



**IMPLEMENTING THE STRATEGIC ACTION PROGRAMME FOR THE YELLOW SEA LARGE MARINE ECOSYSTEM: RESTORING ECOSYSTEM GOODS AND SERVICES AND CONSOLIDATION OF A LONG-TERM REGIONAL ENVIRONMENTAL GOVERNANCE FRAMEWORK  
(UNDP/GEF YSLME Phase II Project)**

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English only

**1<sup>st</sup> Meeting of the Regional Working Group on Habitat**

*Songdo, Incheon, RO Korea, 5-6 September 2017*

## **Draft Terms of Reference of RWGs and Chairs/Vice Chairs of UNDP/GEF YSLME Phase II Project**

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

### **Membership**

Each RWG shall consist of up to 6 members, including:

- Chair and Vice Chair elected by the Working Group. Candidates to the Chair and Vice Chairs must be representatives from each participating country nominated by the IMCCs, and must be the chairpersons of the equivalent National Working Groups;
- 2-4 Leading regional experts in an appropriate discipline of natural and/or social science appointed by the Secretariat in consultation with the participating countries;
- 1 representative from the private sector if needed;
- 1 NGO representative if needed; and

### **Secretariat**

The Project Management Office (PMO) shall serve as Secretariat to the Regional Working Groups, and shall prepare the meeting reports of the RWG meetings. The meeting reports shall be circulated to all members of the RWGs and RSTP and project partners.

### **Meetings**

In consultation with the Chairpersons of the RWGs, the PMO shall convene meetings of the RWGs according to the agreed schedules. Each RWG shall organise its regular meetings once a year. The chairpersons attend the MSTP meetings to present recommendations and activity reports prepared by the RWG.

### **Terms of Reference of Chairs and Co-Chairs of RWGs**

- a) Directly communicate with PMO/Commission Secretariat, Chair/Co-Chair of the MSTP, National Coordinators and Chair of the corresponding NWG on issues related with development, implementation and reporting progress of the annual workplan.
- b) In accordance with the TOR and project three year workplan (2017-2019), prepare the RWG workplan and budget in consultation with RWG members with support from the Secretariat.
- c) Coordinate the work of members to ensure achievement of the RWG objectives and deliverables;
- d) With assistance from the PMO/Commission Secretariat and in consultation with Vice Chair of the RWG, organize annual RWG meetings, including preparation of meeting program, presiding over the meetings in accordance with the Rules of Procedure of

the Interim Commission Council and its Subsidiary Bodies, clearance of the working group report, etc.

- e) Report the progress of the RWG she/he chairs to the MSTP and challenges that need be escalated for consideration and guidance by the Interim Commission Council through the MSTP.
- f) Under the overall coordination of National Coordinator, consult with members of corresponding National Working Group of the participating country he/she represents to ensure the acceptance on the outputs of the RWG.
- g) Draft recommendations or proposal on technical issues under the purview of the RWG for review and endorsement by the MSTP and adoption by the Interim Commission Council.
- h) Advise the Secretariat on partners to be engaged for the RWG to better achieve or in furtherance of the purposes of the RWG.
- i) Propose and develop programs of international and regional symposium and conferences aiming to achieve the objectives of the RWG.
- j) As deemed necessary or at the request of the CTA/Manger, represent YSLME Phase II Project at international conferences and meetings to exchange experiences of UNDP/GEF in application of EBM in YSLME.
- k) Recommend to the MSTP for decision, amendments to the membership and terms of reference of the RWG.

## **Major responsibilities of each RWG**

### **RWG-A: Monitoring and assessment**

**Goal:** to improve the ECC with respect to supporting services by mainstreaming adaptive management to meet potential challenges, including the climate change impacts on ecosystem processes.

#### **Objectives:**

- 1) to harmonize monitoring and assessment methodologies and to improve understanding the N/P/Si ratios and impact on marine and coastal ecosystem
- 2) to improve understanding of the impact of climate change on ecosystem structure
- 3) to improve the monitoring capacity and awareness of jellyfish and HAB including green tide

#### **Deliverables:**

- 1) Technical report on trend in N/P/Si ratio and its impacts on the marine and coastal ecosystem structure
- 2) Technical report on climate-induced ecosystem changes in the Yellow Sea and adaptive management strategies
- 3) Regional jellyfish and HAB monitoring programs established and implemented in collaboration with partners

#### **Tasks:**

1. Lead the development of regional strategy and systems for monitoring and assessing the long-term trend in N/P/Si ratios and its impacts on the marine and coastal ecosystem structure with reviewed and harmonized national monitoring and assessment methodologies.

