



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

UNDP/GEF/YS/RSTP.2/4
Date: 7 February 2005
English only

**Second Regional Technical Meeting on
Preparation of the Implementation Plan
for the UNDP/GEF Yellow Sea Project**
Ansan, Korea, 3-5 March 2005

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

IMPLEMENTATION PLAN

1. Background

For millennia the Yellow Sea ecosystems provided food and livelihood to the civilisations in East Asia. Shallow but rich in nutrients and resources, the Yellow Sea is most favourable for coastal and offshore fisheries, and its waters are the highway for vast international shipping activity.

Three countries (Democratic People's Republic of Korea (DPRK), People's Republic of China (PRC), and Republic of Korea (ROK)) share the natural heritage of the Yellow Sea. Despite their political and social diversity, the people of the region express a common concern for the Yellow Sea. Today the Yellow Sea faces serious environmental problems, many of a transboundary nature, that arise from anthropogenic causes. The three countries of the region are confronting difficult economic and administrative adjustments that complicate environmental management and natural resource protection efforts. The three littoral countries share common problems with pollution abatement and control from municipal and industrial sites in the Yellow Sea basin, as well as contributing non-point source contaminants from agricultural practices. All of the them are urgently seeking to address problems of reduced fish catches (caused in part by overfishing), red tide outbreaks, degradation of coastal habitats (caused by intensive coastal development), and effects of climate variability on the Yellow Sea Large Marine Ecosystem (YSLME).

In few other enclosed or semi-enclosed seas are multilateral measures for marine pollution control so deficient as in the Yellow Sea. However, there now are opportunities for improvement. Both ROK and PRC acknowledge that threats to the commons from pollution and overexploitation of living resources could have serious, perhaps irreversible, economic consequences. China, DPRK, and ROK have to decide how to adjust national initiatives to be compatible with emerging international legal and technical obligations, or, conversely, the extent to which each state wishes to ignore or deviate from international practice.

There is also a lack of a formal infrastructure to bring about international collaboration and cooperation in monitoring and research activities on YSLME shared marine resource issues. The lack of a formal structure prevents the development of well-coordinated cooperative resource assessments, baseline studies and coordination in emergencies (such as a massive mammal die-off, or a spill of oil or of other toxic hazardous materials). Monitoring and research programs are not as effective as they should be because they stop at disputed governmental borders rather than at some ecosystem or natural boundary. Effective studies of transboundary contamination and living marine resource assessments require excellent coordination, cooperation, and synchronization of sampling, analysis, and interpretation to enable integration of data across the region.

An objective of the project is to implement an ecosystem-based management approach to reduce development stress on the ecosystem, and to initiate recovery actions leading to the long-term sustainability of the environment and resources of the YSLME.

ENVIRONMENTAL ISSUES

The Yellow Sea is the semi-enclosed body of water bounded by the Chinese mainland to the west, the Korean Peninsula to the east, and a line running from the north bank of the mouth of the Yangtze River (Chang Jiang) to the south side of Cheju Island. It covers an area of about 400,000 km² and measures about 1,000 km (length) by 700 km (maximum width). The floor of the Yellow Sea is a geologically unique, post-glacially

submerged, and shallow portion of the continental shelf. The seafloor has an average depth of 44 m, a maximum depth of about 100 m, and slopes gently from the Chinese continent and more rapidly from the Korean Peninsula to a north-south trending seafloor valley with its axis close to the Korean Peninsula. This axis represents the path of the meandering Yellow River (Huang He) when it flowed across the exposed shelf during lowered sea level and emptied sediments into the Okinawa Trough. The Sea annually receives more than 1.6 billion tons of sediments, mostly from the Yellow River and Yangtze River, which have formed large deltas.

The Yellow Sea is connected to the Bo Hai Sea in the north and to the East China Sea in the south, thus forming a continuous circulation system. Major rivers discharging directly into the Yellow Sea include the Han, Yangtze, Datung, Yalu, Guang, and Sheyang. The Liao He, Hai He, and Yellow River around the Bo Hai have important effects on salinity in the western Yellow Sea, whereas the Yangtze River exerts strong influence on the hydrography of the southernmost part of the Sea. All rivers have peak runoff in summer and minimum discharge in winter.

Biotic communities of the south-eastern Yellow Sea are complex in species composition, spatial distribution, and community structure possibly due to the complicated oceanographic conditions of the area. Faunal communities are composed of various taxonomical groups of warm and cold water species as well as cosmopolitan and amphipacific ones. Yet the diversity and abundance of the fauna are comparatively low. Marked seasonal variations are the main characteristics of all components of the biotic communities. Turbidity and sediment type appear to be the major parameters that affect the distribution of planktonic and benthic organisms in the coastal waters of the Yellow Sea.

Harmful Algal Blooms (HAB) occurring in the coastal waters off southern and eastern ROK have caused loss to the aquaculture industry and probably large-scale mortality of natural fin- and shellfish. However, the frequency and the area of the outbreak of HABs in the coastal waters off western ROK (Yellow Sea) are lower than those off southern and eastern ROK. High turbulence intensity and turbidity caused by strong tidal currents might inhibit the growth of HAB organisms.

SOCIAL AND ECONOMIC ISSUES

The Yellow Sea is a classic example of a semi-enclosed area, but remarkable for its massive population and increasing anthropogenic pressure. Shallow but rich in nutrients and living resources, it is favourable for coastal and offshore fisheries, and its waters are a highway for international shipping.

Throughout the millennia of civilisation in East Asia, periods of prosperity have been those in which the nations bordering the Yellow Sea have used the Sea co-operatively and efficiently. Such was certainly the case in the Tang dynasty of China, the Silla dynasty of Korea, and the Nara period of Japan. Conversely, when there was bad or inefficient use of this resource, all the coastal nations suffered. As the Yellow Sea coastal countries strive to develop and improve the welfare of their people, an optimal use of Yellow Sea resources could be the beginning of a new era of cooperation.

The commercial utilisation of the living resources in the Yellow Sea dates back several centuries. With the introduction of bottom trawl vessels in the early twentieth century, many stocks began to be intensively exploited by Chinese, Korean, and Japanese fisherman and some economically important species such as the red seabream declined in abundance in the 1920s and 1930s (Xia 1960). The stocks remained fairly stable during World War II. However, due to a great increase in fishing effort throughout the entire Yellow

Sea, nearly all the major stocks were being heavily fished by the mid-1960s. Since then, the composition of the fish catch has changed greatly, and the catch-per-unit-square kilometre has decreased to 2.3 MT in recent years.

The Yellow Sea is one of the most intensively exploited areas in the world. The number of species commercially harvested is about 100 including cephalopods and crustacea. The abundance of most species is relatively small, and only 23 species exceed 10,000 MT in annual catch. These are the commercially important species and account for 40 to 60 percent of the annual catch. Demersal species used to be the major component of the resources and accounted for 65 to 90 percent of annual total catch. The resource populations of demersal species such as small yellow croaker, hairtail, large yellow croaker, flatfish, and cod declined in bio-mass by more than 40 percent when fishing effort increased threefold from the early 1960s to the early 1980s.

Aquaculture is a major use of the coastal waters of the Yellow Sea. Mariculture is commonly practiced in all coastal provinces of China, and it is most advanced in Shandong and Liaoning provinces. In both the Qingdao and Dalian regions the same fishery communes that culture invertebrates also cultivate seaweed.

Oil exploration has been successful in the Chinese and DPRK portions of the Yellow Sea. In addition, the sea has become more important with the growth in trade among its bordering nations. The main Chinese ports are Shanghai, Lu-ta, Tian Jin, Qingdao, and Chin-Huang Dao; the main ROK port is Inch'on, the outport of Seoul; and that for DPRK is Namp'o, the outport for P'yongyang.

Tourism is an industry in its infancy in both China and R. Korea. Several sites of picturesque beauty around the coastlines of these countries could be promoted as tourist attractions. As access to China and Korea becomes easier for foreign visitors, the tourist industry will expand. The Karst coast near Dalian, the granite mountains of the western Liaoning coast in China, and the islands and swimming beaches of ROK, in particular Cheju Island, will be in even greater demand.

LEGISLATIVE ISSUES

The Yellow Sea is an international water-body and many of its problems can be solved only through international co-operation. The management of the Yellow Sea is especially complicated in that it is surrounded by nations that share some aspects of their historical and cultural backgrounds, but differ in internal political systems, external political and economic alignment, and levels of economic development.

For the future of the Yellow Sea, it is thus imperative for the coastal nations to realize the importance of regional co-operation. There are currently several agreements for bilateral regulation or development of the Yellow and East China Seas, but none of them are binding on all the coastal nations; nor is any nation a party to all the agreements. This means that there are insufficient consultations among the coastal nations. In addition, many of the existing national management policies or bilateral management programs for the Yellow Sea have been designed and carried out with insufficient attention to the transnational nature of the resources and industries that the Yellow Sea harbours and supports.

Of course, co-operation among the countries in the region is possible only when each nation in the region is convinced that it will be at least no worse off by co-operating than by going its own way. In the case of the Yellow Sea, it would appear that all nations bordering it would gain more from co-operation than they would without it.

The PRC, ROK, and DPRK already co-operate in many regional initiatives such as UNEP Regional Seas Programme's Northwest Pacific Action Plan (NOWPAP), Tumen River Area Development Project (TRADP), the Asia-Pacific Economic Cooperation Forum (APEC), Fisheries Marine Resources Conservation Working Groups, and the GEF/UNDP/IMO East Asia Seas project. These pre-existing institutional structures will play a crucial role in the development of a Strategic Action Programme (SAP), by providing the umbrella agreements between the countries under which specific co-operative activities may be planned and implemented.

INSTITUTIONAL ISSUES

The present project will build upon the institutional and programmatic framework put in place by the UNEP Regional Seas Programme's Northwest Pacific Action Plan (NOWPAP) and the environmental Memorandum of Understanding between the five member countries of the Tumen River Area Development Project (TRADP). The project supports and operationalises, for the Yellow Sea, several elements of NOWPAP. The NOWPAP Action Plan states, "The implementation of the Action Plan will comprise a number of projects running in parallel." In essence, the present GEF Project can be considered as one of these parallel projects, as can the East Asia Seas GEF Project (EAS), which focuses on demonstration projects for Coastal Zone Management. The present GEF project can contribute to and benefit from several of the NOWPAP proposed regional activity centres, including Regional Marine and Coastal Information System; Monitoring and Assessment of Marine, Coastal and Associated Freshwater Environments; and the Biodiversity and Specially Protected Areas. The present project has little focus on Marine Pollution Preparedness and Response, so NOWPAP will have the lead here. The East Asia Seas GEF Project has two demonstration projects in the YSLME: one in the Bohai Sea of PRC, and one at Nampo in DPRK. The YSLME GEF Project will retain close contacts with each of these existing programmes, perhaps sharing some common Steering Committee members. In addition, the present project will liaise closely with other regional efforts, including the proposed GEF Project on Wetland Biodiversity Conservation and Sustainable Use in China (one site of which, Yancheng Coast, is on the Yellow Sea), the GEF Project on the Tumen River (Preparation of Strategic Action Programme (SAP) and Transboundary Diagnostic Analysis (TDA) for the Tumen River Area, its coastal regions and related Northeast Asian Environs), and the GEF Ballast Water Project (which has a Pilot Demonstration Project In Dalian, PRC, within the YSLME). Other related projects include the NEAR-GOOS (North-east Asian Region Global Ocean Observing System), and other IOC/WESTPAC activities. Finally, the project will have close co-operation with the proposed Medium-sized project *Biodiversity Management in the Coastal Area of DPRK's West Sea*, which has been submitted for approval.

