



YSLME

UNDP/GEF Yellow Sea
Large Marine Ecosystem

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



1. Environment, Biological and Socioeconomic Context of YSLME

The Yellow Sea Large Marine Ecosystem (YSLME) as defined in the TDA and SAP is bounded (clockwise from north) by: a line drawn from Penglai (People's Republic of China) to Dalian (PR China); the Korean Peninsula and Jeju Island (RO Korea) and a line drawn from Jindo Island (RO Korea) to Chaguido (RO Korea); south coast of Penglai; and a line drawn from the north bank of the mouth of the Yangtze River (PR China) to the southwestern coast of Jeju Island (RO Korea). It covers an area of 400,000 km² and measures approximately 1,000 km by 700 km.

The bio-geochemistry of the Yellow Sea is strongly influenced by freshwater and airborne materials. Rivers discharge approximately 1.6 billion tonnes of sediment and 1,500 billion tonnes of freshwater into the sea. More than 460 billion tonnes of rain fall on the area annually. The Yellow Sea's climate is influenced by the Asian monsoon system and its circulation is predominantly affected by the winter and summer seasons, freshwater discharge, and the inflow of warm saline waters of the Kuroshio current.

YS supports a large population of fish, birds, mammals and invertebrates.

- 339 species of fishes are recorded in the Yellow Sea, of which around 45% are warm water species, 46% warm temperate forms and 9% cold temperate forms.
- Polychaete species number around 100, molluscs 171, crustaceans 107, and echinoderms 22.
- Endangered marine mammals in the YS include the black right whale, white fin dolphin, Kurile harbour seal, spotted or largha seal, Japanese sea lion and the striped dolphin.
- It is estimated that at least two million shore birds use the region during their northward migration—representing approximately 40% of all migratory shorebirds using the East-Asian-Australasian Flyway.

Five large coastal cities with tens of millions of inhabitants border the sea—Qingdao, Dalian and Shanghai in PR China; Seoul/Incheon in RO Korea, and Pyongyang/Nampo in the Democratic People's Republic of Korea (DPR Korea).

Boundaries of YSLME covered by the UNDP/GEF YSLME Phase II Project



Yellow Sea LME's Ecosystem Carrying Capacity (ECC) provides capture fisheries resources in excess of two million tonnes per year and mariculture over 14 million tonnes per year, supports wildlife, provides bathing beaches and space for tourism, and absorbs nutrients and other pollutants.



Like many other migratory shorebirds, this banded Bar-tailed Godwit (*Limosa lapponica*) uses the biologically productive intertidal mudflats of the Yellow Sea as critical feeding and stopover grounds during migration between New Zealand and Alaska. (Photo by Mr. Eugene Cheah)



2. Background, Objective and Conformity with GEF-5

This project builds upon four years of regional cooperation for the sustainable use of the Yellow Sea Large Marine Ecosystem (YSLME) put in place by PR China and the Republic of Korea, supported by the Democratic People's Republic of Korea (DPR Korea), the Yellow Sea Partnership and the Global Environment Facility (GEF). The initial project completed a regional Transboundary Diagnostic Analysis (TDA, Box 1) and finalized a regional Strategic Action Programme (SAP, Box 2), the implementation of which will be operationalized by the national SAP.

The countries bordering the Yellow Sea that formally endorsed the SAP for the Yellow Sea are as follows: PR China on 19 November 2009, RO Korea on 28 November 2008, and DPR Korea (as observer) on 8 December 2008. PR China and RO Korea have developed and approved National Strategic Action Plans (NSAPs) to implement the SAP at the national level.

The objective of the project is to foster long-term sustainable institutional, policy, and financial arrangements for effective ecosystem-based management of the Yellow Sea (YS). To achieve this, the project will support the formation of a YSLME Commission that will oversee the implementation of the SAP; and will support the States' efforts to reduce the decline in biological resources and to restore depleted fish stocks in the Yellow Sea.

In line with the GEF-5 International Waters (IW) strategic priorities, GEF will assist the countries to reach an agreement on ecosystem-based joint action for the sustainable management of the Yellow Sea Large Marine Ecosystem, and to catalyze institutional reforms and support the implementation of policies aimed at reducing overfishing and benefiting communities.

