



**UNDP/GEF PROJECT ENTITLED “REDUCING ENVIRONMENTAL STRESS IN THE
YELLOW SEA LARGE MARINE ECOSYSTEM”**

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Draft Project Document

***Implementing the Strategic Action Programme for the
Yellow Sea Large Marine Ecosystem:
Restoring Ecosystem Goods and Services and Consolidation of a
Long-term Regional Environmental Governance Framework***

DRAFT



United Nations Development Programme
Countries: People's Republic of China, and Republic of Korea

PROJECT DOCUMENT¹



Project Title: Implementing the Strategic Action Programme for the Yellow Sea Large Marine Ecosystem: Restoring Ecosystem Goods and Services and Consolidation of a Long-term Regional Environmental Governance Framework

UNDAF Outcome 1: China: Government and other stakeholders ensure environmental sustainability, address climate change, and promote a green, low carbon economy.

UNDP Strategic Plan Environment and Sustainable Development Primary Outcome: Enhance the national capacity at all levels in managing, adapting, and mitigating climate change, and promote environmental sustainability and cleaner and renewable energy.

UNDP Strategic Plan Secondary Outcome:

Expected CP Outcome(s): China: Outcome 5. The vulnerability of poor communities and ecosystems to climate change is reduced.

Expected CPAP Output (s)

5.1 A strengthened policy, legal, institutional framework for the sustainable use of land, water, the conservation of biodiversity, and other natural resources in fragile ecosystems is enforced.

5.2 The integration of gender, vulnerability assessments, risk reduction and adaptation to climate change into local development planning and service delivery in support of poor communities is promoted.

Executing Entity: UNOPS

¹ For UNDP supported GEF funded projects as this includes GEF-specific requirements

Brief Description

This project builds upon a solid foundation of four years of regional co-operation for the sustainable use of the Yellow Sea Large Marine Ecosystem (YSLME) put in place by China and the Republic of Korea and supported by the Democratic People’s Republic of Korea and the Yellow Sea Partnership, with catalytic support from the Global Environment Facility (GEF). The initial project completed a regional Transboundary Diagnostic Analysis and finalized a regional Strategic Action Programme together with national SAPs that operationalise the implementation of the regional SAP. Building on these achievements this project’s objective is to foster long-term sustainable institutional, policy, and financial arrangements for effective ecosystem-based management of the Yellow Sea (YS), namely the YSLME Commission.

The project supports the states' efforts to halt the decline in biological resources and to restore depleted fish stocks in the Yellow Sea, through the implementation of agreed actions defined in the SAP.

In line with the GEF International Waters (IW) strategic priorities the major focus of GEF involvement will be to assist the countries in reaching agreement on ecosystem-based joint action to sustain marine living resources and sustainably manage the Yellow Sea Large Marine Ecosystem and to introduce institutional reforms to catalyze implementation of policies reducing over-fishing and benefiting communities. There are four components of the project: 1) Sustainable national and regional co-operation for ecosystem based management; 2) Improved Ecosystem Carrying Capacity with respect to provisioning services; 3) Improved Ecosystem Carrying Capacity with respect to regulating and cultural services; 4) Improved Ecosystem Carrying Capacity with respect to supporting services.

The key outcomes sought are: 1) establishment of a self-sustaining co-operative mechanism for ecosystem-based management; 2) recovery of depleted fish stocks and improved mariculture production and quality; improved ecosystem health; 3) improved inter-sectoral co-ordination and mainstreaming of ecosystem based management principles at the national level: maintenance of habitat areas; strengthened stakeholder participation in management; improved policy making; 4) skills & capacity significantly developed for region-wide ecosystem-based management

Programme Period: _____

Atlas Award ID: _____

Project ID: _____

PIMS # _____

Start date: _____

End Date: _____

Management Arrangements _____

Total resources required _____

Total allocated resources: _____

Regular _____

Other: _____

- GEF _____
- Government _____
- In-kind _____
- Other _____

In-kind contributions _____

Agreed by (Government): _____
Date/Month/Year

Agreed by (Executing Entity/Implementing Partner): _____

_____ Date/Month/Year

Agreed by (UNDP): _____

_____ Date/Month/Year

Table of Contents

I. ACRONYMS	5
1. SITUATION ANALYSIS	6
1.1 CONTEXT AND GLOBAL SIGNIFICANCE	6
1.1.1 Environmental context	6
1.1.2 Socio-economic Context:	7
1.1.3 The problem to be addressed.....	8
1.2 THREATS, AND ROOT CAUSES.....	11
1.3 LONG-TERM SOLUTION AND BARRIERS TO ACHIEVING THE SOLUTION.....	13
1.4 STAKEHOLDER AND BASELINE ANALYSIS	15
1.4.1 Stakeholder analysis	15
1.4.2 Baseline Analysis.....	17
2. STRATEGY.....	18
2.1 PROJECT RATIONALE AND POLICY CONFORMITY	18
2.2 COUNTRY OWNERSHIP: COUNTRY ELIGIBILITY AND COUNTRY DRIVENNESS.....	20
2.3 DESIGN PRINCIPLES AND STRATEGIC CONSIDERATIONS	20
2.4 PROJECT OBJECTIVE, OUTCOMES AND OUTPUTS/ACTIVITIES	21
2.5 KEY INDICATORS, RISKS AND ASSUMPTIONS.....	28
2.6 FINANCIAL MODALITY	28
2.7 COST-EFFECTIVENESS.....	29
2.8 SUSTAINABILITY	29
2.9 REPLICABILITY	30
3. PROJECT RESULTS FRAMEWORK:	오류! 책갈피가 정의되어 있지 않습니다.
4. MANAGEMENT ARRANGEMENTS	39
5. MONITORING FRAMEWORK AND EVALUATION	40
6. LEGAL CONTEXT	43
7. ANNEXES.....	44
ANNEX 1 OFFLINE RISK LOG	45
ANNEX 2 AGREEMENTS	48
ANNEX 3	49
ANNEX 4. BUDGET AND WORKPLAN.....	67

I. ACRONYMS

APR	Annual Project Review (UNDP)
CPAP	Country Programme Action Plan
DPRK	Democratic People's Republic of Korea
ESCO	Energy Service Company
GEF	Global Environment Facility
HAB	Harmful Algal Bloom
IMCC	Inter-Ministry Co-ordinating Committee
IW	International Waters (GEF)
LME	Large Marine Ecosystem
MPA	Marine Protected Area
MSTP	Management Science and Technical Panel
NSAP	National Strategic Action Plan
NC	National Co-ordinator
NFP	National Focal Point
NGO	Non-Governmental Organisation
NPC	National Project Coordinator
NWG	National Working Group [NWG-F = Fisheries; NWG-M = Mariculture; NWG-H = Habitats; NWG-P = Pollution; NWG-A = Assessment; NWG-G = Sustainability (Finance and Governance)]
PAH	Polycyclic Aromatic Hydrocarbon
PIF	Project Identification Form (GEF)
PIR	Project Implementation Review (GEF)
PRC	People's Republic of China
POP	Persistent Organic Pollutant
RCU	Regional Coordinating Unit
ROK	Republic of Korea
RWG	Regional Working Group [RWG-F = Fisheries; RWG-M = Mariculture; RWG-H = Habitats; RWG-P = Pollution; RWG-A = Assessment; RWG-G = Sustainability (Finance and Governance)]
SAP	Strategic Action Programme
SBAA	Standard Basic Assistance Agreement
SP	Strategic Priority (of the GEF)
TDA	Transboundary Diagnostic Analysis
TOR	Terms of Reference
UNDP	United Nations Development Programme
UNOPS	United Nations Office for Project Services
WWF	World Wide Fund for Nature
YSLME	Yellow Sea Large Marine Ecosystem

1. SITUATION ANALYSIS

1.1 Context and global significance

1.1.1 Environmental context

1. In the context of the preparation of the TDA and SAP the geographic area of the Yellow Sea Large Marine Ecosystem (YSLME) was defined as the body of water bounded: to the west by the Chinese coastline south of Penglai; to the north by a line from Penglai to Dalian; to the east by the Korean Peninsula and Jeju Island and a line drawn from Jindo Island off the south coast of the Korean mainland to the Chaguido, west coast of Jeju Island; and to the south by a line running from the north bank of the mouth of the Yangtze River (Chang Jiang) to the south-western coast of Jeju Island. It covers an area of 400,000 km² and measures approximately 1,000 km by 700 km.
2. The seafloor is a post-glacially inundated portion of the continental shelf with an average depth of 44m and a maximum depth of 140m: the seafloor slopes gently seawards from the Chinese coast and more steeply from the Korean peninsular to a trough in the eastern portion of the basin that runs south to the Okinawa Trench. This trough was carved by the ancient Yellow River (Huang He) when the Yellow Sea was dry during the last glacial period. Meteorologically the region is located between the Siberian High and the subtropical Pacific Low, which results in cold-dry winters and warm-wet summers.
3. The bio-geochemistry of the sea is strongly influenced by fresh water and airborne (aeolian) material. Rivers discharge approximately 1.6 billion tonnes of sediment and 1,500 billion tonnes of freshwater into the Yellow Sea annually with a further 460 billion tonnes of water from rainfall. The huge freshwater inputs result in temperature and salinity differences that limit the water exchange between the Yellow Sea and the East China Sea, such that the flushing rate is once every seven years. The low flushing rate combined with weak water circulation makes this sea vulnerable to pollution and its coastal areas highly susceptible to localized pollution discharges. The Yellow Sea is under the influence of the Asian monsoon system, and circulation is predominantly influenced by winter cooling and summer heating, freshwater discharge and, arguably, the inflow of warm saline waters in a branch of the Kuroshio.
4. The major water masses of the Yellow Sea are: the Yellow Sea Cold Water Mass at the bottom of the basin; the Yellow Sea Warm Current Water, which is relatively saline and flows north-west between Sokotra Rock and Jeju island into the Jeju Strait and eastern Yellow Sea; and the Yangtze River mixed water, which predominantly flows to the South but in the summer extends north-eastwards towards Jeju Island and lowers the salinity of the water. Summer circulation consists of the southward flowing Chinese coastal current, northward flowing Yellow Sea Warm Current, and north-eastward moving water from the East China Sea resulting in a central cyclonic gyre. In the winter the cyclonic gyre is not as pronounced and a southward coastal flow is seen adjacent to the Korean Peninsular.
5. The Yellow Sea is part of the temperate shelf seas of the North temperate Indo Pacific Ocean and supports five major, highly productive, marine habitats supporting large populations of fish, birds, mammals and invertebrates which form a substantial living marine resource base for the large human coastal population. Warm temperate-water

species dominate the fauna and flora accounting for more than 70% of the total biomass. Seventeen species of whales and dolphins and four species of seals are found in the Yellow and Bohai Seas and a number of the populations of the larger species such as the grey and fin whales have been severely depleted in the past. Endangered marine mammals include the black right whale, whitefin dolphin, Kurile harbour seal, spotted or largha seal, Japanese sea lion and the striped dolphin. It is estimated that at least two million shore birds use the region during their northward migration representing approximately 40% of all migratory shorebirds using the East-Asian-Australasian Flyway.

6. The fish diversity is comparatively high with 339 species being recorded from the Yellow Sea of which around 45% are warm water species, 46% are warm temperate forms and 9% are cold temperate forms. As noted below the structure of the fish communities have changed significantly over the last thirty years. Polychaete species number around 100, molluscs 171, crustaceans 107, and echinoderms 22.
7. Landings of the ten most important species landed in the Yellow Sea area increased rapidly from 400,000 tonnes in 1986 to 2.3 million tonnes in 2004. However, this level of exploitation is not sustainable. Over-exploitation of the fish stocks has changed the catch composition. Whereas catches in the Yellow Sea once consisted of large, long-lived, valuable demersal fish such as hairtail and small yellow croaker they are now dominated by short-lived, smaller, lower trophic level and less valuable species such as anchovy and sandlance.
8. The combination of the loss of wetlands, deterioration in coastal water quality and over-exploitation of resources has reduced the capacity of the Yellow Sea to provide goods and services. The nutrient assimilative capacity of the Sea has been exceeded such that increased nutrient inputs are driving changes in the food chain that may result in changes to ecosystem productivity.

1.1.2 Socio-economic Context:

9. Five large coastal cities with tens of millions of inhabitants border the sea: Qingdao, Dalian and Shanghai in the People's Republic of China (PRC); Seoul/Incheon in the Republic of Korea (ROK), and Pyongyang/Nampo in the Democratic People's Republic of Korea (DPRK). This population relies on the Yellow Sea LME for many services such as: provision of capture fisheries resources (in excess of two million tonnes per year) and mariculture (6.2 million tonnes per year); the support of wildlife; provision of bathing beaches and tourism; and its capacity to absorb nutrients and other pollutants. The ability of the Yellow Sea to provide these services is defined here as the "ecosystem carrying capacity".
10. Commercial use of the living marine resources of the Yellow Sea dates back several centuries but intensification of capture fisheries followed the introduction of the bottom trawl in the early twentieth century and resulted in rapid loss of economically important species such as the red seabream by the 1930's. Fishing effort steadily increased post-war and increased threefold between the early 1960s and early 1980s during which time the proportion of demersal species such as small and large yellow croakers, hairtail, flatfish and cod declined by more than 40% in terms of biomass.

11. About 100 species including cephalopods and crustaceans are commercially harvested but most species are not abundant and only 23 species exceed 10,000 tonnes per annum; these species form between 40 and 60 percent of the total landings. During the 1950's and early 1960s the dominant species were the small yellow croaker, and hairtail and the mean body length of the catch exceeded 20cm. Pacific herring, Chub and Spanish mackerel became dominant in the 1970s and the mean body length of the catch had declined to 12 cm. In the 1980s smaller bodied, fast growing and short lived species such as the anchovy and scaled sardine came to dominate the catch with a consequent decline in the quality of the fisheries resources. Recently even catches of anchovy have declined and have been replaced by a new target species, the sandlance.
12. In 1978 an area of 148,000 ha was used in China for mariculture and by 1997 this had expanded to 540,000 ha. The yield of flesh from bivalves in 1978 was 200,000 tonnes or 44% of the mariculture yield. In 1997 this had risen to 300,000 tonnes. Scallops, sea cucumbers and mussels dominate production in China whilst the dominant species in ROK are oysters, 20% of production, and mussels, 6% of production, but a variety of other species including abalone, short-necked clam, hard clam, ark and pen shells and hen calms are cultivated in various areas of both countries.
13. Seaweeds are an important crop in the Yellow Sea but some of the species such as *Pelvetia siliquosa* (deer horn seaweed) which was historically exported in large quantities from ROK to China have declined in abundance and been replaced by other species. The most important cultivated seaweed in China is the brown alga *Laminaria japonica*, introduced from Japan. This is now grown over more than 3,000 hectares with a production of 10,000 dry tonnes per year. Half of this is consumed directly and half is used in the production of alginates.
14. The semi-enclosed nature of the Yellow Sea and the rapid economic development of the surrounding area have resulted in an increasingly polluted and over-exploited sea. This large marine ecosystem (LME) faces major transboundary problems, including: a dramatic increase in fisheries landings that have grown from 400,000 tonnes to 2.3 million tonnes in the past 20 years; continued increases in the discharge of pollutants; changes to ecosystem structure and function leading to an increase in jellyfish and harmful algal blooms; and a 40% loss of coastal wetlands from reclamation and conversion projects representing a major loss of habitat for many species resulting in a significant degradation of biological diversity. On top of these immediate threats lie the potential impacts of climate change and sea level rise, and in particular, changes in basin circulation and the extent of the Yellow Sea "warm pool".

1.1.3 The problem to be addressed.

15. The Transboundary Diagnostic Analysis (TDA) of the Yellow Sea and the associated causal chain analysis provide an analysis of the root causes of the environmental issues and problems of the Yellow Sea and identify the priorities for management actions. Nine major transboundary environmental concerns have been identified: 1) Pollution and Contaminants; 2) Eutrophication; 3) Algal Blooms, including Harmful Algal Blooms (HABs); 4) Fishing effort exceeding Ecosystem Capacity to provide Provisioning Services; 5) Problems of sustainability in mariculture; 6) Habitat Loss and Degradation; 7) Change in Ecosystem Structure; 8) Jellyfish Blooms; and 9) Climate Change related issues.

16. **Pollution and Contaminants:** The Regional Working Group (RWG) on Pollution identified inorganic nitrogen and phosphate, faecal contaminants, heavy metals, persistent organic pollutants (POPs), polycyclic aromatic hydrocarbons (PAHs) and marine litter as the major contaminants in the Yellow Sea. Inorganic nitrogen and phosphate are important nutrients that sustain phytoplankton (single celled algae) communities that form the basis of the marine food chain. However, high concentrations stimulate rapid phytoplankton growth that cannot be consumed by zooplankton at the rate at which it is produced, leading to eutrophication and harmful algal blooms (HABs). Contamination of coastal marine waters by bacteria and viruses derived from direct discharge of untreated domestic waste can result in contamination of seafood, particularly mussels, oysters and scallops, under mariculture. The resulting illnesses vary from minor stomach ailments to dysentery and typhoid. Heavy metals, although possibly important locally around industrial areas, are not considered a transboundary problem. PAHs are also likely to be a more localised issue associated with certain industrial processes although this class of compound can be mutagenic or carcinogenic. Incorporation of POPs into the food chain is, however, part of a global problem and can lead to increased health risks to humans.
17. **Eutrophication.** The extensive and frequent over-use of chemical fertilizers and the increased discharges of untreated and/or partially treated industrial and domestic wastes have raised the concentration of dissolved inorganic nitrogen in coastal waters of the Yellow Sea. The Yellow Sea is vulnerable to eutrophication as it is isolated from the East China Sea by a strong thermohaline front, has weak circulation internally, and the flushing time is around seven years, consequently nutrients such as nitrogen can accumulate in the ecosystem. Algal production during a eutrophic episode frequently results in depletion of the nutrients and collapse of the bloom with mass mortality of the algae that sink to the bottom. The resulting bacterial decomposition causes oxygen depletion in the bottom water causing fish kills and mass mortality of other less mobile organisms, especially in mariculture establishments. Benthic biomass appears to have decreased and the proportion of polychaetes seems to have increased, these changes are frequently associated with increasing eutrophication of the sediments. The reduced diversity of the benthic community could have significant consequences as it is an important food source for many commercially important demersal fish species.
18. **Plankton Community Changes** Silicate (Si) is the result of the erosion and weathering of rocks and is carried to the sea by rivers, ground water and by the wind as dust. As a result of changing freshwater flows due to irrigation and hydroelectric projects, much of the silicate is now trapped before entering the sea. The decreased silicate inputs in combination with increased nitrogen (N) concentrations have changed the nutrient ratio in the coastal waters of the Yellow Sea. This Si:N ratio is vital in sustaining the growth of diatoms that are the most important group of phytoplankton in economically productive systems, accounting for approximately 60% of primary production by biomass in the world's oceans. However, when the ratio of Si:N falls beneath a ratio of 1:1 the lack of silica prevents diatoms from forming their silica body walls and consequently flagellate species are favoured. Since 1980, the Si concentration in the Yellow Sea has been close to the ecological threshold required for diatom growth. The ratio of diatoms to dinoflagellates was reported to have decreased in recent years, possibly in response to the increasing eutrophication and decreased ratio of Si:N as mentioned previously. A number of

these flagellates produce blooms (red tides and HABs) that are either toxic to higher organisms causing for example, paralytic shellfish poisoning of human consumers, or reducing the palatability of seafood. Intense blooms can also reduce survival of fish and shellfish through gill clogging and reduced levels of dissolved oxygen. Changes in the biomass and composition of phytoplankton and zooplankton communities could have serious consequences for fisheries productivity as these groups form the basis of the marine food chain. The national reports by the YSLME project indicated increases in the biomass of phytoplankton fraction $> 77 \mu\text{m}$, but decreases in the zooplankton $> 500 \mu\text{m}$ on the Chinese side, while on the Korean side increased biomass of zooplankton $> 330 \mu\text{m}$ was recorded.

19. Fishing effort exceeding Ecosystem Capacity to provide Provisioning Services:

Over-exploitation is evidenced by the decrease in mean size at catch of most species over the period since 1986. In addition the composition of the catch has dramatically changed, see paragraph 11 above. In general large commercially valuable species have been replaced by smaller, lower trophic level, less valuable pelagic species. Furthermore, the mean trophic level of the main commercial species in the Yellow Sea has decreased due to dietary changes as a result of ontogenetic shifts in diet; potential temperature induced changes in availability of dietary items that may reflect climate change impacts; and over-fishing of the prey items of carnivorous fish including anchovy. Changes in species abundance as a consequence of over-fishing have consequences for the overall structure and productivity not only of the fish community but the entire aquatic food chains in the wider Yellow Sea ecosystem. The decline of the Yellow Sea fisheries directly affects the livelihoods and food security of the local people, as well as having significant broader socioeconomic impacts due to the extremely high value placed on these biological resources.

