					
Binoculars (50% GEF)	unit	13	662				0	6,262				6,262				0				0		6,262	4,802		1,460			
Camera Lens	unit	1	4,967				0	4,967				4,967				0				0		4,967	4,967					
Hydrophone	unit	1	3,311				0	3,311				3,311				0				0		3,311	3,311					
Bathymeter	unit	4	530				0	2,119				2,119				0				0		2,119	2,119					
Monitor	unit	4	2,190				0	8,666				8,666				0				0		8,666	1,986		2,190	4,490		
Data transmitter (50% GEF)	unit	4	4,564				0	18,266				18,266				0				0		18,266		4,347	4,564	9,356		
Telescope	unit	2	730				0	1,460				1,460				0				0		1,460			1,460			
Wetland observation equipment	set	15	538				0	8,070				8,070				0				0		8,070	8,070					
Diving equipment	set	4	3,477				0	12,170				12,170				0				0		12,170		12,170				
Underwater digital Camera	unit	1	1,043				0	1,043				1,043				0				0		1,043		1,043				
Digital camera	unit	6	464				0	2,782				2,782				0				0		2,782	2,782					
Workstation computer	unit	1	5,911				0	5,911				5,911				0				0		5,911		5,911				
4x4 vehicle (20% GEF)	unit	1	7,997				0	7,997				7,997				0				0		7,997		7,997				
Jeep	unit	1	33,115				0	33,115				33,115				0				0		33,115		33,115				
Camera body Nikon D3x	unit	1	7,451				0	7,451				7,451				0				0		7,451	7,451					
Camera GPS unit	unit	1	298				0	298				298				0				0		298	298					
Lens Nikon 400mm f2.8	unit	1	10,431				0	10,431				10,431				0				0		10,431	10,431					
Lens Nikon 17-55mm f2.8	unit	1	2,484				0	2,484				2,484				0				0		2,484	2,484					
GIS software	unit	1	76,165				0	76,165				76,165				0				0		76,165	76,165					

BUDGET (GEF FINANCING)																					Expenditures by year							
Oracle code and description	Unit	No. of units	Unit cost	Component 1:				Component 2:				Component 3:			Component 4:			Component 5:			PM	Total GEF	Year 1	Year 2	Year 3	Year 4	Year 5	
				1.A	1.B	1.C	Total	2.A1	2.A2	2.B	Total	3.A	3.B	Total	4.A	4.B	Total	5.B	5.C	Total								
Rangefinder	unit	1	1,035				0	1,035				1,035				0				0		1,035	1,035					
Underwater video recorder	4set	1	9,604				0	9,604				9,604				0				0		9,604	9,604					
Patrol/working boat (50% GEF)	unit	1	37,255				0	37,255				37,255				0				0		37,255	37,255					
Computer	unit	3	1,324				0					0				3,973				3,973		3,973	3,973					
Special Digital Camera	unit	1	1,324				0					0				1,324				1,324		1,324	1,324					
Laptop	unit	3	1,987				0					0				5,960				5,960		5,960	5,960					
Scanner	unit	1	1,159				0					0				1,159				1,159		1,159	1,159					
Photocopy machine	unit	1	662				0					0				662				662		662	662					
6100 Sub-total non-expendable procurement				0	0	0	0	305,979	0	0	0	305,979	0	0	0	13,078	0	13,078	0	0	0	319,057	187,824	92,747	16,973	21,513	0	
6300 GOE budget																												
Centre monitoring office (50% GEF)	lump sum		8,693				0	8,693				8,693				0				0		8,693	8,693					
Auditing	year	5	3,425				0					0				0				0	17,125	17,125	3,425	3,425	3,425	3,425	3,425	
Miscellaneous							0	2,743				2,743				712				712	393	2,393	5,848	1,262	1,869	1,869	848	
6300 Sub-total GOE budget				0	0	0	0	2,743	8,693	0	11,436	0	0	0	712	0	712	393	0	2,393	17,125	31,666	4,687	13,987	5,294	4,273	3,425	
TOTAL				132,027	122,652	49,786	304,465	726,524	302,861	114,339	1,143,724	170,883	449,780	620,663	444,827	344,004	788,830	131,051	174,514	307,564	351,153	3,516,400	722,390	1,074,630	646,363	545,097	527,919	

ANNEX 2. RESULTS FRAMEWORK AND MONITORING

Narrative Summary	Verifiable Indicators	Means of Verification	Assumption/Risks
GOAL			
<p>The <u>goal</u> of the Project is to improve existing efforts to conserve coastal biodiversity in China’s major estuarine ecosystems.</p>	<ul style="list-style-type: none"> • Two ecologically “healthy” estuaries (Yellow River and Pearl River Estuaries in Shandong and Guangdong Provinces, respectively) defined by the restoration of critical habitats, processes and functions achieved through an ecosystem-based approach and measured by increases in indices of ecosystem “health.” • Uptake of ecosystem-based approach employed in two estuaries in China and abroad. 	<ul style="list-style-type: none"> • Field surveys • Legal decrees and launching of similar initiatives elsewhere. 	
OBJECTIVES			
<p>The <u>project’s specific objective</u> is to mainstream the conservation of estuarine biodiversity in economic development sector plans and develop a series of “best practices” based on experiences derived from project supported field activities focusing on the creation of protected area networks and wetland conservation and restoration in the Yellow and Pearl River Estuaries. This would be achieved through: (i) strengthening of individual marine protected areas (MPAs) to better achieve their conservation objectives; (ii) creation of new MPAs where gap analysis indicates that examples of critical habitats and species remain outside of conservation protection; (iii) promotion of the establishment of MPA networks among existing marine protected areas; (iv) restoration of degraded wetland habitats; (v) addressing policy gaps/failures and need for improved planning and institutional arrangements to reinforce government</p>	<ul style="list-style-type: none"> • Political and public commitment to support a second phase of the China Estuarine program demonstrated by mobilization of financial resources (both domestic and external) to support its preparation and implementation. • Development and application of key environmental indicators in project year (PY) 1 demonstrating quantifiable improvements of environmental health at system level by PY 5. 	<ul style="list-style-type: none"> • Written declarations of SOA / Municipalities to support 2nd phase. • Annual financial statements • Field surveys supported through project supported monitoring program and independent observations of other institutions. 	<ul style="list-style-type: none"> • No long-term changes in state & provincial environmental policy priorities. • No significant long-term environmental changes at global or regional scales.

<p>efforts to create and conserve estuarine ecosystems; (vi) facilitating closer collaboration and improved data collection and interpretation among agencies responsible for monitoring ecological conditions in the two Estuaries; (vii) building institutional capacity; (viii) promotion of increased public awareness of the significance of biodiversity resources in these two deltaic systems and the role MPAs and networks play in there long-term conservation; and (ix) the development and dissemination of a series of “best practices.”</p>			
OUTCOMES (Component Purposes)	Verifiable Indicators	Means of Verification	Assumption/Risks
<p>1. Policy, Planning & Institutional Arrangements</p> <p>Outcome 1.1 Improved policies and policy formulation in support of biodiversity conservation in estuarine ecosystems.</p> <p>Outcome 1.2. Achievement of a more integrated approach towards promoting the conservation of biodiversity and associated habitats and ensuring the long-term “health” of the Yellow and Pearl River Estuarine ecosystems.</p> <p>Outcome 1.3. Improved institutional coordination demonstrated through strengthened policy formulation, decision-making and integrated planning in support of biodiversity conservation.</p>	<ul style="list-style-type: none"> • At least one new non-project supported biodiversity conservation policy formulated and adopted in each of two municipal 13th 5 year development plans. • Add 5 METT indicators to existing MPA assessment scorecards in Shandong and Guangdong. • Two long-term ecological “health” monitoring plans adopted and implemented by participating agencies. • 5 conflicts adversely (2 in Guangdong and 3 in Shandong) affecting the two estuaries resolved during life of project (LOP). 	<ul style="list-style-type: none"> • Policy documents • Revised local scorecards • Integrated annual work plans from participating agencies • Agreements reached by the ICM (Shandong) and MALG (Guangdong) documented my minutes of the meetings 	<ul style="list-style-type: none"> • No medium-term (5 years) changes in state & provincial environmental policy priorities. • Political will significant to support enforcement of new policy initiatives • Global financial crisis does not significantly impact China’s commitment to environmental conservation.
<p>2. MPA Networking and Wetland Restoration</p> <p>Outcome 2.1. Improved management effectiveness of existing, participating</p>	<ul style="list-style-type: none"> • METT scores of MPAs increased by individual targets (please see table of baseline and targets in section 6.2 	<ul style="list-style-type: none"> • METT forms at MTR and Project closure 	

