



2019
Project Implementation Review (PIR)



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Yellow Sea LME phase II

Basic Data	2
Overall Ratings.....	4
Development Progress.....	5
Implementation Progress	55
Critical Risk Management	57
Adjustments	59
Ratings and Overall Assessments	60
Gender	68
Social and Environmental Standards	70
Communicating Impact	72
Partnerships	73
Annex - Ratings Definitions.....	74

A. Basic Data

Project Information	
UNDP PIMS ID	4552
GEF ID	4343
Title	Implementation of the Yellow Sea LME Strategic Action Programme for Adaptive Ecosystem-Based Management
Country(ies)	China, China, Dem Rep Korea, Regional - Asia and Pacific
UNDP-GEF Technical Team	Water and Oceans
Project Implementing Partner	UNOPS
Joint Agencies	<i>(not set or not applicable)</i>
Project Type	Full Size

Project Description
<p>Yellow Sea Large Marine Ecosystem is a water body bordered by China, RO Korea and DPR Korea, covering an area of 400,000 km². Rivers discharge about 1.6 billion tons of sediment and 1,500 billion tones of freshwater into the Yellow Sea. The low flushing rate between Yellow Sea and East China Sea of one every seven years, combined with weak water circulation, makes this sea vulnerable to pollution and its coastal areas highly susceptible to localized pollution discharges. Qingdao, Dalian, Shanghai, Seoul/Incheon (RO Korea) and Pyongyang/Nampo (DRP Korea) are the five cities with over tens of millions of inhabitants bordering the sea. This population relies on the Yellow Sea LME's ecosystem carrying capacity to provide capture fisheries resources in excess of two million tonnes per year, mariculture over 14 million tonnes per year, support for wildlife, provision of bathing beaches and tourism, and its capacity to absorb nutrients and other pollutants. Yet fishing efforts increased threefold between the 1960s and early 1980s, during which time the proportion of demersal species, such as small and large yellow croakers, hairtail, flatfish and cod, declined by more than 40 percent in terms of biomass. Other major transboundary problems include increasing discharge of pollutants; changes to ecosystem structure leading to an increase in jellyfish and harmful algal blooms; 40 percent loss of coastal wetlands from reclamation and conversions projects. Severe environmental degradation has cost the country approximately nine percent of its gross national income in 2009. This situation has been further exacerbated by incomplete legislation and insufficient enforcement. The environmental foundation needed to sustain economic growth may be irreversibly altered, and the important human health implications of a deteriorating environment such as increased agriculture and food contamination and air and water pollution, have resulted in a series of efforts to improve the environment. In recent years, the Government aims to establish an 'ecological civilization' which indicates readiness for environmental transformation.</p> <p>The objective of the regional project is to achieve adaptive ecosystem-based management of the Yellow Sea Large Marine Ecosystem bordered by China, RO Korea and DPR Korea 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 (YSLME SAP) adopted by China and RO Korea in 2009. To achieve this objective, the project will support the formation of the YSLME Commission oversee the implementation of the YSLME SAP, innovate institutional arrangements, improve management capacity and quality of function. This includes, developing robust governmental coordination mechanisms, strengthening regulatory mechanisms while strengthening the incentive structure to promote environmental protection, developing mechanisms to link land and sea and resource use to carrying capacity, and systems for the participation of a range of stakeholders. The key benefits of the project include recovery of depleted fish stocks</p>

and improved mariculture production and quality; improved ecosystem health; maintenance of habitat areas; strengthened stakeholder participation in management and improved policy making; and skills and capacity significantly developed for region-wide ecosystem-based management. This project is in line with Outcome 2 of the Priority Area of Improved and Sustainable Environment of the UNDAF 2016-2020 in China: more people enjoy a cleaner, healthier environment as a result of improved environmental protection and sustainable green growth.

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Other Partners	<i>(not set or not applicable)</i>

B. Overall Ratings

Overall DO Rating	Moderately Unsatisfactory
Overall IP Rating	Moderately Unsatisfactory
Overall Risk Rating	High

C. Development Progress

Description					
Outcome 1					
Ensuring Sustainable Regional and National Cooperation for Ecosystem-Based Management					
Description of Indicator	Baseline Level	Midterm target level	End of project target level	Level at 30 June 2018	Cumulative progress since project start
Status of YSLME Commission and subsidiary bodies at regional level	Ad hoc regional co-ordination through the YSLME Regional Project Board and weak cross sector management at the national level	<i>(not set or not applicable)</i>	All the Terms of Reference for the YSLME Commission and Subsidiary Bodies) approved by all participating country Governments Functioning YSLME Commission	On Track. The Project Manager, Environmental Economist, Environment Officer and Administrative/MIS/Finance Assistant were on board before March 24, 2017 to manage the project. TORs of the Interim YSLME Commission Council and its Subsidiary Bodies, Rules of Procedures for the Interim Commission Council (ICC), TORs of the six Regional Working Groups (RWGs) and Secretariat Staff were approved by the first meeting of the ICC held on July 13, 2017. Both PR China and RO Korea nominated National Project Coordinator (NPC), members of the Inter-Ministerial Coordinating Committee (IMCC), members to Regional Working Groups (RWGs) and National Working Groups (NWGs). First meetings of the six RWGs were held: RWG-A (Incheon, ROK, November 21-22, 2017); RWG-F (Yantai, PRC, October 17-18, 2017); RWG-G (Seoul, ROK, Dec 14-15, 2017); RWG-H (Incheon, ROK, Sept 4-5, 2017); RWG-M (Weihai,	Terms of reference of the Interim YSLME Commission Council and its Subsidiary Bodies, Rules of Procedures for the ICC, TORs of the six Regional Working Groups (RWGs) and Secretariat Staff were approved by the first meeting of the ICC held on July 13, 2017 and operationalized. Both countries nominated National Project Coordinator (NPC), members of the Inter-Ministerial Coordinating Committee (IMCC), members to Regional Working Groups (RWGs) and National Working Groups (NWGs) but chairmanship of the six RWGs was determined by the two countries by end of July 2017. The roadmap for developing a sustainable regional environmental governance framework was approved by the two countries in March 2019 at the ICC-2, which specifies the key elements of the YSLME Commission, gaps and barriers in

				<p>PRC, Oct 26-27, 2017); RWG-P (Dalian, PRC, Oct 10-12, 2017). The roadmap for a sustainable regional environmental governance framework developed by the project is being implemented. ICC-2 held on March 28 approved the plan for establishing the Yellow Commission and the TORs of Task Force on Rules and Governance (TF-RoG) and TF on Financing Mechanism (TF-FM). The Ocean Governance Specialist is on board to assist the TF-RoG to develop the inception report specifying the process and legal documents necessary to institutionalize the YSLME Commission</p>	<p>terms of institution, policy and good governance for a sustainable Commission, and a plan of activities and timeframe for establishment of the Commission. Three ICCs meetings were held back to back with meetings of Management, Science and Technical Panels (MSTP) (July 13, Seoul, ROK; March 27-29, Dalian, PRC; March 12-14, Qingdao, PRC), and an ad hoc ICC is being planned on July 15-16, Qingdao, PRC. The regional working group mechanism has been operationalized through conduct of meetings of the six RWGs and adoption of proceedings: RWG-A (Incheon, ROK, November 21-22, 2017; Kunming, PRC, June 27, 2018); RWG-F (Yantai, PRC, October 17-18, 2017; Jeju, ROK, October 10-11, 2018); RWG-G (Seoul, ROK, Dec 14-15, 2017); RWG-H (Incheon, ROK, Sept 4-5, 2017); RWG-M (Weihai, PRC, Oct 26-27, 2017; Jeju, ROK, Nov 8-9); RWG-P (Dalian, PRC, Oct 10-12, 2017; Busan, ROK, June 4-5, 2019). The Task Force on Rules and Governance (TF-RoG) and TF on Financing Mechanism (TF-FM) were established at the ICC-2. At the ICC-3 a consensus was reached among the ICC members to support a study on the flexible and innovative options for a sustainable YSLME governance</p>
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					mechanism. Task Force members on ROG of the two countries reviewed the draft report of the study to be reviewed again at the ad hoc ICC (July 15-16, 2019). Legal documents for establishing the YSLME governance mechanism and sustainable financing mechanism prepared by the Ocean Governance Specialist and Financing Specialist will be considered as well at the ad hoc ICC.
Status of Inter-Ministerial Coordinating Committee (IMCC)	Sector management has been the normal arrangements with limited inter-sector or inter-ministerial interactions; where coordination was done, it was on a case by case such as fishery management activities	<i>(not set or not applicable)</i>	Participation of Ministries in the IMCC will include but not limited to the following: Ministry of Foreign Affairs, Ministry of Finance, relevant department or ministry of ocean & fishery. Two meetings of IMCC every year and functioning coordination	On track. In RO Korea, IMCC has been established with the following membership: Ministry of Foreign Affairs as GEF National Focal Agency and Ministry of Oceans and Fisheries as GEF National Implementing Agency. Other relevant Ministries including Ministry of Environment, Ministry of Unification etc. will be engaged the project deems necessary. In PR China, IMCC includes the following members: Ministry of Finance (MOF); State Oceanic Administration (SOA); Ministry of Agriculture and Rural Affairs (MOARA); Ministry of Foreign Affairs; and provincial governments of Liaoning, Shandong and Jiangsu. Representatives from MOFA and MOF of ROK, and SOA and MOARA participated in the first and second meetings of the ICC. Both PR China	In RO Korea, IMCC established with the following membership: Ministry of Foreign Affairs (MOFA) as GEF National Focal Agency; Ministry of Oceans and Fisheries (MOF) as GEF National Implementing Agency; Other relevant Ministries including Ministry of Environment, Ministry of Unification etc. In PR China, the IMCC before April 2019 included State Oceanic Administration (now known as Ministry of Natural Resources, MNR), Ministry of Agriculture (now known as Ministry of Agriculture and Rural Affairs, MARA), and provincial governments of Liaoning, Shandong and Jiangsu. With the reorganization of the SOA into the Ministry of Natural Resources (MNR), the management of marine ecology and environment and marine protected areas previously

				and the RO Korea held the first and second meetings of the IMCC right before the MSTPs and ICCs.	under the mandates of the SOA is now shared by Ministry of Ecology and Environment (MEE) and National Forestry and Grassland Administration (NFGA). Under this circumstance, the MNR issued the notification on the working mechanism under the phase II of the UNDP/GEF YSLME Project that specifies the members of the inter-ministerial coordination committee, expert committee, and adjusted the membership of the NWGs and National Coordinator. The new mechanism includes MNR, MEE, MARA and NFGA as members. Both PR China and the RO Korea held regular meetings of the IMCC right before meetings of the the MSTPs and ICCs. The future of the IMCC under the new governance mechanism is uncertain.
Number of the YS Partnerships; Number of activities on capacity building and public awareness; Number of participants in capacity building activities	20 members of the Yellow Sea Partnership	<i>(not set or not applicable)</i>	Number of partnerships: 40 Number of capacity building activities: 25 Number of public awareness initiatives: 15 Number of participants in capacity building activities: about 200	On track. By end of March 31, a total of 66 international organizations and entities from PR China and RO Korea are identified as existing and new partners, including 4 ministries and 6 provincial government partners, 1 local government, 5 regional partners, 8 universities, 15 academic institutions, and 27 NGOs. Collaborative activities have been conducted with IW:Learn, NOWPAP, PEMSEA, SEAFDEC, EAAFP, IUCN, Hanns Seidel Foundation, FIO/PRC, NMEMC/PRC, YSFRI/PRC, Liaoning	Yellow Sea Partnership (YSP), which is meant to support the implementation of the YSLME SAP, is strengthened in YSLME Phase II with the adoption at the ICC-1 of the Guidelines for Strengthening the YSP. It is envisaged to be a multi-stakeholder initiative with members from global, regional, national and local scales provisionally facilitated by the UNDP/GEF YSLME Phase II Project. By the end June of 2019, more than 40 national and local governments, regional