Although the DPRK presently has declined full participation in the YSLME GEF project, efforts will continue to incorporate their participation when the DPRK elects to join in the activities. Meanwhile, the DPRK MSP provides a complementary activity that will benefit the YSLME.

The focus of the YSLME project on sustainable fisheries management and reducing stress to the ecosystem provides an opportunity for exploring how this GEF project can further national and regional commitments to certain international conventions and agreements, such as the United Nations Convention on the Law of the Sea (UNCLOS), the FAO Code of Conduct for Responsible Fisheries, and the Global Programme of Action for the Protection of the Marine Environment from Land – based Activities (GPA).

2. OBJECTIVES

The objectives of the implementation plan are those prepared and approved during the PDF-B Phase of the project. For easy reference of the readers, these objectives are listed in this section.

LONG-TERM OBJECTIVES

The long-term development/environment objective (Level 1) of the project is: **ECOSYSTEM-BASED, ENVIRONMENTALLY-SUSTAINABLE MANAGEMENT AND USE OF THE YSLME AND ITS WATERSHED: REDUCING DEVELOPMENT STRESS AND PROMOTING SUSTAINABLE DEVELOPMENT OF THE ECOSYSTEM FROM A DENSELY POPULATED, HEAVILY URBANIZED, AND INDUSTRIALIZED SEMI-ENCLOSED SHELF SEA**

MEDIUM-TERM OBJECTIVES

The medium-term objectives of the project are:

- (i) Enhancing national capacities in protection of marine environment and sustainable use of marine and coastal resources, through preparation and development of the Transboundary Diagnostic Analysis (TDA), Strategic Action Programmes (SAP), and Implementation of SAP;
- (ii) Strengthening regional co-operation in marine environment protection and management through establishment of regional mechanisms established during the implementation of the project activities in the Yellow Sea, and co-operative spirit enhanced by the project, and
- (iii) Facilitating cross-sectors co-operation and co-ordination of relevant national institutions dealing with marine environmental management, through the Inter-ministry Committee established by the project for the Yellow Sea large marine ecosystem.

In order to achieve these objectives, the purpose of this project will be:

- (i) ***to prepare a Transboundary Diagnostic Analysis (TDA);***

The preparation of the TDA will be based on the preliminary TDA undertaken during the PDF-B phase of this project, in which the environmental problems and priorities of the problems have been identified. The TDA will be used as a basis for focusing on the threats, their root causes and the sectoral activities that endanger the critical ecosystem of the YSLME to implement selected components of the SAP, as appropriate.

- (ii) ***to prepare a regional Strategic Action Programme (SAP) and National Yellow Sea Action Plans (NYSAPs)***

The SAP will identify priority actions to be taken by the participating countries to restore and preserve the YSLME. The SAP will adopt a comprehensive approach and will address land and sea-based sources of marine pollution, degradation of critical habitats and over-fishing. During this process, the targets of the actions will be clearly identified. The incremental costs of the priority actions will be prepared, to indicate the benefits and costs of the actions need to be taken in the region.

The National Yellow Sea Action Plans which will be the National Plans focusing on Yellow Sea will be developed to assist in implementation of the regional SAP at the national level, and will include both national and transboundary Issues.

(iii) To initiate demonstration and/or pilot activities

This project will also initiate demonstration and/or pilot activities to facilitate the implementation of the SAP. The demonstration and pilot activities will provide experience on the implementation and benefits of the activities identified in the SAP. The SAP will consist of a series of legal, policy and institutional reforms and investments to address the priority transboundary issues identified in the TDA/SAP/NYSAP formulation process.

Although during the project life, it would be difficult to fully implement the SAP prepared by the project in the entire Yellow Sea, it will provide useful experiences in certain management actions, and to show usefulness and effectiveness of the regional network established within the project. The experiences and regional network would not only be useful to the Yellow Sea, but it would be expanded to other regional co-operative mechanisms in protection of marine environment in a more strategic way, for instance, the adjacent East China Sea.

The SAP will fully assess the impacts of economic growth in the region, map out alternative development scenarios, which protect global environmental resources, and will enable the riparian states to reach a consensus on priorities, targets, programmes and projects to protect the shared resources of the YSLME. The SAP will include an estimation of the required financial resources and a strategy to mobilize these resources. GEF project proposals to implement selected transboundary elements of the SAP will be prepared using the incremental cost approach. The SAP is expected to play a key role in ensuring that global environmental benefits are provided in tandem with facilitating sustainable and environmentally sound economic development in the area over the coming decades.

The preparation of the SAP will be carefully designed to ensure that the SAP is action-oriented, locally owned, government supported, sustainable, and responsive to the local conditions. This, and the close attention to be paid to mobilizing resources to the SAP, will ensure that it is implemented and not stored on shelves. As a first step for the formulation of the TDA and SAP, the project will strengthen existing mechanisms for regional co-operation in regional, national and local bodies and develop their capacity for project identification, formulation and management. It will also immediately compile, from existing sources, a comprehensive database on international waters and biodiversity in the region and support an in-depth study on environmental research systems and information systems in the area.

The project will rely on a strong participatory approach to formulate the SAP and NYSAPs. A series of consultation meetings will be held at the local and grassroots levels to identify environmental priorities generate and validate information and ensure widespread support to the approaches proposed in the SAP and NYSAPs. An awareness-raising programme on transboundary environmental issues will be carried out parallel to the TDA preparation and this will foster local support for the preparation and implementation of the SAP and NYSAPs.

In addition to providing global environment benefits and shaping the development of the region into the next century, the capacity building under the project will be of general use to development and environmental management in the region. In particular, the capacity to co-operate effectively on a regional level will be useful for all future environmental initiatives

involving two or more of the concerned countries. Moreover, the databases developed under the project will be of use to many local, national and regional initiatives in both the environmental and economic spheres.

Following completion of the TDA, SAP and NYSAPs, this Project will initiate and facilitate the Implementation of the SAP. Previous experience in GEF IW Projects has shown that a project focusing solely on TDA, NAP, and SAP will likely leave a significant time lag between formulation of the SAP and its implementation, thereby reducing regional ownership and government commitments. To avoid this problem the present project also proposes to initiate and facilitate the SAP implementation process in the Region.

3. ACTIVITIES AND EXPECTED OUTPUTS

During the PDF-B phase of the project, the Major Perceived Problems were identified, the Root Causes were agreed upon. Associated with each Root Cause was a list of specific features of the root cause that clarified the different aspects that contribute to the Perceived Problem. Based on this list of Perceived Problems and Root Causes, the Priority Areas for Future Intervention were developed, and grouped into 5 major categories:

- (i) Develop Regional Strategies for Sustainable Management of Fisheries, and Mariculture;
- (ii) Propose and Implement Effective Regional Initiatives for Biodiversity Protection;
- (iii) Propose and Implement Actions to Reduce Stress to the Ecosystem;
- (iv) Propose and Implement Actions to Improve Water Quality and Protect Human Health; and
- (v) Develop and Pilot Regional Institutional and Capacity Building Initiatives.

After more than four years delay in the project implementation, these activities were reviewed by two regional technical meetings. Taking into account the recent changes in the Yellow Sea region, the activities were modified, re-grouped and prioritised. The major activities agreed are attached as [Appendix 1](#) to this document. Table 1 shows a summary of the major activities, together with expected outputs.

Table 1. Major Outputs and Outcomes of the Project

Note: Activities under the Investment Component are on-going, supporting the 4 components in the background, and thus, the milestones are not listed in the table.

	Collet Exit data & inf. Revised data & inf. Strengthened Reg. Coordination Collect New Data First draft of TDA Second draft of TDA Wider part of stakeholder Final TDA Enhanced National Institutions First draft SAP Second draft SAP Public Awareness Final regional SAP First draft nat SAP Final nat SAP Select demon activities Financial Instruments																			
	2005				2006				2007				2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Fishery Component																				
Stock assessment				F1			F2								F3					
Carrying capacity				F4			F5					F5								
Mariculture Production						F6														
Regional Agreements											F7		F8			F9				
Biodiversity Component																				
Habitat conservation & Vulnerable Species		B1					B2				B3									
Genetic Diversity																				
Introduced Species							B4				B5									
Synthesis of reviews & regional strategies															B6B7					
Ecosystem Component																				
Status of Ecosystem				E1			E2													
Carrying Capacity of Ecosystem							E3				E4									
Stressors to Ecosystem				E5	E6		E7						E8							
Pollution Component																				
Contaminant Inputs				P1																
Contaminant Levels				P2			P3	P4												
Critical Spot Analysis		P5																		
Fate and Transport of Contaminants											P6									
Regional Strategy Pollution Control											P7		P9			P8				

Major Outputs of the Project Activities

F1. Regional method for stock assessment	B1. Regional synthesis on biodiversity
F2. Prepare draft mechanism for annual assessment	B2. Finalised regional strategy on biodiversity conservation
F3. Finalisation of the mechanism for annual assessment	B3. Adopted regional implementation plan
F4. Prepare guidelines for carrying capacity	B4. Draft regional strategy on prevention of introduced species
F5. Annual carrying capacity determination	B5. Finalised regional strategy on prevention of introduced species
F6. Finalise the plan on mariculture	B6. Regional synthesis of marine biodiversity
F7. Prepare draft regional fishery agreement	B7. Regional strategy on protection of marine biodiversity
F8. Revised regional fishery agreement	
F9. Finalise regional fishery agreement	

E1. Finalised report on status of YS ecosystem	P1. Prepare regional synthesis on contaminant inputs
E2. Finalised the regional strategy for ecosystem assessment	P2 Regional synthesis on contaminant level
E3. Agreed assessment methods of carrying capacity	P3. Agreed monitoring guidelines
E4. Report on basin-scale survey on lower-trophic level ecosystem	P4. Intercalibrated analytical methods to ensure data quality
E5. Identified major human induced stresses	P5. Identified hot spots
E6. Report on causal chain analysis	P6. Agreed actions for controlling discharge of contaminants & nutrients
E7. Identified measures to address the root causes	P7. Suggestion on harmonisation of national legislation
E8. Finalised regional & national strategies	P8 Finalised investment strategy
	P9. Finalised regional strategy

I1. Upgraded capacity of stakeholders	Regional TDA
I2. Established youth network in protection of marine environment	Regional SAP
I3. Enhanced regional co-ordination in protection of Yellow Sea ecosystem	National SAP
I4. Enhanced national institutional network and capacities	Experience in demonstrated implementation of SAP
I5. Established financial mechanism for sustainable use of marine and coastal resources	
I6. Regional data and information network	
I7. Strengthened public awareness and participation	

4. IMPLEMENTATION BUDGET

Based on the approved budget of the Project Document, the implementation of the project activities will be divided into 5 major thematic working groups, namely: (i) fisheries and aquaculture, (ii) marine pollution, (iii) ecosystem, (iv) biodiversity, and (v) environment investment. To better reflect the previous agreements, this document provides budgetary considerations according to the 5 major thematic working areas.