<p>MPAs.</p> <p>Outcome 2.2. Improved ecological connectivity among participating MPAs in two estuaries.</p> <p>Outcome 2.3. Increased provision of ecological “goods and services” through the restoration of wetlands in two ecosystems.</p>	<p>Monitoring and Evaluation).</p> <ul style="list-style-type: none"> • Increased density of fish egg and fish larva of at least 10% in two sites (please see baseline in the section 6.2 Monitoring and Evaluation). • Increased presence of indicator migratory bird species (increase in Oriental White Stork as quantified through census of nests from 3 to 10) (Shandong); increased coverage of mangrove by 20% (baseline: 5% coverage on Qi’ao Island in Guangdong). 	<ul style="list-style-type: none"> • Annual field surveys and reports • Annual census counts • Field surveys 	
<p>3. Threat Analysis, Mitigation and Monitoring</p> <p>Outcome 3.1. Increased investment for improved environmental quality in the two estuaries.</p> <p>Outcome 3.2. Reduced human – induced stress on critical habitats in the two estuaries.</p> <p>Outcome 3.3. Improved relationships between the local communities and the MPA staff.</p> <p>Outcome 3.4. Improved decision-making leading to ecosystem-based management in two estuaries.</p>	<ul style="list-style-type: none"> • Relevant investments estimated to increase by 5 % quantified through “mainstreaming” in municipal level 13th 5 year plans. • Reduced area of degraded land in Shandong project area (5,000 ha); Effective management control over 60% of area in Miaowan MPA and effectively manage the ecological tour activity in the rest area. • Formation of 5 local village conservation groups (Shandong) and 500 volunteers participating in MPA activity and formation of 1 local village conservation group (Guangdong). • Ecosystem based principles “mainstreamed” at minimum one time into decisions taken by local coordination bodies each Estuary leading to improved ecosystem “health.” 	<ul style="list-style-type: none"> • 13th 5 year municipal development plan • Field surveys • Fisher surveys/counts • Registration forms • Articles of incorporation • Minutes of meetings and decisions taken 	
<p>4. Capacity Building and Increasing Environmental Awareness</p> <p>Outcome 4.1. Increased institutional capacity and political support for the conservation of biodiversity in the two project supported demonstration sites.</p>	<ul style="list-style-type: none"> • Recognition of principles of estuarine biodiversity conservation manifested through at least 2, 13th, 5 year sector plans. 	<ul style="list-style-type: none"> • Municipal 13th, 5 year sector plans 	

<p>Outcome 4.2. Increased public participation and awareness of the significance of biodiversity conservation and estuarine ecosystems.</p>	<ul style="list-style-type: none"> • Primary and secondary school curriculum developed during the project adopted in other school systems in each site. • Number of communities engaged in estuarine biodiversity conservation increased by 30 % over baseline levels in the two sites. 	<ul style="list-style-type: none"> • School educational materials • Public awareness materials distributed in anticipation and during the events. 	
<p>5. Project Management, M& E and Replication of Project Results</p>			
<p>Outcome 5.1. An effectively managed project that achieves its stated objectives.</p> <p>Outcome 5.2. Project well monitored and evaluated.</p> <p>Outcome 5.3. Evidence that “best practices” from the ecosystem-based approaches in the two sites is being taken up and replicated elsewhere in the province and country.</p>	<ul style="list-style-type: none"> • Program activities executed in a timely and cost-effective manner. • Potential risks identified and resolved in the project’s early stages. • Chinese project-supported experiences cited in the design, preparation and implementation of at least 2 other projects in the country. 	<ul style="list-style-type: none"> • Project management reports • M&E reports • Web page statistics 	
<p>Component 1. Policy, Planning & Institutional Strengthening.</p>			
<p>Outputs (Sub-Component Purposes)</p>	<p>Verifiable Indicators</p>	<p>Means of Verification</p>	<p>Assumption/Risks</p>
<p><i>1.A. Policy</i></p> <p>Output 1.1. Establishment of an ecological compensation mechanism (s) for biodiversity conservation at local levels.</p> <p>Output 1.2 Strategic EIA applied to economic development sector’s plans and programs in Dongying City (Yellow River) and Zhuhai City (Pearl River).</p> <p>Output 1.3. Draft local regulations in support of creation of MPA networks.</p>	<ul style="list-style-type: none"> • Two local government regulations providing for ecological compensation in support of wetlands restoration. • Two draft municipal rules in conformity with State Environmental Impact Assessment Law recognizing Strategic EIA as policy tool. • Two draft local MPA regulations. One national policy reform ref. the incorporation of MPA networking in existing SOA regulations. 	<ul style="list-style-type: none"> • Local regulations • Municipal regulations • Local regulations 	<ul style="list-style-type: none"> • No personnel changes which would impact on project consistency • Natural disasters would not significantly impact project implementation • Devaluation of the US\$ against RMB would not significantly increase costs of activities and possibly affect achievement of local outputs and issues of common interest.

<p><i>1.B. Planning</i></p> <p>Output 1.4. Preparation of long-term MPA integrated management and networking plans developed.</p> <p>Output 1.5. Development of medium to long-term restoration strategies for estuarine ecosystems.</p> <p>Output 1.6. Medium to long-term ecosystem health monitoring plans and protocols developed.</p>	<ul style="list-style-type: none"> • Two MPA integrated management and networking plans. • Two medium-to long-term restoration strategies. • Two medium to long-term ecosystem health monitoring plans prepared. 	<ul style="list-style-type: none"> • MPA networking strategies • Restoration strategies • Ecosystem health monitoring plans 	<ul style="list-style-type: none"> • Key stakeholder institutions agree to collaborate effectively in project activities • Decision makers interested in considering and formulating new policy actions
<p><i>1.C. Institutional Arrangements</i></p> <p>Output 1.7. Increased operational effectiveness of two existing estuarine institutional coordination mechanisms in Shandong (ICM) and Guangdong (MALG).</p>	<ul style="list-style-type: none"> • Data exchange protocols negotiated and implemented. • Increased frequency of meetings documented with minutes. 	<ul style="list-style-type: none"> • Protocols • Meeting minutes 	<ul style="list-style-type: none"> •
<p>Component 2: MPA Networking and Wetland Restoration</p>			
<p>Outputs (Sub-Component Purposes)</p>	<p>Verifiable Indicators</p>	<p>Means of Verification</p>	

<p><i>2.A. MPA Networking</i></p> <p>Output 2.2. Management effectiveness of eleven MPAs strengthened through provision of support for updating of management plans, equipment for monitoring and surveillance, and staff training and introduction of principles of co-management and sustainable financial arrangements.</p> <p>Output 2.1. Biodiversity conservation gap analysis and ecological connectivity strategy completed</p> <p>Output 2.3. Creation of at least one new provincial level MPA</p> <p>Output 2.4. Establishment of MPA coordinating networking mechanisms in two estuaries.</p>	<ul style="list-style-type: none"> • 11 updated management plans including measures to support co-management, biodiversity monitoring, and ecological connectivity at the MPA network level • GIS system operating in 6 MPAs to support management, surveillance and monitoring. • Equipment for surveillance and monitoring upgraded in 11 MPAs • Two gap analysis report • One legal document from provincial authorities • Two Memoranda of Understanding (MOU) signed among MPA networking members. • Agreed on protocols on monitoring, enforcement and information sharing in the 12 project supported MPAs. 	<ul style="list-style-type: none"> • Management plans • GIS systems • Equipment • Report • Provincial documents • MOUs • Protocols
<p><i>2.B. Wetland Restoration</i></p> <p>Output 2.5. 2,000 ha of wetlands restored of which at least 1,000 ha of grass wetlands (Yellow River)</p> <p>Output 2.6. 110 ha of mangroves restored (Pearl River) including the removal of abandoned mariculture facilities in Hengqin marine park.</p>	<ul style="list-style-type: none"> • Verified report quantifying change in land use area. • Verified report quantifying change in land use area. 	<ul style="list-style-type: none"> • Independent field report • Independent field report
<p>Component 3: Threat Analysis, Mitigation and Monitoring and Enforcement</p>		
<p>Outputs (Sub-Component Purposes)</p>	<p>Verifiable Indicators</p>	<p>Means of Verification</p>
<p><i>3.A. Threat Analysis and Mitigation</i></p> <p>Output 3.1. Comprehensive analysis of threats to the ecological “health” of the two ecosystems and investment strategies developed and implemented through municipal level 13th 5 years plans</p>	<ul style="list-style-type: none"> • Two reports on ecological – based assessments of assessments (AOAs). • Two investment strategies and reflected in municipal level 13th 5 years plans 	<ul style="list-style-type: none"> • Assessment reports • Strategy reports • Analysis reports