20. Problems of sustainability in Mariculture The production from mariculture and freshwater aquaculture from China and ROK has grown spectacularly and in 2005 these countries accounted for 44 million metric tonnes or 70% of the world's total production, with China accounting for the bulk of the growth. Mariculture accounted for approximately 14 million tonnes in 2004 of which the greatest increases were from mollusc culture. There are signs however that these increases are not sustainable, and recently the productivity per unit area has begun to fall as the area under cultivation grows. This fall in productivity may be due to the fact that only unsuitable cultivation areas now remain, or that increased proximity of farms has resulted in: increased disease transmission between farms; raised concentrations of organic wastes; and increased competition for food resources amongst cultivated organisms. These factors all increase stress and lower the growth and survival rates of the cultured organisms, thus reducing production.

21. Habitat Loss and Degradation: Habitat has been lost at a staggering rate with almost 40% of coastal wetlands being converted to other uses and all three countries have further development plans. Coastal construction has altered coastal habitats, and industrial, agricultural and domestic effluent have further degraded these habitats. The coastal wetlands are important habitat for shellfish resources and their culture, and many of the commercially important fish species use these areas as nursery or feeding grounds at some stage in their life cycle. Additionally many endangered bird species depend on these wetlands as feeding and breeding grounds on their migration routes. Moreover the wetlands perform important biogeochemical functions such as sediment

retention, carbon sequestration, nutrient cycling, prevention of saltwater intrusion and coastline stabilization.

22. **Jellyfish Blooms:** The joint cruises conducted under the UNDP/GEF YSLME first project and other studies reported that, the abundance of jellyfish has increased in recent years leading to clogging of fishing nets and increased likelihood of bathers being stung, and the recent regional fishery stock assessment cruises provide similar evidence of an increase in jellyfish abundance. Recently it has been suggested that the increase in marine litter and construction of concrete structures such as jetties and wharfs has increased the habitat available to the asexual reproductive stage of these jellyfish. In addition, the reduction of plankton-eating fish stocks brought about by over-fishing, combined with the change from predominantly diatoms to dinoflagellates, has increased the food available to support the growth of jellyfish blooms. There appears to be a growing consensus that pollution, acidification of the sea and changing phytoplankton communities are leading to increased jellyfish densities in many regions. Not only do these higher jellyfish densities impact the tourists and fishermen in the Yellow Sea, they also directly impact fish stocks through feeding on the fish larvae and reducing the availability of zooplankton which is an important food source for larval fish. The increases in jellyfish have wider transboundary implications as a consequence of movements of jellyfish out of the Yellow Sea to neighbouring seas.
23. **Potential Climate Change-related Impacts:** Air temperatures over the Korean Peninsular have increased at a rate of 0.23°C/decade since the 1960's. Although annual variation in sea surface temperatures appear to be connected with other major climate/ocean systems (e.g. El Nino/Southern Oscillation and the Aleutian Low), mean sea surface temperatures have increased 0.38 – 0.94°C/decade in the Yellow Sea. This warming trend appears to have been accelerating in recent decades and there has been a northward movement of isotherms during the period. Most of the major commercial fish species over-winter in the bottom cold water mass located in the central southern portion of the Yellow Sea. Shrinkage of this cold water mass due to climate change could have serious consequences for these stocks and already some cold-water species, such as Pacific cod and herring, are no longer found in commercial numbers due to either over-fishing or warming of the cold water mass or a combination of both. The increase in carbon dioxide emissions due to anthropogenic activities could cause acidification of seawater and a decrease of 0.1 pH units, representing a 30% increase the H⁺ ion concentration has already been observed. Links between jellyfish density and acidification have been reported. Potentially the impacts of climate change could result in the mis-timing of the arrival and breeding season of migratory birds with respect to food availability as evidenced in other seas. In addition, climate driven changes in sea level could have significant impacts on the food available to wading birds by reducing the area of tidally exposed mudflats.

1.2 Threats, and root causes

24. Land reclamation and changes to alternative use pose the strongest threats to coastal habitats as most coasts bordering the Yellow Sea consist of depositional shorelines except for some rocky coasts in Liaoning and Shandong Provinces in China and Jeju Do, and Chollanam Do in ROK. Between 1950 and 1985 one third (2.94 million ha) of tidal flats in the People's Republic of China were reclaimed for other uses while

between 1988 and 1998 810 km² or 25% of the total area of tidal flats in ROK were reclaimed. Plans already exist to reclaim around 800,000 hectares of mud-flats over the next 10 years in China whilst comparable data are not available for ROK or the DPRK. Reclamation is driven by demand for additional land for urban expansion, port and oil refinery development, and agriculture.

25. Habitat degradation is also caused by severe pollution with more than 100 million tons of domestic sewage and around 530 million tons of industrial wastewater being discharged into the near shore areas of the Yellow Sea annually. The eastern Yellow Sea is seriously polluted and subject to persistent red tides, whilst the zooplankton community has been affected showing declines in copepods and arrow worms. Mass mortalities of the hard clam have occurred in the western regions of ROK coincident with high densities of pathogenic bacteria, parasitic cercaria and high concentrations of pesticides. Such events have caused serious losses in the aquaculture industry.
26. Habitat conversion and intensification of uses is occurring along much of the landward fringe of the Yellow Sea and includes intensification of drainage with consequent loss of wetlands, intensification of grazing and increased removal of timber products, and increased construction of shrimp and mariculture ponds. The underlying causes for these changes are the increased demands for seafood which reflect both the growth in coastal populations and the increased per capita demand for seafood resulting from lifestyle changes and increased coastal tourism.
27. A total of around 122 species of plants and animals were found to be vulnerable due to changes in habitat and suitability of migratory habitats, marine pollution, over-exploitation of the living marine resources, and changes in water circulation and surface temperatures. Underlying causes are the increase in human population numbers and activities in the coastal zone, limitations of waste treatment facilities, excessive numbers of fishing boats, and construction and port enlargement. In part, these causes reflect an inadequate valuation of the ecosystem goods and services during development planning, a lack of public awareness of the values of natural systems, weak legal instruments and inadequate enforcement of laws and regulations.
28. It has been estimated that more than 223 species of plants and animals had been introduced to ROK by 1996 of which a number of barnacles have become naturalized. Of 30 seashore areas surveyed 27 had at least one introduced marine organism present and *Balanus amphitrite* and *Ciona intestinalis* were found in 21 and 19 areas respectively. Whilst a number of species have been introduced deliberately for mariculture, or for stabilizing coastal dune areas a number appear to have been introduced accidentally, possibly via ballast water discharge.
29. The data on fisheries in the Yellow Sea suggest that the harvest is excessive - far above the level of a sustainable harvest. This has resulted in decreased individual size in target species and reduced population numbers and hence reduced mature breeding fish in the population and harvest. It is recognized that the primary cause of the over-exploitation is an excessive number of fishing vessels and it has been agreed that there is a need to reduce the size of the fishing fleet by 25-30% by 2020 to address this particular problem. Also contributing to the decline in fisheries resources is a traditional, narrow management approach to fisheries that focuses on particular resources without considering the interconnection between these target fish and the

food web and ecosystem on which they depend, i.e. an ecosystem based management approach is lacking.

30. To respond to these problems, a regional "Transboundary Diagnostic Analysis" (2005), and a regional "Strategic Action Programme (SAP)" (2008), have been successfully produced through the UNDP/GEF Yellow Sea Large Marine Ecosystem (YSLME) project and the "National Strategic Action Plans" (2009) were finalised in the Republic of Korea and China. These countries recognized that scientific knowledge needs to be translated into policy, legal and management actions for the entire region and not restricted to each nation, as environmental problems are not limited by geographic boundaries. The SAP identifies 11 tangible regional targets aimed at maintaining the ecosystem's capacity to provide the four ecosystem services (provisioning, regulating, cultural and supporting) to the region and beyond. It provides adaptive ecosystem-based management actions to reach these targets. Government Officers from DPRK have expressed their understanding of the procedure and outcomes of the TDA and SAP development through a workshop specially designed for the country and an official letter has been received supporting the TDA and SAP outcomes.
31. A significant barrier to addressing these problems in a concerted regional approach is the present absence of a regional governance mechanism. A YSLME Commission will be established to play a key role in overseeing joint actions to address the transboundary issues. It will ensure the regional targets are met through the implementation of the "on-the-ground" management actions that are documented in the SAP. The Commission will, at a later phase of the project, become self-sufficient and sustainable through establishment of appropriate financial mechanisms, capacity building and capacity building workshops, stakeholder participation, and public awareness activities. It is expected that the global environmental benefits of the proposed project would include: restoration of globally important fish stocks by reducing up to 30% of the current fishing effort; increased uptake of sustainable mariculture techniques in an industry responsible for 1/3 of global production; improved management of globally significant habitats for migratory birds and mammals; decreased eutrophication through reduction in nutrient discharges by 10% every 5 years; and thus, an overall restoration of ecosystem carrying capacity. Moreover, the project's unique approach to formulating a SAP based on ecosystem services serves as an inception point for introducing ecosystem based management approaches at the national level.
32. The tangible management targets listed in the SAP, e.g. reducing 30% fishing boats and reducing 10% nutrient discharge every 5 years, were based on the current existing national plans approved by the respective governments. In the case of China, the National 12th 5-year Plan has the same management targets. RO Korea has the similar national plan. It has been carefully reviewed by the regional experts and the national and provincial governments based on their approved plans and on the realistic considerations on the implementation. During the first project, demonstration projects were implemented to study the usefulness and effectiveness of the management actions. The relevant reports were published.

1.3 Long-term solution and barriers to achieving the solution

33. The root causes of the environmental problems of the Yellow Sea stem from the increasing demand for environmental goods and services which has already exceeded the natural capacity of the system to supply. That is, the Ecosystem Carrying Capacity has been exceeded not merely in terms of direct exploitation but also in terms of services such as the capacity of the system to absorb contaminants which has been exceeded resulting in algal and jellyfish blooms and other problems outlined above. The Strategic Action Programme notes that Ecosystem Carrying Capacity may be defined in terms of: provisioning services (e.g. wild and cultured seafood), regulating services (e.g. regulation of climate change and water quality), cultural services (e.g. tourism), and supporting services (e.g. nutrient cycling & primary production).
34. The long-term goal of the YSLME SAP is to preserve the ecosystem carrying capacity (ECC) of the Yellow Sea in order to continue to provide ecosystem services. Consequently the effective long-term solution to the environmental problems of the Yellow Sea is to implement effectively the regional SAP in such a manner that all targets are met and environmental quality and productivity are restored.
35. Traditionally, management actions target problems. However, this traditional approach is of limited effectiveness as environmental problems are not normally the result of a single cause. Declining fish landings are not simply the result of over-fishing, but are also the result of pollution, over supply of nutrients into coastal waters and loss of habitat used by fish for spawning and feeding. The sectorial approach to management cannot adequately address all the underlying causes. Based on this past experience, the ecosystem-based approach, advocated by the YSLME SAP, targets multiple ecosystem services holistically to sustain the ECC of the Yellow Sea.
36. The immediate causes of problems such as over-fishing may be found in over-capitalization of the industry such that too many boats are seeking to catch an ever declining stock of fish. The increased demand for seafood stems from the coastal population itself, and increasing numbers of tourist visitors together with external demand both within China and in neighbouring East Asian Countries. This growing demand has not only resulted in overharvesting of wild stocks but also in increased mariculture production from areas of inter-tidal and sub-tidal habitats being converted to mariculture facilities.
37. Long-term solutions to these problems involve a substantial reduction in the size of the current fishing fleet, with the concurrent provision of alternative livelihoods for displaced fishermen; improved aquaculture production in terms of both quantity and quality, whilst at the same time a reduction in the environmental impacts of mariculture operations; better production systems that reduce contaminant outputs, more efficient and effective means of controlling pollutants at source and preventing their entering the marine environment.
38. The solutions for each individual set of problems cannot be addressed in isolation one from the other but must be tackled in a coherent and co-ordinated manner that reflects the realities of the Yellow Sea Large Marine Ecosystem in terms of the goods and services provided by the system and the demands placed upon it by human populations and activities.
39. The situation is further complicated by the involvement of all the coastal countries in the use of the Yellow Sea and its resources. The current development actions of each

country independently impact upon the health of the Yellow Sea Ecosystem and just as there is a need to co-ordinate actions between sectors at the national level, there is a need to co-ordinate the actions of all the coastal countries in terms of their use of the Yellow Sea Ecosystem and its associated resources. The long-term solution to the problems of regional co-ordination requires the establishment of an appropriate regional entity having the political and financial support of all the coastal countries that can serve as a forum for the development of appropriate sustainable management plans and having the power and authority to oversee the implementation and execution of such plans.

1.4 Stakeholder and baseline analysis

1.4.1 Stakeholder analysis

40. The central governments of the two participating countries are the most important stakeholders since both the project and the actions to date seek to establish and strengthen the regional governance regime with respect to the Yellow Sea. The role of each of the central governments of the participating countries has been important in the past in promoting regional approaches.
41. Below the central government in each country are the Provincial and Municipal Governments that have jurisdiction over various aspects of coastal land and water uses and planning and for licensing and enforcing local regulations and standards. These government entities are significant stakeholders with the power and authority to control and regulate the actions of both public and private sector enterprises operating in the coastal zone.
42. The coastal communities are stakeholders that derive benefit both directly and indirectly from the various uses of the coastal ecosystems including for agriculture, mariculture, the operation of tourism businesses, and subsistence. At the same time these communities are impacted by ecosystem changes occurring as a result of both their own actions and those of others. For example small scale tourist businesses, or mariculture operations that depend on the quality of the marine environment can be adversely impacted by red tides and harmful algal blooms that cause mass mortality of marine organisms and human health problems. During the first project of the UNDP/GEF YSLME Project the Rongcheng Fisheries Association and a number of commercial mariculture companies in Sanggou Bay, in China and the Fisheries Co-operative of ROK have been involved in workshops, publicity campaigns, protection of seagrass beds and the conduct of SAP demonstration activities.
43. Several international organisations have participated in the past in aspects of regional governance. UNDP has actively participated in the regional governance mechanisms while UNEP has been involved through the Regional Seas Programme in general, and NOWPAP in particular, and the IMO through the operation of the various earlier phases of PEMSEA, and the implementation of ballast water demonstration project in Dalian. It is anticipated that the existing partnership/MOU between the first project of YSLME and PEMSEA will continue to be functioning to maximise the co-operation and co-ordination between the two projects, in particular to use PEMSEA as a political framework in the East Asian Seas region.

44. The scientific and academic communities have participated at both the regional and national levels in conducting aspects of the regional analyses that have been undertaken during the first project and in providing scientific and technical advices to the political decision makers represented on the Project Steering Committee. It is anticipated that these institutions and individuals will continue to provide such functions in the implementation of the next phase of the Yellow Sea project and in providing advice to the Yellow Sea Large Marine Ecosystem Commission when it is established.
45. Other stakeholders including parliamentary organisations, international NGOs such as WWF and local ones together with private sector groups such as mariculture associations have participated in the regional governance less actively than other stakeholder groups to date. In the ROK, NGOs such as Birds Korea; Citizens Institute for Environmental Studies, the Eco-horizon Institute, Korea Marine Rescue Center, Shihwa Lake Saver, and the PGA Wetlands Ecology Institute, and In China the Global Village of Beijing, have all undertaken activities during the first project under the small grants programme. Incorporation of stakeholders into the various decision-making systems related to marine resource management, coastal zone management, pollution management and other aspects of SAP implementation is encouraged. At the national level co-ordination is also desirable between scientists, managers, fishermen, farmers, and government officers.
46. Securing the participation of all the coastal countries and relevant stakeholders in the regional governance whilst necessary will be an enormous task and capacity building of some stakeholder groups particularly local NGOs and governments will be required before they are in a position to fully participate in the regional governance and management decision making. It is anticipated that involvement of both the NGO community and Private sector enterprises will build on the successes of the first project and the range of organisations will be expanded to include industries, small and medium sized enterprises and tourism operators.
47. In order to enhance overall effectiveness of SAP implementation, strengthening partnerships with existing regional co-operative institutions, is necessary including, but not limited to, bilateral co-operation mechanisms such as the Joint Committee on Environmental Co-operation, the Joint Fisheries Commission, China-Korea Joint Ocean Research Center; and further strengthening the current Yellow Sea Partnership.
48. This project marks the second stage of GEF financial support to the Yellow Sea. It also marks a change in focus and a change in the stakeholder mix of the project itself. By focusing on the problems of depleted fisheries and conservation of biodiversity, this project places more emphasis on sustainable development and as such the fisheries sector itself is important. Add to this the fact that regional governance is critical to this project and the most important stakeholder groups are the Ministries responsible for: Foreign Affairs, Maritime Affairs, the Environment/Natural Resources, and fisheries in each country.
49. List of major government stakeholder institutions.

People's Republic of China
Ministry of Foreign Affairs
Ministry of Finance

State Oceanic Administration
Ministry of Environment Protection
Ministry of Communication
Ministry of Agriculture
Provincial and Municipal Governments
Republic of Korea
Ministry of Foreign Affairs
Ministry of Oceans and Fisheries
Ministry of Agriculture, Food, and Rural Affairs
Ministry of Environment
Ministry of Unification

1.4.2 Baseline Analysis

50. There is a marked declining trend in extent, and status, of the coastal ecosystems of the Yellow Sea. This trend line is disturbingly downward as described in earlier sections, including both significant losses of area and degradation of coastal habitats and ecosystem functions. In a baseline scenario this trend would likely continue either declining, or bottoming out, with little to no improvement in the near to medium term.
51. The lack of experience and knowledge, and other capacity constraints with respect to ecosystem-based management will prevent the Yellow Sea coastal countries from developing a basic understanding of key ecological relationships such as the link between changes in nutrient ratios and jellyfish blooms, and applying this understanding to practical resource management decision making. Capacity constraints will hamper the region's ability to develop effective management decision support tools that would enable regional and national institutions to better link resource management with conservation objectives in the context of an ecosystem-based management framework. Capacity constraints may also inhibit improved regional collaboration and hence the effectiveness of management actions across the Yellow Sea Large Marine Ecosystem.
52. Under a business as usual (or baseline) scenario, individual countries will continue with their regular monitoring programmes of various environmental and ecological parameters but this will be done in the absence of an agreement on regional standards and protocols for monitoring of Yellow Sea ecosystem health. This means that the data from each country, because it is collected in different ways and at different times, will be difficult to compare and contrast, hampering use of the data in regional management and policy making and preventing the development of a basin wide picture of ecosystem health.
53. The decline in habitat status and biodiversity are closely linked through food chains and feeding patterns and a disturbance in the phytoplankton and zooplankton communities caused by changes in nutrient ratios may impact species at higher trophic levels, through changes in the frequency of red tides and harmful algal blooms, eutrophication and mass mortalities of benthic organisms under a baseline scenario.
54. Declining trends in individual size fish in catches, in catch per unit effort and in total landings are well recognized by all parties as an indication that the current harvest is beyond sustainable levels and without action to reduce the catch effort it is likely that these resources will continue to decline both in quantity and quality over the

foreseeable future. Whilst the levels of harvest are viewed as the primary cause of the decline observed over the last three decades it is clear that loss of coastal habitats that are significant nursery and spawning grounds has contributed to declines in fish recruitment whilst increased pollution has resulted in declining water quality and changed availability of larval fish food sources.

55. Decline in individual size of catch reflects both declines in size of individuals within each target species and declines consequent upon changes in the target species themselves such that the economic values of the catch have declined significantly over the last two decades. Without concrete and co-ordinated action these trends will continue unchecked
56. Under the baseline scenario, the Yellow Sea countries would continue to apply past management practices rooted in assumptions that people can control natural systems and consistently achieve maximum sustainable yields through practices such as release of significant numbers of hatchlings and fingerlings without attempts to ascertain the ecological effectiveness of such actions. In a baseline situation, too little attention will be paid by managers to questions such as how to increase the reproductive success of target fish species through ecologically-based approaches that improve the quality of the environment in terms of conserving nursery and spawning habitats and reducing pollution.

2. STRATEGY

2.1 Project Rationale and Policy Conformity

57. This project fits within and complements the GEF portfolio of International Waters projects since the project builds upon an impressive country-driven regional Strategic Action Programme developed under and agreed with GEF support. This will enable the project to generate many useful lessons and to serve as a mature model for many other fledgling transboundary initiatives in GEF's worldwide portfolio and contribute to the strengthening of the overall GEF-IW portfolio, through participation in IW:LEARN activities. Secondly, the project is designed to incorporate lessons from other GEF IW initiatives such as projects on the Benguela Current, the Rio de la Plata, and the Black Sea.
58. The YSLME SAP proposes the use of an innovative "ecosystem-based management approach" as advocated in the Millennium Development Goals (MDGs) in order to manage the complicated relationships between the environmental stresses and the resulting problems. This ecosystem-based approach uses scientific knowledge to guide appropriate management actions that preserve the ecosystem functions of the YSLME and its Ecosystem Carrying Capacity (ECC) i.e. its capacity to provide ecosystem services that are vital to the welfare of communities surrounding the Yellow Sea.
59. This project is consistent with GEF's International Waters strategy, in that it represents a project to implement the Strategic Action Programme developed and agreed with GEF assistance and based on a detailed Transboundary Diagnostic Analysis. The GEF funding will: enable regionally co-ordinated implementation of

the SAP through the YSLME Commission; and foster the removal of sectorial barriers to the integrated management of the YS ECC.