				<p>Ocean and Fisheries Institute/PRC, IOCAS/PRC, BlueRibbon/PRC, NIFS/ROK, KEOM/ROK, NEAMPAN/UNESCAP, Ganghwa Tidal Flat Center/ROK, EcoHorizon/ROK, WWF Korea, and local governments such as Liaoning/PRC, Shandong/PRC, Jiangsu/PRC, Weihai/PRC, Incheon/ROK, etc.</p> <p>On March 1, 2017, UNOPS signed an MOU with National Marine Environmental Monitoring Center of State Oceanic Administration (NMEMC/SOA) whereby the Secretariat Dalian Branch acquired a two-room office with a total of 33 square meters as branch office up to November 22, 2019 for Environment Officer. An MOU was also signed between UNOPS and Incheon on the use of office space by PMO staff.</p> <p>The project conducted a number of joint events with partners. For example, on July 14, 2017, the Project organized a MPA Seminar in Ganghwa Tidal Flat Center with NEAMPAN of UNESCAP and KOEM of ROK to raise awareness of the global, regional and local importance of the tidal flat of Ganghwa.</p>	<p>organizations and regional seas programmes, academia, NGOs and private sector participated in YSLME events. Among these, 14 partners collaborated with YSLME Phase II Project in the conduct of workshops, seminars and training courses. Dates, partners and activities of some of these partnership events include:</p> <ul style="list-style-type: none"> o On July 14, 2017, a MPA Seminar was organized in Ganghwa Tidal Flat Center with NEAMPAN of UNESCAP and KOEM of RO Korea. o On September 14-15, 2017, the Project sponsored the organization of the International Symposium on IMTA with NIFS/MOF of RO Korea. o On July 23-27, 2018, Workshop on designing a network of MPAs for the YSLME based on biophysical connectivity was jointly organized by PMO with KOEM and MABIK of RO Korea. o On June 25-26, 2018, PMO organized the China-Korea Workshop on Harmful Marine Organisms in Yellow Sea was held in Kunming in collaboration with SOA/PRC, MOF/ROK, KOEM/ROK, IOCAS/PRC and NMEMC/PRC. o On July 30-31, 2018, the Fish Stock Assessment Workshop
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				<p>UNOPS signed a MOU with SOA authorizing UNOPS to enter into PCAs with NMEMC, FIO and YSFRI, which were signed in March and April, 2018. Guidelines for Strengthening Yellow Sea Partnership have been approved by the ICC-1, and is now being implemented.</p>	<p>was held in Tongyeong of RO Korea in collaboration with NIFS.</p> <ul style="list-style-type: none"> o On September 17-18, 2018, International Training Course of Physiological Energy Measurement Technique of Bivalves was jointly organized by PMO and YSFRI/PRC. o On November 17-18, 2018, Seminar on the Law and Policy to Promote Regional Ocean Governance was held with Marine Development Studies Institute of Ocean University of China, Center for Global Climate and marine Governance of Korea University and NMEMC. o On December 1-2, 2018, Integrated Multitrophic Aquaculture (IMTA) Responsibly Farming Waters by Taking Advantage of Ecosystem Services was jointly organized with Asian Institute of Technology (AIT); o An ad hoc expert meeting of RWG-A was held in Qingdao on May 14, 2019 for participants to share views on how to achieve the targets of each activity within the available timeframe. o On June 16-17, 2019, PMO also organized the 2nd China-Korea Workshop on Harmful Marine Organisms in YS in Jeju, RO Korea
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					<p>in collaboration with KOEM/ROK and NMEMC/PRC.</p> <p>o A China-Korea workshop on Yellow Sea Cold Water Mass (YSCWM) in the Yellow Sea was held on June 11-12, 2019 in Penglai, PR China with 19 participants, and organized by FIO/PRC, KIOST and KOEM/ROK and PMO.</p> <p>The YSLME II Project maintained close coordination with other global and regional ocean governance initiatives for information sharing, knowledge management and learning.</p> <p>To date, the YSLME II Project staff participated in 21st and 22nd IGMs of NOWPAP, the 9th Partnership Council Meeting of PEMSEA, the EAS Congress 2018 and the meeting on Building International Partnerships to Enhance Science-based Ecosystem Approaches in Support of Regional Ocean Governance and LME consultation meeting organized by IOC/UNESCO and LME:Learn, and the training course on ocean governance held in Vietnam organized by IOC/UNESCO.</p> <p>In 2018 alone, a total of 15 events were organized by PMO in collaboration with YSLME Partners</p>
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					<p>attracting 445 participants including 301 males (67.6%) and 144 females (32.4%).</p> <p>Capacity development is a major area of project intervention and partnership development. Four capacity development activities were organized in 2018. YSLME training on IMTA for mariculture operators in Rongcheng City of Shandong Province (May 20, Rongcheng, 32 participants), Workshop on designing a network of MPAs for the YSLME based on biophysical connectivity (July 23-27, Seocheon, 29 participants), international training course of physiological energy measurement technology of bivalves (September 17-18, Rongcheng, 119 participants) are specifically to develop the capacity of mariculture operators and MPA managers to apply IMTA technology and developing ecological network of MPA in YSLME. The 1st regional workshop on designing a network of MPAs for the YSLME in Seocheon, RO Korea was sponsored by National Marine Biodiversity Institute (MABIK) of ROK. More than 30 representatives from 17 research institutes, universities, NGOs, regional organizations and local governments of PRC, ROK and USA attended the 5-day</p>
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					<p>workshop. These training were attended by 180 participants from PR China and RO Korea. The project also provided three resource persons from RWG-M to lecture in the training course on integrated multiprophic aquaculture (IMTA) responsibly farming waters by taking advantage of ecosystem services (December 1-2, Bankok).</p>
<p>Status of recognition and compliance to regional and international treaties and agreements</p>	<p>Regional and international treaties and agreements are recognized by China, but not fully compliant.</p>	<p><i>(not set or not applicable)</i></p>	<p>Better compliance of the relevant regional and international treaties and agreement e.g. UNCLOS, The 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, CBD, Ramsar, The FAO Code of Conduct for Responsible Fisheries, and the bilateral agreements between China & ROK on environment protection and fisheries</p>	<p>Off track. The Assessment Report on China's Legal Framework in Compliance with the International and Regional Legal Instruments for the Implementation of SAP was completed by the Legal Expert. Legal reforms in the areas of marine litter, wetland, environmental risk assessment, fisheries and climate change adaptation are needed in accordance to the assessment. A regional seas governance workshop is scheduled in November 17-18 to set a dialogue with government partners on follow-ups with the findings of the study. .</p>	<p>The Project approach to achieving compliance of international ocean-related treaties and agreements is through desk review, training, preparation of training modules to synergize implementation of treaties and agreements at LME scale and development of national standards and management measures in both countries. In this regard, the Legal Expert submitted two reports: the assessment report on China's legal framework in compliance with the international and regional legal instruments for the implementation of SAP in the YSLME Project II and the assessment report of China's national and local capacity for implementation of international legal documents in the YSLME Phase II Project. The second report provides a review of the national and local capacity in implementation of UNCLOS, CBD, RAMSAR, UNFCCC and FAO</p>

					Code of Conduct for Responsible Fisheries. The preparation of regional guidelines for incorporating FAO Code of Conduct for Responsible Fisheries (CCRF) in YSLME context is being undertaken by YSFRI. Review of the 10 requirements has been completed and the two countries agreed to descope the 10 requirements for further in-depth analysis of the regulatory framework and management practices. Technical assistance to develop national standards and management measures in line with the regional guidelines of CCRF is not yet initiated. Hosted by Ocean University of China, Korea University and KOEM from ROK and the Project, the International Seminar on the Law and Policy to Promote Regional Ocean Governance in the YSLME Region was organized in 17-18 November 2018 in Qingdao, PRC to enhance the understanding of regional ocean governance (ROG) theory, share information on good ROG practices, and discuss about how to improve the law and policy framework to achieve a more effective governance with more than 50 experts.
Agreement on the financial arrangement for the YSLME Commission	YSLME Commission does not exist at start of project	<i>(not set or not applicable)</i>	Financing agreement between and	On track. Initial discussion was held on financial arrangement of the regional marine	Initial discussion on financial arrangement of the regional marine environmental cooperation

			among countries agreed to fully support YSLME for at least 5 years.	environmental cooperation mechanism in the first meeting of the RWG-G. The meeting decided to continue to seek external grant such as GEF and GCF to support the operation of the YSLME Commission if established within the project timeframe. The Financing Specialist to develop the YSLME Trust Fund and financial rules is in the process of hiring to enable the Commission to accept resources from different donors as alternative financing to implementation of the YSLME SAP.	mechanism took place in the first meeting of the RWG-G (December 14-15, Seoul). The meeting decided to continue to seek external grant such as GEF and GCF to support the operation of the YSLME Commission if established within the project timeframe. The Financing Specialist contracted by UNOPS submitted the YSLME Partnership Trust Fund to the countries but review was deferred to ad hoc ICC to be held in July 15-16, Qingdao, China.
The progress of the objective can be described as:		Off track			
Outcome 2					
Improving Ecosystem Carrying Capacity with Respect to Provisioning Services					
Description of Indicator	Baseline Level	Midterm target level	End of project target level	Level at 30 June 2018	Cumulative progress since project start
Number of fishing boats decommissioned from the fleet in YSLME waters	About 1.2 million fishing boats	<i>(not set or not applicable)</i>	Fishing boat numbers substantially reduced by 10%, in line with the 2020 target of 30% reduction	On track . China has set the national targets to reduce 20,000 fishing vessels with a total capacity of 1.5 million kW and reduce fish landings by 15 percent during 13th FYP (2016-2020). Based on information provided by PR China in the review of SAP implementation (June 2018), the number of fishing vessels will be reduced from the baseline of 21,713 (Liaoning: 7,084; Shandong: 10,355; and Jinagsu: 4,274) in 2015 to 18,797 (Liaoning:	On track. PR China has set the national targets to reduce 20,000 fishing vessels with a total capacity of 1.5 million KW and reduce fishing landings by 15 percent during the 13th FYP (2016-2020). In addition, fishing closure in Yellow Sea from May 1 to September 16 has been introduced in 2017 by Ministry of Agriculture of China (now known as Ministry of Agriculture and Rural Affairs) to restore the declining fish stocks. Based on information

				<p>6,177; Shandong: 8,976; and Jiangsu: 3,644) by 2020. Achieving this target represents a reduction of fishing vessels by 13.4% of the baseline year of 2015. The project supported the development of fishing vessel selection criteria, and through its Yellow Sea Grant Program will support livelihood development of the displaced fishermen based on findings of a socioeconomic study of fishing vessel buyback scheme.</p>	<p>provided by PR China in the review of SAP implementation (June 2018), the number of fishing vessels will be reduced from the baseline of 21,713 in 2015 (Liaoning: 7,084; Shandong: 10,355; and Jinansu: 4,274) in 2015 to 18,797 by 2020 (Liaoning: 6,177; Shandong: 8,976; and Jiangsu: 3,644) by 2020. If fully implemented in PR China, a 13.4 percent reduction of fishing vessels by 2020 would be achieved, exceeding the targeted reduction of 10 percent by 2020. There is a continued reduction in fisheries outputs in the two countries, evidenced by a significant reduction in RO Korea up to 2017 and a decrease of annual total allowable catch from 13 million tons to 10 million tons from inshore and offshore capture fisheries, or 25 percent reduction to be achieved in 2018 in PR China.</p> <p>In commensurate with the efforts of reducing fishing vessels and outputs, the project also intervened in assurance of social safeguards. A study on the social and economic implication of the implementation of the fishing vessel buy-back scheme in PR China was conducted, suggesting to focus on livelihood support and vocational skills training to enhance the employment</p>
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					of displaced fishermen. In the ICC-3 (Qingdao, March 12-14), a proposal to conduct . training for re-employment of displaced fishermen joining the fishing vessel buy-back scheme was approved for Yantai University to train a total of 250 fishermen with 90 percent re-employment with support from Provincial and local fishery bureaus in Shandong, Liaoning and Jiangsu from July to November, 2019.
Status of major commercially important fish stock from restocking and habitat improvement	Effectiveness of restocking and habitat protection not evaluated	<i>(not set or not applicable)</i>	Measurable improvement (5%) in standing stock and catch per unit effort; Future management decisions on restocking based on effectiveness	On track. In Shandong Province, the restocking of fish through artificial reef has been monitored and evaluated in coastal areas of Haiyang City, with an investment of CNY 37 million from 2013 to 2017 in a sea area of 57 ha. Stones, tubular concrete reef, rectangular concrete reef, steel frame reef, square concrete reef, waste fishing vessels were deployed following technical advice from the project-recruited consultants. Seabed algae field in the artificial reef areas has been formed, and algae and shellfish start to stick to the reefs after one year of deployment, dominated by <i>Ulva pertusa</i> , Sea mustard, <i>Ostrea plicatula</i> , reaching 50% coverage of reef area. Fish, shrimps and crabs are also increasing significantly. Based on the assessment in October of 2012, the abundance of 23 economic species in the reef area have increased 2.29 times. The number of	Total allowable catch (TAC), marine ranching involving artificial reef, fish fry release and marine forests plantations and license system are the key measures in the PR China and RO Korea to recover fish stocks and support fishermen's revenue. Both PR China and RO Korea have introduced total allowable catch (TAC) system in fishery management. Currently RO Korea applies TAC system to 11 species with 70 TAC observers, while PR China piloted the system in 2017 starting with two species. Swimming Crab (<i>Portunus trituberculatus</i>) is under TAC in both countries, providing an ideal example for learning in application of TAC to improve management effectiveness of fish stocks. In line with targets of the UNDP/GEF