Project snapshot

Programme Period	2014-2017
Total allocated resources:	US\$ 233,044,196
GEF	US\$ 7,562,430
UNDP	US\$ 1,692,000
Other:	
• Government in cash	US\$ 26,785,812
• Government in-kind	US\$ 195,203,954
• Other	US\$ 1,800,000
Executing Entity/Implementing Partner	UNOPS

There are four components of the project:

1. Sustainable national and regional cooperation for ecosystem-based management;
2. Improved Ecosystem Carrying Capacity with respect to provisioning services;
3. Improved Ecosystem Carrying Capacity with respect to regulating and cultural services; and
4. Improved Ecosystem Carrying Capacity with respect to supporting services.

The key outcomes sought are:

1. Establishment of commission, a self-sustaining cooperative mechanism for ecosystem-based management;
2. Recovery of depleted fish stocks and improved mariculture production and quality;
3. Improved ecosystem health;
4. Improved inter-sectoral coordination and mainstreaming of ecosystem-based management principles at the national level, maintenance of habitat areas, strengthened stakeholder participation in management and improved policymaking; and
5. Skills and capacity significantly developed for region-wide ecosystem-based management.

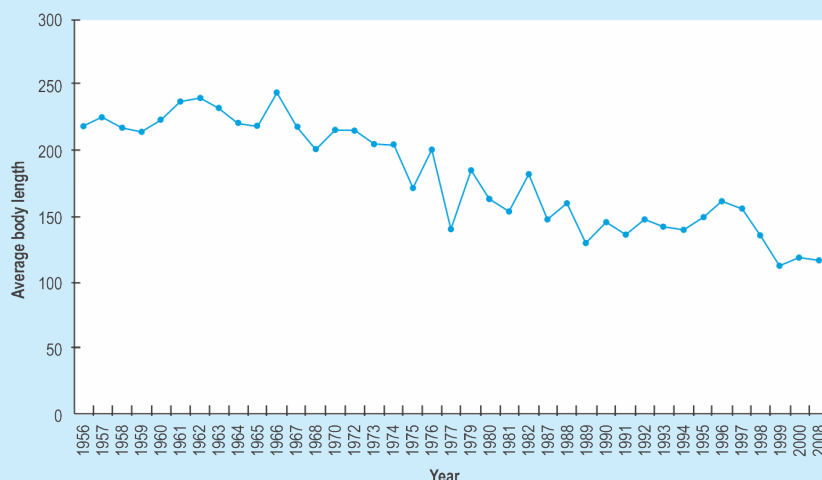
Box 1. Transboundary Diagnostic Analysis (TDA) of the Yellow Sea

Eight major transboundary environmental concerns have been identified in the Yellow Sea Transboundary Diagnostic Analysis (TDA), a GEF mechanism to jointly analyze factual and scientific information, and new information reported since the TDA was published:

- 1. Pollution and Contaminants**, including inorganic nitrogen and phosphate, fecal contaminants, heavy metals, persistent organic pollutants (POPs), polycyclic aromatic hydrocarbons (PAHs) and marine litter, result from human activities due to discharge of industrial, agricultural and domestic waste that enter into the marine environment through rivers, groundwater and atmosphere as wet or dry deposition.
- 2. Eutrophication**, constituting enhanced primary and/secondary biological production and results primarily from the increased availability of dissolved inorganic nitrogen and phosphorus, has an adverse effect on excessive algal blooms that decrease water transparency and give high concentration of organic matter in surface water as red tides. The Yellow Sea is vulnerable to eutrophication as it is isolated from the East China Sea by a strong thermohaline front; it has weak circulation internally and the flushing time is around seven years. The resulting bacterial decomposition from algal production causes oxygen depletion in the bottom water causing fish kills and mass mortality of other less mobile organisms, especially in mariculture establishments.