<p>Output 3.2. Sustainable production and service activities generating local income and reducing stress on critical estuarine habitats developed and implemented based on: (a) eco-farming of mitten crab (Yellow River Estuary); and (b) ecotourism, ecological compensation, PA employment in Hengqin Marine Park (Pearl River Estuary).</p> <p>Output 3.3 Village conservation groups operating and local communities participating in MPA activities</p>	<ul style="list-style-type: none"> • 25 ha of agricultural land in the NNR core zone converted to the eco-farming of mitten crab. • Provide sustainable incomes for an estimated 3,000 and 10 – 15 families of fishermen and/or agriculturalists in the YRE and PRE, respectively. • Five local village conservation groups operating (Shandong); and 500 volunteers participating in MPA activities and formation of at least 1 local village conservation group (Guangdong) 	<ul style="list-style-type: none"> • Field survey reports • Site visits in supervision missions
<p><i>3.B. Monitoring</i></p> <p>Output 3.4. Multi-agency, integrated monitoring plan developed and implemented.</p>	<ul style="list-style-type: none"> • 2 MOUs and supporting protocols and annual meetings and minutes. 	<ul style="list-style-type: none"> • MOUs • Protocols • Minutes
Component 4: Capacity Building and Increasing Environmental Awareness		
Outputs (Sub-Component Purposes)	Verifiable Indicators	Means of Verification
<p><i>4.A. Capacity Building</i></p> <p>Output 4.1. International and in-country training for senior officials and technical staff in ecosystem-based principles applied to the management and conservation of estuaries</p> <p>Output 4.2: Training courses for community volunteers.</p> <p>Outputs 4.3: Cross-site visits</p> <p>Output 4.4. MPA managers and technical</p>	<ul style="list-style-type: none"> • 10 training courses over LOP including decision-making on biodiversity protection, information analysis and case studies for senior managers, officials and technical staff from two sites to improve capacity of decision-making in support of biodiversity conservation in estuarine ecosystems. (20-30 people). • 2 training workshops (15-20 participants each), one per site, for increasing capacity in public participation in MPA management including bird and dolphin watching, mangrove rangers etc. • 44 person cross-site visits between the two sites. • 20 MPA managers and technical staff have 	<ul style="list-style-type: none"> • Course outlines • List of attendees • Supervision mission reports • Course outlines • List of attendees • Travel records • List of participants • Travel records

<p>staff have attended international training session under south-south cooperation in:</p> <p>1) co-management mechanisms for increased sustainability of estuarine MPAs; 2) ecosystem approach to estuarine biodiversity conservation involving sectors operating in the areas of influence of the MPAs; and 3) systematic monitoring of ecosystem health as an important component in biodiversity</p>	<p>attended international training session under south-south cooperation</p>	<ul style="list-style-type: none"> List of participants Invitation letters
<p><i>4.B. Increasing Environmental Awareness (environmental education)</i></p> <p>Output 4.5. Increased student awareness and knowledge of the significance of marine biodiversity conservation and the role of MPAs.</p> <p><i>(public awareness)</i></p> <p>Output 4.6. Increased stakeholder awareness for marine biodiversity conservation and estuarine ecosystems.</p>	<ul style="list-style-type: none"> 2 curricula developed for 2-3 school at each site. 100 students per year know the project and relevant knowledge at each estuary. At least 500 volunteers and other stakeholders in each site participate in the publicity activities. At least 20 decision makers participate in annual public forum about ecosystem based management. 	<ul style="list-style-type: none"> Project management reports Project M & E reports Examples of PA materials Examples of PA materials List of participants List of participants Minutes of issues discussed.
<p>Component 5: Project Management, M&E and replication of Project Results</p>		
<p>Outputs (Sub-Component Purposes)</p>	<p>Verifiable Indicators</p>	<p>Means of Verification</p>
<p><i>5.A Project Management</i></p> <p>Output 5.1. Project Coordination Unit (PCU) created to manage and coordinate GEF supported activities and local project units</p>	<ul style="list-style-type: none"> Documentation of GEF supported activities integrated into relevant SOA, GPBOF and SPBOF activities being implemented on the ground. GEF reporting requirements complied with in a timely and satisfactory manner. 	<ul style="list-style-type: none"> Project management reports Project M&E reports GEF specific reporting products
<p><i>5.B. Monitoring and Evaluation</i></p> <p>Output 5.2. SOA's, GPBOF and SPBOF M&E capacity strengthened to supervise GEF supported activities</p>	<ul style="list-style-type: none"> GEF required monitoring requirements integrated into SOA's, GPBOF and SPBOF M&E system. GEF reporting requirements complied with in a timely and satisfactory matter. Midterm and final evaluations conducted 	<ul style="list-style-type: none"> Review of M&E system parameters and data collection methodology Project monitoring and evaluation reports
<p><i>5.C Replication of Results</i></p>	<ul style="list-style-type: none"> Webpage established and periodic updates; semi-annual newsletter and at least 5 	

Output 5.3. Knowledge management system established and implemented	project generated “best practices” produced and distributed.	<ul style="list-style-type: none">• Media outputs• Published “best practices”	
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ANNEX 3. PROVISIONAL FIVE YEAR WORK PLAN

	PY 1				PY 2				PY 3				PY 4				PY 5			
Component 1. Policy, Planning and Institutional Arrangements																				
Subcomponent 1.A: Policy																				
Workshop and public consultation on PRE CWD regulation (GD)																				
Stakeholder consultations on ecological compensation study (GD)																				
Surevy on PRE CWD regulations (GD)																				
Workshops on PRE CWD regulations (GD)																				
SEIA assessment regulation workshop(s) (GD)																				
Publication of reports and drafts of regulations (GD)																				
General provincial environmental policy analysis (SD)																				
SEIA study and local policy draft (SD)																				
Ecological compensation policy study and local policy draft (SD)																				
Abandoned oil well policy draft (SD)																				
MPA regulations and local policy draft (SD)																				
Publication of reports and publications (SD)																				
Subcomponent 1.B: Planning																				
MPA integrated management study and network strategy (GD)																				
Long-term ecosystem health monitoring plan (GD)																				
PRE ecosystem restoration planning workshops (GD)																				
PRE ecosystem restoration plan preparation and review meetings (GD)																				
Reports and publications (GD)																				
MPA integrated and networking strategy (SD)																				
Ecosystem restoration analysis and study (SD)																				
Ecosysem health and monitoring plan (SD)																				
Updating provincial MPA assessment methodologies (SD)																				
Review meetings (SD)																				
Reports and publicatons (SD)																				