2. Coordinate the development of regional strategies for long-term ecosystem forecast and conduct of modelling and scenario analysis.
3. Facilitate the assessment and monitoring of the impact of climate change and analysis of factors and signs of global climate changes on a regional scale and share findings.
4. Coordinate the preparation of regional adaptive management strategy to enhance the resilience of the YSLME and reduce the vulnerability of coastal communities to climate change impacts on ecosystem processes and other threats identified in the TDA and SAP.
5. Lead the development of regional jellyfish and HAB monitoring programs and establishment of committees, and coordinate the monitoring of the transboundary impact of jellyfish blooms (JBs) and harmful algal blooms (HABs) occurrence in collaboration with international organizations and partners (e.g. IOC/WESTPAC, NOWPAP, PICES etc.).
6. Forecast future changes and developing adaptive management scheme by integrating models and developing scenario-based projections for future ecosystem changes;

### **RWG-F: Fish stocks**

**Goal:** To improve Ecosystem Carrying Capacity (ECC) with respect to provisioning services by recovering and enhancing depleted fisheries stocks.

**Objectives:**

- 1) to assess the progress of SAP Target 1 implementation and make recommendations on targets and actions in the updated SAP
- 2) to enhance capacity of national and local governments in monitoring and assessment of fish stocks, and effectiveness of licensing, closure and restocking management

**Deliverables:**

- 1) methodologies of joint stock assessment and data management protocols
- 2) Technical report on status of stocks of selected species in YS using harmonized assessment methodologies and recommendations on new targets and actions to improve management effectiveness of licensing, closure and restocking measures
- 3) training module on stock assessment and fish restocking

**Tasks:**

- a) Facilitate the discussion and agreement on sharing of collated data on catches in the Yellow Sea (YS) and analyse patterns of species over the same period of time.
- b) Develop methodologies for improved estimates on fish stock with an aid of stock assessment. Construct models covering patterns of fish stocks using newly initiated methodology being used globally. Analyse relations of fishing efforts, closure, licensing and restocking effectiveness and ecosystem carrying capacity and make recommendations on targets and actions to update SAP.
- c) Assist to rebuild over-exploited marine living resources by improving quality of habitats and fisheries management in line with Ecosystem-Based Fisheries Management (EBFM).
- d) Identify the effect of climate change on fish populations in the YS. Find out distribution shifts of fishes using recently developed models and forecast impacts of climate change on the distribution of fishes in the YS.
- e) Prepare training modules on fish stock assessment and restocking

## **RWG-G: Sustainability (socioeconomics and governance)**

Goal: to improve regional environmental governance by strengthening institutional, legislative, and financial capacities of the region and the countries

### **Objectives:**

- 1) to enhance the capacity of governments at different levels to apply economic analysis in investment decision making.
- 2) to guide relevant RWGs and coordinate efforts in the development of institutional, policy and financial framework of the YS Commission
- 3) to advise on the means and approaches for full participation of DPRK for participatory implementation of YSLME project and SAP
- 4) to enhance coordination of bilateral fisheries agreement between two countries
- 5) to strengthen partnership with regional co-operative institutions (2017-2019)

### **Deliverables:**

- a) roadmap towards a sustainable framework and MOU or political statement for signing by participating countries
- b) training modules on cost-benefit analysis for wider application in the YS region
- c) training modules for better implementation of multilateral environmental agreements including EBM
- d) regional guideline to incorporate FAO Code of Conduct for Responsible Fisheries

### **Tasks:**

- a) Coordinate the conduct of Cost-Benefit Analysis (CBA) to examine the economy and efficiency of management actions performed by two Parties. Coordinate the development of training module on CBA and its application in the context of YSLME. Organize technical trainings on CBA to build and/or strengthen the capacity of the participating countries.
- b) Provide advice and recommendation on establishment of YSLME Commission including its legal personality. Organize workshops to share ideas on building institutional framework composing of YSLME Commission, Secretariat and its subsidiary bodies. Identify ways and means to engage DPRK's full participation to enhance effectiveness of the work of YSLME.
- c) Lead the review of regional and national measures and actions to improve the implementation of international and regional treaties and guidelines, and coordinate the preparation of training module on synergizing implementation of multilateral environment agreements using ecosystem-based management in LMEs.
- d) Enhance coordination between the bilateral Fisheries Agreement between two countries in the YSLME Commission, including support in development of regional guidelines to incorporate suggested guidelines of the FAO Code of Conduct for Responsible Fisheries into the YSLME Commission's Context.
- e) Strengthen partnerships with existing regional co-operative institutions including PEMSEA, NOWPAP, the Joint Fisheries Commission, etc. Provide guidance on participation of NGOs and communities in climate change adaptation, reduction of marine litter, recovery of fish stocks, and capacity building for NGOs, local governments and communities.