- 3. Plankton Community Changes.** Changes in the biomass and composition of phytoplankton and zooplankton communities could have serious consequences for fisheries productivity as these groups form the basis of the marine food chain. These changes could produce blooms (red tides and HABs) that are either toxic to higher organisms, cause paralytic shellfish poisoning in humans or reduce seafood palatability. Intense blooms can also reduce survival of fish and shellfish through gill clogging and reduced levels of dissolved oxygen.
- 4. Fishing Efforts Exceeding Ecosystem Carrying Capacity.** Gradual decrease mean size of catch of most species since 1986. Large commercially valuable species have been replaced by smaller, lower trophic level, less valuable pelagic species. Changes in species abundance as a consequence of overfishing affect the overall structure and productivity not only of the fish community but of the entire aquatic food chains in the wider Yellow Sea ecosystem.

The average body length of small yellow croaker from 1956 to 2008.



Green tide in Qingdao coast

5. Unsustainable Mariculture, represented by the falling productivity per unit area as the area under cultivation grows. This fall in productivity may be due to the fact that only unsuitable cultivation areas now remain, or that increased proximity of farms has resulted in increased disease transmission between farms, raised concentrations of organic wastes and increased competition for food resources amongst cultivated organisms. These factors increase stress and lower the growth and survival rates of the cultured organisms, thus reducing productivity.

6. Habitat Loss and Degradation. Almost 40% of coastal wetlands have been converted into other uses. Coastal construction has altered coastal habitats; industrial, agricultural and domestic effluent had further degraded these habitats which are important for shellfish resources and their culture, and many of the commercially important fish species use these areas as nursery or feeding grounds at some stage in their life cycle. Many endangered bird species also depend on these wetlands as feeding and breeding grounds on their migration routes. The wetlands perform important biogeochemical functions such as sediment retention, carbon sequestration, nutrient cycling, prevention of saltwater intrusion, and coastline stabilization.

7. Jellyfish Blooms. Joint cruises conducted under the first YSLME project and other studies reported that the population of jellyfish has increased in recent years causing the clogging of fishing nets and increasing the likelihood of swimmers getting stung. The increase in marine litter and the construction of concrete structures such as jetties and wharves have also increased the habitat available to the asexual reproductive stage of these jellyfish. The reduction of plankton-eating fish stocks brought about by overfishing has increased the food available to support the growth of jellyfish blooms. There appears to be a growing consensus that pollution, acidification of the sea and changing phytoplankton communities are leading to increased jellyfish densities in many regions. Not only do high jellyfish densities impact the tourists and fishers in the Yellow Sea, they also adversely impact fish stocks. Jellyfish feed on the fish larvae and that reduces the availability of zooplankton which is an important

food source for larval fish. The increase in jellyfish population has wider transboundary implications as a consequence of movements of jellyfish out of the Yellow Sea to neighbouring seas.

8. Potential Climate Change-related Impacts. Air temperatures over the Korean Peninsula have increased at a rate of 0.23°C/decade since the 1960s. Although annual variation in sea surface temperatures appear to be connected with other major climate/ocean systems (e.g., El Nino/Southern Oscillation and the Aleutian Low), mean sea surface temperatures have increased 0.38 – 0.94°C/decade in the Yellow Sea. Most of the major commercial fish species over-winter in the bottom cold water mass are located in the central southern portion of the Yellow Sea. Shrinkage of this cold water mass due to climate change could have serious consequences for these stocks. Some cold-water species, such as Pacific cod and herring, are no longer found in commercial numbers due to either overfishing or warming of the cold water mass or a combination of both. The increase in carbon dioxide emissions due to anthropogenic activities causes acidification of seawater. Links between jellyfish density and acidification have been reported. Potentially, the impacts of climate change could result in the mistiming of the arrival and breeding season of migratory birds with respect to food availability as evidenced in other seas. In addition, climate-driven changes in sea level could have significant impacts on the food available to wading birds by reducing the area of tidally exposed mudflats.



Jellyfish bloom (photo by Beidou survey)



Fishery species tagging technology in stock enhancement. (photo by Xuezhou Liu)



Kelp, fish and scallop IMTA model. (photo by Jianguang Fang)

Box 2. Strategic Action Programme

The Strategic Action Programme (SAP) identifies 11 regional targets aimed at maintaining the ecosystem's carrying capacity to provide the four ecosystem services (provisioning, regulating, cultural and supporting) to the region and beyond.