	PY 1	PY 2	PY 3	PY 4	PY 5
Subcomponent 1.C: Institutional Arrangements					
Data Exchange protocols negotiated (MALG) (GD)		● ●	● ●	● ●	● ●
Coordination meetings (GD)		● ●	● ●	● ●	● ●
Stakeholder annual consultation meetings (GD)		● ●	● ●	● ●	● ●
Information sharing and data exchange protocol negotiated (SD)		● ●	● ●		
ICM data sharing website established (SD)					● ● ● ●
Review meetings (SD)		● ●	● ●	● ●	
ICM coordination meetings (SD)		● ●	● ●	● ●	● ● ● ●
Component 2. MPA Networking and Wetland Restoration					
Subcomponent 2.A: Strengthening of Individual MPAs					
Equipment purchase (varies by MPA)		● ●	● ●	● ●	● ●
GIS digital management system				● ●	
Studies (varies by MPA)			● ●		
Management plan preparation and publication (varies by MPA)		● ●	● ●	● ●	● ●
MPA baseline and monitoring study (SD MPAs)			●		●
Infrastructure construction (5 SMPAs-SD)				● ● ● ●	
Subcomponent 2.B: MPA Networking					
Biodiversity gap analysis (GD & SD)		● ●			
Establishment of integrated monitoring protocols (GD & SD)		● ●	● ●	● ●	● ●
MPA training (GD & SD)		● ●			● ●
Digital data management training (GD & SD)			● ●		● ●
METT assessment training (SD)				● ●	
Biodiversity protection and network planning training (SD)		● ●		● ●	● ●
Civil Works (GD)			● ●	● ●	
Information sharing and collaborative enforcement (GD & SD)		● ●	● ●	● ●	● ●
GIS development for co-management (SD)				● ●	
MPA networking system plan (SD)				● ●	

	PY 1				PY 2				PY 3				PY 4				PY 5			
Co-management meetings (SD)				●				●				●				●				●
Training materials preparations (DG & SD)			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Subcomponent 2.C: Wetland Restoration																				
Landscape analysis and landuse change assessment (GD & SD)				●	●	●	●								●	●	●	●	●	
Ecological restoration protocol and guidelines preparation (GD)			●	●																
Restoration investments in GD (Hengqin MP, Qiao Island NR)			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Baseline survey and restoration study (SD)						●	●												●	●
Restoration design and engineering plans (SD)																			●	●
Ecosystem services and restoration results assessment (SD)																				
Restoration investments (SD)					●	●	●	●												
Reports and publications (SD)			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Component 3. Threat Analysis and Mitigation and Monitoring																				
Subcomponent 3.A: Threat Analysis and Mitigation																				
Ecological AoA (GD & SD)			●	●	●	●														
Local skills training (GD & SD)			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Hengqin MP ecotourism plan (GD)			●	●																
Ecotourism study (GD)						●	●													
Workshop on ecotourism plannin (GD)			●	●																
Social economy and industry study (SD)						●	●													
Post-project EIA and Threat Assessment (GD & SD)																	●	●	●	
Local monitoring program (SD)										●	●									
Local farmer/fisher meetings (SD)					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Publications and reports (SD)						●									●					
Subcomponent 3.B: Monitoring																				
Purchase of equipment (GD)			●	●																
Training in integrated monitoring (GD & SD)			●	●		●	●			●	●			●	●					
Monitoring indicator development (GD & SD)			●	●																
Monitoring plan developed (GD & SD)				●	●	●														

	PY 1				PY 2				PY 3				PY 4				PY 5			
Integrated monitoring protocol negotiated (GD & SD)				●	●	●														
Monitoring plan implemented (GD & SD)					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Coordination meetings (GD & SD)				●				●				●				●				●
Publications and reports (GD & SD)				●				●				●				●				●
Component 4. Capacity Building and Increasing Environmental Education and Public Awareness																				
Subcomponent 4.A: Capacity Building																				
Equipment purchase			●	●																
Project management training (PCU and SIU staff)		●	●			●				●										
Training courses (SOA, GD & SD sr. officials)			●				●				●				●				●	
Cross-site visits (SOA, GD & SD)							●	●							●	●				
Training courses (SOA, GD & SD technicians)			●	●	●	●					●	●	●	●						
Training for volunteers					●	●	●	●												
South-south training (SOA, GD & SD staff)				●																
Training materials preparation and publication			●	●	●	●	●	●	●	●	●	●	●	●	●	●				
Subcomponent 4.B: Increasing Environmental Education and Public Awareness																				
Purchase of equipment and materials (GD & SD)			●	●																
Primary school curriculum development (GD & SD)					●	●	●													
Secondary school curriculum development (GD & SD)					●	●	●													
Purchase of “core” collection for EEC (GD & SD)					●	●	●	●												
Reefcheck campaign (GD & SD)					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Painting competitions (GD & SD)										●	●									
Student lectures (GD & SD)					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Public decision-maker fora (GD & SD)													●							
Publications, brochures, poster design, printing and distribution (GD & SD)				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Component 5. Project Management, M&E and Replication of Project Results																				

	PY 1				PY 2				PY 3				PY 4				PY 5			
Subcomponent 5.A: Project Management																				
Contracting of PCU and provincial staff		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Establishment of operational offices in SOA and provinces	●	●																		
Subcomponent 5.B: Monitoring & Evaluation																				
Inception workshop	●																			
Preparation of PIR and monitoring plan	●																			
Periodic reporting		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
PCU M&E meetings				●				●				●				●			●	
GD M&E meetings				●				●				●				●			●	
SD M&E meetings				●				●				●				●			●	
Mid-term evaluation										●										
Final evaluation																			●	
Subcomponent 5.C: replication of Results																				
Creation and maintenance of web page			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Printing and dissemination of newsletter		●	●	●		●	●	●		●	●	●		●	●	●		●	●	
Preparation, publication and dissemination of “best practices”																		●	●	

ANNEX 4. DRAFT TERMS OF REFERENCE (TORS)

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity Conservation, Restoration and Protected Area Networking in China

1. Draft Terms of Reference: PCU PROJECT MANAGER (national consultant)

Background and Tasks:

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCIO), the PCU project manager will be responsible for ensuring that this happens in an effective and lasting manner, he/she will have the following responsibilities and functions:

1. Ensure smooth implementation of the project in accordance with the project document and FAO's procedures. In particular, establish good administrative procedures for coordination of the work of the provincial and site level project management units and ensure that the different parts of the project work well towards a common goal;
2. He/she shall liaise directly with designated officials of the PSC, existing and potential project donors, and others as deemed appropriate and necessary by the PSC or by him/herself;
3. He/she shall be responsible for coordinating, overseeing the preparation of, and the delivery of all substantive, managerial and financial reports from and on behalf of the project;
4. He/she will supervise all project staff in the PCU as well as the project budget. Certify attendance sheets, and oversee the establishment and operation of the project personnel performance assessment scheme;
5. Prepare an annual work plan on the basis of the project document, under the general supervision of the PSC and in close consultation and coordination with the SIU coordinators and FAO;
6. Work with project staff members, LPSCs, and consultants to help each one utilize a practical and simple method for helping to determine the impact of project activities – of training activities, of workshops, the process of developing new laws and policies;
7. Coordinate, monitor and be responsible to the PSC for implementation of the Work Plan;
8. Ensure consistency among the various program elements and related activities provided or funded by other donor organizations;
9. Work with FAO office to prepare Terms of Reference for consultants and contractors;

10. Foster and establish links with other related GEF programs and, where appropriate, with other relevant regional programs;
11. Provide technical input to project activities where appropriate;
12. Work with stakeholders to develop an effective biodiversity field survey program;
13. Be an *ex-officio* member of the PSC and be responsible for the preparation, organization, and follow-up necessary to the effective conduct of PSC business;
14. Submit quarterly reports of relevant project progress and problems to the PSC;
15. He/she will integrate the various co-funded initiatives with GEF funded activities;
16. Serve as a fundraiser and lobbyist for activities included in the project but in need of funding from other partners;
17. Organize round table discussions on project successes and failures, per the work plan;
18. Encourage an atmosphere of adaptive management in the project office, where people focus on meaningful results “on the ground”, rather than simply the spending of funds or reports;
19. Oversee an effective ongoing project monitoring program and development of a process whereby the project assesses best practices as it gains experience;
20. The project manager will collaborate with FAO to ensure that specified tasks undertaken at the project sites are outsourced to suitable consultants and/or organizations.

Minimal Requirements:

The manager should be a graduate professional, preferably with a degree in biodiversity conservation, coastal management, project management, or some directly related field (e.g. wildlife and fisheries management, natural resource management, natural resource economics, etc.). He/she must have at least 5 years of experience as a senior project manager, as well as in leading and coordinating large working groups. Proven working experience and the ability to generate links with diverse partners/stakeholders (public and private sectors, academia, etc.) and experience in project coordination with international bodies will be especially considered.

