

## **REPORT OF THE SECOND MEETING OF NOWPAP WORKING GROUP 4** **(Beijing, People's Republic of China, 14-15 October 2004)**

### **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 3rd Intergovernmental Meeting, the responsibility for NOWPAP/3 (Regional Monitoring Programme) was jointly shared by the Special Monitoring and Coastal Environmental Assessment Regional Activity Center (CEARAC) and the Pollution Monitoring Regional Activity Center (POMRAC) to carry out regional activities.
3. Following the results of discussions at the First NOWPAP/3 Meeting (Beijing, China, 21-22 May 2001), the 7<sup>th</sup> Intergovernmental Meeting (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(WG3): HAB including red tides and Working Group 4 (WG4): Remote Sensing of Marine Environment.
4. At the NOWPAP CEARAC First Focal Points Meeting (Toyama, Japan, 25-28 February 2003), the Remote Sensing subgroup agreed that WG4 needed to focus on the following issues:
  1. To evaluate the feasibility of monitoring present and future phenomena of environmental concern by remote sensing based on the consideration of the operational status in each country; and
  2. To propose a monitoring plan by remote sensing based on the evaluation in 1).
5. In the First NOWPAP WG4 Meeting (Vladivostok, Russian Federation, 1-3 December 2003), CEARAC proposed that 'Eutrophication' and 'Oil spill' should be the targets of marine environmental monitoring by RS for the time being due to the fact that both of them are common environmental issues in NOWPAP region and both are expected targets of RS applications. The First NOWPAP WG4 Meeting agreed the WG4 would focus on eutrophication and oil spill. CEARAC proposed a 'Plan of Work for the NOWPAP WG4'. After a productive discussion, the First WG4 Meeting agreed on the 'Plan of Work for the NOWPAP WG4'.

6. The Second Focal Point Meeting (Toyama, Japan, 15-17 March 2004) adopted the TOR for NOWPAP WG4. The meeting also reviewed a short-term workplan and a long-term workplan for NOWPAP WG4.
7. In order to review the draft National Reports, finalize the Guidelines for National Report, discuss the way to harmonize them for integrated report and also review the CEARAC activities on development of remote sensing information network system, the Experts of NOWPAP WG4 members participated in the meeting. The invited guest of representative from the Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Secretariat of CEARAC also participated. A full list of participants is attached in Annex I to the present report.

#### Agenda Item 1. Opening of the meeting

8. The meeting was opened at 9:15 am at the Conference Room of the China National Environmental Monitoring Center (CNEMC), on 14th October 2004 by the Director of CEARAC, Mr. Masanobu Miyazaki. Mr. Miyazaki expressed his gratitude to the staff who made the WG4 meeting in Beijing possible and wished everyone a good stay.  
On behalf of the CNEMC, Dr. Guogang Li welcomed everyone to Beijing and expressed his hopes for the success of the meeting.

#### Agenda Item 2. Organization of the meeting

##### 2.1 Election of two co-Chairpersons and a Rapporteur

9. The Director of CEARAC explained the previous nomination of the last WG4 meeting and invited the meeting to elect two Chairpersons and a Rapporteur. The meeting unanimously elected Dr. Ishizaka from Japan and Dr. Zhou from China as the co-Chairpersons and Dr. Mitnik from Russia as a Rapporteur.

##### 2.2 Rules of procedure

10. The meeting adopted its rules of procedures. It was suggested that, for purposes of this meeting, the rule used be those of the Governing Council of UNEP, adjusted as appropriate to suit the nature of the meeting. English was the working language of the meeting. NOWPAP CEARAC as the Secretariat of the meeting presented a provisional list of documents as presented in Annex II.

### Agenda Item 3. Adoption of the Agenda

11. The Provisional Agenda (Annex III) was introduced by CEARAC with the Annotated Provisional Agenda (Annex IV). The CEARAC Secretariat explained the brief history of CEARAC and WG 4 and then proposed the meeting the adoption of the Provisional agenda. The meeting adopted the agenda without any changes.

### Agenda Item 4. Overview of the WG4 activities and budgets for 2004/2005

12. The CEARAC Secretariat explained the Report of CEARC activities for 2002/2003 and planned activities for 2004/2005 (Annex V), (Appendix1).
13. Dr. Suh from Korea expressed his concern for the lack of WG3 and WG4 meetings in 2005. The CEARAC Secretariat explained that the 3<sup>rd</sup> WG 4 meeting, which was originally planned in fall 2005, will be postponed in order to allocate more budgets and time for compiling the National Report and Integrated Report. The Secretariat asked the meeting to understand the situation.
14. Dr. Asanuma asked the frequency of the CEARAC Newsletter and the status of the other RACs' Newsletter. The CEARAC Secretariat explained that CEARAC, DINRAC and POMRAC currently publish the Newsletter annually. Soon operational RCU may organize the Newsletter as a NOWPAP Newsletter including whole RACs activities.
15. Dr. Zhou pointed out the lack of the budget for the Portalsite of RS and the CEARAC Secretariat explained that in order to make up the limited budget from the NOWPAP Trust Fund, NORTHWEST PACIFIC REGION ENVIRONMENTAL COOPERATION CENTER (NPEC) contributes to the portion for the Portalsite of RS.