Ecosystem Carrying Capacity (ECC) is defined as the capacity of an ecosystem to provide its services or the sum of all the ecosystem services it can provide. It will be determined by various ecological processes that are inter-dependent, which in turn are determined by ecosystem configuration and state.

– YSLME SAP

These targets primarily address a particular ecosystem service, with the understanding that achievement of a target will also benefit other ecosystem services. These targets are set using current scientific understanding and most are quantitatively measurable. Under ecosystem-based management, scientific monitoring is essential to assess the impact of the management actions and management must be adaptive to respond to new knowledge. To achieve these regional targets, the SAP proposes associated technical management actions.

Provisioning Services

- Target 1:** 25-30% reduction in fishing effort
- Target 2:** Rebuilding of over-exploited marine living resource
- Target 3:** Improvement of mariculture techniques to reduce environmental stress

Regulating Services

- Target 4:** Meeting international requirements on contaminants
- Target 5:** Reduction of total loading of nutrients from 2006 levels

Cultural Services

- Target 6:** Reduced standing stock of marine litter from current level
- Target 7:** Reduce contaminants, particularly in bathing beaches and other marine recreational waters, to nationally acceptable levels

Supporting Services

- Target 8:** Better understanding and prediction of ecosystem changes for adaptive management including endangered and endemic species
- Target 9:** Maintenance and improvement of current populations/distributions and genetic diversity of the living organisms including endangered and endemic species
- Target 10:** Maintenance of habitats according to standards and regulations of 2007
- Target 11:** Reduction of the risk of introduced species

The SAP also suggests governance actions as an implementation mechanism to enhance the environmental effectiveness of legal instruments; to promote participation of a wide range of stakeholders; and to create the YSLME Commission. The SAP provides the means to secure economic justification of the actions and to monitor and evaluate their status and performance.

The SAP also suggests regional and national governance actions for the implementation of the SAP:

At regional level:

- Action 1:** Creation of a soft, non-legally binding and cooperation-based YSLME commission;
- Action 2:** Improvement of effectiveness of legal instruments through regional agreements and guidelines;
- Action 3:** Strengthening partnerships with existing regional cooperative institutions; and
- Action 4:** Establishment of a sustainable financial mechanism to support implementation off the YSLME SAP.

At national level:

- Action 1:** Improvement of the coherence and comprehensiveness of legal instruments for protection of the environment and biodiversity in the context of sustained economic development;
- Action 2:** Upgrading national capacity in compliance assurance, enforcement of controls on fishing activities and regulation of practices with environmental consequences; and
- Action 3:** Engagement of local government, private sector and NGOs.

The Yellow Sea represents a marine environmental resource shared among the coastal countries; hence, GEF involvement is critical in overcoming the geopolitical complexities and potential conflict among resource users in the Yellow Sea.

Within the GEF International Waters Strategic Priority 1 (IW-SP1), the project will:

- address the need for bilateral and multi-lateral programmes of action to enhance fish stocks;
- encourage the implementation of the FAO Code of Conduct for Responsible Fisheries; and
- engage the fishing and mariculture industries in sustainable management solutions that provide profit to the stakeholders without harming the Yellow Sea ecosystem.

Within the GEF IW-SP2, the project will:

- address the reduction of the nutrient loads, in fulfillment of the articles in pollution-related conventions through translating regional monitoring results into policies and providing mechanisms to exchange data among agencies and across borders;
- establish and improve management plans for the marine protected areas;
- regularly monitor the impacts of pollutants on habitats, surrounding areas, and assessment of affected stakeholders;
- utilize ecosystem-based approaches and adaptive management schemes to manage these transboundary water problems; and
- cover potential impacts of and adaptation to climate change through management actions.

3. Project Components and Linkage with SAP Targets

Objective: To achieve adaptive ecosystem-based management of the Yellow Sea Large Marine Ecosystem by fostering long-term sustainable institutional policy, and financial arrangements for effective ecosystem-based management of the Yellow Sea in accordance with the YSLME Strategic Action Programme.