Additional Requirements:

Language: Chinese and English
Headquarters: Beijing (with occasional travel to Shandong and Guangdong), China
Duration: 60 person months throughout the 5 years of the Project.

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking in China

FAO-GEF-SOA Project

2. Draft Terms of Reference: PCU ADMINISTRATIVE ASSISTANT (national consultant)

Background and Tasks:

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCIO), the PCU administrative assistant will have the following responsibilities and functions:

1. Manage administrative, financial and logistic activities of the Project according to FAO rules and regulations.
2. Develop administrative support functions to facilitate implementation of Project activities, including staff issues, travel arrangements, workshops' support, office equipment and services maintenance, contract administration, inventory, etc.
3. Maintenance and organization of Project documents.
4. Interact with the accounting section of the FAO Representation in all administrative and financial aspects that may be required.
5. Develop other duties assigned by the Project Manager.

Minimal Requirements:

Applicants must have at least five years of relevant professional experience to include prior work with internationally funded projects. Excellent computing skills, initiative, ability for team-work and willingness to creative problem solving will be particularly appreciated.

Additional Requirements:

Language: Chinese and English
Headquarters: Beijing (with occasional travel to Shandong and Guangdong), China
Duration: 60 person months throughout the 5 years of the Project.

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking in China

FAO-GEF-SOA Project

3. Draft Terms of Reference: REPORTING AND CONTRACTS OFFICER (national consultant)

Background and Tasks:

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCIO), the Reporting and Contracts Officer will have the following responsibilities and functions:

1. Day-to-day work necessary to successfully generate all the necessary reports for the project;
2. Finalizing all relevant sub-contractual arrangements for project implementation. This will require coordinating with FAO colleagues and of course the PCU project manager;
3. Coordinating with the PCU, relevant provincial agencies, and the academic and donor community;;
4. Facilitate smooth information sharing among PSC members, FAO, the PCU;
5. Organize effective annual reviews with the help of PCU project manager and FAO;
6. Ensure that site SIUs are reporting as required and are “results oriented” and NOT “input-oriented.”;
7. Apply FAO’s and Government’s accounting requirements to project’s reporting;
8. Other duties as may be assigned by the PCU;

Minimal Requirements:

The Reporting and Contract’s Officer should be a graduate professional, preferably with a degree in some directly related field. He/she must have at least 3 years of experience of work with international organizations/agencies, governmental offices, research or training organizations, with larger budgets and demonstrable, working knowledge of international accounting standards, able to work under general guidance or independently.

Additional Requirements:

Language: Chinese and English
Headquarters: Beijing (with occasional travel to Shandong and Guangdong), China

Duration: 60 person months throughout the 5 years of the Project.

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking in China

FAO-GEF-SOA Project

4. Draft Terms of Reference: Documents Translator and Interpreter (national consultant)

Background and Tasks:

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCIO), the Documents Translator and Interpreter will have the following responsibilities and functions:

1. provide written translation services to the PCU as well as the participating SIUs to include but not be limited to: (i) meeting the specific GEF reporting requirements (all in English); (ii) providing summaries of technical documents to the FAO LTU; and (iii) facilitating official communications between SOA and FAO;
2. supporting technical field missions of FAO by providing interpretation services including accompanying FAO missions to field sites; and
3. Other duties as may be assigned by the PCU.

Minimal Requirements:

The Translator/Interpreter manager should be a graduate professional, preferably in languages (English). He/she must have at least 3 years of experience of work in providing translation/interpretation with international organizations/agencies, governmental offices, research and/or training organizations. If the candidate has another but relevant professional formation but with demonstrated successful experience working in verbal and written English, preferable in the subject matter of the project, this profile would also be considered.

Additional Requirements:

Language: Chinese and English
Headquarters: Beijing (with occasional travel to Shandong and Guangdong), China
Duration: 60 person months throughout the 5 years of the Project.

PEOPLE'S REPUBLIC OF CHINA

***Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking
in China***

FAO-GEF-SOA Project

**# 5 & 6. Draft Terms of Reference: PROJECT SITE IMPLEMENTATION COORDINATOR
(national consultant)**

Background and Tasks

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCIO), the Project Site implementation Coordinators (one for Shandong and Guangdong, provinces respectively) will have the following responsibilities and functions:

1. Manage the day-to-day operations of their respective, site project office;
2. Assist the PCU project manager in ensuring that the proper FAO procedures are utilized when communicating with FAO so as not to lose time in unnecessary delays.
3. Learn FAO administrative procedures, processes, and requirements and provide administrative support to project staff;
4. Assure that necessary financial, procurement, disbursement and personnel matters are effectively addressed in close cooperation with other colleagues in the SIU office;
5. Keep lines of communication open among key project stakeholders to the extent possible
6. Work closely with part-time project accountant on a continual basis;
7. Prepare internal and external correspondence for the SIU, maintain files and assist in the preparation of documentation for meetings;
8. Co-ordinate and assist in travel arrangements of project personnel;
9. Keep project implementation focused on producing quality results for the money spent in terms of changed human behavior and changed situations;
10. Assist in the preparation of local press releases, statements and speeches on the project's activities;
11. Provide material to support the project's information dissemination activities.

12. Undertake such other duties as may be assigned by the PCU project manager

Minimal Requirements:

The project site implementation coordinator should be a graduate professional, preferably with a degree in a related discipline, some experience would be helpful working with international organizations/agencies, governmental offices, and research organizations. He/she should be able to demonstrate: (i) good knowledge of project operations procedures; (ii) initiative, good judgment and ability to organize office work; (iii) willingness to work as a team member; and (iv) ability to use PC, word processors and other related technology.

Additional Requirements:

Language:	Chinese and English
Headquarters:	Dongying City (Shandong); Guangzhou (Guangdong) (with occasional travel to Beijing, China)
Duration:	60 person months (per province) throughout the 5 years of the Project.

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking in China

FAO-GEF-SOA Project

7. Draft Terms of Reference: POLICY SPECIALIST (national consultant)

Background and Tasks:

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCI), the Policy Specialist(s) will have the following responsibilities and functions:

Shandong Province

1. He/she shall be responsible for the identification of new policy instruments to be tested during project implementation that address one or more policy gaps/failures that affect the sustainable management of the Yellow River estuarine ecosystem;
2. Establish a draft ecological compensation policy and accompanying institutional mechanism to provide a source of financing for biodiversity conservation activities in Yellow River Estuary (Dongying City);
3. Apply strategic EIA to economic development sector's plans and programs in Dongying City;
4. Draft local regulations in support of creation of MPA networks.

Guangdong Province

5. He/she shall be responsible for the identification of new policy instruments to be tested during project implementation that address one or more policy gaps/failures that affect the sustainable management of the Pearl River estuarine ecosystem;
6. Establish an ecological compensation mechanism for biodiversity conservation in Pearl River estuary;
7. Apply strategic EIA to economic development sector's plans and programs in Zhuhai City;
8. Draft local regulations in support of creation of MPA networks;

Minimal Requirements:

The policy specialist should be a graduate professional, preferably with a degree in legal/institutional, or some directly related field. He/she must have at least 5 years of experience as a policy specialist.

Additional Requirements:

Language: Chinese and English
Headquarters: Shandong and/or Guangdong (with occasional travel to Beijing), China
Duration: 10 person months (between the two provinces) throughout the 5 years of the Project

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking in China

FAO-GEF-SOA Project

8. Draft Terms of Reference: PLANNING SPECIALIST (national consultant)

Background and Tasks:

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCIO), the Planning Specialist(s) will have the following responsibilities and functions:

1. He/she shall develop two medium to long-term MPA integrated management and networking strategies of the two estuarine ecosystems.
2. He/she shall develop two medium to long-term ecological restoration strategies of the two estuarine ecosystems.
3. He/she shall develop a medium to long-term plan to guide the ecosystem healthy monitoring of the two estuarine ecosystems.

Minimal Requirements:

The planning specialist should be a graduate professional, preferably with a degree in legal/institutional, or some directly related field. He/she must have at least 5 years of experience as a policy specialist.

