

REPORT OF THE FIRST MEETING OF NOWPAP WORKING GROUP 4 (Vladivostok, Russian Federation, 1-3 December 2003)

Background leading to this meeting

1. The Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region (NOWPAP) and three Resolutions were adopted at the First Intergovernmental Meeting (Seoul, 14 September 1994: UNEP (OCA)/NOWPAP/IG.1/5). Resolution 1 identified five areas of priority for implementation of the Action Plan, one of which was NOWPAP/3: Establishment of a collaborative, regional monitoring programme.
2. Following the decision of the Third Intergovernmental Meeting (IGM), the responsibility for NOWPAP/3 (Regional Monitoring Programme) was jointly shared by the Special Monitoring and Coastal Environmental Assessment Regional Activity Centre (CEARAC) and the Pollution Monitoring Regional Activity Centre (POMRAC) to carry out regional activities.
3. The Fourth IGM (Beijing, 6-7 April 1999) adopted the proposal for the second phase of the implementation of NOWPAP, in which the establishment of Coordinating Committee (CC) was expected as an outcome for the activity of NOWPAP/3. Resolution 1 of this meeting requested the NOWPAP Members to designate relevant representatives for participation in the "NOWPAP/3 Coordinating Committee and Working Groups".
4. Following the decision of the First Meeting of the CC (Beijing, 21-22 May 2001), four Working Groups were established under NOWPAP/3.
5. Following the results of discussions at the First Meeting of the CC, the Seventh IGM (Vladivostok, 20-22 March 2002) approved the resolution 3 Para.6, "the demarcation of the responsibilities and activities between CEARAC and POMRAC as presented by the Secretariat in document UNEP/NOWPAP IG.7/8". Subsequently CEARAC was allocated with the responsibility to implement activities related to Working Group 3: HAB (Harmful Algal Blooms) and Working Group 4: Remote Sensing of Marine Environment.
6. The Seventh IGM also adopted the proposal as regards to the allocation of new responsibilities and activities to the Regional Activity Centres (RACs) out of the necessity to move from a project-based implementation of activities to RAC-based activities. Following the approval of the Seventh IGM to establish the fora of the RAC's Focal Points, the CC for NOWPAP/3 evolved to become the CEARAC Focal Points Meeting.
7. At the First CEARAC Focal Points Meeting (Toyama, 25-27 February 2003), the main issues needed to be focused on by Working Group 4 were defined.

8. CEARAC organized the internet meetings to define the provisional agenda items and to have preliminary discussion on each items.
9. Experts from Japan, Republic of Korea and Russian Federation (hereinafter referred to as Japan, Korea and Russia, respectively) participated in the meeting. The experts from People's Republic of China agreed to hold the meeting without Chinese experts. One of the NEAR-GOOS experts participated in the meeting as an invited guest and the Secretariat of CEARAC also participated in.

Agenda Item 1. Opening of the meeting

10. The meeting was opened at 9:45 am at the Conference Room of V.I. Il'ichev Pacific Oceanological Institute (POI), Far East Branch of the Russian Academy of Sciences, Vladivostok, Russia, on the 1st of December 2003 by the Director of CEARAC, Mr. Hiroyuki Ishitobi. He welcomed all the participants to the meeting and hoped that the participants would share the knowledge on remote sensing with experts.
11. The Director of CEARAC introduced Dr. Leonid Mitnik, CEARAC Focal Point of Russia, Head, Satellite Oceanography Department, V.I. Il'ichev Pacific Oceanological Institute. He made a speech with a warm welcoming comment to the participants.

Agenda Item 2. Organization of the meeting

12. The meeting unanimously elected Dr. Joji Ishizaka, the expert of Japan, and Dr. Leonid Mitnik, the expert of Russia, as its co-chairmen, and Dr. Kyu-Kui Jung, the expert of Korea, as a Rapporteur.
13. The meeting agreed that the rules used be those of the Governing Council of UNEP, adjusted as appropriate to suit the nature of the meeting.

Agenda Item 3. Adoption of the Agenda

14. The Provisional Agenda was introduced by the Secretariat with the Annotated Provisional Agenda.
15. The meeting adopted the agenda.

Agenda Item 4. Overview of existing activities and future plans regarding monitoring by Remote Sensing in NOWPAP Members

16. Dr. Young-Sang Suh made a presentation on the oceanographic features around the Korean Peninsula inferred from satellite remote sensing. He also introduced red tide observing system in Korea.

17. Dr. Leonid Mitnik made a presentation on monitoring of the coastal zone and open ocean pollution by remote sensing. He also introduced projects of monitoring oil spill by remote sensing, which have been conducted at POI since 1990s.
18. Dr. Joji Ishizaka made a presentation on the existing and future plans of coastal environmental monitoring by remote sensing in Japan. Dr. Shinichi Takao made a presentation on the marine environmental watch system for Northwest Pacific region. Dr. Hajime Shirayama made a presentation on the Toyama Bay project.
19. Dr. Anatoly Alexanin made a presentation on remote sensing opportunities and red tide problem in Russia.

Agenda Item 5. IOC/GOOS global/regional activities, present status of the oceanographic satellite remote sensing, and their relations to the NOWPAP activities

20. Dr. Hiroshi Kawamura made a presentation on the IOC/GOOS global/regional activities, present status of the oceanographic satellite remote sensing, and their relations to the NOWPAP activities. He emphasized the importance of collaboration among the regional oceanographic programmes.