COMPONENT 1

Ensuring sustainable regional and national cooperation for ecosystem-based management, based on strengthened institutional structures and improved knowledge for decisionmaking

OUTCOMES:

1.1 Regional governance structure, the YSLME Commission established and functional, based on strengthened partnerships and regional coordination

Key deliverables:

1. MOU or joint declaration on establishment of the YSLME Commission signed
2. NSAP implementation in China and RO Korea reviewed and reports prepared
3. YSLME SAP 2020-2030 updated/prepared
4. Legal personality of YSLME Commission or other arrangements initiated
5. Quality management system for Secretariat instituted

1.2 Improved inter-sector coordination and collaboration at the national level, based on more effective IMCCs

Key deliverables:

1. National IMCC in China and RO Korea established and operationalized

1.3 Wider participation in SAP implementation fostered through capacity building and public awareness, based on strengthened Yellow Sea partnership and wider stakeholder participation; improved environmental awareness; enhanced capacity to implement ecosystem-based management

Key Deliverables:

1. MOUs, regional and bilateral agreements, and other collaborative arrangements with regional and national partners signed
2. Exchange of local government officials/experts for cross-learning of experiences supported and new knowledge and practices applied
3. Collaborative trainings organized focusing on ecosystem-based management, social safeguards, environmental treaties and agreements, carrying capacity, regional cooperation, CBA and valuation such as benefits of IMTA, impacts of coastal and marine habitat modifications, habitat-based and food-chain based approaches for habitat conservation, economic valuation, and MPA networking
4. Communication strategy prepared and public awareness activities organized
5. YSLME internship program for SAP implementation initiated

1.4 Improved compliance with regional and international treaties, agreements and guidelines

Key deliverables:

1. Review of gaps in legislation initiated and priority legal reforms agreed
2. Regional guidelines for incorporating Code of Conduct for Responsible Fisheries by China and RO Korea prepared and agreed
3. National standards and management measures to comply with regional guidelines on Code of Conduct for Responsible Fisheries developed and implemented

1.5 Sustainable financing for regional collaboration on ecosystem-based management secured, based on cost-efficient and ecologically-effective actions

Key deliverables:

1. Pilot cost-benefit analysis and valuation studies of Integrated Multi-Trophic Aquaculture (IMTA), impacts of modification of marine habitats and effectiveness of fishing in both area and time conducted and report published
2. Financing agreement for YSLME Commission between participating countries and stakeholders adopted and implemented

SAP Targets being addressed

Regulating Services

Target 4: Meeting international requirements on contaminants

Governance actions 1, 2, 3 at the regional level, and governance actions 1, 2, 3 at the national level

COMPONENT 2

Improving Ecosystem Carrying Capacity with respect to provisioning services

OUTCOMES:

2.1 Recovery of depleted fish stocks as shown by increasing mean trophic level

Key deliverables:

1. Socioeconomic assessment of fishing boat buy-back scheme and support for alternative livelihoods program conducted
2. Assessment of effectiveness of license system and proposal of management innovations initiated

2.2 Enhanced fish stocks through restocking and habitat improvement

Key deliverables:

1. Stock assessment methodologies harmonized
2. Effectiveness of buy-back scheme and closure measures assessed
3. Improved techniques for replanting sea grass/macroalgae developed
4. Workshops for knowledge sharing and learning organized

2.3 Enhanced and sustainable mariculture production by increasing productivity per unit area as a means to ease pressure on capture fisheries

Key deliverables:

1. Regional guidelines for Integrated Multi-trophic Aquaculture prepared and adopted
2. Best management practice (BMP) for IMTA developed and published
3. National plan to promote IMTA developed
4. IMTA training modules prepared and training courses conducted

SAP Targets being addressed

Provisioning Services

Target 1: 25-30% reduction in fishing effort

Target 2: Rebuilding of over-exploited marine living resource

Target 3: Improvement of mariculture techniques to reduce environmental stress

COMPONENT 3

Improving Ecosystem Carrying Capacity with respect to regulating and cultural services

OUTCOMES:

3.1 Ecosystem health improved through reductions in pollutant discharge (e.g., nutrients) from land-based sources

Key deliverables:

