

NOWPAP POMRAC



**Northwest Pacific Action Plan
Pollution Monitoring Regional Activity Centre**

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Report of the 4th NOWPAP POMRAC Focal Points Meeting

Qingdao, China

25-26 April 2006

NOWPAP POMRAC



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Report of the 4th NOWPAP POMRAC Focal Points Meeting

Qingdao, China

25-26 April 2006

REPORT OF THE 4TH NOWPAP POMRAC FOCAL POINTS MEETING (Qingdao, China, 25-26 April 2006)

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, Republic of Korea, 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 NOWPAP 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 7th NOWPAP 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 POMRAC was allocated with the responsibility to implement activities related to Working Group (WG) 1 - Atmospheric Deposition and WG 2 - River and Direct Inputs.
4. The 1st Focal Points Meeting of POMRAC (Vladivostok, Russia, 9-11 April 2003) decided that the main task of WG 1 and WG 2 should be to establish regional assessment programs to evaluate the - i) atmospheric deposition of contaminants; and ii) river and direct inputs of contaminants into the marine and coastal environment in NOWPAP region, respectively.
5. The 2nd Focal Points Meeting of POMRAC (Vladivostok, Russia, 26-27 May 2004) adopted the procedure for the compilation and preparation of National Reports for WG 1 and WG 2. It was adopted that the National Reports will be prepared by either the POMRAC Focal Points assisted by National Experts, or directly by National Experts hired by POMRAC. Financial support for the preparation of the National Reports will be provided by POMRAC, according to guidance of POMRAC FPs. It was decided that for unification of the data from NOWPAP Members samples of some tables and lists of recommended parameters will be submitted by POMRAC Secretariat after its approval by National Focal Points.
6. The 2nd Joint Meeting of NOWPAP Working Group 1 and Working Group 2 (10-11 October, 2005, Vladivostok, Russia) has reviewed the National Reports, prepared by NOWPAP Members, provided recommendations on their harmonization and publishing, discussed and adopted Structures of the Regional Overviews for WG 1 and WG 2, discussed and adopted the establishment of the Reference Database for WG 1 and WG 2.
7. The 3rd Focal Points Meeting of POMRAC has discussed and adopted the decisions of the 2nd Joint Meeting of NOWPAP Working Group 1 and Working Group 2 (10-11 October, 2005, Vladivostok, Russia) on procedure of harmonization and publication of the National Reports, reviewed and adopted the Contents of the Regional Overviews for WG 1 (Atmospheric Deposition) and WG 2 (River and Direct Inputs), that should be compiled during 2006, and the procedure of their compilation. The Meeting has discussed the Content of the Report "STATE OF MARINE ENVIRONMENT IN THE NOWPAP REGION" and determined the participation of POMRAC in the preparation of the Report. The Meeting has also reviewed and adopted workplans for WG 1 and WG 2 for the end of 2005 and 2006/2007, discussed and approved Workplan and Budget for POMRAC in the 2006/2007 biennium. It was pointed out that the approved Workplan and Budget for POMRAC in the 2006/2007 biennium could be revised at

the following POMRAC Focal Points Meeting taking into account the decisions of the 10th NOWPAP Intergovernmental Meeting.

8. The 10th IGM (Toyama, 24-26 November, 2005) has approved the new directions for the NOWPAP RACs including the new activities of POMRAC such as Report of the State of Marine Environment in the NOWPAP region; Integrated Coastal and River Basin Management (ICRBM); Establishment of AD Reference Database and RDI Reference Database, and Marine Litter Activity (MALITA).

9. Focal Points and experts of the NOWPAP Members, namely, People's Republic of China, Japan, Republic of Korea and Russia participated in the 4th NOWPAP POMRAC Focal Points Meeting. Representative of NOWPAP RCU Toyama Office, as well as representatives of DINRAC and CEARAC, also participated in the meeting. The full list of participants is attached to the present report as Annex 1.

Agenda Item 1. Opening of the Meeting

10. The 4th Focal Points Meeting of POMRAC was opened at 9:30 am on the 25th of April 2006 at the Conference Center of Huanghai Hotel, Qingdao, China by Dr. Anatoly KACHUR, Director of POMRAC.

11. Dr. LI Guogang, Deputy Director of China National Environmental Monitoring Center expressed his welcome greetings on behalf of the Chinese side.

12. Mr. Norio BABA, NOWPAP RCU Representative, said his opening remarks to the participants of the Meeting.

Agenda Item 2. Organization of the Meeting

13. According to the agreed procedure of electing on a rotational basis, the Meeting unanimously elected Dr. Hee-Gu CHOI, Republic of Korea as the Chairperson, and Dr. SHULKIN, Russia as the Rapporteur respectively.

Agenda Item 3. Adoption of the Agenda

14. Dr. KACHUR, Director of POMRAC introduced to the meeting participants the List of Documents (Annex 2), the Provisional Agenda (Annex 3) and Timetable (Annex 4) of the meeting. The meeting adopted the provisional agenda.

Agenda Item 4. Overview of the progress made in the intersessional period after the Third NOWPAP POMRAC Focal Points Meeting

15. Mr. Baba, NOWPAP RCU Representative, has reported to the Meeting the progress of the implementation of NOWPAP activities covering the period since the 10th IGM in Toyama in November 2005 till April 2006, which mainly included decisions of the 10th IGM, brief introduction to CEARAC, MERRAC and POMRAC and RCU activities. In his presentation, contacts with other programs and projects, public awareness, GEF PDF-B Proposal, Regional Marine Litter Activity (MALITA) and other related issues were also mentioned (Annex 5).

16. Subsequently, Dr. KACHUR, the Director of POMRAC has presented the report on the POMRAC activities in 2005 and in the beginning of 2006, made after the Third NOWPAP POMRAC FPM (13-14 October, 2005, Vladivostok, Russia). He also reported the expenditure of POMRAC budget for the 2004/2005 biennium (Annex 6).

17. Dr. Mitsuo UEMATSU asked Secretariat to clarify the revised budget details. After

clarification by Dr. Kachur, the Meeting approved the report.

Agenda Item 5. Review and adoption of the Regional Overview on Atmospheric Deposition of Contaminants into the Marine and Coastal Environment in NOWPAP Region

18. Dr. Shuqin LIU, International Consultant, made a detailed presentation on the Draft Regional Overview on Atmospheric Deposition of Contaminants into the marine and coastal environment in NOWPAP Region, based on the data of the National Reports for WG1 (Appendix I). In her presentation, Dr. LIU emphasized the conclusions and recommendation for future regional activities and priorities. She also mentioned the shortages of her draft due to unavailable and incomparable data for atmospheric deposition monitoring in NOWPAP countries, and asked for comments and additional information for the finalization of the Regional Overview for WG1.

19. At the course of the subsequent discussion, the participants commented a necessity to attract additional sources, to determine more comparable and appropriate parameters on air quality monitoring in NOWPAP countries. The Meeting agreed that it was very difficult to find the comparable data, and it should be honestly recognized that some required data are not available at the moment of compilation of the Regional Overview.

20. After a discussion concerning the finalization of the draft Regional Overview, the participants agreed to adopt the including procedures to finalize the Regional Overview:

- 20.1 From 27 April to 25 May, 2006 all NOWPAP Focal Points, RACs, and experts should send their comments and recommendations for finalization of the Regional Overview to the POMRAC Secretariat. The POMRAC Secretariat will forward them to the all FPs, and International Consultant.
- 20.2 The International Consultant considering all the received recommendations and comments made at the 4th POMRAC FPM (25-26 April, 2006, Qingdao, China) will prepare the final Regional Overview, and sent them to the POMRAC Secretariat within 10 days after receiving the comments from Secretariat. The POMRAC Secretariat will disseminate them among FPs and experts.
- 20.3 Comments on the final Regional Overview, FPs should send by 30 June 2006. After that date, the Regional Overview will be considered as approved, and the POMRAC Secretariat will prepare the finalized Regional Overview for publication.

Agenda Item 6. Review and adoption of the Regional Overview on River and Direct Inputs of contaminants into the marine and coastal environment in NOWPAP Region

21. Dr. SHULKIN, International Consultant made a detailed presentation on the Draft Regional Overview on River and Direct Inputs of contaminants into the marine and coastal environment in NOWPAP Region (Appendix II). He expressed that it was difficult to prepare the Regional Overview basing only on data in National Reports, and it is necessary to use other information sources. Another main difficulty was a different approach of NOWPAP countries to the future activity in the fields discussed.

22. The meeting held a general discussion after the presentation. It was agreed that the same procedure and timeline as for WG1 above would be used for finalization of the Regional Overview for WG2. the participants agreed to adopt the following procedure to finalize the Regional Overview, namely:

- 22.1 From 27 April to 25 May, 2006 all NOWPAP Focal Points, RACs, and experts should send their comments and recommendations for finalization of the Regional Overview to the POMRAC Secretariat. The POMRAC Secretariat will forward them to the all FPs, and International Consultant.

22.2 The International Consultant considering all the received recommendations and comments made at the 4th POMRAC FPM (25-26 April, 2006, Qingdao, China) will prepare the final Regional Overview, and sent them to the POMRAC Secretariat before 5 June 2006. The POMRAC Secretariat will disseminate them among FPs and experts.

22.3 Comments on the final Regional Overview, FPs should send by 30 June 2006. After that date, the Regional Overview will be considered as approved, and the POMRAC Secretariat will prepare the finalized Regional Overview for publication.

Agenda Item 7. Discussion of the Terms of the References for POMRAC FPM

23. Dr. Svetlana KOZHENKOVA, the POMRAC Secretariat presented the revised Terms of Reference for the NOWPAP POMRAC Focal Points Meeting (Annex 7). The Meeting has reviewed, and agreed to submit it to IGM with minor changes.

Agenda Item 8. Discussion of the Terms of References for NOWPAP Working Group 1 (Atmospheric Deposition) and Working Group 2 (River and Direct Inputs)

24. Dr. Svetlana KOZHENKOVA, the POMRAC Secretariat presented the revised Terms of Reference for NOWPAP Working Group 1 (Atmospheric Deposition) (Annex 8) and Working Group 2 (River and Direct Inputs) (Annex 9). The Meeting has reviewed, and adopted them with minor changes.

Agenda Item 9. Discussion of new intersessional activities of POMRAC

25. Dr. KACHUR, the Director of POMRAC made a brief introduction to new intersessional activities of POMRAC, namely: Report of the State of Marine Environment in the NOWPAP region, Integrated Coastal and River Basin Management (ICRBM), and Marine Litter Activity (MALITA) (Appendix III).

26. Mr. Norio Baba, NOWPAP RCU representative introduced to the Meeting the decision of the 10th IGM (UNEP/NOWPAP IG.10/5/rev. 1) on NOWPAP EVOLUTION: New Directions for the NOWPAP RACs and RCU, which contains the approved responsibilities and activities of the NOWPAP RACs for the 2006-2007 biennium (Appendix IV). The Meeting has acknowledged the progress in new intersessional activities of POMRAC.

Agenda Item 10. Report of the POMRAC activity and budget for the 2006-2007 biennium approved by the 10th NOWPAP IGM

27. Dr. KACHUR, Director of POMRAC introduced to the Meeting the POMRAC activity and budget for the 2006 and 2007 biennium approved by the 10th NOWPAP IGM (Annex 10).

28. The Meeting discussed the POMRAC activity and budget in 2006-2007. The Meeting also recommended the POMRAC Secretariat develop a procedure on implementation specifically for ICRBM activities, including preparation of relevant information on ICRBM, and provisional definitions for ICRBM scope and directions. Within a month, the POMRAC Secretariat will provide this information to FPs for the nomination of experts for ICRBM WG.

Agenda Item 11. Review of NOWPAP WG1 Workplan for 2006-2007

Agenda Item 12. Review of NOWPAP WG2 Workplan for 2006-2007

29. Dr. KACHUR, Director of POMRAC introduced the draft workplans for NOWPAP WG1 and WG2 in 2006-2007. The Meeting has adopted the workplans with minor changes (Annex 10, Table 3).

Agenda Item 13. Review of the POMRAC workplan and budget for 2006-2007

30. Dr. KACHUR, Director of POMRAC presented the workplan and budget for POMRAC in 2006-2007, including new activities (Annex 10).

31. Mr. Masanobu MIYAZAKI, the Director of CEARAC explained the objectives and the contents of the Marine Litter Activity (MALITA) in the NOWPAP region, which is a part of CEARAC activities for the 2006-2007 biennium. He pointed out also the problems of implementation. POMRAC will implement some parts of MALITA activities.

32. Dr. Akira HARASHIMA and other participants expressed their needs to get additional handouts from the Secretariat about future activities at the ICRBM field due to its extremely broad scope of the concerned issues.

33. Ms. Tong AN, Representative of DINRAC informed the Meeting about DINRAC's support for the creation of RDI and AD Reference Data Bases activity within its limited budget.

34. After a discussion, the Meeting approved the POMRAC workplan and budget in 2006-2007 with changes concerning terms of implementation of separate activities (Annex 10).

Agenda Item 14. Arrangement date and venue of the Fifth NOWPAP POMRAC Focal Points Meeting

35. After a discussion, the participants agreed to hold the 5th NOWPAP POMRAC FPM in September 2007 in Toyama, Japan, or in Khabarovsk, Russia. The POMRAC Secretariat will arrange the final place with CEARAC Secretariat and NOWPAP RCU.

36. The participants agreed with the provisional topics to be covered at the 5th NOWPAP POMRAC FPM, proposed by the POMRAC Secretariat, namely:

- discuss and adopt the report on POMRAC activity in 2006-2007;
- review AD and RDI Reference Databases;
- review and adopt the guidelines and Terms of References for NOWPAP Working Group Integrated Coastal and River Basin Management (ICRBM);
- discuss and adopt the POMRAC workplan and budget for 2008-2009.