Agenda Item 6. Finalization of the Terms of Reference for NOWPAP Working Group 4

21. The Draft Terms of Reference (TOR) for the NOWPAP Working Group 4 was presented by the Secretariat.
22. After a productive discussion and after a comprehensive review by the meeting, all the comments had been taken into consideration. It was determined that remote sensing in the documents denoted space-based remote sensing. The meeting agreed to add one task to make an effort for the cooperation with other regional programmes in view of coastal and marine environmental monitoring. Subsequently, the meeting finalized the Draft TOR.
23. The Director of CEARAC explained that the finalized Draft TOR would be forwarded by the Secretariat to the Second CEARAC Focal Points Meeting for final adoption.

Agenda Item 7. Review and agreement of workplan for Working Group 4

7.1 Objective and long-term strategy

24. The Secretariat proposed objectives and long-term strategies for Working Group 4. After a productive discussion, the meeting agreed on the objectives and long-term strategies with modifications, 1) the target users and areas should include ocean users and marine environment, and 2) not only information but also data should be collected and provided.

7.2 Applications supported by Remote Sensing

25. The Secretariat proposed that eutrophication and oil spill should be the targets of marine environmental monitoring by remote sensing for the time being due to the fact that both of them are common environmental issues in NOWPAP region. The Secretariat also explained the capability of remote sensing as a tool for monitoring eutrophication and oil spill. The meeting agreed the Working Group 4 would focus on eutrophication and oil spill. The meeting decided the priority of the parameters for monitoring. The meeting considered that it would be possible to detect but not to monitor oil pollution on every day basis due to insufficient amount of available satellite data. The meeting suggested the Secretariat to add grounds to monitor eutrophication and oil spill by remote sensing to the Plan of Work.

7.3 Definition of user's needs and gaps

26. The Secretariat proposed that it would be necessary to clarify the gap between remote sensing requirements and present remote sensing capacity on eutrophication monitoring and oil spill detection.

27. The meeting suggested that the needs and gaps should be further clarified on a basis of the each country's situation.

7.4 Towards the operational monitoring

28. The Secretariat proposed the appropriate parameters for the monitoring of eutrophication and oil spill, explained the monitoring methods to enable the eutrophication and oil spill monitoring by remote sensing, and reviewed modeling and prediction of eutrophication and oil spill.

29. Dr. Vasily F. Mishukov, as a consultant, made a presentation on the aerosol effects on the observation of marine environment and the experimental study of oil degradation in the Sea of Okhotsk.

30. Regarding eutrophication monitoring method, the meeting agreed that the monitoring method should be reviewed and planned more comprehensively including *in situ* data and statistical analysis of remote sensing data. The meeting also agreed that it would be essential to design match-up dataset for calibration/validation of remote sensing.

7.5 Development of remote sensing information network system

31. The Secretariat proposed the development of the portal site on remote sensing in the NOWPAP region as a remote sensing information network system. After a discussion the meeting agreed on this proposal.

32. The Secretariat also supported the development of the website on oil spill remote sensing at POI. After a discussion the meeting agreed on this proposal.

7.6 Public outreach

33. The Secretariat proposed to develop CEARAC website, publish newsletter, and develop the portal site on remote sensing in NOWPAP region as information dissemination strategies.

34. The meeting suggested the implementation involving NGOs in CEARAC activities.

7.7 Capacity building of NOWPAP members

35. The Secretariat explained the necessary capacity building for the development of the regional collaborative monitoring. The meeting suggested posting the information about existing training courses and projects provided by other international organizations on the proposed portal site.

7.8 Cooperation with other regions and organizations

36. The Secretariat introduced the activities by other international organizations and projects.

37. A Working Group member introduced some European projects on the oil spill observation and suggested the possibility to cooperate with the projects.

7.9 Capability of CEARAC

38. The Secretariat explained the present status of the capability of CEARAC and matters to be concerned with implementing further activities.

7.10 Review of the integrated national reports which will be prepared by CEARAC with the view of standardizing and establishing a system to update national reports

39. The Secretariat proposed the guideline of the national report. After a productive discussion, the meeting agreed that each Working Group member would feedback comments and suggestions on the guideline by the end of December 2003, and the Secretariat would revise the guideline by referring to the comments and suggestions. The meeting also agreed to make a draft of the national report based on the revised guideline by the Second Meeting of Working Group 4. The adequacy of the guideline will be discussed and assessed at the Second Meeting of Working Group 4.

40. The meeting discussed the draft of the integrated report provided by the Secretariat. The meeting agreed that each Working Group member would feedback comments and suggestions on the report to the Secretariat by the end of January 2004. The Secretariat will revise it by referring to the comments and suggestions by Working Group members and then submit it to the Second Focal Points Meeting.

41. The meeting agreed that Working Group member would submit the national report to the Working Group 4 every two years, and also agreed that the Secretariat would prepare the integrated report every two years based on the national reports. The Director of CEARAC will submit the integrated report to CEARAC Focal Points Meeting.

7.11 Long-term plan for Working Group 4

42. The meeting reviewed and revised the draft long-term plan for Working Group 4, by referring to several comments from Working Group members. The meeting recommended that CEARAC should establish the initial version of portal site in 2004.

7.12 Proposed work plan for 2004/5

43. The meeting reviewed and revised the draft 2004/5 work plan for Working Group 4, by referring to several comments from participants.

Agenda Item 8. Other matters

44. The Director of CEARAC suggested holding the Second Meeting of NOWPAP Working Group 4 in Beijing in autumn 2004. Regarding the meeting the Secretariat was requested to consult with Chinese experts.

Agenda Item 9. Adoption of the report of the meeting

45. The Rapporteur reviewed and checked the draft report of the meeting prepared by the Secretariat and provided the meeting for revision and adoption.

46. The meeting adopted the report with minor modifications.

Agenda Item 10. Closure of the meeting

47. The Chairman declared the meeting closed at 14:30 on the third of December 2003.