				<p>fish caught per net is 90, 3.5 times increase. Catch per unit time is 7,154 g per net, an increase of 2.82 times than in 2012. In 2017, Shandong Fushan Marine Science and Technology Co. Ltd won the bidding to build and deploy 1,800 square steel-integrated monolithic reefs (3m X 3m X3m) and establish marine ranching observation system in a sea area of 7.8 ha in Haiyang Fuhan National Marine Ranching Demonstration Area in the external waters of Pipakou located in the east of Haiyang City, Shandong Province. With a total funding of CNY26 million, the project was approved in 2017 and is now being implemented in 2018 for completion in 12 months. The YSLME Project will continue to use the monitoring indicator system of marine ranching construction of Shandong Province to assess the results of fish stock enhancement of the artificial reefs before and after construction. Monitoring of enhancement results will continue and be reported to ICC in December 2018.</p>	<p>YSLME Phase II Project to recover depleted fish stocks by taking a combination of measures ranging from reducing fishing efforts to restocking, the YSLME Project Management Office (PMO) organized the Korea-China Workshop on Stock Assessment in Tongyeong, RO Korea on 30-31 July 2018 co-hosted by MOF of RO Korea, SOA and Ministry of Agricultural and Rural Affairs of PR China (MARA). Attended by more than 20 fisheries experts and researchers from 9 research institutes, universities, public agencies of PR China, RO Korea and United States of America, the workshop facilitated the exchange of experiences among participating countries in stock assessment methodologies and processes using Swimming Crab and small yellow croaker as two case species. Use of TAC as a conservation and management measure for joint stock management in Yellow Sea is still at infancy stage.</p> <p>Marine ranching through artificial reef, is common approach to adopted by both countries to restore depleted fish stocks. In PR China, three groups of national marine ranches are piloted and supported by Ministry of Agriculture and Rural Affairs with a total of 64</p>
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				<p>operations in Yellow Sea, East China Sea and South China Sea in 2017. In RO Korea, a total of 36 marine ranches are established to restock the fish population including in the Yellow Sea. Initial study by Shandong Ocean and Fisheries Department indicate positive results of marine ranching in restocking fish population. According to FIRA of ROK, efforts to establish marine forests in ROK was made at 21 and 24 sites respectively in 2015 and 2016, creating areas of 3,236 ha and 3,064 ha with support of project funding 35.7 million USD and 34.7 million USD respectively. This initiative is encouraged nationally through a national Act enforced since 2012 by designating 10th May every year as Marine Gardening Day. Projects on Marine Ranches have also been implemented by applying at 19 sites in 2015 and 2016 with support of project funding 19 million USD in 2015 and 2016 respectively. Marine ranching has produced some tangible results in project demonstration sites. In Shandong Province, the restocking of fish through artificial reef has been monitored and evaluated in coastal areas of Haiyang City, with an investment of CNY 37 million from 2013 to 2017 in a sea area of 57 ha. Stones, tubular concrete reef, rectangular concrete reef, steel frame reef, square concrete</p>
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				<p>reef, waste fishing vessels were deployed following technical advice from the project-recruited consultants. Seabed algae field in the artificial reef areas has been formed, and algae and shellfish start to stick to the reefs after one year of deployment, dominated by <i>Ulva pertusa</i>, Sea mustard, <i>Ostrea plicatula</i>, reaching 50% coverage of reef area. Fish, shrimps and crabs are also increasing significantly. Based on the assessment in October of 2012, the abundance of 23 economic species in the reef area have increased 2.29 times. The number of fish caught per net is 90, 3.5 times increase. Catch per unit time is 7,154 g per net, an increase of 2.82 times than in 2012. In 2017, Shandong Fushan Marine Science and Technology Co. Ltd won the bidding to build and deploy 1,800 square steel-integrated monolithic reefs (3m X 3m X3m) and establish marine ranching observation system in a sea area of 7.8 ha in Haiyang Fuhun National Marine Ranching Demonstration Area in the external waters of Pipakou located in the east of Haiyang City, Shandong Province. With a total funding of CNY26 million, the project was approved in 2017 and is now being implemented in 2018 for completion in 12 months. The YSLME Project will continue to use the monitoring</p>
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					<p>indicator system of marine ranching construction of Shandong Province to assess r the results of fish stock enhancement of the artificial reefs before and after construction. Monitoring of enhancement results will continue and be reported to ICC in December 2018.</p> <p>With project support, effectiveness of license system was assessed in PR China by YSFRI and recommendations were proposed. The study indicates that: (1) license system has already restricted the quantity of marine fishing vessel numbers that had fishing activities in the Yellow Sea. However, the total tonnage and horsepower increased, which means management still needs to be strengthened to control the fishing vessel quantity, tonnage and horsepower in a reasonable range, so that the fishery resources in the Yellow Sea can be utilized in a reasonable and sustainable manner; (2) although China has taken a series of measures to restrict fisherman getting into fishery, it has positive effect on fisherman's income, which is the best feedback for the future implementation of various fishery systems. The study recommends that: (1) to completely control fishing intensity and protect marine</p>
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					fishery resources, China should implement input control management together with output control, improving the existing input control management system and introducing advanced output control management system; (2) conduct comprehensive surveys and stock assessment of fishery resources to serve scientific management and decision-making for fishery management.
Type of mariculture production technology Level of pollutant discharge from mariculture operations	Declining quality of mariculture products Declining quantity of production per unit area from mariculture Environmental impacts of mariculture not evaluated	<i>(not set or not applicable)</i>	Reduction of contaminants caused by mariculture production (5% reduction in the demo sites) Measurable increase (5% increase in the demo sites) in mariculture production per unit area Discharge of nutrient and other discharges from mariculture	On track . Baseline indicators of temperature, salinity, DIN, phosphorus, pCO ₂ , DIC, Chl-a (total), Chl-a (size classes of phytoplankton), sediment, production situation, general chemistry and carbon are continuously being monitored in a land-based aquaculture area in Haiyang, one oyster monoculture farm in Sungo Bay and one kelp monoculture area and one shellfish-seaweed IMTA area in Sungo Bay, Rongcheng. In earlier monitoring it was found that 1) water quality and sediment of monoculture areas were high; 2) oyster monoculture was a source of CO ₂ ;3) monoculture of shellfish has reduced the primary production of the sea; and 4) kelp monoculture has resulted in higher Chl-a concentration along the coast and reduction of nutrient. Restocking of farmed species will	In PR China, mariculture ecosystem services through IMTA has been practiced for at least two decades and results have been well documented in Sungo Bay of Rongcheng, Shandong Province. Based on the experiences of IMTA in Sungo Bay, IMTA proves to be highly energy-efficient, increasing production and social acceptability of culturing systems, optimizing the carrying capacity of coastal embayments, improving water quality, increasing protein yields, and through carbon capture contributing to mitigation of the effects of climate change. In RO Korea, IMTA was demonstrated from 2011 onwards in coastal areas beyond YSLME by NIFS of RO Korea on IMTA of sea

			<p>installations reduce 5%</p>	<p>continuously be monitored in three sites in 2017 and results of nutrient reduction will be reported in the 4th quarter of 2018.</p>	<p>tangle, Gulfweed, Korean rockfish, Pacific Oyster and sea cucumber indicating that sea cucumber grew 2.7 times faster; survival rate of Korean rockfish increased by 33.4% (from 56.8% to 90.5%); no fish disease occurred in IMTA (40% of Rockfish farmed in monoculture infected with disease). In the IMTA in Namhae of Korean rockfish, sea cucumber, Pacific Oyster, Undaria and Saccharina japonica, studies found no significant difference in growth of body length and weight of Korean rockfish; no disease found in rockfish (36.7% under monoculture); Pacific Oyster grow faster by >20% in shell height and whole and meat weight, and 22.5% higher fatness; and sea cucumber grew >40% faster.</p> <p>The project explored to use various approaches in replicating IMTA through further demonstration in land-based aquaculture, scaling up carrying capacity assessment in mariculture, training module development and organization of training courses in project impact areas. In scaling up the IMTA, eminent experts from PR China have proposed to national government to adopt carrying capacity as the key management measures to align aquaculture development on a sustainable path.</p>
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					<p>The Project will support the replication of IMTA across coastal areas of Shandong Province, a leading mariculture producer in PR China, through assessment of the opportunities for application of IMTA, development of a promotion plan, and conduct of ecosystem services valuation from potential IMTA operations and establishment of IMTA enterprise alliance.</p> <p>To help transfer the knowledge of IMTA, the project has published a 170-page training module for IMTA in Chinese and English for use in training courses. A 120 m2 meeting room for use in training on IMTA has been constructed by Dongchu Fishery Cooperation, a community-based enterprise specializing in aquaculture of kelp, abalone, scallop, sea urchin and sea cucumber with technical assistance from YSFRI/PRC. Two training courses for Chinese mariculture managers and academia were conducted in 2018.</p> <p>In one replication site in PR China, baseline indicators of temperature, salinity, DIN, phosphorus, pCO₂, DIC, Chl-a (total), Chl-a (size classes of phytoplankton), sediment, production situation, general chemistry and carbon are</p>
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					<p>monitored in a land-based aquaculture area in Haiyang, one oyster monoculture farm in Sungo Bay and one kelp monoculture area and one shellfish-seaweed IMTA area in Sungo Bay, Rongcheng. In earlier monitoring it was found that 1) water quality and sediment of monoculture areas were high; 2) oyster monoculture was a source of CO₂; 3) monoculture of shellfish has reduced the primary production of the sea; and 4) kelp monoculture has resulted in higher Chl-a concentration along the coast and reduction of nutrient. Restocking of farmed species will continuously be monitored in three sites in 2019 and results of nutrient reduction will be reported periodically.</p> <p>During the 2nd meeting of the Regional Working Group on mariculture held in November 8-9, 2019 in Jeju, ROK, experts from both countries reviewed the ongoing progress on IMTA promotion and demonstration in PRC and ROK. There is consensus to strengthen cooperation and agreed on the significance of the social and economic and environmental benefits of the integrated Multi-Trophic Aquaculture system.</p>
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					<p>The project awarded under the YSGP a 100,000 USD grant to a consortium of China Aquatic Product Processing and Marketing Alliance (CAPPMA) and Qingdao Marine Conservation Society (QMCS) in collaboration with the Aquaculture Stewardship Society (ASC). The project aims at addressing the multiple negative environmental and social impacts of unsustainable mariculture enterprises along the Yellow Sea coast across the provinces of Liaoning, Shandong and Jiangsu Provinces in China and also involve Republic of Korea's (ROK) mariculture enterprises and NGOs operating along ROK's Yellow Sea coast. It will focus on addressing habitat destruction, overfishing, fishing down the food chain, illegal and improper chemical use, eutrophication, increasing incidents of disease in wild stocks, degradation of worker's welfare and health by promoting better developed and operated mariculture enterprises via technical guidelines and market incentives supported by relevant policies and laws.</p>
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The progress of the objective can be described as: **On track**

Outcome 3

Improving Ecosystem Carrying Capacity with respect to Regulating and Cultural Services					
Description of Indicator	Baseline Level	Midterm target level	End of project target level	Level at 30 June 2018	Cumulative progress since project start
Level of pollutant discharges particularly Nitrogen in YSLME tributaries	Discharge reductions do not meet the regional target	<i>(not set or not applicable)</i>	10% reductions in N discharges every 5 years	<p>Off track.</p> <p>The related actions implemented in PR China include 1) conduct intensive monitoring and assessment; 2) control contaminants discharge; 3) Implement MARPOL 1973/78.</p> <p>During the project implementation period, the following actions at national level have been adopted and implemented in PR China that will lead to reduction of N during the 13th FYP period (2016-2020)</p> <ul style="list-style-type: none"> In 2015, China issued “Water Pollution Control Action Plan”, which has strengthened pollution control in industrial agglomeration areas. The Plan requires that by the end of 2017, the industrial agglomeration area should be built into a centralized sewage treatment facility, and an automatic online monitoring device was installed, and that the urban sewage treatment facilities in the sensitive areas would meet the grade I-level A emission standards. Results of implementation of the Plan were not reported. Considering the action plan proposed that by 2020, the national water environmental quality must make staged-based 	<p>Context of PR China:</p> <ul style="list-style-type: none"> The related actions implemented in PR China include 1) conduct intensive monitoring and assessment; 2) control contaminants discharge; 3) Implement MARPOL 1973/78. During the project implementation period, the following actions at national level have been adopted and implemented in PR China that will lead to reduction of N during the 13th FYP period (2016-2020) In 2015, China issued “Water Pollution Control Action Plan”, which has strengthened pollution control in industrial agglomeration areas. The Plan requires that by the end of 2017, the industrial agglomeration area should be built into a centralized sewage treatment facility, and an automatic online monitoring device was installed, and that the urban sewage treatment facilities in the sensitive areas would meet the grade I-level A emission standards. Results of implementation of the Plan were not reported. Considering the action plan

			<p>improvements and the urgency, complexity, toughness, and long-term nature of water pollution control efforts requires full implementation of the Plan, the CPC Central Committee and the State Council have emphasized great importance to the prevention and control of water pollution and published a new notification on the battle of pollution prevention and control in June of 2018. The new notification and opinion from The CPC central committee highlights the Action Plan for Prevention and Control of Water Pollution must be fully implemented and the targets raised in the “Water Pollution Control Action Plan” need to be fulfilled based on time schedule. The responsibilities of local governments for protection of water environment was also highlighted in the notification from The CPC Central Committee. Progress report on implementation of “Water Pollution Control Action Plan” has not yet been published by the ministry of Ecology and Environment.</p> <ul style="list-style-type: none"> • On July 11, 2016, State Council of China issued the Action Plan for Soil Pollution Prevention and Control. It clearly points out that a coordination mechanism among government, community, enterprises, and residents will be establishes. • On November, 2016, the General Office of the CPC Central Committee and the General Office of 	<p>proposed that by 2020, the national water environmental quality must make staged-based improvements and the urgency, complexity, toughness, and long-term nature of water pollution control efforts requires full implementation of the Plan, the CPC Central Committee and the State Council have emphasized great importance to the prevention and control of water pollution and published a new notification on the battle of pollution prevention and control in June of 2018. The new notification and opinion from The CPC central committee highlights the Action Plan for Prevention and Control of Water Pollution must be fully implemented and the targets raised in the “Water Pollution Control Action Plan” need to be fulfilled based on time schedule. The responsibilities of local governments for protection of water environment was also highlighted in the notification from The CPC Central Committee. Progress report on implementation of “Water Pollution Control Action Plan” has not yet been published by the ministry of Ecology and Environment.</p> <ul style="list-style-type: none"> o On July 11, 2016, State Council of China issued the Action Plan for Soil Pollution Prevention and Control. It clearly points out
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				<p>the State Council issued the Opinions on Full Implementation of River Chief System; it has been made clear that the major leaders of Party and government organizations need to shoulder the posts as river chiefs.</p> <ul style="list-style-type: none"> • The Ministry of Transport issued the Special Action Plan for Ship and Port Pollution Prevention and Control (2015-2020) in 2015 to explore and establish a new mechanism for the reception and disposal of ship pollutants, and promote the construction of receiving facilities for pollutants and improve receiving and disposing capabilities to meet the demand for receiving and disposing pollutants from ships • As imported solid waste, China banned imports of 24 types of solid waste since 2017 in a fresh move to reduce environmental pollution, which covers waste plastics, unsorted scrap paper, discarded textiles, and other kinds of waste. • On March 26, 2018, the Ministry of Ecology and Environment reviewed and adopted in principle the “Action Plan for the Implementation of the Proposal for the Reform of the Import Management System for the Prohibition of the Importation of Solid Waste into the Prohibition of Foreign Garbage for the 2018-2020”. 	<p>that a coordination mechanism among government, community, enterprises, and residents will be established.</p> <ul style="list-style-type: none"> o On November, 2016, the General Office of the CPC Central Committee and the General Office of the State Council issued the Opinions on Full Implementation of River Chief System; it has been made clear that the major leaders of Party and government organizations need to shoulder the posts as river chiefs. o The Ministry of Transport issued the Special Action Plan for Ship and Port Pollution Prevention and Control (2015-2020) in 2015 to explore and establish a new mechanism for the reception and disposal of ship pollutants, and promote the construction of receiving facilities for pollutants and improve receiving and disposing capabilities to meet the demand for receiving and disposing pollutants from ships o As imported solid waste, China banned imports of 24 types of solid waste since 2017 in a fresh move to reduce environmental pollution, which covers waste plastics, unsorted scrap paper, discarded textiles, and other kinds of waste.
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				<p>For 10% reductions in N discharge, NMEMEC will support a watershed model for the nutrients loading estimation in Haizhou Bay including N discharges from river basins and identify N sources. Achieving the target of the project relies very much on the local N discharge reduction program, including improvement of fertilizer use efficiency and building of more sewage reduction plants with use of co-financing from governments. The project currently is only supporting the demonstration of marine litter reduction in Weihai and restoration of wetland in Rudong as nutrient sinks for replication of experiences elsewhere through workshops and seminars.</p>	<p>o On March 26, 2018, the Ministry of Ecology and Environment reviewed and adopted in principle the “Action Plan for the Implementation of the Proposal for the Reform of the Import Management System for the Prohibition of the Importation of Solid Waste into the Prohibition of Foreign Garbage for the 2018-2020”.</p> <p>Context in RO Korea:</p> <ul style="list-style-type: none"> - According to the Marine Environment Comprehensive Plan (2011-2020), more efforts by setting up strict law are being addressed to prevent pollutants from marine-based sources of pollution by strengthening legal framework, which is in line with recent trends globally. Strict restriction of ship-based pollutants (SOx and NOx), and ballast water as well initiated by International Maritime Organization (IMO). - To understand characteristics of discharge of pollutants along coastal areas, comprehensive survey has been carried out since 2011. Valuable information on sources, water and sediment quality and transporting routes has being collected. Results of this survey provides insight of status of coastal environment especially ecosystems.
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					<p>- To enhance efforts to reduce pollution, national action plan for the management of land-based sources of pollutants was established in 2013. This national plan has a goal to manage water quality in 50 out of 65 coastal areas planned to be managed in national scale which accounts for 75% achievement until 2020. Additional attempt to reduce non-point sources of pollution is also being made by setting up guidelines to follow. The funding for these activities especially contaminated sediment removal was allocated 10 million USD in 2017 and 12 million USD in 2018. Monitoring activities at sites completed are also being carried with financial support of 0.23 million USD in 2017 and 0.35 million USD in 2018. Distribution of contaminated sediment in designated areas is being conducted with financial support of 0.4 million USD in 2017 and 0.5 million USD in 2018.</p> <p>- In ROK, a project on nutrition reduction and eutrophication phenomenon causing from land-based sources is being implemented in Han River watershed as a target site using data available. Outcomes of the project will be available in January 2019 which will contribute to the development of national strategy.</p>
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					<p>Project intervention:</p> <ul style="list-style-type: none">- at regional level, through consultancy the regional marine environment monitoring network is being developed together with the water quality standards which is already in good share for review at the ICC-3 scheduled in the first quarter of 2019. Sources and sinks of pollutants, environmental status and trends in the Yellow Sea are reviewed by the project to improve understanding of the environmental capacity and level of reduction of total loading of nutrients from baseline level.- Nutrients from sea-based (mariculture and shipping) and atmospheric sources from PR China and RO Korea are being studied. By the year 2015, the total mariculture area and the yield reached 2,317,760 hectares and 18,756,1277 tons respectively in PR China (MAO, 2016). Along with the development of the scale of aquaculture, especially in China, the negative effects of the mariculture waste both on the culture system and on the ambient aquatic ecosystem are being studied. Method for assessment of sea-based and deposition fluxes of nutrients and heavy metals from atmosphere-based sources have
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					<p>been developed by NMEMC for endorsement by the RWG-P.</p> <p>- For 10% reductions in N discharge, with project support NMEMEC has been undertaking studies to calculate nutrients using exports coefficient model in Haizhou Bay, Jiangsu Province of PR China. Haizhou Bay lies on the western margin of the South Yellow Sea, near the city of Lianyungang, and receives water inflow mainly from the Linhong River, Qingkou River, Longwang River and Xiuzhen River. The bay has an area of approximately 876.39 km², has a major fishery base, with aquaculture industries boosting economic growth in Lianyungang by 4.3 times from 1995 to 2005 (OFBL, 2011). According to the recent reports, the Linhong River carried 2.26 × 10⁸ t of domestic sewage and industrial wastewater in 2010 (EPAL, 2011; OFBL, 2011). And according to the record in the sea area of Jiangsu from 1997 to 2014, red tides hit Jiangsu Province 33 times, and the Haizhou Bay was frequented as well.</p>
Types of technologies applied for pollution reduction	Some innovations such as man-made wetlands are being undertaken nationally but without	<i>(not set or not applicable)</i>	Successful demonstration of use of artificial wetlands in pollution control in	On track . The project has selected Xiaoyangkou of Rudong as a demonstration site to conduct Common Cordgrass	In 2016, PR China has initiated “Blue Bay Action Plan” incentivizing local governments to adopt integrated approaches to address coastal and marine challenges