Agenda Item 15. Other matters

37. No other matters have been raised in the meeting.

Agenda Item 16. Adoption of the report of the meeting

38. The Meeting reviewed and adopted the report of the Meeting prepared by the Rapporteur and the Secretariat.

Agenda Item 17. Closure of the meeting

39. The Chairperson declared the Meeting closed at 17:00 on Wednesday, April 26, 2006.



Participants of the 4th NOWPAP POMRAC Focal Points Meeting
(Qingdao, China, 25-26 April 2006)

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Annex 1
List of participants
of the 4th NOWPAP POMRAC Focal Points Meeting

Annex 1

List of participants of the 4th NOWPAP POMRAC Focal Points Meeting

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Annex 2

**List of documents
for of the 4th NOWPAP POMRAC Focal Points Meeting**

Annex 2

List of documents for the 4th NOWPAP POMRAC Focal Points Meeting

Provisional Agenda	UNEP/NOWPAP/POMRAC/FPM 4/1
Annotated Provisional Agenda	UNEP/NOWPAP/POMRAC/FPM 4/2
Timetable	UNEP/NOWPAP/POMRAC/FPM 4/3
Report of NOWPAP RCU Representative on the implementation of the NORTHWEST PACIFIC ACTION PLAN	UNEP/NOWPAP/POMRAC/FPM 4/4
Report on the activities of NOWPAP Pollution Monitoring Regional Activity Center (POMRAC) in 2005-2006	UNEP/NOWPAP/POMRAC/FPM 4/5
Regional Overview on Atmospheric Deposition of Contaminants into the Marine and Coastal Environment in NOWPAP Region (1 st Draft)	UNEP/NOWPAP/POMRAC/FPM 4/6
Draft Regional Overview on River and Direct Inputs of Contaminants into the Marine and Coastal Environment in NOWPAP Region	UNEP/NOWPAP/POMRAC/FPM 4/7
Terms of Reference for the NOWPAP POMRAC Focal Points Meeting (REVISED)	UNEP/NOWPAP/POMRAC/FPM 4/8
Terms of Reference for NOWPAP Working Group 1 - Atmospheric Deposition of Contaminants into the Marine and Coastal Environment in NOWPAP Region (REVISED)	UNEP/NOWPAP/POMRAC/FPM 4/9
Terms of Reference for NOWPAP Working Group 2 - River and Direct Inputs of Contaminants into the Marine and Coastal Environment in NOWPAP Region (REVISED)	UNEP/NOWPAP/POMRAC/FPM 4/10
Draft Workplan and Budget for POMRAC in 2006/2007	UNEP/NOWPAP/POMRAC/FPM 4/11
Provisional list of participants	UNEP/NOWPAP/POMRAC/FPM 4/Inf. 1
Annex 1. NOWPAP EVOLUTION: New Directions for the NOWPAP RACs and RCU	UNEP/NOWPAP IG. 10/5/rev. 1
Annex 2. Establishment of the Marine Litter Activity (MALITA) in the NOWPAP Region	UNEP/NOWPAP IG. 10/6

Annex 3

Provisional Agenda

Annex 3

Provisional Agenda

Day 1 (April 25, 2006)

1. Opening of the Meeting
2. Organization of the meeting
 - Election of the officers
 - Organization of work
3. Adoption of the Agenda
4. Overview of the progress made in the intersessional period after the Third NOWPAP POMRAC Focal Points Meeting
 - 4.1. Report of NOWPAP RCU Representative on the implementation of the Northwest Pacific Action Plan
 - 4.2. Report of the Director of POMRAC on the activities and the budget expenditures made during the intersessional period after the Third NOWPAP POMRAC Focal Points Meeting
5. Review and adoption of the Regional Overview on **Atmospheric Deposition** of contaminants into the marine and coastal environment in NOWPAP Region
6. Review and adoption of the Regional Overview on **River and Direct Inputs** of contaminants into the marine and coastal environment in NOWPAP Region
7. Discussion of the Terms of the References for POMRAC FPM
8. Discussion of the Terms of the References for NOWPAP Working Group 1 (**Atmospheric Deposition**) and Working Group 2 (**River and Direct Inputs**)
9. Discussion of new intersessional activities of POMRAC
 - 9.1. Marine Litter Activity (MALITA)
 - 9.2. Report of the State of Marine Environment in the NOWPAP region
 - 9.3 Integrated Coastal and River Basin Management (ICRBM)

Day 2 (April 26, 2006)

10. Report of the POMRAC activity and budget for 2006 and 2007 biennium approved by 10th NOWPAP IGM
11. Review of NOWPAP WG1 Workplan for 2006-2007
12. Review of NOWPAP WG2 Workplan for 2006-2007
13. Review of POMRAC workplan and budget for 2006-2007
14. Arrangement date and venue of the Fifth NOWPAP POMRAC Focal Points Meeting
15. Other matters
16. Adoption of the report of the meeting
13. Closure of the meeting

Annex 4
Timetable

Annex 4

Timetable

Day 1 (April 25, 2006)

9:00 – 9:30 Registration

9:30 – 9:45 **Agenda Item 1. Opening of the Meeting**

9:45 – 10:00 **Agenda Item 2. Organization of the Meeting**

10:00 – 10:10 **Agenda Item 3. Adoption of the Agenda**

10:10 – 11:00 **Agenda Item 4. Overview of the progress made in the intersessional period after the Third NOWPAP POMRAC Focal Points Meeting**

10:10 – 10:30 4.1. Report of RCU Representative on the implementation of the Northwest Pacific Action Plan

10:30 – 11:00 4.2. Report of the Director of POMRAC on the activities and budget expenditures made during the intersessional period after the Third NOWPAP POMRAC Focal Points Meeting

11:00 – 11:30 (Coffee Break) (Group Photograph)

11:30 – 12:30 **Agenda Item 5. Review and adoption of the Regional Overview on Atmospheric Deposition of contaminants into the marine and coastal environment in NOWPAP Region**

12:30 – 14:00 Lunch Break

14:00 – 15:00 **Agenda Item 6. Review and adoption of the Regional Overview on River and Direct Inputs of contaminants into the marine and coastal environment in NOWPAP Region**

15:00 – 15:30 **Agenda Item 7. Discussion of the Terms of the References for POMRAC FPM**

15:30 – 15:45 (Coffee Break)

15:45 – 16:30 **Agenda Item 8. Discussion of the Terms of the References for NOWPAP Working Group 1 (Atmospheric Deposition) and Working Group 2 (River and Direct Inputs)**

16:30 – 17:00 **Agenda Item 9.** Discussion of new intersessional activities of POMRAC

9.1. Marine Litter Activity (MALITA)

9.2. Report of the State of Marine Environment in the NOWPAP region

9.3 Integrated Coastal and River Basin Management (ICRBM)

Day 2 (April 26, 2006)

9:30 – 10:30 **Agenda Item 10.** Report of the POMRAC activity and budget for 2006 and 2007 biennium approved by 10th NOWPAP IGM

10:30 – 10:50 **Agenda Item 11.** Review of NOWPAP WG1 Workplan for 2006-2007

10:50 – 11:10 **Agenda Item 12.** Review of NOWPAP WG2 Workplan for 2006-2007

11:10 – 11:30 (Coffee Break)

11:30 – 12:00 **Agenda Item 13.** Review of POMRAC workplan and budget for 2006-2007

12:00 – 12:10 **Agenda Item 14.** Arrangement date and venue of the Fifth NOWPAP POMRAC Focal Points Meeting

12:10 – 12:20 **Agenda Item 15. Other Matters**

12:20 – 16:00 Lunch Break
Preparation of the meeting report by the Secretariat

16:00 – 17:30 **Agenda Item 16. Adoption of the report of the meeting**

17:30 **Agenda Item 17. Closure of the Meeting**

Annex 5

Report of NOWPAP RCU Representative on the implementation of the NORTHWEST PACIFIC ACTION PLAN

Annex 5

Report of NOWPAP RCU Representative on the implementation of the NORTHWEST PACIFIC ACTION PLAN

The following progress report on the implementation of NOWPAP activities covers the period since the 10th Intergovernmental meeting (IGM) in November 2005 till April 2006.

10th IGM decisions

At the 10th IGM (November 2005, Toyama, Japan), the following decision were made.

1. As shown below, the work plan and budget for NOWPAP activities for the 2006-2007 biennium were approved.

Activity	Responsibility for implementation	Proposed 2006-2007 Budget
DINRAC	DINRAC	150
CEARAC	CEARAC	150
MERRAC	MERRAC	150
POMRAC	POMRAC	150
Survey of National Legislation	RCU	10
Public Awareness	RCU	23
Coordination of RACs	RCU	20
MALITA	RCU	70
GEF PDF-B	RCU	100
Operation of RCU	RCU	110
Implementation of NOWPAP	RCU	110
Sub-Total		1,043
13% of the sub-total as Programme Support Cost		136
TOTAL		1,179

2. Preparation of a report on criteria and methods to evaluate NOWPAP RACs.
3. Further discussion on the sustainable contributions of the member states to the NOWPAP Trust fund, aiming at resolving the matter as soon as possible but no later than 2007.
4. New directions for NOWPAP RACs and RCU:
 - 1) Land/Marine Based Sources of Pollution
 - 2) State of Marine Environment Report
 - 3) Integrated Coastal and River Basin Management
 - 4) Oil and Chemical Emergency Preparedness and Response.

The transition should be implemented gradually, within several years.
5. The revised project proposal on marine litter activity (MALITA) was approved. NOWPAP RCU was requested to start this activity as soon as possible in close cooperation with the NOWPAP RACs, UNEP and other international organizations and programmes involved.
6. The expansion of geographical coverage of the NOWPAP Regional Oil Spill Contingency Plan (RCP) was agreed to cover Sakhalin Island Shelf.

The following is the short overview of the main actions undertaken by the Regional Activity Centers (except POMRAC) and the RCU since the 10th IGM.

CEARAC - The Special Monitoring and Coastal Environmental Assessment Regional Activity Centre

The CEARAC is responsible for implementing activities under Working Group 3 - Harmful Algal Blooms (HABs) and Working Group 4 - Remote Sensing (RS) of the Marine and Coastal Environment. After the 10th IGM, the following reports were published:

- Integrated Report on Harmful Algal Blooms (HABs) for the NOWPAP Region
- Integrated Report on Ocean Remote Sensing for the NOWPAP Region
- Cochlo-dinium pamphlet

CEARAC renewed its webpage (<http://cearac.nowpap.org/>) and has maintained the following data service through the Internet:

- HAB Reference Database (<http://www.cearac-project.org/wg3/hab-ref-db/>)
- Cochlo-dinium homepage (<http://www.cearac-project.org/wg3/cochlo-entrance/>)
- Website on oil spill monitoring by RS (<http://cearac.poi.dvo.ru/en/>)
- Portal site on ocean remote sensing (<http://www.cearac-project.org/wg4/portalsite/>)

The 4th Focal Points Meeting of CEARAC was held on 8-9 March 2006 in Toyama, Japan. The Focal Points Meeting discussed the workplan and budget for the 2006-2007 biennium, ToRs of FPM and WGs, and new activities. The meeting agreed to submit the revised FPM ToR to the 11th IGM of NOWPAP and adopted the revised ToRs of WGs with minor changes. Proposal of making a booklet of countermeasures to terminate and mitigate red tides under the activity of WG3 (HAB) and Guidelines for monitoring of eutrophication in coastal area using satellite data under the activity of WG4 (Remote Sensing) were discussed. Furthermore, the activities that CEARAC will implement within MALITA and the report of the State of Marine Environment in the NOWAP region were also discussed.

The Northwest Pacific Region Environment Cooperation Center (NPEC) which is a host organization of CEARAC is planning to organize International Workshop on Marine Remote Sensing in the Northwest Pacific region on 1-2 August 2006 in Busan, the Republic of Korea in cooperation with Pukyong National University, to be supported by IOC/WESTPAC, PICES and etc.

DINRAC - Data and Information Network Regional Activity Centre

DINRAC has continued to maintain its webpage (<http://dinrac.nowpap.org/>) and the following databases:

- Database on NOWPAP Institutions (<http://dinrac.nowpap.org/NowpapInstitution.php3>)
- Database on NOWPAP Experts (<http://dinrac.nowpap.org/NowpapExpert.php3>)

A new publication, National Reports on Coastal and Marine Environmental GIS and RS Applications in the Northwest Pacific Region was published in December 2005. The contents of the report are available as a database at the DINRAC webpage.

- Database on Coastal and Marine Environmental GIS & RS Products in the Northwest Pacific Region (<http://dinrac.nowpap.org/NowpapGIS.php3>)

DINRAC has been also working on the development of a framework of NOWPAP DINRAC Meta-database.

The 5th Focal Points Meeting of DINRAC will be held on 10-11 May 2006 in Shenzhen, the People's Republic of China. During the Focal Points Meeting, the workplan and budget for the 2006-2007 biennium, establishment of clearing-house based on the concept of switch-board, and strengthening of the cooperation with the other RACs and also with international organizations/programmes dealing with the data and information management will be discussed.

MERRAC - Marine Environmental Emergency Preparedness and Response Regional Activity Centre

The following reports were published by MERRAC in November 2005 as the results of three

specific projects:

- Sensitivity Mapping, MERRAC Technical Report No. 1
- Guideline for Shoreline Clean-up, MERRAC Technical Report No. 2
- Guideline for the Use of Dispersants, MERRAC Technical Report No. 3

MERRAC has continued specific projects on regional mapping of vulnerable resources; on oil spill modeling; and on minimum level of preparedness.

The 1st NOWPAP Joint Oil Exercise will be conducted on 11 May 2006 in Sakhalin, Russian Federation.

The 9th MERRAC Focal Points Meeting will be held on 5-7 May 2006 at MERRAC, Daejeon, the Republic of Korea, and in conjunction with the 9th MERRAC FPM, the 1st NOWPAP Workshop on Marine Litter will be held in Incheon, Korea on 8-9 June 2006.

MERRAC has been preparing to co-organize the Workshop for the development of effective regional agreements for preparedness and response to marine pollution in East Asia during East Asian Seas Congress 2006 in Haikou, the People's Republic of China, December 2006.

RCU – Regional Coordination Unit

RCU has worked in close contact with National Focal Points, NOWPAP RACs, UNEP HQ, UNON and UNEP GPA office in the Hague to ensure that all NOWPAP activities are being implemented in time, within the allocated budget and according to the UN rules and regulations.

RCU also has kept contacts with relevant organizations, programmes and projects in the region, such as EAS/RCU, NEAR-GOOS, PEMSEA, PICES, YSLME etc.

Since the 10th IGM of NOWPAP, RCU staff attended the following meetings in order to strengthen cooperation with them:

- The 2nd Regional Scientific and Technical Panel (RSTP) Meeting of the UNDP/GEF Yellow Sea Large Marine Ecosystem (YSLME) project, 15-17 December 2005.
- the 10th Session of the Coordinating Committee of the North East Asian Global Ocean Observing System (NEAR-GOOS CC10), Busan, the Republic of Korea, 16 - 18 January 2006.
- Workshop on Developing Future IAEA RCA Environment Strategy, 20-22 February 2006.
- Workshop on YSLME partnership building and public awareness strategy, 15-16 March 2006.

The public awareness strategy was developed and RCU implemented public awareness activities accordingly to increase a visibility of NOWPAP and to attract attentions of general public to the marine environment issues.

According to the decision of the IGM, RCU developed the NOWPAP resource mobilization strategy and approached potential donors and partners to seek external sources to the Trust Fund. The information on potential donors such as Nippon Foundation, Kurita Water and Environment Foundation, Sumitomo Foundations etc. was shared with the RACs.

As a result of close cooperation with the member states, USD 55,000 earmarked contribution from Japanese Government was provided to promote the International Coastal Clean-up campaign in Tsushima Island, Japan in 2006.

When the chemical spill incident happened at Songhua River in the People's Republic of China in November 2005, RCU collected the information on the incident through the RACs to share the collected information among the NOWPAP member states.

GEF PDF-B proposal

The concept paper of the GEF Project to Address Land-based Sources of Persistent Toxic Substances (PTS) was accepted by the GEF Secretariat on 9 January 2006. The support/endorsement letters from the member states are being prepared for the final approval of the project. During the PDF-B phase, the NOWPAP member states will conduct a preliminary assessment of PTS in the region. This will then lead to the preparation of a regionally agreed list

of hazardous chemicals to be collaboratively addressed; standardized data on contaminant levels; information on land-based sources; estimated transport of relevant contaminants; and suggested demonstration sites and measures for the NOWPAP sea area. Actual interventions will take place during the full-size project phase; and experiences and lessons learnt will be incorporated into and maintained as a part of regular activities of NOWPAP beyond the life of the project.

Regional Marine Litter Activity (MALITA)

A new project on the marine litter in the NOWPAP region has been launched after the approval by the 10th NOWPAP IGM in November 2005, Toyama, Japan. Within this project, the following activities will be implemented in 2006-2007:

- collecting and analyzing existing data and information (including legal instruments and financial incentives) on marine litter and identifying gaps;
- organizing regular regional meetings and workshops to share information and to build common understanding on the marine litter issue;
- developing and implementing regional marine litter monitoring programme;
- organizing awareness raising campaigns and clean-up activities; approaching different sectors of civil society such as private sector, academia, central and local governments, NGOs and others;
- developing sectoral guidelines for marine litter management focusing on shipping, fisheries, tourism, recycling.

