Proceedings of the 1st Meeting of the Regional Working Group on Pollution Reduction (RWG-P) of the UNDP/GEF YSLME Phase II Project

(draft)

Xinghai Golf Hotel, Dalian, PR China

10-12 October 2017

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1. Opening of the meeting

1. The 1st Meeting of the Regional Working Group on Pollution Reduction (RWG-P) of the UNDP/GEF YSLME Phase II Project was held in Xinghai Golf Hotel, Dalian, on October 10-12, 2017. National Coordinators (NCs) from PR China and RO Korea, Members of the RWG-P from RO Korea, Members of National Working Group on Pollution Reduction from PR China, representatives from NMEMC/SOA, Korea Marine Environment Management Corporation (KOEM) and staff of the Secretariat participated in the Meeting.

2. Mr. GUO, Chief Technical Adviser of the Project opened the meeting and welcomed all participants to Dalian, PR China. In particular he expressed heart-felt thanks to NMEMC/SOA for the hospitality, to KOEM and National Coordinator (NC) of RO Korea for their facilitation of participation of RWG-P members at the meeting, and the efforts of the RWG members in preparing the TORs for review by the meeting. He introduced briefly background of the Project, the processes of TDA and SAP addressing key issues such as eutrophication, algae bloom and contaminants under the mandate of the RWG-P, as well as roles of RWG-P as directed by the first meeting of the Interim Commission Council (ICC). He reminded the participants of the slower than expected implementation of the project and underscored the urgency of full implementation of the project with cooperation of both countries.

3. Professor Juying WANG, Deputy Director General of NMEMC/SOA and the Chair of RWG-P in PR China, welcomed all participants and expected the 2nd phase of the Project to be successful as it was in the first phase with enhanced cooperation. Through hosting the branch PMO at NMEMC, enhanced cooperation can be expected with improved communication.

4. The participants went through a round of self-introduction of their names, organizations and expertise related to the mandate of the RWG-P.

5. The list of participants is attached to this report as Annex I.

2. Organization of the meeting

2.1 Election of Chair and designation of rapporteurs

6. Mr. Yinfeng GUO invited the representatives of PR China and RO Korea to nominate the Chair and Vice Chair for the meeting. Considering the fact that Chairs and Vice Chairs of all RWGs have not been nominated, the meeting suggested Mr. Yinfeng GUO, CTA of the Project to serve as the interim Chair and designated the Secretariat as rapporteur. Mr. GUO accepted the suggestion of the meeting emphasizing that

full ownership of the Project is with the two countries and urged the two countries to resolve the chairmanship of RWGs as early as possible.

7. Dr. WANG from PR China reiterated the significance of prompt implementation of activities considering delayed start-up of the 2nd phase of the Project.

2.2 Adoption of agenda

8. The Chair explained that the Meeting will address the following issues: 1) to seek consensus over the TOR and workplan of the RWG-P. In this meeting, it is expected to have discussion to revise and refine work plans as well as TOR of RWG-P if necessary; 2) to respond to the decisions of the interim Commission Council to expedite the implementation of the Project with review of TORs of key activities related with mandate of the RWG-P as a standard procedure of UNOPS and UNDP in mobilizing expertise to implement project activities; 3) to identify demonstration sites and agree on interventions at local levels to catalyse active participation of local stakeholders in the near future; 4) knowledge management and capacity development.

9. He also conveyed the concerns of UNDP and UNOPS on the slow progress of Project which was ascribed to the late approval of the Annual Workplan. He expected the Project to be implemented as planned through flexible arrangement of signing a memorandum of understanding with SOA and signing of Project Cooperation Agreements with three institutes active in the two project phases. He also wished the Project to draw more attention from governmental sectors on the progress of the projects.

10. The meeting adopted the agenda as it is.

3. Review and refine documents approved at the 1st Meeting of Interim YSLME Commission Council

3.1 Project overview and outcomes and activities related to the mandate of RWG-P

11. The Chair introduced project outcomes, targets, activities and budget for activities in 2017. In his presentation, outcomes of components 3 and 4 in relation to pollution reduction were elaborated. Also, in line with activities that RWG-P is supposed to implement, management measures at regional level were introduced together with activities to be implemented in 2017.

12. After the Chair's presentation, the floor was open for general comments and suggestions. Dr. OH from RO Korea introduced briefly current relevant situations of

RO Korea in project implementation by highlighting 3 points: 1) uncertainty of support by MOF to fully support all planned activities due to lack of budget in 2017; 2) need for more regional activities in close collaboration with experts from both countries; and 3) need to refer review of activities related to HAB and Jellyfish to RWG-A.

