

Report of the Eighteenth NOWPAP CEARAC Focal Points Meeting

Background leading to this meeting

1. The Special Monitoring and Coastal Environmental Assessment Regional Activity Centre (CEARAC) is one of the four Regional Activity Centres (RACs) to coordinate activities relevant to specific components of the Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Action Plan (NOWPAP). As its name shows, the major working areas of CEARAC is monitoring and assessment of coastal environment of the NOWPAP region as well as developing monitoring and/or assessment tools by applying remote sensing technology.
2. In recent years, CEARAC has implemented activities mainly on marine biodiversity, seagrass beds, coastal eutrophication and marine litter, in accordance with the priority areas in the NOWPAP Medium-term Strategy (MTS) 2018-2023 and considering national, regional and international objectives/goals such as national action plans/strategies of the NOWPAP member states and/or Sustainable Development Goals (SDGs).
3. As for the current 2020-2021 biennium, because of the postponement of the 24th NOWPAP Intergovernmental Meeting (IGM) by the impact of COVID-19 pandemic, adoption of the Programme of Work (PoW) for the 2020-2021 biennium was delayed and it affected launching the current CEARAC activities. Then, the 18th CEARAC Focal Points Meeting (FPM), which was planned to be held in 2020, was also postponed to 2021. Therefore, CEARAC Secretariat prepared the implementation plans for six specific projects for this biennium and circulated the documents among CEARAC FPs for adoption through e-mail correspondences. Then, in September 2020, all FPs agreed on the implementation plans and finally CEARAC started implementing its activities for the 2020-2021 biennium.
4. The coronavirus situation has not been improved and restrictions on global travels and any type of gathering of people have not been lifted in Japan yet. Considering such a situation, CEARAC Secretariat decided to organize the 18th CEARAC FPM virtually on 24 and 25 of August in 2021.

5. The major agendas for the 18th FPM were review of the progress of the current 2020-2021 activities and discussion on potential activities for the next 2022-2023 biennium. Because of the limited meeting time, the Secretariat asked for comments and suggestions regarding agenda items from the FPs when uploading all related documents to a special website one month prior to the meeting in order to spend the meeting time effectively for discussion on issues in question by the FPs.
6. Prior to the meeting, the Secretariat had proposed to prepare resolutions to summarize the discussion and conclusion of the 18th CEARAC FPM for adoption tentatively instead of a regular meeting report. Then, it was agreed by CEARAC FPs that a more detailed meeting report will be prepared by the Secretariat and circulated among the FPs and other meeting participants within one week after the meeting for further adoption.

Agenda Item 1 Opening of the meeting

7. The eighteenth NOWPAP CEARAC Focal Points Meeting was opened at 1:06 p.m. (Japan Time) on 24 August 2021 by Mr. Makoto HAYASHI, Director of NOWPAP CEARAC. He greeted all participants and asked them for self-introduction. The meeting participants were FPs of all four member states, representatives of MERRAC, RCU, and the North Pacific Marine Science Organization (PICES).

Agenda Item 2 Organization of the meeting

2.1 Election of the officers

8. Chairperson and Rapporteur are rotated in every CEARAC FPM among the FPs of the four member states; however, since the FPs of China have recently been appointed, it was agreed to change the regular rotation rule for the 18th FPM and the meeting elected Dr. Joji ISHIZAKA, FP of Japan as Chairperson and Dr. Jianchao FAN, FP of China as Rapporteur.

2.2 Organization of work

9. It was proposed by CEARAC Secretariat that, for the purposes of the CEARAC FPM, the rules used in the meeting be basically those of United Nations Environment Assembly (UNEA), adjusted as appropriate to suit the nature of the meeting. Decisions should be made by consensus and English was the working language of the meeting.

Agenda Item 3 Adoption of the agenda

10. CEARAC Secretariat briefly explained the Provisional Agenda (UNEP/NOWPAP/CEARAC/FPM 18/1) with the Annotated Provisional Agenda (UNEP/NOWPAP/CEARAC/FPM 18/2).
11. The meeting adopted both documents.