The 1st Marine Litter workshop will be held in Incheon, the Republic of Korea, organized by MERRAC and financially supported by MOMAF and Metropolitan city of Incheon.

The NOWPAP ICC campaign and workshop will be held in Tsushima, Japan, September 2006 in cooperation with ICC National Coordinators of Korea and Japan. In order to support the ICC campaign and workshop, Japanese government provided the earmarked contribution.

Annex 6

**Report on the activities of NOWPAP Pollution Monitoring Regional
Activity Center (POMRAC) in 2005-2006**

Annex 6

Report on the activities of NOWPAP Pollution Monitoring Regional Activity Center (POMRAC) in 2005-2006

Background

Pollution Monitoring Regional Activity Center of UNEP Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region (NOWPAP) was formed by NOWPAP Fourth Intergovernmental Meeting (Beijing, China, April 6-7, 1999) on the basis of the Pacific Geographical Institute of the Far Eastern Branch of Russian Academy of Sciences (Vladivostok).

In its work POMRAC is guided by UNEP Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region, the Resolutions of NOWPAP First Intergovernmental Meeting (Seoul, Korea, September 14, 1994), Resolutions of NOWPAP Third Intergovernmental Meeting (Vladivostok, Russia, April 9, 1998), NOWPAP Fourth Intergovernmental Meeting (Beijing, China, April 6-7, 1999) and NOWPAP Seventh Intergovernmental Meeting (Vladivostok, Russia, March 20-22, 2002).

POMRAC work on the territory of Russia is guided by the Constitution of the Russian Federation, laws and other norms of Russian legislation, UNEP management directives. The Russian National NOWPAP body is the Ministry of Natural Resources with Centre for International Projects acting as its executive body.

The overall goal of POMRAC is the coordination of activity and establishment of cooperation in regional monitoring of marine and coastal environment of the Northwest Pacific Region (NOWPAP/3) under the program NOWPAP UNEP.

Following the results of discussions at the First NOWPAP/3 Coordinating Committee Meeting (Beijing, 21-22 May 2001), the 7th Intergovernmental Meeting (Vladivostok, 20-22 March 2002) shared the responsibilities and activities between CEARAC and POMRAC as presented in document UNEP/NOWPAP IG.7/8. POMRAC is fully responsible for two working groups: WG 1 - Atmospheric Deposition of contaminants into the marine and coastal environment; and WG 2 – River and Direct Inputs of contaminants into the marine and coastal environment.

The 8th Intergovernmental Meeting approved the budget of \$150,000 for 2004/2005 for POMRAC activities.

Report of the activities of POMRAC in 2004 – September 2005 was made during the 3rd POMRAC Focal Point Meeting (13-14 October, 2005, Vladivostok, Russia) (UNEP/NOWPAP/POMRAC/FPM 3/7).

The main functions and tasks of POMRAC are:

- To collect relevant information on the introduction of the program of regional monitoring of marine and coastal environment of the Northwest Pacific Region (NOWPAP/3).
- To organize meetings of Working Groups under the plan approved by the member states at intergovernmental meetings.
- To collect information on technologies and know-how in the field of monitoring of the sea, coastal and associated fresh waters as well as the atmosphere in NOWPAP region.
- To develop training programs, to plan and organize training courses and technical seminars.
- To coordinate an exchange of monitoring results in the network of monitoring stations which are included in NOWPAP/3 system and to give these results to other NOWPAP projects and organizations.

- To provide regular reports on the activity of Regional center and to submit these results to NOWPAP Intergovernmental Meetings.
- To publish the technical reports, manuals, bulletins etc. as results of NOWPAP activity.
- To continuously inform the population and organizations concerned on the condition of sea, coastal and associated fresh waters as well as the atmosphere in the NOWPAP region.
- To maintain contacts with POMRAC Working groups and with the appropriate national and regional international organizations in NOWPAP member states to achieve the objectives and tasks of the UNEP NOWPAP.
- To provide the necessary methodical and, when possible, technical assistance for organizations of the NOWPAP countries in efforts and techniques of monitoring of sea, coastal and associated fresh waters and the atmosphere. To organize data intercalibration in cooperation with other international and regional organizations concerned, first of all IOC UNESCO. To promote harmonization of the approaches and techniques used in NOWPAP/3 monitoring network.
- To consider and, in consultation with RCU NOWPAP, to undertake other necessary initiatives to achieve the objectives and tasks of the Action Plan in the field of pollution monitoring.

Within its Terms of Reference and under current legislation, POMRAC has the rights:

- To liaise with NOWPAP partners; To participate in NOWPAP work on adjacent subjects;
- To involve specialists and experts in the preparation of materials on NOWPAP problems, to form regional environmental cooperation expert boards in consultation with the national coordinator, Center for International Projects.
- To participate in an information exchange on regional environmental problems in accordance with national rules and procedures;
- To conduct meetings and other activities on realization of POMRAC NOWPAP thematic sectors and the program as a whole and on adjacent subjects;
- To prepare recommendations for national and international partners concerned in prospective lines of activity of POMRAC NOWPAP;
- To conduct analysis of information on the problems of international environmental cooperation in the region;
- To advise organizations, institutions and individual experts on international environmental cooperation in the region;
- To correspond with the POMRAC partners on routine matters.

Outline of POMRAC

The managerial functions of POMRAC are executed by POMRAC Directorate on the basis of Pacific Geography Institute of the Far Eastern Branch of the Russian Academy of Sciences and the Center for International Projects. Day-to-day technical-organizational work is to be done by the assigned researchers and technicians from Pacific Geography Institute of the Far Eastern Branch of the Russian Academy of Sciences.

Staff

Three staffers of PGI have been engaged in the work related to POMRAC activities.

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Main Responsibilities

In accordance with the decision of NOWPAP Eight Intergovernmental Meeting, with the budget approved at this meeting and with the main lines of POMRAC work, adopted during the 2nd POMRAC Focal Points Meeting; Vladivostok, 26-28 May 2004 (table 1), the following activities are scheduled for 2004-2005:

1. Development of the primary goals, and structure of national and regional reports for working groups.
2. Holding the 1st Working Group Meetings,
3. Holding the 2nd Working Group Meetings,
4. Holding the 2nd POMRAC Focal Points Meeting
5. Preparation of the basic formats for National Reports.
6. Preparation of the basic formats for Regional Overviews.

Table 1

Workplan and Budget for POMRAC in 2004/2005

as decided by the 2nd POMRAC Focal Points Meeting; Vladivostok, 26-28 May 2004

Activity	Actions and planned date	Responsibility	Remarks	Budget US\$
'Back to Back' Meeting of WG 1, WG 2 and 2 nd FPM	May 2004	POMRAC with assistance of UNEP	Vladivostok, Russia,	36,000
Preparation of the National Report of WG 1	June 2004 – February 2005	National Experts from each NOWPAP Member States	\$5,000 for experts from each NOWPAP member States	20,000
Preparation of the National Report of WG 2	June 2004 – February 2005	National Experts from each NOWPAP Member States	\$5,000 for experts from each NOWPAP Member States	20,000
'Back to Back' Meeting of WG 1, WG 2 and 3 rd FPM	May 2005	POMRAC with assistance of RCU and UNEP	POMRAC, Vladivostok	33,000
Harmonization of WG 1 National Reports	February – May 2005	POMRAC through regional consultant		6,000
Harmonization of WG2 National Reports	February – May 2005	POMRAC through regional consultant		6,000
Printing of National Reports				4,000
Preparation of the Regional Assessment and Overview WG 1	June 2005 – 2005	POMRAC with assistance of UNEP and RCU	Activity and budgets could continue to next biennium	10,000
Preparation of the Regional Assessment and Overview WG 2	June 2005 – 2005	POMRAC with assistance of UNEP and RCU	Activity and budgets could continue to next biennium	10,000
Website	Throughout 2004/5	POMRAC		2,000
Cooperation, coordination of POMRAC activities and communication maintenance)	Throughout 2004/5	POMRAC in cooperation with RCU, UNEP, UNESCO/IOC and relevant regional organizations		3,000
Total				150,000

7. Preparation of the Structure of the State Marine Environment Report for NOWPAP Region.
8. Support of POMRAC website.

In December, 2005 workplan and budget revision was conducted (table 2). Actual expenses on the major activities are in the table 3.

Main Activities in 2005:

The Second Joint Meeting of NOWPAP Working Groups (WG1 and WG2) was held during 10-11 October 2005 in Vladivostok, Russian Federation

The major objectives of this meeting were:

- Overview of National Reports, prepared by National Experts of WG 1 (Atmospheric Deposition) and WG 2 (River and Direct Inputs) of NOWPAP;
- Recommendations for harmonization and publishing of National Reports of WG1 and WG2;
- To agree Structures of the Regional Overviews for WG 1 and WG 2;
- The establishment of the Reference Database on Atmospheric Deposition of Contaminants into the Marine and Coastal Environment in NOWPAP Region (AD Reference Database) and the Reference Database on River and Direct Inputs of Contaminants into the Marine and Coastal Environment in NOWPAP Region (RDI Reference Database);
- To recommend Workplan of WG1 and WG2 to the 3rd POMRAC FPM for 2006/7.

The participants of the 2nd Joint Meeting of NOWPAP Working Groups were nominated POMRAC Focal Points of four NOWPAP Members, experts from NOWPAP members, a representative of RCU NOWPAP UNEP, representatives of the Far Eastern Branch of the Russian Academy of Science, the director of CEARAC, representatives of DINRAC and MERRAC.

The Third Focal Points Meeting of POMRAC was held during 13-14 October 2005 in Vladivostok, Russian Federation.

The major objectives of this meeting were:

- Review and adoption of the Report on activities and budget expenditures made during inter-sessional period after Second NOWPAP POMRAC Focal Points Meeting (see table);
- Review and adoption decisions of the 2nd WG1 Meeting on National Reports “Atmospheric Deposition” and the 2nd WG2 Meeting on National Reports “River and direct inputs”.
- Review and adoption of the Content of Regional Overviews “Atmospheric Deposition” and “River and Direct Inputs”, approval of Consultant(s) for preparation of the Regional Overviews.
- Discussion of possible directions of activity POMRAC for 2006/7 and further.
- Review and adoption of the Content of the STATE OF MARINE ENVIRONMENT REPORT IN THE NOWPAP REGION
- Discussion and adoption of the proposed Workplan and Budget of NOWPAP POMRAC for the 2006/2007 biennium.

The 3rd FPM recommends Budget and Workplan of POMRAC for 2006/7 for the 10th NOWPAP Intergovernmental Meeting.

Table 2

**Budget 2004-2005 POMRAC
IN USD**

		2004 (USD)	2005 (USD)	Total (USD)
10	PROJECT PERSONNEL COMPONENT			
	1100 Professional staff			
	1101 POMRAC Director	0	0	0
	1200 Consultants			
	1201 Development of Integrated Reports on the	0	49,000	49,000
	1299 Sub total	0	49,000	49,000
	1600 Travel			0
	1601 Travel on official business	925	3,500	4,425
	1699 Sub total:	925	3,500	4,425
	1999 Component total:	925	52,500	53,425
20	SUB-CONTRACTS COMPONENT			
	2999 Component total:	0	0	0
30	TRAINING COMPONENT			
	3300 Meetings/conferences			
	3301 Focal Points Meeting	38,392	42,000	80,392
	3302 Working Group 1 Meeting	12,336	0	12,336
	3303 Working Group 2 Meeting	11,798	0	11,798
	3380 Prior Years Adjustment(Not to be reported by POMRAC)	0	-14,812	-14,812
	3399 Sub total:	62,526	27,188	89,714
	3999 Component total	62,526	27,188	89,714
40	EQUIPMENT COMPONENT			
	4999 Component total	0	0	0
50	MISCELLANOUS COMPONENT			
	5200 Reporting cost			
	5201 Publications	2,000	2,500	4,500
	5299 Sub total:	2,000	2,500	4,500
	5300 Sundry			
	5301 Communications	216	1,500	1,716
	5304 Other	645	0	645
	5399 Sub total:	861	1,500	2,361
	5999 Component total	2,861	4,000	6,861
99	GRAND TOTAL	66,312	83,688	150,000
	Previous budget	78,000	72,000	150,000
	Increase/decrease	11,688	-11,688	0

The participants of the Third FPM were the nominated Focal Points of four NOWPAP Members, invited experts from NOWPAP Members, representatives of RCU NOWPAP, of the Far Eastern Branch of the Russian Academy of Science, the Ministry of Natural Resources of the Russian Federation, the director of CEARAC and representatives of DINRAC and MERRAC.

The report of the 3rd Focal Points Meeting of POMRAC is published and distributed among all NOWPAP members by POMRAC. This report is on WEBSITE of POMRAC NOWPAP <http://www.pomrac.dvo.ru>.

Total costs of expenses for carrying out 'Back to Back' the 2nd Meetings of WG 1, WG 2 and 3rd FPM have made 43000 dollars.

Director of POMRAC presented the REPORT ON THE ACTIVITIES OF NOWPAP POLLUTION MONITORING REGIONAL ACTIVITY CENTER (POMRAC) IN 2004/2005, Workplan and Budget for 2006/07 on the **10th Intergovernmental Meeting on the Northwest Pacific Action Plan** (Toyama, Japan, 24-26 November 2005). The 10th IGM approved all POMRAC documents and budget of \$ 155 500 for 2006/7.

The 10th IGM has approved the directions for the NOWPAP RACs including the new activities of POMRAC such as State of Marine Environment Report (with other RACs), Integrated Coastal and River Basin Management (ICRBM), Land Based Sources of Pollution (with other RACs) and Marine Litter (with other RACs).

Other activities

In June - August, 2004 Terms of Reference for National Consultants for preparation of the National Report and the basic formats for preparation of National Reports of the NOWPAP countries (tables, maps and others) were prepared by POMRAC after their approval by the National Focal Points.

In August, 2004 projects of contracts (Memorandums of Understanding) with National Experts for preparation of National Reports were prepared. Signing of contracts was not carried out before March 2005 because of existing problems with financing through the Russian banks. Only by assistance of RCU and UNEP we solved the problem in the beginning of March, 2005.

During July - August 2005 all National Reports of Working Group 1 (AD) and practically all of National Reports of Working Group 2 (RDI) (except report by National Expert of ROK) were received. Payments for expert work of 37500 US dollars were made. Remuneration for the expert from Republic of Korea for the Report for Working Group 2 (2,500 US\$) was paid after the 2nd Meeting of NOWPAP Working Group 2 (13-14 October 2005, Vladivostok, Russia), where the report was presented.

In October-December of 2005 POMRAC Secretariat worked on edition of Report of the 2nd Meeting of NOWPAP Working Group 1, Report of the 2nd Meeting of NOWPAP Working Group 2 and 3rd Focal Points Meeting of POMRAC. The Reports were published in March 2006. Cost of the publication made 1425 US dollars.

In November of 2005 there were signed Memorandums of Understanding for National Experts of WG 1 and for National Experts of WG 2 for harmonization and finalization of the National Reports according to decisions of the 2nd NOWPAP WG 1 and WG 2 Meetings (10-11 October, 2005, Vladivostok, Russia) and the 3rd NOWPAP POMRAC FPM (13-14 October, 2005, Vladivostok, Russia). By December 12, 2005, POMRAC Secretariat received the Final National Reports, which were finalized by POMRAC National Experts:

1. Chinese National Report for WG 1 – Mr. Ruibin WANG
2. Chinese National Report for WG 2 – Ms. Mingcui WANG
3. Japanese National Report for WG 1 – Mr. Susumo OKADA
4. Japanese National Report for WG 2 – Mr. Susumo OKADA
5. Korean National Report for WG 1 – Dr. Hee Gu CHOI
6. Russian National Report for WG 1 – Dr. Tatiana BELAN
7. Russian National Report for WG 2 – Dr. Vladimir M. SHULKIN

Dr. Jae Ryoung OH - Expert of Republic of Korea for WG2 – sent Final National Report on 31 of January 2006.