The project budget agreed by the participating countries, subsequently approved by the GEF council, represented the situation in the year of 2000 and 2001. Since then, several factors have been changed. During the discussion with partners of the project, including the participating countries, UNDP and UNOPS, there was a general feeling that the budget of the implementation plan should be revised to reflect the changes during last two to three years. The major changes include:

- (i) The salary scales and post adjustment have been changed since the approval of the project document. These changes require modification of the project budget;
- (ii) Knowledge of marine environment status in the Yellow Sea has been upgraded, therefore, the relevant activities and approaches need to be adjusted accordingly;
- (iii) Understanding the approach of Transboundary Diagnostic Analysis (TDA) and Strategic Action Programme (SAP) has been improved. Therefore the relevant activities in regional TDA, national SAP and regional SAP need to be considered again by all partners of the project; and
- (iv) Some modifications are necessary in the approved budget for implementation of project activities as discussed in the First Regional Technical Meeting (Beijing, China, 14-16 December 2004).

The revised budget is presented in [Appendix 2](#).

5. IMPLEMENTATION MECHANISM

In order to achieve the overall goals, the project is designed to ensure the active participation of the following stakeholder groups:

- Respective Governments of the People's Republic of China (PRC) and Republic of Korea (ROC), at national and local levels;
- Local communities and populations in the respective areas;
- Scientific Community;
- Representatives of civil society, represented by NGOs and other groups of interest (professional associations, syndicates, etc.);
- Representatives of the donor community, represented by the implementing agencies and other international cooperation organisations; and
- Private Sectors.

Driven by the governments of the PRC and ROK, this project is designed to address regional priorities in the Yellow Sea, and is consistent with their national environmental policies. The countries have fully demonstrated their willingness to co-operate in the area of regional environmental protection and management, as shown in the national commitments in the implementation of this project.

Democratic People's Republic of Korea (DPRK) has demonstrated their willingness to co-operate in regional environment initiatives through their active involvement in the TDA and SAP for the Tumen River Area project, PEMSEA, and NOWPAP. Protection of the Yellow Sea is also a priority to DPRK and the government has indicated DPRK may

participate in the project at a later date. All stakeholders of this project should make all necessary efforts to involve DPRK into the project activities.

Representatives of numerous institutions from PRC and ROK have actively participated and greatly contributed to the success of the PDF-B phase of the project. All of them strongly endorsed the present project proposal and will co-operate and contribute to the implementation of the full phase of the project. Among the many participating institutions are:

People's Republic of China:

- UNDP/PRC
- Ministry of Finance
- State Oceanic Administration, Beijing
- First Institute of Oceanography (SOA), Qingdao
- Yellow Sea Fisheries Institute, Ministry of Agriculture, Bureau of Fisheries, Qingdao
- Chinese Academy of Science
- Ministry of Agriculture, Bureau of Fisheries
- State Environmental Protection Administration

Republic of Korea:

- UNDP/ROK
- Korea Ocean Research and Development Institute (KORDI)
- Korea Maritime Institute (KMI)
- Ministry of Maritime Affairs and Fisheries (MOMAF)
- Ministry of Foreign Affairs and Trade (MOFAT)
- Ministry of Environment
- National Fisheries Research and Development Institute

The Project Steering Committee is composed of representatives from the participating countries, UNDP, UNOPS and observers from other international and regional organisations and projects, including non governmental organisation (NGOs) and private sectors.

The Project Steering Committee is responsible for approving strategic decisions and annual workplans and budget, reviewing progress, and identifying new and additional funding. Representatives of private sector and other organisations that contribute to the YSLME would be encouraged to participate in the Project Steering Committee as observers. The Project Steering Committee will provide policy-level liaison to national governments, through inter-sectoral co-ordination in each country, regarding implementation of the programme at the national level, and will provide direction to the Project Management Office (PMO) regarding preparation of the Yellow Sea Strategic Action Programme (SAP).

The Regional Scientific and Technical Panel (RSTP) shall consist of: (i) the National Project Co-ordinator; (ii) the Chairpersons of the Regional Working Group for the project components; (iii) selected regional experts to meet scientific and technical requirements; and (iv) Chief Technical Advisor (CTA) of the Project Management Office. Based on the approved project programme and budget, the RSTP will provide scientific and technical guidance to the regional working groups established for the project components, ensure effective implementation of the project activities, and the quality of outcomes and outputs of the project, and review the data and information generated from the project activities, and provide guidelines on the data quality control, in particular for the preparation of TDA and SAP. The Terms of References for the RSTP is provided as [Appendix 3](#) to this document.

The Project Management Office (PMO) will provide a co-ordination and management structure for the implementation of the Yellow Sea Project in accordance with the rules and procedures of UNDP/GEF consistent with directions provided by the PSC. Specific attention will be given to the development of a regional and national inter-sectoral co-ordination initiative so as to fully involve different government ministries and the private sector, as well as other stakeholders, in the Project.

Regional Working Groups (RWG) will be responsible for: development of workplans and implementation of activities in the respective project areas; regional co-ordination within area of competency; development of relevant regional recommendations; providing guidance and strategy within area of competency; providing assistance in development of the TDA; and providing assistance in development and implementation of Strategic Action Programme (SAP) and the National Yellow Sea Action Plans (NYSAPs). The regional working groups (RWGs) will be formed from the representatives from the participating countries, and other selected experts as deemed necessary for the work of the RWGs.

At national level, for the PRC, the Ministry of Finance will act as the focal Ministry of the project; and the State Oceanic Administration (SOA) is the National Project Co-ordinator. For the ROK, the Ministry of Foreign Affairs and Trade (MOFAT) is the Focal Ministry¹.

The Inter-ministerial Committee (IMC) should be established in the participating countries to provide guidance for project implementation at national level, and to ensure co-ordination of a wide participation of institutions, including NGOs and private sectors, in the implementation of the project activities.

National Co-ordinating Units will be established in each participating country to serve as the secretariat of the IMC, and to co-ordinate the implementation of activities at national level. The national working group for each project component should be established, and take responsibility for the implementation of the project component activities at national level.

The United Nations Development Programme (UNDP) is the Implementing Agency of the project, and the United Nations Office for Project Services (UNOPS) serves as Executing Agency for the Project. UNOPS will co-ordinate overall execution of the respective project components. The UNDP Korea Office will serve as Principle Project Representative of the project.

The implementation structure of the project is attached as [Appendix 4](#) to this document.

6. WORKPLAN

Based on the agreed activities, the workplan for the implementation of project activities was prepared, and is attached in [Appendix 5](#) to this document.

7. MONITORING, EVALUATION AND DISSEMINATION

OVERALL PROJECT MONITORING

¹ The Korea National Project Co-ordinator is under discussion, and will be decided soon.

Project objectives, sub-components and emerging issues will be regularly reviewed and evaluated at annual meetings of the Project Steering Committee. The project will be subject to the various monitoring and evaluation mechanisms of GEF and UNDP, including TPR (Tri-partite Review), mid-term Independent Evaluation and an external Evaluation and Final Report prior to the termination of the project. The project will also participate in the APR/PIR (Annual Project Implementation Review) exercise of the GEF.

The project design includes the communication of all project findings to concerned and interested parties. Many activities in the project target the two-way communication of information. These include consultation meetings, awareness campaigns, conferences with regional and donor governments, and Internet connections. These activities, in addition to standard GEF, UNDP, and executing agency procedures will assure an effective and wide dissemination of project findings.

In addition, standard GEF indicators for monitoring and evaluation purposes will be applied during the project for application in subsequent stages of the Yellow Sea LME and monitoring SAP implementation. They will consist of process indicators (PI), stress reduction indicators (SRI), and environmental status indicators (ESI). The SAP created at the end of the project will be an important process indicator.

At the beginning of the project, relevant process, stress reduction, and environmental status indicators will be identified. These indicators will serve as the basis for monitoring and evaluation of the project. It is expected that many of the indicators will be PIs. These would include, *inter alia*, indicators such as the State of the Ecosystem Report, the condition of fisheries stocks, successful functioning of habitat areas and vulnerable species. SRIs could include, *inter alia*, recommendations and agreements regarding sustainable harvest of fishery resources, improved contaminant monitoring techniques to economically and socially benefit participating countries, explicit measures to protect genetic diversity, and agreed methods to determine ecosystem carrying capacity. Although ESIs are likely to be more apparent after the life of the project, some ESIs can be realised during implementation. These could include, *inter alia*, the establishment of protected areas, documented healthier stocks of vulnerable species, and measurable reduction of pollution loadings from hot spots.

Two evaluations, one at mid-term and another at project end, will be carried out. The mid-term evaluation will focus on relevance, performance (effectiveness, efficiency, and timeliness), issues requiring decisions and actions, and initial lessons learned about project design, implementation, and management. The final evaluation will focus on similar issues as the mid-term evaluation, but will also look at early signs of potential impact and sustainability of results, including the contribution to capacity building at national and regional levels, and the achievement of global environment goals. Recommendations for follow-up activities will be provided.

Approximately USD 96,000 will be allocated for the M & E and Tripartite Reviews, which will be carried out by independent experts and UNDP. This figure is flexible, and will be subject to ongoing review and budgetary adjustments, as necessary. The evaluations will be carried out according to standard procedures and formats in line with GEF requirements. The process will include the collection and analysis of data on the project and its various activities, including an overall assessment, the achievement of clearly defined objectives and performance with verifiable indicators, annual reviews, and description and analysis of stakeholder participation in the project. Explanations will be given on how the M & E results will be used to adjust project implementation, if required, and to replicate the results throughout the region. As far as possible, the M & E process will be measured according to a workplan included in this Implementation Plan.

ACTIVITY REPORTING

In addition to monitoring and evaluation of the overall project, subcontracted activities will undergo a smaller scale review. This review will be carried out between the PMO and subcontracted agency in order to monitor progress and provide assistance where necessary. All subcontracted agencies will submit reports to the PMO based on a schedule agreed by both parties, stated in the Contract for Services or Memorandum of Agreement (MOA).

The required reports from the subcontracted agency are listed below:

- Submission of workplan at the onset of the activity;
- Interim financial statements;
- Interim progress reports; and
- Final financial and activity report.

The schedule and formats for these reports will follow the standard UNOPS formats, and will be available when the Contract / MOA are prepared.