13. In response to the updates from RO Korea, the Chair emphasized that all activities listed in the NSAP will be implemented by member states financed by government. As for regional activities which are not funded by national governments regularly, participating countries need to consider securing government budget beyond GEF project cycle in support of implementation of regional activities proved by RWGs as most effective if implemented at regional level. Considering the cross-cutting and interlinked characteristics of many activities among RWGs, views from experts of RWG-P if any can be shared with RWG-A if time allows for review at the meeting.

14. Upon the request of the Chair, the Secretariat introduced the TOR of RWGs and Chairs/Vice Chairs and the TOR of RWG-P. After presentation by the Secretariat, the Chair opened the floor for discussion and invited participants to provide comments for possible revision on TOR which could be submitted for further consideration at the next MSTP.

15. RO Korea recalled an earlier intervention at the MSTP-1 emphasizing that it is the role of the Secretariat to organize regional workshops rather than the Chairs/Vice Chairs of the RWGs. The Chair requested the Secretariat to take note of the findings on TOR.

3.2 Terms of reference of RWGs and Chairs/Vice Chairs, and TOR of RWG-P; and RWG-P work plan (2017-2019)

16. Upon the request of the Chair, the Secretariat introduced TOR of RWGs and Chairs/Vice Chairs with focus on TOR of RWG-P. After presentation by the Secretariat, the Chair emphasized that at the ICC-1 of the TOR of RWGs and 3-year work plans were approved under the condition of possible revision by RWG members.

17. Due to time constraints in implementation of project activities, representatives of both countries raised the concern over practicality of full implementation of planned activities in 2017. Dr. WANG from PR China suggested that activities planned to be completed in 2017 should be reconsidered for possible extension to 2018 if unable to be completed in 2017.

18. After lengthy discussion, the Meeting suggested to review all activities carefully and be aware of time to be completed for activities.

19. Dr. WANG from PR China suggested to combine activities of similar nature in different TORs, while in the TOR on marine litter review of policies and monitoring of

marine litter under different disciplines are mixed together. In the latter case, she suggested to the two activities need to be separated in different TORs.

20. Dr. OH from RO Korea suggested again to combine activities under several categories. In response to suggestion made by RO Korea, the Chair reminded the participants to consider the following two points: 1) limited resources for potential subcontractors attempting to implement activities listed in TORs and 2) regional activities should be carried out based on close regional cooperation under the framework of the Project with strong ownership and national interest.

21. The meeting agreed to combine and or activities under different subcontracts based upon specific circumstances, taking consideration of practical implementation modality of project activities.

Session 1: Initiating implementation of Project Activities – Review of TORs for regional activities

22. This session reviewed a total of 19 TORs of project activities to be implemented in 2017. Activities and discussion results are highlighted in the following paragraphs.

Activity 1 of Output 3.1.1.: Establish regional pollution monitoring guideline, environmental quality standards and network based on any existing ones: harmonize regional methodology and update regional monitoring guideline including for emerging contaminants

23. After introduction of TOR by both countries, the Meeting noticed two areas with different contributions from the two countries: 1) deliverables to focus on a “proposal” for regional pollution monitoring guideline, suggested by PR China, and “pollution maps” of anthropogenic pollutants suggested by RO Korea which expects data sharing between the two countries to facilitate the work of the international expert; and 2) expanding the scope of target pollutants from nutrients to nutrients, POPs and heavy metals. In the perspective of the Secretariat, development of pollution maps is critical and also will provide good outcomes which will contribute to update TDA and SAP, one of mandate of all RWGs.

24. Dr. OH from RO Korea introduced the concept of “non-target screening” which could be applicable to YS, by considering the fact that no critical pollutants affecting marine environment have been identified.

25. In response to suggestion made by Dr. OH, Dr. WANG from PR China suggested to identify critical pollutants causing serious problems in marine environment nowadays.

Also, in regards to pollution maps, sharing data is unlikely to be a problem since the relevant data and information is available in China even if the format is different.

26. After lengthy discussion, the Meeting agreed to include emerging pollutants including POPs and heavy metals in developing guidelines and in developing framework plan for establishing the monitoring network.

Activity 2 of Output 3.1.1.: Support to apply modelling and calculate nutrient loading in hot spots/critical habitats: 2 pilot sites in China and 2 sites in RO Korea

27. After presentation, the Meeting suggested to reduce number of demonstration sites by taking consideration of limited amounts of budgets and time. In response to suggestion made by both countries, the Chair informed the Meeting that reducing the number of demonstration sites without compromising the results of the project could be considered as an option which has already been discussed within UNOPS on reduction of number of sites.

28. Dr. WANG from PR China also proposed to consider Haizou bay of Lianyungang City, Jiangsu Province, as a demonstration site.

29. RO Korea suggested the use of watershed approach in applying modelling and calculate nutrient loading. While this approach is welcomed to reflect the ecosystem-based approach, the meeting was reminded of the fact that there are no suitable watersheds Yellow Sea region to apply the modelling, because the Yellow River is outside the project geographical coverage, and the Yangtze River is too large to be included in the project.