Payments for expert work of 12000 US dollars were made.

In January-March 2006 POMRAC Secretariat worked on edition National Reports on Atmospheric Deposition of Contaminants into the Marine and Coastal Environment in NOWPAP Region and National Reports on River and Direct Inputs of Contaminants into the Marine and Coastal Environment in NOWPAP Region. These Reports are planned to be published by May, 2006.

In December 05 – January 06 projects of contracts (Memorandums of Understanding) with International Experts (Consultants) for preparation of Regional Overview were prepared. Signing of contracts was carried out in February 2006.

Director of POMRAC participated in Intersessional Workshop 2005 in Seoul in July, 2005. Together with other RACs, during this meeting there was achieved the arrangement on preparation "STATE OF MARINE ENVIRONMENT REPORT IN THE NOWPAP REGION".

Representatives of POMRAC participated in FPMs of other regional NOWPAP centers: MERRAC (2005, May); CEARAC (2005, September; 2006, March); DINRAC (2005, September).

In 2004 - 2005 POMRAC took part in work of two Workshops of GIWA (Program GIWA UNEP) on the problems of preservation of the environment devoted to NOWPAP region. POMRAC secretariat and POMRAC National Experts have prepared two GIWA reports in which priority problems of environmental condition of NOWPAP region are determined. Charges on these actions are carried out at the expense of additional funds (outside of the voted POMRAC budget).

In 2005 POMRAC took part in preparation of recommendations for expansion of a network of biosphere reserves of region for improvement of background monitoring system of the environment (Program MAB UNESCO) and in work of the 9th International Workshop of East Asia Biosphere Network. Charges on these actions are carried out at the expense of additional funds (outside of the voted POMRAC budget).

In January, 2006 POMRAC prepared materials on Amur River pollution which resulted from chemical facility accident in Jilin, China in November, 2005. In March, 2006 Director of POMRAC reported on this problem on special session of Khabarovsky krai administration.

During the accounting period POMRAC website was supported.

Table 3. Revised POMRAC budget 2004-2005

PROJECT EXPENDITURE ACCOUNTS FOR COOPERATING AGENCIES

Quarterly project statement of allocation (budget), expenditure and balance (Expressed in US\$) covering the period
01 October - 31 December 2005.

Project No PN/6030-04-10 Agency name PACIFIC INSTITUTE OF GEOGRAPHY FAR EAST BRANCH RUSSIAN ACADEMY OF SCIENCES
Project title: SUPPORT TO POLLUTION MONITORING IN THE NOWPAP REGION UNDER THE FRAMEWORK OF THE NORTHWEST PACIFIC ACTION PLAN (POMRAC)

Object of expenditure by UNEP budget code	Project commencing: 01 January 2004		Project ending: 31 December 2005		Cumulative expenditure for year 2004-2005	Unspent balance of budget	
	Project budget allocation for year 2004-2005 (Rev1).		Total expenditure for IV quarter 2005	Total unliquidated obligations		m/m	Amount
	m/m	Amount					
1100 Project personnel		0,00	0,00	0,00	0,00		0,00
1200 Consultants		49 000,00	11 500,00*	0,00	49 000,00*		0,00
1300 Administrative support		0,00	0,00	0,00	0,00		0,00
1400 Volunteers		0,00	0,00	0,00	0,00		0,00
1600 Travel		4 425,00	1 829,24	0,00	4 425,00		0,00
2100 Sub-contracts		0,00	0,00	0,00	0,00		0,00
2200 Sub-contracts		0,00	0,00	0,00	0,00		0,00
2300 Sub-contracts		0,00	0,00	0,00	0,00		0,00
3100 Fellowships		0,00	0,00	0,00	0,00		0,00
3200 Group training		0,00	0,00	0,00	0,00		0,00
3300 Fellowships		89 714,00	42 000,00	0,00	89 714,**		0,00
4100 Expendable equipment		0,00	0,00	0,00	0,00		0,00
4200 Non-expendable equipment		0,00	0,00	0,00	0,00		0,00
4300 Premises		0,00	0,00	0,00	0,00		0,00
5100 Operation		0,00	0,00	0,00	0,00		0,00
5200 Reporting costs		4 500,00	500,00	0,00	4 500,00		0,00
5300 Sundry		2 361,00	577,44	0,00	2 361,00		0,00
99 GRAND TOTAL		150 000,00	56 406,68	0,00	150 000,00		0,00

Annex 7

Terms of Reference for the NOWPAP POMRAC Focal Points Meeting

Annex 7

Terms of Reference

for the NOWPAP POMRAC Focal Points Meeting

1. Background

In order to implement the objectives related to the monitoring and assessment of the marine and coastal environment {objective 1 task (a) and objective 5 tasks (a) (b) (c)} of the “Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region (NOWPAP)”, the First Intergovernmental Meeting (IGM) on NOWPAP in September 1994, Seoul, Republic of Korea, gave a priority, inter alia to the establishment of “Activity NOWPAP/3 – Establishment of a collaborative, regional monitoring programme”.

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 a Coordinating Committee was expected as an outcome for the Activity 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”.

The First Meeting of the Coordinating Committee (Beijing, 21-22 May 2001), agreed upon the terms of reference for Coordinating Committee and for the Working Groups.

The Pollution Monitoring Regional Activity Center (POMRAC), was established on 15 August of 2002, based on the resolution 2 of the Fourth IGM (Beijing, 6-7 April, 1999), and following the signature of a Memorandum of Understanding between UNEP and the Pacific Geographical Institute of Far Eastern Branch of Russian Academy of Sciences from 1 August 2002 in Vladivostok, Russian Federation. POMRAC was designated to coordinate and facilitate pollution monitoring related activities with technical assistance from UNEP and other relevant international and regional organizations.

The overall goal of POMRAC is to coordinate regional activities related to the establishment of a collaborative regional monitoring programme. The Seventh IGM (Vladivostok, 20-22 March, 2002) has approved the establishment of two Working Groups under POMRAC: WG 1 - Atmospheric Deposition of Contaminants into the Marine and Coastal Environment; and WG 2 – River and Direct Inputs of Contaminants into the Marine and Coastal Environment (document UNEP/NOWPAP IG.7/8).

The 10th IGM (Toyama, 24-26 November, 2005) has approved the new directions for the NOWPAP RACs including the new activities of POMRAC such as Integrated Coastal and River Basin Management which includes land-based sources of pollution.

POMRAC will be engaged, inter alia, in the development of a regional monitoring programme, development and implementation of monitoring data quality and analytical control methods, training courses relevant to monitoring methodologies and data and analytical control.

The 1st Focal Points Meeting of POMRAC (Vladivostok, Russia, 9-11 April 2003) adopted the Terms of Reference for POMRAC FPM (UNEP/NOWPAP/POMRAC/FPM 1/9, Annex 5).

The 4th Focal Points Meeting of POMRAC (Qingdao, China, 25-26 April 2006) revised Terms of Reference for POMRAC FPM and adopted them, as follows.

2. Objectives

The POMRAC Focal Points Meeting is a NOWPAP arrangement to promote smooth and effective coordination of activities related to the pollution monitoring of the marine and coastal environment including, among others, Atmospheric Deposition and River and Direct Inputs of contaminants into the marine and coastal environment and Integrated Coastal and River Basin Management which includes land-based sources of pollution. The main objectives of the POMRAC Focal Points Meeting are:

- (a) Exchange information to ensure practical implementation of activities related to the pollution monitoring of the marine and coastal environment in NOWPAP Region.
- (b) Promote, coordinate and harmonize regional cooperation in NOWPAP Region related to the pollution monitoring of the marine and coastal environment.

3. Functions

Bearing in mind that the Intergovernmental Meeting as the governing body for the NOWPAP, the functions of the POMRAC Focal Points Meeting as an advisory body to POMRAC will be:

- (a) Identify and carry out the cooperative actions in NOWPAP Region related to the pollution monitoring of the marine and coastal environment, including Atmospheric Deposition and River and Direct Inputs of contaminants and Integrated Coastal and River Basin Management.
- (b) Coordinate, guide and supervise the work of the Working Groups operating under POMRAC.
- (c) To establish new Working Groups or disband/modify the existing Working Groups, based on internal evaluation done by the POMRAC FPM.
- (d) Promote information exchange and technical cooperation, including education, training and technology transfer in the fields related to the pollution monitoring of the marine and coastal environment, including Atmospheric Deposition and River and Direct Inputs of contaminants and Integrated Coastal and River Basin Management.
- (e) Review ongoing regional and national activities and advise POMRAC on necessary follow-up actions related to the pollution monitoring of the marine and coastal environment, including Atmospheric Deposition and River and Direct Inputs of contaminants and Integrated Coastal and River Basin Management.
- (f) Advise POMRAC on necessary activities related to the goals and objectives of NOWPAP in the field of marine and coastal monitoring.

4. Participation

- 4.1 NOWPAP Members will be invited to participate in the POMRAC Focal Points Meeting. The representative of each NOWPAP Member, the national Focal Point should represent the relevant national authority which has the responsibility and authority at the national level regarding monitoring of the marine and coastal pollution and integrated coastal and river basin management. The Focal Point himself/herself should be of high level and with authority and experience in issues related to monitoring of the marine and coastal pollution and integrated coastal and river basin management. Each representative may be

accompanied by advisors as appropriate, such as a senior scientist with the experience in these above mentioned fields. It is expected that NOWPAP Members would ensure that their delegations reflect the full range of national expertise's and interests.

- 4.2 The representatives of international organizations, Non-Governmental Organizations (NGOs), local authorities and representatives of the civil society willing to contribute to the work of these meetings may be invited as observers.
- 4.3 The representatives of the NOWPAP Regional Coordinating Unit (RCU) and NOWPAP Regional Activity Centres (RACs) may also participate in the Meeting as observers.
- 4.4 The list of invited observers will be circulated by the Director of POMRAC to the POMRAC Focal Points prior to the meeting.
- 4.5 Certain meeting discussions may be limited only to NOWPAP Members' official representatives. Observers may be requested to be absent from these discussions. Decisions on this issue will be made by the NOWPAP Members' official representatives. The continued participation of observers in the work of the meetings will be reviewed periodically, taking into account the contribution of such observers to the work of the POMRAC Focal Points Meeting.

5. Sessions

- 5.1 The POMRAC Focal Points Meeting should be held once a year. Each session will discuss the timing of the subsequent session.
- 5.2 At each session, the meeting will elect, from the official representatives of the NOWPAP Members, a Chairperson and a Rapporteur.
- 5.3 Election of officers of the meeting will be decided by consensus.

6. Tasks

The POMRAC Focal Points Meeting will carry out the following tasks:

- (a) To advise and recommend to the NOWPAP Intergovernmental Meeting on the workplan and budget of POMRAC through its Director.
- (b) To periodically review and approve the implementation of the plan and budget of POMRAC as adopted by the IGM.
- (c) To guide the work of the Working Groups through the provision and periodic review of the Terms of Reference.
- (d) To review periodic reports prepared by POMRAC.
- (e) To review proposals and overviews prepared by the Working Groups.
- (f) To advise the POMRAC and other NOWPAP RACs on the coordination of the work of the Working Groups and other NOWPAP activities.

7. Intersessional work

The intersessional work will be carried out mainly by correspondence among the Focal Points. If necessary, and subject to availability of funds, meetings of experts, workshops and other meetings may be organized.

8. Secretariat

The POMRAC Focal Points Meeting and the Working Groups will be served by a secretariat provided by POMRAC.

9. Decisions

The meeting will achieve decisions by consensus among the NOWPAP Members. If consensus cannot be reached on administrative and procedural matters, voting may be taken. Each NOWPAP Member will have one vote. Such decision will be taken by a majority of those NOWPAP Members present and voting.

10. Procedure

10.1 The POMRAC Focal Points Meeting and Working Groups shall adopt, mutates mutandis, the rules of procedures of the UNEP Governing Council.

10.2 The POMRAC Focal Points Meeting shall advise, when necessary, to the Intergovernmental Meeting on amendments to the present Terms of Reference of POMRAC Focal Points Meeting.

11. Agenda

The secretariat, in consultation with and under the guidance of the POMRAC Focal Points, will prepare a provisional agenda for each session of the meeting. Any participant in the meeting may request the secretariat to add discussion items to the provisional agenda prior to its finalization.

12. Budget and Expenses

12.1 The budget for the POMRAC Focal Points Meeting and POMRAC subsequent activities is supported by the NOWPAP Trust Fund. Other external funds should also be sought in accordance with the development of POMRAC activities.

12.2 The Director of POMRAC will report to the Focal Point Meeting on expenditures of the NOWPAP Trust Fund related to POMRAC activities. After approval of such report by the Focal Point Meeting, the Director of POMRAC will report on POMRAC expenditures to the Intergovernmental Meeting.

13. Report

The POMRAC Focal Points Meeting will consider and adopt a report at each meeting. The report will be circulated to all participants of the meeting. The Director of POMRAC will present the report to the Intergovernmental Meeting.

14. Language

The working language of the POMRAC Focal Points Meeting will be English. The host country of each of the meeting sessions may interpret the English into the language of the host country.

Annex 8

Terms of Reference for NOWPAP Working Group 1

**- Atmospheric Deposition of Contaminants
into the Marine and Coastal Environment in NOWPAP Region**

Annex 8

Terms of Reference for NOWPAP Working Group 1

- Atmospheric Deposition of Contaminants

into the Marine and Coastal Environment in NOWPAP Region

Background

The 7th Intergovernmental Meeting of NOWPAP (Vladivostok, 20-22 March 2002), have decided that POMRAC will be responsible for two working groups: WG 1 - Atmospheric Deposition of Contaminants into the Marine and Coastal Environment; and WG 2 – River and Direct Inputs of Contaminants into the Marine and Coastal Environment (document UNEP/NOWPAP IG.7/8).

The 1st Focal Points Meeting of POMRAC (Vladivostok, Russia, 9-11 April 2004) decided that the main task of WG 1 should be to establish a regional assessment program to evaluate the atmospheric deposition of contaminants into the marine and coastal environment in NOWPAP region.

The 2nd Focal Points Meeting of POMRAC (Vladivostok, Russia, 26-28 May 2004) adopted the Terms of Reference for Working Group 1 (WG 1) (UNEP/NOWPAP/POMRAC/FPM 2/7, Annex 5).

The 4th Focal Points Meeting of POMRAC (Qingdao, China, 25-26 April 2006) revised Terms of Reference for WG 1 and adopted them, as follows.

Objectives

The main objectives of the WG 1 are:

- (a) Exchange information to ensure practical implementation of activities related to the monitoring of Atmospheric Deposition in the NOWPAP region.
- (b) Promote, coordinate and harmonize regional cooperation in the NOWPAP region related to the monitoring of Atmospheric Deposition of contaminants into the coastal and marine environment.

Functions

The functions of the WG 1 are:

- Identify and carry out the cooperative actions in the NOWPAP region related to the monitoring of the Atmospheric Deposition.
- Promote information exchange and technical cooperation, including education, training and technology transfer in the fields related to monitoring of the Atmospheric Deposition.
- Review ongoing regional and national activities and advise POMRAC on necessary follow-up actions related to the monitoring of the Atmospheric Deposition.
- Advise POMRAC on necessary activities related to the goals and objectives of NOWPAP in the field of marine and coastal monitoring.

Participation

Each NOWPAP Member will nominate its representatives to WG 1. The Working Group will be composed of one or two experts from each NOWPAP Member.