1. Pollution monitoring guidelines and monitoring network agreed upon and methodologies harmonized
2. Agreement on data and information sharing mechanisms between China and RO Korea, and between YSLME Project and other organizations finalized
3. Demonstration of PPP projects in reduction of inorganic nitrogen, phosphate, fecal substances, heavy metals and POPs from investment projects initiated
4. Data products generated from shared data utilized by sectoral agencies in policy development and updating of the YSLME SAP

3.2 Wider application of pollution-reduction techniques piloted at demonstration sites

Key deliverables:

1. Regional strategy for use of wetland as nutrient sinks developed
2. Knowledge base and replication in use of wetland for restoring coastal and freshwater ecosystem improved

3.3 Strengthened legal and regulatory process to control pollution

Key deliverables:

1. Guidelines for microplastics monitoring and assessment by China and RO Korea prepared and applied
2. New financial and economic incentives and regulatory measures adopted in coastal cities in support of recycling economy
3. New provincial regulations to improve water quality in Shandong, Jiangsu and Liaoning provinces developed
4. New economically profitable businesses from waste reuse and recycling developed

3.4 Marine litter controlled at selected locations

Key deliverables:

1. Reducing marine litter through engagement of private sector and communities demonstrated
2. Advisory services in development and adoption of marine litter control policies and regulatory measures in coastal provinces provided

3. Awareness and education programs in demonstration site and YSLME region on responsible disposal of waste that end up in the sea initiated and organized

SAP Targets being addressed

Regulating Services

Target 4: Meeting international requirements on contaminants

Target 5: Reduction of total loading of nutrients from 2006 levels

Cultural Services

Target 6: Reduced standing stock of marine litter from current level

Target 7: Reduce contaminants, particularly in bathing beaches and other marine recreational waters, to nationally acceptable levels

Governance actions 1 and 2 at the national level

COMPONENT 4

Improving Ecosystem Carrying Capacity with respect to supporting services

OUTCOMES:

4.1 Maintenance of current habitats and the monitoring of the mitigation of the impacts of reclamation

Key deliverables:

1. YSLME Biodiversity Conservation Plan and management guidelines prepared and adopted
2. Regional guidelines for coastal habitat management developed and adopted

4.2 MPA network strengthened in the Yellow Sea

Key deliverables:

1. YSLME MPA network rationalized to incorporate connectivity for increased management effectiveness of critical species and habitats (i.e., migratory mammals and birds and their habitats, fish spawning and nursery sites, and cold water mass)
2. Capacity in management effectiveness of MPAs in selected sites developed through training courses and study visits
3. Design and establishment of new MPAs in coastal and marine areas covered in biodiversity conservation plan supported
4. Annual YSLME MPA forum conducted

4.3 Adaptive management mainstreamed to enhance the resilience of the YSLME and reduce vulnerability of communities to climate change impacts on ecosystem processes and other threats identified in the TDA and SAP

Key deliverables:

1. Regional strategies for adaptive management developed
2. Three Provincial adaptation strategies updated/developed
3. Climate resilience incorporated into four coastal ICM plans

4.4 Application of Ecosystem-based Community Management (EBCM) in preparing risk management plans to address climate variability and coastal disasters

Key deliverables:

1. A small grant program for improved awareness, knowledge, participation and preparedness to impact of climate change at community levels in YSLME region designed and implemented
2. Regional strategies for long-term ecosystem forecasts, modelling and scenario analysis developed
3. Regional monitoring network established, joint cruises organized, and data shared via the project website
4. Regional jellyfish and HAB monitoring programs created
5. Training modules on ecosystem-based management in LMEs for increased knowledge base and dissemination and transfer at regional levels prepared, used and revised

SAP Targets being addressed

Supporting Services

Target 8: Better understanding and prediction of ecosystem changes for adaptive management including endangered and endemic species

Target 9: Maintenance and improvement of current populations/distributions and genetic diversity of the living organisms including endangered and endemic species

Target 10: Maintenance of habitats according to standards and regulations of 2007

Target 11: Reduction of the risk of introduced species

4. Project Organizational Framework

The YSLME Commission will be established as a permanent institutional framework to continue and expand current efforts made under the first YSLME Project.

