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

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**Technical Meeting for the Co-operative Study Cruises  
In the Yellow Sea Marine Basin  
For the UNDP/GEF Yellow Sea Project  
Qingdao, China, 17-18 October 2005**

### **Expected Outcomes and Outputs Of the Co-operative Study Cruises**

In the approved Implementation Plan of the UNDP/GEF Yellow Sea Project, “Reducing Environmental Stress in the Yellow Sea Large Marine Ecosystem,” one of the major activities of the project is to undertake a survey of the Yellow Sea Marine Basin to collect data and information co-operatively, for all the components of the Yellow Sea Large Marine Ecosystem (YSLME) Project.

The ‘Yellow Sea marine basin’ lies within the boundaries of the Yellow Sea large Marine Ecosystem (as defined in the Project Document) and is delimited by the surrounding territorial waters of China and the Korean Peninsula.

The main objectives of the co-operative surveys is to provide basin-wide, data and information for the Yellow Sea marine basin based on the data/information requirements of the Regional Working Groups, to be used together with other existing data/information in the preparation of the Transboundary Diagnostic Analysis (TDA). These surveys are also necessary to prepare baselines of the status of the Yellow Sea marine environment at start of the project implementation and will be used in the TDA process to support or refute the ‘perceived problems’ of the Yellow Sea listed in Implementation Plan, and in the later stage as one of the critical indicators for the evaluation of the YSLME Project.

#### Expected Outcomes of the Surveys

As above, the objectives of the surveys are to provide data and information that will be used, in the preparation of the Transboundary Diagnostic Analysis (TDA) and to prepare necessary initial baseline data suite for the Yellow Sea marine basin which will give us an understanding of:

- The status and conditions of the Yellow Sea Marine basin ecosystem
- The condition and quality of the Yellow Sea marine basin habitat
- The biophysical dynamics of the Yellow Sea marine basin system

More specifically the data/information collected from both surveys will allow us to determine:

- Status and changes, if possible, in benthic and pelagic resources – biodiversity and biomass, shifts in trophic structure, productivity, condition of commercial fisheries, carrying capacity, etc;
- Status and changes in quality and availability of benthic and pelagic habitats;
- Abundance and distribution of introduced organisms in the Yellow Sea marine basin; and
- Seasonal changes in the above.
- Basic basin-wide information on the marine environment, including primary productivity, chemical and physical characteristics of the Yellow Sea
- Status of marine pollution and quality of water in the Yellow Sea marine basin; and
- Other data and information required.

This data/information will then allow us to identify trends, and/or predict changes under prevailing ecosystem conditions and identify or prioritise interventions for the SAP phase of the project.

The Outcomes of the surveys should also include ultimately:

- Regionally agreed methods for observation, monitoring and sampling of marine environmental parameters in the Yellow Sea;
- An enhanced co-operative mechanism for regional marine environment monitoring and observation;
- Upgraded skills in basin-wide observation and monitoring;
- A better scientific understanding of the basin-wide marine environment/ecosystem status;
- Identification of data/information and knowledge gaps.
- Increased mutual understanding and trust amongst the participating institutions.

#### Expected Outputs from the Surveys:

At the successful completion of the co-operative surveys the following outputs are anticipated:

1. Detailed reports of the activities for each survey including performance of vessel, equipment, and staff.
2. Recommendations, and highlighting of issues that need to be addressed before the initiation of the next survey in summer (April/May, 2006).
3. Assemblage of all raw and analysed data/information collected by all components (in both printed and digitized form).
4. A preliminary analysis of collected data/information with corresponding descriptions of the following (noting particularly the issues and/or anomalies that exist for each):

#### **4.1. Benthic and Pelagic habitat structure and quality**

- 4.1.1. Describing in detail diversity and spatial distribution of benthic habitats, prevailing biophysical regimes and noting areas of ecological and commercial significance.

#### **4.2. Benthic and Pelagic Resources**

- 4.2.1. Describing in detail the condition of benthic resources of the Yellow Sea marine basin in terms of: productivity, biodiversity, biomass, distribution and abundance of species.
- 4.2.2. Describing in detail the condition of commercial fish stocks in the Yellow Sea marine basin and highlighting any areas of significance.

#### **4.3. Trophic and Ecosystem Structure**

- 4.3.1. Describing in detail the trophic structure of the Yellow Sea marine basin as whole, highlighting areas of significance.
- 4.3.2. Describing in detail the state of the ecosystem of the Yellow Sea marine basin as whole, highlighting areas of significance.
- 4.3.3. Providing a model of carrying capacity for the Yellow Sea basin for selected indicator species.

#### **4.4. Pollution and Water Quality**

- 4.4.1. Describing in detail the physicochemical state and quality of waters and sediments of the Yellow Sea marine basin in terms of common environmental parameters such as nutrients, organic pollutants, heavy metals, etc, and highlighting any areas of significance.
- 4.4.2. Describing if possible, potential sources and sinks of these parameters in the Yellow Sea marine basin.

Outputs are expected to be delivered to the PMO within 2 months from the completion of the survey.