Other relevant international or/and regional organizations dealing with Atmospheric Deposition in the NOWPAP region may be invited to participate in the work of WG 1 as observers or consultants.

Activities

To achieve the main task of the Working Group 1 (Atmospheric Deposition), the following activities will be carried out:

1. Review and assess existing national and regional programs and systems, which may be used for the evaluation of the atmospheric deposition of contaminants into the marine and coastal environment.
2. Review of the national monitoring data as well as scientific data and models for the evaluation of the atmospheric deposition of contaminants into the marine and coastal environment.
3. Discuss regional strategies and priorities for the monitoring and evaluation of atmospheric deposition of contaminants in the region.
4. Identify the monitoring parameters and data to be used in order to link the land-based data to atmospheric deposition into the marine and coastal environment.
5. Discuss the further development of a monitoring system for atmospheric deposition into marine and coastal environment, including marine-based measurements/observations.
6. Identify and cooperate with potential partners, organizations and/or programs, which may operate in the related fields.
7. Discuss the development of data and information sharing and exchange mechanisms within NOWPAP members and the related partners.
8. Discuss the development of the capacity building measures and public outreach products.
9. Assist in preparation of detailed national reports.
10. Prepare a regional overview based on the national reports.
11. Participate and contribute to a regional assessment of the state of marine and coastal environment in NOWPAP region.

Procedures

Meetings of the Working Group 1 will be held as requested by the POMRAC Focal Points Meeting. The POMRAC Focal Points Meeting will discuss the needs and timing of the meeting.

The Working Group 1 shall adopt, mutates mutandis, the rules of procedures of the UNEP Governing Council.

The Chairperson for each meeting will be elected by the WG 1 on a rotational basis. The Chairperson will continue to serve as the chairperson of WG 1 during the intersessional period, until a new chair is elected in the following meeting.

Working Group 1 will try to achieve decisions by consensus. Lack of consensus will be reported to the next POMRAC Focal Points Meeting.

The Working Group 1 will advise, when necessary, to the POMRAC Focal Points Meeting on amendments to the present Terms of Reference for WG 1.

The Working Group 1 will consider and adopt a report at each of their session. The reports will be circulated to all participants in the meeting. The director of POMRAC will present the reports to the POMRAC Focal Points Meeting.

POMRAC will act as the secretariat for Working Group 1.

Budget and Expenses

The WG 1 activities will be supported by the NOWPAP Trust Fund through POMRAC budget. Other external funds should also be sought in accordance with the development of POMRAC activities.

Language

The working language of the WG 1 will be English. The host country of each of the meeting sessions may interpret English into the language of the host country.

Annex 9

Terms of Reference for NOWPAP Working Group 2

**- River and Direct Inputs
of Contaminants into the Marine
and Coastal Environment in NOWPAP Region**

Annex 9

Terms of Reference for NOWPAP Working Group 2

- River and Direct Inputs of Contaminants

into the Marine and Coastal Environment in NOWPAP Region

Background

The 7th Intergovernmental Meeting of NOWPAP (Vladivostok, 20-22 March 2002), decided that POMRAC should be responsible for two working groups: WG 1 – Atmospheric Deposition of Contaminants into the Marine and Coastal Environment; and WG 2 – River and Direct Inputs of Contaminants into the Marine and Coastal Environment (document UNEP/NOWPAP IG.7/8).

The 1st Focal Points Meeting of POMRAC (Vladivostok, Russia, 9-11 April 2003) decided that the main task of WG 2 should be to establish a regional assessment program to evaluate the river and direct inputs of contaminants into the marine and coastal environment in the NOWPAP region.

The 2nd Focal Points Meeting of POMRAC (Vladivostok, Russia, 26-28 May 2004) adopted the Terms of Reference for Working Group 2 (WG 2) (UNEP/NOWPAP/POMRAC/FPM 2/7, Annex 6).

The 4th Focal Points Meeting of POMRAC (Qingdao, China, 25-26 April 2006) revised Terms of Reference for WG 2 and adopted them, as follows.

Definition: river and direct inputs refer to all inputs of contaminants from land based sources and activities including, inter alia:

- Rivers inputs
- Municipal wastewater
- Industrial wastewater
- Non points sources (such as agricultural runoff)
- Marine Dumping (from LBS and Dredging)

Objectives

The main objectives of WG 2 are:

- (a) Exchange information to ensure practical implementation of activities related to the monitoring of river and direct inputs in the NOWPAP region.
- (b) Promote, coordinate and harmonize regional cooperation in the NOWPAP region related to the monitoring of river and direct inputs into the coastal and marine environment.

Functions

The functions of WG 2 are:

- Identify and carry out the cooperative actions in the NOWPAP region related to the monitoring of the river and direct inputs.
- Promote information exchange and technical cooperation, including education, training and technology transfer in the fields related to monitoring of the river and direct inputs.

- Review ongoing regional and national activities and advise POMRAC on necessary follow-up actions related to the monitoring of the river and direct inputs.
- Advise POMRAC on necessary activities related to the goals and objectives of NOWPAP in the field of marine and coastal monitoring.

Participation

Each NOWPAP Member will nominate its representatives to WG 2. The Working Group will be composed of one or two experts from each NOWPAP Member.

Other relevant international and/or regional organizations dealing with river and direct inputs of contaminants into the marine and coastal environment in the NOWPAP region may be invited to participate in the work of WG 2 as observers or consultants.

Activities

To achieve the main task of WG 2, the following activities will be carried out:

- 1) Compilation and exchange of national reports based on a format agreed upon by POMRAC Focal Points Meeting
- 2) Review of the national reports
- 3) Preparation of the regional overview (consultancy)
- 4) Identification of gaps and needs.
- 5) Publication of national reports
- 6) Publication of regional overview
- 7) Identification and prioritization of required activities under this working group

Procedures

Meetings of the Working Group 2 will be held as requested by the POMRAC Focal Points Meeting. The POMRAC Focal Points Meeting will discuss the needs and timing of the meeting.

The Chairperson for each meeting will be elected by WG 2 on a rotational basis. The Chairperson will continue to serve as the chairperson of WG 2 during the intersessional period, until a new chair is elected in the following meeting.

Working Group 2 will try to make decisions by consensus. Lack of consensus will be reported to the next POMRAC Focal Points Meeting.

Working Group 2 will advise, when necessary, to the POMRAC Focal Points Meeting on amendments to the present Terms of Reference for WG 2.

Working Group 2 will consider and adopt a report at each of their sessions. The reports will be circulated to all participants in the meeting. The director of POMRAC will present the reports to the POMRAC Focal Points Meeting.

POMRAC will provide the secretariat to WG 2.

Budget and Expenses

The WG 2 activities will be supported by the NOWPAP Trust Fund through POMRAC budget. Other external funds will also be sought in accordance with the development of POMRAC

activities.

Language

The working language of WG 2 will be English. The host country of each of the meeting sessions may interpret English into the language of the host country.

Annex 10

Workplan and Budget for POMRAC in 2006/2007

Annex 10

WORKPLAN AND BUDGET FOR POMRAC IN 2006/2007

1. Introduction

1. The 1st POMRAC Focal Points Meeting recommended that the workplan for POMRAC in 2004/05 would be on the level of \$195,000 and such request was presented by the POMRAC Secretariat to the Eighth Intergovernmental Meeting (Sanya, China, 5-7 November 2003).

2. The Eighth Intergovernmental Meeting decided to allocate the sum of \$150,000 for each of the NOWPAP RACs for 2004/05 biennium, including for the POMRAC activities.

3. The joint meeting of POMRAC WG 1 and WG 2 (Vladivostok, 25-25 May 2004) agreed that the main activities for WG 1 (Atmospheric Deposition) would consist of the following elements:

- Review and assess existing national and regional programmes and systems, which may be used for the evaluation of the atmospheric deposition of contaminants into the marine and coastal environment.
- Review the national monitoring data as well as scientific data and models for the evaluation of the atmospheric deposition of contaminants into the marine and coastal environment.
- Discuss regional strategies and priorities for the monitoring and evaluation of atmospheric deposition of contaminants in the region
- Identify the monitoring parameters and data to be used in order to link land-based data to atmospheric deposition into the marine and coastal environment.
- Discuss the further development of a monitoring system for atmospheric deposition into marine and coastal environment, including marine-based measurements/observations.
- Identify and cooperate with potential partners, organizations and/or programs, which may operate in the related fields.
- Discuss the development of data and information sharing and exchange mechanisms within NOWPAP members and the related partners.
- Discuss the development of the capacity building measures and public outreach products.
- Assist in the preparation of detailed national reports.
- Prepare a regional overview based on the national reports.
- Participate and contribute to a regional assessment of the state of marine and coastal environment in the NOWPAP region.

The joint meeting also agreed that the main activities for WG 2 (River and Direct Inputs) would consist of the following elements:

- Compilation and exchange of national reports based on a format agreed upon by POMRAC Focal Points Meeting
- Review of the national reports
- Preparation of the regional overview (consultancy)
- Identification of gaps and needs.
- Publication of national reports
- Publication of regional overview
- Identification and prioritization of required activities under this working group

2. Main activities for 2006/2007 biennium

A. Preparation of the Regional Overviews for WG 1 and WG 2:

1. The 3rd POMRAC FPM (13-14 October, 2005, Vladivostok, Russia) has discussed and agreed the National Reports with comments made at the 2nd WG's Meetings (10-11 October, 2005, Vladivostok, Russia). The Memorandums of Understanding with National Experts of WG 1 and National Experts of WG 2 on harmonization and finalization of the National Reports have been signed in November of 2005. POMRAC Secretariat received the Final National Reports by December 12, 2005.

2. The 3rd FPM has agreed on the structure, content, scope and sources of information of the Regional Overviews for WG1 and WG2. Drafts of the contracts (Memorandums of Understanding) with International Experts (Consultants) on preparation of Regional Overviews have been prepared in December 05 – January 06. Signing of the contracts took place in February 2006.

3. According to the Memorandums of Understanding the International Experts (Consultants) should submit the Draft Regional Overviews to POMRAC Secretariat no later than April 10, 2006 by e-mail. The compilation of the Regional Overviews should follow the Terms of Reference for preparation of the Regional Overview and the Structures of the Regional Overview, which were adopted during the 3rd POMRAC FPM. Different sources, and first of all National Reports of NOWPAP Working Group 1 and 2, may be used for compilation of the Regional Overviews. The Regional Overviews should be not less than 70 pages and not more than 100 pages.

4. POMRAC Secretariat forwarded the Final National Reports to the International Experts (Consultants) by e-mail at the moment of signing the contracts.

5. International Experts submitted the Draft Regional Overviews to POMRAC Secretariat in due time. POMRAC Secretariat disseminated these papers among POMRAC Focal Points and Experts by e-mail

6. International Experts should make oral presentations of the Draft Regional Overviews during the Fourth NOWPAP POMRAC Focal Points Meeting. After receiving comments from Focal Points and Experts, the Final Regional Overview should be submitted to POMRAC Secretariat by the International Consultants in two weeks after the Meeting by e-mail (pomrac@tig.dvo.ru, svetlana@tig.dvo.ru).

7. When finalized, the Regional Overviews will be printed as the POMRAC technical reports.

Budget: US\$ 13,000 (US\$ 10,000 for international consultants and US\$ 3,000 for printing).

B. Preparation of the Review of State of Marine Environment of NOWPAP Region

In the middle of 2005 POMRAC has suggested to compile the Review of State of Marine Environment of NOWPAP Region on the bases on national reports and regional overviews on present status of the environment in NOWPAP Region, prepared by CEARAC, MERRAC and POMRAC. The National Reports of the NOWPAP member countries prepared in the 1990-2000 years, and also materials of other programmes will be used in this Review.

The draft of Content of the "State of Marine Environment Report in the NOWPAP Region" was adopted during the 3rd POMRAC FPM (13-14 October, 2005, Vladivostok, Russia). The 10th IGM (Toyama, 24-26 November, 2005) has approved the new directions for the NOWPAP RACs including new activities of POMRAC such as Report of the State of Marine Environment in the NOWPAP Region.

Preparation of the Review of State of Marine Environment of NOWPAP Region will be made in 2006 in close cooperation between POMRAC, CEARAC, MERRAC and DINRAC. Publication of the Review will be made in the first part of 2007 by POMRAC.

Budget: US\$ 11,000 (US\$ 8,000 for international consultants and US\$ 3,000 for printing).

C. Development of References Databases for WG1 and WG2.

The 3rd POMRAC FPM discussed and adopted the establishment of the Reference Databases for WG 1 and WG 2. The 10th IGM (Toyama, 24-26 November, 2005) has approved this activity. The References Databases for WG1 and WG2 will be prepared throughout 2006/7 in close cooperation between POMRAC and DINRAC (Table 2).

Budget: US\$ 4,000

D. Integrated Coastal and River Basin Management

In accordance with decisions of the 10th IGM, POMRAC should focus on activities related to Integrated Coastal and River Basin Management which includes land-based sources of pollution. All activities related to Integrated Coastal and River Basin Management will be implemented in close collaboration with all NOWPAP RACs.

POMRAC plans to implement several activities in 2006/7 namely:

- to create the ICRBM WG,
- to organize the 1st Meeting of ICRBM WG,
- to prepare the National Reports and Regional Overview (ICRBM WG).

Budget: US\$ 35,000 (US\$ 17,000 - the 1st Meeting of ICRBM WG, US\$ 18,000 - preparation and publication of the National Reports and Regional Overview)

E. Marine Litter Activity (cooperatively with other RACs) - might be linked with general waste management practices on land and with 3R (reduce, reuse, recycle) initiative

POMRAC is planning to implement several activities which were assigned to POMRAC in MALITA (Table 1) namely:

Table 1

5-1	Collection and review of existing information and data relevant to sea-based ML in each of the NOWPAP members	January 2006	MERRAC POMRAC DINRAC	In-kind
5-2	Collection and review of existing information and data relevant to land-based ML in each of the NOWPAP members	January 2006	CEARAC POMRAC DINRAC	In-kind
10	Organize that NOWPAP members join the International Coastal Cleanup 2006 and 2007 Campaign (if feasible)	August 2006	RCU CEARAC DINRAC MERRAC POMRAC	1,000 1,000
13	Formulation and implementation of awareness and education campaigns:	March 2007	RCU	---
13-2	- for shipping companies, ship officers and crews of recreational, commercial and fishing vessels	March 2007	MERRAC POMRAC	1,500 1,500
15-1	Preparation of brochures in the four NOWPAP languages for the purpose of promoting public awareness on the reduction of ML	August 2007	CEARAC DINRAC MERRAC POMRAC	1,000 1,000 1,000 1,000
16-1	Shipping, fisheries, boating, diving and cruise lines	September 2007	MERRAC POMRAC	3,000 2,000

Budget: US\$ 5,500

The proposed activities for POMRAC are summarized in the following table 3:

Table 3

Workplan and Budget for POMRAC in 2006/2007

Activity	Actions and planned date	Responsibility	Remarks	Budget US\$
4 th POMRAC FPM (2 days)	April 2006	POMRAC with assistance of NOWPAP RCU, UNEP	POMRAC, Qingdao, China	28,000
Preparation of the Regional Overview for WG 1	February 2006 – June 2006	POMRAC with assistance of UNEP and RCU	by regional consultant	5,000
Preparation of the Regional Overview for WG 2	February 2006 – June 2006	POMRAC with assistance of UNEP and RCU	by regional consultant	5,000
Preparation of the Review of State of Marine Environment of NOWPAP Region	Throughout 2006	POMRAC with assistance CEARAC, DINRAC, MERRAC by regional consultant(s) from NOWPAP Member States, RCU	by regional consultant(s)	8,000
Publication of the Regional Overviews (WG1, WG2)	July 2006	POMRAC		3,000
1 st Meeting of WG ICRBM (2 days)	September 2006	POMRAC with assistance of NOWPAP RCU, UNEP	POMRAC, Vladivostok, Russia or other city in one of the countries of NOWPAP region	17,000
'Back to Back' 3 rd Meeting of WG 1, WG 2 (2 days)	April 2007	POMRAC with assistance of NOWPAP RCU, UNEP	POMRAC, Vladivostok, Russia or other city in one of the countries of NOWPAP region	22,000
Preparation of the National Reports of WG ICRBM	November 2006 – March 2007	National Experts from each NOWPAP Member States	\$3,000 for each NOWPAP Country experts	12,000
Preparation of the Regional Overview (WG ICRBM)	June 2007 – September 2007	POMRAC with assistance of UNEP and RCU	by regional consultant	3,000
Publication of the National Reports and Regional Overview (WG ICRBM)	October~ November, 2007	POMRAC		3,000
5 th POMRAC FPM (2 days)	September 2007	POMRAC with assistance of NOWPAP RCU, UNEP	POMRAC, Vladivostok, Russia or other city in one of the countries of NOWPAP region	27,000
Publication of the Review of State of Marine Environment of NOWPAP Region	August-September 2007	POMRAC		3,000
Development of reference databases for WG1 and WG2	Throughout 2006/7	POMRAC and DINRAC by national consultants from NOWPAP Member States		4,000
Marine Litter Activity	Throughout 2006/2007	POMRAC, CEARAC, DINRAC, MERRAC with assistance of NOWPAP RCU, UNEP, IOC UNESCO		5,500
Website	Throughout 2006/7	POMRAC		2,000

Cooperation, coordination of the POMRAC activities and communication maintenance	Throughout 2006/7	POMRAC in cooperation with RCU, UNEP, RACs, UNESCO/IOC and relevant regional organizations		8,000
Total				155,500

Appendix I

Draft Regional Overview on Atmospheric Deposition of Contaminants into the Marine and Coastal Environment in NOWPAP Region

**Dr. Shuqin LIU
POMRAC Consultant**

Regional Overview

On Atmospheric Deposition of
Contaminants into the Marine
and Coastal Environment in
NOWPAP Region

Presented by Dr. Shuqin LIU
POMRAC Consultant

Objectives of this Overview

- To exchange information to ensure promoting, coordinating and harmonizing regional cooperation related to monitoring of atmospheric deposition of contaminants into marine and coastal environment in NOWPAP Region.

Goals of this Overview

- To provide NOWPAP countries with a synthesis report on atmospheric deposition in following fields:
- National monitoring programme
 - Methodologies and procedures
 - Research activities
 - Present situation
 - Recommendations on regional activities

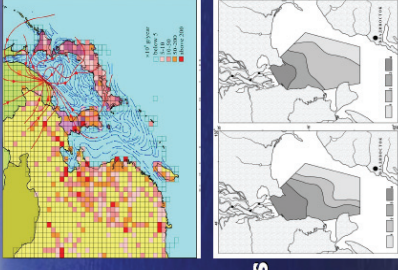
NOWPAP: short history

- NOWPAP was adopted in 1994 by four member states (China, Japan, Korea and Russia) and coordinated by UNEP HQ until 2005
- In 2005, the Regional Coordinating Unit was established (co-hosted by Japan and Korea)
- Four RACs were established during 2000-2002 (one RAC in each member country)
- Most NOWPAP activities are implemented by (or through) RACs

Projects implemented by POMRAC

WG 1 : monitoring of atmospheric deposition of contaminants: National Reports were prepared in 2005 and Regional Overview will be ready in 2006

WG 2 : monitoring of river and direct inputs of contaminants into the marine and coastal environment: National Reports in 2005 and Overview in 2006



Sources for Developing the Overview

- NOWPAP POMRAC Focal Points Meetings reports
- Working Group meeting reports
- National reports (heavily relied on)
- Websites

Contents:

1. Social and economic situation
2. Monitoring program
3. Methodologies and procedures
4. Research activities
5. Present situation of atmospheric deposition
6. Conclusions
7. Recommendations for further steps

1. Social and Economic Situation

Population

Target area in each Country	Population (million)	Population density (people/km ²)
Japan (16 Prefectures)	33.67	193
China (5 Provinces)	272.60	262
Korea Peninsula	48.40	491
Russia Far East	1.60	1.1
Total in NOWPAP Region	356.27	

Cont.

Industries

- Food processing
- Service
- Textile
- Shipbuilding
- Electronics
- Manufacturing

- Fishery
- Metallurgical ind.
- Oil & petrochemical ind.
- Forestry ind.
- Others

TRANSPORTATION

Cont.

Energy Mix (%)

Country	Oil/Oil Product	Coal	Natural Gas	Hydro	Nuclear	Others
Japan	48.9	19.3	14.0	3.3	11.9	2.6
China	23.4	66.1	2.7	7.8	n.a.	n.a.
Korea	49.0	24.0	11.0	2.0	14.0	n.a.
Russia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

2. Monitoring Program

- Regional program (EANET)
- National programs
 - Japan
 - China
 - Korea
 - The Russian Federation
- QA/QC activities for high quality of monitoring

Acid Deposition Monitoring Network in East Asia (EANET)

- To create common understanding of acid deposition problems;
- To provide inputs for decision-making aimed at reducing adverse impacts caused by acid deposition;
- To promote cooperation among the member countries on acid deposition related issues.

National Monitoring Program of Japan

- Air pollution monitoring system (587 stations in NOWPAP region, including ambient and roadside stations);
- Acid deposition monitoring (10 out of 31 in the region, 5 for EANET);
- Environmental investigation of chemical substances.

National Monitoring Program of China

- National environmental monitoring network (2,356 stations with 46,515 staff. 1,914 stations at city/county level.)
- Acid deposition monitoring
 - 1,207, acidity of precipitation, including 803 for chemical composition of precipitation
 - 9, acid rain under EANET

National Monitoring Program of Korea

- National monitoring program (10 networks with 309 stations)
- SO₂ and NO₂ monitoring
- Acid rain monitoring
- Yellow sand dust monitoring
- Heavy metal monitoring

Monitoring Program of the Russian Far East

- 40 monitoring stations
 - 5 for chemical composition of precipitation
 - 13 for air pollution
 - 20 for snow cover
 - 1 for acidity of precipitation
 - 1 for acid rain (EANET)

3. Methodologies and Procedures

- Air quality monitoring
- Acid deposition monitoring
 - Wet deposition
 - Dry deposition

Air Quality Monitoring

Parameters	Analytical Methods			
	Japan	China	Korea	Russian Federation
SO ₂	Conductometric; UV fluorescence	UV fluorescence	Pulse UV fluorescence	Spectrophotometry
NO _x	Absorptiometry; Chemiluminescence	Chemiluminescence		
O ₃	Absorptiometry; UV absorption			
SPM/PM ₁₀	Beta-ray absorption	Beta-ray or TEOM	Beta-ray absorption	
HC	Hydrogen flame ionization			

Acid Deposition Monitoring (wet deposition)

Parameters	Analytical Methods			
	Japan	China	Korea	Russian Federation
NH ₄ ⁺	Ion Chromatography; Spectrophotometry (indophenols blue)	Ion Chromatography	Ion Chromatography; Indophenols	Spectrophotometry
NO ₃ ⁻	Ion Chromatography	Ion Chromatography	Ion Chromatography	Spectrophotometry
Na	Ion Chromatography; Atomic absorption spectrometry	Ion Chromatography	Ion Chromatography; Atomic absorption spectrometry	Flame spectrophotometry
K, Ca, Mg	Ion Chromatography; Atomic absorption spectrometry	Ion Chromatography	Ion Chromatography; Atomic absorption spectrometry	Flame spectrophotometry

CO	Infrared absorption	Non-diffused infrared spectrometry	Non-diffused infrared spectrometry	Electrochemical
O ₃		UV photometric	UV photometric	
TSP		Gravimetric	Beta ray absorption	Gravimetric
NO		Chemiluminescence		Spectrophotometry
NO ₂		Chemiluminescence	Chemiluminescence	Spectrophotometry
NH ₃				Spectrophotometry
H ₂ S				Spectrophotometry
Formaldehyde				Spectrophotometry
SO ₄				Nephelometric

pH	Glass electrode	pH meter	Glass electrode	Potentiometric
Conductivity	Conductivity cell	Conductivity cell	Conductivity cell	Conductometry
SO₄	Ion Chromatography	Ion Chromatography	Ion Chromatography	Nephelometry
Cl	Ion Chromatography	Ion Chromatography	Ion Chromatography	Potentiometric
Zn				Atomic absorption spectrometry
HCO₃				Potentiometric

Acid Deposition Monitoring (dry)

Parameters	Analytical Methods			
	Japan	China	Korea	Russian Federation
SO ₂	Filter packs, UV fluorescence			
O ₃	UV photometric			
NH ₄ ⁺				Ion Chromatography
NH ₃	Filter packs (Manual)			
PM	Beta-ray or TEOM			
NO/NO ₂	Chemiluminescence			
NO ₃ ⁻				Ion Chromatography
SO ₄				Ion Chromatography

Cl			Ion Chromatography
K, Na, Ca, Mg			Ion Chromatography
Pb, Cd, Cr, Cu, Mn, Fe, Ni		Atomic absorption spectrometry, ICP-MS, High volume air sampler	
Concentration of Ions	Filter packs		

Summary on Methodologies and Procedures

- For air quality monitoring, only SO₂ and CO are the common parameters used among 4 countries but with different analytical methods;
- For acid deposition (wet), parameters of NH₄, NO₃, SO₄, pH, Na, Ca, Mg, K, Cl and conductivity are commonly used but with different analytical methods;
- For dry deposition, limited information.

4. Research Activities

- Long-term monitoring of Air pollution
- Acid rain
- Air pollutant sources and sinks
- Impacts of air pollution on human health
- Acid deposition monitoring of East Asian
- Impacts of yellow sand dust on marine ecosystem
- Atmospheric deposition of contaminants

5. Discussions on Present Situation

- Governments made efforts in improving air quality (all 4 countries)
- Air quality improved or kept same level as economy developed
- TSP or PM₁₀ was still a problem in some cities
- Automobile exhaust pollution

Cont.

- Trans-boundary movement of some pollutants was highlighted, including yellow sand dust and coal ash
- NO₂ and benzpyrene as main pollutants caused by power plants and heating system
- Atmospheric deposition

Contents of Some Pollutants in the Air of NOWPAP Target Areas of China (Average for 2002)

Cities	PM ₁₀ (mg/m ³)	SO ₂ (mg/m ³)	NO ₂ (mg/m ³)
Harbin	0.132	0.042	0.054
Changchun	0.099	0.009	0.022
Shenyang	0.173	0.064	0.045
Dalian	0.091	0.035	0.023
Yantai	0.077	0.039	0.025
Qingdao	0.097	0.054	0.026
Lianyungang	0.121	0.035	0.021
Shanghai	0.109	0.036	0.058

Chemical Composition of Precipitation of NOWPAP Target Areas of China
(annual average of 2002, mg/l)

Cities	pH	Na	K	Ca	Mg	SO ₄	NO ₃	Cl
Harbin	7.15	-	-	-	-	-	-	-
Changchun	6.81	1.394	0.904	5.972	0.804	5.951	3.506	1.943
Shenyang	6.58	1.22	1.30	7.88	2.02	16.66	3.30	3.82
Dalian	7.02	1.59	0.46	7.24	0.47	21.38	4.39	5.21
Yantai	6.53	3.52	3.41	7.65	0.86	18.5	3.95	6.87
Qingdao	5.1	1.527	0.5	2.919	0.527	8.61	2.979	2.714
Lianyungang	6.14	0.628	0.24	2.584	0.414	16.782	1.165	6.42
Shanghai	5.03	0.527	0.396	2.638	0.233	20.249	2.942	2.390

Annual Amount of Acid Deposition of Japan

(mmol m⁻² year⁻¹, 2002)

Site	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
Rishiri	26.1	14.9	12.9	207	19.2	188	4.86	9.73	5.66	21.4	14.4
Tappi	30.2	17.1	22.5	253	19.6	219	5.41	12.0	7.30	26.1	27.8
Sado	40.4	18.8	21.4	439	20.7	384	9.30	13.0	4.86	44.0	32.5
Oki	55.4	21.2	23.7	658	19.5	570	15.0	18.1	6.14	63.8	29.2
Banryu	24.8	18.6	25.0	116	23.4	104	3.76	6.99	4.76	12.1	26.5

nss: non-sea-salt

Monthly Deposition of Each Component in the NOWPAP Target Areas of Japan, 2002

Month	Wet Depositions, mmol m ⁻²										
	SO ₄ ²⁻	nss-SO ₄ ²⁻	NO ₃ ⁻	Cl ⁻	NH ₄ ⁺	Na ⁺	K ⁺	Ca ²⁺	nss-Ca ²⁺	Mg ²⁺	H ⁺
Jan.	1.15	0.57	0.39	10.8	0.46	9.62	0.25	0.33	0.12	1.12	0.53
Feb.	1.47	1.08	1.12	6.65	1.17	6.44	0.21	0.41	0.27	0.78	1.32
Mar.	0.86	0.70	1.01	3.04	0.90	2.69	0.14	0.74	0.68	0.37	0.02
Apr.	2.47	1.90	1.64	10.3	1.32	9.36	0.34	2.53	2.32	1.11	0.08
May	0.84	0.75	0.63	1.65	1.14	1.50	0.09	0.20	0.17	0.21	0.64
June	0.58	0.47	0.31	2.07	0.67	1.81	0.08	0.13	0.09	0.23	0.50
July	3.58	3.37	2.55	4.08	5.93	3.59	0.36	0.26	0.18	0.47	3.22
.....											
Annual	26.1	14.9	12.9	207	19.2	188	4.86	9.73	5.66	21.4	14.4
Annual	30.2	17.1	22.5	253	19.6	219	5.41	12.0	7.30	26.1	27.8
Annual	40.4	18.8	21.4	439	20.7	384	9.30	13.0	4.86	44.0	32.5
Annual	55.4	21.2	23.7	658	19.5	570	15.0	18.1	6.14	63.8	29.2
Annual	24.8	18.6	25.0	116	23.4	104	3.76	6.99	4.76	12.1	26.5

More in Japan:

Monthly Weighted Averages of Each Component in 2002

Precipitation (mm), pH, SO₄²⁻(mmol/L), nss-SO₄²⁻(mmol/L), NO₃⁻(mmol/L), Cl⁻(mmol/L), NH₄⁺(mmol/L), Na⁺(mmol/L), K⁺(mmol/L), Ca²⁺(mmol/L), nss-Ca²⁺(mmol/L), Mg²⁺(mmol/L), EC(mS/cm)

Monitoring Results of Dry Deposition in 2002

SO₂ (ppb), HNO₃ (ppb), HCl (ppb), NH₃ (ppb), NO (ppb), NO₂ (ppb), NO_x (ppb), O₃ (ppb), PM₁₀ (mg/m³), PM_{2.5} (mg/m³)

Particulate Matter Components in 2002

SO₄²⁻ (mg/m³), NO₃⁻ (mg/m³), Cl⁻ (mg/m³), NH₄⁺ (mg/m³), Na⁺ (mg/m³), K⁺ (mg/m³), Ca²⁺ (mg/m³), Mg²⁺ (mg/m³)