	regional coordination or dissemination of results		1 sites and replicated in about 2 coastal municipalities and local government units	(Spartina anglica) eradication and tidal wetland restoration, with the targets of eradicating 200 ha of cordgrass and rehabilitation of 20 ha of natural wetland to enhance the suitability of habitat for waterbirds, ecosystem services and economic benefits. Feasibility study was completed in June, 2018 and implementation is on-going, to be completed in October, 2019.	<p>through innovative investment modalities to leverage knowledge and knowhow and financing from private sector through public private partnership in sewage treatment, beach management, sea water desalination, etc. In YSLME, Rizhao, Dalian, Qingdao, Weihai, Yantai are selected as demonstration sites.</p> <p>In addition to enhancing sewage treatment capacity and sewage collection system, developing a regional strategy to use wetland as nutrient sinks is under support by the Project. The draft regional strategy submitted by the consultant contains the following sections: reviews the roles of wetland in nutrient removal for the Yellow Sea Coastal area and the mechanisms of nutrient retention; the status and changes of coastal wetland in the Yellow Sea in both PR China and RO Korea; nutrient loads from river discharges and atmosphere, wastewater treatment and nutrient removal in the Yellow Sea wetland; and the mechanisms of using natural and artificial wetland as nutrient sinks for wastewater treatment.</p> <p>In the YSLME demonstration city of Dalian, reduction of nutrient inputs</p>
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					<p>from an upstream river into vulnerable Linshui Bay and restoration of bay area are prioritized by national and local governments with earmarking of 320,000,000 yuan (equivalent to 48 million US dollars) from the two sources. In 2017, the central government support focused on strengthening the coastal embankment, restoration of sand beach, restoration of estuarine wetland while local investment of Dalian City upgraded the sewage treatment capacity of existing facilities. In Linshui Bay of Dalian, the technologies of restoration of coastal wetland in estuarine areas and upgrading the sewage treatment capacity of existing treatment facilities are used by the subcontractors. Level of reduction will be calculated by NMEMC with support of YSLME Phase II Project.</p> <p>Nutrient loading study in Haizhoubay of Lianyungang city and modeling of nutrients in Han River of ROK are ongoing and results were introduced at the second meeting of the RWG on Pollution Reduction (Pusan, June 3-6). The regional of using wetland as nutrient sinks was completed for review by PRC and ROK to discuss either adoption of strategy for implementation or as a reference</p>
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					material for consideration by the both countries.
Status of legal and regulatory process to control pollution	Weak legal and regulatory framework to control pollution in provinces bordering in the YSLME	<i>(not set or not applicable)</i>	Develop evaluation tools, in the first year, to assist in harmonizing national and provincial legislation to improve coastal water quality in Shandong, Jiangsu and Liaoning provinces	Off track. A legal expert is on board to review the compliance of PR China and RO Korea with international legal requirements for pollution reduction, and the report has not yet been submitted. Initial findings indicate the absence of national legislation on marine litter and microplastics, etc. Capacity of national and provincial officials in implementation of global and national pollution-related legislation appears weak	Based on the review of the project consultant, there are no laws or regulations specifically issued to address marine litter in PR China. Yet a series of relative laws and regulations have been enacted to prevent and control of marine litter pollution, including Marine Environmental Protection Law; Law on the prevention and control of environmental pollution by solid waste (1996); Regulations on the prevention and control of pollution by land-based pollutants (1990); Regulations of the people's republic of china on control over dumping of wastes in the ocean; Regulations of the People's Republic of China Concerning Environmental Protection in Offshore Oil Exploration and Exploitation; Administrative Regulations on the Prevention and Treatment of the Pollution and Damage to the Marine Environment by Marine Engineering Construction Projects; and Regulation on the Prevention and Control of Vessel-induced Pollution to the Marine Environment. Programs to prevent and mitigate marine litter in PR China are also reviewed.

					<p>In ROK, Marine Environment Management Act took effect since 2007 and was revised in 2011. By following the Act, Marine Environment Comprehensive Plan (2011-2020) was developed in collaboration with relevant stakeholders with a goal of sustainable use and management of marine environment. Plans with goals were well addressed to control pollution being occurred in coastal areas.</p> <p>Efforts are to be made by the project to identify the approach to harmonizing national and provincial legislation to improve the coastal water quality in the three provinces of the two countries.</p>
Status of the control of marine litter at selected locations	Due to a lack of appreciation of the problem little action is currently being undertaken	<i>(not set or not applicable)</i>	<p>Regional Guidelines on control of marine litter based on those initiated by NOWPAP produced and adopted for use in the Yellow Sea;</p> <p>Established regional data base in the first year,</p>	<p>On track.</p> <p>In the 1st RWG meeting on Pollution Reduction, it was agreed that the project would use the NOWPAP marine litter monitoring guidelines to conduct the baseline survey. In China, Weihai was selected as the demonstration site for reducing marine litter. A subcontract is being implemented to monitor the status of marine litter in two sites in Weihai, assess the legal and regulatory framework gaps, and propose incentive policies in recycling</p>	<p>In the 1st RWG meeting on Pollution Reduction, it was agreed that the project would use the NOWPAP marine litter monitoring guidelines to conduct the baseline survey. In China, Weihai was selected as the demonstration site for reducing marine litter. A subcontract is being implemented to monitor the status of marine litter in two sites in Weihai, assess the legal and regulatory framework gaps, and propose incentive policies in recycling economies. A</p>

			<p>and significant reduction in the quantities of marine litter at selected beach locations</p>	<p>economies. A consultation meeting in Jinan was held to determine the scope of demonstration with initial interest from local government to support the collection of abandoned fish cages in aquaculture, collection of garbage from fishing boats before closure season, and support to establish a coastal city partnership to integrate marine litter into overarching environmental agenda of local governments. TOR of demonstration project is under preparation. In RO Korea, an intensive survey was carried out in Jeolla Namdo province to make an inventory of litter in land, river, coast and estuary by OSEAN (Our Sea of East Asia Network) to estimate marine litters in this province in November 2017. Beach litter survey methodology of the CSIRO (Commonwealth Science and Industrial Research Organization) was used for this survey. KIOST and OSEAN have carried out the abundance and accumulation patterns of plastic marine debris on 6 beaches in the Korean YS since 2016.</p>	<p>consultation meeting in Jinan was held to determine the scope of demonstration with initial interest from local government to support the collection of abandoned fish cages in aquaculture, collection of garbage from fishing boats before closure season, and support to establish a coastal city partnership to integrate marine litter into overarching environmental agenda of local governments. TOR of demonstration project is under preparation.</p> <p>In ROK, beach litter survey along the coastline has been conducted 6 times per year at 382 sites to monitor and observe types of litters and their abundance. The sampling sites were selected in every 10km. An intensive survey was carried out in Jeolla-Namdo province to make an inventory of litter in land, river, coast and estuary by OSEAN (Our Sea of East Asia Network) to estimate marine litters in this province in November 2017. Beach litter survey methodology of the CSIRO (Commonwealth Science and Industrial Research Organization) was used for this survey. KIOST and OSEAN have carried out the abundance and accumulation patterns of plastic marine debris on 6 beaches in the Korean YS since 2016. At</p>
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					<p>Provincial level, starting from year of 2015, Chungnam Province developed comprehensive plan for the conservation of marine environment. In line with approach described in the plan, 43 projects for the conservation of marine environment with funding of 18 million USD is being implemented in areas of building infrastructure, collection and disposal of marine litter. In particular, around 9,000 tones of marine litter are being collected with a help of financial support of 4.2 million USD.</p> <p>In the second meeting of In the 1st RWG meeting on Pollution Reduction, it observed the difference in methodologies in terms of frequency of monitoring, availability and cope. The meeting was encouraged by the vision of zero marine litter and commitment of reducing 5 percent of marine litter each year by Chungcheongnamdo and the interest of Teaan city to establish a city alliance to reduce marine litter to be facilitated by PMO.</p> <p>The 335,500 CNY YSGP grant implemented by Blue Ribbon Ocean Conservation Association contributes to this component in Jingzi Village of Weihai City by</p>
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					<p>effectively resolving the contradiction between local marine resources environmental protection and community development, to make local villagers participate deeply in activities of decision-making, protection and management, to transfer themselves from managed to managing, and to gradually get benefits from marine environmental protection. It will set up a platform to promote regional cooperation and exchanges between Chinese and Korean marine NGOs. At this location, it will reduce marine litter and micro-plastics, and strengthen public education.</p> <p>A further YSGP grant of 46,312 USD was awarded to Shanghai Rendu Ocean NPO Development Center (Rendu) for a marine debris monitoring project to strengthen the marine debris survey network in 6-8 locations in the Yellow Sea area. It will focus on fishery and aquaculture marine debris. Based on the survey data collected, Rendu will produce an analysis report and propose potential solutions.</p>
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<p>The progress of the objective can be described as:</p>	<p>On track</p>
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<p>Outcome 4 Improving Ecosystem Carrying Capacity with respect to Supporting Services</p>

Description of Indicator	Baseline Level	Midterm target level	End of project target level	Level at 30 June 2018	Cumulative progress since project start
<p>Areas of critical habitats;</p> <p>Status of mitigation of reclamation impacts</p>	<p>Coastal habitats critical to maintaining ecosystem services continue to be converted or reclaimed unchecked</p>	<p><i>(not set or not applicable)</i></p>	<p>Areas of critical habitats maintained at current level. Increase 3% total areas as MPAs</p> <p>Impacts of reclamation prepared in 2 demo sites</p>	<p>On track.</p> <p>Until now, approximately 880,000 ha of YS mudflat areas have been reclaimed. This comprises 37% of the inter-tidal areas of the Chinese portion of the YS, which have been reclaimed since 1950, and 43% of the mudflats on the ROK coast, which has been reclaimed since 1917. Currently, a review process on the past and future reclamation projects up to 2016 and implication to the critical coastal habitats is ongoing. In 2018, critical habitats are expected to be identified and meeting with criteria for Ramsar wetlands and standards of important bird habitat areas to be provided by Birdlife International. Reclamation areas in the YS after 2009 will be mapped using satellite imageries of Landsat. GIS maps of critical habitats in YS coastal wetlands will be also developed, including information on important bird habitats, bird records across China. To date, reclamation map of 2008-2009 and 2016 were developed. The habitat areas loss will be also quantified by map overlaying. In 2018, Ministry of Natural Resource requested suspension of all reclamation projects in coastal areas of China, and this new order will place much hope to protect remaining but critically important intertidal of YS. In RO Korea, a 7 million US dollar</p>	<p>on track. Up until now, approximately 880,000 ha of YS mudflat areas have been reclaimed. This comprises 37% of the inter-tidal areas of the Chinese portion of the YS, which have been reclaimed since 1950, and 43% of the mudflats on the ROK coast, which has been reclaimed since 1917. The project has taken a strategic approach of conservation planning, policy development, and implementation of projects to restore ecologically and biologically important coastal areas.</p> <p>The project is supporting the development of YSLME Biodiversity Conservation Plan 2018-2030. Review of the the conservation status in RO Korea and PR China of 23 potential priority sites identified by WWF, KMI and KIOST in 2007 have completed. Status of biodiversity, positive achievements, gaps, underlying causes to base objectives, targets and actions to be proposed in the conservation plan up to 2030 will be discussed at the biodiversity forum under the 3rd YSLME Science Conference to be held in Qingdao, 2019.</p>