Appendix 1

ACTIVITIES OF THE IMPLEMENTATION PLAN

Objective I. Fisheries & Mariculture	
Activities Agreed	Actions to be taken
IA. Stock assessment	
Activity 1. Review of existing data (review of historical data commercial fisheries and research results)	Contract to relevant national institution(s) for data and info. Revise national data and info Inputs to final TDA
Activity 2. Diagnosis of stock conditions	Regional WG meeting 1 Finalisation of data and info. WG meeting 3
Activity 3. Develop common methodology for joint regional stock assessment and perform initial joint regional stock assessment	Gathering existing methods & prepare suggested methods(consultant) Discuss & Modify the methods (WG meeting 1) Revise the regional methods (consultant) finalise the method (WG meeting 2)
Activity 4. Perform demonstration of a Regional Survey	Prepare guidelines for survey (consultant) Accept guidelines (WG meeting 1) Equipment Ship rental for Regional Survey (sub-contract) Analyse survey result (consultant) Publish survey result (printing)
Activity 5. Perform initial joint regional stock assessment	Prepare a plan for the stock assessment Technical discussion on the plan (WG meeting 3) implement the regional stock assessment (contracts) Discuss the results of assessment (WG meeting 4) Additional assessment if necessary (contracts) Accept the assessment result (WG meeting 5) Publication of assessment results (printing)
Activity 6. Create mechanism for regional annual multi-species stock assessment, by introducing legal/policy changes to overcome existing barriers	Identify major barriers in stock assessment WG meeting 2) Identify the species to be assessed (WG meeting 2) Prepare draft mechanism for annual assessment (PMO) Discuss the draft mechanism (WG meeting 3) Revise the draft mechanism (consultant) Finalisation of the mechanism (WG meeting 5)
IB. Carrying capacity	
Activity 1. Review existing state-of-knowledge and preliminary carrying capacity analysis (retrospective) and define gaps	Contract to relevant national institution(s) for assessing information Regional WG meeting 1 Revise national state of knowledge Finalisation of Report (WG meeting 3) Inputs to final TDA
Activity 2. Fill the knowledge gaps for carrying capacity analysis.	Prepare guidelines for carrying capacity (consultant) Reg Training course on carrying capacity (Training 1)
Activity 3. Perform iterative series of analysis of carrying capacity	Prepare workplan for the analysis (consultant) discuss and agree on the workplan (WG meeting 3) Implement the workplan (contracts to national focal points)
Activity 4. Annual carrying capacity determination	Gathering results of the analysis (PMO) Scientific seminar (together with WG meeting 5). (Meetings)

	Annual carrying capacity determination (scientific seminar)
	Publication of regional carrying capacity
IC. Mariculture Production	
Activity 1. Review existing status and trends of mariculture	Contract to relevant national institution(s) for assessing information
	Regional WG meeting 1
Activity 2. Develop joint applied research program for sustainable mariculture	Prepare a draft joint research plan (consultant)
	Present draft to the WG meeting 2
	Revise the draft according to the agreement
	Finalise the plan in WG meeting 3
	Prepare technical guidelines (consultant)
Activity 3. Pilot demonstration projects in mariculture	Training course on mariculture techniques
	Selection sites for pilot, WG meeting 3
	Implementation of the pilot activities (contract)
	Present results to WG meeting 5
Activity 4. Facilitate communication about new diseases, diagnoses, and control techniques	Publication of the results (printing)
	Establish a regional network on information sharing and quick response (PMO)
	Agreement at WG meeting 3
	Prepare technical guidelines (consultant)
	Training course on disease diagnosis, prevention and control
ID. Regional Agreements and National Laws & Management Plan	
Activity 1. Review existing national laws and regulations on fisheries and mariculture, and pertinent international agreements	Contract to relevant national institution(s) to assess information on national laws & regulation, and national responsibility of regional and Int'l conventions
	Publication of the existing knowledge together with analysis and suggestions
Activity 2. Develop regional agreement for sustainable use of fisheries resources	Feasibility study on regional agreement, in particular to implement the FAO code of conduct for responsible fisheries
	Prepare draft regional agreement (consultant)
	Discuss the regional agreement WG meeting 4
	Revise the draft (PMO)
	Discussion WG meeting 5
	Repeat the actions if necessary
Activity 3. Propose measures for strengthening laws and regulations	Finalise the agreement and propose to the respective governments for approval
	Enforcement will be considered together with Activity 2
Activity 4. Development of Regional fisheries management/implementation plans, including regional recovery programme	Identify regional requirements and target for regional SAP (consultant)
	Prepare national SAP (contract to focal points)
	Discuss draft national SAP (WG meeting 3)
	Revise national SAP
	Finalise national SAP
	Discuss framework of Regional SAP (WG meeting 3)
	Prepare draft regional SAP (consultant)
Discuss and revise (WG meetings 4, 5, 6)	
	Implement reg'l management plan

Objective II. Biodiversity Protection	
Activities Agreed	Actions to be taken
IIA. Habitat Conservation & Vulnerable Species	
<p>Activity 1. Review existing national practices of coastal habitat use, conservation, restoration, status of vulnerable species, and trophic linkages (including keystone species), and analyse and prioritise gaps of regional importance; Identify capacity gaps, and prioritise training needs</p> <p>(IIA. Habitat Conservation) Activity 1. Review existing national practices of coastal habitat use, conservation, and restoration</p> <p>(IIB. Vulnerable Species) Activity 1. Conduct national review of status of vulnerable species and vulnerable trophic linkages</p>	Contract to relevant national institution(s) [Invite relevant government agencies and local govt to provide inputs] [Communicate with DIM management consultant]
	Present outcomes of national assessment in WG meeting 1
	Consider joint meetings with Pollution and Ecosystem WGs to discuss trophic linkage outcomes relevant to the other WGs
	Prepare a regional synthesis (consultant)
	Finalise national outputs and synthesis (WG meeting 2)
	Publish the outcomes (printing)
	Inputs to final TDA
<p>Activity 2. Develop regionally coordinated strategies of conservation and restoration of habitats and for protection of vulnerable species</p> <p>(IIA. Habitat Conservation) Activity 2. Develop regionally coordinated strategies of conservation and restoration of habitats</p> <p>(IIB. Vulnerable Species) Activity 2. Develop regionally-coordinated strategies for protection of vulnerable species</p>	Prepare draft regional strategy (consultant)
	Discuss & modify the draft (WG meeting High) (including approaches to improve management for protected areas, developing a regional network of well managed protected areas, developing a regional monitoring system for biodiversity, include selected vulnerable species action plans)
	Revise the draft accordingly
	Finalise strategy (WG meeting 3)
	Inputs to Regional SAP
Activity 3. Implement Regional Strategy for Conservation Areas and for protection of vulnerable species	
	Prepare draft implementation plan (consultant)
Activity 4. Implement Regional Strategy for Conservation Areas	Adopt implementation plan (WG meeting 4)
Activity 5. Implementation of regionally coordinated strategies for protection of vulnerable species	Implement the strategy (Contract to Nat'l focal points)
IIB. Genetic Diversity	
<p>Activity 1. Determine situations of genetic degradation of important bio-resources</p>	Prepare draft of current status of genetic degradation of important bio-resources, including a list of species, and current activities which address 'genetic degradation', and identify and prioritise gaps [Communicate with DIM management consultant]
	Discuss & finalise the current status (WG meeting High) Deliver data to DIM consultants
	Inputs to TDA
Activity 2. Develop regional consensus on the requirements for conservation of genetic	Prepare a draft list on conservation of genetic diversity (Consultant)

diversity?	
	Training Course on genetic techniques
	Agree on the list of genes (WG meeting 2)
	Prepare a plan for the conservation (consultant)
	Finalise the plan (WG meeting 3)
Activity 3. Prepare recommendations for conservation measures	Input to SAP
Activity 3. Prepare recommendations for conservation measures	The activities will be incorporated into Activity 2
IIC. Introduced Species	
Activity 1. Document introduced exotic species and their pathways, assess impacts and risks	Contract to relevant national institution(s) [Communicate with DIM management consultant]
	Discuss & modify the draft (WG meeting 1)
	Revise the draft accordingly
	Finalise strategy (WG meeting 2)
	Inputs to Regional SAP
Activity 2. Develop proposals for regulation and control of exotic species	
	Prepare draft regulation to control exotic species (consultant)
	Discuss the draft (WG meeting 3)
	Training course on implementation of the regulation
	Revise the draft accordingly
	Finalise strategy (WG meeting 4)
	Submit for approval of governments
Inputs to Regional SAP	
Activity 3. Implement strategies for regulation and control of introduction of exotic species, including necessary legal, policy, and institutional reforms at national and regional levels	Upon approval, prepare an implementation plan (consultant)
	Implement the regulation
	Inputs to Regional SAP
IID. Synthesis of reviews and development of coordinated strategies	
Activity 1. Synthesise reviews from IIA, B, and C	Consultant to synthesise output from activity High of IIA, IIB, and IIC [Ensure the consultant works with the WG for synergies and compatibility]
	Inputs to final TDA
Activity 2. Develop a coordinated strategy for biodiversity protection	Synthesise 3 regional strategies and 3 implementation plans to prepare a coordinated regional SAP (consultant)
	Discuss and prioritise actions in regional SAP (WG meeting 4)
	Revise the draft accordingly
	Finalise strategy (WG meeting 5)
	Inputs to Regional SAP
	Accept the Regional SAP
Submit for approval of governments	

Objective III. Ecosystem & Water Quality	
Activities Agreed	Actions to be taken
IIIA. Status of Ecosystem	
Activity 1. Prepare state-of-ecosystem reviews and reports.(including long-term and recent changes)	Contract to relevant national institution(s)
	Establish a regional editorial group /or use the WG
	Prepare a draft report (consultant)
	Discuss the draft (WG meeting 1)
	Revise the draft report (consultant)
	Finalise the draft report (WG meeting 2)
Activity 2. Identify data and information gaps and develop strategies for monitoring changing status of ecosystem and its transboundary impacts	Prepare synthesis of the national assessment, and identify the info gaps (consultant)
	Prepare draft strategy, including: parameters, analysis, intercalibration, data exchange, etc.
	Discuss the draft (WG meeting 2)
	Revise the draft
	Finalise the strategy (WG meeting 3)
Activity 3. Demonstration of new and innovative technologies for monitoring	Contract to relevant national institution(s)
	Regional workshop on remote sensing
	Application of remote sensing
	Ship-of-opportunities monitoring
	Molecular probes
IIIB. Carrying Capacity of Ecosystem	
Activity 1. Establish the logistical and data requirements of estimating carrying capacity	Contract to relevant national institution(s)
	Discuss and coordinate with fisheries WG (joint workshop)
	Decide on the assessment methods of carrying capacity
	Training on carrying capacity
Activity 2. Conduct a basin-scale survey on lower-trophic level ecosystem	Conduct a basin-scale survey on lower-trophic level ecosystem
Activity 3. Assess the carrying capacities of the ecosystem under changing human-induced and natural variability	Prepare a regional synthesis (consultant)
	Finalise national outputs and synthesis
	Publish the outcomes (printing)
IIIC. Stressors to Ecosystem	
Activity 1. Identify and rank stresses on the ecosystem; identify data and information gaps	Contract to relevant national institution(s)
	Present outcomes of ranking, data and info in WG meeting 1
	Prepare a regional synthesis (consultant)
	Finalise national outputs and synthesis (WG meeting 2)
	Publish the outcomes (printing)
	Inputs to final TDA
Activity 2. Identify corrective measures to minimize human-induced stress	Identify major human induced stresses (contract)
	Causal chain analysis (contract)
	Identify measures to address the root causes (WG meeting 3)
	Inputs to final TDA
Activity 3. Develop strategy to identify long-term sustainable investments to improve the YSLME	
	Prepare a format for national strategy (PMO)
	Prepare nat'l strategy (contract)
	Discuss nat'l strategy (WG meeting 4)
	Revise nat'l strategy (contract)