Agenda Item 4 Report of the Regional Coordinating Unit (RCU) on the progress of the Northwest Pacific Action Plan (NOWPAP)

12. Dr. Ning LIU, Programme Officer of NOWPAP RCU, reported the progress of the entire NOWPAP activities since the 17th CEARAC FPM held on 9-10 September 2019 in Toyama, Japan (UNEP/NOWPAP/CEARAC/FPM 18/3). He explained that MERRAC had already finished their FPM online this year, and FPMs for other two RACs (DINRAC and POMRAC) are also planned online after CEARAC FPM.
13. The meeting acknowledged the report.

Agenda Item 5 Reports on CEARAC activities for the 2020-2021 biennium**5.1 Overall progress report of CEARAC activities**

14. Mr. HAYASHI briefly reported the implementation and the expenditure of CEARAC activities for the 2020-2021 biennium as of July 2021 (UNEP/NOWPAP/CEARAC/FPM 18/4). Then, more detailed reports of respective intersessional projects were followed (UNEP/NOWPAP/CEARAC/FPM 18/5 - 18/10). Dr. LIU encouraged CEARAC Secretariat to complete the planned activities for the 2020-2021 biennium as much as possible by the end of 2021 even though they were started late. The Secretariat committed that they would do their best to finish the work by the end of the year or Q1 2022 at latest.
15. The meeting adopted the report.

5.2 Reports on specific projects**5.2.1 Assessment of the distribution of tidal flats and salt marshes in the NOWPAP region**

16. Dr. Takafumi YOSHIDA, senior researcher of CEARAC, reported the progress of the project: assessment of the distribution of tidal flats and salt marshes in the NOWPAP region (UNEP/NOWPAP/CEARAC/FPM 18/5).
17. Dr. ISHIZAKA pointed out the underestimation/overestimation of GIC compared to real distribution, and commented that the “overlapped ratio” is not appropriate to understand the differences between GIC and real distribution. He suggested considering different evaluation methods.
18. Dr. Vladimir SHULKIN, FP of Russia, asked why there are so small overlapping areas in Russia.
19. Dr. YOSHIDA explained that GIC is a machine-learning method, and it needs training data (real distribution) as much as possible for improvement of the accuracy. In original GIC, there is only limited training data in the NOWPAP region, and that is the reason there is underestimation happens in Russian coastal waters. However, as Dr. YOSHIDA ensured that with provided national data, the accuracy of the revised GIC was improved. He also explained that such detailed analysis will be included in the summary report.
20. The meeting adopted the report.

5.2.2 Organization of a training course on environmental DNA (eDNA) analysis

21. Dr. YOSHIDA reported the progress of the project: organization of a training course on eDNA analysis (UNEP/NOWPAP/CEARAC/FPM 18/6). Due to COVID-19 pandemic, CEARAC Secretariat proposed to cancel the training course which was planned to be held in 2022.
22. The meeting agreed to cancel the training course in 2022; however, requested the Secretariat to move this project forward. Dr. YOSHIDA responded that developing video manuals and organizing an online seminar would be alternative options. However, for implementing them, cooperation from the Society of eDNA is necessary, and after discussion with the Society, the workplan of this activity will be revised.

23. The meeting agreed to review the revised workplan which will be prepared by the end of September for final adoption.

5.2.3 Updating HAB database and HAB reference database

24. Dr. YOSHIDA reported the progress of the project: Updating HAB database and HAB reference database (UNEP/NOWPAP/CEARAC/FPM 18/7).

25. The meeting adopted the report and agreed to nominate experts who will review the information on HAB collected by the Secretariat.

5.2.4 Case studies of estimating seagrass blue carbon in selected sea areas in the NOWPAP region

26. Dr. Genki TERAUCHI, senior researcher of CEARAC, reported the progress of the project: Case studies of estimating seagrass blue carbon in selected sea areas in the NOWPAP region (UNEP/NOWPAP/CEARAC/FPM 18/8).

27. Dr. Nobuyuki YAGI, FP of Japan, emphasized the importance of the work and suggested not only developing a report but also finding a way to disseminate the result of the work. Dr. TERAUCHI explained that the Secretariat is willing to collaborate with UNEP and GRID Arendal to further disseminate the results.

28. The meeting adopted the report.

5.2.5 Improvement of the NOWPAP Eutrophication Assessment Tool (NEAT) for assessment and monitoring of eutrophication using satellite chlorophyll-a

29. Dr. Eligio de Raus MAURE, researcher of CEARAC, reported the progress of the project: Improvement of the NOWPAP Eutrophication Assessment (NEAT) using satellite chlorophyll-a (UNEP/NOWPAP/CEARAC/FPM 18/9).