Additional Requirements:

Language: Chinese and English
Headquarters: Beijing (with occasional travel to Shandong and Guangdong), China
Duration: 1 person month throughout the 5 years of the Project

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking in China

FAO-GEF-SOA Project

9. Draft Terms of Reference: MPA MANAGEMENT SPECIALIST (national consultant)

Background and Tasks:

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCIO), the MPA Management Specialist(s) will have the following responsibilities and functions:

Shandong Province

- 1 Complete biodiversity conservation gap analysis;
- 2 Strengthen 6 MPAs in Shandong through provision of support for management plans, infrastructure/equipment, staff training and introduction of principles of co-management and sustainable financial arrangements;
- 3 Design and conduct training for MPA manager and staff in participatory & community-based management and conservation biology;
- 4 Provide input on how the stakeholders should establish Village Conservation Groups or an NGO – whichever is most appropriate;
- 5 Legal document from provincial authorities;
- 6 Support the creation of an MPA network in Guangdong through: (i) establishment of MPA coordinating networking mechanisms in two estuaries; (ii) facilitating the preparation of a Memoranda of Understanding (MOU) signed among MPA networking members; and (iii) the preparation and signing of protocols among the participating MPAs to collaborate in monitoring and enforcement; information sharing and/or other activities.

Guangdong Province

- 1 Complete biodiversity conservation gap analysis;
- 2 Creation of at least one new provincial level MPA;
- 3 Strengthen 6 MPAs in Guangdong through provision of support for management plans, infrastructure/equipment, staff training and introduction of principles of co-management and

sustainable financial arrangements;

- 4 Design and conduct training for MPA manager and staff in participatory & community-based management and conservation biology;
- 5 Provide input on how the stakeholders should establish Village Conservation Groups or an NGO – whichever is most appropriate.
- 6 Legal document from provincial authorities;
7. Support the creation of an MPA network in Guangdong through: (i) establishment of MPA coordinating networking mechanisms in two estuaries; (ii) facilitating the preparation of a Memoranda of Understanding (MOU) signed among MPA networking members; and (iii) the preparation and signing of protocols among the participating MPAs to collaborate in monitoring and enforcement; information sharing and/or other activities.

Minimal Requirements:

Applicants must be a proven expertise in practical MPA management and the application of MPA management best practices, have experience and skill in applying community-based MPA management approaches, with experience in helping colleagues adapt to these practices to fit local circumstances. Specific practical experience (minimal 5 years) in the design and implementation of marine protected areas in China is a requirement.

Additional Requirements:

Language: Chinese and English
Headquarters: Variable. But with significant travel to Shandong and Guangdong), China
Duration: 37 person months throughout the 5 years of the Project.

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking in China

FAO-GEF-SOA Project

10. Draft Terms of Reference: SUSTAINABLE PRODUCTION SPECIALIST (national consultant)

Background and Tasks:

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCIO), the sustainable production specialist(s) facilitate the implementation of project activities pertaining to the development of sustainable production activities providing alternative income generating opportunities, he/she will have the following responsibilities and functions:

1. Work with communities to identify local skills and business interests;
2. Eco-farming of mitten crab (Yellow River Estuary)
3. Develop a range of measures (ecotourism, ecological compensation, PA employment) in Hengqin Marine Park and Miaowan Coral MPA (Pearl River Estuary).
4. Train communities in business planning and bring in trainers for other key skills requirements;
5. Identify how to assist potentially marginalized community members who are major resource users and hence should be targets of business development support.
6. Disseminate the lessons learned from those developing new small businesses to others the project wishes to support.

Minimal Requirements:

Applicants must be a proven expertise in one of the main areas expected to be developed by the project, for example, tourism, handicrafts etc. He/she must be experience in training local communities in business related skills and in successfully working with local communities in rural areas; he/she will be able to work within a conservation project alongside scientists.

Additional Requirements:

Language: Chinese and English
Headquarters: Beijing (with occasional travel to Shandong and Guangdong), China
Duration: 10 person months throughout the 5 years of the Project.

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking in China

FAO-GEF-SOA Project

11. Draft Terms of Reference: ECOSYSTEM MONITORING SPECIALIST (national consultant)

Background and Tasks:

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCIO), the ecosystem monitoring specialist(s) will have the following responsibilities and functions:

1. Develop an ecosystem health monitoring program in the two estuaries;
2. Draft and promote the adoption/implementation of a multi-agency, integrated monitoring plan in the two estuaries;
3. Drafting and promoting the acceptance of MOUs and supporting protocols and annual meetings and minutes among participating agencies in the two estuaries;
4. Designing and participating in workshops in support of the formulation and acceptance of integrated monitoring protocols among relevant agencies in Pearl and Yellow River Estuaries;
5. Participated in field studies on ecosystem health monitoring in Pearl and Yellow River Estuary;
6. Review and evaluation on ecosystem health monitoring in the two estuaries.

Minimal Requirements:

Applicants must be a proven expertise marine ecosystem monitoring; he/she will be able to work within a conservation project alongside scientists.

Additional Requirements:

Language: Chinese and English
Headquarters: Various with travel to Shandong and Guangdong), China
Duration: 2 person months throughout the 5 years of the Project.

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking in China

FAO-GEF-SOA Project

12. Draft Terms of Reference: CAPACITY BUILDING SPECIALIST (national consultant)

Background and Tasks:

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCIO), the capacity building specialist(s) will have the following responsibilities and functions:

1. Organize 2 training course including decision-making on biodiversity protection, information analysis and case study etc for senior managers and officials from two sites to improve capacity of decision-making in support of biodiversity conservation in estuarine ecosystems;
2. Organize 1 training course on MPA management and master planning, new knowledge and new information technique application etc for major MPA staff to improve MPA management in the two sites;
3. Organize 1 in-country cross-site visits for approximately 20 participants between the two sites;
4. 2 international site visits for about 20 decision-makers, MPA major staff and other stakeholders from the two sites;
5. Organize a training workshop for 15-20 participants at each site for the public capacity building including bird and dolphin watcher, recruitment of mangrove rangers;
6. Training 3-4 graduate students/ staff to improve capacity building in PCU.

Minimal Requirements:

Applicants must be a graduate professional, preferably with an academic formation in areas related to capacity building. He/she must have at least 2 year of experience in environmental sector.

Additional Requirements:

Language: Chinese and English
Headquarters: Beijing (with occasional travel to Shandong and Guangdong), China
Duration: 6 person months throughout the 5 years of the Project.

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking in China

FAO-GEF-SOA Project

13. Draft Terms of Reference: ENVIRONMENTAL EDUCATION SPECIALIST (national consultant)

Background and Tasks:

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCIO), the Environmental Education Specialist will have the following responsibilities and functions:

1. Increased student awareness and knowledge of the significance of marine biodiversity conservation and the role of MPAs, develop 1 curriculum for 2-3 school at each site, develop 100 students know the project and relevant knowledge at each estuary per year;
2. Increase stakeholder awareness for marine biodiversity conservation and estuarine ecosystem, launch at 500 volunteers and other stakeholders participate in the publicity activities, and invite at least 20 decision makers participate in annual public forum about ecosystem based management;
3. Assess the existing formal system of public communication in the two estuaries and ascertain how it could be improved and be made more efficient in support of project goals and objectives.
4. Prepare the environmental education strategy and plan designed to guide the project activities implemented under sub-component 4 B.

Minimal Requirements:

Applicants must be a graduate professional, preferably with an academic formation in areas related to communication, environmental education and social sciences. He/she must have at least 2 year of experience in environmental sector.

Other Requirements:

Language: Chinese and English
Headquarters: Beijing (with occasional travel to Shandong and Guangdong), China
Duration: 6 person months throughout the 5 years of the Project.