60. Within the GEF International Waters Strategic Priority #1, the project will address the need for bilateral and multi-lateral programmes of action to enhance fish stocks; encourage the implementation of the FAO Code of Conduct for Responsible Fisheries; engage the fishing and mariculture industries in sustainable management solutions that provide profit to these stakeholders, while not negatively impacting the Yellow Sea Ecosystem.
61. This project also addresses the GEF International Waters Strategic Priority 2 (IW-SP2) through measures to reduce nutrient loads, in fulfilment of the articles in pollution-related conventions; through translating regional monitoring results into policies; and providing mechanisms to exchange data among agencies and across borders. IW-SP2 is closely linked to protection of critical habitats through improving and/or establishing management plans and marine protected areas. Regular monitoring of the impacts of pollutants on habitats, surrounding areas, and assessment of affected stakeholders will be covered and the project will utilize ecosystem-based approaches and adaptive management schemes to manage these transboundary water problems. The potential impacts of and adaptation to, climate change will be embedded in the management actions directed towards ecosystem carrying capacity as the central theme of the project.
62. The project will also deliver additional outcomes such as: enhanced public awareness; strengthened stakeholder's capacity to carry out actions; and institutional sustainability that ensures the SAP and the YSLME Commission will be self-sufficient in the long-term. Involvement of all coastal countries in the Yellow Sea, will contribute to regional environment management, as well as regional peace and stability.
63. The Yellow Sea represents a marine environmental resource shared among all the coastal countries hence GEF involvement is critical in overcoming the geopolitical complexities and potential conflict among resource users in the Yellow Sea. The participation of DPRK, as an observer, in this project would ensure the engagement of all the Yellow Sea coastal countries in the management of their shared transboundary resources and in helping to resolve the environmental issues and problems. The costs of introducing effective skill levels with regard to ecosystem based management in the DPRK in order to ensure, in the future, full participation of DPRK in regional conservation efforts is therefore considered to be almost entirely incremental. Benefits resulting from the inclusion of all partners will accrue in terms of expanded regional and international marine conservation and management efforts in the East Asian Seas region.
64. The current sectorial management of the marine environment in the countries bordering the Yellow Sea prevents implementation of co-ordinated, integrated and ecosystem-based management as defined in the SAP. GEF assistance in the institutional, policy and management reforms will move the process from the business-as-usual approach to integrated management across sectors. Managing to improve ecosystem carrying capacity will be a novel process for the region to engage in, and there is an urgent need to move the region's perception of marine environmental management in this direction. As a result of the SAP implementation,

the capacity of individual agencies to play a pivotal role in facilitating more holistic management will be improved. Use of GEF resources together with national financial commitments will also facilitate the sharing of experiences and lessons-learned on national and regional scales, ultimately aimed at increasing the replication potential for the project's impacts. Implementation of YSLME SAP will assist implementation of the "Sustainable Development Strategies for the Seas of the East Asia (SDS-SEA)" at the sub-regional level. This will provide valuable benefits to strengthen regional infrastructure established under GEF's efforts.

2.2 Country Ownership: Country Eligibility and Country Divinence

65. The countries have all endorsed the SAP for the Yellow Sea developed during the implementation of the UNDP/GEF first project as follows: China (19 Nov. 2009), DPRK (as observer) (8 Dec. 08), ROK (28 Nov. 08), and China and ROK have developed and approved the National Strategic Action Plans (NSAPs) to implement the SAP at the national level. These NSAPs are consistent and congruent with the National Biodiversity Strategic Action Programs of China and ROK.
66. This project is fully consistent with the UNDP Country Programme Document (CPD) for China contributing to UNDAF Outcome 1, namely that: social and economic policies are developed and improved to be more scientifically based, human centred and sustainable and UNDP Programme Outcome 7. Conservation and sustainable use of biodiversity is more effective.
67. An official letter was received from DPRK in supporting the TDA and SAP prepared for the Yellow Sea, following a detailed introduction of these topics at a training workshop, organised during the first project. Involvement of DPRK as an observer of the project will assist in implementing the country programme developed by UNDP in the areas of marine environment protection and sustainable uses of marine and coastal resources.
68. The Republic of Korea is no longer eligible for UNDP Country assistance, nevertheless the actions and activities programmed in the regional Strategic Action Programme will be financed through the government's recurrent budget within the national institutional framework.

2.3 Design Principles and Strategic Considerations

69. As noted above a critical element of any long-term solution to the environmental problems of the Yellow Sea lies in the creation of a sustainable management mechanism at the regional level supported by cross-sectorial management actions at the national level. This project aims to establish an intergovernmental YSLME Commission that is sustainably funded in the long term and possesses sufficient authority and credibility to direct the management of the Yellow Sea Large Marine Ecosystem and its resources with a view to restoring the Ecosystem Carrying Capacity of the system.
70. Critical to the achievement of the long term development and environmental goals is the development of a strong capacity for ecosystem based management of the Yellow Sea and its associated resources and a substantial proportion of the project's activities are directed towards achieving this capacity.

2.4 Project Objective, Outcomes and Outputs/Activities

Objective: To foster long-term sustainable institutional, policy, and financial arrangements for effective ecosystem-based management of the Yellow Sea in accordance with the YSLME Strategic Action Programme.

COMPONENT 1. SUSTAINABLE REGIONAL AND NATIONAL CO-OPERATION FOR ECOSYSTEM BASED MANAGEMENT, BASED ON: STRENGTHENED INSTITUTIONAL STRUCTURES; IMPROVED KNOWLEDGE BASE; AND STRENGTHENED CAPACITY FOR DECISION MAKING

OUTCOME 1.1 REGIONAL GOVERNANCE STRUCTURE, THE YSLME COMMISSION ESTABLISHED AND FUNCTIONAL BASED ON: STRENGTHENED PARTNERSHIPS & REGIONAL CO-ORDINATION; WIDER STAKEHOLDER PARTICIPATION AND ENHANCED PUBLIC AWARENESS

Output 1.1.1 *Draft agreement, accepted by all the participating countries, to establish the YSLME Commission and associated bodies, including the Management Science and Technical Panel (MSTP) and Regional Working Groups (RWGs) at the regional level, and Inter-Ministry Co-ordination Committees (IMCC) and National Working Groups (NWGs) at the National Level and adopt their Terms of Reference (TOR), membership and rules of procedure for the conduct of meetings.*

It is anticipated that the Commission will meet annually and will serve as the supreme body responsible for joint policy development, implementation of the SAP and oversight of the GEF project execution. The MSTP will also meet annually and the RWGs will meet as required to execute their responsibilities as defined by the Commission. The reports of all meetings will be made publicly available through the Yellow Sea Large Marine Ecosystem website, which will also serve as a repository for regional environmental data and information and will be interactive allowing partners to up-load data and information as appropriate.

Output 1.1.2 *Commission Secretariat created and functioning.*

The Commission will be serviced by a professional secretariat with responsibility for: preparing annual summaries of costs and draft budgets for the subsequent year; advising on the cost effectiveness of the operation of the Commission, its subsidiary bodies and its Secretariat; providing technical assistance and advice to the National Project Coordinators (NPCs) as required.

OUTCOME 1.2 IMPROVED INTER-SECTORAL CO-ORDINATION AND COLLABORATION AT THE NATIONAL LEVEL

Output 1.2.1 *National level agreements regarding ecosystem-based management actions, policies, regulations and standards promulgated, as appropriate*

Activities will involve supporting and strengthening the functioning of the IMCCs in each country by including the IMCC into the project implementation structure; organizing regular IMCC meetings and reporting the IMCC agreements to the Interim Commission Council designed for this project ;

OUTCOME 1.3 WIDER PARTICIPATION IN SAP IMPLEMENTATION FOSTERED THROUGH CAPACITY BUILDING AND PUBLIC AWARENESS

Output 1.3.1 *At least 15 agreements with partners on overall environment co-operation and management, relevant fishery management, marine habitat conservation and pollution reduction, at both national and regional levels; cross sector partnerships established and operational*

It is anticipated that at least 15 regional and bilateral agreements will be finalised with the agencies and organisations having interest in the environment of the Yellow Sea and active engagement in SAP implementation.

Based on the regional governance analysis prepared during the first project, the necessary information on legal framework, institutional arrangement and stakeholder participation exist. With the available information, the project will assist the participating countries in harmonising national legislation with regionally agreed standards; develop a YSLME Legal clearing house as part of the project website.

Output 1.3.2 *National public awareness in support of YSLME SAP achieved; data and information collected; jointly managed databases; publicly accessible information for implementing management plans at the regional, national and local levels*

Through the existing Yellow Sea Partnership, and the Strategy of Public Awareness and Participation developed during the first project, further efforts will include assembly of data and information on the ecosystem status and changes; monitoring and reporting; wider stakeholder participation at all levels fostered through annual workshops and active engagement of NGOs and private sector in execution of activities. Considerable inputs will be required in the case of DPRK in order to assist that country in building capacity to implement ecosystem-based management in line with China and ROK which have already commenced this task during the first project.

Output 1.3.3 *Transfer of lessons, experiences and best practices between local sites*

During the first project, 23 demonstration and/or pilot projects were implemented. Lessons and experiences were obtained from these efforts. The project will continue to transfer these lessons and experiences to other geographic sites, if applicable and suitable to the local environment conditions. The activities will include, but not limited to, the activities in recovering fishery stocks, control land-based, sea-based and atmospheric deposition of pollutants, sustainable mariculture and adaptive management of the impacts from climate change.

Output 1.3.4 *Training of at least 10 stakeholder groups on public participation on relevant management actions, in particular on fishery management, marine habitat conservation and economic assessment*

OUTCOME 1.4 IMPROVED COMPLIANCE WITH REGIONAL AND INTERNATIONAL TREATIES, AGREEMENTS AND GUIDELINES

Based on the national and regional governance studies carried out during the first project, the legal, institutional and stakeholders analyses were published. The proposed actions included

in the regional and national SAPs. Necessary actions will be taken to harmonise the legal arrangement in the region.

Outputs 1.4.1 *Enhanced national and regional legal instruments to comply with regional & global treaties, agreements and guidelines*

In order to improve the strictness, scope of coverage and enforcement of the legal instruments, actions need to be made including, but not limited to the following:

- Ensuring full ratification of the treaties;
- Strengthening co-ordination between the bilateral Fisheries Agreement between China and ROK in the YSLME Commission Context;
- Developing regional guidelines in order to incorporate suggested guidelines of the FAO Code of Conduct for Responsible Fisheries into the YSLME Commission's Context; and
- Developing guidelines on matters not covered in detail by the United Nations Convention on the Law of the Sea, Convention on Biological Diversity and Ramsar Convention.

OUTCOME 1.5 SUSTAINABLE FINANCING FOR REGIONAL COLLABORATION ON ECOSYSTEM-BASED MANAGEMENT SECURED BASED ON COST-EFFICIENT AND ECOLOGICALLY-EFFECTIVE ACTIONS

Outputs 1.5.1 *Periodic economic assessments of costs and ecological effectiveness*

In general, there is a lack of the economic considerations of ecosystem management in the region. Few analyses have been conducted on conservation activities from the perspective of cost-benefit performance. The CBA of major management actions should be conducted to provide more information. To integrate economic aspects into ecosystem management, it is recommended to take the following preparatory actions by 2020:

- Improve the regional guideline for economic analyses of environmental management actions;
- Conduct pilot CBA studies on selected demonstration activities of the actions;
- Organise technical trainings on CBA to build and/or strengthen the capacity of the participating countries;
- Integrate economic analyses into the workplan of relevant authorities to design and implement better conservation activities; and

Outputs 1.5.2 *Sustainable financing agreed; at least 150% increase in government financing for regional collaboration*

With the agreement from the governments of the participating countries, the negotiation on the establishment of the YSLME Commission should be carried out during the second project in the Yellow Sea. One of the important issues will be the sustainable financing for the YSLME Commission. The governments of participating countries need to get an agreement on the operation of the Commission and financial support for the secretariat of the Commission and necessary fund raising activities.

COMPONENT 2. IMPROVING ECOSYSTEM CARRYING CAPACITY WITH RESPECT TO PROVISIONING SERVICES

OUTCOME 2.1 DEPLETED MARINE LIVING RESOURCES RECOVERING

Output 2.1.1 *Reduction by approximately 10% of the current fishing fleet through buy-back scheme and support system for displaced fishermen established.*

Activities will include reduction in the number of fishing vessels through boat buy-back of around 10% of the current fleet over four years and tighter control of fishing boat construction and licensing; assessment of possible alternative livelihoods and technical training for displaced fishermen; introduction of small loan scheme and tax free incentives for alternative livelihoods. improved management based on sound science; seasonal and area closure as appropriate; improvement in gear selectivity and fish behaviour studies; improved monitoring and assessment of stock fluctuations including joint regional stock assessments;.

Output 2.1.2 *Provision of alternative livelihoods to fisher folks taking into account the contribution of women*

Following the actions on boat buy-back, extensive efforts need to be carried out in providing alternative livelihoods to the original fishery communities, such as eco-tourism and small scale business suitable for the local communities. Necessary trainings on the alternative livelihoods will be organised. While implementing all these activities, the participation and involvement of women should be seriously considered.

OUTCOME 2.2 ENHANCEMENT OF FISH STOCKS THROUGH RE-STOCKING AND HABITAT IMPROVEMENT

Output 2.2.1 *Science-based management of fisheries and mariculture*

During the first project, the demonstration projects indicated that increase numbers of healthy and genetically diverse fry of selected commercial stocks will be produced and released to boost natural reproduction. Through the regional network established by the first project, the continue efforts on increasing the numbers of healthy and genetically diverse fry of the commercial stocks, and the effectiveness of this programme will be carefully monitored;

The artificial reefs will provide refuges for important demersal fish species and to discourage trawling in certain areas. To continue to existing efforts, the artificial reefs will be constructed in the area where important for enhancing the fish stock;

Seagrass beds provide nursery and spawning areas for commercially threatened species. More efforts will be carried out in define and approve by the governments new protected areas for seagrass. In addition to the conservation actions, it is anticipated that more seagrass will be planted in the areas where suitable for the expansion of seagrass bed.

OUTCOME 2.3 ENHANCED MARICULTURE PRODUCTION, SUSTAINABILITY, AND QUALITY

Output 2.3.1 *Widespread practice of sustainable mariculture, where appropriate increasing productivity by up to 10%*

The demonstration projects on sustainable mariculture in both China and RO Korea provided good examples and techniques in increasing economic yield and reducing negative impacts to the marine environment. To explore suitable sites with appropriate environmental and economic conditions, the integrated multi-trophic aquaculture (IMTA) and heterotrophic mariculture techniques should be introduced. It is anticipated that the productivity will be increased by up to 10%, and negative impacts to the environment will be largely reduced.

Output 2.3.2 *Adoption of integrated multi-trophic aquaculture (IMTA) where appropriate*

Based on experiences and outcomes of the demonstration activities conducted in the first project, environmentally friendly mariculture methods and technology will be further developed and their use promoted as widely as possible. These involve a change to integrated multi-trophic aquaculture (IMTA) from monoculture and arrangement of the production system such that wastes from one unit serve as inputs to production in adjacent units.

COMPONENT 3. IMPROVING ECOSYSTEM CARRYING CAPACITY WITH RESPECT TO REGULATING AND CULTURAL SERVICES

OUTCOME 3.1 ECOSYSTEM HEALTH IMPROVED THROUGH A REDUCTION IN POLLUTANT (e.g. Nutrients) FROM LAND-BASED SOURCES

Output 3.1.1 *Reduced pollutant levels, e.g. reduce 10% N discharge every 5 years, by enforcement and control in demonstration sites*

Activities will be implemented that involve intensive monitoring at a regional level carried out by a regional monitoring network established as the first time in the region, based on agreed protocols that build on existing activities at the national level and are in conformity with an agreed strategy to control contaminants and share data and information regionally. This will involve the development of economic instruments to reduce pollution; improve the regional contingency plans for oil spills; improved development of waste water treatment systems; adoption of waste reduction technologies; A basin wide strategy to identify and quantify the importance of individual sources and sinks of contaminants will be developed that will include consideration of loadings in hot spots and critical habitats.

Output 3.1.2 *Enhanced data and information regarding sources and sinks of contaminants*

The current national regulations have some condition to share the marine environmental data and information. Necessary actions need to be taken to enhance the data and information sharing regarding the sources and sinks of contaminants to provide effective mechanism for better understanding of the effects of the pollutant control.

OUTCOME 3.2 WIDER APPLICATION OF POLLUTION-REDUCTION TECHNIQUES PILOTED AT THE DEMONSTRATION SITES.

Output 3.2.1. *New and innovative techniques for pollution reduction (e.g. artificial wetlands) applied at demonstration sites*

Development of demonstration sites involving artificial wetland construction for control of nutrients discharge, evaluation of their effectiveness and promotion of the use elsewhere if appropriate. Based on further environment information and management actions, it is

anticipated that there would 3-4 demonstration sites be identified to remove nutrients by artificial coastal wetlands.

Output 3.2.2 Reviews of new technologies for treating nutrients in wastewater evaluated and the information made available to appropriate government agencies and institutions through the project website.

New technologies in removing nutrients from land-based sources will be reviewed and checked to meet the regional conditions, including new technologies in waste water treatment plant.

OUTCOME 3.3 STRENGTHENED LEGAL AND REGULATORY PROCESSES TO CONTROL POLLUTION

Output 3.3.1 Strengthened legal instruments and better regulatory processes to control pollution

Ultimately it is anticipated that the legislation governing sub-standard waters will be strengthened and improved. This will involve review of the standards and levels recommended in current international agreements and evaluation of their suitability for adoption in the participating countries. Stakeholder workshops will be convened in each country to publicise the outcomes and recommendations of this review.

OUTCOME 3.4 MARINE LITTER CONTROLLED AT SELECTED LOCATIONS

Output 3.4.1 Procedures in place to control and remove marine litter at demonstration sites

A regional review of the current policies and regulations regarding solid waste disposal will be carried out together with a review of current technologies for reducing production of such wastes including recycling opportunities.

A regional baseline survey of marine litter and a simple monitoring scheme developed for regional application.

At selected locations the project will work with local authorities to improve public awareness of the problems of marine litter, and develop campaigns for beach clean-up utilising NGOs and community groups.

COMPONENT 4 IMPROVING ECOSYSTEM CARRYING CAPACITY WITH RESPECT TO SUPPORTING SERVICES

OUTCOME 4.1 MAINTENANCE OF CURRENT AREAS OF HABITATS; MONITORING AND MITIGATION OF THE IMPACTS OF RECLAMATION

Output 4.1.1 Agreement at all levels to implement the relevant management actions avoid new coastal zone reclamation projects

To secure this output, it will be necessary to: establish and implement a regional conservation plan for biodiversity including explicit targets for habitat and species conservation; develop regional guidelines for coastal habitat management; assess negative impacts of the activities modified marine habitats; control and minimize new coastal reclamation; improve the mitigation of reclamation impacts on adjacent habitats; promote public awareness of the

benefits of biodiversity conservation; and institute mechanisms for early stakeholder consultations regarding development and management plans.

OUTCOME 4.2 MPA NETWORK STRENGTHENED IN THE YELLOW SEA

Output 4.2.1 *MPA networks (covering approx. 544,800 ha) strengthened in the YSLME*

The current MPAs in the Yellow Sea are insufficient to conserve the rich biodiversity of this LME and it will be necessary to analyse the linkages, biological, environmental and human, between the existing sites in order to identify gaps in the system. New MPAs will be developed to ensure the operation of the regionally representative network. Effectiveness of the MPA networks will be evaluated by assessing the maintenance and change of biodiversity in MPAs. MPA managers, NGOs and community groups will be further networked through the project and via exchanges and visits between sites. Stakeholder capacity will be strengthened through the convening of regional and national workshops on sustainable use of MPAs. A 5-year workplan for the YSLME MPA network will be prepared to cover wider MPAs in the region, and provide effective tools for biological diversity conservation.

OUTCOME 4.3 ADAPTIVE MANAGEMENT MAINSTREAMED TO ENHANCE THE RESILIENCE OF THE YSLME AND REDUCE THE VULNERABILITY OF COASTAL COMMUNITIES TO CLIMATE CHANGE IMPACTS ON ECOSYSTEM PROCESSES AND OTHER THREATS IDENTIFIED IN THE TDA AND SAP

Output 4.3.1 *Regional strategies adopted and goals agreed; site-based ICM plans enhancing climate resilience in place for selected sites in YSLME; conservation areas and habitats for migratory species identified*

Impacts of climate change in the Yellow Sea ecosystem, in particular the impacts to the plankton communities have been studied in the demonstration projects of the first project. Efforts need to be continued to find out impacts of climate change. With scientific and environmental information available, an appropriate regional strategy need to be developed as a long-term goal.