30. After lengthy discussion, the Meeting agreed to reduce demonstration sites from 2 to 1 for each country and consider the use of meaningful “watershed approach” in the scoping study. It was also suggested to add any new initiatives to be conducted by NMEMC which could be applicable to this project.

Activity 1 of Output 3.1.2.: Diagnostic analysis of ID sources and sinks of pollutants, review available data and information, report environmental status and trends of YS, and identify gaps and explore mechanisms for data and information sharing between the two countries

31. After presentation, Dr. WANG from PR China asked to clarify “trends” which could be implied “temporal” or “spatial” approach. Since the pollution maps are available, “spatial” trends can be made. Understanding of “temporal” trends will be meaningful since the trends during the 1st phase could be compared with the one in the 2nd phase. She also suggested not to consider quality standards since regional standard has not been set up for the assessment of the YS.

32. After lengthy discussion, the Meeting agreed on the importance of diagnostic analysis of sources and sinks of pollutants. With suggestion made by both countries, the PMO is requested to consolidate the two TORs into one.

Activity 2 of Output 3.1.2.: Support for monitoring and data acquisition for sharing on pollutants from atmosphere-based sources

33. After lengthy discussion, the Meeting agreed on the importance of diagnostic analysis of sources and sinks of pollutants. With suggestion made by both countries, the PMO is requested to consolidate the two TORs into one.

34. After presentation from both countries, Dr. OH from RO Korea noticed different target compounds – nutrients by PR China and PBT including heavy metals by RO Korea. He also suggested the PMO to revise the title of the subcontract, followed by an introduction of concept of “PRTR” used by OECD for consideration and use by two countries.

35. PR China expressed a concern of data sharing and value of “PRTR” since PR China is not officially established till now by Ministry of Environmental Protection (MEP) in PR China.

36. After lengthy discussion, the Meeting agreed to include nutrients with hazardous substances (heavy metals and POPs). With suggestion made by both countries, the PMO will consolidate two TORs into one.

Activity 3 of Output 3.1.2.: Support for monitoring and data acquisition for sharing on fertilizer use

37. After presentation from a representative of NMEMC of PR China, Dr. KOO of RO Korea suggested to combine with Activity 1 due to similar characteristics.

38. As for geographical coverage of the project, the Chair emphasized the 3 provinces (Liaoning, Shandong, and Jiangsu) from PR China will be covered in the project, while fertilizer use data from the five provinces of RO Korea will also be made available for future use.

Activity 4 of Output 3.1.2.: Support for monitoring and data acquisition for sharing from sea-based sources

39. NMEME/SOA presented the TOR of the activity for comments. Dr. OH introduced briefly ship-based pollutants to help understand the scope of the given TOR.

40. The Chair supported to include other sea-based pollutants in addition to from mariculture, which was agreed by PR China, and concluded to set the scope of the study at “sea-based” pollutants. The Chair also accepted the suggestion to delete the term “in PR China” in the title of the study.

Activity 1 of Output 3.2.1.: Develop regional strategy for using wetlands as nutrient sink

41. The Meeting confirmed the importance of review of status of coastal wetlands in nutrient removals.

42. Dr. HEO from RO Korea suggested to combine this project with activity 2 of output 3.2.1. which will synthesize the good practices using wetlands as nutrient sinks. On activity 2 of output 3.2.1, Dr. OH suggested to use good practices of the Yellow Sea rather than experiences of other region for ease of communication and cross-site learning.

43. The Meeting agreed to combine the two projects and to add more case studies carried out in sites located in YS region.

44. The meeting adjourned at 18:00, followed by a dinner reception hosted by the Project.

45. The meeting on the second day started at 09:00, to continue to review the remaining TORs.

Activity 1 of Output 3.3.1.: Review of policies and regulations in China and RO Korea dealing with pollution control and assess compliance with UNCLOs, the future we want, multi-lateral environmental agreements and programmes ratified by both countries, and prioritize legal and regulatory reforms in both countries

46. After the presentation, Dr. OH from RO Korea suggested the study to cover both PR China and RO Korea Ms. CHAE from RO Korea and Dr. WANG from PR China had same opinion that every activity should include both governments’ review.

47. Dr. WANG from PR China suggested that this TOR should include both RO Korea and PR China. Also, Ms. CHAE emphasised the need to review TOR of regional activities by RWGs before hiring of consultants.