30. Dr. ISHIZAKA asked if the GOCI and SGLI data are already part of the NEAT or not. Dr. MAURE replied that they are not and that CEARAC is just starting the evaluation of the data.

31. Dr. ISHIZAKA asked if the in-situ data have already been collected. Dr. MAURE replied not yet. The data collection is awaiting the nomination of a Chinese expert. Once all experts are nominated, a meeting will be set up to explain the work of data collection.
32. Dr. ISHIZAKA further asked clarification about the data collection meeting and the expert meeting. Dr. MAURE clarified that the first meeting on data collection is about the explanation of the work related to data collection and submission. The CEARAC expert meeting on eutrophication will be held to discuss the results obtained from data collection and give recommendations about updating the NEAT time series to include new sensors.
33. The meeting adopted the report.

5.2.6 Organization of the 5th training course on remote sensing data analysis

34. Dr. TERAUCHI reported the progress of the project: Organization of the 5th training course on remote sensing data analysis (UNEP/NOWPAP/CEARAC/FPM 18/10).
35. Dr. SHULKIN congratulates CEARAC's progress in this work and others as well.
36. The meeting adopted the report.

Agenda Item 6 Proposals on CEARAC activities for the 2022-2023 biennium

6.1 Proposals for specific projects

6.1.1 Implementation of pilot studies at significant tidal flats in the NOWPAP region

37. Dr. YOSHIDA presented the proposal on implementation of pilot studies at significant tidal flats in the NOWPAP region (UNEP/NOWPAP/CEARAC/FPM 18/11).
38. Some FPs pointed out unclear differences between this project and the ones by other international frameworks, including Ramsar Convention and bilateral conventions on migratory birds in the comments provided prior the meeting. However, the workplan presented at the meeting was acceptable. Thus, the FPs approved the workplan in principle and requested the Secretariat to revise the working document based on the presentation and discussion during the meeting.

39. The meeting agreed to review the revised document prepared by the Secretariat within two weeks after the meeting.

6.1.2 Organization of the first e-DNA training course

40. Dr. YOSHIDA presented the proposal on organization of the first e-DNA training course (UNEP/NOWPAP/CEARAC/FPM 18/12).

41. CEARAC FPs requested the Secretariat to develop the program of the training course based on the needs and the status of member states in terms of how much eDNA methodology is being applied in scientific researches. The Secretariat agreed to discuss the detailed program with the Staring Committee members who are experts nominated from the member states.

42. The meeting agreed the proposal.

6.1.3 Update of Cochlodinium website

43. Dr. YOSHIDA presented the proposal on update of Cochlodinium website (UNEP/NOWPAP/CEARAC/FPM 18/13).

44. Dr. YAGI supported this project but asked who the main audience of the website are.

45. Dr. YOSHIDA replied that when the Cochlodinium website was developed, targeted audience was not only scientists but also fishermen. So, to easily understand the contents for fishermen, basic information was introduced. In addition, the website was developed in English and in the four member states' languages.

46. Dr. Tatiana ORLOVA, FP of Russia, pointed out usefulness of the materials on Cochlodinium for education to children and young people. She also mentioned the importance of new selected species, and introduced red tide by *Karenia sp.* in Kamchatka coastal area.

47. The meeting agreed the proposal

6.1.4 Construction of a seagrass blue carbon network in the NOWPAP region

Dr. TERAUCHI presented the proposal on construction of a seagrass blue carbon network in the NOWPAP region (UNEP/NOWPAP/CEARAC/FPM 18/14).

48. Dr. ISHIZAKA asked how a list of organizations, institutions and personnel to map described in the task 3.1 is different from existing experts. The Secretariat explained that the proposed project will reach out to organizations, institutions and people with no remote sensing background.

49. The meeting agreed the proposal.

6.1.5 Development of a cloud-based bio-optical database for satellite water quality monitoring in NOWPAP coastal waters

50. Dr. MAURE presented the proposal on development of a cloud-based bio-optical database for satellite water quality monitoring in NOWPAP coastal waters (UNEP/NOWPAP/CEARAC/FPM 18/15).

51. With data improvement from newer sensor, we can get more detailed high-quality images, but at the same time, we have to be careful because in the coastal regions there are a variety of water constituents that impact the optical signal detected by satellites such including CHL, CDOM (coloured dissolved organic matter) and/or sediments.