	Prepare regional draft strategy (consultant)
	Finalise nat'l strategy (WG meeting 5)
	Discuss reg'l strategy (WG meeting 5)
	Finalise reg'l strategy (WG meeting 6)
	Inputs to nat'l & reg'l SAP
Objective IV. Pollution component	
IVA. Critical Spots	
Activity 1. Determine and rank critical spot sources of water quality degradation	Review previous and ongoing monitoring system and assess methodologies and/or technical guidelines (including target contaminants, QA/QC, intercalibration exercises, data exchange, etc.)
	Develop technologies for monitoring contaminants and nutrients
	Present outcomes of ranking, data and info in WG meeting 1
	Prepare a regional synthesis (consultant)
	Finalise national outputs and synthesis (WG meeting 2)
	Publish the outcomes (printing)
	Inputs to final TDA
IVB. Contaminant Levels	
Activity 1. Develop baseline data and summarize contaminant and nutrient levels in the YSLME	Review existing data & info on contaminant levels
	Data quality control for baseline data
	Present outcomes of ranking, data and info in WG meeting 1
	Environmental Survey with other working groups (if not, need ship time)
	Prepare a regional synthesis (consultant)
	Finalise national outputs and synthesis (WG meeting 2)
	Inputs to final TDA
Activity 2. Develop regional monitoring network strategy	Establish a monitoring network / or use the existing ones (PMO)
	Draft Monitoring guidelines / standards (consultant)
	Agree on the guidelines / standards (WG meeting 3)
	Intercalibration exercise of participating labs (Contract)
	Development of indicators to assess the implementation of relevant international conventions
Activity 3. Determine and rank critical spot sources of water quality degradation	Prepare format for data & info collection (PMO), no need to rank the spots
	Identification of hot spots
	Contract to relevant national institution(s) to collect hot spots data and information (contract to Nat'l focal points)
	Discussion & further requirements (WG meeting 1)
	Revise the hot spots data & info
	Inputs to final TDA
IVC. Analysis of the Fate and Transport of Contaminants to Facilitate SAP Analysis	
Activity 1. Review existing understanding of fate and transport of contaminants and nutrients	Review existing understanding
	Present outcomes of reviewing from national outputs in WG meeting 1

	Prepare a regional synthesis (consultant)
	Finalise national outputs and synthesis (WG meeting 2)
	Practice & intercalibration of the procedure
	Publish the outcomes (printing)
	Inputs to final TDA
Activity 2. Perform fate and transport analyses of contaminants and nutrients for management and policy development, including EIA process, ICZM	Analysis for fate and transport of contaminants and nutrients
	ICM actions for controlling discharge of contaminants and nutrients
	Impact prediction of impact of discharged contaminants and nutrients on the environment
IVD. Regional Strategy for Pollution Control	
Activity 1. Review and compare national regulations and laws on water quality and pollution control, develop proposals	Contract to relevant national institution(s)
	Regional review (WG meeting 3)
	Regional analysis and suggestion on harmonisation
	Publish review report
	Inputs to national and regional SAP
Activity 2. Develop investment strategies Activity 3. Develop funding mechanism to implement the regional strategy Activity 4. Develop regional priorities and strategies to reduce contaminant and nutrient levels	Economic valuation of hot spots, & identify the opportunities (Consultant)
	Identify hot spots in both source, and impact (WG meeting 4)
	Prepare draft strategy (consultant)
	Discuss the draft (WG meeting 5)
	Revise the draft (Consultant)
	Finalise the investment strategy (WG meeting 6)
	Publish the investment strategy
	Inputs to regional SAP
	Prepare an implementation plan (consultant)
	Agree on the implementation plan (WG meeting 4)
	Contracts for implementation
	Root cause analysis for contaminants
	Discuss the draft (WG meeting 2)
	Revise the draft
Finalise the strategy (WG meeting 3)	
Input to SAP	
OBJECTIVE V Development of Regional Institutions and Capacities	
Activities Agreed	Actions to be taken
VA. Stakeholders	
Activity 1. Identify stakeholders and assess their capacities for contributing to environmental management and decision-making	Contract to institutions(experts)(Contract)
	Produce a regional list (PMO)
Activity 2. Strengthen stakeholder capacities	Prepare training materials for all stakeholders (contract)
	Training for decision makers (Training 1)
	Training for community trainers (Training 2)
	Training for local governmental officers (training 3)
	Intern programme
	Site visits by local governmental officials

	"The Yellow Sea and Youth"
Activity 3. Encourage routine and effective involvement of stakeholders in environmental and resource management and decision-making	Publish newsletters of the project Printing newsletters Regular stakeholders conference (1/yr)
VB. Regional Coordination	
Activity 1. Create a functioning regional coordination mechanism to carry out the YSLME Project	Programme Coordinator Economist Scientific Officer Public Advisor Local Staff at PMO: Secretary Driver Administrative Assistant Administrative Officer IT Supporting staff
Activity 2. Prepare TDA	Review preliminary TDA, and suggest improvements (consultant) Discuss draft, and decide new format (WG meeting 1) Gathering data & info from national review report on the project components (PMO) Second draft of TDA (consultant) 2nd discussion on the draft (WG meeting 2) Revise the TDA Finalise TDA (WG meeting 3) Printing the final TDA
Activity 3. Prepare nat'l SAP	Assess all national information & prepare for a framework of NYSAP (contract) National meetings-1 on NYSAP Revise NYSAP Finalise NYSAP Print NYSAP
Activity 4. Prepare Regional SAP	Review NYSAPs & identify regional priorities and actions (consultant) Prepare a draft regional SAP (consultant) Discuss the draft at the WG meeting 3 Revise the draft SAP & prepare version #2 Discuss version #2, & finalise the regional SAP (WG meeting 4) Revise the draft SAP, & prepare version #3 Discuss version #2, & finalise the regional SAP (WG meeting 5) Printing regional SAP
VC. National Institutions	
Activity 1. Review and assess national institutions to support YSLME	Contract to nat'l focal points (Contract) Finalise the review report (WG meeting 2) WG meeting 6
Activity 2. Facilitate national institutions to be	Enhance communications

effective stewards of the YSLME.	Provision of necessary equipment
	Provide technical trainings
	Local travel
	local staff: coordination
Activity 3. Facilitate national institutions to be effective stewards of the YSLME	PSC to discuss
Activity 4. Establish National Coordination Unit within existing framework to assure intersectoral coordination in TDA/NYSAP/SAP process	To be carried out by National institutions National Co-ordinating Mechanism
Activity 5. Develop proposals to strengthen national institutions to enhance their ability to contribute to environmental management and decision-making	Together with Activity 3
VD. Financial Instruments	
Activity 1. Review status and potential for financial sustainability of YSLME regional institutional framework	Contract to national focal point (contract) Discuss & finalise the review report (WG meeting 2)
Activity 2. Provide training in environmental project identification and preparation	Identify the training needs (WG meeting 1) Training #1 Project document preparation Training #2 Fund raising
Activity 3. Assist and encourage the continuation of project preparation and feasibility studies for long-term environmental investment to implement the SAP and NYSAPs	Prepare draft proposal (consultant) PSC to discuss
Activity 4. Provide matched fund for small grant project	Identify the topics of small grant project (PMO) Provide matched funds for the approved projects (contracts) Matched grants
Activity 5. Provide funding for pre-feasibility studies of promising technologies and industries to help achieve the goals of the YSLME, to create an investment portfolio (Priority Investment Portfolio)	Prepare pre-feasibility studies (consultant) Discuss & finalise pre-feasibility study(WG meeting 3) Submit to PSC for approval Demonstration projects (contracts)
VE. Data and Information Management	
Activity 1. Determine regional data and information management capabilities	Review regional data & info systems, i.e. regional data centre, NEAR-GOOS, NOWPAP DINRAC, (consultant) Prepare a proposal for DIM (consultant)
Activity 2. Develop an effective regional DIM strategy to help achieve the goals of the YSLME	Discuss and approve DIM proposal (WG meeting 1) Equipment Training on DIM Operation of DIM
Activity 3. Implement the regional DIM strategy, including equipment, facilities, and communications	To identify sustainable means for the DIM

VF. Public Awareness and Participation	
Activity 1. Develop a public awareness campaign	Prepare public awareness campaign (PMO) Agree on the campaign (WG meeting 1)
Activity 2. Demonstrate regional public awareness/participation campaign	Organise public awareness conferences (contracts) Prepare public awareness materials (Contracts) Produce multi-media, e.g. project pins, mouse pads, posters, etc. Public awareness training-twice
Activity 3. Encourage ongoing public awareness and participation activities to help achieve the goals of the YSLME	

Appendix 2

BUDGET OF THE IMPLEMENTATION PLAN

Budget	Description	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	5 yr total
		\$	\$	\$	\$	\$	\$
1000	Personnel						
1100	International Experts						
1101	Programme Manager	171,919	180,515	189,541	191,364	200,932	934,271
1102	Environ Officer	109,200	114,660	120,393	126,413	132,733	603,399
1103	Fisheries Officer	109,200	114,660	120,393	126,413	132,733	603,399
1104	Economist	109,200	114,660	120,393	126,413	132,733	603,399
1199	Sub-total	499,519	524,495	550,720	570,602	599,132	2,744,468
1200	Short-term Consultants						
1201	Stock assessment (tasks:IA1IA-6) (1.5 w/m)	14,000	0	0	0	0	14,000
1202	Carry capacity (tasks: IB1-IB2.4) (2 w/m)	0	0	0	0	0	0
1203	Mariculture (tasks: IC1-IC4) (1.5 w/m)	10,500	0	0	0	0	10,500
1204	Feasibility study on the regional agreement, i.e. FAO code of conduct (task ID2)	7,000	0	0	0	0	7,000
1205	Fisheries legislation (task: IDID3)	7,000	7,000	7,000	0	0	21,000
1206	SAP-fisheries (task ID4)	0	0	7,000	7,000	0	14,000
1207	Habitats review (tasks: IIA1-IIA5) (1.5 w/m)	0	0	0	0	0	0
1208	Vulnerable Species (tasks: IIA1-IIA4) (2 w/m)	7,000	7,000	0	0	0	14,000
1209	Genetic Diversity (tasks: IIB1-IIB3) (1 w/m)	7,000	0	0	0	0	7,000
1210	Introduced species (tasks: IIC1-IIC3) (1.5 w/m)	0	0	0	0	0	0
1211	Contaminant Inputs (tasks: IVA1)	10,500	0	0	0	0	10,500
1212	Contaminant monitory (tasks: IVB1-IVB3)	14,000	0	0	0	0	14,000
1213	Hot spot (tasks IVB1, IVB3)	0	0	14,000	0	0	14,000
1214	Emergency Planning and Preparedness (tasks 5.1-5.3)	0	0	0	0	0	0
1215	Legal and Regulatory (tasks IVD1-IVD4)	0	0	14,000	0	0	14,000
1216	Prepare state-of-ecosystem reviews and reports (tasks IIIA1-IIA3)	14,000	0	0	0	0	14,000
1217	Carrying Capacity of Ecosystem (tasks: consultant IIIB1-IIIB3)	7,000	0	0	0	0	7,000
1218	Identify and rank stresses on the ecosystem (tasks IIIC1-IIIC3)	0	10,500	0	0	0	10,500
1219	Review preliminary TDA, and suggest improvements (Tasks: consultant VB1-VB2(2.5W/m)	17,500	0	0	0	0	17,500
1220	Reg. SAP consultant (Consultant VB4 (3 w/m)	0	0	21,000	0	0	21,000
1221	Prepare proposal on continuation of project preparation and feasibility studies for long-term environmental investment (tasks: consultant VC, VD (1.5 w/m)	0	0	0	0	0	0