				<p>project was completed in Ganghwa to restore the ecosystem connectivity of intertidal mudflats through replacing a causeway connecting two islands with a newly built bridge. In addition, a new monitoring project, "Fisheries Resources Changes based on Yellow Sea Ecosystem" will be implemented from 2018. The budget is in total 17.2 billion KRW for 5 years. The project is an expansion of the comprehensive ecosystem monitoring in coastal area to open sea. With project direct support, a proposal to set up a national MPA in 42.88 km² in Xiaoyangkou of Rudong has been proposed and reviewed by SOA. Approval of the proposal was delayed because of the restructuring of SOA. Study on impact of reclamation in two sites is ongoing.</p>	<p>In order to better understand the implication of reclamation projects to PPAs, a consultant was hired to review the past and future reclamation to the critical coastal habitats identified by RAMSAR and Birdlife International. A draft report for maintenance of the existing critical habitats to improve the ecosystem carrying capacity of supporting services of YSLME were submitted and currently in revision. Detailed information on conservation status and gaps and also recommended management measures were proposed. The study contributed to the conservation of intertidal mudflat. In 2018, the Ministry of Natural Resource of PR China requested suspension of all reclamation projects in coastal areas, and this new order will place much hope to protect remaining but critically important intertidal of YS.</p> <p>Project also supported efforts to increase the coastal and marine areas covered by MPAs, Eight key coastal wetland habitats critical for migratory water birds in Yellow Sea and Bohai Sea areas yet to put under effective protection are identified and defined by Paulson Institute, China Wetland Center and Institute of Geographic Sciences and Natural Resources Research of</p>
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					<p>Chinese Academy of Sciences (CAS). In response, the Project supported a study of biological and ecological significance of Xiaoyangkou intertidal mudflat of Rudong County, Jiangsu Province, one of the 8 critical wetlands. Based on the results of the survey, a technical proposal has been prepared to include an area of 42.88 KM2 as a special MPA at national level to protect the Spoon-billed Sandpiper (<i>Calidris pygmaea</i>), a critically endangered species with nearly 40% of its population wintering in Xiaoyangkou and the habitats for many other migratory waterbird species. The proposal has been submitted to local and provincial governments in support of their efforts to protect the intertidal mudflat of global significance. A similar initiative to expand MPA coverage of marine and coastal areas is under consideration in Ganghwa Island of RO Korea, one of tidal flats of the Han River estuary in Yellow Sea, the larger of the only two known breeding sites globally for the critically endangered Black-faced Spoonbill (<i>Platalea minor</i>).</p> <p>Restoration of coastal habitat was supported in ROK through co-financing. In RO Korea, a 7 million</p>
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					<p>US dollar project was completed in Ganghwa to restore the ecosystem connectivity of intertidal mudflats through replacing a causeway connecting two islands with a newly built bridge. In addition, a new monitoring project, "Fisheries Resources Changes based on Yellow Sea Ecosystem" will be implemented from 2018. The budget is in total 17.2 billion KRW for 5 years. The project is an expansion of the comprehensive ecosystem monitoring in coastal area to open sea.</p> <p>As part of the YSGP, YSLME contributes CNY510,500 to a grant project implemented by the Chinese Academy of Fishery Science to support the management capacity of marine protected areas and monitor progress in preserving essential marine biodiversity. The project also contributed a grant of 100,000 USD to a project implemented by the Beijing Chaoyang District Yongxu Global Environmental Institute (GEI). This project intends to develop and promote community co-management to protect seabirds, ensure sustainable artisanal fishing practices, and promote regional cooperation and experience exchange among communities along the East Asia-Australasian</p>
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					<p>Flyway network, including both in China and South Korea. The project site will be located around the Yalu River estuary wetland in Donggang County, Dandong City of Liaoning Province where the National Yalu River Estuary Wetland Reserve is located. A further YSGP grant of 80,000 USD to the Institute of Geographic Sciences and Natural Resources Research (IGSNRR) has the goal to improve the understanding of the waterbird habitat quality of IBAs in YSLME and along the waterbird flyway, and to understand ecological connectivity, life history and migration pattern of four endangered bird species: Relict gull (<i>Larus relictus</i>) and Great knot (<i>Calidris tenuirostris</i>) in Hangu Coastal Wetlands, Binhai New Area, Tianjin, and Oriental white stork (<i>Ciconia boyciana</i>) and Black-faced spoonbill (<i>Platalea minor</i>) in the Qinghe River Estuary Wetland, Lianyungang. It will also improve the capacity of NGOs, raise awareness of the local communities, in particular the youngsters, in protecting natural wetlands and endangered waterbirds, explore the practices of balancing sustainable management of nearshore aquaculture and conservation of endangered waterbirds and their key habitats in YSLME, and improve the replication</p>
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					and application of the outputs in other project areas. YSLME also selected the Society of Entrepreneurs and Ecology Foundation (SEE) in association with IUCN and SEAAFP, for award of a grant contract to a value of 100,000 USD to strengthen regional cooperation on the conservation of the Yellow sea Intertidal and Associated Coastal Wetlands. The project will support the further development and operation of a transboundary platform on the sustainable management of the intertidal wetlands of the Yellow Sea (the recently created Yellow Sea Working Group in IUCN). It will also develop a network of site managers involved in the conservation of coastal wetland protected areas around the Yellow Sea. It will also support public education and direct conservation actions with a focus on four sites in China (Dalian, Qingdao Jiaozhou Bay, Yancheng Dongtai coastal area and Nantong Dongling coastal area) as well as selected sites in RoK (e.g. Cheonsu Bay and the Hwaseong Wetlands).
level of ecological connectivity in expansion of the Yellow Sea MPA system.	the planned expansion of the MPA system currently does not take into account ecological connectivity	<i>(not set or not applicable)</i>	the planned expansion of the MPA system currently does take into account	On track. The 1st Institute of Oceanography of State Oceanic Administration of PR China completed a study to support	on track. To date, 31 national MPAs in PRC (8,056 km ²) and 16 national MPA in ROK (386 km ²) are designated to protect marine mammals, birds, fishes, mollusks,

			<p>ecological connectivity (measured by use of developed connectivity tool kit or other means)</p>	<p>the government of Rudong in Jiangsu Province of PR China to establish Xiaoyangkou wetland as a National Marine Protected Area for consideration by the State Oceanic Administration of PR China. This site is selected as the critical stopover habitat for critically endangered spoon-billed sandpiper along the East Asia and Austrasian flyway with highest irreplaceability index. A proposal to set a total of 42.88 km² as MPA was reviewed and discussed by SOA and results of the review will be announced shortly. A MPA connectivity training is scheduled in July in RO Korea to further expand the coverage of coastal areas as MPA in an effectively managed network</p>	<p>plants and algae in YS. The national MPAs of the PRC and ROK only represent 2.1% of Yellow Sea, far below the 10% Aichi Target.</p> <p>Surveys and production of overlays to analyze gaps and conservation needs of critical species and habitats, i.e. seal, endangered migratory birds, fish spawning and nursery grounds, cold water mass, etc. are being conducted by FIO, NMEMC and YSFRI in PR China through PCAs. Results of the technical assistance will lead to development of marine biodiversity protected area development plan in PR China. The same institute completed a study to support the government of Rudong in Jiangsu Province of PR China to establish Xiaoyangkou wetland as a National Marine Protected Area for consideration by the State Oceanic Administration of PR China. This site is selected as the critical stopover habitat for critically endangered spoon-billed sandpiper along the East Asia and Australian flyway with highest irreplaceability index. A proposal to set a total of 42.88 km² as MPA was reviewed and discussed by SOA and results of the review was not announced due to reorganization of SOA.</p> <p>National Forestry and Grassland</p>
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					<p>Administration of PR China who assumes the management responsibility of MPA is suggested to approve the gazettelement of this MPA. Another example of MPA expansion taking into account ecological connectivity during the project period is the Garorim Bay Marine Species Protected Area in RO Korea. It was designated as MPA site in July 2016 covering areas of 91.237km² with a goal of protection of habitat and breeding grounds of protected marine species including spotted seal, and systematic conservation and protection of key habitats of marine and pelagic species.</p> <p>Capacity development activities are also being conducted to support the biophysical connectivity among MPAs. A MPA connectivity training was held in 23-27 July, 2018, in Seocheon, RO Korea to further expand the coverage of coastal areas as MPA in an effectively managed network. The training toolkit on MPA networking is being prepared by an international consultant for use in future training. Under the concept of MPA networking to improve management effectiveness of transboundary species and MPA expansion, FIO and Liaoning Marine and Fisheries Research Institute will collaborate</p>
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					<p>with NIFS of RO Korea in conducting spotted seal migration through satellite tracking supported by the project. Environment DNA of the species will also be studied to understand better the scientific soundness of MPA network for the species. As part of the YSGP, the project selected the NGO China Biodiversity Conservation and Green Development Foundation (CBCGDF) to support the construction of the Yellow-Bohai Sea Spotted Seals Protected Area Network. The project would focus on Dalian City, Panjin City and Jinzhou City of Liaoning Province; Yancheng City and Lianyungang City of Jiangsu Province; Tangshan City of Hebei Province; Tianjin City; Shanghai City.</p>
<p>Status of incorporation of adaptive management of climate change regional strategies and in ICM plans for selected coastal communities</p>	<p>Inadequate considerations are being given to the impacts of climate change</p>	<p><i>(not set or not applicable)</i></p>	<p>CC adaptation strategies incorporated in regional strategies such as YSCWM and plankton communities</p> <p>ICM plans in (specify number) coastal communities incorporate CC adaptation to</p>	<p>Not yet started.</p> <p>The 1st Institute of Oceanography and State Oceanic Administration of PR China proposed to develop climate change adaptation ICM model framework plan. The impact of climate change in YS is mainly reflected in the rising sea level, higher frequency and severity of various marine disasters, such as storm surge and sea ice. The objective of this study is to develop adaptation strategy of climate change of Dandong via vulnerability assessment of coastal communities and impact assessment of sea level rising.</p>	<p>Off the track. The studies on relationships between the changes of Yellow Sea Cold Water Mass (YSCWM) and structure of plankton communities and the development of a regional strategy for adaptive management are ongoing. The project will deliver a synthesis report along with regional strategy for developing adaptive management be undertaken by FIO/SOA under a PCA with UNOPS and in collaboration with KIOST of RO Korea. Thus far no report has been submitted by FIO. During the China-Korea workshop on YSCWM</p>

			<p>improve climate resilience</p>	<p>Dandong city locates the north coast of YS, facing DPR Korea across the Yalu river which is also critical spot for migratory birds. Through this study, it is expected to have results on 1) vulnerability assessment of sea level rising for coastal communities; 2) impact assessment of sea ice distribution on coastal zone development and marine species; 3) impact assessment of sea level rising for the mudflat habitat and wading birds and 4) adaptation strategy for climate change of Dandong city. This project is expected to be completed in December, 2019.</p>	<p>held on June 10-11, 2019 in Penglai, PRC, experts from both countries emphasized on the responses of ecosystems in YS to natural forces and forecast of ecosystem changes in the YS as a result of climate change and anthropogenic influence. There was general consensus at immediate actions with more effort would be placed on YSCWM through future cooperative studies possibly including impact of climate change on YSCWM, considering long-term trend of surface warming, increasing extreme events.</p> <p>FIO proposed to develop climate change adaptation ICM model framework plan. The impact of climate change in YS is mainly reflected in the rising sea level, higher frequency and severity of various marine disasters, such as storm surge and sea ice. The objective of this consultancy is to develop adaptation strategy of climate change of Dandong via vulnerability assessment of coastal communities and impact assessment of sea level rising. Dandong city locates the north coast of YS, facing DPR Korea across the Yalu river which is also critical spot for migratory birds. Through this study, it is expected to have results on 1) vulnerability</p>
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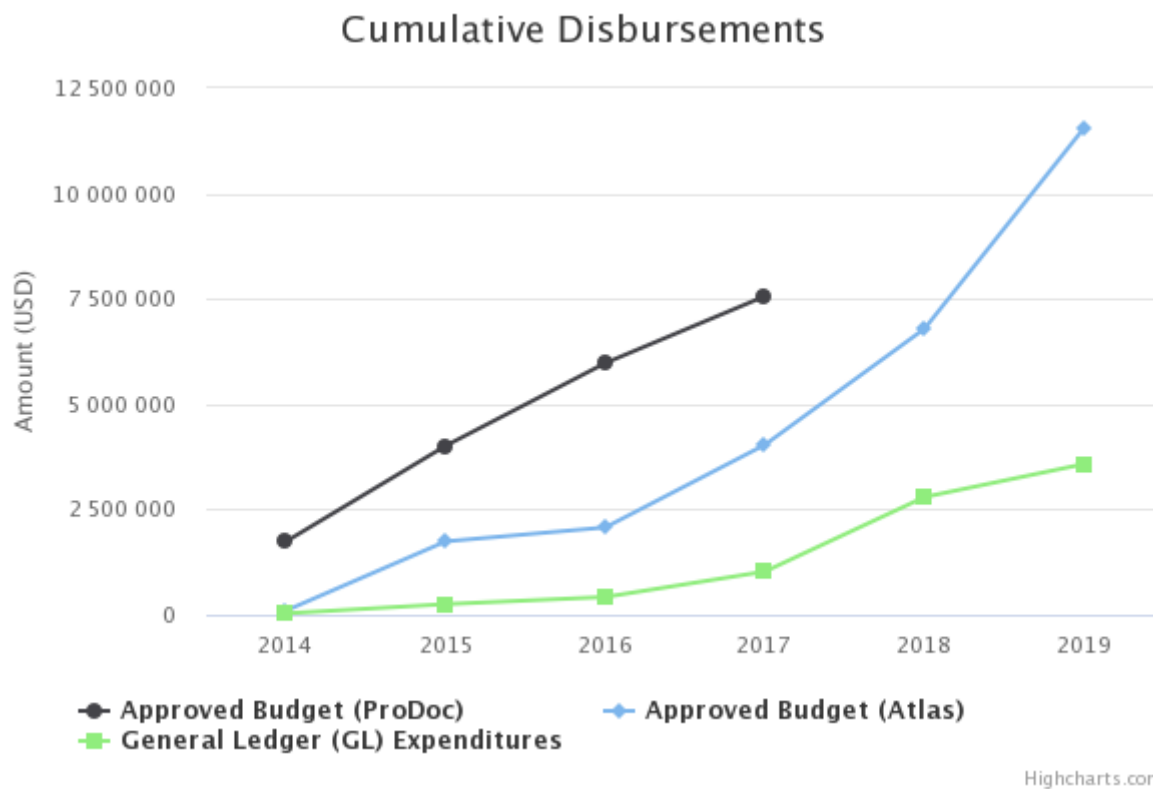
					<p>assessment of sea level rising for coastal communities; 2) impact assessment of sea ice distribution on coastal zone development and marine species; 3) impact assessment of sea level rising for the mudflat habitat and wading birds and 4) adaptation strategy for climate change of Dandong city. This project is expected to be completed in December, 2019.</p>
<p>Status of Regional Monitoring Network for application of ECBM</p>	<p>National Monitoring will continue without regional linkages and harmonisation making regional analyses difficult or impossible</p>	<p><i>(not set or not applicable)</i></p>	<p>Agreed number of cruises & parameters for the regional monitoring network established and data shared regionally via the project web site.</p> <p>Regular LME-wide assessments; enhanced information exchange; periodic scenarios of ecosystem change</p>	<p>On track.</p> <p>The National Marine Environmental Monitoring Center (NMEMC) of PR China prepared and submitted the draft monitoring programs of jellyfish, HAB and drifting macroalgal blooms and N/P/Si which were reviewed and recommended for adoption by RWG-A meeting held on June 29, 2018. In the plan, surveys are suggested to conduct 3 times at sampling locations, Donggang and Haizhouwan. Detailed methodologies on sampling and analysis are described for clarification at the meeting. Additional discussion on sampling station, monitoring frequency and key elements of HAB, monitoring is expected to be discussed between both countries. As for Jellyfish monitoring study, detailed methodologies with sampling and stations are described. As for monitoring, it was suggested to set 3 sections with 5 sections for each</p>	<p>on track. The National Marine Environmental Monitoring Center (NMEMC) of PR China prepared and submitted the draft monitoring programs of jellyfish, HAB and drifting macroalgal blooms and N/P/Si which were reviewed and recommended for adoption by RWG-A meeting held on June 29, 2018. In the plan, surveys are suggested to conduct 3 times at sampling locations, Donggang and Haizhou Bay. Detailed methodologies on sampling and analysis are described for clarification at the meeting. Additional discussion on sampling station, monitoring frequency and key elements of HAB, monitoring is expected to be discussed between both countries. As for Jellyfish monitoring study, detailed methodologies with sampling and stations are described. As for monitoring, it was suggested to set</p>