### Agenda Item 5. Review on the preparation of National Reports

#### 5.1 Report on the draft National Report 2004

##### 5.11 Report on the draft National Report of China

16. The Chair invited China to present the report and Dr. ZHOU presented the draft National Report of China (Annex VI-1), (Appendix2).
17. Dr. Asanuma asked how China distributes satellite data to end-users. Dr. Zhou replied that there are three common types of end-users of the information collected by marine environment remote sensing in China. Farmers and fishermen can access to the relevant information through the website or daily faxes to local Government officers. Researches can access the information they need through the website. There is also a marine satellite information service center, which will provide information and materials upon request.

18. Dr. Mitnik asked how many users use synthetic aperture radar images for research applications in China. Dr. Zhou replied that there were approximately 50,000 fishermen in China who used this information, three bureaus of the Chinese Government, as well as many universities which regularly utilize such information. Such information is collected in three centers and sent to Beijing where it is integrated and made available to the public.

#### 5.12 Report on the draft National Report of Japan

19. The Chair invited Japan to present the report and Dr. Asanuma presented the draft National Report of Japan (Annex VI-2), (Appendix3).

20. Dr. Zhou asked about how the National Space Development Agency (NASDA) was involved in the project. Dr. Asanuma replied that NASDA, Predecessor of Japan Aerospace Exploration Agency (JAXA), launched ADEOS with OCTS and ADEOS-II with GLI collaborating with Japanese scientists for calibration and validation. JAXA is planning to launch the new satellite with SGLI. Dr. Ishizaka added that JAXA is now only in the discussion phase of its development due to unclear situation of rockets launching.

#### 5.13 Report on the draft National Report of Korea

21. The Chair invited Korea to present the report and Dr. Suh presented the draft National Report of Korea (Annex VI-3), (Appendix4).

22. Dr. Kawamura, invited guest, asked whether he proposed the monitoring influence of the Three Gorges Dam and establishment of the Ocean Color of CAL/VAL network as NOWPAP projects. Dr. Suh answered these could be the project candidates.

23. Dr. Ishizaka agreed about the importance of monitoring changes in the Yangtze River due to the Three Gorges Dam, as these changes influence waters in the sea of NOWPAP region.

#### 5.14 Report on the draft National Report of Russia

24. The Chair invited Russia to present the report and Dr. Mitnik presented the draft National Report of Russia (Annex VI-4), (Appendix5).

25. Dr. Zhou asked about the Russian algorithms for the imprints of atmospheric convective eddies on the radar images of the sea surface. Dr. Mitnik replied that their algorithms and models are in agreement with the experimental satellite data.

26. Dr. Zhou again asked about Russian algorithms for Internal waves and bottom topography features detection. Dr. Mitnik replied that Russia also has a lot of information on these topics as well, including topography of Chinese waters, sandbar mapping, acoustic sounding of shallow waters as well as on other applications of SAR images.

27. Responding Dr. Mitnik's invitation, Dr. Alexanin presented a report on the research and findings of the Regional Center of the Russian Academy of the Sciences in Vladivostok (Appendix6).

## 5.2 Review and agreement of the Guidelines for National Report

28. In order to keep National Reports in common among the four countries and to make better use of the National Report for compiling the Integrated Report, the Secretariat reminded the meeting the Guidelines for National Report (Annex IX) and invited the discussion about the adequacy of the Guidelines.
29. The meeting started to discuss the tasks of the RS applications including the eutrophication and oil spill (including oil spill in sea ice). The expansion of the new targets such as the river discharge and the wetland were also discussed.
30. The Chair reminded that major targets, eutrophication and oil spill were already agreed in the Second Focal Points Meeting (FPM) and we cannot avoid these two targets. The CEARAC Secretariat added that the compiling the National Report is a two-year-project in 2004-05, and since the Guideline was already adopted in the Second FPM, the meeting should focus on these two targets at hand. The meeting agreed that at least these two targets should be included in the National Report.
31. Dr. Mitnik emphasized that shared use of RS database is important.
32. Dr. Suh suggested to include reference of meta-data information because the satellite data information related to the stored amount of data, media, data level conditions (level 0, level 1 and so on) including date and coverage in each country are unclear. Then meeting agreed to include meta-data information in Chapter 2.
33. Dr. Asanuma suggested the concept of social benefits for regional to national level should be included. The meeting agreed that this topic could be added to Chapter 7.
34. The meeting agreed the review of the Guideline for National Report and points of concern and also agreed to continue working on the National Report in accordance with the agreed schedule.

Agenda Item 6. Review on the development of remote sensing information network system

## 6.1 Development of the portal site on remote sensing

35. The Secretariat reported the current progresses of CEARAC activities on development of the portal site on remote sensing (Annex X).