1222	Data & info. Management system tasks VE1-3)	7,000	0	0	0	0	7,000
1223	Consultants unspecified	30,000	30,000	30,000	25,000	25,000	140,000
1299	Sub-total	152,500	54,500	93,000	32,000	25,000	357,000
1300	Supporting staff						
1301	Secretary	28,614	30,045	31,547	33,125	34,781	158,113
1302	Driver	24,029	25,231	26,492	27,817	20,201	123,771
1303	Adm. Asst.	28,614	30,045	31,547	33,125	20,201	143,533
1304	Adm. Officer	48,194	50,603	53,134	55,790	20,201	227,922
1305	IT supporting staff	28,614	30,045	31,547	33,125	20,201	143,533
1399	Sub-total	158,066	165,970	174,268	182,982	115,584	796,870
1500	Duty Travel						
1501	PMO/International Expert Travel	77,800	85,800	77,800	77,800	77,840	397,040
1599	Sub-total	77,800	85,800	77,800	77,800	77,840	397,040
1600	Mission Costs						
1601	Annual Tri Part Review	8,000	8,000	8,000	8,000	8,000	40,000
1602	Interviews/Travel (CTA Prospects)	20,000	0	0	0	0	20,000
1699	Sub-total	28,000	8,000	8,000	8,000	8,000	60,000
1700	(Nat'l Project Professional Personnel) NPPP						
1701	Mariculture Advisor	11,000	24,000	24,000	24,000	0	83,000
1702	Biodiversity Advisor	0	25,500	25,500	25,800	0	76,800
1703	Ecosystem Advisor	0	0	10,000	10,000	10,000	30,000
1704	NCU Coordinator and Secretary	89,400	93,900	98,500	52,400	0	334,200
1705	TDA NPPP	0	25,000	25,000	0	0	50,000
1706	DIM Consultants	40,000	40,000	40,000	40,000	0	160,000
1799	Sub-total	140,400	208,400	223,000	152,200	10,000	734,000
1999	COMPONENT TOTAL	1,056,285	1,047,165	1,126,788	1,023,584	835,556	5,089,378
2100	Subcontracts						
2101	Stock assessment (tasks:IA1-IA5)	90,000	0	0	0	0	90,000
2102	Revise natl stock assessment (tasks: IA1 - IA3)	5,000	0	0	0	0	5,000
2103	Perform reg. stock assessment (tasks IA4 – IA6)	0	90,000	90,000	0	0	180,000
2104	Annual carrying capacity determination (tasks IB1 – IB4)	0	0	60,000	60,000	60,000	180,000
2105	Implement mariculture techniques (tasks IC1 – IC3)	0	0	70,000	60,000	60,000	190,000
2106	Implement Reg Fisheries and ecosystem Management/Implementation Plans	0	0	0	100,000	80,000	180,000
2107	Ship rental	210,000	200,000	200,000	0	0	610,000
2108	Review existing national practices of coastal habitat use, conservation, & restoration (tasks: IIA1-IIA3)	60,000	0	0	0	0	60,000
2109	Implement Regional Strategy for Conservation Areas (task IIA4)	0	0	75,000	75,000	75,000	225,000
2110	Implement regionally coordinated strategies for protection of vulnerable species (task IIA5)	0	0	0	0	0	0
2111	Review national pollution info (tasks: contract 1.1-1.9)	90,000	0	0	0	0	90,000
2112	Environmental Survey with other working groups	120,000	120,000	0	0	0	240,000

2113	Intercalibration exercise	22,000	0	0	0	0	22,000
2114	Develop funding mechanism to implement the regional strategy (tasks IVD2 – IVD3)	0	0	60,000	120,000	120,000	300,000
2115	Practice & Intercalibration of the procedure	0	25,000	0	0	0	25,000
2116	ICM actions for controlling of discharge of contaminants and nutrients (task IVC1 – IVC2)	0	0	0	40,000	0	40,000
2117	Facilitate implementation of procedures for re-mediation and prevention (tasks IVD1 – IVD4)	0	0	0	40,000	0	40,000
2118	National reviews (tasks: contract IVA - IVD)	90,000	0	0	0	0	90,000
2119	Demonstration of new and innovative technologies for monitoring (task IVA1)	0	45,000	0	0	0	45,000
2120	Develop strategy to identify long-term sustainable investments (task IVD2)	0	0	60,000	0	0	60,000
2121	Conduct a basin-scale survey on lower-trophic level ecosystem (tasks IIB1 – IIB3)	90,000	90,000	0	0	90,000	270,000
2122	implement HAB monitoring						0
2123	Stakeholders activities (Tasks: contract VA1VA3)	10,000	14,000	0	0	0	24,000
2124	"The Yellow Sea and Youth" (task VA2)	0	8,000	8,000	8,000	8,000	32,000
2125	regular stakeholders conference (1/yr) (task VA3)	0	4,000	4,000	4,000	4,000	16,000
2126	Contract for NYSAP (task VB3)	0	0	14,500	14,500	0	29,000
2127	Strengthen national institutions (tasks: contract VC1-VC5)	14,000	14,000	7,000	0	0	35,000
2128	Provide matched funds for the approved projects (contracts: VD4)	0	0	0	0	0	0
2129	Demonstration projects on sustainable investment (tasks VD1 – VD5)	0	0	0	350,000	750,000	1,100,000
2130	Organise public awareness conferences (tasks VF1 – VF3)	0	3,500	3,500	3,500	3,500	14,000
2131	Preparation of public awareness materials (task VF2)	12,000	10,000	0	0	0	22,000
2132	Produce project pins, mouse pads etc. (task VF2)	15,000	0	0	0	0	15,000
2133	National co-ordinating mechanism (tasks VC1 – VC5)	74,000	74,000	74,000	74,000	74,000	370,000
2134	Other contracts	125,000	125,000	125,000	125,000	125,000	625,000
2199	Sub-total	1,027,000	822,500	851,000	1,074,000	1,449,500	5,224,000
2999	COMPONENT TOTAL	1,027,000	822,500	851,000	1,074,000	1,449,500	5,224,000
3000	Training & meeting						
3100	Fellowship						
3101	Intern programme	24,000	24,000	24,000	24,000	24,000	120,000
3102	Other fellowships	10,000	10,000	10,000	10,000	10,000	50,000
3199	Sub-total	34,000	34,000	34,000	34,000	34,000	170,000
3200	Group training						
3201	Reg. training on carrying capacity	0	0	0	0	0	0
3202	Reg. training on mariculture techniques	0	20,000	0	0	0	20,000
3203	Reg'l training on disease diagnosis, prevention and control	0	20,000	0	0	0	20,000

3204	Training Course on genetic techniques	0	0	0	0	0	0
3205	Reg. training on regulation and control of exotic species.	0	0	0	0	0	0
3206	Training on contaminant monitoring	20,000	0	0	0	0	20,000
3207	training & intercalibration on assessment	0	0	0	0	0	0
3208	Reg'l training on carrying capacity of ecosystem	0	20,000	0	0	0	20,000
3209	Training course on monitoring HAB						0
3210	Training for decision makers (Training 1)	0	20,000	0	0	0	20,000
3211	Training for community trainers (Training 2)	0	0	20,000	0	0	20,000
3212	Training for local governmental officers (training 3)	0	20,000	0	0	0	20,000
3213	Training on Project document preparation	0	0	0	20,000	0	20,000
3214	Training on Fund raising	0	0	0	0	20,000	20,000
3215	Training on DIM	0	20,000	0	0	0	20,000
3216	Public awareness training-1	20,000	0	0	0	0	20,000
3217	Public awareness training-2	0	0	20,000	0	0	20,000
3218	Other trainings	80,000	80,000	80,000	80,000	80,000	400,000
3299	Sub-total	120,000	200,000	120,000	100,000	100,000	640,000
3300	Meetings Conference						
3301	Project Steering Committee meetings	18,000	18,000	18,000	18,000	18,000	90,000
3302	Technical Working Group meetings	25,000	25,000	25,000	25,000	25,000	125,000
3303	Regional scientific conference		120,000		120,000		240,000
3304	Reg WG-F (meeting 1; tasks: IA1-IA4)	17,500	0	0	0	0	17,500
3305	Reg WG-F (meeting 2; tasks: IA3, IA6, IC2))	17,500	0	0	0	0	17,500
3306	Reg WG-F (meeting 3; tasks: IA2, IA5-6, IB1-3, IC2-4, ID4))	0	22,500	0	0	0	22,500
3307	Reg WG-F (meeting 4; tasks: IA5, ID2, 4)	0	0	17,500	0	0	17,500
3308	Reg WG-F (meeting 5; tasks: IA5-6, IB4, ID4)	0	0	0	20,000	0	20,000
3309	Reg WG-F (meeting 6; tasks: ID4, tbd)	0	0	0	0	20,000	20,000
3310	Reg WG-B (meeting 1; tasks:IIA1, IIC1)	17,500	0	0	0	0	17,500
3311	Reg WG-B (meeting 2; tasks: IIA1, IIB2, IIC1))	17,500	0	0	0	0	17,500
3312	Reg WG-B (meeting 3; tasks:IIA2, IIB2, IIC2)	0	17,500		0	0	17,500
3313	Reg WG-B (meeting 4; tasks:IIA4, IIC2, IID2)	0	0	17,500	0	0	17,500
3314	Reg WG-B (meeting 5; task: IID2)	0	0	0	17,500	0	17,500
3315	Reg WG-B (meeting 6; tasks: tbd)	0	0	0	0	17,500	17,500
3316	WG-P (meeting 1;tasks: IVA1, IVB1, 3,)	15,000	0	0	0	0	15,000
3317	WG-P (meeting 2; tasks: IVA1, IVB1, IVC1, IVD 4)	17,500	0	0	0	0	17,500
3318	WG-P (meeting 3; tasks: IVB2, IVD1, 4))	0	17,500	0	0	0	17,500
3319	WG-P (meeting 4; tasks: meeting	0	0	17,500	0	0	17,500