			<p>section. It was recommended to have monitoring from July to August every year. To improve effectiveness of monitoring, assessment and data sharing on jellyfish and HAB, both countries recommended to establish scientific committee as an advisory group, expecting contribution not only on better coordination of national efforts especially on data sharing but also enhancing effectiveness of regional efforts by maintaining and operating monitoring program in a systematic way. The scientific committee is expected to be considered of 6 members, 3 from each country. In addition, the 1st Institute of Oceanography and State Oceanic Administration of PR China proposed to conduct series of scientific research on the ecological mechanism for the blooms of floating <i>Sargassum horneri</i> in western YS, which was identified to increasingly occur and impact the coastal ecosystems in recent years. Floating <i>S. horneri</i> has been increasingly observed in the western YS and caused detrimental impacts on the coastal aquaculture in recent years. It remained unclear about the dynamic biological and physical process for the bloom of these invasive brown seaweeds. This activity is to clarify seasonality, distribution and environmental drivers for the recent blooming and to provide the fundamental and consultative</p>	<p>3 sections with 5 sections for each section. It was recommended to have monitoring from July to August every year.</p> <p>To improve effectiveness of monitoring, assessment and data sharing on jellyfish and HAB, the scientific committee was established as an advisory group, expecting contribution not only on better coordination of national efforts especially on data sharing but also enhancing effectiveness of regional efforts by maintaining and operating monitoring program in a systematic way.</p> <p>In addition, the 1st Institute of Oceanography and State Oceanic Administration of PR China proposed to conduct series of scientific research on the ecological mechanism for the blooms of floating <i>Sargassum horneri</i> in western YS, which was identified to increasingly occur and impact the coastal ecosystems in recent years. Floating <i>S. horneri</i> has been increasingly observed in the western YS and caused detrimental impacts on the coastal aquaculture in recent years. It remained unclear about the dynamic biological and physical process for the bloom of these invasive brown seaweeds.</p>
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				<p>information for managing and controlling the floating biomass and reducing impairment to coastal ecosystem. Until the October 2019, findings on seasonality and inter-annual variability of the floating <i>Sargassum horneri</i> in western YS and environmental drivers for the increasing blooms in recent years will be available.</p>	<p>This activity is to clarify seasonality, distribution and environmental drivers for the recent blooming and to provide the fundamental and consultative information for managing and controlling the floating biomass and reducing impairment to coastal ecosystem. Until the October 2019, findings on seasonality and inter-annual variability of the floating <i>Sargassum horneri</i> in western YS and environmental drivers for the increasing blooms in recent years will be available.</p> <p>During the 2nd workshop on harmful marine organisms (HMOs) in the YS which was held in Jeju, ROK on June 17-18, 2019, a total of 19 scientists and managers from 11 academic institutions of PR China and RO Korea discussed the status, trends, methodologies, research plans, management measures, multiple use and mitigation of harmful species of jellyfish, <i>Spartina alterniflora</i> and algae. <i>Sargassum</i> sp. was also discussed as of its origin and developments following the catastrophic outbreak with significant economic loss to tourism in Jeju Island of RO Korea and mariculture in Northern Jiangsu of PR China in 2017. The workshop helped exchange information on</p>
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					<p>new projects, progress and results of latest studies on the three HMOs and Sargassum spp.</p> <p>During the ad hoc expert meeting of RWG-A held on Qingdao, PRC in May 10, 2019, the meeting discussed the possibility of future joint monitoring activities to study jellyfish distribution and abundance in the YS. The meeting participants also discussed possible methodologies for monitoring systems including sampling sites and frequency of sampling and information sharing.</p>
<p>The progress of the objective can be described as:</p>		<p>On track</p>			

D. Implementation Progress



Cumulative GL delivery against total approved amount (in prodoc):	47.31%
Cumulative GL delivery against expected delivery as of this year:	47.31%
Cumulative disbursement as of 30 June (note: amount to be updated in late August):	3,577,892

Key Financing Amounts	
PPG Amount	<i>(not set or not applicable)</i>
GEF Grant Amount	7,562,430
Co-financing	225,481,766

Key Project Dates	
PIF Approval Date	Apr 12, 2013
CEO Endorsement Date	Feb 25, 2014
Project Document Signature Date (project start date):	Jul 11, 2014
Date of Inception Workshop	Jul 13, 2017
Expected Date of Mid-term Review	Apr 1, 2018

Actual Date of Mid-term Review	Mar 28, 2018
Expected Date of Terminal Evaluation	Jul 1, 2019
Original Planned Closing Date	Jul 15, 2019
Revised Planned Closing Date	Dec 31, 2019

Dates of Project Steering Committee/Board Meetings during reporting period (30 June 2018 to 1 July 2019)
2019-03-11
2019-07-15
2019-09-16
2019-12-16

E. Critical Risk Management

Current Types of Critical Risks	Critical risk management measures undertaken this reporting period
Political	<p>Potential partners unwilling to make formal commitments</p> <p>Mitigation Measures:</p> <p>Based on the agreement between PR China and RO Korea, the YSLME SAP specifies a target to establish YSLME Commission as the non-legally binding cooperation framework between the two countries. With the institutional restructuring in PR China where four national agencies have mandates over different aspects of ocean management, YSLME focal point in PR China lowered the expectation of establishing the YSLME Commission. At the 3rd Interim YSLME Commission Council Meeting, both countries expressed the need to have a flexible and innovative regional ocean governance mechanism and commissioned an independent study to explore options for a regional ocean governance mechanism in the YSLME. An ad hoc ICC meeting will be held in July 15-16 to discuss to seek consensus on the the framework of the regional governance mechanism and plans to use a task force to finalize the infrastructure of the mechanism and basic instruments to institutionalize the mechanism by end of the year.</p>
Operational	<p>heavy workload under the project to PMO</p> <p>Mitigation measures:</p> <p>The workload under the project is extremely high given the complexity of the project and shortage of staff in the PMO as identified by the MTR mission. UNOPS proposed to upgrade the post of Operations Associate to ICS-10 to provide full support to the Project Manager to speed up the procurement and operations of the project activities without compromise to the rules and regulations of the UNOPS. In response to the reorganization of the SOA of PR China, PMO Dalian Branch is now hosted by Marine Hazard Mitigation Service of the Ministry of Natural Resources, the technical support institution to National Focal Point of YSLME Phase II Project in PR China to strengthen the coordination and improve the communication between PMO and PR China in support of effective implementation of the project. Environment Specialist is also on board in May to help manage the eight grant programs under the Yellow Sea Grant Program under the Phase II Project. Three interns are also on board to assist in administrative, communication and other assistance roles while developing their planning, organizational and operational skills through mobilization of inputs, events management and reporting under the UN project contexts.</p>
Organizational	<p>The reorganized Ministry of Natural Resources (MNR) may lack ownership of the project results due to the shift of mandate in management of marine ecology and environment and marine protected areas to other line ministries.</p> <p>Mitigation measures:</p> <p>Formal communication between UNOPS and UNDP senior managers with senior official of the Ministry of Natural Resources was made to raise concerns of inter-ministerial coordination in project implementation. In response, the MNR has formally established the Inter-Ministerial Coordination Committee to streamline the horizontal (among MNR,</p>

	<p>MEE, MARA and NFGA) and vertical coordination (between MNR and provincial governments in Shandong, Liaoning and Jiangsu). In addition, the IMCC also met quarterly instead of annually to give oversight of the project implementation. National Task Forces and a technical committee were established to oversee the quality of implementation of the project and appraise the deliverable of PCAs, subcontracts and consultants. The restructured ICC worked well in coordinating position of China for the ad hoc ICC, and the RWG-Mariculture was able to organize a review meeting to appraise the deliverable of study on feasibility of replication of IMTA in wider Shandong.</p>
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F. Adjustments

Comments on delays in key project milestones

<p>Project Manager: please provide comments on delays this reporting period in achieving any of the following key project milestones: inception workshop, mid-term review, terminal evaluation and/or project closure. If there are no delays please indicate not applicable.</p>
<p>The Project was extended from July 10, 2018 to December 31, 2019 following a decision of the third meeting of the Interim Commission Council serving as the board of the Project held on March 27-29, 2018. However, the extension, which should have been completed before reporting period, only went effective through signing of an amendment of the Project Document by UNDP and UNOPS on September 4, 2018. The delayed extension of the Project with more than two months resulted in post defacto extension of all Project Cooperation Agreements (PCAs), subcontracts and Individual Contractor Agreements. Nevertheless, the delay in extension has not caused significant impact to project implementation facilitated by an internal arrangement within the UNOPS to sustain the full operation of the PMO. The lesson learnt is that in the case of project extension the full costs of project management incurred during the extended period of project implementation should be factored in the budgeting and planning of work packages for the extension period.</p>
<p>Country Office: please provide comments on delays this reporting period in achieving any of the following key project milestones: inception workshop, mid-term review, terminal evaluation and/or project closure. If there are no delays please indicate not applicable.</p>
<p>The Project inception workshop was heavily delay because of coordination issues between governments of PRC and ROK, UNOPS just pay the PMO staff for one year salary without doing anything for the project implementation. The MTR also delay because limited progress even launched the project in name. Even 1.5 year extension approved by UNDP-GEF, but because of activities implementation delay for around year compared with workplan in PD, and complex internal clearance process for procurement and slow fund payment by UNOPS, the project just delivery half of fund up to now. During the ad hoc ICC in July 2019, all parties agreed for application for another one year no-cost extension with precondition of accomplish all activities by the end of June 2020, and proceed TE and auditing in the last 6 months in 2020.</p>
<p>UNDP-GEF Technical Adviser: please provide comments on delays this reporting period in achieving any of the following key project milestones: inception workshop, mid-term review, terminal evaluation and/or project closure. If there are no delays please indicate not applicable.</p>
<p>The project has set an ambitious work plan during the reference period (partly covered by a no-cost extension) that programmed all the remaining funds until December 2019. The huge volume of work was simply too much relative to the capacities of the PMO to program the activities and those of the partners to implement them. The project is thus unable to recover from the long-running delays that started from the early years of the project. It is expected that the delays will be discussed in future meetings, including a special ICC meeting in July 2019, which may trigger another request for extension.</p>