48. During the discussion, Dr. OH proposed that the activity 1 of output 3.1.1 should be revised as well. Taking into consideration the request of both countries to expand the use of the GEF grant to review of legal frameworks of both PR China and RO Korea, the Chair concluded to accept the proposed revisions to the TOR for it to include

both PR China and RO Korea in the review, with the understanding that, while activities in the Project will be implemented by both countries, the GEF grant will support activities in PR China in accordance to the Project Document and GEF policy. With the enlarged scope in the study, the Chair suggested to reduce the scope of the study to Output 3 only by the International Consultant, with the Outputs 1 and 2 to be primarily provided by the two countries with assistance from the intern on environmental law. He further suggested to revisit the reporting dates by the PMO.

Activity 2 of Output 3.3.1.: Review of international and regional instruments and policies on waste management, guidelines on marine litter monitoring and assessment, and develop a harmonized regional microplastics monitoring and assessment guidelines

Activity 4 of Output 3.3.1.: Support to develop regulatory measures for marine litter monitoring, disposal, handling, reuse, recycle in pilot province or city of Yellow Sea to enable investment on recycling economies

Activity 1 of Output 3.4.1.: Regional review of existing policies and regulations regarding solid waste disposal as well as technologies for reducing production including recycling opportunities

Activity 2 of Output 3.4.1: Develop & test monitoring system, and conduct a regional baseline survey of marine litter in collaboration with other relevant organizations

49. Dr. Zhang from PR China presented the four TORs in relation to marine litter.

50. Dr. OH from RO Korea pointed out that the TOR for Activity 4 of Output 3.3.1 prepared by RO Korea expert only considered marine litter monitoring without touching on support to local government in developing enabling policies. Moreover, he said that marine litter and micro-plastic need to be handled separately. In addition, he said that development of the guidelines and regulatory measures on marine litter and micro-plastic should be included in different TORs. Given the institutional and technical capacity of NMEMC/SOA, he suggested that the all activities related with marine litter should be undertaken by NMEMC/SOA.

51. The meeting discussed the need to undertake studies on impact of microplastics to seafood, and the need to develop regional microplastics guidelines by the Project.

52. Following open discussions, the meeting concludes that while no international guidelines for micro-plastic monitoring exist, there is no point of developing microplastics monitoring guidelines by the YSLME Phase II Project as international guidelines are being developed with participation of experts from the world. In this regard, full involvement of experts of PR China and RO Korea in the development process of such international guidelines is strongly recommended. The meeting recognized that in spite of the need for better understanding of the impact of microplastics on seafood, technically the cause-effect relationship between

microplastics and seafood security is not scientifically established, let alone the accumulated effects of microplastics and chemical compounds on seafood.

53. Following the discussion, the Chair concluded that in Activity 2 of Output 3.3.1, review of international and regional instruments and policies on waste management, guidelines on marine litter monitoring and assessment will be combined with Activity 1 of Output 3.1.1, while budget for developing a harmonized regional microplastics monitoring and assessment guidelines will be set aside for other uses under the PCA with NMEMC.

54. For Activity 2 of Output 3.4.1, the Chair concluded to include in the Project Cooperation Agreement (PCA) with NMEMC/SOA rather than to mobilize an international consultant as originally planned.

Activity 3 of Output 3.1.1: Review of control mechanisms from point sources and evaluate facilities and equipment to control/reduce discharge from industrial and municipal sources and control/mitigation mechanism of pollution from point sources

55. Dr. WANG from PR China pointed out that marine litter should not be included in this activity. And Dr. OH from RO Korea suggested to delete or modify the bullet point one of the activity. He also suggested that after modification then the TORs for demonstration sites may also need to be modified.

56. The Chair concluded to revise the TOR by the PMO for further review by the RWG-P through communication.

Activity 4 of Output 3.1.1: Economics analysis of reduction of nutrients for better environment and ecosystem of pilot sites

57. Dr. OH from RO Korea suggested to revise the title of the consultancy to keep consistent with purposes of the activity. Dr. KOO from RO Korea questioned the benefits of developing artificial wetland for nutrient treatments and other environmental benefits. To be specific, he claims that artificial wetland should not be prioritized for such interventions have not targeted the root causes. In his personal opinion, categorizing the pollutant sources and finding out contributions to Yellow Sea should be the first task to be done.

58. With full understanding of the comments made by Dr. KOO, Dr. WANG from PR China believed that more wetland and including artificial ones will be built with support of national governments in the future, and in this sense, support to demonstration of using wetland as nutrient sinks is very relevant to the subject area.

59. The Chair appreciated the frankness of the Dr. KOO and recalled the TDA and SAP processes when the RWGs of the two countries identified the issues and root causes and strategized actions in the YSLME SAP signed by the two countries. As a means to support implementation of the YSLME SAP, development of regional strategy and demonstration of using wetland regulating services to sink nutrients are designed for support by this project with endorsement of the MSTP-1. Given the rigorousness of the TDA and SAP processes, he believed the inclusion of wetland construction and restoration activities to in the project is necessary.