**Atmospheric Deposition (g/m²) of Chemical Substances
At Some Stations of Russian Far East in 2002**

Period	Cl ⁻	Na ⁺	K ⁺	Ca ²⁺	Mg ²⁺	SO ₄ ²⁻	NO ₃ ⁻	NH ₄ ⁺	Zn ²⁺	Sum of ions
Timiryazevsky										
May- October	0.520	0.173	0.116	0.173	0.000	1.330	0.231	0.462	0.058	3.295
November- April	0.189	0.090	0.050	0.229	0.030	0.847	0.090	0.150	0.010	1.883
Year	0.709	0.263	0.166	0.402	0.030	2.177	0.321	0.612	0.068	5.178
Partizansk										
May- October	0.532	0.228	0.228	0.228	0.000	1.065	0.532	0.304	0.076	3.917
November- April	0.392	0.170	0.065	0.183	0.026	0.562	0.209	0.065	0.039	1.747
Year	0.924	0.398	0.293	0.411	0.026	1.627	0.741	0.369	0.115	5.664

Period	Cl ⁻	Na ⁺	K ⁺	Ca ²⁺	Mg ²⁺	SO ₄ ²⁻	NO ₃ ⁻	NH ₄ ⁺	Zn ²⁺	Sum of ions
Sadgorod										
May- October	0.532	0.228	0.228	0.228	0.000	3.658	0.448	0.896	0.075	8.883
November- April	0.392	0.170	0.065	0.183	0.026	1.670	0.101	0.139	0.025	3.990
Year	0.924	0.398	0.293	0.411	0.026	5.328	0.549	1.035	0.100	12.873
Terney										
May- October	1.439	0.682	0.530	0.227	0.076	1.894	0.303	0.379	0.152	6.249
November- April	0.222	0.130	0.074	0.167	0.037	0.555	0.074	0.074	0.019	1.536
Year	1.661	0.812	0.604	0.394	0.113	2.449	0.377	0.453	0.171	7.785
Khalikidon										
May- October	1.641	0.591	0.197	1.575	0.459	4.593	0.459	0.394	0.066	12.783
November- April	0.390	0.182	0.104	0.572	0.065	1.600	0.065	0.104	0.026	3.319
Year	2.031	0.773	0.301	2.147	0.524	6.193	0.524	0.498	0.092	16.102

6. Conclusions

- Good monitoring systems existing in every NOWPAP country;
- Every country working hard in improving air quality and obtaining achievements;
- There are differences in methodologies and procedures in monitoring practice;
- Trans-boundary air pollutants movement was highlighted and became an issue in the region;
- Limited research has been done on atmospheric deposition of contaminants in the region.

7. Recommendations for Future Regional Activities

1. Establish unified monitoring parameters and analytical methods for atmospheric deposition in the region;
2. Initiate a regional research project on atmospheric deposition of contaminants;
3. Establish a regional integrated monitoring network;

Cont.

4. Establish a regional data base as the mechanisms for information sharing;
5. Set up regional strategies on trans-boundary movement of air pollutants;
6. Establish a long-term regional program to monitor acid deposition in the region, including acid rain;

Cont.

7. Further strengthen capacity building and institutional building;
8. Fully use the outcomes of EANET and work jointly with EANET on atmospheric deposition;
9. Promote the development of air pollution control technologies in way of regional cooperation.

Welcome your comments!
Thanks!

Shuqin LIU
April 25, 2006

Appendix II

**Draft
Regional Overview
on River and Direct Inputs
of Contaminants into the Marine and Coastal Environment
in NOWPAP Region**

**Dr. Vladimir SHULKIN
POMRAC Consultant**

UNEP/NOWPAP/POMRAC/WG2
REGIONAL OVERVIEW
ON RIVER AND DIRECT INPUTS OF
CONTAMINANTS
INTO THE MARINE AND COASTAL
ENVIRONMENT IN NOWPAP REGION

(First Draft.)

This Regional Overview has been prepared based on the decisions of the NOWPAP/POMRAC 3rd FPM (Vladivostok, Russia, October 13-14 2005).

This document summarizes the current status on the surface waters quality monitoring, and concentration of chemical substances in river water of China, Japan, Korea and Russia.

Moreover the some chemical substances runoff through the rivers and discharged directly are evaluated within main parts of the NOWPAP region. Information on river input and chemical substances concentration in river waters will be done for the observation points situated much close to the river mouths without special attention to the processes obtained in the estuaries and mixing zone.

National Reports prepared by the POMRAC experts were the main source of this Overview. Some other information sources like published scientific papers and open Reports of other UNEP programs were used also with proper citation.

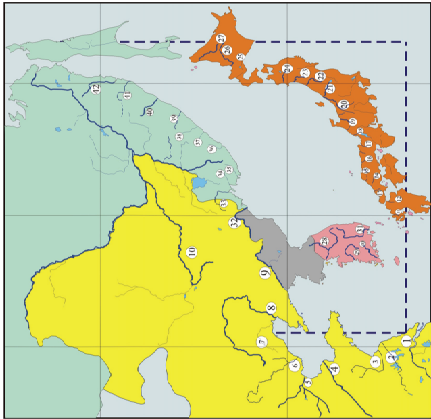
Goals and Objectives:

- **First goal** of this Regional Overview is to give a comparative description of national programs of China, Japan, Korea and Russia concerning evaluation of contaminants input to the marine environment through the rivers, or directly.
- This goal includes overview of legislative base, comparison of main environmental standards, major features of monitoring programs and methods used.
- The objective of this part of Overview is to elucidate the existing problems in the data compatibility, and to suggest for discussion some measures for the harmonization of pollution monitoring activities in NOWPAP region in the future.
- **Second goal** is to provide available information about concentration of some chemical substances in the river waters, and to assess run off of contaminants to the marine environment by rivers and direct inputs on the regional level.
- This part of regional overview could be useful for the integration with the overview on the atmospheric deposition for the comprehensive assessment of chemical substances input to the marine environment, and with Reports of other RACs for the holistic assessment of marine environment quality within NOWPAP region.

Contents (according to recommendations of 3 FPM):

- 1. Executive Summary
- 2. Introduction
 - 2.1 Goals and Objectives of the Overview
 - 2.2 General background information on NOWPAP
 - 2.3 General information on river and direct inputs of contaminants
 - 2.4 Geographical scope of NOWPAP area related to this Review
- 3. Social and economic situation
- 4. Monitoring and assessment activities in NOWPAP member countries
 - 4.1 Overview of national and international policies and laws
 - 4.2 National and international monitoring programs
 - 4.3 Methodologies and procedures
 - 4.3.1 Brief characteristic of national monitoring networks of surface water quality
 - 4.3.2 Methodological features of sample preservation and analysis
 - 4.3.3 QA/QC procedures
 - 4.4 Research Activities (national and international)
 - 4.5 Training Activities
- 5. Present situation
 - 5.1 Chemical composition of river run-off
 - 5.2 Temporal trend in river water quality assessment
 - 5.3 Pollution Loads through Rivers
 - 5.4 Direct input
- 6. Proposals for future regional activities and priorities in NOWPAP region
- 7. Conclusions
- 8. Data availability

Geographical Scope



- Main features of River Discharge:
 - China – S=1634* (4000) th.sq.km
L= 10054 km
Q= 193* (1144) cubic km
 - Japan – S=89.5 th.sq.km
L= 11610 km
Q= 125 cubic km
 - Korea – S=68 th.sq.km
L=6050 km
Q=46 cubic km
 - Russia – S=133 th.sq.km
L= 3095 km
Q= 43 cubic km
- * - without Yangtze(1) and Songhua (10) Rivers

Social and economic situation

- The population of the region studied is about 560 000 000 with very uneven distribution from 4 persons/km2 in Russia to 303 persons/km2 in Japan, 372 person/km2 in China, and to 475 persons/km2 in Korea.
- The level of economical development is very unequal also: the volume of industrial and agriculture production varies from 1118 USD per capita in Russia to 15340 USD per capita in Japan in fiscal year 2002. Though there are some differences within countries as well (from 6764 USD to 29578 USD for different prefectures in Japan, or from 526 to 2615 USD for different districts within Primorye in Russia)
- The main features of economical characteristics including brief description of main industry branches, and structure of employees are presented in the Overview

Monitoring and assessment activities in NOWPAP member countries

- Overview of national and international policies and laws**
 - The lists of main legislative acts are presented, and brief description of purposes and responsibility fields are done.
- National and international monitoring programs**
 - The monitoring of water quality of surface waters (rivers and lakes) as well as coastal sea waters is responsibility of each NOWPAP country itself. Therefore international cooperation on this issue is expressed in the information exchange, some joint research projects, training activities etc.
 - The real monitoring of water quality is carried out within national programs of each country according to the own rules.

China

- State Environmental Protection Administration (SEPA) is responsible for the surface waters, underground waters, and near shores seawaters monitoring, and the waste water discharge sources as well.
- There are two sets of monitoring stations on the rivers:
 - First one includes 479 stations on the 6 key drainage areas in NOWPAP regions, that is Haihe River, Huaihe River, Liaohe River, Yangtze River, Yellow River, Songhua River with monthly monitoring of water temperature, pH, electrical conductivity, dissolved oxygen, CODMn, BOD5, N-NH4, oil, volatile hydroxybenzene, Hg, Pb, water discharge.
 - Second one consists of 43 automatic stations within the drainage areas mentioned above. Automatic stations are under operation from 1999 and registered hourly and reported weekly water temperature (T), pH, dissolved oxygen (DO), electric conductivity (EC), turbidity (TB), chemical oxygen demand (CODMn), total organic carbon (TOC) and ammonium nitrogen (NH3-N).
- The surface water are divided into 5 Grades according to the nature and usage.
- The assessment of the surface water quality is based on the compliance of data observed with Environmental Quality Standard of surface water (GB3838-2002) (Table of Standards is presented in RO)

Japan

- Monitoring of public surface, ground and coastal water quality is a responsibility of prefectural governments and local offices of national administrative agencies.
- Control of industrial wastewaters is put on the enterprises who discharges effluents
- The water quality is assessed by the compliance with set of Environmental Quality Standards (EQS)
- The total number of the environmental standard points where the compliance with different EQS is checked and the supplementary points is 247 on the 35 first class rivers within NOWPAP region.
- The sets of EQS in Japan include:
 - EQS Protecting the Human Health
 - EQS for Conservation of Living Organisms
 - Uniform National Effluent Standards

Environmental quality standards (EQS) for conservation of the living organisms are established taking into account that all public water bodies in Japan are classified based on water usage for 6 grades with according EQS

Tables with EQS for the water of all Grades are presented in the RO

Korea

- Monitoring of freshwater qualities is under jurisdiction of the Ministry of Environment (MOE).
- Local Environmental Offices affiliated with MOE and other authorities are responsible for the management and operation of the monitoring system:
 - monitoring of rivers and lakes by local Environmental Offices, local governments, and KOWACO ;
 - monitoring of drinking water supply sources by local governments and KOWACO;
 - and monitoring of agricultural waters by KARICO.

National Institute of Environmental Research (NIER) of MOE provides necessary supports to all agencies involved in the monitoring

River water is monitored 12 times per year for 16 essential parameters, and 4 times per year for additional 11 parameters including trace metals, and POPs.

Russia

- The Federal Service on Hydrometeorology and Environmental Monitoring (ROSHYDROMET) is a state agency responsible for routine monitoring in Russia. In Primorsky Krai, monitoring of contamination of river and coastal waters is implemented by Primorsky Office on Hydrometeorology and Environmental Monitoring according to State Monitoring Programs.
- All wastewaters are controlled by the subdivisions of Federal Service for Environmental, Technological and Nuclear Supervision.
- The quality of underground water is a subject of responsibility of subdivisions of the Ministry of Natural Resources.
- The water quality assessment in Russia is based on the compliance of the characteristics observed with maximum permissible concentrations (MPC is an analogue of EQS).
- There are three sets of MPC in ambient water: (1) for the drinking water; (2) for the water of domestic, drinking and cultural uses – “public waters”; (3) for the water used for the fishery purposes.
- For the drinking water MPC is a hygienic norm obligatory without any exception. For some kind of “public” waters and waters used for fishery purpose MPC is an ecological norm.

Despite on the some difference, there is obvious similarity in a whole between water quality standards EQS , WQS, MPC in different countries

Characteristic	China	Japan	Korea	Russia	MDL, mg/L
DO ₂	7.5	7.5	7.5	5	0.2; 0.5
CODMn ₅	2	1(lakes)	1(for lakes)	5	0.5
CODCr ₅	15	-	-	15	1.5
BOD ₅	3	1 (rivers)	1	2	0.4; 2.0
NH ₄ -N	0.15	-	?	0.4	0.002; 0.05
NO ₃ -N	-	10	?	9.1	0.2; 0.01; 0.5
T.P.S	0.02	0.05	0.01(for lakes)	0.051	0.001; 0.01
T.N.S	0.2	0.1	0.2 (for lakes)	9.51	0.002; 0.05
Cu ₅	0.01	0.04	-	0.001	0.001; 0.005
Zn ₅	0.05	0.03	-	0.01	0.0005; 0.05
F ₅	1.0	0.8	?	0.75	0.05; 0.2
Se ₅	0.01	0.01	?	0.01	0.002
As ₅	0.05	0.01	0.05	0.005	0.0005; 0.005
Hg ₅	0.00005	0.0005	Notdetectable	0.0005	0.00005; 0.0005
Cd ₅	0.001	0.01	0.01	0.001	0.0005; 0.002
Pb ₅	0.01	0.01	0.1	0.006	0.005; 0.040
CN ₅	0.005	Notdetectable	Notdetectable	0.035	0.01; 0.1
N-phenols ₅	0.002	?	0.005	0.002	0.002; 0.005
oil ₅	0.05	?	?	0.05	0.01; 0.02
surfactants ₅	0.2	-	0.5	0.1	0.01; 0.05

Methodologies and procedures

- Brief characteristic of national monitoring networks of surface water quality
- China.** 479 monthly reported monitoring stations with t°C, pH, conductivity, DO, CODMn, BOD5, NH4-N, oil, volatile phenols, Hg, Pb as monitoring items, and 43 weekly reported automatic monitoring stations with t°C, pH, DO, CODMn, conductivity, turbidity, total organic carbon (TOC) and NH4-N as monitoring items.
- Japan.** 247 monthly reported standard points and the supplementary points on the first class rivers (35 rivers within NOWPAP area). Monitoring items include SS, DO, CODMn, BOD5, T-N, T-P, NO2, NO3, Pb, Cd, Cr 6+, As, Hg, Se, F, B plus 15 organic pollutants like benzene, thiuram, PCBs etc.
- Korea.** 559 monthly reported monitoring stations on the 4 rivers, including 21 major stations weekly reported. Monitoring items include pH, SS, Conductivity, DO, CODMn, BOD5, T-N, NO3-, NH4-N, T-P, phenols, Coli. Some additional parameters (PO4, Chi-a, CN, Cd, Pb, As, Cr 6+, Hg, detergents) are measured quarterly (4 times/yr) and others (PCBs, organic pollutants) are measured once a year on the same network.
- Russia.** 43 stations, including 20 monthly reported and 13 quarterly reported. Monitoring items on the monthly reported station include t°C, pH, conductivity, DO, SS, BOD5, CODCr, and 2-3 characteristic pollutants. On the quarterly operated stations the additional parameters are determined including macro-ions, N-NH4, NO3, NO2, PO4, Fe, Si, oil products (PHC), PAHs, trace metals, POPs.