Commission Bodies

The **Interim Commission Council** shall serve as the Project Board, playing a critical role in project monitoring and evaluation by quality assuring these processes and products, and using evaluations for performance improvement, accountability and learning. YSLME Commission shall consist of: Participating countries with assistance from GEF National Implementing Agencies and IMCC chairpersons of each participating country; Chairman of the MSTP; UNDP/GEF; UNOPS; private sector bodies; and accredited NGOs.

The **Management, Science and Technical Panel (MSTP)**, as a permanent body, shall provide the RWGs with managerial, scientific, and technical guidance and the Interim Commission Council with managerial, scientific, and technical advice. The Panel shall consist of National Coordinators, RWG chairpersons, selected regional experts, and representatives of the private sector and NGOs actively engaged in SAP implementation, together with the Project Manager. The Panel coordinates regional activities across the RWGs; provides them with suggestions to improve the activities; considers budget allocations for each activity; and makes recommendations to

the Council for their approval of budgets, work plans and the execution of activities.

Regional Working Groups (RWGs) shall be established as necessary to effectively plan, coordinate and manage the various activities approved by the Interim Commission Council. Initially six working groups will be established with responsibility for coordinating actions at the regional level focusing on: fish stocks; sustainable mariculture; habitat conservation; pollution reduction; monitoring/assessment; and sustainability, socioeconomics and governance.

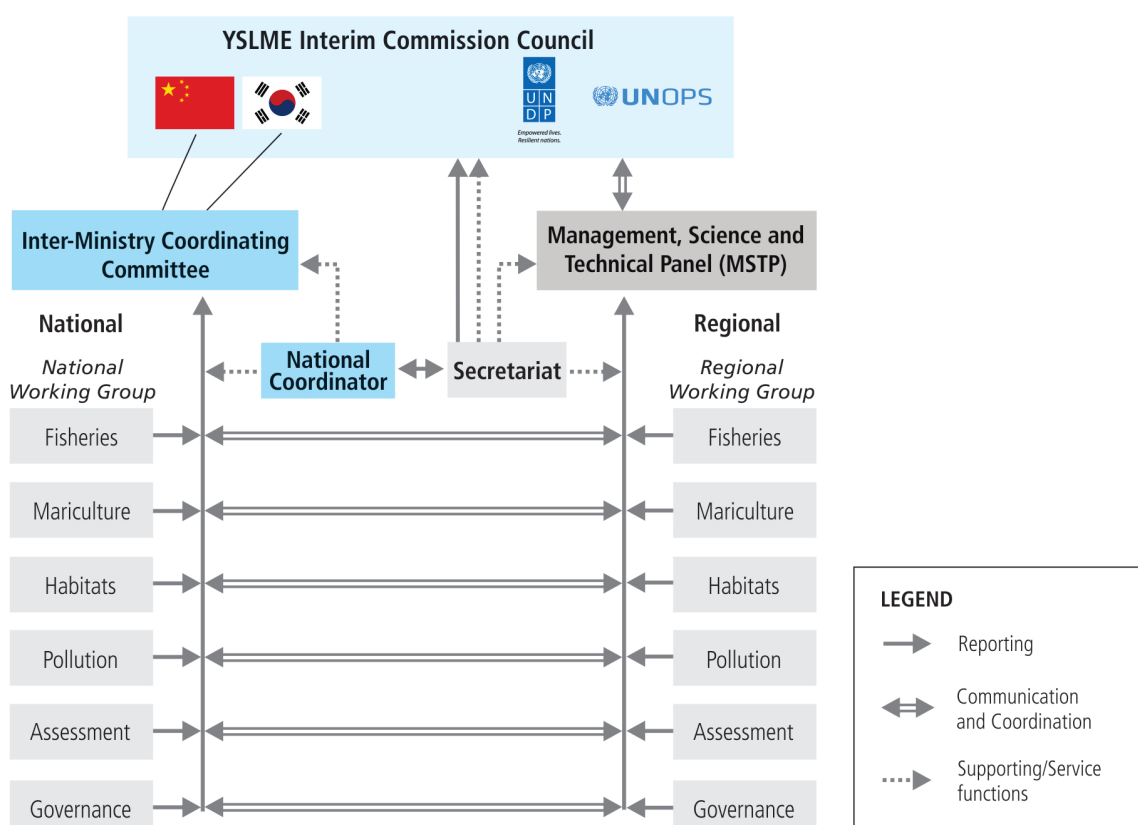
The **Inter-Ministry Coordinating Committee (IMCC)** coordinates national activities among relevant national ministries and institutions to ensure smooth implementation of national efforts in line with regional directions and objectives.