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking in China

FAO-GEF-SOA Project

14. Draft Terms of Reference: CAPACITY BUILDING SPECIALIST (international consultant)

Background and Tasks:

The Project is a partnership among SOA, FAO and GEF. The project seeks to conserve globally significant estuarine biodiversity by implementing a cross-sectoral program of integrated activities that generate specific and meaningful results on the ground. To do this, the project will need to create and to follow successfully a path of coordinated action among national government agencies, provincial governments and municipal governments. Under the general supervision of the Department of International Cooperation (DIC) in SOA, the FAO Representative in China and in close collaboration with the Project Manager and the FAO Investment Center of Rome (TCIO), the international capacity building specialist(s) will have the following responsibilities and functions:

1. Meet with SOA, PCU and SIU coordinators and local agency staff to better appreciate existing capacity and training needs in support of project goals and objectives;
2. Review the existing activities proposed in project design and evaluate their appropriateness both in terms of content and level of effort to meet needs identified and agreed to in (i) above;
3. Prepare a detailed training program to cover the life of project in line with agreed on budget constraints;
4. Identify international and national consultants and/or institutions capable of providing the needed capacity building services;
5. Prepared detailed Scopes of Work and Terms of Reference to facilitate the contracting of service providers.

Minimal Requirements:

Applicants must be a post-graduate professional in the marine sciences preferably with proven work experience in capacity building preferably with a demonstrated knowledge and background working in China. Knowledge of Chinese is desirable.

Additional Requirements:

Language: English
Headquarters: Beijing (with occasional travel to Shandong and Guangdong), China
Duration: 2 person months throughout the 5 years of the Project.

PEOPLE'S REPUBLIC OF CHINA

Demonstration of Estuarine Biodiversity of Conservation Restoration and Protected Area Networking in China

FAO-GEF-SOA Project

15. Draft Terms of Reference: EXTERNAL EVALUATOR (international consultant)

Background and Tasks:

Two external, independent evaluations will be supported during the life of the project; a mid-term evaluation to be conducted at the end of project year 3 and final project evaluation to be completed three months prior to the terminal review meeting of the project partners. These evaluations will be conducted by one or more expert consultants with experience in the evaluation of GEF projects. He/she will be contracted through a competitive selection process whose final selection will require the approval of the project's TWG. The following draft TORs will be revised by the PCU in close consultation with the FAO Project Task Manager at the FAO Office in China, the FAO Lead Technical Unit and under the ultimate responsibility of FAO Office of Evaluation, in accordance with FAO evaluation procedures and taking into consideration evolving guidance from the GEF Evaluation Office. The TOR and the report will be discussed with and commented upon by the project partners:

1. Review and analyze background documents and products produced during project implementation.
2. Review and become familiar with GEF and FAO evaluation procedures and requirements, where possible supported by recent examples of "best practices" of GEF project evaluations.
3. Travel to the site and meet with various stakeholders participating in the project.
4. Conduct interviews with representatives of various partner institutions (in the case of FAO Rome) for cost considerations this may be done through video conferencing using the facilities of FAO China.
5. Based on these inputs, assess the degree of fulfillment of project goals and objectives outlined in each project component. In this work he/she will use the project's logframe as the basic evaluative tool to assess the degree to which the project achieved its stated goals, objectives, outcomes and outputs. In this assessment, the evaluator should include but not be limited to:
 - (i) a review of the effectiveness, efficiency and timeliness of project implementation;
 - (ii) an analysis of effectiveness of implementation and partnership arrangements;
 - (iii) the identification of issues requiring decisions and remedial actions;

- (iv) the identification of “lessons learned” about project design, implementation and management;
 - (v) highlighting technical achievements; and
 - (vi) in the case of the mid-term evaluation, proposing mid-course corrections and/or adjustments to the implementation strategy as necessary.
- 6 Assess the correlation/agreement between objectives and achievements.
7. Write a final report containing recommendations.

Minimal Requirements:

Applicants must be a professional specialized in project evaluation. He/she must have 10 years of professional experience in the field. Previous working experience in the region, as well as experience in project coordination with international bodies, will be especially valuable.

Other Requirements:

Language: English

Headquarters: Beijing (with occasional travel to Shandong and Guangdong), China

Duration: 2 person months in PY 3 (1 pm) and PY 5 (1 pm), respectively.

ANNEX 5: PROJECT REVIEWS (STAP, GEF SECRETARIAT, GEF COUNCIL) AND TEAM RESPONSE

GEF Secretariat (*and associated responses by the project preparation team*):

There were no specific comments to address at the time of CEO endorsement.

GEF Agencies:

There were no specific comments to address at the time of CEO endorsement.

Convention Secretariat:

There were no specific comments to address at the time of CEO endorsement.

STAP scientific and technical screening of the Project Identification Form (PIF)

Date of screening: 9 February 2010

Screener: David Cunningham

Panel member validation by: Brian Huntley

Further guidance from STAP

STAP's advisory response to GEFSEC and FAO was "Minor Revision Required." STAP requested that the following issues be addressed in the full project document:

- (a) details should be provided on the baselines against which GEBs will be measured (p.5, para. 5) and details of the measurement techniques to be used;
- (b) the details of the restoration techniques to be used and best practice evidence from prior studies should be elaborated. It is expected that experimental design, to test the most effective and efficient restoration approaches will allow quantitative measurement of the success rate; and
- (c) a synthesis of the lessons learned and best practices developed in the GEF/UNDP Wetland Biodiversity Conservation and Sustainable Use in China Project should be included to avoid repetition of investment.

Response by the project team

The team agrees with the points made by the STAP reviewer. With respect to the baseline, project preparation resources and the timing were not sufficient to establish a technical baseline by the time of submission of the CEO Endorsement Template as much of the preparation was spent on identifying the specific pilot sites, relevant outcome indicators and their target, and confirming the necessary institutional arrangements to support implementation of the Project. Baseline for the identified outcome indicators will be established in Project Year (PY) 1 and complemented with additional biodiversity and ecosystem health indicators as reflected in the M&E plan Section I H above.

Measurement techniques to assess total bird visitation and total number of migratory bird species in the Pearl and Yellow River Estuaries over their respective baselines will be based

primarily on bird counts facilitated with equipment procured with GEF inputs. Stabilization of the populations of the one or more threatened/endangered species (Categories I and II) will be measured by: (i) the number of nests of Oriental Stork observed (Yellow River Estuary); (ii) number of calves of Chinese White Dolphin (Pearl River Estuary) and the numbers of coral species (Pearl River Estuary). An increase in the populations of one or more critically endangered/endangered species (e.g., Chinese White Dolphin will be measured by the number of heads and families of the mammal). The creation of new MPAs will be measured by their size and conservation strategies developed to ensure their future, sustainable management.

With respect to the request for further details in proposed restoration techniques, in the Yellow River Estuary, reflecting local characteristics in hydrology, landform, soil and biological factors, three restoration models will be developed and implemented. These are: (i) the *Suaeda glauca*-*Tamarix chinensis*-*Phragmites* communities model (with a habitat niche width respectively of 0.676, 0.378 and 0.55) which is to be piloted in zones characterized by relative natural conditions with little evidence of human disturbance; (ii) the *Phragmites* communities-*Typha angustifolia*-*Triarrhena sacchariflora* model (with a habitat niche width respectively of 0.960, 0.724 and 0.549) which is to be piloted in zones characterized by flowing water; and (iii) the *Suaeda glauca* -*Phragmites* communities model which is to be piloted in zones in proximity to the coast characterized by higher human impact. In the pilot project, where feasible, abandoned oil wells will be capped and soil conditions restored and water provided to maintain wet soil conditions. It is calculated that the minimum water demand for the wetland is $190.50 \times 10^8 \text{ m}^3$. The quantitative indicators of success are based on survival rate and coverage both higher than 80%. In addition, two open oil wells in depleted reservoirs will be capped and used for demonstration purposes and provide inputs to the formulation of draft policies that will address this issue in the future. Finally, 100% of the fishermen inside the wetland will adopt sustainable fisheries practices by providing them with technical support for the establishment of environmentally sound mariculture of mitten crab and other species.

In the Pearl River Estuary, local pioneer species of mangroves will be planted in both Hengqin Ocean Park (110 hectares representing 20% of the wetland) with an estimated 100% survival rate) in addition to the removal of all aquaculture facilities and Qi'ao (30% replacement of alien species by local species in that area) as indicated by the survival rate (80%) of the plants.