Activity 3 of Output 3.2.1 Technical support to design wetland habitats to achieve blue bay in three pilot sites in China and application of clean production technologies and relevant technology transfer

60. In discussing the effectiveness of artificial wetland between Mr. Zhu from PR China and Dr. KOO from RO Korea, Dr. KOO suggested to consider use part of budget for demonstration of wetland construction and restoration to activity 3 of output 3.1.2 on data collection and sharing on fertilizer use.

61. The Chair concluded that in selecting demonstration sites for wetland construction or restoration, the project can consider the demonstration of good production practices in reduction of fertilizer use and construction of wetland under the watershed management framework.

Activity 3 of Output 3.3.1: Review technologies for waste reduction, reuse, recovery, and economic studies on recycling uses

62. Dr. KOO from RO Korea questioned the need of this activity, a view shared by Ms. CHAE of RO Korea . Based on this concern, the Chair concluded by postponing this activity for review in the future with a potential option of using the budget for some other activities.

63. Mr. LIANG elaborated the need for selection of demonstration sites in mitigation of sewage, construction of wetland and for other purposes based on the equal participation of the three provinces in China. The Chair reviewed the existing demonstration sites with a finding that all provinces are represented and agreed to make balance in finalizing final demonstration sites.

Session 2: harmonizing monitoring and assessment methodologies and development of regional environment pollution monitoring guidelines

64. In this Session, representatives from the two countries are invited to present available data / information on sources, pathways, and distributions of pollutants, as well as environmental pollution monitoring and assessment methodologies and network.

65. Mr. Ziwei YAO delivered the presentation on behalf of PR China on the monitoring and assessment methodologies first. He gave an introduction of history of marine environment monitoring in PR China and Marine environmental monitoring agencies and monitoring areas of China. His talk focuses on the following issues:
    - Strategic Plan of online and realtime monitoring stations of China
    - Improving of marine environment assessment method;
    - Marine environment monitoring and assessment service -Establishing an open and cooperative working mechanism

66. Dr. Jae Ryoung OH, National Coordinator of RO Korea, delivered the presentation on Marine Environment Monitoring Systems in RO Korea: Marine Environment Monitoring Sampling stations, Monitoring results, Data services (marine environment information system, website www.meis.go.kr) and the Annual and semi-annual report.

67. Being asked by Dr. WANG from PR China who is responsible for the analysis, Dr. OH from RO Korea informed that KOEM and Hanyang University are responsible.

68. Both sides agreed to share the presentations with each other for better understanding of the monitoring of marine environments of each country.

69. Dr. OH raised the question of how to develop the regional guidelines with two countries, and suggested each country should provide detailed information.

70. Dr. OH informed that except certain monitoring data RO Korea is pleased to make available its monitoring data. He cited the difficult situation of accessing data from website and the flow progress and responses in getting in touch with SOA. Then he suggested it might be a good idea if experts from each country can visit each other. Mr. LIANG commented that Chinese experts could visit Korea and Korean experts could visit China and this can help better understand the methodologies of each country.

71. In response to the interventions of Dr. OH and Mr. LIANG, the Chair commented that mutual visits could be a good idea to consider. In this case, the Chair noticed several options for the two countries to make progress in developing and harmonizing regional monitoring guidelines, including:
    - hiring of international consultant
    - mutual visits of each country by experts
    - use national experts from each country

72. The Chair suggested the two countries to review the three options and inform the Secretariat of the final decisions as mutual visits might need to get endorsement from national authorities in the first place. The Chair noticed PR China's agreement for the project to support the consultancy of Korean experts and even travels.

Session 3: Planning for a workshop on need and development of a harmonized monitoring guidelines and protocols to monitoring SAP implementation and update SAP

73. This session is designed to discuss the scheduling of a workshop, including topics venue, dates, outcomes of the workshop, etc.

74. Dr. OH from RO Korea suggested 4 subjects:
    - Marine litter including microplastics
    - POPs, heavy metal & emerging contaminants
    - Nutrients
    - general laws and policies

75. After some discussions, themes of potential workshops have been narrowed down to two: 1) marine litter including micro-plastic; and 2) nutrients. For each workshop, impact of pollutants, monitoring, policies and legislation, and reduction technologies could be the focus of the workshop subject to further development based on needs and partnerships. For both themes, NOWPAP is identified as a partner for collaboration.

76. The Chair concluded that next year RWG-P meeting will be held at RO Korea, possibly in Busan, back to back with a workshop under the theme of nutrient management in the third quarter of 2018. To fully capitalize the inputs of the workshop, the RWG-P could be held after the workshop. The workshop on marine litter including microplastics will be held in 2019 in PR China.