OUTCOME 4.4 APPLICATION OF ECOSYSTEM-BASED COMMUNITY MANAGEMENT (EBCM) IN PREPARING RISK MANAGEMENT PLANS TO ADDRESS CLIMATE VARIABILITY AND COASTAL DISASTERS

Output 4.4.1 *Public awareness of Yellow Sea environmental problems enhanced; strong local support for and awareness of demonstration activities*

The project will sponsor a network of NGOs, based on the Yellow Sea Partnership established during the first project, to work together in building public awareness of environmental issues and problems in the Yellow Sea. Other activities will include: establishment of a biodiversity small grant fund; sponsoring of public awareness programmes at national demonstration sites; regional training on ecotourism at MPAs and other locations; assessment of the trend in introduced species; exchange of information and experiences.

Output 4.4.2 *Established monitoring network; regular basin-wide assessments; enhanced information exchange; periodic scenarios of ecosystem change*

Comprehensive regional monitoring system established to provide data and information regarding trends and changes in environmental conditions over both the short and long-terms.

Assessments of the scale and magnitude of observed and future changes will involve modelling and the development of scenarios that can be used in management decision making. The initial foci will centre on nutrients and changes in nutrient ratios, frequency and magnitude of algal and jellyfish blooms; changes in sea surface temperature and basin circulation, extent and condition of coastal habitats and the RWGs will play an important role in establishing the monitoring system, developing and applying models and scenario development.

2.5 Key indicators, risks and assumptions

Risk	Risk Type	Risk Mitigation Measures
A critical external risk to involve all the coastal countries lies in the position of DPRK vis-à-vis resolutions of the UN Security Council that may make it difficult for DPRK to actively participate in this project	Political	This risk is beyond the project capability to address. It is assumed however that by the time of endorsement of the Project Document by the GEF CEO, UNDP country office and programme may assist the necessary activities in DPRK.
Potential conflicts between the participating countries could occur over project resources and the use and management of the shared resources of the Yellow Sea LME.	Political	This risk is considered medium-low, as ROK and China have had experience in conflict resolution through negotiations such as the successful implementation of co-operative cruises of the YSLME project. With the countries' signatures agreeing to co-operate in the SAP and a Commission overseeing SAP implementation, any conflicts should be resolved at a high policy level with regional co-operation.
Lack of governance reforms might prevent implementation of management actions and impede the objective of sustaining ecosystem carrying capacity.	Operational	This is considered a low risk. Governance analyses have been carried out in the first Project, and governance-related management actions are recommended in the SAP to ensure effective implementation of governance reforms. Governance reforms will support long-term sustainability of the Commission and the entire ecosystem-based management process.
Environmental variability and climate change could alter ecosystem functions and reduce ecosystem services.	Environment	This is considered low risk. An SAP demonstration activity has already been carried out to evaluate the impacts of climate variability and change on the plankton communities of the YS, and its full implementation is scheduled under the proposed project. The YSLME Commission will guide adaptive management to meet such global changes.
Lack of long-term institutional sustainability may inhibit the long-term benefits of the SAP to the region, beyond the Project's 2nd phase.	Strategic	This is a common risk in GEF projects which the establishment of a sustainably financed Commission seeks to solve by the end of the project. Due to the varying levels of capacity and economic development among the participating countries this risk is considered medium-low. The YSLME Commission will guide aspects such as financing mechanisms, stakeholder participation, and capacity building programs to ensure that the technical and institutional benefits from the SAP continue beyond the project's life span.

2.6 Financial modality

71. This is a GEF grant co-financed project for which UNDP is the Implementing Agency and UNOPS the Executing Agency. Financial management of the GEF grant is the

responsibility of UNOPS that will manage the funds in accordance with UNOPS financial rules and regulations including monitoring expenditures and maintaining fiscal oversight of all expenditures. Activities in ROK will be financed through the national budget and funds will be managed in accordance with the ROK financial rules and regulations.

2.7 Cost-effectiveness

72. The project is highly cost-effective since the project management represents less than 10% of total project costs and substantial co- and parallel financial contribution from the countries augments this management overhead. Costs associated with the management and dispersal of country co-financing are assumed by the countries and institutions concerned. The project will produce substantial outcomes that have high economic and environment values. Recovering the fishery stock and sustainable mariculture will recover the fishery resources for human uses. With about US \$ 10.8 billion co-financing and parallel-financing support provided by the governments of the participating countries, the project will provide more economic and environmental benefits to the people living in the coastal areas of the Yellow Sea.

2.8 Sustainability

73. Strategic sustainability has already been greatly enhanced with the approval of the Yellow Sea SAP, which effectively demonstrates that the countries are committed to long range environmental objectives and are willing to begin the process of SAP implementation. Linkages between the SAP and each country's NSAP will form a crucial element of the Project's sustainability strategy. Furthermore the implementation of the NSAPs can be seen as an indicator of real commitment by the participating countries.
74. A more lasting indicator of sustainability will be Yellow Sea countries commitment to financing a long-term YSLME Commission and signs that this will be achieved can already be seen in the expressed willingness of China and ROK to provide bridging finance for the operation of the PMO following completion of the first project and commencement of the SAP Implementation Project.
75. Institutional Sustainability: The preliminary investments in developing the SAP and TDA, were not designed as planning processes that would be sustained beyond the life of the project, nevertheless the Inter-Ministry Co-ordination Committee established under the first project in China and ROK will be maintained and strengthened during the second phase project in order that these might play a seminal role in the functioning of the YSLME Commission once established. The proposed regional and national bodies that will form part of the Interim Commission represent a continuation of bodies and functions tried and tested during the first project. It is anticipated that once the YSLME Commission is legally established these bodies will continue to exist.
76. Financial Sustainability: The main indicator of financial sustainability will be the extent to which the countries themselves undertake the financing of the YSLME Commission as the body responsible for implementation of SAP activities. The present project seeks to engage the countries in a dialogue that will result in agreement on future financing of SAP implementation once the project is completed.

Ample evidence exists to demonstrate the willingness of China and ROK to make substantial financial inputs to addressing the environmental problems of the Yellow Sea as evidence by the extent of co-financing approved by each of these countries to this project.

77. *Social Sustainability*: Broader involvement of stakeholders in as many aspects of the Project as possible is an important factor of overall project success. The Project will especially promote broad stakeholder involvement in the preparation of legislative changes as this sector will have the most widespread and long lasting impact on residents of the Yellow Sea.

2.9 Replicability

78. The proposed project has strong potential to provide experiences and lessons that can be adapted to other regions of the world, particularly those aiming to adopt ecosystem-based management approaches to bio-resources conservation and management of Large Marine Ecosystems. As implemented in the 1st phase, the project provided training for Guinea Current LME on sustainable mariculture techniques. The project will document the lessons in a form that facilitates their replication, and will actively participate in GEF and other activities that seek to promote replication and sharing of experiences, such as IW:LEARN and the Biennial GEF IW Conferences.

3. PROJECT RESULTS FRAMEWORK:

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD: China: Enhance the national capacity at all levels in managing, adapting, and mitigating climate change, and promote environmental sustainability and cleaner and renewable energy.

Country Programme Outcome Indicators: Strengthened co-ordination mechanism set up among national and international partners for effective management of biodiversity for mainstreaming biodiversity into planning and investment processes; biodiversity conservation in protected areas; biodiversity conservation in production landscapes.

Primary applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one): **1. Mainstreaming environment and energy OR**
2. Catalyzing environmental finance OR 3. Promote climate change adaptation OR 4. Expanding access to environmental and energy services for the poor.

Applicable GEF Strategic Objective and Program: International Waters Strategic Priority 1; and Strategic Priority 2

Applicable GEF Expected Outcomes:

COMPONENT 1. Ensuring sustainable regional and national co-operation for ecosystem based management, based on strengthened institutional structures and improved knowledge for decision making

OUTCOMES:

- 1.1 Regional Governance structure, the YSLME Commission established and functional based on: strengthened partnerships & regional co-ordination; wider stakeholder participation and enhanced public awareness.
- 1.2 Improved inter-sectoral co-ordination and collaboration at the national level, based on: more effective IMCCs;
- 1.3 Wider participation in SAP implementation fostered through capacity building and public awareness based on: strengthened the Yellow Sea partnership and wider stakeholder participation; improved environmental awareness; enhanced capacity to implement ecosystem-based management.
- 1.4 Improved compliance with regional and international treaties, agreements and guidelines
- 1.5 Sustainable financing for regional collaboration on ecosystem-based management secured based on cost-efficient and ecologically-effective actions

COMPONENT 2. Improving Ecosystem Carrying Capacity with respect to provisioning services

OUTCOMES:

- 2.1 Recovery of depleted Fish stocks as shown by increasing mean trophic level
- 2.2 Enhanced stocks through restocking and habitat improvement
- 2.3 Enhanced and sustainable mariculture production by increasing productivity per unit area as a means to ease pressure on capture fisheries

COMPONENT 3. Improving Ecosystem Carrying Capacity with respect to regulating and cultural services

OUTCOMES:

- 3.1 Ecosystem health improved through reductions in pollutant discharge e.g. 10% reduction in N per 5 years from land-based sources
- 3.2 Wider application of pollution-reduction techniques piloted at the demonstration sites
- 3.3 Strengthened legal and regulatory process to control pollution
- 3.4 Marine litter controlled at selected locations

COMPONENT 4. Improved Ecosystem Carrying Capacity with respect to supporting services

OUTCOMES:

- 4.1 Maintenance of current areas of habitats through relevant management actions (e.g. the Total Quantity Control of Reclamation) to strictly control land reclamation.(no new permissions granted for coastal zone reclamation)
- 4.2 Stronger regional MPA networks established and functioning
- 4.3 Adaptive management mainstreamed to meet the potential challenges of: climate change impacts on ecosystem processes and other threats identified in the TDA and SAP
- 4.4 Application of Ecosystem-based Community Management (EBCM) in preparing risk management plans to address climate variability and coastal disasters

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Applicable GEF Outcome Indicators:						
Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
1. Sustainable Regional and National Cooperation for Ecosystem-Based Management	1.1 Regional governance structure, the YSLME Commission established, operational and sustained	YSLME Commission and subsidiary bodies functioning at regional level; enhanced cross sectoral co-ordination at the national level	<i>Ad hoc</i> regional co-ordination and weak cross sectoral management at the national level	Functioning YSLME Commission; Terms of Reference for the YSLME Commission approved by all participating country Governments	Meeting reports; Government approvals issued by the competent national authorities	External risks stem from the geopolitical situation and may result in one or more countries either not participating or participating only partially
	1.2. Improved inter-sectoral coordination and collaboration at national level	IMCC's functioning and meeting regularly regarding the management of marine environment and resources	Sector management has been normal situation, while co-ordination was done case by case.	Regular meetings of IMCC and functioning co-ordination	meeting reports; Joint management decisions	Reform on the governmental agencies; it would be relatively stable during the 2 nd phase.
	1.3 Wider participation in SAP implementation fostered through capacity building and public awareness	Number of the YS partnership; numbers of activities on capacity building and public awareness	Temperate arrangement for co-ordination and capacity building activities	Frequent coordinating activities and produce meaning benefits on capacity building and public awareness	Signed Partnership agreements; Active stakeholder participation in regional and national implementation of the SAP and NSAPs	The partnership become YSLME's responsibility; All partners should be encourage to take more responsibilities

Applicable GEF Outcome Indicators:						
Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
	1.4 Improved compliance with regional and international treaties, agreements and guidelines	Numbers of treaties and agreement be recognized and implemented	regional and international treaties and agreements are recognized, but not fully compliant	Better compliance of the relevant regional and international treaties and agreement	Regional Guidelines for implementing the FAO Code of Conduct; Domestic legislation amended to meet international standards	Government Ministries/departments unwilling to share development and management plans, unlikely given the history of collaboration established during the phase 1 project
	1.5 Sustainable financing for regional collaboration on ecosystem-based management secured based on cost-efficient & ecologically effective actions	Agreement on the financial arrangement for the YSLME Commission	Insufficient funding for regional actions and collaboration;	Sustainable financing (150% of present contributions); Cost efficient and ecologically effective actions	Letters of commitment: Agreement of YSLME Commission	Internal & external financial situation do not allow sufficient investment into the marine environment
2. Improved Ecosystem Carrying Capacity with Respect to Provisioning Services	2.1 Recovery of depleted fish stocks as shown by increasing mean trophic level	Number of fishing boats removed from the fleet	Actions to reduce fishing boat numbers remain uncoordinated	Fishing boat numbers substantially reduced in line with the 2020 target of 30% reduction	Government reports of boats decommissioned	Government policy changes, making boat buyback a low priority. This is unlikely to happen
	2.2 Enhanced stocks through restocking and habitat improvement	Depleted Fish stocks gradually recovering; Stocks enhanced through restocking and habitat improvement	Some recovery depending upon national actions: Effectiveness of restocking and habitat protection not evaluated	Measurable improvement in standing stock and catch per unit effort; Future management decisions on restocking based on effectiveness	Published reports of evaluations by the RWG-F	Difficulties in negotiating the cruises, causes delay or cancellation low probability due to past success in their organisation

Applicable GEF Outcome Indicators:						
Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
	2.3 Enhanced and sustainable mariculture production by increasing productivity per unit area as a means to ease pressure on capture fisheries	Enhanced mariculture production, sustainability and quality; Reduction and control of pollutant discharge from mariculture operations	Quality and quantity/unit area decline; Little reduction in impacts of mariculture,	Mariculture production per unit area increased, with less contamination of products; Reduced nutrient and other discharges from mariculture installations	Reviews of production data published by the RWG-M; Reviews of discharge data published by the RWG-M	Mariculture enterprises unwilling to adopt IMTA in place of monoculture, this is considered of low probability
3. Improved Ecosystem Carrying Capacity with respect to Regulating and Cultural Services	3.1 Ecosystem health improved through reductions in pollutant (e.g., N) discharge from land-based sources	Reductions in pollutant discharges e.g. 10% reduction in N per 5 years	Discharge reductions do not meet the regional target	Reductions in key contaminants of 10%	Monitoring reports and data published on the project website	Possible risk of non-compliance by polluting enterprises, considered a moderate risk
	3.2 Wider application of pollution-reduction techniques piloted at the demonstration sites	New and innovative techniques for pollution reduction applied	Some innovation may be undertaken nationally but without regional co-ordination or dissemination of results	Demonstration of use of artificial wetlands in pollution control successful, and adopted by other coastal municipalities and local government units	Published reports on effectiveness of artificial wetlands in reducing nutrients	New techniques not widely adopted considered a moderate risk if publicising the outcomes of the demonstration sites is inadequate
	3.3. Strengthened legal and regulatory process to control pollution	Strengthened legal and regulatory process to control pollution	Little change likely from the present situation	Improved legislation governing sub-standard waters	Approved legislation:	Harmonization of legislation may take longer time than the project period

Applicable GEF Outcome Indicators:						
Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
	3.4 Marine litter controlled at selected locations	Marine litter controlled at selected locations	Due to a lack of appreciation of the problem little action will occur	Regional Guidelines on control of marine litter based on those of NOWPAP produced and adopted for use in the Yellow Sea; Quantities of marine litter at selected beach locations significantly reduced	Published guidelines; Data and information contained in RWG-P reports available via the project website	There would be unwillingness to publically identify the sources of marine litter
4. Improved Ecosystem Carrying Capacity with respect to Supporting Services	4.1 Maintenance of current areas of habitats through relevant management actions	maintenance of current areas of habitats; monitoring and mitigation of reclamation impacts	Highly likely that coastal habitats will continue to be reclaimed unchecked	Where possible new reclamation projects stopped or impacts mitigated	Reports of the meetings of the RWG-H. Biennial state of the environment reviews	Provincial and Local Governments continue to encourage land reclamation. This is considered a moderately high risk.
	4.2 Stronger regional MPA network established and functioning	MPA networks strengthened & operational in the Yellow Sea with wider participation of MAPs	Unlikely to occur since this requires regional co-ordination	Existing MPAs networked and gaps identified leading to identification of priority sites for future MPA establishment	Published GAP analysis for MPA network; Numbers of stakeholder groups represented in meetings or engaged as sub-contractors/partners in execution of SAP related activities	Provincial and local governments may not agree to the establishment of new MPAs

Applicable GEF Outcome Indicators:						
Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
	4.3 Adaptive management mainstreamed to enhance the resilience of the YSLME and reduce the vulnerability of coastal communities to climate change impacts on ecosystem processes & other threats identified in the TDA and SAP	Appropriate considerations were given in the management plan to allow adaptive management of climate change	Inappropriate consideration were given to the impacts of climate change in the management plans	Better understanding of the impacts of climate change in marine environment; Adaptive measures for climate change;	Demonstration project reports on the impacts of climate change; Provision of management measures facing to the challenges	Lacking of scientific understanding of the impacts of climate change on marine ecosystem
	4.4. Application of Ecosystem-based Community Management (EBCM) in preparing risk management plans to address climate variability and coastal disasters	Regional Monitoring Network established, and operational.	National Monitoring will continue without regional harmonisation making regional analyses difficult or impossible	Comprehensive regional monitoring network established and data shared regionally via the project web site. Regular basin wide assessments; enhanced information exchange; periodic scenarios of ecosystem change	Monitoring data reported to RWGs and lodged on project website,; models developed and published; regional forecasts and scenarios of future conditions published.	Data & information on the relevant monitoring and research will not be fully opened & shared.

TOTAL BUDGET AND WORKPLAN

Budget table is attached as Annex 4 to this document.

Award ID:	<i>must be created before submission for GEF CEO approval and entered in the submission documents</i>	Project ID(s):	<i>must be created before submission for GEF CEO approval and entered in the submission documents.</i>
Award Title:	Country Name Project Title		
Business Unit:	<i>must be created before submission for GEF CEO approval and entered in the submission documents</i>		
Project Title:	Country Name Project Title		
PIMS no. [REDACTED]	<i>must be created before submission for GEF CEO approval and entered in the submission documents.</i>		
Implementing Partner (Executing Agency)	UNOPS		

SUMMARY OF FUNDS

	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Total
GEF	1,741,706	2,270,247	1,962,614	1,587,863	7,562,430
UNDP	250,000	650,000	850,000	342,000	2,092,000
WWF	450,000	1,100,000	250,000	0	1,800,000
China (in cash)	2,302,660	2,848,580	2,625,080	2,036,160	9,812,480
China (in kind)	19,299,310	19,589,290	19,396,591	19,457,390	77,742,581
Korea (in cash)	3,062,923	3,062,923	3,062,923	3,062,923	12,251,693
Korea (in kind)	3,588,932	3,588,932	3,588,932	3,588,931	14,355,728
TOTAL	30,695,531	33,109,972	31,736,140	30,075,267	125,616,911

4. MANAGEMENT ARRANGEMENTS

79. The Yellow Sea Large Marine Ecosystem Interim Commission shall be established as an institutional vehicle to continue and expand current efforts in regional ecosystem-based management initiated through the first project of the UNDP/GEF YSLME Project. The Interim Commission shall be established as a non-legally binding, co-operative and consensus-based mechanism to co-ordinate, and enhance, regional and national efforts to implement the Yellow Sea SAP. The Interim Commission shall include an Interim Commission Council; a Management, Science and Technical Panel and Regional Working groups as detailed in Annex 3 of this document.
80. The Yellow Sea Large Marine Ecosystem Interim Commission shall serve as the Project Board (sensu UNDP) responsible for making management decisions for a project in particular when guidance is required by the Project Manager. The Project Board plays a critical role in project monitoring and evaluations by quality assuring these processes and products, and using evaluations for performance improvement, accountability and learning. It ensures that required resources are committed and arbitrates on any conflicts within the project or negotiates a solution to any problems with external bodies. In addition, it approves the appointment and responsibilities of the Project Manager and any delegation of its Project Assurance responsibilities. Based on the approved Annual Work Plan, the Project Board can also consider and approve the quarterly plans (if applicable) and also approve any essential deviations from the original plans.
81. In order to ensure UNDP's ultimate accountability for the project results, Project Board decisions will be made in accordance with standards that shall ensure management for development results, best value for money, fairness, integrity, transparency and effective international competition. In case consensus cannot be reached within the Board, the final decision shall rest with the UNDP Project Manager. The membership of the Interim Commission, which shall serve as the UNDP Project Board includes:
- Executive members, namely the GEF Operational Focal Points from each participating country:*
- Senior Suppliers: represented by UNDP/GEF and UNOPS*
- Senior Beneficiaries: namely representatives from the GEF Implementing Agency in each country*
82. The **Project Assurance** role is the responsibility of the UNDP/GEF representative who supports the Project Board by carrying out objective and independent project oversight and monitoring functions.
83. **Project Manager:** The Project Manager shall have the authority to run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Project Board. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

84. **Project Support:** UNOPS serves as the executing partner for the project. In addition to budget management and expenditures control, UNOPS responsibilities include hiring and administration of international and local personnel, procurement of goods and services, travel arrangements and other miscellaneous support as required the project or Project Manager.

5. MONITORING FRAMEWORK AND EVALUATION

85. The project will be monitored through the following M&E activities. The M&E budget is provided in the table below.
86. **Project start:** A Project Inception Workshop will be held within the first 2 months of project starting with those with assigned roles in the project organisation structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan. An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.
87. The Inception Workshop should address a number of key issues including:
- a) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and PMO staff vis à vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
 - b) Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
 - c) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
 - d) Discuss financial reporting procedures and obligations, and arrangements for annual audit.
 - e) Plan and schedule Project Board meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first Project Board meeting should be held within the first 12 months following the inception workshop.
88. Quarterly:
- Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
 - Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically

classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).

- Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs can be used to monitor issues, lessons learned etc... The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

89. **Annually: Annual Project Review/Project Implementation Reports (APR/PIR):** This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements. The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objectives and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual)
- Lesson learned/good practice
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS Quarterly Project Report (QPR)
- Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

90. **Periodic Monitoring through site visits:** UNDP CO and the Project PMO will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and the Project PMO and will be circulated no less than one month after the visit to the project team and Project Board members.

91. **Mid-term of project cycle:** The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation. The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organisation, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Project Management Office and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC). The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

92. **End of Project:** An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as

initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Project Management Office and UNDP-GEF. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC). The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

93. During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.
94. **Learning and knowledge sharing:** Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

M& E work plan and budget

<i>Type of M&E activity</i>	<i>Responsible Parties</i>	<i>Budget US\$ Excluding project team staff time</i>	<i>Time frame</i>
<i>Inception Workshop and Report</i>	<ul style="list-style-type: none"> ▪ <i>Project Manager</i> ▪ <i>UNDP CO, UNDP GEF</i> 	<i>Indicative cost: 10,000</i>	<i>Within first two months of project start up</i>
<i>Measurement of Means of Verification of project results.</i>	<ul style="list-style-type: none"> ▪ <i>UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members.</i> 	<i>To be finalized in Inception Phase and Workshop.</i>	<i>Start, mid and end of project (during evaluation cycle) and annually when required.</i>
<i>Measurement of Means of Verification for Project Progress on output and implementation</i>	<ul style="list-style-type: none"> ▪ <i>Oversight by Project Manager</i> ▪ <i>Project team</i> 	<i>To be determined as part of the Annual Work Plan's preparation.</i>	<i>Annually prior to ARR/PIR and to the definition of annual work plans</i>
<i>ARR/PIR</i>	<ul style="list-style-type: none"> ▪ <i>Project manager and team</i> ▪ <i>UNDP CO</i> ▪ <i>UNDP RTA</i> ▪ <i>UNDP EEG</i> 	<i>None</i>	<i>Annually</i>
<i>Periodic status/ progress reports</i>	<ul style="list-style-type: none"> ▪ <i>Project manager and team</i> 	<i>None</i>	<i>Quarterly</i>
<i>Mid-term Evaluation</i>	<ul style="list-style-type: none"> ▪ <i>Project manager and team</i> ▪ <i>UNOPS</i> 	<i>Indicative cost: 40,000</i>	<i>At the mid-point of project</i>

<i>Type of M&E activity</i>	<i>Responsible Parties</i>	<i>Budget US\$ Excluding project team staff time</i>	<i>Time frame</i>
	<ul style="list-style-type: none"> ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 		<i>implementation.</i>
<i>Final Evaluation</i>	<ul style="list-style-type: none"> ▪ Project manager and team, ▪ UNOPS ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	<i>Indicative cost : 40,000</i>	<i>At least three months before the end of project implementation</i>
<i>Project Terminal Report</i>	<ul style="list-style-type: none"> ▪ Project manager and team ▪ UNDP CO ▪ local consultant 	<i>0</i>	<i>At least three months before the end of the project</i>
<i>Audit</i>	<ul style="list-style-type: none"> ▪ UNOPS ▪ UNDP CO ▪ Project manager and team 	<i>Indicative cost per year: 3,000</i>	<i>Yearly</i>
<i>Visits to field sites</i>	<ul style="list-style-type: none"> ▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives 	<i>For GEF supported projects, paid from IA fees and operational budget</i>	<i>Yearly</i>
TOTAL indicative COST <i>Excluding project team staff time and UNDP staff and travel expenses</i>		<i>US\$ 187,000 (+/- 5% of total budget)</i>	

6. LEGAL CONTEXT

95. This project forms a part of an overall programmatic framework under which several separate associated country level activities will be implemented. When assistance and support services are provided from this Project to the associated country level activities, this document shall be the "Project Document" instrument referred to in: (i) the respective signed SBAA's for the specific countries; or (ii) in the Supplemental Provisions attached to the Project Document in cases where the recipient country has not signed an SBAA with UNDP, attached hereto and forming an integral part hereof.
96. This project will be implemented by UNOPS in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.
97. The responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. The Implementing Partner shall: (a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried; (b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary.

Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

98. The Implementing Partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

7. ANNEXES

The following are UNDP required annexes

Risk Analysis. *Use the standard UNDP Atlas Risk Log template. For UNDP GEF projects in particular, please outline the risk management measures including improving resilience to climate change that the project proposes to undertake.*

Agreements. *Any additional agreements, such as cost sharing agreements, project cooperation agreements signed with NGOs² (where the NGO is designated as the “executing entity”, letters of financial commitments, GEF OFP letter, GEF PIFs and other templates for all project types) should be attached.*

Terms of Reference: *TOR for key project personnel should be developed and attached.*

Capacity Assessment: *Results of capacity assessments of Implementing Partner (including HACT Micro Assessment)*

² For GEF projects, the agreement with any NGO pre-selected to be the main contractor should include the rationale for having pre-selected that NGO.

ANNEX 1 OFFLINE RISK LOG

(see Deliverable Description for the Risk Log regarding its purpose and use)

Project Title: Implementing the Strategic Action Programme for the Yellow Sea Large Marine Ecosystem:	Award ID:	Date:
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#	Description	Date Identified	Type	Impact & Probability	Countermeasures / Mngt response	Owner	Submitted, updated by	Last Update	Status
1	Enter a brief description of the risk <i>(In Atlas, use the Description field. Note: This field cannot be modified after first data entry)</i>	When was the risk first identified <i>(In Atlas, select date. Note: date cannot be modified after initial entry)</i>	Environmental Financial Operational Organisational Political Regulatory Strategic Other Subcategories for each risk type should be consulted to understand each risk type (see Deliverable Description for more information) <i>(In Atlas, select from list)</i>	Describe the potential effect on the project if this risk were to occur Enter probability on a scale from 1 (low) to 5 (high) P = Enter impact on a scale from 1 (low) to 5 (high) I = <i>(in Atlas, use the Management Response box. Check "critical" if the impact and probability are high)</i>	What actions have been taken/will be taken to counter this risk <i>(in Atlas, use the Management Response box. This field can be modified at any time. Create separate boxes as necessary using "+", for instance to record updates at different times)</i>	Who has been appointed to keep an eye on this risk <i>(in Atlas, use the Management Response box)</i>	Who submitted the risk <i>(In Atlas, automatically recorded)</i>	When was the status of the risk last checked <i>(In Atlas, automatically recorded)</i>	e.g. dead, reducing, increasing, no change <i>(in Atlas, use the Management Response box)</i>
2	External risks stem from the geopolitical situation and may result in one or more countries either not participating or participating only partially	During Project preparation	Political	Potential impacts on inter-governmental regional co-operation P = 2 I = 3	Potential countermeasures are beyond the competency of project management	UNDP/GEF			
3	Potential partners unwilling to make formal commitments	During Project preparation	Operational	Potential impacts on SAP implementation P = 2 I = 2	Careful negotiation by PMO	PMO			
4	Stakeholders unwilling to participate	During Project preparation	Operational	Potential impacts on NSAP implementation P = 1 I = 3	PMO to encourage stakeholders to participate	PMO			

#	Description	Date Identified	Type	Impact & Probability	Countermeasures / Mngt response	Owner	Submitted, updated by	Last Update	Status
	Governments unwilling to actively engage the NGO community	During Project preparation	Operational	Potential limitation of stakeholder engagement P = 3 I = 2	PMO to encourage governments to engage NGOs in SAP implementation	PMO			
	Government Ministries/departments unwilling to share development and management plans	During Project preparation	Operational	Weak national co-ordination: unlikely given the history of prior collaboration P = 1 I = 2	PMO to discuss and encourage sharing of data and information at all levels	PMO			
	Government policy changes, making boat buyback a low priority.	During Project preparation	Political/Financial	This is unlikely to arise in China and ROK P = 1 I = 4	Potential countermeasures are beyond the competency of project management	PMO			
	Difficulties in negotiating the joint fisheries stock assessment, causes delay or cancellation	During Project preparation	Organisational	low probability due to past success. P = 2 I = 2	PMO to allow sufficient lead time for negotiations	PMO			
	Mariculture enterprises unwilling to adopt integrated multi-trophic aquaculture (IMTA) in place of monoculture	During Project preparation	Operational	this is considered of low probability due to current efforts in introducing IMTA P = 2 I = 4	PMO and NCs to publicise the outcomes of prior demonstrations and assist with technical support where necessary	PMO & NCs			
	Possible risk of non-compliance by polluting enterprises	During Project preparation	Regulatory	considered a moderate risk in China P = 3 I = 3	National Co-ordinators to track situation continuously and seek assistance from PMO if situation beyond their competence to address	NCs and PMO			
	New techniques for pollution reduction not widely adopted	During Project preparation	Operational	Pollution reduction targets not met P = 2 I = 3	PMO and NCs to publicise the outcomes of the demonstration	PMO and NCs			
	National, Provincial and Local Governments continue to encourage land reclamation.	During Project preparation	Organisational	This is considered a moderately high risk without strong project intervention P = 4	PMO and NCs to continue publicising the environmentally damaging effects of land reclamation	PMO and NCs			

#	Description	Date Identified	Type	Impact & Probability	Countermeasures / Mngt response	Owner	Submitted, updated by	Last Update	Status
				I = 3					
	Provincial and local governments may not agree to the establishment of new MPAs	During Project preparation	Organisational	Impacts on effectiveness of the MPA network P = 2 I = 3	PMO and NCs to provide evidence of cost effectiveness of MPA network establishment	PMO and NCs			

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ANNEX 2 AGREEMENTS

The contents of this annex will be finalised once the substantive portions of the project document have been approved by the countries and will reflect the agreed co-financing.

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Annex 3
TERMS OF REFERENCE

Draft YSLME Commission Structure

Background

The Yellow Sea SAP aims to facilitate the protection of marine environment and sustainable use of the marine and coastal resources in the Yellow Sea. To achieve this objective, the SAP contains regional environmental targets and the management actions that are required to meet those targets by 2020.

One of the actions envisaged in the SAP is the establishment of the YSLME Commission as a permanent institutional framework to continue and expand current efforts made under the first phase of the UNDP/GEF YSLME Project. The Commission is envisaged as a soft, non-legally binding, and co-operation based institution that will co-ordinate and enhance regional and national efforts to apply ecosystem based management. With the participation of the Yellow Sea countries, it is proposed that the Commission consist of the following bodies:

- Interim Commission Council;
- Management, Science and Technical Panel (MSTP);
- Regional Working Groups (RWGs);
- Inter-Ministry Co-ordinating Committee (IMCC);
- National Co-ordinator (NC);
- National Working Groups (NWGs); and
- Secretariat.

The UNDP/GEF SAP implementation project is envisaged as the mechanism through which the Commission is established, with negotiation mechanism, conflicts resolution procedure and its sustainable financing mechanism and agreement. During the period of SAP implementation it is envisaged that an Interim Commission will be established to serve as the mechanism for discussing and agreeing the final structure and details of the Permanent Commission and as the Project Board *sensu* UNDP.

Commission Bodies

Interim Commission Council³, a body that serves as the supreme decision-making authority with respect to the implementation of SAP related activities. During the execution of the SAP Implementation project an Interim Commission Council will be established to serve as the Project Board. The Council membership shall consist of: participating countries represented by GEF National Operational Focal Points (NFPs) with assistance from the government officials of GEF National Implementing Agencies and the IMCC chairpersons; representatives of UNDP/GEF, UNOPS, and other donor organisations; MSTP chairpersons; and representatives from the private sector and NGOs that are actively contributing to the implementation of the SAP. Regular meetings of the Council shall take place once a year. Special meetings may be convened as required. The Council provides overall strategic policy and management direction, and considers and approves regional activities and budgets

³ Following the completion of the 2nd phase of the UNDP/GEF project, the Commission Structure may be modified to meet the new requirements.

suggested by the MSTP, and secures technical and financial resources necessary for implementing SAP management actions.

Management, Science and Technical Panel (MSTP), a permanent body, provides the RWGs with managerial, scientific, and technical guidance and the Interim Commission Council with managerial, scientific, and technical advice. The Panel shall consist of NCs, RWG chairpersons, selected regional experts, and representatives of the private sector and NGOs actively engaged in SAP implementation, together with the Project Manager. Regular meetings are organised once a year, preferably back-to-back with the Council meetings. The Panel co-ordinates regional activities across the RWGs; provides them with suggestions to improve the activities; considers budget allocations for each activity; and makes recommendations to the Council for their approval of budgets, work plans and the execution of activities.

Regional Working Groups (RWGs), The MSTP shall establish such regional working groups as are deemed necessary to effectively plan, co-ordinate and manage the various activities approved by the Interim Commission Council. Initially six such working groups will be established with responsibility for co-ordinating actions at the regional level focusing on: fish stocks (RWG-F); sustainable mariculture (RWG-M); habitat conservation (RWG-H); pollution reduction (RWG-P); monitoring/assessment (RWG-A), and sustainability (socioeconomics and governance (RWG-G). Each Working Group shall consist of experts nominated by the IMCC from each participating country⁴, and representatives from the private sector and NGOs. Each RWG shall organise regular annual meetings to prepare work plans for consideration of the MSTP and approval by the Council. Following Council approval, the RWGs shall monitor and supervise activities, in accordance with the guidance provided by the MSTP. In addition, the RWGs shall provide technical guidance to relevant NWGs and shall provide advice within its sphere of competence to the MSTP through the RWG chairperson.

Inter-Ministry Co-ordinating Committee (IMCC) co-ordinates national activities among relevant national ministries and institutions to ensure smooth implementation of national efforts in line with regional directions and objectives. The IMCC membership shall include the NFP and representatives from relevant ministries in the country. The National Co-ordinator (NC) shall serve as the secretary to the IMCC, and regular meetings shall be convened at least once a year. If more than one meeting is convened in any one year then one of these shall be organised before the annual meeting of the Interim Commission Council. The IMCC reviews the work plans that the NWGs prepare and provides them with guidance for improvement when necessary. The IMCC chairperson serves as a member of the Council and the IMCC reports to the MSTP through the NC.

National Co-ordinator (NC), a full-time position appointed by the IMCC, the NC serves as the primary national contact for the RWGs and the Secretariat. The NC co-ordinates national activities among the NWGs under the direction of the IMCC; and serves as secretary to the IMCC. The NC assists the NFP in organising IMCC meetings and serves as a member of, and reports on national activities to the MSTP on behalf of the IMCC.

National Working Groups (NWGs), are established at the discretion of the IMCC, and are responsible for the design and implementation of management actions at the national level.

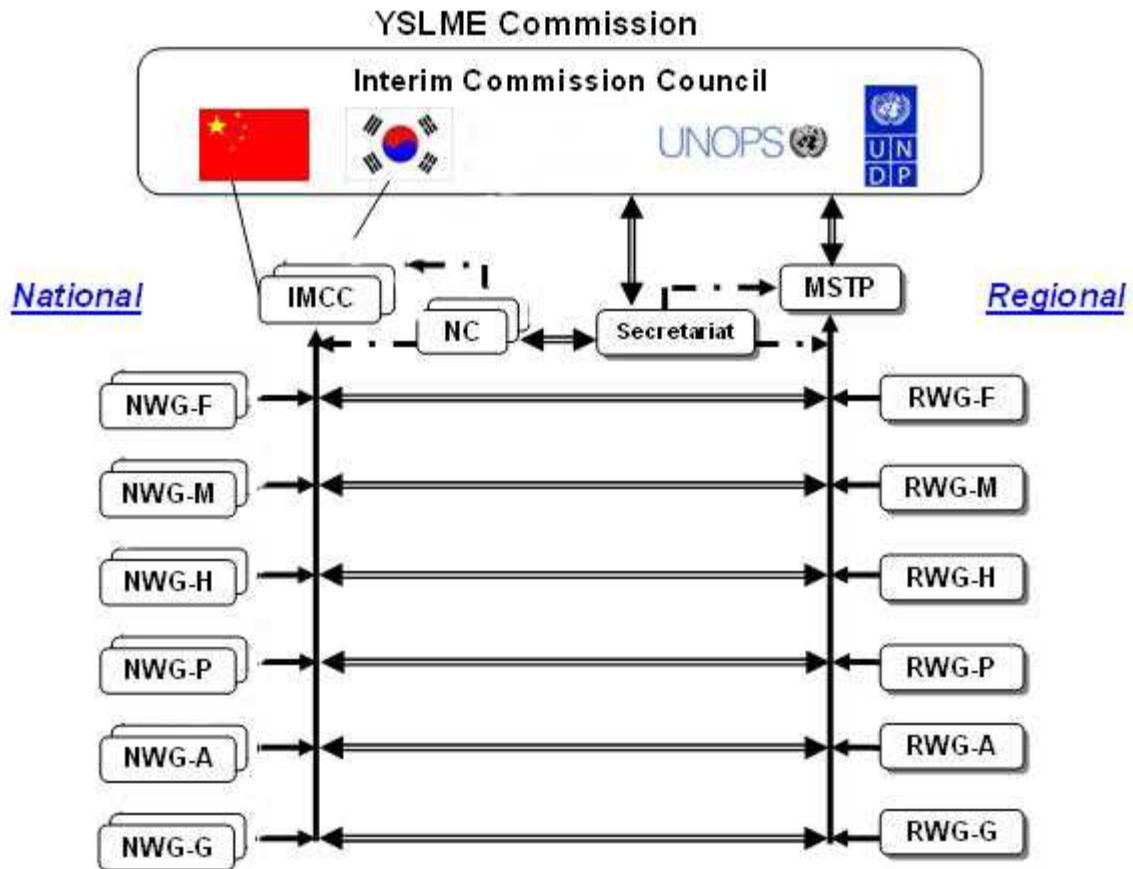
⁴ Normally such individuals would be the Chairs of the appropriate National Working Group.

Membership shall include environmental managers, scientists, and technical experts in the appropriate field of expertise. In close co-ordination with the respective RWG and the NWGs in other participating countries, each NWG shall prepare national work plans for the IMCC to consider and approve. The chairperson of each NWG reports on its activities to the IMCC.

Commission Secretariat, a permanent body, the Secretariat provides administrative support and regional co-ordination among the Interim Commission Council, the MSTP, the RWGs, and the NCs. During the bridging period and second phase of the YSLME Project, the Project Management Office (PMO) headed by the Project Manager shall serve as the Secretariat. The Secretariat assists in organising all the regional meetings of the regional bodies defined in this document as well as other activities relevant to the implementation of the SAP management actions. The Secretariat reports to the Council and the Panel through the Project Manager. The Commission Secretariat should be located in ### [name of the country] with support of the government of [name of the country]. For better communications with all the coastal countries of the Yellow Sea and for effective implementation of the project, a communication office should be established, with major financial support from the government of [name of the country]

The YSLME Commission Secretariat shall create a “Management Advisory Roster” being an open ended database of regional environmental managers, scientists, and technical experts, nominated by the IMCCs in the respective countries. Individuals from this pool may be called upon from time to time to assist the Commission in the execution of activities to implement the SAP, including for example, serving as expert members on the various bodies of the Commission, or as consultants and advisors to the Secretariat for specific short term tasks. Considering the requirements of each regional working group, the Secretariat in close consultation with the NCs shall appoint appropriate persons from the roster, as expert members of each RWG. Considering the requirements of each national working group, NCs shall appoint appropriate persons as expert members of each NWG, and report such appointments to the appropriate regional bodies of the Commission.

Organisational Framework of the Yellow Sea Large Marine Ecosystem (YSLME) Commission Bodies



Reporting: Communication, co-ordination: Supporting/service functions:

NWG = National Working Groups; RWG = Regional Working Groups; IMCC = Inter-Ministry Co-ordination Committee; NC = National Co-ordinator; MSTP = Management Science and Technology Panel. National and Regional Working Groups include Fisheries = F; Mariculture = M; Habitats = H; Pollution = P; Assessment = A; and Governance = G.

Draft Terms of Reference for: The YSLME Interim Commission Council

The Interim Commission Council is a body that serves as the supreme decision-making authority with respect to the implementation of SAP related activities. During the implementation of the UNDP/GEF SAP Implementation Project (the second phase of the YSLME Project), an Interim Commission Council will be established to serve as the Project Board. The following sections describe the membership, meetings, and functions of this body.

Membership

The Interim Commission Council shall consist of:

- Participating countries represented by GEF National Operational Focal Points with assistance from GEF National Implementing Agencies and IMCC chairpersons of each participating country;
- Chairperson of the Management, Science and Technical Panel (MSTP);
- A representative of the UNDP/GEF;
- A representative of UNOPS;
- Representatives from private sector bodies actively engaged in SAP implementation
- Representatives from accredited NGOs actively engaged in SAP implementation⁵.

Additional members including representatives from other relevant government agencies in the participating countries may be added at the discretion of the Council. During the second phase of the YSLME Project, the Project Management Office shall serve as the Secretariat of the Council.