52. Dr. ISHIZAKA emphasized that CEARAC needs to closely work with ocean optics experts of the member states in Task 1 of the workplan.

53. Dr. YAGI said there will be a good collaboration system of the four member states. He also wonders who will be the user of this info. Dr. MAURE targets more general public who are interested in water quality.

54. Dr. YAGI really encouraged collaboration of the member states.

55. Dr. FAN said that water quality is very important. It relates to rain and other weather conditions, too. This is very useful for validating satellite data.

56. Dr. ORLOVA thinks the NEAT is very useful and good example of collaboration.

57. Dr. Jinsoon PARK, FP of Korea, thinks it is very challenging but useful, so supports this project.

58. The meeting agreed the proposal in principle.

6.1.6 Development of the remote sensing data analysis training programs and organization of training courses

59. Dr. TERAUCHI presented the proposal on development of the remote sensing data analysis training programs and organization of training courses (UNEP/NOWPAP/CEARAC/FPM 18/16).

60. Dr. YAGI asked about criteria for selecting the candidates. The Secretariat replied that criteria will be determined in consultation with organizing committee members to be nominated by CERARAC FPs.

61. The meeting agreed the proposal in principle.

6.2 Draft workplan and budget of CEARAC activities for the 2022-2023 biennium

62. CEARAC Secretariat presented a draft workplan of entire CEARAC activities including the six specific projects explained in Agendas 6.1.1 to 6.1.6 (UNEP/NOWPAP/CEARAC/FPM 18/17).

63. The meeting agreed the proposed workplan in principle and to send it to the 24th NOWPAP Intergovernmental Meeting (IGM) for approval, which is planned to be held in winter in 2021.

Agenda Item 7 CEARAC activities on marine litter

64. Dr. YOSHIDA introduced the proposal on collecting information on actions and best practices on plastic litter in the NOWPAP region (UNEP/NOWPAP/CEARAC/FPM 18/18). He explained the proposal will be submitted to the Marine Litter Focal Points Meeting to be held virtually in September 2021 and discussed in detail. He also explained the workplan may be revised to avoid duplication with an international framework's project informed by Mr. Takayuki SHIGEMATSU, FP of Japan.

Agenda Item 8 Potential collaborative areas with other RACs and/or NOWPAP Partners

65. Dr. Pengbin WANG from PICES expressed high expectation for further collaboration with CEARAC. Dr. ISHIZAKA also mentioned AP-CREAM of PICES for a chance of collaboration in CEARAC training courses.
66. Dr. YOSHIDA added that CEARAC will join the PICES annual meeting this year and share information with experts' groups and discuss future collaboration between NOWPAP and PICES. IOC/WESTPAC is also an important partner, and CEARAC Secretariat will continue close communication with them.

Agenda Item 9 Arrangement of the nineteenth NOWPAP CEARAC FPM

67. CEARAC Secretariat proposed to hold the 19th NOWPAP CEARAC Focal Points Meeting in spring 2022. The style of the meeting, either in a face-to-face or a virtual one, will be decided in course of time taking the COVID-19 pandemic situation into consideration.
68. RCU proposed to hold RAP BIO Expert Meeting back-to-back with CEARAC FPM. RCU will request budget for the RAP BIO Expert Meeting to the next IGM. If IGM approved, RCU will invite RAP BIO experts and CEARAC FPs to the meeting. To save travel fee, back-to-back organization of two meetings is reasonable and effective.
69. The meeting agreed RCU's proposal.
70. The meeting adopted this agenda.

Agenda Item 10 Other matters

71. The meeting was invited to raise any other issues relevant to CEARAC activities and no other issues were raised.

Agenda Item 11 Adoption of the resolutions and the report of the meeting

72. Draft resolutions of the eighteenth NOWPAP CEARAC Focal Points Meeting were prepared by CEARAC Secretariat with the help of the Rapporteur.

73. The meeting adopted the resolutions.

74. CEARAC Secretariat will prepare a draft meeting report for the 18th CEARAC FPM and circulate it to the meeting participants for adoption within one week after the meeting.

Agenda Item 12 Closure of the meeting

75. The eighteenth NOWPAP CEARAC Focal Points Meeting was closed by the Chairperson at 16:10 (Japan Time) on 25 August 2021.