Session 4: Review the criteria of selection demonstration sites and agree on the initial list of demonstration sites

77. The meeting discussed and noticed that PR China will choose one site between Haizhou bay and Dalian bay for demonstration for sewage and nutrient reduction in pollution hot spots and Rushan and possibly Rudong as well as demonstration for wetland construction or restoration. PR China agreed to inform the Secretariat of its final decision shortly after consultation with members of the IMCC in respective

provinces. PR China also confirmed to select Weihai as a site for policy development to reduce marine litter.

78. RO Korea chose Kanghwa Island as MPA site and wetland restoration demonstration. Han River is selected for demonstration of watershed approach in nutrient reduction. Ro Korea mentioned that the site for marine litter reduction cannot be decided at this moment because the expert in the know did not attend the meeting but agreed to notify the Secretariat within a week.

Session 5: Knowledge management and capacity development

79. Dr. OH from RO Korea suggested the case studies of algae blooms Jellyfish in YSLME be referred to RWG on monitoring and assessment which was accepted by the Chair. He also suggested both countries could share ideas on capacity development based on needs and design a monitoring program on capacity building.

80. Dr. WANG from PR China confirmed NMEMC/SOA's interest in sharing information on monitoring frequency, parameters, etc., and that PR China will support the development of training modules and programs.

81. Dr. OH recalled his experiences on capacity development in LMEs in the past years and expressed the willingness to assist in this area. He also emphasized the need to review data before release to public domain. On this issue, the Chair confirmed that data generated from YSLME project will be released to public on website after review and clearance by respective RWGs. He also suggested to take knowledge management and capacity development separately given the distinctiveness of the two subjects. He even suggested to create posts to facilitate the knowledge management and capacity development in particular preparation of training modules subject to availability of budget. The Chair concluded that PMO would prepare TOR(s) for such posts.

Session 6: Collaboration with other partners

82. The Chair called that the first phase of the project has developed Yellow Sea partnership and the guidelines for strengthening Yellow Sea Partnership was approved by the ICC-1. He underscored the importance of implementation of the YSLME SAP by broader partners, and in this regard, he kindly asked the RWG members to give advice for this agenda item.

83. Dr. WANG from PR China shared the meeting information with NOWPAP which is to be held in Qingdao next month on topic of eutrophication assessment technology. Moreover, she would like to invite PMO to join the workshop on the topic of microplastic next month in Shanghai as a joint initiative of PR China and Japan. Last month she attended a meeting held in Phuket under IOC/WESTPAC. At the

workshop three working groups address different issues which are relevant to the agenda of RWG-P. From this, she believes that useful methodologies should be developed and adapted at international level and highlighted the meaningfulness of for cooperation with other organizations.

84. The Chair appreciated the updates by Dr. WANG on issues related to the mandate of the RWG-P and concludes that the Secretariat should make efforts to make available such updates to all members. He also suggested the Secretariat to put events related with mandate of the RWGs on website.

4. Agenda of next RWG meeting

85. The Chair was pleased to note that both countries agreed that the next RWG meeting would be held in Busan, RO Korea in the third quarter of next year back to back to the proposed workshop on nutrients. He confirmed that PMO will draft the meeting program and share with RWG-P members in consultation with the two Chairs of NWG-P.

86. During the discussion, Mr. LIANG from PR China suggested to hold the workshop on nutrient before the RWG meeting.

5. Other business

87. On data management, Dr. OH from RO Korea suggested PMO to check the status of database from phase one hosted by China-Korea Joint Ocean Research Center (CKJORC). Dr. WANG from PR China commented that the platform from phase one would be good to use during the phase two.

6. Wrap-up and closure of the meeting

88. The Chair highlighted the productivity of the meeting which would enable the Secretariat to proceed with the implementation of those activities. The Chair made it clear that the TORs will be consolidated, combined, and revised as discussed for sharing with RWG members within a week. He also requested feedback from RWG members to the revised TORS within a week.

89. Thanking the participants for showing open-minded and co-operative attitudes, Dr. OH from RO Korea was pleased that the meeting successfully went over the TORs. On behalf of the delegation, he also expressed sincere thanks to NMEMC for the hospitality and the friendship of Dr. WANG during the meeting. He showed appreciation to the Chair and PMO and believed next meeting will produce even better results in the future.

90. Dr. WANG from PR China felt that she was worried in the beginning because of the large number of TORs to review. However, fortunately the meeting was through with them all. She believed this meeting was successful since communication with both sides went really well. She also believed that in the future there will be more productive results and she looks forward to the continued constructive contributions from both sides. She thanked to PMO for the hospitality and everything being delivered in successful conduct of the meeting.

91. Dr. LIANG from PR China said that this was his first time participating in this RWG meeting in Phase two and was satisfied with the results of this meeting. He believed openness and friendliness were key to making this meeting smooth and hoped this could be continued in the future.

92. The Chair thanked all the participants and declared the closure of the meeting. He then invited participants to enjoy a lunch hosted by the Secretariat.