## **RWG-H: Habitat conservation**

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

**Objectives:**

- 1) Develop regional conservation plan for biodiversity
- 2) Develop regional guidelines for assessment of effectiveness of coastal and marine ecosystem restoration projects
- 3) Maintain and improve the effectiveness of YSLME MPA Network
- 4) Develop the capacity and public awareness of benefits of biodiversity conservation

**Deliverables:**

- 1) Regional biodiversity conservation plan
- 2) regional guideline for assessment of coastal and marine ecosystem restoration projects
- 3) Rationalized network of MPA in YSLME that integrate the principles of connectivity
- 4) A training module on habitat-based and food-chain based approaches for habitat conservation
- 5) conduct of three YSLME MPA forums

**Tasks:**

- a) Coordinate the development and implementation of a regional biodiversity conservation plan to preserve habitats that include establishment of regional nature reserves/Marine Protected Areas (MPAs) for coastal wetlands, endangered and vulnerable species and spawning and nursery ground of critical species. Coordinate the conduct of study on the YS cold water mass.
- b) Coordinate the update the TDA and SAP. Assist in identifying policies for management of estuarine and marine nurseries in both countries. Facilitate development and implementation of regional policies and legal measures. Provide advice on drafting of proposals for improved habitat quality legislation and regulation.
- c) Coordinate the preparation of training modules of habitat-based and food-chain based approaches for habitat conservation. Organize regional training workshops with assistance from PMO. Facilitate the development of regional guidelines for assessment of coastal and marine ecosystem restoration projects, and provide advice on maintaining and strengthening a network of MPAs and on the control mechanisms of new coastal reclamation.
- d) Organize annual regional MPA forum as a longstanding platform for knowledge sharing and exchange among practionners and MPA managers for improved management effectiveness.

**RWG-M: Sustainable Mariculture**

**Goal:** To improve the ECC with respect to provisioning services by enhancing mariculture production and quality and by reducing and controlling pollutant discharge from mariculture.

**Objectives:**

- 1) to establish and optimize the integrated aquaculture of bivalve, fish, seaweed, sea cucumber, seagrass, abalone-seaweed and bioremediation technology for increased productivity and reduced marine environmental pollution per unit area
- 2) to prepare training module and disseminate IMTA experience and knowledge YSLME-wide and to other LMEs
- 3) to standardize IMTA for commercialization at industrial scale

**Deliverables:**

- 1) high proficiency IMTA successfully demonstrated in three sites in Shandong and Liaoning, PR China;
- 2) regional guidelines for sustainable mariculture (IMTA, Bio-Floc, Shellfish restoration in tidal flat, etc.) and GAP of IMTA;
- 3) training module of IMTA published;
- 4) conduct of three international conferences and training programs on sustainable mariculture

**Tasks:**

1. Coordinate the development of regional guidelines for sustainable mariculture.
2. Prepare training module for IMTA.
3. Conduct regional and international training workshops on IMTA and other sustainable mariculture techniques in collaboration with other partners including IW:LEARN, NACA, SEAFDEC, etc.
4. Conduct field visit to identify demonstration sites, assess the replication potential across YSLME, find out technical constraints, opportunities and enabling conditions to ensure the development of the mariculture sector in the Yellow Sea (YS).
5. Disseminate current knowledge on the environmental effects of mariculture and opportunities of environmentally friendly technologies (IMTA, bio-floc and shellfish restoration in tidal flat) to aquaculture association, local government officials, and international organizations.
6. Identify avenues and ways to replicate the sustainable mariculture technologies for blue economy development in other regions for support by development assistance programs.

**RWG-P: Pollution Reduction**

**Goal:** to improve the ECC with respect to regulating and cultural services by reducing pollutant levels and strengthening legal and regulatory processes

**Objectives:**

1. to facilitate the establishment and operation of an YSLME marine environment pollution monitoring network
2. to enhance capacity of national and local government on monitoring, assessment and mitigation of land and sea-based contaminants
3. to harmonize regional marine litter (including microplastics) monitoring and assessment methodologies and advise on approaches to reduce marine litter

**Deliverables:**

- 1) regional marine environment monitoring mechanism for assessing SAP implementation progress
- 2) technical report on marine environment status and trend in YS as input to TDA and SAP
- 3) regional marine litter (including microplastics) baseline survey report
- 4) training module on contaminants from river-sea interaction and atmospheric disposition, and the carrying capacity of LME
- 5) regional strategy for using wetland as nutrient sink

**Tasks:**

- a) Provide advice on enhancing exchange and sharing of pollution data and information at a regional level and on 'Hot Spot' control actions based on loads through scenario analysis and modelling. Assist to update facilities/equipment to control or reduce discharge from industrial and municipal sources to reduce pollution.
- b) Facilitate to establish a guideline for regional routine monitoring and assessment, quality standards and network on marine environmental pollution in the YS. Provide advice on harmonization of regional methodologies and update of regional monitoring guidelines. Hold regional workshops focused on monitoring technology and assessment methodology.
- c) Facilitate the development of diagnostic strategy for identifying sources and sinks of pollutants. Prepare technical report on environmental status and trend in the YS as inputs to revised TDA and SAP.
- d) Coordinate the development of a regional strategy for using wetland as nutrient sink. Support the development of a harmonized regional marine litter (including microplastics) monitoring and assessment guideline.
- e) Prepare a training module on contaminants from river-sea interaction and atmospheric disposition and the carrying capacity of LME. Facilitate exchanges in management of land- and sea-based pollutants including marine litter, including through strengthen partnership with relevant stakeholders and partners and organization of regional workshops with participation of responsible authorities and international organizations (e.g. UNEP GPA).