Meetings

Regular meetings of the Council shall be convened once a year. A chairperson and a vice-chairperson who shall be responsible for chairing the meetings shall be selected by the members from amongst the members, and shall serve until the commencement of the next regular meeting.

Special meetings may be convened by the chairperson: (i) when a majority of the Council members make a request for such a meeting to the Secretariat; and (ii) at the request of the Secretariat when circumstances demand.

The Council can invite other organisations and projects to attend the meetings as observers.

Tasks

- (1) Provide overall strategic policy and management direction to the Commission in implementing the SAP and executing the UNDP/GEF SAP implementation Project;
- (2) Review, amend, and approve regional activities, work plans, and budgets for SAP implementation, that are suggested by the MSTP;
- (3) Co-ordinate the work of the participating countries to ensure that the activities meet regional and national environmental concerns and priorities;

⁵ *The membership of the private sector and NGOs needs further consideration as concerns expressed on this issue.*

- (4) Secure technical and financial resources necessary to implement the activities;
- (5) Review the progress of the activities and provide guidance to the MSTP and the Secretariat for better management and co-ordination;
- (6) Facilitate necessary actions for policy reform to harmonise national legislation;
- (7) Promote co-operation with relevant international, regional, and national organisations and projects;
- (8) Facilitate the participation of the private sector and NGOs in SAP implementation;
- (9) Disseminate the findings and results of SAP implementation to broad audiences, within and outside the region;
- (10) The Interim Commission Council established at the commencement of the UNDP/GEF SAP Implementation Project shall finalise and arrange for national approval of the membership and Terms of Reference for each of the Commission Bodies; and,
- (11) Finalise and arrange for national approval of the membership and Terms of Reference for the permanent Commission Council to be established during the execution of the UNDP/GEF SAP Implementation Project

Other matters

Notwithstanding the membership and terms of reference specified in this document, the Interim Commission Council shall have the power to amend, from time to time, the membership and terms of reference of the Council.

Draft Terms of Reference for the YSLME Commission Management, Science and Technical Panel

The Management, Science and Technical Panel (MSTP), a permanent body, provides the Regional Working Groups (RWGs) with managerial, scientific, and technical guidance and the Interim Commission Council with managerial, scientific, and technical advice. The following sections describe the membership, meetings, and functions of this body.

Membership

The Panel shall consist of:

- The National Co-ordinators (NCs) from each participating country;
- The chairpersons of each Regional Working Group;
- Leading regional experts, taken from the Management Advisory Roster, identified by the Secretariat;
- Representatives from private sector organisations actively engaged in SAP implementation;
- Representatives of NGOs actively engaged in SAP implementation; and
- The Project Manager.

During the second phase of the YSLME Project, the Project Management Office shall serve as the Secretariat of the Panel.

Meetings

Regular meetings shall be convened once a year preferably before the Interim Commission Council meetings. A chairperson and a vice-chairperson who are responsible for chairing the MSTP meetings shall be elected from amongst the members. The chairperson attends the Council meetings to present the recommendations and reports prepared by the Panel.

Tasks

- (1) Review and co-ordinate regional activities for SAP implementation, proposed by each RWG;
- (2) Provide the RWGs with technical guidance and suggestions to improve the activities where necessary;
- (3) Consider the recommendations of each RWG concerning proposed budget allocations for each activity;
- (4) Provide the Interim Commission Council with recommendations on proposed regional activities, work plans, and budgets;
- (5) Facilitate co-operation with relevant international, regional, and national organisations and projects to enhance the effectiveness and efficiency of SAP implementation;
- (6) Monitor the progress of the regional activities and ensure the quality of outputs; and,
- (7) Report to the Council through the MSTP chairperson on the progress of activities and SAP implementation.

Other matters

Notwithstanding the membership and terms of reference specified in this document, the MSTP may make recommendations to the Interim Commission Council, to amend, from time to time, the membership and terms of reference of the Panel.

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Draft Terms of Reference for YSLME Commission Regional Working Groups

The Management, Science and Technical Panel (MSTP) shall establish such Regional Working Groups (RWGs) as are deemed necessary to effectively manage and execute the various activities approved by the Interim Commission Council. Initially six working groups will be established with responsibility for co-ordinating actions at the regional level focusing on: fish stocks (RWG-F); sustainable mariculture (RWG-M); habitat conservation (RWG-H); pollution reduction (RWG-P); monitoring/assessment (RWG-A), and sustainability (socioeconomics and governance (RWG-G). The following sections describe the membership, meetings, and functions of each regional group.

Membership

Each RWG shall consist of:

- Representatives from each participating country, nominated by the IMCCs, normally such individuals shall be the chairpersons of the equivalent National Working Groups.
- Leading regional experts in an appropriate discipline of natural and/or social science selected from the Management Advisory Roster and appointed by the Secretariat; and
- Representatives from the private sector; and,
- NGO representative.

During the second phase of the YSLME Project, the Project Management Office shall serve as the Secretariat of the RWGs. Each Working Group shall elect its own Chairperson and other officers from amongst the members.

Meetings

Each RWG shall organise its regular meetings once a year. The chairperson attends the MSTP meetings to present recommendations and activity reports prepared by the RWG.

Tasks

- (1) Prepare regional activities with work plans to implement the SAP for consideration by the MSTP and approval by the Interim Commission Council;
- (2) Monitor, supervise, and amend approved regional activities for better implementation, as necessary, following the guidance and suggestions provided by the Council and the Panel;
- (3) Co-ordinate the work of the NWGs and provide them with guidance for national activities to meet national and regional environmental concerns and priorities as described in the SAP;
- (4) Report to the Panel through the RWG chairperson on the progress of the regional activities.

Major responsibilities of individual RWGs

RWG-F Fish stocks: Provide guidance and co-ordination for regional activities to improve Ecosystem Carrying Capacity (ECC) with respect to provisioning services by recovering and enhancing depleted fisheries stocks.

RWG-M Sustainable mariculture: Provide guidance and co-ordination for regional activities to improve the ECC with respect to provisioning services by enhancing mariculture production and quality and by reducing and controlling pollutant discharge from mariculture.

RWG-H Habitat conservation: Provide guidance and co-ordination for regional activities to improve the ECC with respect to supporting services by conserving biological diversity and maintaining current areas of habitats.

RWG-P Pollution reduction: Provide guidance and co-ordination for regional activities to improve the ECC with respect to regulating and cultural services by reducing pollutant levels and strengthening legal and regulatory processes.

RWG-A Monitoring and assessment: Provide guidance and co-ordination for regional activities to improve the ECC with respect to supporting services by mainstreaming adaptive management to meet potential challenges, including the climate change impacts on ecosystem processes.

RWG-G Sustainability (socioeconomics and governance): Provide guidance and co-ordination for regional activities to improve regional environmental governance by strengthening institutional, legislative, and financial capacities of the region and the countries.

Other matters

Notwithstanding the membership and terms of reference contained in this document, the RWG may recommend to the MSTP for decision, amendments to the membership and terms of reference of the RWG.

Draft Terms of Reference for YSLME Commission Inter-Ministry Co-ordinating Committee

The Inter-Ministry Co-ordinating Committee (IMCC) co-ordinates national activities among relevant national ministries and institutions to ensure smooth implementation of national efforts in line with regional directions and objectives. The following sections describe the membership, meetings, and functions of this body.

Membership

The IMCC shall consist of:

- Government executive officials at the GEF National Focal Agency (i.e., GEF National Operational Focal Point [NFP]), the GEF National Implementing Agency, and all the other relevant ministries that have responsibilities in marine and coastal issues in the Yellow Sea;
- National Working Group (NWG) chairpersons; and
- Representatives from private sector organisations actively engaged in NSAP implementation; and,
- Representatives of NGOs actively engaged in NSAP implementation.

The National Co-ordinator (NC) serves as a secretary to the IMCC.

Meetings

Regular meetings shall be convened at least once a year. If more than one meeting is convened in any one year then one of these shall be organised before the annual meeting of the Interim Commission Council. A chairperson and a vice-chairperson responsible for chairing the IMCC meetings are elected from amongst the members. The IMCC chairperson serves as a member of the Council. The IMCC reports to the Management, Science and Technical Panel (MSTP) through the NC.

Tasks

- (1) Prepare, on behalf of the government, the national positions on policy issues for the Interim Commission Council to consider and present the positions to the Council through the IMCC chairperson;
- (2) Nominate regional environmental managers and science and technical experts for inclusion in the Management Advisory Roster;
- (3) Establish the NWGs with leading experts in the country in line with the requirements, focal areas, and activities of the RWGs;
- (4) Appoint the NC and the NWG chairpersons based on nominations by the GEF National Focal Agency (i.e., NFP) and the GEF National Implementing Agency;
- (5) Review and co-ordinate national activities under the NSAP implementation, that the NWGs propose;
- (6) Provide the NWGs with guidance and suggestions to improve the national activities to meet national and regional environmental concerns and priorities;
- (7) Secure technical and financial resources necessary to implement the national and regional activities;

- (8) Monitor the progress of the national activities and ensure the quality of outputs;
- (9) Facilitate co-operation with relevant national organisations and projects to enhance the effectiveness and efficiency of the national activities;
- (10) Report to the MSTP through the NC on the progress of the national activities;
- (11) Facilitate the participation of the private sector and NGOs in SAP/NSAP implementation; and
- (12) Disseminate the findings and results of NSAP implementation to broad audiences, nationally, regionally, and internationally.

Other matters

Notwithstanding the membership and terms of reference contained in this document, the IMCC shall have the power to amend, from time to time, the membership and terms of reference. Such amendments shall be reported to the next meeting of the YSLME Interim Commission Council.

**Draft Terms of Reference for YSLME Commission
National Co-ordinator**

The National Co-ordinator (NC), a full-time position appointed by the Inter-Ministry Co-ordinating Committee (IMCC), shall serve as the primary national contact for the RWGs and the Secretariat. The following section describes the functions of this individual.

Tasks

- (1) Serve as a secretary to the IMCC, assisting the National Operational Focal Point in organising IMCC meetings;
- (2) Assist the IMCC to review and co-ordinate national activities under the NSAP implementation, secure technical and financial resources necessary to implement the national activities, and monitor the progress of the activities to ensure the quality of outputs;
- (3) Compile a register of national management, scientific and technical experts in maritime affairs for consideration by the IMCC as nominated members of the Management Advisory Roster;
- (4) Recommend appropriate national experts from the Management Advisory Roster as NWG members to the IMCC;
- (5) Co-ordinate the national activities among the NWGs under the direction of the IMCC;
- (6) Report to the Management, Science and Technical Panel (MSTP) on behalf of the IMCC on the progress of national activities;
- (7) Serve as a member of the MSTP, contributing to the regional co-ordination, the provision of guidance to the RWGs, and the preparation of regional work plans and budgets;
- (8) Liaise closely with the Secretariat, supporting it on matters regarding SAP/NSAP implementation;
- (9) Assist the IMCC to facilitate the participation of the private sector and NGOs in SAP/NSAP implementation and to disseminate the findings and results of the implementation to broad audiences; and
- (10) Such other tasks as the IMCC shall from time to time decide.

Draft Terms of Reference for YSLME Commission National Working Groups

National Working Groups (NWGs) shall be established at the discretion of the Inter-Ministry Co-ordinating Committee (IMCC), and are responsible for the design and implementation of management actions at the national level. The NWGs are organised in line with the requirements, focal areas, and activities of the RWGs. The following sections describe the membership, meetings, and functions of such bodies.

Membership

Each NWG shall consist of:

- A chairperson nominated by the GEF National Focal Agency (i.e., National Operational Focal Point [NFP]) and the GEF National Implementing Agency and appointed by the IMCC;
- Leading experts in the relevant fields of natural and social science nominated by the IMCC and appointed by the National Co-ordinator (NC); and
- Representatives from the private sector and NGOs.

The NC shall serve as the Secretariat of the NWG.

Meetings

Each NWG shall organise its regular meetings as necessary, but at least once a year. The meeting shall preferably be held in advance of the RWG meetings. The chairperson of the NWG attends the IMCC meetings and the RWG meetings, to present recommendations and activity reports prepared by the NWG.

Tasks

- (1) Prepare, in close co-ordination with the respective NWGs in other participating countries, national activities with work plans to implement the NSAP for the respective RWG to consider and agree upon;
- (2) Monitor and evaluate the progress of national activities and amend them, as necessary, in consultation with the RWG;
- (3) Report to the IMCC through the NWG chairperson on the progress of the national activities;
- (4) Report to the RWG through the NWG chairperson on the execution of national activities; and,
- (5) Facilitate the execution at national level of activities identified by the RWG as appropriate to implement the regional SAP, in addition to those activities relevant to the implementation of the NSAP.

Other matters

Notwithstanding the membership and terms of reference contained in this document, the IMCC, has the power to amend, from time to time, the membership and terms of reference of the NWG, and shall report such amendments to the MSTP.

Draft Terms of Reference for YSLME Commission Secretariat

Commission Secretariat, a permanent body that provides administrative support and regional co-ordination among: the Interim Commission Council; the Management, Science and Technical Panel (MSTP); the Regional Working Groups (RWGs); and the National Co-ordinators (NCs). During the second phase of the YSLME Project, the Project Management Office (PMO) headed by the Project Manager shall serve as the Secretariat, facilitating regional and national efforts relevant to SAP/NSAP implementation. The following section describes the functions of this body.

Tasks

- (1) The Secretariat assists in organising all the regional meetings of the Commission bodies as well as other activities relevant to the implementation of the SAP management actions.
- (2) The Secretariat reports to the Council and the MSTP through the Project Manager.
- (3) Serve as a secretary to the meetings of the Council, the MSTP, and RWGs, liaise with, and provide administrative support to these bodies in the execution of their responsibilities;
- (4) Draft policy, managerial, and technical papers on SAP implementation in co-operation with the RWGs and NCs as part of the preparation for the Council and MSTP meetings;
- (5) Prepare and present activity implementation reports to the Council and the MSTP through the Project Manager;
- (6) Appoint regional experts as RWG members from the Management Advisory Roster;
- (7) Assist in organising all the regional meetings, including the ones mentioned above in Terms of References for Council, MSTP, and RWGs, as well as other regional co-ordination activities relevant to the implementation of the SAP;
- (8) Administer contracts for consulting services under SAP implementation, following U.N. rules;
- (9) Monitor the progress of all regional activities of the YSLME Commission to ensure that activities are implemented in line with the strategic policy and management direction provided by the Council, and that high quality outputs are secured on time and within budget;
- (10) Liaise closely with the NCs to ensure smooth implementation of national efforts in line with regional efforts and objectives;
- (11) Assist the Council and the MSTP in promoting the co-operation with relevant organisations, including the private sector and NGOs; and
- (12) Assist in disseminating the findings and results of SAP/NSAP implementation to broad audiences nationally, regionally and internationally.

Other matters

Notwithstanding the terms of reference contained in this document, the Interim Commission Council has the power to amend, from time to time, the terms of reference of the Secretariat.

YSLME Commission

Draft Rules of Procedure for the Interim Commission Council⁶

Rule 1: Membership

1. The Interim Commission Council shall consist of: representatives from the countries participating in the UNDP/GEF Yellow Sea Project (hereinafter called the “Yellow Sea countries”), the chairperson of the Management, Science and Technical Panel (MSTP), one representative each from UNDP/GEF and UNOPS, and representatives of the private sector and NGOs actively engaged in SAP implementation⁷.
2. Each Yellow Sea country shall be represented by: the GEF National Operational Focal Point (NFP) assisted by the Chairperson of the Inter-ministry Co-ordinating Committee (IMCC) and a Government Official(s) from National Implementing Agency designated by the NFP.
3. The Interim Council may decide by consensus that other organisations become Council Members.
4. Notwithstanding the Rules contained in this document, the Council has the power to amend, from time to time, the membership of the Council.

Rule 2: Meetings

1. The Interim Commission Council shall hold regular meetings once a year, upon convocation by the Council Chairperson. At each regular meeting, the Council shall decide on the dates and venue of the next meeting. For the role of the Chairperson, see Rule 4 in this document.
2. Special meetings may be convened by the Chairperson: (i) when a majority of the Council members make a request for such a meeting to the Secretariat; and (ii) at the request of the Secretariat when circumstances demand. The Secretariat shall circulate the request for holding a special meeting to all Members and each country’s National Co-ordinator (NC) with a deadline for response. The Secretariat shall inform the Members of the consensus response.
3. The Chairperson shall decide on the dates and venue of a special meeting in consultation with the NCs and the Secretariat.

Rule 3: Agenda

1. The Secretariat shall prepare the agenda for each meeting in consultation with the Chairperson.
2. The agenda for a regular meeting shall include *inter alia*, the following items:
 - a. Adoption of the agenda;
 - b. Activity report of current year (progress report);
 - c. Proposed work plan and budget for the subsequent year and onwards;
 - d. Any other items the inclusion of which has been decided at a previous meeting;

⁶ Following completion of the 2nd phase of the UNDP/GEF project, the Rules of Procedure may need to be modified to meet new requirements of the Commission.

⁷ The membership of the private sector and NGOs needs further consideration as concerns expressed on this issue.

- e. Items proposed by any Member;
 - f. Outstanding and arising issues and
 - g. Adoption of the report of the meeting.
3. The agenda for a special meeting shall consist only of those items that are proposed for consideration in the request to convene the meeting.
 4. The Secretariat shall circulate a provisional agenda with supporting documents to the Members at least two weeks before the opening of the meeting.

Rule 4: Chairperson

1. The Chairperson of the Interim Commission Council shall be selected from each Yellow Sea country in rotation, in alphabetical order.
2. A Chairperson and a Vice-chairperson who shall be responsible for chairing the meetings shall be selected by the members from amongst the members, and shall serve until the commencement of the next regular meeting. If the Chairperson cannot preside at a meeting or any part thereof, the Vice-Chairperson shall act as the Chairperson with the same powers and duties.
3. The Chairperson shall serve for a period of one year.
4. In addition to exercising the powers and duties conferred upon him/her elsewhere in the Rules, the powers and duties of the Chairperson shall be to:
 - a. Ensure that all the tasks of the Council, as described in the Terms of Reference, are fully carried out;
 - b. Convene regular and any special meetings;
 - c. Declare the opening and closing of each meeting;
 - d. Preside at all meetings: direct discussion, accord the right to speak, and announce decisions;
 - e. Call a speaker to order if their remarks are not relevant to the subject under discussion;
 - f. Ensure observance of the Rules described in this document; and
 - g. Make such decisions and give such directions to the Secretariat, that ensure the business of the Council is carried out efficiently and in accordance with its wishes.

Rule 5: Secretariat

1. The Project Management Office serves as the Secretariat during the bridging period and second phase of the YSLME Project.
2. In addition to exercising the powers and duties conferred upon it elsewhere by the Rules, the Secretariat shall:
 - a. Issue the invitations to the meetings;
 - b. Prepare the provisional agenda for the meetings in accordance with Rule 3;
 - c. Make all necessary arrangements, including secretarial assistance, for the meetings of the Council and its regional subsidiary bodies;
 - d. Prepare the progress report, work plan, and budget;
 - e. Prepare meeting reports; and
 - f. Perform other functions and tasks, as described in the Terms of Reference, or entrusted to the Secretariat by the Council.

Rule 6: Conduct of business

1. A majority of the Members shall constitute a quorum.
2. Proposals from any members shall be introduced in writing and submitted prior to the meeting for the Secretariat to circulate to the Members.

3. The decisions of the meetings shall be made by consensus.
4. Where consensus cannot be achieved during a meeting, the Secretariat in consultation with the Chairperson shall facilitate negotiations to seek resolution during the subsequent inter-sessional period. The Secretariat shall report the results of the negotiations to the Members.
5. The Interim Commission Council may adjourn the discussion of any issue on which a consensus cannot be reached and refer it to a working group of the Council. The working group shall be charged with resolving the issue and be required to report the outcome of their work to the Council when the discussion resumes.
6. The record of the meeting, including all the decisions made, shall be kept by the Secretariat which shall circulate the record to the Members in the form of a draft report before the closure of the meeting. Any Member who disagrees with any part of the report may propose an amendment for consideration by all members during the adoption of the report.
7. The Secretariat shall distribute the final version of the report to the Members within two weeks following the closure of the meeting.
8. Between meetings, any proposal for a decision falling within the competence of the Interim Commission Council shall be circulated in writing by the Secretariat to the Members with a specified deadline for reply. On the basis of the responses the Secretariat will inform members in writing of the views expressed and the consensus position.

Rule 7: Subsidiary bodies

1. The subsidiary bodies of the Interim Commission Council shall consist of the regional bodies (MSTP and Regional Working Groups), the national bodies (IMCC and National Working Groups), and the Secretariat.
2. The membership, meetings, and tasks of each subsidiary body shall be defined in their Terms of Reference.
3. The Rules of Procedure of each subsidiary body shall follow those of the Council.

Rule 8: Language

The working language of the Interim Commission Council shall be English.