The **National Coordinator (NC)**, a full-time position appointed by the IMCC, serves as the primary national contact for the RWGs and the Secretariat.

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

Commission Secretariat as a permanent body shall provide administrative support and regional coordination among the bodies of the YSLME Commission, such as the Council, the MSTP, the RWGs, and the NCs.

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



5. Partnerships

The YSLME SAP will be implemented through the Yellow Sea Partnership (YSP), a multi-stakeholder initiative at global, regional, national and local scales continuously facilitated by the UNDP/GEF YSLME Phase II Project. Established in 2006, the YSP shares the following agreed common goals:

- (a) Reduction of the adverse environmental threats and impacts of development activities on the marine environment in the Yellow Sea;
- (b) Promotion of environmentally-sustainable management and use of the marine and coastal resources in the Yellow Sea; and
- (c) Fostering mutual knowledge and understanding between our people and our environment.

Existing and initial potential partners of the YSP include the following stakeholder groups:

Governments

- State Oceanic Administration (SOA) of PR China
- Ministry of Finance, PR China
- Ministry of Oceans and Fisheries (MOF), RO Korea
- Ministry of Foreign Affairs (MOFA), RO Korea
- Incheon Metropolitan City, RO Korea
- National Marine Environment Monitoring Center (NMEMC) of SOA, PR China
- Korea Marine Environment Management Corporation (KOEM), RO Korea
- Provincial and local governments of PR China and RO Korea bordering the Yellow Sea

Parliamentary organizations in the two countries

UN Agencies, Global and Regional Institutions and Mechanisms

- UNDP
- UNOPS
- The GEF
- IW:LEARN
- PEMSEA
- NOWPAP
- IOC/WESTPAC
- UNESCAP-ENEA
- COBSEA

Academia

- First Institute of Oceanography (FIO/SOA), PR China
- Yellow Sea Fisheries Research Institute (YSFRI), PR China
- Institute of Geographic Sciences and Natural Resources Research of Chinese Academy of Sciences (CAS), PR China
- Korea Institute of Ocean Science and Technology (KIOST)
- Korea Maritime Institute (KMI)
- National Institute of Fisheries Science (NIFS), RO Korea
- Korea University

- Anyang University, RO Korea
- Chungnam National University, RO Korea
- Pukyong National University, RO Korea
- Jeju National University, RO Korea
- Inha University, RO Korea
- Hanyang University, RO Korea
- Kunsan University, RO Korea

NGOs

- WWF
- Wetland International
- Marine Stewardship Council (MSC)
- Dalian Cooperative Young Marine and Coastal Scholar Society (CYMCSS), PR China
- Global Village of Beijing (GVB)
- East Asian-Australasian Flyway Partnership (EAAFP)
- Conservation International
- Paulson Institute
- BlueRibbon Ocean Conservation Association (BOCA), China
- Eco- horizon Institute, RO Korea
- Ganghwa Tidal Flat center, RO Korea
- SiheungGaetgol Eco Park, RO Korea
- Seochon Bird Ecological Park, RO Korea
- BuanJulpoo Bay Tidal Ecological Park, RO Korea
- Gochang Tidal Flat Visitors' Center, RO Korea
- Muan Ecological Tidal Flat Center, RO Korea
- Sinan Mudflat Center, RO Korea
- Suncheon Bay Eco-center, RO Korea
- Nakdong Estuary Eco Center, RO Korea
- Bongam Tidal Flat Ecological Center, RO Korea
- Moolseal, Ganghwa Tidal Flat Education Center, RO Korea
- Marine Environment Education Center, RO Korea
- Our Sea of East Asia Network, OSEAN, RO Korea
- Shihwa Life Saver, RO Korea
- Ganghwa People's Network, RO Korea

Private sector groups such as aquaculture associations



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