	IVD2-4))						
3320	WG-P (meeting 5; tasks: IVD2-4)	0	0	0	17,500	0	17,500
3321	WG-P (meeting 6; tasks: IVD3, tbd)	0	0	0	0	15,000	15,000
3322	WG-Eco (meeting 1; tasks: IIIA1, IIIC1)	15,000	0	0	0	0	15,000
3323	WG-Eco (meeting 2; tasks: IIIA1-2, IIIC1)	17,500	0	0	0	0	17,500
3324	WG-Eco (meeting 3; tasks: IIIA2, IIIC2)	0	17,500	0	0	0	17,500
3325	WG-Eco (meeting 4; task: IIIC4)	0	0	17,500	0	0	17,500
3326	WG-Eco (meeting 5; task: IIIC4)	0	0	0	15,000	0	15,000
3327	WG-Eco (meeting 6; tasks: IIIC4, tbd)	0	0	0	0	17,500	17,500
3328	WG-I (meeting 1; tasks: 1.1-1.4)	15,000	0	0	0	0	15,000
3329	WG-I (meeting 2; tasks: 2.1-2.3)	12,500	0	0	0	0	12,500
3330	WG-I (meeting 3; tasks: meeting 3.1-3.3)	0	17,500	0	0	0	17,500
3331	WG-I (meeting 4; tasks: meeting 4.1-4.2)	0	0	17,500	0	0	17,500
3332	WG-I (meeting 5; tasks: meeting 5.1)	0	0	0	17,500	0	17,500
3333	WG-I (meeting 6; tasks: tbd)	0	0	0	0	17,500	17,500
3334	Reg workshop on Remote Sensing	0	20,000	0	0	0	20,000
3335	Other meetings	40,000	40,000	40,000	40,000	40,000	200,000
3399	Sub-total	245,500	315,500	170,500	290,500	170,500	1,192,500
3999	COMPONENT TOTAL	399,500	549,500	324,500	424,500	304,500	2,002,500
40000	EQUIPMENT & PREMISES COMPONENT						
4100	Expendable equipment (items under (\$1,500 each, for example)						
4101	Office supplies	18,000	9,000	9,000	9,000	9,000	54,000
4102	Library acquisitions	2,000	1,000	1,000	1,000	0	5,000
4103	GIS Software	8,000	0	0	0	0	8,000
4104	Computer Software	5,000	2,500	2,500	500	500	11,000
4199	Sub-total	33,000	12,500	12,500	10,500	9,500	78,000
4200	Non-expendable equipment (computers, office equip, etc)						
4201	Computers	15,000	5,000	5,000	25,000	0	50,000
4202	GIS workstation	3,000	0	0	0	0	3,000
4203	Printers	2,000	0	1,000	0	0	3,000
4204	Copy machine (small size)	3,500	0	0	0	0	3,500
4205	PowerPoint OHP	6,200	0	0	0	0	6,200
4206	Automobile	25,000	0	0	0	0	25,000
4207	Equipment for regional survey (f)	20,000	20,000	20,000	0	0	60,000
4208	Sea-going equipment	300,000	20,000	20,000	20,000	0	360,000
4209	Equipment for DIM	30,000	14,000	0	0	0	44,000
4210	Equipment unspecified	12,000	20,000	20,000	20,000	12,000	84,000
4299	Sub-total	416,700	79,000	66,000	65,000	12,000	638,700
4300	Premises (office rent, maintenance, of premises, etc)						
4301	Office rent	0	0	0	0	0	0
4302	Furniture	12,000	4,000	2,000	0	0	18,000
4303	unspecified costs	5,000	5,000	5,000	5,000	5,000	25,000
4399	Sub-total	17,000	9,000	7,000	5,000	5,000	43,000
4999	COMPONENT TOTAL	466,700	100,500	85,500	80,500	26,500	759,700
5000	MISCELLANEOUS						

	COMPONENT						
5100	Operation and maintenance of equip.						
5101	Rental & maint. of computer equip.	3,000	3,000	3,000	3,000	3,000	15,000
5102	Rental & maint. of copiers	1,500	1,500	1,500	1,500	1,500	7,500
5103	Repair & maint. of vehicles & insurance	8,000	8,000	8,000	8,000	8,000	40,000
5104	Rental & maint. of other office equip	2,500	2,500	2,500	2,500	2,500	12,500
5105	Rental of meeting rooms & equip.	2,000	2,000	2,000	2,000	2,000	10,000
5199	Sub-total	17,000	17,000	17,000	17,000	17,000	85,000
5200	Reporting costs (publications, maps, newsletters, printing, etc)						
5201	Stock assessment report	0	4,000	0	0	0	4,000
5202	Carrying capacity report	0	0	0	0	0	0
5203	Existing laws & regulation	0	4,000	0	0	0	4,000
5204	Review national practices of coastal habitat use, conservation, and restoration.	0	3,000	0	0	0	3,000
5205	Review of status of vulnerable species and vulnerable trophic linkages.	0	0	3,000	0	0	3,000
5206	Regional contaminant inputs	0	3,000	0	0	0	3,000
5207	Investment strategy	0	0	0	0	3,000	3,000
5208	Strategies for rapid & long-term regional responses to catastrophic causes of pollution	0	0	0	0	0	0
5209	Review report of national legislation on pollution	0	0	0	3,000	0	3,000
5210	Review of fate and transport of contaminants	0	0	3,000	0	0	3,000
5211	Regional carrying capacity of ecosystem	0	3,000	0	0	0	3,000
5212	Ecosystem stresses-national & regional status	0	0	3,000	0	0	3,000
5213							0
5214	printing newsletters	1,000	1,000	1,000	1,000	1,000	5,000
5215	Printing the final TDA	0	3,000	0	0	0	3,000
5216	Printing NYSAP	0	0	0	3,000	0	3,000
5217	Printing regional SAP	0	0	3,000	0	0	3,000
5219	Other reports	8,000	12,000	12,000	12,000	24,000	68,000
5220	Publication (other than reports)	5,000	12,000	12,000	12,000	12,000	53,000
5221	Webpage design and updating	3,000	500	500	500	500	5,000
5299	Sub-total	17,000	45,500	37,500	31,500	40,500	172,000
5300	Sundry (communications, postage, freight, clearance charges, etc)						
5301	Communication	12,000	17,500	17,500	17,500	12,500	77,000
5302	postage/freight	1,250	1,250	1,250	1,250	1,250	6,250
5303	unspecified	9,000	9,000	9,000	9,000	9,000	45,000
5399	Sub-total	22,250	27,750	27,750	27,750	22,750	128,250
5400	Hospitality and entertainment						
5401	Hospitality and entertainment	4,000	6,000	6,000	6,000	6,000	28,000
5402							0
5499	Sub-total	4,000	6,000	6,000	6,000	6,000	28,000

5500	Evaluation (consultants fees/travel/DSA, admin support, etc. internal projects)						
5501	Evaluation (consultants fees/travel/DSA)	0	0	48,000	0	48,000	96,000
5599	Sub-total	0	0	48,000	0	48,000	96,000
5999	Component Total	60,250	96,250	136,250	82,250	134,250	509,250
9999	Total	3,009,735	2,615,915	2,524,038	2,684,834	2,750,306	13,584,828
	UNOPS project supporting costs (6%)	180,584	156,955	151,442	161,090	165,018	815,090
	Grant Total	3,190,320	2,772,870	2,675,480	2,845,924	2,915,324	14,399,917
							14,399,917
							14,394,000
							-5,917

Appendix 3

TERMS OF REFERENCE FOR THE REGIONAL SCIENTIFIC & TECHNICAL PANEL

Background

The overall objective of the project is defined as: Ecosystem-based, environmentally-sustainable management and use of the YSLME and its watershed: reducing development stress and promoting sustainable development of the ecosystem from a densely populated, heavily urbanised, and industrialised semi-enclosed shelf sea.

In order to achieve this objective this project will prepare a Transboundary Diagnostic Analysis (TDA), National Yellow Sea Action Plans (NYSAPs), and a regional Strategic Action Programme (SAP). This project will also initiate and facilitate the implementation of the SAP. The SAP will consist of a series of legal, policy and institutional changes and investments to address the priority transboundary issues identified in the TDA/SAP formulation process.

Rationale

In order to facilitate the achievements of the overall objectives, and to prepare scientifically and environmentally sound TDA and SAP, a Regional Scientific and Technical Panel will be established with responsibility for ensuring effective implementation and management of the project activities as approved by the Project Steering Committee (PSC), and providing scientific and technical advice to the PSC, and the Regional Working Groups.

Membership

The Regional Scientific and Technical Panel (RSTP) shall consist of:

- The National Project Co-ordinator;
- The Chairpersons of the Regional Working Group for the project components;
- Selected regional experts¹ to meet scientific and technical requirements; and
- Chief Technical Advisor (CTA) of the Project Management Office.

The RSTP shall elect a Chairperson, a Vice-Chairperson and a Rapporteur. The Chairperson will attend the meetings for the Project Steering Committee to present the reports and recommendations of the RSTP.

Secretariat

The Project Management Office shall act as secretariat to the RSTP.

¹ In consultation with the National Project Co-ordinators, four regional experts should be selected to ensure well-rounded representation of expertise in the Panel.

Meetings of the Panel

The Project Management Office shall, in consultation with the Chairperson of the Panel, convene the RSTP meetings, preferably before the meetings of the Project Steering Committee.