Rule 9: Participation of observers

1. The Interim Commission Council may invite observers to participate in its meetings.
2. Upon the invitation of the Chairperson, observers may participate in the discussion of issues within their competence or scope of activities, without the right to participate in decision-making.
3. Observers may, upon invitation of the Chairperson, submit written statements that shall be circulated by the Secretariat to the members of the Council or to the concerned subsidiary bodies.

Rule 10: Amendments and suspension

Any Rules contained in this document may be amended or suspended by the Interim Commission Council.

Annex 4. Budget and Workplan

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
1. Sustainable Regional and National Cooperation for Ecosystem-Based Management	1.1 Regional governance structure, the YSLME Commission established, operational and sustained	1.1.1 Draft agreement, accepted by all the participating countries, to establish the YSLME Commission and associated bodies	Evaluation of SAP and NSAP implementation	2 consultants x 1mth x 12,000	0	12,000	0	12,000	24,000	71200	International Consultants
			Strengthening the participation of the member countries	secondment of government officials develop exchange program to send government officials to the PMO; nat'l govt sources - co-financing	0	0	0	0	0	71200	International Consultants
			Cost & effective operation of the Commission	strengthening partnerships and develop joint programme(s) to share available resources with existing regional institutions such as NOWPAP, PEMSEA, WESTPAC, and etc.; 2 joint activities	3,500	3,500	3,500	3,500	14,000	71600	Travel
					1,500	1,500	1,500	1,500	6,000	75700	Meeting Service
		1.1.2 Commission Secretariat created and functioning	Organise annual meetings of the Interim Project Board	4 meetings x 20,000	9,450	9,450	9,450	9,450	37,800	71600	Travel
					4,050	4,050	4,050	4,050	16,200	75700	Meeting Service
			Organise annual meetings of the	4 meetings x 20,000	9,475	9,428	9,947	9,282	38,132	71600	Travel

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			MSTP		4,050	4,050	4,120	4,050	16,270	75700	Meeting Service
			Organise mtgs of the ICTF	2 mtgs yrs 1 & 2, 1 mtg yrs 3 and 4	11,200	11,200	5,600	5,600	33,600	71600	Travel
					4,800	4,800	2,400	2,400	14,400	75700	Meeting Service
			Organise annual regional working group meetings	6 RWGs(Fisheries, Mariculture, Habitat, Pollution, Assessment, Sustainability) x 4 meetings x 12,500	48,900	48,500	48,500	48,500	194,400	71600	Travel
					22,500	21,460	22,500	22,500	88,960	75700	Meeting Service
			1.2 Improved inter-sectoral coordination and collaboration at the national level	1.2.1 National level agreements regarding: management actions; policies; regulations and standards promulgated as appropriate	IMCC & NWGs	NPCs to develop guidelines for national co-ordination (see below) <i>co-financing</i>	0	0	0	0	0
Establish an interactive project website to enable stakeholder groups from each country to access and upload information in their own languages. Website to include training materials and	<i>Staff Costs included in PMO costs</i>	5,000			5,000	5,000	5,000	20,000	72400	Communication and Audio Visual Equipment	

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS		
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description	
			legal clearing house									
			Development of Regional and National Guidelines regarding the involvement of Stakeholder groups in Yellow Sea Management actions as appropriate.	2 consultants x 1mth x 8000	16,000	0	0	0	16,000	71200	International Consultants	
			Establish microfinance schemes	Provide microfinance for industries to introduce environmentally-friendly management system, facility, and equipment (e.g., pollution control, sustainable mariculture) <i>co-financing</i>	0	0	0	0	0	72100	Contractual Services -	
			Introduce preferential tax system	Provide income tax exemption for facilitating the creation of alternative livelihoods <i>co-financing</i>	0	0	0	0	0	72100	Contractual Services -	

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			IMCC meetings	Continue inter-ministry Committee: 2 co-ordinating meetings/year * 4 yrs=8 meetings * 2 countries (nat'l) <i>co-financing</i>	0	0	0	0	0	71600	Travel
					0	0	0	0	0	75700	Meeting Service
			Appoint National Project Co-ordinator	NPC will be a member of YSLME SAP Implementation Project Board, nat'l - 48mthx2NPCs; ROK NPC natl funds	0	0	0	0	0	71200	International Consultants
	1.3 Wider participation in SAP implementation fostered through capacity building and public awareness	1.3.1 At least 15 agreements with partners. Cross sector partnerships established and operational	Strengthening partnerships with existing bilateral mechanisms	Joint activity 15,000 x 1 time. Regional workshop 10,000 x 1 time.	0	10,500	7,000	0	17,500	71600	Travel
					0	4,500	3,000	0	7,500	75700	Meeting Service
			Strengthening partnerships with existing regional mechanisms	Guideline development: consultant 2 person months x 8,000. Regular meeting 13,000 x 2 years. Joint programmes with partners to be implemented under the "Commission" activity.	0	9,100	0	9,100	18,200	71600	Travel
					0	3,900	0	3,900	7,800	75700	Meeting Service
					0	8,000	0	8,000	16,000	71200	International Consultants

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
		1.3.2 National public awareness in support of YSLME SAP achieved; data and information collected	Assemble data and information	obtain necessary data & info for preparing national management plan: institutional contracts to collect data & info.	10,000	7,000	0	0	17,000	72100	Contractual Services -
			Finalise National SAP	Preparing the national management plan (Nat'l SAP): Two nat'l experts consultation	0	4,000	0	0	4,000	72100	Contractual Services -
		1.3.3 Transfer of lessons, experiences and best practices between local sites	Upgrade capacities	Investigation of requirements; preparing a list of required equipment; providing the equipments	0	0	0	0	0	72200	Equipment and Furniture
			International Exchanges	Exchange experts to gain updated knowledge on marine environment : exchange 6 scientists *30days	0	2,700	0	2,700	5,400	71600	Travel
			International exchanges	Exchange experiences among the participating countries.	0	0	0	0	0	71600	Travel
					0	0	0	0	0	75700	Meeting Service
			Strengthen national commissions	strengthen the National Commission for Environment Protection as inter-ministry mechanism: 2 co-ordinating	0	0	0	0	0	71600	Travel
					0	0	0	0	0	75700	Meeting Service

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
				meetings/year * 4 yrs=8 meetings							
			Improved nat'l co-ordination	Improve communication and co-ordination of nat'l agencies (2 training), operation (4 yrs)	0	0	0	0	0	71600	Travel
					0	0	0	0	0	75700	Meeting Service
			Establish National Co-ordination Office	Establish nat'l co-ordinating office +furniture	0	0	0	0	0	72200	Equipment and Furniture
				2 persons *48 months	0	0	0	0	0	72100	Contractual Services -
				+office rent	0	0	0	0	0	73100	Rental Maintenance - Premises
		1.3.4 Training of at least 10 stakeholder groups	Annual Nat'l Workshops for Stakeholder representatives	Workshops: 20 people, 3 days, 4 years, 2 countries <i>co-financing</i>	0	0	0	0	0	71600	Travel
						0	0	0	0	0	75700
				National Training courses	<i>Co-financing</i>	0	0	0	0	0	75700
	1.4 Improved compliance with regional and international treaties,	1.4.1 Enhanced national and regional legal instrument	Develop regional guidelines for incorporating Code of Conduct for Responsible	Consultant 2 person months x 12,000	16,000	8,000	0	0	24,000	71200	International Consultants

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
	agreements and guidelines	s to comply with regional & global treaties, agreements and guidelines	Fisheries in YSLME context.								
			Develop guidelines for matters not covered by UNCLOS, CBD & Ramsar.	Consultant 2 person months x 8,000 x 3 conventions; implementation is under respective Ecosystem Services.	12,000	36,000	0	0	48,000	71200	International Consultants
			Harmonize domestic legislation. Address the gaps between the domestic and regional standards	Consultant 2 person months x 4,000 x 2 countries. Additionally co-finance required from China & ROK.	0	16,000	0	0	16,000	71200	International Consultants
			Develop a YSLME Clearing House as part of 1.1.7	Operation cost 5,000 x 4 years.	5,000	5,000	5,000	5,000	20,000	73100	Rental Maintenance - Precises
1.5 Sustainable financing for regional collaboration on ecosystem-based management secured based on cost-efficient and ecologically-effective	1.5.1 Periodic economic assessments of costs and ecological effectiveness	Biennial estimations of SAP Implementation costs and cost-benefit	1 Consultant 1.5 mths	0	6,000	0	6,000	12,000	71200	International Consultants	
		Annual review of costs and expenditures. Mid term evaluation and Audit	Costed in PMO time. Mid term evaluation at the second year: \$60,000 + Audit at the last year \$50,000	0	60,000	0	0	60,000	71200	International Consultants	
				0	0	0	50,000	50,000	72100	Contractual Services -	
	1.5.2 Sustainable	Integrate econ analysis into	Organise training workshops on	0	10,500	10,500	0	21,000	71600	Travel	

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
	actions	e financing agreed; at least 150% increase in Gov financing to regional coordination	national workplan	economic analysis for better conservation activities 15,000 x 2	0	4,500	4,500	0	9,000	75700	Meeting Service
			Biennial review of ecological effects of management actions	National level activity costed in <i>co-financing</i> . Plus RWG mtg time to review national inputs	0	0	0	0	0	72100	Contractual Services -
					183,425	330,638	146,567	212,532	873,162		
Technical Assistance					153,914	161,598	169,870	178,802	664,184	71200	HICA
					30,385	31,905	33,500	35,175	130,965	71300	LICA
Project Negotiation and coordination					24,107	25,235	26,580	27,856	103,779	71200	HICA
					1,761	1,849	1,942	2,039	7,590	71300	LICA
Travel					15,371	15,371	15,371	15,371	61,482	71600	Travel
UNOPS 7%					28,627	39,662	27,568	33,024	128,881	75100	Facilities and Administration
Total Costs Component 1					437,591	606,258	421,398	504,798	1,970,044		
2. Improved Ecosystem Carrying Capacity with respect to provisioning services	2.1 Recovery of depleted fish stocks as shown by increasing mean trophic level	2.1.1 Reduction of fishing by around 10% in demonstration sites through e.g. vessel buy-back schemes over the	Review current national criteria and develop guidelines for vessel selection	collect current national criteria & develop guidelines (1 workshop*USD 15,000	0	10,500	0	0	10,500	71600	Travel
				& 2 consultants *0.5 pm* \$8000)	0	4,500	0	0	4,500	75700	Meeting Service
					0	8,000	0	0	8,000	71200	International Consultants
			Identification of boats; buy back; and decommissioning	<i>Co-financing</i>	0	0	0	0	0	72100	Contractual Services -

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
		project duration	Institutional study on the effects of buy-back on the reduction of fishing effort and recovery of fishstocks.	Data collection, travel, data costs, monitoring <i>co-financing</i>	0	0	0	0	0	72100	Contractual Services -
			Cost-Benefit Analysis of boat buy-back	Consultant 2 sites*2 months*\$8000;	0	16,000	16,000	0	32,000	71200	International Consultants
				1 reg. workshop*\$15,000	0	0	10,500	0	10,500	71600	Travel
					0	0	4,500	0	4,500	75700	Meeting Service
			Improving licensing system	2 consultants* \$6,000	12,000	0	0	0	12,000	71200	International Consultants
				+ 1 reg workshop *\$13,500	0	9,450	0	0	9,450	71600	Travel
					0	4,050	0	0	4,050	75700	Meeting Service
			Issue & renew licenses	nat'l <i>co-financing</i>	0	0	0	0	0	72100	Contractual Services -
			Implementation of license system (enforcement & monitoring)	Demonstration at 2 sites; Additional co-financing	0	12,000	12,000	12,000	36,000	72100	Contractual Services -
		2.1.2 Provision of alternative livelihoods to fisher folks taking into account the contribution of women	Assessment of possible Alternative livelihoods	Consultant 1 person months* \$ 8000 for China; 1consultant month and wkshp - ROK natl co-financing; 1 wkshp - China natl co-financing	0	8,000	0	0	8,000	71200	International Consultants
				"small loan" &"tax free" system for alternative livelihoods	0	10,500	0	0	10,500	71600	Travel
				Forum for exchange of ideas \$15,000	0	4,500	0	0	4,500	75700	Meeting Service

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS		
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description	
			Implementing "small loan" scheme	nat'l	0	0	0	0	0	72100	Contractual Services -	
			implement tax free system	nat'l	0	0	0	0	0	72100	Contractual Services -	
			Increase Tourism opportunities	1 international workshop + 2 natl workshop*\$10,000: ROK co-finance ntl wksp	14,000	10,500	0	0	24,500	71600	Travel	
					6,000	4,500	0	0	10,500	75700	Meeting Service	
			Technical retraining programmes	Fisheries education and training center	0	0	0	0	0	72100	Contractual Services -	
	2.2 Enhanced stocks through restocking and habitat improvement	2.2.1 Science-based management of fisheries and mariculture	Evaluation of the effectiveness of closure (the effects and effectiveness)	2 consultant* 2 month(\$ 8000) (ROK natl)	0	0	16,000	0	16,000	71200	International Consultants	
				Enforcement of Closure	nat'l	0	0	0	0	0	72100	Contractual Services -
				Public Awareness of benefits	2 national workshops* \$ 10,000	0	7,000	7,000	0	14,000	71600	Travel
						0	3,000	3,000	0	6,000	75700	Meeting Service
				Joint regional stock assessments	Surveys: country * 4yr <i>co-financing</i>	0	0	0	0	0	72100	Contractual Services -
				Regional network for harmonization of methodology and discussion of stock assessment	Expert group *4years* \$ 15000 costed under 1.1.3	7,000	7,000	7,000	7,000	28,000	71600	Travel
					2,960	2,853	2,920	2,592	11,325	75700	Meeting Service	
		Regional training in stock assessment	1 scientist *2 countries* 2 years* 1 month*\$6600	0	0	26,400	0	26,400	71200	International Consultants		

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			Joint study of fish behaviour/gear selectivity	Exchange of Scientists: 2 scientists* 2countries*10 days; Exchange of ideas to improve selectivity of gears*\$15000	0	8,800	10,000	0	18,800	71600	Travel
			Improved enforcement of regulations	nat'l	0	0	0	0	0	72100	Contractual Services -
			Increase production of healthy fish fry	nat'l	0	0	0	0	0	72100	Contractual Services -
			Release of H-R fish	nat'l	0	0	0	0	0	72100	Contractual Services -
			Monitoring of success	together with the habitat improvement workshop	0	0	0	0	0	71600	Travel
					0	0	0	0	0	75700	Meeting Service
			Improve techniques of artificial reefs construction and placement	Exchanges of scientists*4*\$3000	0	6,000	6,000	0	12,000	71600	Travel
			Artificial Reefs deployment	nat'l	0	0	0	0	0	72100	Contractual Services -
			Improve techniques and replanting of sea grass/macroalgae		0	10,500	0	10,500	21,000	71600	Travel
				2 regional Workshop*\$15000	0	4,500	0	4,500	9,000	75700	Meeting Service
			Monitoring success	Demo. 2 sites*\$40000	18,000	26,000	16,000	8,000	68,000	72100	Contractual Services -
			Introduction of more scientific based	1 regional symposium \$50000	0	0	35,000	0	35,000	71600	Travel
				(combine with	0	0	15,000	0	15,000	75700	Meeting Service

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			management	fisheries conferences like APFIC or PICES?) 2 national wkshps <i>co-financing</i>							
2.3 Enhanced and sustainable mariculture production	2.3.1 Widespread practice of sustainable mariculture, where appropriate increasing productivity by up to 10%	Develop regional guidelines for sustainable mariculture	(1 consultant*\$8,000 + 1 regional meetings* \$15000	0	10,500	0	0	10,500	71600	Travel	
				0	4,500	0	0	4,500	75700	Meeting Service	
				8,000	0	0	0	8,000	71200	International Consultants	
		Develop national management plan for sustainable mariculture	2 consultant*\$8000	0	16,000	0	0	16,000	71200	International Consultants	
			Develop BMP for sustainable mariculture	\$30,000 + additional <i>co-financing</i>		10,000	15,000	5,000	30,000	72100	Contractual Services -
		Implementation of Sustainable mariculture practice	\$60,000 (sea ranching and IMTA) (ROK - natl)	0	30,000	30,000	0	60,000	72100	Contractual Services -	
			prepare guideline for reducing nutrient discharge	1 regional consultant*\$8000	8,000	0	0	0	8,000	71200	International Consultants
		2.3.2 Adoption of integrated multi-trophic aquaculture (IMTA) where appropriate	Implementation of reducing nutrient discharge activities	\$27,000 (additional co-financing ROK & China)	0	0	13,500	13,500	27,000	72100	Contractual Services -
			Enhance and exchange information	2 regional fora * \$15,000 (ROK - pays own participants)	0	7,000	7,000	7,000	21,000	71600	Travel
					0	3,000	3,000	3,000	9,000	75700	Meeting Service

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			Establish regional network for disease prevention and warning	1 Consultant* 2 months*\$8,000	0	8,000	8,000	0	16,000	71200	International Consultants
				+1 regional meeting*\$15,000	0	0	10,500	0	10,500	71600	Travel
					0	0	4,500	0	4,500	75700	Meeting Service
			Improve capacity in disease diagnoses	0	6,000	0	0	6,000	71600	Travel	
			Enhance information sharing and exchange	2 conference x 20,000	0	14,000	0	14,000	28,000	71600	Travel
	0	6,000		0	6,000	12,000	75700	Meeting Service			
Total activity costs component 2					75,960	293,153	278,820	93,092	741,025		
Technical Assistance					97,164	101,937	107,798	114,535	421,433	71200	HICA
					15,511	16,286	17,100	17,955	66,852	71300	LICA
Project Negotiation and Coordination					13,285	13,905	14,678	15,444	57,312	71200	HICA
					899	944	991	1,041	3,874	71300	LICA
Travel					13,265	13,265	13,265	13,265	53,060	71600	Travel
UNOPS 7%					15,126	30,764	30,286	17,873	94,049	75100	Facilities and Administration
Total Costs Component 2					231,209	470,255	462,938	273,205	1,437,606		
3. Improved Ecosystem Carrying Capacity with respect to regulating and cultural services	3.1 Ecosystem health improved through reductions in pollutant (e.g., N) discharge	3.1.1 Reduced pollutant levels, e.g. reduce 10% N discharge every 5 yrs, by	establish regional pollution monitoring guideline and network based on any existing ones	harmonizing regional methodology and update regional monitoring guideline. consultant 2 pm * 8000; working group develop	0	14,000	7,000	0	21,000	71600	Travel
					0	6,000	3,000	0	9,000	75700	Meeting Service
					16,000	0	0	0	16,000	71200	International Consultants

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS		
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description	
	from land-based sources	enforcement and control in demonstration sites		regional monitoring programme, 2 sessions @ 10,000; implement regional monitoring programme by country (seed money); consultant for reg								
				working group to improve understanding of environmental capacity & promote best available techniques and new technology; experts exchange: exchange info on management of fertiliser use and control of sea-based sources of pollutants	0	0	0	0	0	71600	Travel	
				establish mechanism for discussing regional level data exchange	0	0	0	0	0	75700	Meeting Service	
				Review environmental quality standards (3rd year)	0	0	8,000	0	8,000	71200	International Consultants	
				regional assessment and update of contaminant sources and fate	0	0	0	0	0	71600	Travel	
				regional working group to update sources and fate; monitoring sources and fate, 2 sites (nat'l and/or combine with other monitoring from sea, atm, land) MA5-2	0	0	0	0	0	75700	Meeting Service	

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			evaluation of facilities and equipment to control/reduce discharge from industrial and municipal sources	national consultants	0	0	0	0	0	71200	International Consultants
			develop basin-wide strategy to control contaminants	consultant * 8000 + PMO; Cooperation with relevant ecoregion project, e.g. WWF's projects	0	8,000	0	0	8,000	71200	International Consultants
			diagnostic strategy for ID sources & sinks of pollutants	review available data & info, consultant 1pm x 8000	8,000	0	0	0	8,000	71200	International Consultants
			Support for pilot intensive monitoring (hot spots/ critical habitats) including input sources and loads of sewage, and aquaculture	2 pilot sites (combine the monitoring with MA5-2)	0	0	0	0	0	72100	Contractual Services -
			Support to monitor & calculate nutrient loading in hot spots/ critical habitats	2 pilot projects for development of total quality control methodology, with best available techniques	0	12,000	12,000	0	24,000	72100	Contractual Services -
			develop wastewater treatment plan for reduction of nutrients loads	working group review existing plans; review existing waste treatment facilities & give	0	0	0	0	0	71600	Travel
					0	0	0	0	0	75700	Meeting Service