Annex 1: List of Participants

List of Participants

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Annex 2: Program of the 1st Meeting of the RWG-P

Program of the First Meeting of Regional Working Group on Pollution Reduction
Dalian, PR China, 10-12 October 2017

Background

Terms of Reference, Workplan of the Regional Working Group on Pollution for 2017-2019 and the Project Workplan for 2017 have been approved by the first meeting of the Interim Commission Council(ICC-1) last July in 2017. Based on decisions of the Interim Commission Council, implementation of activities of these workplans need to consider the following factors:

- significant delay of the second phase of the Project and delayed establishment of the RWGs and the urgency of implementation of activities immediately;
- review of planned activities carefully by RWG members who have not participated in the first meeting of the MSTP; and
- maximizing cooperation and coordination among experts of RWGs from participating countries.

In line with the decisions of the ICC-1, the 1st meeting of the RWG-P will be held in Dalian of PR China on October 10-12, 2017. The meeting will be organized by the Interim Commission Secretariat in collaboration with National Marine Environmental Monitoring Centre of the State Oceanic Administration (NMEMC).

Objectives and Outcomes of the meeting

The 1st meeting of the RWG-P aims to achieve the following objectives:

- To review and refine the TOR of RWG-P and workplan for 2017-2019 as necessary and agreement on the work arrangement among RWG members;
- To review and build consensus on the TORs of and/or methodologies to conduct regional activities under purview of the RWG-P to enable expedited implementation of project activities in 2017;
- To discuss and agree on the draft program of a regional workshop on monitoring and assessment methodologies and harmonization of regional monitoring guidelines.
- To identify areas of collaboration and partners and potential collaborative activities for support by the Project

It is expected that the workshop could provide the following tangible outcomes:

1) Revised TOR and workplan activities proposed in the 3-year workplan and agreed work arrangement among RWG-P members;
2) Revised program of regional workshop, agreed on monitoring technology, assessment methodology and regional monitoring guideline;
3) Consensus on TORs of and methodologies to conduct project regional activities;
4) demonstration sites identified in PR China and RO Korea for wetland restoration and pollution reduction in hotspots;

5) 1-3 collaborative events proposed for support by the Project;
6) Agenda of next RWG meeting; and
7) Consensus on knowledge products and training modules.

Participants

- Members of the RWG designated by China and RO Korea, NMEMC, China, KIOST, RO Korea,
  CTA /Manger, Environment Officer, Environmental Economist, etc.

Tentative Programme

09 October (Monday) Arrival of Participants	
Day 1: 10 October (Tuesday)	
08:00~09:30	Registration for participants
09:30~09:50	Opening of the meeting • Welcome addresses • Introduction of the members and participants
09:50~10:00	Organization of the meeting • Election of Chairs and designation of rapporteurs • Adoption of agenda
10:00~11:00	Review and refine the following documents approved by the Interim YSLME Commission: • Project Workplan in 2017 and activities related to the mandate of RWG-P; • Terms of Reference of RWGs and Chairs/Vice Chairs; • TOR of RWG-P; • RWG-P workplan (2017-2019)
11:00~11:15 11:15~12:00	**Coffee break** Review workplan for 2017 and activities, and work arrangement among RWG-P members
12:00~14:00	**Lunch and Break**
14:00~16:30	**Session 1: Initiating implementation of Project Activities - Review of TORs for regional activities** (meeting documents or TORs will be prepared by PMO and members of RWGs) • Activity 1 of Output 3.1.1: Establish regional pollution monitoring guideline, environmental quality standards and network based on any existing ones: harmonize regional methodology and update regional monitoring guideline including for emerging contaminants • Activity 2 of Output 3.1.1: Support to apply modeling & calculate nutrient loading in hot spots/ critical habitats: 2 pilot sites in China and 2 sites in RO Korea • Activity 1 of Output 3.1.2: Diagnostic analysis of ID sources & sinks of pollutants, review available data & info, report environmental status and

