Summary Report of the 2nd Meeting of the Regional Working Group on Mariculture

Jeju, RO Korea, 8-9 November 2018

1. The Second Meeting of the Regional Working Group on Mariculture (RWG-M) was held in Suites Hotel, Jeju City, RO Korea on 8-9 November 2018. Eight participants from four organizations in PR China and seven participants from five organizations in RO Korea attended the two-day meeting, which was chaired by Mr. Jianguang FANG and co-chaired by Mr. Ik-Kyo CHUNG. The Meeting reviewed the progress of activities listed in the approved workplan for 2018 and discussed implementation arrangement for activities to be initiated in 2019. Highlights of presentations, discussions, conclusions and recommendations under each session are summarized below.

Message in the opening session

2. The meeting recognized that unsustainable mariculture is one of the key transboundary environmental concerns identified in Yellow Sea, and agreed on the significance of the social, economic and environmental benefits of the Integrated Multi-Trophic Aquaculture (IMTA) system.

3. The meeting also underscored the need to strengthen cooperation and nurture the spirit of friendship between countries in addressing the challenges identified in the TDA/SAP, which still stay relevant. The role of YSLME serving as a platform with concerted efforts and consensus from all partners was also well appreciated.

4. The meeting confirmed the relevance of the agenda to the RWG-M objectives and deliverables approved by the ICC-1, and reaffirmed the role of RWG meetings as a quality assurance mechanism of project activities implemented by the two countries.

Progress of Workplan Activities in 2018

5. The meeting was updated of the progress of activities within the remit of RWG-M. Given the updated information, the meeting highlighted a concern on lack of information sharing on the implementation of activities, especially on two IMTA training workshops held in PR China. Collaboration between PRC and ROK is also missing.

Session 1: Review the ongoing progress on IMTA promotion and demonstration in PR China and RO Korea

6. The meeting was updated of the progress on IMTA demonstration of seaweed-shellfish-sea cucumber, land-based IMTA and eco-farming of oyster in PR China. The meeting noticed that based on scientific findings, the IMTA technology could enhance the growth rate of shellfish and sea cucumber with reduction of carbon from sea water. The enhancement of scallop on the sea bed of Dongchu Island also turned out to be successful as reflected in the results showing improved water quality in Sanggou Bay.

7. The meeting shared views regarding concerns on the occurrence of unstable environmental factors such as increase of seawater temperature that might be caused by climate change. The environmental changes being faced in recent years drove possible changes of species to cultivate.

8. The meeting also understood the current research status of IMTA in RO Korea. The activity is initiated by NIFS with a project on IMTA system linked to tourism in the south coast of ROK. Having similar findings in Sanggou Bay, the growth rate of sea cucumber was 2.7 times faster in IMTA than in a bottom culture farm. Results also showed a surprising 0% disease occurrence in rockfish, indicating benefits of IMTA
over monoculture farming which recorded more than 40%. A substantial discussion was held to recommend ways to further promote IMTA in ROK. The strategies shared were to reflect positive results of IMTA into laws and regulations, promote IMTA technologies and collaborate with industrial sectors.

9. The meeting was briefed of the new progress in ROK of the IMTA demonstration and scaling up. The strategies shared were to integration of positive results of IMTA into laws and regulations, promotion of IMTA technologies and collaboration with industrial sectors are some of the strategies adopted in ROK.

10. The meeting also reached agreement and suggested that ROK and PRC take cultivation of abalone as a study topic since both countries farm the same species with common concerns.

11. The meeting was also pleased to learn about the coastal areas suitable for IMTA application in Shandong Province of PR China. In terms of the identification of suitable areas of IMTA in Shandong Province, the meeting also shared the specific statistical data and explanation about aquatic production, total areas of aquaculture, and areas of different aquaculture in Shandong Province. In addition, potential IMTA application areas in Qingdao, Huangdao, Laoshan, Chengyang, Jiaozhou and Jimo were also discussed.

Session 2: To review the IMTA training module and additional information to be added (training module to be included in meeting kit)

12. Based on the experiences in Sungo Bay and land-based IMTA in other areas of PR China, the meeting agreed that it would be ideal if the training module is completed early as it serves as basis for demonstration and replication. It would be useful to prepare the module and conduct training programs where it will be used.

13. With an understanding of the goal of the training module development, a brief introduction of IMTA training module was made by following the chapters listed in the training module.

14. Participants shared suggestions to improve the quality of the training module like adding case studies from both countries, providing annexes with information on major species to be cultured and improving IMTA facilities.

Session 3: Framework and process to develop good aquaculture practices of IMTA

15. Possible GAP framework and indicators in line with international guidelines were introduced with emphasis on three areas: 1) ecosystem approach to aquaculture; 2) ASC-MSC seaweed standard; and 3) possible GAP framework and indicators of IMTA.

16. The meeting tentatively agreed on the suggested IMTA framework, which will depend on the availability of data, especially in RO Korea. The data shared was composed of introduction, scope, legislation, terminology, IMTA system design, and implementation of GAP. Furthermore, the meeting raised concerns on difficulties in developing GAP of IMTA if consideration of methodologies and types of species and geographical scope is given.

17. Having acknowledged complicated circumstances faced in the development of GAP, the meeting agreed that the framework could be composed of IMTA types consented by both countries, particularly major species (e.g. fish, bivalve and seaweed), and should be in line with international standards. The meeting also agreed on the need to share updates of developments through e-communication between two countries.
Session 4: Social-economic impact of IMTA as a part of the good aquaculture practices in PR China and ROP Korea including the case studies from PRC and ROK

18. Using the village in Dongchu Island as an example, the consultant from Nanjing University of PR China presented the framework of governance and socio-economic indicators of the IMTA application in PR China. The consultant used SWOT analysis to investigate strengths, weaknesses, opportunities and threats. Challenges in translating policy goals into tangible outcomes (e.g. health of seagrass affecting mariculture) were also explained. RO Korea also presented socio-economic impact of IMTA in ROK, mentioning that the system could be more profitable and sustainable by increasing farming incomes from multiple target species and market price for sustainable seafood, reducing costs and improving survival rates. Bio-mitigation and pollution reduction effects by IMTA target species could also increase environmental benefits. Future researches on optimal IMTA production system were recommended.

19. The meeting agreed that the social-economic impact of IMTA is a critical factor and suggested to be included in governance component of the GAP for further development.

Session 5: Collaboration with other partners

20. Ongoing activities in 2018 to be carried over in 2019 and new activities to be initiated in 2019 were introduced by the PMO. The meeting made the following suggestions on activities to be implemented in both 2018 and 2019:
   a. to participate in IMTA training in collaboration with Asian Institute of Technology based in Bangkok in early December 2018, with 3 experts from the two countries;
   b. to organize IMTA training workshop in 2019; and
   c. to hold the 3rd RWG-M meeting in 2019.

21. With regards to the participation in the IMTA training event in collaboration with Asian Institute of Technology, two experts from PR China were decided while one expert from RO Korea is expected to confirm to PMO early next week. Information regarding the time and meeting venues for the IMTA training workshop and 3rd RWG-M meeting will be drafted by the PMO in close collaboration with the two countries and will be shared accordingly.

Time and venue of next meeting

22. As agreed, the PMO will consult with both countries and share information accordingly.