With respect to the application of the lessons and best practices developed in the GEF/UNDP USD 34.6 million Wetland Biodiversity Conservation and Sustainable Use in China project to the present Project, the August 2009 Terminal Evaluation Report (TER) of the redesigned project found that the concept was basically sound but the project document (PRODOC) lacked precision and definition. Nevertheless the TER team noted that the project had accounted for significant achievements including putting information/data bases in place, strengthening of existing monitoring systems and enhancing mechanisms of policy dialogue and cooperation. The team concluded more work and support would be needed as the challenge of wetland biodiversity conservation in China is "enormous and complex." The team suggested the need for follow-up and specifically recommended the following activities of particular relevance to the proposed project: (i) support for policy and legislative frameworks leading to their improvement, adoption and enforcement; (ii) strengthening of institutions at all levels in particular at the lower levels including targeting local administrations to enhance their capacities to deal with NR planning

and management; and (iii) support for capacity building emphasizing practical "hands on" experience and sound knowledge of the local ecosystem. Another recommendation from the TER team that were reviewed and reflected in project design was the need to build on the number of government agencies and NGOs routinely sharing data on wetland biodiversity monitoring. The TER team also identified two "lessons learned": (i) project design should better take into account the time needed for the political process; and (ii) all projects should be based on sound goal orientation analyses and specific and precise definition of goals, outcomes, outputs and activities and the identification and application of objectively verifiable indicators. These were taken into account in project design. In the course of Project implementation, a cross site visit will be arranged for project staff from YRE and PRE to Yancheng (since this is a coastal wetland and likely most relevant among the project sites supported by the UNDP/GEF/China GEF4 wetlands programme).

Council Members (Germany)

While the problemacy addressed in the PIF is quite complex, with a great variety of factors and sectors contributing to current ecological degradation, more explanation should be given to the fact, that the State Oceanic Administration (SOA) has been chosen as a lead counterpart agency.

The objective of the project is to provide "best practices" which "could prove to be catalytic in launching similar activities in China." To actually achieve the up-scaling of best practice example the backstopping of a political partner from the beginning of the project with this in mind is indispensable and hardly realization at a late stage of a project.

Coordination with other related initiatives should be envisaged – not only other GEF projects and initiatives, but also e.g., BMZ/GTZ Project Wetland Biodiversity Conservation in China.

Response by the project team

The team would like to respond and provide some additional clarification to information provided in the PIF. With respect to China's State Oceanic Administration (SOA)'s designation as the project's lead counterpart agency, SOA is an administrative agency subordinate to the Ministry of Land and Resources, responsible for the supervision and management of sea area in China and coastal environmental protection, protecting national maritime rights and organizing scientific and technical research of its territorial waters. The main functions of the agency are: (i) regulation of China's coastal zone; an area that includes islands, internal seas and neighboring waters, contiguous zone, continental shelf, exclusive economic zones and other sea areas under its jurisdiction; (ii) the issuance of permits for sea area use such as laying of submarine cables and pipelines; (iii) environmental protection of the marine area (this includes but is not limited to the regulation of pollutants, discharges into the sea, environmental monitoring of the nation's seas, assesment of marine oil and gas exploration and related development, ocean dumping and ocean engineering projects to ensure the environmental impact is minimized and regulations are followed); (iv) organization and regulation of marine scientific surveys and research; (v) enforcement of the laws formulated to the protection of maritime space (tis includes coastal surveillance, investigation and prosecution of illegal activities); and (vi) the organization of survey of maritime areas to promote a better understanding of the environment for protection, economic activity or conservation. In addition to SOA's technical capacity, a national agency is required to provide the necessary inter-institutional coordination role for an

internationally-finance project that involves more than one province. Under SOA, the implementing agencies in both Shandong and Guangdong are Marine and Fisheries Departments, an agency with mandates for marine and fishery affairs, a good foundation for the coordination between these two sectors. Equally, the role of SOA will be indispensable to up scaling and supporting the dissemination of best-practices and their adoption in other provinces post project.

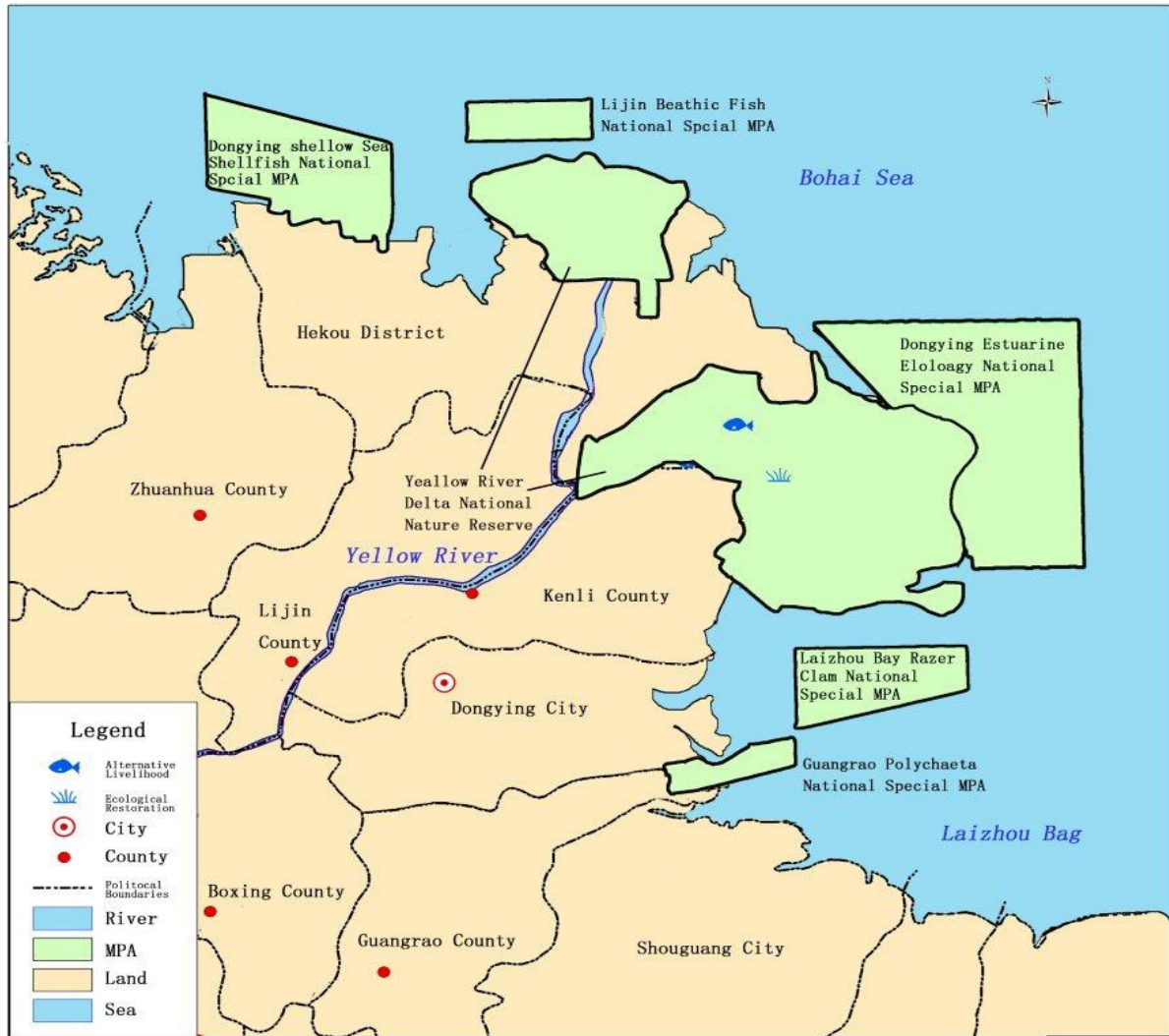
The Project is designed under the umbrella of China Biodiversity Partnership and Framework for Action (CBPFA) and Action plan of wetland protection in China, both being strategic outcomes from close collaboration of multiple agencies from the central and local governments. During project implementation coordination with other initiatives including the BMZ/GTZ Project Wetland Biodiversity Conservation in China will be secured in the two sites through the inter-institutional committees ICM (Shandong) and MALG (Guangdong).

ANNEX 6. MAPS

MAP 1. LOCATION OF PEARL AND YELLOW RIVER ESTUARIES



MAP 2. PILOT SITES IN YELLOW RIVER ESTUARY



MAP 3. PILOT SITES IN PEARL RIVER ESTUARY