16:30~16:45 16:45~18:00	trends of YS, and identify gaps and explore mechanisms for data and information sharing between the two countries • Activity 2 of Output 3.1.2: Support for monitoring and data acquisition for sharing on pollutants from atmosphere-based sources • Activity 3 of Output 3.1.2: Support for monitoring and data acquisition for sharing on fertilizer use • Activity 4 of Output 3.1.2: Support for monitoring and data acquisition for sharing from sea-based sources • Activity 1 of Output 3.2.1: develop regional strategy for using wetlands as nutrient sink **Coffee Break** **Continuation of Session 1:** • Activity 1 of Output 3.3.1: Review of policies and regulations in China and RO Korea dealing with pollution control and assess compliance with UNCLOs, the future We Want, multi-lateral environmental agreements and programmes ratified by both countries, and prioritize legal and regulatory reforms in both countries • Activity 2 of Output 3.3.1: Review of international and regional instruments and policies on waste management, guidelines on marine litter monitoring and assessment, and develop a harmonized regional microplastics monitoring and assessment guidelines • Activity 4 of Output 3.3.1: support to develop regulatory measures for marine litter monitoring • Activity 1 of Output 3.4.1: Regional review of existing policies and regulations regarding solid waste disposal as well as technologies for reducing production including recycling opportunities
Day 2: 11 October (Wednesday)	
09:00~10:30	**Session 1: Initiating implementation of Project Activities - Review of TORs for regional activities (continuation)** • Activity 2 of Output 3.4.1: Develop & test monitoring system, and conduct a regional baseline survey of marine litter in collaboration with other relevant organizations • Activity 4 of Output 4.4.2: create regional jellyfish monitoring program: create regional committee to coordinate monitoring, assessment and data sharing and develop national and regional monitoring methodologies of jellyfish booms. • Activity 5 of Output 4.4.2: create regional HAB (including macro-algae) monitoring program: create regional committee to coordinate monitoring, assessment and data sharing. Combine with jellyfish committee to develop national and regional monitoring methodologies of HAB • Activity 3 of output 3.1.1: Review of control mechanisms from point sources and evaluate facilities and equipment to control/reduce discharge from industrial and municipal sources and control/mitigation mechanism of pollution from point sources • Activity 4 of output 3.1.1: Economics analysis of reduction of nutrients for better environment and ecosystem of pilot sites

10:30~10:45 10:45~12:00	**Coffee Break** **Session 1: continuation** • Activity 2 of Output 3.2.1: cost-effective and sustainable mechanism to treat municipal wastewater & sewage: good practices and experience sharing and learning • Activity 3 of Output 3.2.1: technical support to design wetland habitats to achieve blue bay in three pilot sites in China and application of clean production technologies and relevant technology transfer • Activity 3 of Output 3.3.1: review technologies for waste reduction, reuse, recovery, and economic studies on recycling uses
12:00~14:00	**Lunch Break**
14:00~17:00	**Session 2: Harmonizing monitoring and assessment methodologies and development of regional environment pollution monitoring guidelines** • Country presentations on available data/information on sources, pathways, and distribution of pollutants, as well as environmental pollution monitoring and assessment methodologies and network - PR China and RO Korea The presentations will be followed with In-depth discussions on determination of "hot spots"; monitoring procedures; and information and data gaps and agreed solutions of data acquisition required actions and workplan which need data support and required actions for TDA preparation.
Day 3: 12 October (Thursday)	
09:00~10:00	**Session 3: Planning for a workshop on need and development of a harmonized monitoring guidelines and protocols to monitoring SAP implementation and update SAP** (It is expected that the workshop will agree on the venue, dates, outcomes of the workshop, sessions and outputs, chair and co-chair of each session, speakers from RO Korea and PR China and other organizations under each session, and facilitators of break-out group discussions if needed, and field visit program)
10:15~11:00	**Session 4: Review the criteria of selection demonstration sites and agree on the initial list of demonstration sites** • Yalu river estuary and Xiaoyangkou, RuDong City, Jiangsu Province, on wetland restoration for pollutant reduction • Linshui Bay, Dalian, Liaoning province and Rushan Bay, Shandong, for demonstration of pollution reduction Demonstration sites from RO Korea will also be introduced in line with the principle that each country will have equal number of demonstration sites for exchange of experiences and cross-site learning In this session, RWG members will discuss selection criteria, and methodologies, and review local contexts and GEF support to demonstration sites. representatives from local governments of China and RO Korea can also be invited to participate to present the proposals for support by the project.

11:00~12:00	**Session 5: Knowledge Management and capacity development** PMO will introduce the knowledge management of the project in relation to the mandate of the RWG-P. Needs and key elements of training modules and modalities for disseminating project results will also be discussed. • ecosystem carrying capacity: contaminants from river-sea interaction and atmospheric deposition; • design, plan and implement an integrated ecosystem-based monitoring system of LME; • ecosystem carrying capacity: case study of algae blooms in YSLME; • ecosystem carrying capacity: case study of Jellyfish outbreak in YSLME.
12:00~14:00	**Lunch and Break**
14:00~15:30	**Session 6: Collaboration with other partners** In this session, the RWG members will be invited to give suggestions on collaboration with other regional ocean governance mechanisms, including NOWPAP, NEAR-GOOS, etc. Co-operation with other project components and relevant activities in the region will also be reviewed. Based on review, 1-3 collaborative events will be proposed for support by the Project.
15:30~15:45	**Coffee break**
15:45~16:00	Agenda of next RWG meeting
16:00~16:20	Other business
16:20~16:40	Wrap-up and closure of the meeting