G. Ratings and Overall Assessments

Role	2019 Development Objective Progress Rating	2019 Implementation Progress Rating
Project Manager/Coordinator	Moderately Unsatisfactory	<i>- IP Rating provided by UNDP-GEF Technical Adviser and UNDP Country Office only -</i>
Overall Assessment	<p>The project implementation is in full swing during this reporting period, with a fully operational regional project management mechanism and regional working groups, implementation of four Project Cooperation Agreements, subcontracts, staff and consultants in place, and engagement on board of 6 grantee through Yellow Sea Grant Program. The working mechanism in PR China after institutional restructuring is in place to strengthen inter-ministerial coordination in implementation of the project. The commitment of China to the project target of YSLME Commission is attenuated due to the institutional restructuring and a flexible mechanism is being secured with assistance of external consultancy. In component 2, with support of government-financed fishing vessel buy-back scheme, fishing closure in time and area, output control, marine ranching program, application of multi-trophic aquaculture and project-supported re-employment training for displaced fishermen joining the buy-back scheme, the target of reducing 10 percent of fishing vessels with sufficient social safeguards has a high likelihood of success coupled with replication of IMTA in the region. In component 3, pollution reduction seems to be off the track due to the slow progress in agreeing to the regional marine environment monitoring, lack of full adoption of the regional strategy in using wetland as nutrient sinks, and implementation of pollution reduction demonstration project to reduce loading. The loading study in Haizhou Bay of Jiangsu Province provides a good example of managing excessive nutrient loading in coastal areas. In component 4, capacity development, consultation and experiences sharing through development of training kit for biophysical connectivity, organization of biodiversity forum, training courses and policy studies, expansion of MPAs for critical intertidal flats is being realized through project interventions in Rudong and partner efforts. The expansion of MPAs for spotted seals and spoon-billed sandpipers are being proactively pursued by the two countries resulting in increased coverage of MPAs. Studies on coastal areas reclamation trends, partner advocacy of implication of coastal habitat loss to ecosystem services led to the decision of Chinese government to suspend reclamation which will enable to maintain the globally important and ecological and biologically significant intertidals in the Yellow Sea. Progressing implementation of project supported studies on climate impact on YSCWM and coastal communities is slow. In terms of partnership, eight civil society organisations, business associations and academic institutions were funded under the Yellow Sea Grant Program of the YSLME, enabling them to complement the existing project partners approaches by reaching out to the communities for awareness raising, education, monitoring, and facilitation of communities to participate in conservation through conservation agreement with local authorities to contribute to sustainable fisheries, replication of environmentally friendly mariculture techniques, monitoring and reduction of marine litter, and conservation of migratory waterbirds and mammals. The science conference organized by the project will definitely contribute to the update of the TDA and SAP with continued interest of the two countries despite their lack of willingness to establish the YSLME Commission. Project delivery during this period amounted to around 1.5 million USD, yet the balance of 4 million USD justifies the extension of the project for the results to fully materialize. Yet with nearly 60 percent pending delivery by end of the project, the project is rated as marginally unsatisfactory in performance.</p>	

Role	2019 Development Objective Progress Rating	2019 Implementation Progress Rating
UNDP Country Office Programme Officer	Moderately Unsatisfactory	Moderately Unsatisfactory
Overall Assessment	<p>This is the Third PIR of the YSLME Phase II Project, the overall assessment is Moderately unsatisfactory for both DO and IP because limited indicators have been achieved up to now, the delivery rate up to now is only 40.88% since Project Document Signature Date (project start date) on 11 July 2014, which was 5 years ago. The rate of actual achievement is significantly below planned achievement. The project ICC has agreed to have another one year extension including half year implementation by UNOPS and half year for TE and closure. Even UNDP put lots of efforts to push UNOPS and PMO for delivery and implementation during PSC, and daily push, but limited progresses have been achieved with heavy uncertainty.</p> <p>1. Key achievements against the targets of the project to date as following:</p> <p>Outcome 1.</p> <p>1.1: Regional governance structure etc: Terms of reference of the Interim YSLME Commission Council and its Subsidiary Bodies, Rules of Procedures for the ICC, TORs of the six Regional Working Groups (RWGs) and Secretariat Staff were approved by the first meeting of the ICC held on July 13, 2017 and operationalized. The regional working group mechanism has been operationalized through conduct of meetings of the six RWGs and adoption of proceedings.</p> <p>According to the discussions between the two countries, a soft, flexible and innovative option for a sustainable YSLME governance mechanism would be more efficient.</p> <p>1.2: Improved inter-sectoral coordination etc: In RO Korea, IMCC members including Ministry of Foreign Affairs (MOFA) as GEF National Focal Agency; Ministry of Oceans and Fisheries (MOF) as GEF National Implementing Agency; Others including Ministry of Environment, Ministry of Unification etc. In PR China after the new restructure, the IMCC members includes MNR, MEE, MARA and NFGA.</p> <p>Certain coordination interactions among these members went on well.</p> <p>1.3 (Wider participation in SAP implementation etc): By the end June of 2019, more than 40 national and local governments, regional organizations and regional seas programmes, academia, NGOs and private sector participated in YSLME events.</p> <p>In 2018, a total of 15 events were organized by PMO in collaboration with YSLME Partners attracting 445 participants including 301 males (67.6%) and 144 females (32.4%).</p> <p>1.4 (Improved compliance with regional and international treaties etc.) :Two reports have been submitted: (1) the assessment report on China's legal framework in compliance with the international and regional legal instruments for the implementation of SAP, (2) the assessment report of China's national and local capacity for implementation of international legal documents.</p> <p>The preparation of regional guidelines for incorporating FAO Code of Conduct for Responsible Fisheries (CCRF) in YSLME context is being undertaken by YSFRI.</p>	

1.5 (Sustainable financing etc.): Initial discussion on financial arrangement of the regional marine environmental cooperation mechanism took place in the first meeting of the RWG-G, both sides agreed to continue to seek external grant such as GEF and GCF to support the operation of the YSLME Commission if established within the project timeframe. The YSLME Partnership Trust Fund proposal was submitted by Financing Specialist contracted by UNOPS, which need review by both countries.

Outcome 2. No indicator achieved.

2.1, Recovery of depleted fish stocks: The number of fishing vessels will be reduced from the baseline of 21,713 in 2015 to 18,797 by 2020. If fully implemented in PR China, a 13.4 percent reduction of fishing vessels by 2020 would be achieved. There is a continued reduction in fisheries outputs in the two countries, evidenced by a significant reduction in RO Korea up to 2017 and a decrease of annual total allowable catch from 13 million tons to 10 million tons from inshore and offshore capture fisheries, or 25 percent reduction to be achieved in 2018 in PR China.

2.2, Enhanced fish stocks etc: Currently RO Korea applies TAC system to 11 species with 70 TAC observers, while PR China piloted the system in 2017 starting with two species. Swimming Crab) is under TAC in both countries, providing an ideal example for learning in application of TAC to improve management effectiveness of fish stocks. In PR China, three groups of national marine ranches are piloted and supported by Ministry of Agriculture and Rural Affairs with a total of 64 operations in Yellow Sea, East China Sea and South China Sea in 2017. In RO Korea, a total of 36 marine ranches are established to restock the fish population including in the Yellow Sea. Effectiveness of license system was assessed in PR China by YSFRI and recommendations were proposed.

2.3, Enhanced and sustainable mariculture etc: Both countries made great efforts for pilots. The project explored to use various approaches in replicating IMTA through further demonstration in land-based aquaculture, scaling up carrying capacity assessment in mariculture, training module development and organization of training courses in project impact areas.

Outcome 3. No indicator achieved, one indicator is off track.

3.1 Both countries have taken related actions at national and local levels.

In PR China, the related actions implemented in PR China include 1) conduct intensive monitoring and assessment; 2) control contaminants discharge; 3) Implement MARPOL 1973/78. Related actions at national and local levels have been adopted and implemented in PR China that will lead to reduction of N during the 13th FYP period (2016-2020).

In ROK, a project on nutrition reduction and eutrophication phenomenon causing from land-based sources is being implemented in Han River watershed as a target site using data available.

3. 2 PR China has initiated "Blue Bay Action Plan" incentivizing local governments to adopt integrated approaches to address coastal and marine challenges through innovative investment modalities to leverage knowledge and knowhow and financing from private sector through public private partnership in sewage treatment, beach management, sea water desalination, etc. In YSLME, Rizhao, Dalian, Qingdao, Weihai, Yantai are selected as demonstration sites. The draft regional strategy submitted by the consultant. Pilots in Dalian and Liangyungang are going well.

In ROK, modeling of nutrients in Han River are ongoing well and results were introduced to public.

3.3 Gap analysis has been done in both countries, efforts are to be made by the project to identify the approach to harmonizing national and provincial legislation to improve the coastal water quality in the three provinces of the two countries.

3.4 In China, Weihai was selected as the demonstration site for reducing marine litter, related consultation meetings have been organized. SGPs for supporting pilots have been implemented in related areas.

In ROK, beach litter survey along the coastline has been conducted 6 times per year at 382 sites to monitor and observe types of litters and their abundance. An intensive survey was carried out in Jeolla-Namdo province to make an inventory of litter in land, river, coast and estuary by OSEAN.

Outcome 4. No indicator achieved, one indicator is not yet started.

4.1 The project is supporting the development of YSLME Biodiversity Conservation Plan 2018-2030. Review of the conservation status in RO Korea and PR China of 23 potential priority sites identified by WWF, KMI and KIOST in 2007 have completed.

A consultant to review the past and future reclamation to the critical coastal habitats identified by RAMSAR and Birdlife International. A draft report for maintenance of the existing critical habitats to improve the ecosystem carrying capacity of supporting services of YSLME were submitted and currently in revision.

A study of biological and ecological significance of Xiaoyangkou intertidal mudflat of Rudong County, Jiangsu Province, one of the 8 critical wetlands. A similar initiative to expand MPA coverage of marine and coastal areas is under consideration in Ganghwa Island of RO Korea, one of tidal flats of the Han River estuary in Yellow Sea.

Restoration of coastal habitat was supported in ROK through co-financing. In RO Korea, a 7 million US dollar project was completed in Ganghwa to restore the ecosystem connectivity of intertidal mudflats through replacing a causeway connecting two islands with a newly built bridge. In addition, a new monitoring project, "Fisheries Resources Changes based on Yellow Sea Ecosystem" will be implemented from 2018. The budget is in total 17.2 billion KRW for 5 years. The project is an expansion of the comprehensive ecosystem monitoring in coastal area to open sea.

4.2 To date, 31 national MPAs in PRC (8,056 km²) and 16 national MPA in ROK (386 km²) are designated to protect marine mammals, birds, fishes, mollusks, plants and algae in YS. The national MPAs of the PRC and ROK only represent 2.1% of Yellow Sea, far below the 10% Aichi Target.

4.3 Off the track. Related studies have been carried out and the results are expected to come out soon.

4.4 The draft monitoring programs of jellyfish, HAB and drifting macroalgal blooms and N/P/Si which were reviewed and recommended for adoption.

the scientific committee was established as an advisory group, expecting contribution not only on better coordination of national efforts especially on data sharing but also enhancing effectiveness of regional efforts by maintaining and operating monitoring program in a systematic way.

series of scientific research on the ecological mechanism for the blooms of floating Sargassum horneri in western YS has been conducted by FIO.

The possibility of future joint monitoring activities to study jellyfish distribution and abundance in the YS. The possible methodologies for monitoring systems including sampling sites and frequency of sampling and information sharing was also discussed.

2. Shortcoming and plans for achieving targets and objective

The shortcomings of the project are following:

2.1 Quite complex and difficult dynamics for coordination between countries including PRC, ROK and DPRK, which led to a crippling three-year delay to operational commencement, limited actual milestone has been achieved yet up to now.

2.2 Unsatisfactory coordination capacity and implementation arrangement by UNOPS and PMO, lack of strategic approach to promote the implementation in efficient and effective management in a time manner. Lack of communications among most of key stakeholders of the project.

2.3 Low delivery rate both from financial and activities implementation perspectives, which demand PMO to take urgent actions for accelerating the efficiency and effectiveness of implementation modalities.

3. Overall suggest for the project implementation towards the end of the project.

The project applied to have another one year extension including half year implementation by UNOPS and half year for TE and closure. UNDP would like to work with both countries and direct UNOPS for their stronger commitment to deliver the project both for activities to achieve indicators with reasonable expenditure delivery according to the TYWP until the end of the project. UNDP would propose the following advice for the PMO and UNOPS:

3.1 Enhance the leadership and strategic approach for the project implementation by both UNOPS and PMO. Capacity building of PMO and related stakeholders for improve project implementation from delivery and quality perspectives. CTA/PM of the project should play leading role for formulate the strategic approach for overall implementation including workplan, partnership building, coordination with three countries, timeline and performance management of PMO staff and activities, monitoring and evaluation etc. The CTA/PM play key role for success of the project to achieve targets, he should pay attention to delegate PMO staff for implementation and could only focus on key actions and only participate key activities personally, especially focus on coordination with UNOPS HQ.

3.2 Pay much attention to strengthen the coordination and facilitate the communications between the three countries for reach consensus for key issues during the implementation.

3.3 Speed up the implementation of the project, set up tight schedule for project implementation with detailed count down timetable to achieve indicators one by one managed by PMO, with timely monitoring and supervision by CTA/PM. The project should strengthen the coordination and cooperation between the governments in three countries, and other related stakeholders. PMO should prepare everything well in advance for implementation in strategic manner, time management is the key.

3.4 Try all the best to accomplish most of components, pay much attention to summarize the results and achievements of the project, enhance the

	<p>communications with media, NGOs and local residents to raise public awareness, as well as increase the visibility of the project. Well prepared for TE of the project in the third quarter of 2020 by speeding up activity implementation, timely M & E, public awareness, knowledge management etc. And preparation for potential application of extension.</p> <p>In summary, the overall progress of both ratings is moderate unsatisfactory, we sincerely hope that the project could achieve the objectives in the end by all means of efforts and great support from all stakeholders.</p>	
Role	2019 Development Objective Progress Rating	2019 Implementation Progress Rating
GEF Operational Focal point	<i>(not set or not applicable)</i>	<i>- IP Rating provided by UNDP-GEF Technical Adviser and UNDP Country Office only -</i>
Overall Assessment	<i>(not set or not applicable)</i>	
Role	2019 Development Objective Progress Rating	2019 Implementation Progress Rating
Project Implementing Partner	<i>(not set or not applicable)</i>	<i>- IP Rating provided by UNDP-GEF Technical Adviser and UNDP Country Office only -</i>
Overall Assessment	<i>(not set or not applicable)</i>	
Role	2019 Development Objective Progress Rating	2019 Implementation Progress Rating
Other Partners	<i>(not set or not applicable)</i>	<i>- IP Rating provided by UNDP-GEF Technical Adviser and UNDP Country Office only -</i>
Overall Assessment	<i>(not set or not applicable)</i>	
Role	2019 Development Objective Progress Rating	2019 Implementation Progress Rating
UNDP-GEF Technical Adviser	Moderately Unsatisfactory	Moderately Unsatisfactory
Overall Assessment	<p>At the outset, the circumstances for this project need to be elaborated on as it affects DO and IP progress ratings. The 4-year project meaningfully started in March 2017 when the PMU was fully staffed although the project document was signed in July 2014 at which time the project officially started. As of June 2019, the project has only been under implementation for 2 years and 3 months. However, this PIR reports on progress from July 2014 and therefore the assessments are made against the longer time frame. It is noted that the project was extended from July 2018 to December 2019. This PIR covers the first 12 months of the roughly 18-month extension period.</p> <p>During the meeting of the YSLME Interim Commission Council (ICC) in March 2019, decision was made to program the entire remaining funds of the project which amounted to \$ 4,767,833. This was a tall order considering the history of the project but consideration was placed on the momentum gained with the fully-staffed PMO that has been in place two years running. Most of the grant agreements with government and academic institutions and consultancy agreements have been signed with project partners in China thus the bulk of</p>	

the work during the year is monitor the implementation of activities by partners while finalizing pending contracts.