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
				recommendations to improve (with above)							
			reporting environmental status & trends of Yellow Sea	consultant to update regional synthesis, 1pm x 8000	0	0	8,000	0	8,000	71200	International Consultants
			Stakeholder workshop to transfer new findings	1 in-country / country	0	0	0	0	0	71600	Travel
					0	0	0	0	0	75700	Meeting Service
			improve control mechanism of pollution from point sources	consultant review 1pm * 8000 & recommend PMO	0	8,000	0	0	8,000	71200	International Consultants
			Economic analysis	2.5PM	10,000	8,000	0	0	18,000	71200	International Consultants
			develop economic instruments to reduce pollution	consultant to review existing instruments and give recommendations 1pm;	0	8,000	0	0	8,000	72100	Contractual Services -
				implement pilot projects to apply economic instruments, 2 sites (ROK co-finance)	0	10,000	10,000	0	20,000	72100	Contractual Services -
			improve regional strategy for oil spill	working group to update strategy (share with NOWPAP)	0	0	0	0	0	71600	Travel
					0	0	0	0	0	75700	Meeting Service
			joint exercises on implementing contingency plans	1 demonstration; Sharing D & I with NOWPAP, IMO for oil transportation: oil type, quantity, source, traffic route	0	10,500	0	10,500	21,000	71600	Travel
					0	4,500	0	4,500	9,000	75700	Meeting Service

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			improve management of ballast water to avoid introducing exotic species	site: demonstrate monitoring & assessment to improve management procedures	0	0	20,000	0	20,000	72100	Contractual Services -
			using alternative energy and technology transfer to reduce CO2 discharge from vessels	technology transfer from developed countries, 1 pilot project	0	0	0	0	0	72100	Contractual Services -
			Implement improvement of wastewater & sewage treatment facilities	2 sites (national)	0	0	0	0	0	72100	Contractual Services -
		3.1.2 Enhanced data and information regarding sources and sinks of contaminants	Support for monitoring & reducing atm-based sources	1 site inst. Contract 2yrs monitoring	0	15,000	15,000	0	30,000	72100	Contractual Services -
			Support for monitoring, reducing, & improving fertilizer use	1 site inst. Contract 2yrs monitoring	0	15,000	15,000	0	30,000	72100	Contractual Services -
			Support for monitoring & reducing sea-based sources	1 site inst. Contract 2yrs monitoring	0	15,000	15,000	0	30,000	72100	Contractual Services -
			development of storm water treatment system	consultant to give recommendations	0	0	0	0	0	71200	International Consultants

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			Establish & implement programme to control total nutrient loading	national commitments	0	0	0	0	0	72100	Contractual Services -
3.2 Wider application of pollution-reduction techniques piloted at the demonstration sites	3.2.1 New and innovative techniques for pollution reduction (e.g. artificial wetlands) applied at demonstration sites	promote wetlands as nutrient sinks	develop regional strategy for using wetlands as nutrient sink, consultant 1pm * 8000; local govt officer's study tour to 1 site in China, 2 days/site, 6 pers/site (natl)	0	8,000	0	0	8,000	71200	International Consultants	
		Create more wetlands as nutrient sink	national commitments	0	0	0	0	0	72100	Contractual Services -	
		transfer new technology for treating nutrients in wastewater	1 pilot project	0	0	15,000	0	15,000	72100	Contractual Services -	
		cost-effective and sustainable mechanism to treat municipal wastewater & sewage	1 consultant * 8000 + PMO pm give regional recommendations; 1 pilot project	0	8,000	0	0	8,000	71200	International Consultants	
		Improve legislation governing sub-standard waters	1 consultant x 3mths natl	0	0	0	0	0	71200	International Consultants	
3.3. Strengthened legal and regulatory process to control pollution	3.3.1 Strengthened legal instruments and better regulatory processes to control pollution	Harmonize international and regional guidelines on marine litter monitoring and	1 consultant x 1mth x 8000	8,000	0	0	0	8,000	71200	International Consultants	

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS		
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description	
			assessment									
			Stakeholder workshop to transfer new findings	1 in-country / country	0	0	0	0	0	71600	Travel	
					0	0	0	0	0	75700	Meeting Service	
			Waste management	regional review of current policies & regulations, consultant 1pm *8000 + PMO pm; national review of polices & regulations; improve municipal waste collection regulation & collection system (natl)	8,000	0	0	0	8,000	71200	International Consultants	
			Review technologies for waste reduction, reuse, recovery	regional review of current technologies for waste reduction, reuse, recovery, consultant 1pm* 8000; recommend clean production technologies, technology transfer from developed countries, 1 site	0	8,000	0	0	8,000	71200	International Consultants	
			recycling economy	recommendations & 2 pilot projects regional recycling economies	0	10,000	0	0	10,000	72100	Contractual Services -	

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			implement regional baseline survey and pilot monitoring programme on marine litter	Meeting cost for working group for survey design; baseline survey, 1 cruise / cty; develop coastal monitoring activities, consultant 1pm (Using existing ones); pilot coastal waters monitoring, 2 sites; pilot beach monitoring, sites as above; assessment and dissemination	0	15,000	0	0	15,000	72100	Contractual Services -
				Cruise for monitoring	0	20,000	30,000	0	50,000	72100	Contractual Services -
	3.4 Marine litter controlled at selected locations	3.4.1 Procedures in place to control and remove marine litter at demonstration sites	implementing programmes for cleaning marine litter	enhance public-private partnerships on reducing waste production and disposal Demo Activity	14,117	0	0	0	14,117	72100	Contractual Services -
				implement regular community-based approach for removing marine litter.	0	19,189	20,103	18,404	57,696	72100	Contractual Services -
			marine litter included in school curriculum	0	0	0	0	0	72100	Contractual Services -	
			improve publicity of marine litter issues	support & continue efforts through YSP and other existing programmes	7,000	7,000	0	0	14,000	71600	Travel
					3,000	3,000	0	0	6,000	75700	Meeting Service

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			production of information packages	contract groups to design and distribute	0	20,000	0	0	20,000	72100	Contractual Services -
			Regional assessment of existing status of marine litter, including harmonize measurement techniques	(1 consultant x 8000)	8,000	0	0	0	8,000	71200	International Consultants
				1 reg'l mtg X 15,000 (natl)	0	10,500	0	0	10,500	71600	Travel
			Support for regular monitoring, info dissemination, and beach signage	1 site / cty (national)	0	0	0	0	0	72100	Contractual Services -
			Review, develop, improve nationally accepted criteria/standards/monitoring technologies	1 consultant x 2mth x 8000 (nat'l)	0	0	0	0	0	71200	International Consultants
			Implement monitoring and assessment programme using improved criteria/standards	1 site / cty (national)	0	0	0	0	0	72100	Contractual Services -
			Develop & test early warning system, reporting to relevant agencies	1 consultant 1pm per 1 site / cty	0	8,000	0	0	8,000	71200	International Consultants

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			Improve and implement early warning system in rec. area	1 site / cty (combine with above)	0	0	0	0	0	72100	Contractual Services -
			Enforcement of pollution discharge in test areas	1 site / cty national sources	0	0	0	0	0	72100	Contractual Services -
			Allocate funds for recycling enterprises	consultant recommend to include in govt policy for investment plans, natl incentives for industry participating in recycling enterprises, 2 sites	0	0	0	0	0	72100	Contractual Services -
			Start-up for local recycling enterprises	2 pilot projects @ 3,000each (see microfinance)	0	6,000	0	0	6,000	72100	Contractual Services -
			Inclusion of envt. awareness into nat'l plans	1 consultant per cty x 2mths, natl	0	0	0	0	0	71200	International Consultants
			Total Activity Costs component 3		82,117	281,189	178,103	33,404	574,813		
			Technical Assistance		80,331	84,279	88,988	94,278	347,877	71200	IICA
					14,306	15,022	15,773	16,562	61,663	71300	LICA
			Project Negotiation and coordination		11,764	12,313	12,989	13,647	50,713	71200	IICA
					829	871	914	960	3,574	71300	LICA
			Travel		10,296	10,296	10,296	10,296	41,184	71600	Travel
			UNOPS 7%		13,975	28,278	21,494	11,840	75,588	75100	Facilities and Administration
Total Costs Component 3			Total Costs Component 3		213,620	432,247	328,558	180,986	1,155,411		

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
4. Improved Ecosystem Carrying Capacity with respect to supporting services	4.1 Maintenance of current areas of habitats through relevant management actions	4.1.1 Agreement at all levels to implement the relevant management actions avoid new coastal zone reclamation projects	Regional evaluation of implementation of CBD and RAMSAR convention and country reports within the YSLME	2 person months* \$ 8000 + travel 1 trips to 2 countries * \$ 1500	2,100	0	0	0	2,100	71600	Travel
					900	0	0	0	900	75700	Meeting Service
					16,000	0	0	0	16,000	72100	Contractual Services
			Develop explicit goals in the form of regional habitats and species targets and a biodiversity conservation plan in implementation of CBD, Ramsar and other conventions	2 person months* \$ 8000	0	16,000	0	0	16,000	71200	International Consultants
			Develop strategies and governance mechanisms to achieve regional habitat and species targets through expert group mtgs	6 person months* \$ 8000 (Natl) + travel cost \$ 10,000	7,000	0	0	0	7,000	71600	Travel
					3,000	0	0	0	3,000	75700	Meeting Service
		Develop management plan and targets for demonstration sites	2 Consultant*1month *\$ 8400	0	16,000	800	0	16,800	71200	International Consultants	

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS		
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description	
			representative MPA network									
			Establishment of network of MPA managers, NGO's and International organizations through Yellow Sea Partnership (YSP) and YSESP exchange forum	Costed as part of PMO costs	0	0	0	0	0	72100	Contractual Services -	
			Regional training programmes (MPA managers and Govt officials)	\$15,000	15,000	0	0	0	15,000	71600	Travel	
			Exchange programme (conservation managers)	6 conservation managers * travel (\$ 600) & subsistence (\$750) * 2 years	0	8,100	8,100	0	16,200	71600	Travel	
			Evaluation of management effectiveness	Consultant* 2 countries* 1 pm (ROK Natl)	0	0	11,000	0	11,000	72100	Contractual Services -	
			Regional workshops on sustainable use on MPAs	2 regional meetings * \$ 15,000 (combine with others)	0	0	0	0	0	71600	Travel	
	4.3 Adaptive management mainstreamed to	4.3.1 Regional strategies adopted and goals agreed;	Analysis of country coastal management guidelines, identification of conservation	2 Consultants* 1 month*USD 9000	9,000	9,000	0	0	18,000	71200	International Consultants	

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
	enhance the resilience of the YSLME and reduce the vulnerability of coastal communities to climate change impacts on ecosystem processes and other threats identified in the TDA and SAP	site-based ICM plans enhancing climate resilience in place for selected sites in YSLME; conservation areas and habitats for migratory species identified	areas according to planning zones.								
			Establish a coordination group of experts, managers, and govt officials to develop regional guidelines	Expert Group discussion costed under 1.1.3 1 consultant*1 pm * USD 8000	8,000	0	0	0	8,000	71200	International Consultants
			Identification of habitats of selected migratory species at the regional level	Coordinated Country Surveys; Referencing of existing data (natl) and Expert group discussion (\$ 15,000) costed under 1.1.3	0	0	0	0	0	71600	Travel
					0	0	0	0	0	75700	Meeting Service
			Identification of approved reclamation up to 2007 in each country, and any further reclamation approved since 2008	2 Consultant*1 pm* *\$ 8000 (ROK Natl)	16,000	0	0	0	16,000	71200	International Consultants
			Improve enforcement of reclamation management	National working group of experts	0	0	0	0	0	71600	Travel
					0	0	0	0	0	75700	Meeting Service
Improve mitigation of reclamation effects:	National	0	0	0	0	0	72100	Contractual Services -			

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			improvement of EIA process								
			Regional monitoring network of NGOs/stakeholders that provide data on new reclamation to YSP website	database management* \$ 20,000 (combine with others under BL 1.1.7)	0	0	0	0	0	72100	Contractual Services -
4.4. Application of Ecosystem-based Community Management (EBCM)	4.4.1 Public awareness of Yellow Sea environmental problems enhanced; strong local support for and awareness of demonstration activities	Sponsoring of network of NGOs to work together to promote Public Awareness	\$ 6000 * 4 yrs	6,000	6,000	6,000	6,000	24,000	72100	Contractual Services -	
		Small grants for Biodiversity promotion	\$ 30000 (only first year)	20,000	10,000	0	0	30,000	72100	Contractual Services -	
		Public awareness programmes at the Demonstration sites	\$20,000	0	20,000	0	0	20,000	72100	Contractual Services -	
		Regional training of tourism advantages around demo sites for local stakeholders	national sources	0	0	0	0	0	72100	Contractual Services -	
		Regional training of MPA managers in public awareness	\$ 15000 * 2 years (2nd year Natl)	10,500	0	0	0	10,500	71600	Travel	
				4,500	0	0	0	4,500	75700	Meeting Service	

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			activities								
			CBA of biodiversity conservation at demo sites	\$ 20000 per site (natl)	0	0	0	0	0	72100	Contractual Services -
			Sponsoring YSP programme	\$1,000 * 4 yrs	700	700	700	700	2,800	71600	Travel
					300	300	300	300	1,200	75700	Meeting Service
			Analyze gaps between national legislation and international guidelines, provide recommendations	Compare national regulations; Write guidelines for monitoring and quarantine procedures; consultant*1 month*\$8000	0	8,000	0	0	8,000	72100	Contractual Services -
			Conduct national monitoring and exchange information;	Produce Annual Report	0	0	0	0	0	72100	Contractual Services -
			Make assessment on the trend of the introduced species in the region	Hold 2 forums to conduct joint assessment; publish reports; workshop 2*\$15,000 (Natl); consultant 1pm*\$8000	0	8,000	0	0	8,000	72100	Contractual Services -
			Mechanism to ensure stakeholder consultation - public hearings for management plans	<i>Co-financing</i>	0	0	0	0	0	72100	Contractual Services -

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
		4.4.2 Established monitoring network; regular basin-wide assessments; enhanced information exchange; periodic scenarios of ecosystem change	Establish a comprehensive regional monitoring system	Review and harmonize national methodologies for regional monitoring; see Governance action; Link existing national monitoring network; see Governance action	0	0	0	0	0	72100	Contractual Services -
			Monitor regional impacts	Conduct regular monitoring; operate linked national networks (seed money)	15,000	15,000	0	0	30,000	72100	Contractual Services -
			Make regional assessment	Hold annual forums to conduct joint assessment (part of RWG responsibilities); make policy-relevant recommendation; publish reports; 1 workshop/yr, USD10,000x4, consultant 1pm	6,000	6,000	6,000	6,000	24,000	71600	Travel
					2,850	2,850	2,850	2,850	11,400	75700	Meeting Service
					500	500	500	500	2,000	74200	Publication
					8,000	8,000	8,000	8,000	32,000	71200	International Consultants
			Set up a regional monitoring system	Create regional committee to coordinate monitoring and assessment. (seed money) Review and harmonize national methodologies for regional monitoring; see Governance action; Link existing national monitoring	0	0	0	0	0	72100	Contractual Services -

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS		
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description	
				network; see Governance action costed under 1.1.4								
			Monitoring the impacts	Conduct regular basin-scale monitoring	0	0	0	0	0	72100	Contractual Services -	
			Make assessment	Hold annual regional fora to conduct joint assessment; make policy-relevant recommendation; publish reports; 1 workshop/yr, USD1,000x3, ROK to meet costs of Ntl participants	0	6,650	6,650	6,650	19,950	71600	Travel	
						0	2,850	2,850	2,850	8,550	75700	Meeting Service
					consultant 1pm (see governance action)	0	8,000	8,000	8,000	24,000	71200	International Consultants
					establish expert group Compare existing models; Devise strategies for integration of circulation-ecosystem model; workshop 10,000; consultant 1pm * 8000	0	7,000	0	0	7,000	71600	Travel
			Make regional strategies for long-term ecosystem forecasts		0	3,000	0	0	3,000	75700	Meeting Service	
						0	8,000	0	0	8,000	71200	International Consultants
			Develop regional models	Develop regional circulation-	7,000	0	0	0	7,000	71600	Travel	
						3,000	0	0	0	3,000	75700	Meeting Service

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS		
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description	
				ecosystem models, consultant 2pm (combine with above+ PMO) Produce mid- & long-term forecasts; verify the results; workshop 10,000;								
				consultant 1pm * 8000	8,000	0	0	0	8,000	71200	International Consultants	
			Make forecasts	Develop regional scenarios; workshop 15000	0	0	10,500	0	10,500	71600	Travel	
					0	0	4,500	0	4,500	75700	Meeting Service	
			Assessment & dissemination	Interpret & disseminate forecasts using YSLME data server	0	0	0	0	0	72100	Contractual Services -	
			Create regional jellyfish monitoring program	Create regional committee to coordinate monitoring and assessment. develop national and regional monitoring methodologies of jellyfish blooms; see Governance action Link and coordinate existing national jellyfish monitoring programs; see Governance action	15,000	0	15,000	0	30,000	72100	Contractual Services -	
			Conduct regular jellyfish monitoring activities	Conduct monitoring of jellyfish blooms	0	0	0	0	0	72100	Contractual Services -	

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
			Asses the status, trend and damage of jellyfish blooms	Hold annual forums to conduct joint assessment; make policy-relevant recommendation; publish reports; 1 workshop/yr, consultant 1pm/yr (see governance action)	0	0	0	0	0	71600	Travel
			Create regional HAB (including macroalgae) monitoring program	Create regional committee to coordinate monitoring and assessment. Combine with jellyfish committee develop national and regional monitoring methodologies of HAB; see Governance action Link and coordinate existing national HAB monitoring programs; see Go	0	10,000	0	0	10,000	72100	Contractual Services -
			Conduct regular HAB monitoring activities	Conduct monitoring of HAB	0	0	0	0	0	72100	Contractual Services -
			Asses the status, trend and damage of HABs	Hold annual forums to conduct joint assessment; make policy-relevant recommendation; publish reports - combine with jellyfish costed	0	0	0	0	0	72100	Contractual Services -

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
				under 4.4.19							
			Establish a comprehensive regional monitoring system	Develop regional monitoring strategies for N/P/Si changes, climate change, jellyfish blooms, and HAB; consultants 2pm* 8000+PMO	16,000	0	0	0	16,000	72100	Contractual Services -
				Hold a conference to review and link existing monitoring network; workshop with participation of 50 regional and international experts; USD60,000	0	0	42,000	0	42,000	71600	Travel
				Annual forums to conduct joint assessment, 15,000x3	0	0	18,000	0	18,000	75700	Meeting Service
				Apply Ecosystem-based Community management (EBCM) (ICM)	261,203	261,712	261,827	262,007	1,046,749	72100	Contractual Services -
Total Activity Costs component 4					525,553	465,162	445,077	319,357	1,755,149		
Technical Assistance					102,910	107,998	114,241	121,549	446,698	71200	IICA
					14,583	15,312	16,078	16,882	62,855	71300	LICA

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS		
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description	
			Project Negotiation and coordination		13,099	13,714	14,479	15,250	56,541	71200	HICA	
					845	887	932	978	3,643	71300	LICA	
					31,248	31,248	31,248	31,248	124,993	71600	Travel	
					48,177	44,403	43,544	35,368	171,491	75100	Facilities and Administration	
Total Costs Component 4			Total Costs Component 4		736,415	678,724	665,599	540,632	2,621,370			
Sum of total costs (Component 1-4) excluding project management costs			Total activity costs all components		867,055	1,370,142	1,048,567	658,385	3,944,149			
					Total of Technical Assistance	434,319	455,812	480,898	509,164	1,880,192	71200	HICA
						74,786	78,525	82,451	86,574	322,335	71300	LICA
					Project Negotiation and coordination	62,255	65,167	68,726	72,196	268,344	71200	HICA
						4,334	4,551	4,779	5,017	18,681	71300	LICA
					Travel	70,180	70,180	70,180	70,180	280,719	71600	Travel
					UNOPS 7%	105,905	143,106	122,892	98,106	470,009	75100	Facilities and Administration
Total costs excluding project management costs	1,618,833	2,187,483	1,878,492	1,499,621	7,184,430							
5. Project Management Cost			Project Operation		14,187	15,248	16,403	17,617	63,454	71200	HICA	
					34,733	37,331	40,158	43,130	155,353	71300	LICA	
			Office supplies	30,000	0	0	0	30,000	72200	Automobile, Furniture		
				832	832	832	832	3,328	72300	Fuel of vehicles & insurance		
				3,417	5,770	2,758	3,500	15,445	72400	Printers, Communication, Postage/freight		
				3,500	3,500	3,500	2,722	13,222	72500	Office supplies & Library acquisition		
				13,197	0	0	0	13,197	72800	Computers		
				8,500	8,500	8,500	8,500	34,000	73100	Premises costs, Operation cost		

Project Components	Expected Outcomes	Expected Outputs	Activities	Details	Annual Breakdown of GEF					ATLAS	
					Yr 1	Yr 2	Yr 3	Yr 4	Total	Code	Description
					300	0	300	0	600	73300	Computer Software
					300	300	300	300	1,200	73400	Repair & maint. of vehicles
					5,000	5,000	5,000	5,000	20,000	74200	Publication
					642	642	642	642	2,568	74500	Finance & Legal Services, Vehicle insurances
					226	226	226	226	904	74700	Vehicles parking
				UNOPS 7%	8,038	5,414	5,503	5,773	24,729	75100	Facilities and Administration
Total Costs of Project Management			Total Costs of Project Management		122,872	82,764	84,122	88,242	378,000		
Grand Total			Grand Total		1,741,706	2,270,247	1,962,614	1,587,863	7,562,430		

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