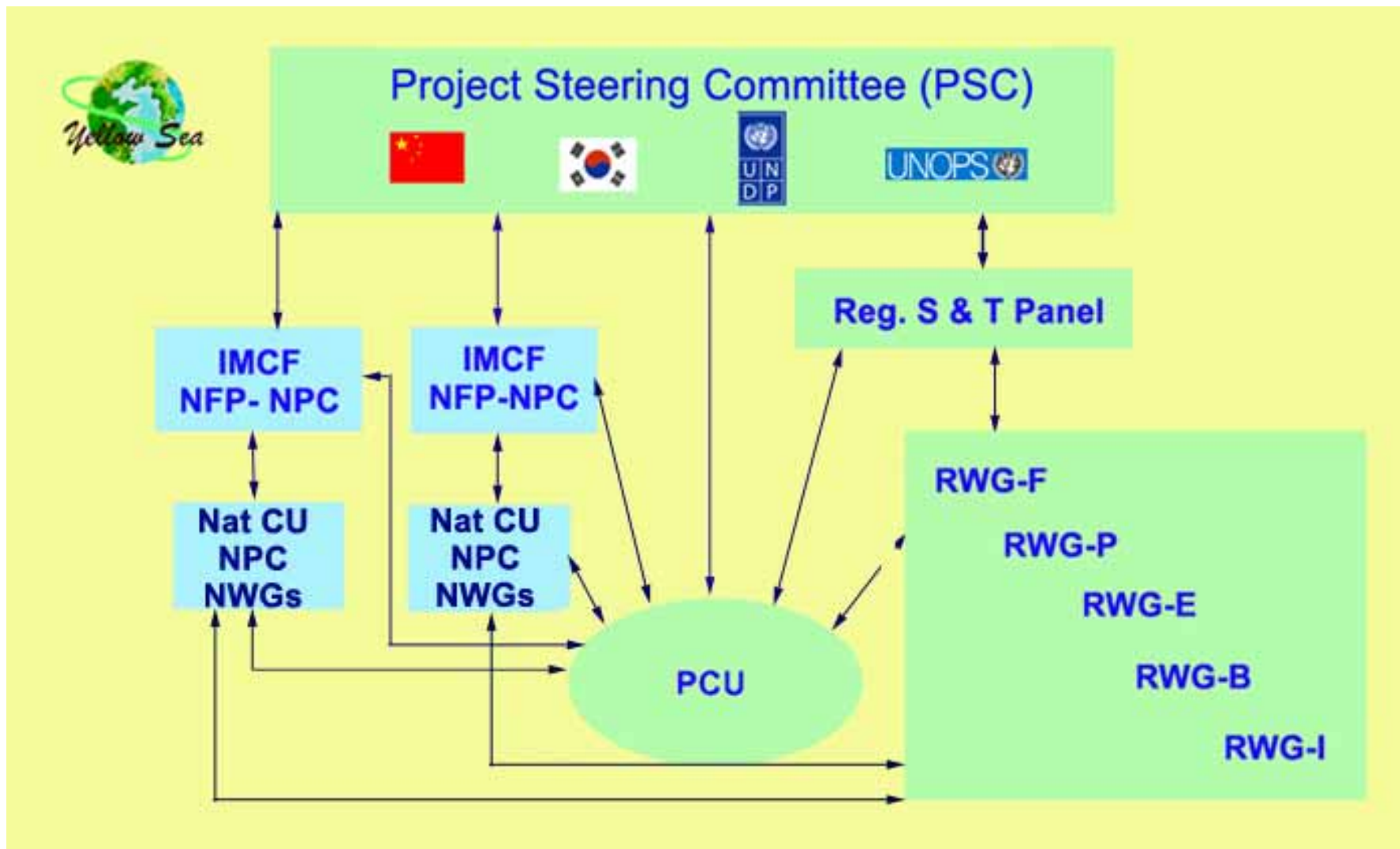
Tasks of the Panel

The RSTP shall:

- (i) Based on the approved project programme and budget, provide scientific and technical guidance to the regional working groups established for the project components;
- (ii) Ensure effective implementation of the project activities, and the quality of outcomes and outputs of the project;
- (iii) Review the data and information generated from the project activities, and provide guidelines on the data quality control, in particular for the preparation of TDA and SAP;
- (iv) Prepare scientific and technical reports on the project progress, together with recommendations to be considered and approved by the Project Steering Committee;
- (v) Ensure scientific and technical co-operation and co-ordination with other international and regional organisations and projects to maximise the benefits of the project outcomes to the participating countries; and
- (vi) Under the directives of the Project Steering Committee, provide and review regularly the scientific and technical strategy to support management and sustainable use of coastal resources in the Yellow Sea areas.

Appendix 4

PROJECT STRUCTURE OF THE IMPLEMENTATION PLAN



		2005				2006				2007				2008				2009				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Regional Agreements and National Laws & M	Activity 2	Feasibility study on the regional					■	■	■													
		Prepare drft regional agreement						■	■	■												
		Discuss the regional agreement												■								
		Revise the draft (PCU)													■	■						
		Discussion WG meeting 5																				
		repeat the actions if necessary																				
		Finalise the agreement and propose																				
	Ad	Enforcement will be considered																				
	Activity 4	Identify regional requirements and							■	■												
		Prepare national SAP (contract to																				
		Prepare draft regional SAP																				
		Discuss framework of Regional SAP																				
		Discuss and revision (WG meetings																				
		Discuss draft national SAP (WG																				
		Revise national SAP																				
		Finalise national SAP																				
		Implement regl. Management plan																				

Ecosystem Component

		2005				2006				2007				2008				2009			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Prepare final TDA																			
		Regional SAP																			
		Natl SAP																			
		Demonst of reg. SAP																			
		Annual Project Steering Comm. Meetings																			
		Regional STC																			
Status of Ecosystem	Activity 1	Contract to relevant national																			
		Establish a regional editorial group /or																			
		Prepare a draft report (consultant)																			
		Discuss the draft (WG meeting 1)																			
		Revise the draft report (consultant)																			
		finalise the draft report (WG meeting 2)																			
	Activity 2	Prepare synthesis of the national																			
		Prepare draft strategy, including:																			
		Discussion the draf (WG meeting 2)																			
		Revise the draft																			
		finalise the strategy (WG meeting 3)																			
	Activity 3	Contract to relevant national																			
		Application of remote sensing																			
		Ship-of-opportunities monitoring.																			
		Molecular probes.																			
Carrying Capacity	Activity 1	Contract to relevant national																			
		Discuss and coordinate with fisheries																			
		Decide on the assessment methods of																			
	Traing on carrying capacity																				
	Activity 2	Conduct a basin-scale survey on lower-																			
Prepare a regional synthesis																					
Finalisation national outputs and																					
Activity 1	Contract to relevant national																				
	Present outcomes of ranking, data and																				
	Prepare a regional synthesis																				
	Finalisation national outputs and																				
	Publish the outcomes (printing)																				
Inputs to final TDA																					

		2005				2006				2007				2008				2009							
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Stressors to Ecosystem	Activity 2																								
	Identify major human induced stresses					■	■																		
	Causal chain analysis (contract)							■	■																
	Identify measures to address the root								■																
	Inputs to final TDA																								
	Activity 3																								
	Prepare draft strategy, including:						■	■	■																
	Discussion the draf (WG meeting 3)								■																
	Revise the draft									■	■	■													
	finalise the strategy (WG meeting4)												■												
	Activity 4																								
	Prepare a format for national strategy (PCU)												■	■											
	Prepare natl strategy (contract)													■	■	■									
	discussing natl strategy (WG meeting 5)																			■					
	Revise natl strategy (contract)																			■	■				
	Prepare regional draft strategy (consultant)							■	■				■												
	finalise natl strategy (WG meeting 5)																			■					
discussing reg. strategy (WG meeting 5)																									
finalise reg strategy (WG meeting 6)																									
Inputs to natl & reg SAP									■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
Implement SAP																	■	■	■	■	■	■	■		

Pollution Component

		2005				2006				2007				2008				2009			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Prepare final TDA	■	■	■	■	■	■	■	■												
	Regional SAP									■	■	■	■	■	■	■	■				
	Natl SAP													■	■	■	■				
	Demonst of reg. SAP																	■	■	■	■
	Annual Project Steering Comm. Meetings	■	■		■				■			■					■				
	Regional STC	■		■				■								■					
Contaminant Input	Reviewing of previous and ongoing	■	■																		
	Development of technologies for	■	■																		
	Present outcomes of ranking, data and	■																			
	Prepare a regional synthesis		■	■																	
	Finalisation national outputs and				■																
	Publish the outcomes (printing)							■	■												
	Inputs to final TDA				■	■	■	■	■												
Contaminant Levels Activity 1	Review existing data & inf on	■	■																		
	Data quality control for baseline data		■																		
	Present outcomes of ranking, data and	■																			
	Environmental Survey with other working		■		■																
	Prepare a regional synthesis			■	■																
	Finalisation national outputs and				■																
Inputs to final TDA			■	■	■	■	■	■													
Contaminant Levels Activity 2	Establish a monitoring network / or using					■	■														
	Draft Monitoring guidelines / standards						■	■													
	Agree on the guidelines / standards (WG)								■												
	Intercalibration exercise of participating		■																		
	Development of indicators to assess the							■	■												
Critical Spot Areas Activity 1	Prepare format for data & info collection	■	■																		
	Identification of hot spots		■	■																	
	Contract to relevant national institution(s)			■	■																
	Discussing & further requirements (WG)				■				■												
	Revise the hot spots data & info				■	■	■	■	■												
	Inputs to final TDA				■	■	■	■	■												
Critical Spot Areas Activity 2	Review existing understanding	■	■																		
	Present outcomes of reviewing from	■																			
	Prepare a regional synthesis		■	■																	
	Finalisation national outputs and				■																
	Publish the outcomes (printing)							■	■												
	Inputs to final TDA				■	■	■	■	■												

		2005				2006				2007				2008				2009			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Analysis	Activity																				
	Analysis	Analysis for fate and transport of ICM actions for controlling of discharge Impact prediction of impact of																			
Regional Strategy Pollution Control	Activity 1	Contract to relevant national institution(s)																			
		Regional review (WG meeting 3)																			
		Regional analysis and suggestion on																			
		Publish review report																			
		Inputs to national and regional SAP																			
	Activity 2	Economic valuation of hot spots, & Identify hot spots in both source, and																			
		Prepare draft strategy (consultant)																			
		Discussing the draft (WG meeting 3)																			
		Revise the draft (Consultant)																			
		Finalise the investment strategy (WG)																			
		Publish the investment strategy																			
		Inputs to the regional SAP																			
		Prepare an implementation plan																			
	Activity 3	Agree on the implementation plan (WG)																			
		Contracts for implementation																			
	Activity 4	Root cause analysis for contaminants																			
		Discussion the draf (WG meeting 2)																			
		Revise the draft																			
		finalise the strategy (WG meeting 3)																			
		Input to SAP																			

Investment Component

		2005				2006				2007				2008				2009			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Prepare final TDA																			
		Regional SAP																			
		Natl SAP																			
		Demonst of reg. SAP																			
		Annual Project Steering Comm. Meetings																			
		Regional STC																			
Stakeholders	Activity 1	Contract to institutions (experts)																			
		Produce a regional list (PCU)																			
	Activity 2	Prepare training materials for all																			
		Training for decision makers																			
		Training for community trainers																			
		Training for local governmental																			
		Intern programme																			
		Site visits by local governmental "The Yellow Sea and Youth"																			
	Activity 3	publish newsletters of the project																			
		printing newsletters																			
		regular stakeholders conference																			
	Regional Coordination	Activity 2	Review preliminary TDA, and																		
Discussing draft, and decide new																					
Gathering data & info from																					
Second draft of TDA (consultant)																					
2nd discussion on the draft (WG)																					
Revise the TDA																					
Activity 3		Finalise TDA (WG meeting 3)																			
		Printing the final TDA																			
		Prepare a draft of regional SAP																			
		Discuss the draft on the WG																			
		Revise the drft SAP, & prepare																			
		Discussing version #2, & finalise																			
		Revise the drft SAP, & prepare																			
		Discussing version #2, & finalise																			
		Printing regional SAP																			