The expenditure in the first 2 quarters \$ 853,791. The delivery in this reporting period is 18%, mainly for the activities under the component 2, whereas the total cumulative delivery since the project started is 48%. This figure may be low but would represent an accelerated pace compared to previous semesters. It is expected that implementation will be on a much faster pace during the second semester of 2019.

With the initial confusion resulting from the reorganization in China largely overcome, there has been recent discussion about the possibility of another extension beyond December 2019. This would allow more time for the project to be implemented meaningfully for about 4 years which is the original duration. UNDP would support this initiative if discussed in upcoming ICC meetings. It is important that such an extension should only be made on the condition that implementation should not slacken.

While several risks are still highlighted in this PIR, these are not expected to be serious as in the past years. The PMO and UNDP China have done a good job in building trust among the countries and partners. The remedial measures that have been put in place in the past years have yielded positive results. These should be continued as the need arises. The PMO should immediately brief new staff from all partners as staff movements have been quite fast.

For the progress under Component 1: Ensuring Sustainable Regional and National Cooperation for Ecosystem-Based Management

The most significant achievement under this component is that in 2018, there were 445 participants attending 15 events organized by the project. With that promising participants number, it is estimated that more than 40 national, regional organizations NGOs and private sectors would participate in YSLME events by end of this year. The end-of-project targets under the participation in SAP implementation indicator (40 partnerships, and 25 capacity building activities, with the number of participants 200) is expected to be achieved. Nevertheless, as the progress on regional and national cooperation for ecosystem-based management is significantly behind the schedule, the progress under this component is considered off-track.

Component 2: Improving Ecosystem Carrying Capacity with Respect to Provisioning Services

In PRC, the total allowable catch declined from 13 million tons to 10 million tons from both inshore and offshore capture fisheries (25 percent reduction to be achieved in 2018 in PRC whereas the EoP is 30% reduction). For enhancing fish stock activities, in ROK, 36 marine ranches are established. Three groups of national marine ranches are piloted. ROK also applies TAC system to 11 species with 70 TAC observers. In China, two species are piloted. For activities under enhancing and sustaining mariculture production, activities are at the pilot stage in both countries.

Component 3: Improving Ecosystem Carrying Capacity with respect to Regulating and Cultural Services

For activities under Ecosystem health improved through discharged reductions, there are ongoing intensive monitoring and assessment conducted in PRC. In ROK, a target site with the project on eutrophication and nutrition reduction is being implemented. For activities under the application of artificial wetlands to reduce the pollution discharge, according to China's Blue Bay Action Plan, Rizhao, Dalian, Qingdao, Weihai, Yantai in YLSME are selected as demonstration sites. In ROK, modeling of nutrients in Han River is ongoing.

Component 4: Improving Ecosystem Carrying Capacity with respect to Supporting Services

Continuing from last year progress, the project has finished identifying 23 potential sites in two countries. For strengthen regional MPA network achievements, currently, there are 31 national MPAs in PRC and 16 national MPAs in ROK (total for 2 countries = 2.1% of Yellow Sea whereas the end-of-project targets under MPA is to increase 3% total areas as MPAs and the impacts of reclamation prepared in two demo sites).

For adaptive management mainstreamed to enhance resilience of the YSLME, it is rated as off-track. Similarly, there is not much progress on climate impacts implementation on climate impacts & coastal governance. For application of ecosystem-based community management (EBCM), the draft monitoring program of jellyfish is still underway. The progress under this component is thus considered off-track.

Recommendation/Conclusion

Within less than 4 months left before the project's planned closing date, it is a huge challenging to overcome the bottlenecks and expedite off-track activities. However, as mentioned earlier, there is a likelihood of another extension.

There are issues/risks below which required full attention and commitments of all relevant parties/ countries to reach the project targets:

The first identified issue is a political risk regarding partners' commitments. Consensus is the most important driver to the project's success. Efforts have been made to solve this hindrance. For example, an ad hoc ICC meeting was planned in July and was aimed to seek consensus on regional governance framework by end of this year.

Second, as mentioned from the MTR, workload on the PMU and staff shortage immensely affect the project implementation. To solve this issue, work delegation has been proposed. For example, an operation associate position would be upgraded to provide further procurement and operations support. Likewise, interns are on board to help with administrative tasks and communications. In terms of speeding the 8-grants program, the environmental specialist could provide technical support to the program. It is noted that this delegation could help CTA/PM to dedicate more time on the project implementation.

The last risk identified is an organizational risk. That is, the restructuring in the offices of government partners in China has resulted in confusion. The recent meetings, however, indicate that all partners now have a clear understanding of the project through efforts of the PMO, UNDP and UNOPS.

H. Gender

Progress in Advancing Gender Equality and Women's Empowerment

This information is used in the UNDP-GEF Annual Performance Report, UNDP-GEF Annual Gender Report, reporting to the UNDP Gender Steering and Implementation Committee and for other internal and external communications and learning. The Project Manager and/or Project Gender Officer should complete this section with support from the UNDP Country Office.

Gender Analysis and Action Plan: <i>not available</i>
Please review the project's Gender Analysis and Action Plan. If the document is not attached or an updated Gender Analysis and/or Gender Action Plan is available please upload the document below or send to the Regional Programme Associate to upload in PIMS+. Please note that all projects approved since 1 July 2014 are required to carry out a gender analysis and all projects approved since 1 July 2018 are required to have a gender analysis and action plan.
<i>(not set or not applicable)</i>
Please indicate in which results areas the project is contributing to gender equality (you may select more than one results area, or select not applicable):
Contributing to closing gender gaps in access to and control over resources: No
Improving the participation and decision-making of women in natural resource governance: No
Targeting socio-economic benefits and services for women: No
Not applicable: Yes
Atlas Gender Marker Rating
GEN1: some contribution to gender equality
Please describe any experiences or linkages (direct or indirect) between project activities and gender-based violence (GBV). This information is for UNDP use only and will not be shared with GEF Secretariat.
<i>(not set or not applicable)</i>
Please specify results achieved this reporting period that focus on increasing gender equality and the empowerment of women.
Please explain how the results reported addressed the different needs of men or women, changed norms, values, and power structures, and/or contributed to transforming or challenging gender inequalities and discrimination.
<i>(not set or not applicable)</i>
Please describe how work to advance gender equality and women's empowerment enhanced the project's environmental and/or resilience outcomes.

(not set or not applicable)

I. Social and Environmental Standards

Social and Environmental Standards (Safeguards)

The Project Manager and/or the project's Safeguards Officer should complete this section of the PIR with support from the UNDP Country Office. The UNDP-GEF RTA should review to ensure it is complete and accurate.

1) Have any new social and/or environmental risks been identified during project implementation?
No
If any new social and/or environmental risks have been identified during project implementation please describe the new risk(s) and the response to it.
<i>(not set or not applicable)</i>
2) Have any existing social and/or environmental risks been escalated during the reporting period? For example, when a low risk increased to moderate, or a moderate risk increased to high.
<i>(not set or not applicable)</i>
If any existing social and/or environmental risks have been escalated during implementation please describe the change(s) and the response to it.
<i>(not set or not applicable)</i>
SESP: SESP_PIMS4552.pdf
Environmental and Social Management Plan/Framework: <i>not available</i>
For reference, please find below the project's safeguards screening (Social and Environmental Screening Procedure (SESP) or the old ESSP tool); management plans (if any); and its SESP categorization above. Please note that the SESP categorization might have been corrected during a centralized review.
<i>(not set or not applicable)</i>
3) Have any required social and environmental assessments and/or management plans been prepared in the reporting period? For example, an updated Stakeholder Engagement Plan, Environmental and Social Impact Assessment (ESIA) or Indigenous Peoples Plan.
<i>(not set or not applicable)</i>
If yes, please upload the document(s) above. If no, please explain when the required documents will be prepared.
<i>(not set or not applicable)</i>
4) Has the project received complaints related to social and/or environmental impacts (actual or potential)?
<i>(not set or not applicable)</i>

If yes, please describe the complaint(s) or grievance(s) in detail including the status, significance, who was involved and what action was taken.

(not set or not applicable)

J. Communicating Impact

Tell us the story of the project focusing on how the project has helped to improve people's lives.

(This text will be used for UNDP corporate communications, the UNDP-GEF website, and/or other internal and external knowledge and learning efforts.)

(not set or not applicable)

Knowledge Management, Project Links and Social Media

Please describe knowledge activities / products as outlined in knowledge management approved at CEO Endorsement /Approval.

Please also include: project's website, project page on the UNDP website, blogs, photos stories (e.g. Exposure), Facebook, Twitter, Flickr, YouTube, as well as hyperlinks to any media coverage of the project, for example, stories written by an outside source. Please upload any supporting files, including photos, videos, stories, and other documents using the 'file library' button in the top right of the PIR.

<https://www.yellowseapartnership.org> (YSLME Project's website)

<https://www.yellowseapartnership.org/news> (up-to-date news about YSLME project's activities and events)

<https://www.yellowseapartnership.org/mstp-documents> (Meeting documents, proceedings, and publications for MSTP and ICC)

<https://www.yellowseapartnership.org/rwgs> (Meeting proceedings for the Six Regional Working Groups)

<https://www.yellowseapartnership.org/docs> (Publications for other meetings, workshop, and events)

<https://news.iwlearn.net/yslme-phase-ii> (news on Phase II launch on IW:Learn)

<http://www.un-rok.org/about-un/offices/yslme/> (UN-ROK promotion of the Phase II Project)

<https://mailchi.mp/unesco.org/ioc-news-june-2018>, link to the Yellow Sea LME article featured in the IOC-UNESCO newsletter this June 2018.

All the photos, news, and publications are available on the project website (<https://www.yellowseapartnership.org>)

K. Partnerships

Partnerships & Stakeholder Engagement

Please select yes or no whether the project is working with any of the following partners. Please also provide an update on stakeholder engagement. This information is used by the GEF and UNDP for reporting and is therefore very important! All sections must be completed by the Project Manager and reviewed by the CO and RTA.

Does the project work with any Civil Society Organisations and/or NGOs?
Yes
Does the project work with any Indigenous Peoples?
No
Does the project work with the Private Sector?
Yes
Yes
Does the project work with the GEF Small Grants Programme?
No
Does the project work with UN Volunteers?
No
Did the project support South-South Cooperation and/or Triangular Cooperation efforts in the reporting year?
No
CEO Endorsement Request: PIMS 4552 YSLME2 CEO Endorsement Request Doc 6Jan14.docx
Provide an update on progress, challenges and outcomes related to stakeholder engagement based on the description of the Stakeholder Engagement Plan as documented at CEO endorsement/approval (see document below). If any surveys have been conducted please upload all survey documents to the PIR file library.
Eight organizations were partnered for funding under the Yellow Sea Grant Program, i.e. 1) Beijing Chaoyang District Yongxu Global Environmental Institute (GEI), 2) Blue Ribbon Ocean Conservation Association (BROCA), 3) China Aquatic Products Processing and Marketing Alliance (CAPPMA), 4) Chinese Academy of Fishery Science (CAFS), 5) Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences (IGSNRR), 6) Shanghai Rendu Ocean NPO Development Center, 7) China Biodiversity Conservation and Green Development Foundation (CBCGDF), and 8) Society of Entrepreneurs and Ecology Foundation(SEEF). To date, all the 8 grantees have been awarded, while only 6 Grant Support Agreements (GSAs) were signed, and 1st instalment was paid to 4 of the 6 GSAs. These partners will complement the project partners by reaching out to the communities for awareness raising, education, monitoring, and facilitation of communities to participate in conservation through conservation agreement with local authorities to contribute to sustainable fisheries, replication of environmentally friendly mariculture techniques, monitoring and reduction of marine litter, and conservation of migratory waterbirds and mammals.

L. Annex - Ratings Definitions

Development Objective Progress Ratings Definitions

(HS) Highly Satisfactory: Project is on track to exceed its end-of-project targets, and is likely to achieve transformational change by project closure. The project can be presented as 'outstanding practice'.

(S) Satisfactory: Project is on track to fully achieve its end-of-project targets by project closure. The project can be presented as 'good practice'.

(MS) Moderately Satisfactory: Project is on track to achieve its end-of-project targets by project closure with minor shortcomings only.

(MU) Moderately Unsatisfactory: Project is off track and is expected to partially achieve its end-of-project targets by project closure with significant shortcomings. Project results might be fully achieved by project closure if adaptive management is undertaken immediately.

(U) Unsatisfactory: Project is off track and is not expected to achieve its end-of-project targets by project closure. Project results might be partially achieved by project closure if major adaptive management is undertaken immediately.

(HU) Highly Unsatisfactory: Project is off track and is not expected to achieve its end-of-project targets without major restructuring.

Implementation Progress Ratings Definitions

(HS) Highly Satisfactory: Implementation is exceeding expectations. Cumulative financial delivery, timing of key implementation milestones, and risk management are fully on track. The project is managed extremely efficiently and effectively. The implementation of the project can be presented as 'outstanding practice'.

(S) Satisfactory: Implementation is proceeding as planned. Cumulative financial delivery, timing of key implementation milestones, and risk management are on track. The project is managed efficiently and effectively. The implementation of the project can be presented as 'good practice'.

(MS) Moderately Satisfactory: Implementation is proceeding as planned with minor deviations. Cumulative financial delivery and management of risks are mostly on track, with minor delays. The project is managed well.

(MU) Moderately Unsatisfactory: Implementation is not proceeding as planned and faces significant implementation issues. Implementation progress could be improved if adaptive management is undertaken immediately. Cumulative financial delivery, timing of key implementation milestones, and/or management of critical risks are significantly off track. The project is not fully or well supported.

(U) Unsatisfactory: Implementation is not proceeding as planned and faces major implementation issues and restructuring may be necessary. Cumulative financial delivery, timing of key implementation milestones, and/or management of critical risks are off track with major issues and/or concerns. The project is not fully or well supported.

(HU) Highly Unsatisfactory: Implementation is seriously under performing and major restructuring is required. Cumulative financial delivery, timing of key implementation milestones (e.g. start of activities), and management of critical risks are severely off track with severe issues and/or concerns. The project is not effectively or efficiently supported.