Dr. Zhou asked that if the portal site stores satellite images on website and if it provides data service to member countries. The Secretariat explained CEARAC's intentions to distribute RS data on the portal site in the next stage.

36. Dr. Zhou asked the purpose for the portal site and the Secretariat replied that it will provide information on RS data sources to scientists in the NOWPAP region.
37. Dr. Kawamura emphasized that regional concerns on the RS products are essential because they are dedicated to the NOWPAP region, providing high-resolution RS data and improving the accuracy of RS products through tuning with the in situ data.
38. The meeting agreed the development of the portal site on remote sensing and also agreed to cooperate with CEARAC for collecting link destination from their countries.

## 6.2 Development of the website on remote sensing for oil spill monitoring

39. Dr. Mitnik, Russian expert, reported the current progresses of CEARAC activities on development of the website on remote sensing for oil spill monitoring (Annex XI).

Dr. Asanuma raised his concern of the usage of the reference to the word 'pollution', suggesting that all 'pollution' be referred to as 'spill'. The suggestion was agreed to without argument and the Secretariat agreed to correct this document.

40. The Secretariat explained that the website has not yet been officially announced because of the disagreement which exists between CEARAC and MERRAC and also between CEARAC and UNEP regarding the nature of the website.
41. Dr. Suh mentioned that this website provides information on oil spill detection with RS technology. Therefore CEARAC should continue to work on the development of this website. He also encouraged CEARAC to provide oil spill information in near realtime.
42. Dr. Kawamura mentioned that this oil spill website is in the R&D phase. He added that this website could be operational for practical use. If it becomes operational, other agencies will become interested in it and lend support for further development. Then he affirmed that this oil spill website is valuable and should be supported by NOWPAP regardless of the RAC identifications.

43. The Secretariat mentioned that the CEARAC is required to explain the attributes of this oil spill website in the coming 9<sup>th</sup> NOWPAP IGM and therefore they are currently negotiating with MERRAC.

Agenda Item 7. IOC/WESTPAC Ocean Remote Sensing Program, Present status of New Generation Sea Surface Temperature Project, and their relation to the NOWPAP activities

44. Dr. Kawamura presented on this item and then participants were invited to discuss relevant issues.
45. The Chair mentioned that the detailed information of the activities of IOC/WESTPAC was really helpful for WG4 activities.

Agenda Item 8. Discussion about the contents of Integrated Report.

46. The Secretariat explained the draft of the proposed contents of the Integrated Report (Annex XII). The meeting discussed the outline to combine the National Reports into the Integrated Report.
47. After lengthy discussion, the meeting agreed that the contents of the Integrated Report should comply with the contents of the National Reports, only adding the Introduction Section in the beginning of the Integrated Report.
48. The meeting acknowledged the importance of the suggested activities for the NOWPAP Region to deploy WG4 future activities.
49. The members asked the Secretariat to have an opportunity to have a WG4 meeting in order to review the National Report prior to the Third FPM scheduled in summer 2005. The Secretariat replied that efforts would be made, but it is not certain at this stage.

Agenda Item 9. Other Matters

50. The Chair initiated a free discussion.
51. Dr. Ishizaka suggested discussion of WG4 future activities. Dr. Zhou was for Dr. Ishizaka's suggestion.
52. Dr. Ishizaka reminded the meeting of the three ideas brought up on day 1 such as (1) coastal zone monitoring, (2) project-based activities (i.e. cooperative monitoring of the effect of the Three Gorges Project on the coastal waters of the Yangtze River, cooperative ferry monitoring of NOWPAP region for CAL/VAL), and (3) data sharing system.

53. Dr. Asanuma mentioned that it should have clear social needs for monitoring coastal zone. Dr. Ishizaka suggested that each National Report should include social benefit of the monitoring eutrophication and oil spill, such as management and protection of coastal and marine ecosystems. Furthermore, not just for the monitoring eutrophication and oil spill, social benefit should be included in other targets such as the river discharge and the wetland in Chapter 7. Then in the future WG4 could justify extending to coastal zone in terms of social benefit.
54. Dr. Kawamura brought up the importance of cooperation with land groups in order to consider interaction between land and ocean in coastal zones. The Secretariat mentioned, the 9<sup>th</sup> NOWPAP IGM will discuss the Global Environmental Fund project, in which coastal zone management is one of the main subjects.
55. Dr. Ishizaka brought up the issue of data sharing and distribution. Dr. Kawamura mentioned problems such as who will do data-processing continuously; and how to obtain funds for a data center. Dr. Kawamura added the need of a regionally sustainable satellite network system. Dr. Suh mentioned the marine environmental watch system of NPEC has a possibility to be a data distribution center. The Secretariat replied NPEC intends to be a data distribution center for the NOWPAP region.

#### Agenda Item 10. Adoption of the report of the meeting

56. A draft report of the meeting was prepared by the Rapporteur for consideration and adoption.
57. The meeting adopted the report with modifications.

#### Agenda Item 11. Closure of the meeting

58. The Chairman declared the meeting closed at 15:00 on October 15, 2004.