Features of sample preservation and analysis

- The preservation methods are pretty similar in all NOWPAP countries.
- The main source of possible discrepancy of data on the nutrients and metals due to sample pretreatment is a use of filtered samples in Russia and unfiltered in other NOWPAP countries.
- Another issue is a COD using KMnO4 as an oxidant in China, Japan and Korea, and COD using more strong reagent K2Cr2O7 in Russia.
- And third issue is a broad use of total nitrogen (TN) and total phosphorus (TP) for the assessment of water quality in all NOWPAP countries except Russia.
- The methods used for the determination of many substances are similar in the NOWPAP countries.
- The detection limits as a rule are significantly less than WQS. The only exception is absorptometric determination of volatile phenols with detection limit 0.002-0.005 mg/l in China, Korea, and Russia that is practically equal to the WQS.

The main differences in water analysis methods used in NOWPAP countries

Parameter	China	Japan	Korea	Russia
NH4+	Colorimetric, 0.01-0.05 mgN/l	Absorptometric, 0.7 mgN/l	Absorptometric, 0.002 mgN/l	Colorimetric, 0.05 mgN/l
NO3	-*	Absorptometric, 0.2 mgN/l	IC, 0.01 mgN/l	Ion selective electrode, 0.5 mgN/l
F-	-	Absorptometric, 0.2 mg/l	-	Ion selective electrode, 0.01mg/l
Phenols	4-AAP spectrophotometric, 0.002 mg/l	-	Absorptometric, 0.005 mg/l	Absorptometric, 0.002 mg/l
oils	IR-spectrophotometry, 0.01 mg/l	-	-	IR-spectrophotometry, 0.02 mg/l

- The main features of QA/QC are described**
- The research activities in the NOWPAP countries in the field of surface water quality assessment and evaluation of river runoff are described briefly**
- The main features of training activities in the NOWPAP countries are listed also**

Temporal trend in river water quality assessment

- The trend in water quality from 1995 to 2002 in the rivers of **Japan** west coast is characterized by plateau or the decreasing tendency though there is a difference of the change pattern in each rivers.
- In **Korea** the only parameter has shown decreasing trend over the 1995-2003 was a BOD that is a sign of improving quality of water. COD measurements confirm this trend.
- In **Russia** the significant trend was observed for the Razdolnaya River where BOD values shown increase during 1995-2003 period, though ammonia concentration decreased at the same time, and dissolved oxygen was increased

Present situation

- A set of 6 Tables on the concentration of some chemical substances in the down reach of rivers of all NOWPAP countries are presented.
- Besides the routine parameters (SS, BOD, COD, nutrients) the Japanese experts kindly provided high quality data on the chlorine pesticides (DDT, HCH etc) and PCBs in the Ishikari River and the Russian experts provided modern data on dissolved metals in the some rivers of Primorye.
- The conclusions about river water quality according to the experts opinions are presented

For the comparison reason some normalization procedures could be recommended

- First one is a traditional watershed square normalization (specific discharge in l/s.km² or t/y.km²) characterizes mainly the intensity of processes taking place at the watershed.
- For the assessment of intensity of input from land to the sea another measure suggested recently: coastal specific discharge – determined as input of any substances divided on the length of coast line through this input has been carried out.
- Such kind of assessments could be usefull on the regional and subregional basis for the comparison issue.
- On the example of water run-off, is shown that traditional specific discharge is not suitable for the assessment of the river influence on the sea, because it is minimal for China, that is not a case from the point of view influence of river input on the sea.
- Therefore for the normalization of other fluxes coastal specific discharge (F/L, where F – input of any substances, t/year, L – length of coast line) is used

Pollution Loads via Rivers

- When we are talking about river water quality the concentration of chemical substances is an issue, but when we discuss river input to, and river influence on the sea area, the load (flux) of substances carried by rivers becomes more important.
- It is necessary to take in mind possible influence of tides and estuarine processes on the real fluxes, but the first proxy of estimation of river fluxes to the sea can be multiplying of water discharge by the chemical substance concentrations.
- Such estimations are presented in Overview in the set of Tables for all NOWPAP countries.
- The direct comparison of assessments presented in these Tables is complicated due to quite different scale of rivers considered, partial incoherence of parameters measured, and absence of data for some rivers or parameters.
- Moreover there is significant difference in the shape and length of coastal line.

Such assessment is the first and rough proxy, but there is reasonable difference between countries according their possible influence on the adjoining coastal waters due to river input.

More detailed insight could be done using this approach for the evaluation of river input influence from the different subregions of countries.

	S, 10 ⁶ km ²	L, km	Q, km ³	Q/S, l/s*km ²	Q/L, l/s*km	SS/L, t/y.k m	BOD/L, t/y.km	COD/ L, t/y.k m	NH ₄ / L, t/y.k m	NO ₃ / L, t/y.k m
China*	1634	10054	193	3,7	609	***	58	100,7	47,5	31,9
Japan	89,5	11610	124,7	44,2	341	147,9	11	31,4	0,4	6,2
Korea	68,1	6050	45,9	21,4	241	109,4	21	45,1	8,3	16,8
Russia*	133,4	3095	43,3	9,9	428	738,9	27	141,8	1,2	1,1

Notes to the assessment of metal input via rivers

- At the discussion of metal load with river input one should account that main part of metals are not dissolved but they are adsorbed on the surface of the suspended particles.
- This is why the particulate phase is normally by far the dominant transport form for heavy metals in rivers.
- On the one hand, monitoring programs in China, Japan and Korea only measure total metals without filtering the sample, and these data are strongly depend on suspended solids content with restricted utility of this information for the pollution monitoring.
- From other side, a spatial and temporal intercomparison of data requires a sampling strategy that is representative for the total suspended sediment transport. This is almost impossible with the sampling frequency normally applied by national monitoring agencies, because including one high-turbid sample or not in a data set may completely change the resulting average assessment.

Notes to the assessment of POPs input via rivers

- The recent reliable data on the persistent organic pollutants (POPs) in NOWPAP region rivers are very restricted even though POPs are very important from the point of view water quality.
- It is worthy to note that such kind of data scarcity takes place even for the rivers of regions with much more developed history of river water quality monitoring.
- Due to scarcity of data to estimate river input of POPs to the NOWPAP sea area at the regional or subregional levels seems unrealistic for the time being.
- To use data on POPs concentrations in bottom sediments and mollusks could be an alternative circumstantial approach for the assessment of the influence of land based sources on the coastal sea area, because contaminated coastal sediments arise from freshwater discharge mainly.

Direct input

- The data on direct input provided by the National Reports are presented
- The direct comparison between countries is complicated by the different format of data and different scheme of wastewater discharge evaluation.
- Nevertheless for China and Russia there is possibility to assess the significance of direct input of some chemical substances compare with input through the rivers

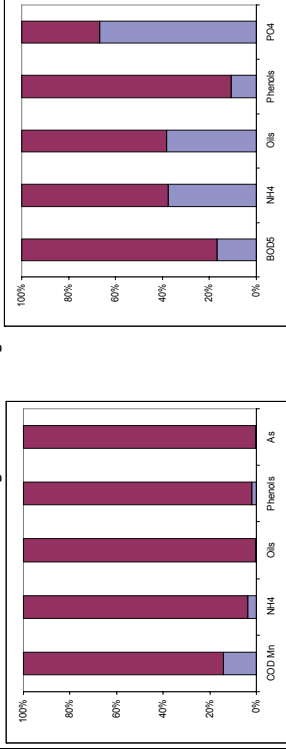
Proposals of countries for future regional activities and priorities in NOWPAP region

- **China:**
 - The strengthening of capacity building on oceanic monitoring: some buoyage automatic stations should be setup on the special sea areas.
 - The willingness to use uniform monitoring method and assessment standard, so the data from different country could be acceptable by all of the partners.
 - Some pilot project about the influence on seawater from the pollutants of the big river should be started.
- **Japan:**
 - WEPA and NARBO initiatives and proposals are in the implementation and it should be important to share the monitoring data through these activities in the future regional activities of POMRAC

Obviously, that in Russia mainland coast within NOWPAP region the wastewaters generated flux of BOD5 and phenols reaches up 20% of total input to the sea.

For ammonia and petroleum hydrocarbons the anthropogenic flux reaches up 40% and anthropogenic flux of phosphate reaches up 80% of total river plus direct input of phosphor to coastal water.

In China the main part of pollutants comes through the river input, but taking into account the rather elevated level of ammonia and petroleum hydrocarbons in some Chinese rivers, it just means that significant part of anthropogenic wastewaters in China comes to the sea through river discharge.



Identification of Gaps and Needs according to the goals of Regional Overview:

- There is some discrepancy in the list of parameters have to be monitored:
 - 1) In China nitrate content is not a parameter monitored in river water;
 - 2) Oil products (petroleum hydrocarbons extracted by hexan or CCl4) content in water is analysed by IR-spectrophotometry in China and Russia, but in Japan and Korea this parameter is not used in the routine monitoring of surface water quality;
 - 3) Phenols are subject for monitoring in surface waters in China, Korea and Russia, but not in Japan;
- Discussion is necessary to elaborate measures to overcome this situation.
- Different approach could be needed for different issue. If phenolic pollution is not a problem in Japan, and contamination of surface waters by oil products is negligible in Japan and Korea, to discuss the including of these parameters to the monitoring list in these countries could be unwise.
- But to obtain reliable relationships between TN and other dissolved species of N, or TP and phosphate not within state monitoring format, but through the research work inside each countries with following discussion could be useful for all NOWPAP countries.

▪ **Korea:**

- would like to strengthen cooperation in the near future within Tripartite Environment Ministers Meeting Among Korea, China, and Japan (TEMM)
- The East Asian Seas (EAS) Congress is a next pioneering region-wide platform for capacity-building, strategic action and cooperation for the sustainable management and development of the Seas of East Asia.

▪ **Russia:**

- The need to decide the issue of methods used and data obtained compatibility through the joint training courses and/or special Workshops
- The willingness of comparative assessment of the different parts within NOWPAP region from the point of view of nutrients and suspended solids input to the sea.
- For the effective monitoring of trans-boundary water bodies Russia suggest to establish monitoring stations at Tumen river (in cooperation with China and DPRK), and at Khanka Lake (with China).
- The necessity to define the list of persistent toxic substances (PTS) of serious concern carried with river and direct inputs to the coastal environment of the NOWPAP region (in cooperation with CEARAC).

Identification of Gaps and Needs (2)

- Another serious issue is an use of unfiltered samples at the surface waters monitoring in China, Japan and Korea. Some unpredictable overestimation can take place at the determination of COD, TP and TN (in China and Korea), especially at high suspended solid contents and/or acidic preservation. Significant overestimation will be observed for heavy metals tightly bound to the particulate matter in the surface waters at natural pH, but inevitably released to solution at the acidic preservation. The scale of this overrate would depend on suspended solid contents and nature.
- There is a group of problems connected with determination of micro pollutants within routine monitoring of water quality. The analysis of National Reports has shown that for the time being the reliable data on dissolved forms of trace metals and persistent organic pollutants (PCBs, PAHs, pesticides like DDTs and HCH) in the surface (river) waters of NOWPAP countries are scarce, and do not allow to carry out correct evaluation of input of these substances to the sea at the regional and subregional level. These problems are typical not for NOWPAP countries only. The rather similar situation is observed for much more developed programs like MAP or OSPAR.

Identification of Gaps and Needs (3)

- The existing data on micro pollutants level are far below EQS (WQS, MPC) in most cases, and from this point of view situation seems satisfactory.
- But reliable data on "background" concentration of these substances will allow to trace and to assess the anthropogenic influence on the surface waters at the initial stages of pollution.
- This will help to predict the environmental problems with water quality in future and to elaborate measures for diminishing of damage.
- The possible approach to decision of this problem is a cooperation and using of scientific research results within and abroad NOWPAP region.
- The discussion of these issues could be the topics of mutual interest for future activities of WG2.

Appendix III

Tenth Intergovernmental Meeting
of the Northwest Pacific Action Plan

Toyama, Japan, 24-26 November 2005

**Establishment of the Marine Litter Activity (MALITA)
in the NOWPAP Region**

United Nations Environment Programme

NOWPAP



**Northwest
Pacific
Action Plan**



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Tenth Intergovernmental Meeting of
the Northwest Pacific Action Plan
Toyama, Japan, 24-26 November 2005

**Establishment of the Marine Litter Activity (MALITA)
in the NOWPAP Region**

**Regional
Seas**

A. INTRODUCTION

The Problem

Marine litter is any persistent, manufactured or processed solid materials disposed of abandoned in the marine and coastal environment. According to studies from different parts of the world, it is found everywhere in the marine and coastal environment from the poles to the equator and from continental coastlines to small remote islands. It appears that marine litter problem is not restricted to the densely populated regions and can be found in remote places far away from any obvious source because of its transboundary movement through ocean currents and winds.

Most of marine litter consists of material that degrade slowly, if at all, so a continuous input of large quantities of these items results in a gradual build-up in the marine and coastal environment. This negative trend has been confirmed by a number of studies that approximately 6.4 million tonnes of marine litter are disposed of in the oceans and seas each year. Other studies and researches show that some 8 million items of marine litter are dumped in oceans and seas every day, about 5 millions of which are thrown overboard or lost from ships. Furthermore, it has been estimated that over 13,000 pieces of plastic litter are floating per every square kilometer of ocean today.

Despite efforts made internationally, regionally and nationally, the marine litter problem is continuously getting worse. As long as the input of non-degradable or slow degradable litter into the marine and coastal environment keeps increasing, its adverse effects on our seas and oceans will increase likewise. The major reasons why the marine litter problem keeps worsening worldwide are deficiencies in the implementation and enforcement of existing international, regional and national regulations and standards that could improve the situation, combined with a lack of awareness among main stakeholders and the general public.

Marine litter has multiple sources. It could be, for example, waste from landfills on land; domestic waste including waste from beach goers; medical waste and sewage-related waste from bathrooms; galley waste and cargo room waste from commercial shipping; nets and fish boxes from fishing vessels; and waste from industrial production or distribution. However, the main sources can be grouped as follows:

Main sea-based sources of marine litter	Main land-based sources of marine litter
<ul style="list-style-type: none"> . Merchant shipping, ferries and cruise liners; . Fishing vessels; . Military fleets and research vessels; . Pleasure craft; . Offshore oil and gas platforms; . Aquaculture installations; . Waterway recreational activities (diving and marinas) 	<ul style="list-style-type: none"> . Municipal landfills (waste dumps) located on the coast; . Riverine transport of waste from landfills or other sources along rivers and other inland waterways (canals); . Discharge of untreated municipal sewage and storm water (including occasional overflows); . Industrial facilities (solid waste from landfills and untreated water); and . Tourism (recreational visitors to the coast and beach goers)

Measures to reduce or prevent marine litter in the marine and coastal environment have to be taken in a large number of places, within a large number of activities in a wide range of societal sectors, and by many people in many situations. Good waste management must begin with preventing waste being generated – what is never produced does not have to be disposed of and cannot become marine litter. The second step is to collect waste that has anyway been

generated and make sure it is being taken care of properly, either for reuse and recycling of materials and products (to as large an extent as possible) or for disposal in a manner that is as safe as possible from an environmental and health point of view.

Today, there is generally a lack of appropriate management of waste from the place where the waste is produced to the final disposal or processing of the waste. However, marine litter is not only an environmental problem that can be solved solely by means of legislation, law enforcement and technical solutions. It is also a cultural problem and has to be addressed as such, namely by efforts to change attitudes, behaviours, management approaches, education and involvement of all sectors/interests, including the public at large. Education, information and training are vital components in all efforts towards more waste-wise thinking in society as a whole. Marine litter is also an issue that is connected to other environmental, economic, health and aesthetic problems. It causes damages and death to wildlife, threat to biodiversity in productive coastal areas, destruction of marine habitats, transfer of invasive species between seas, and possible distribution of toxic and hazardous substances. It also causes damage that entails great economic costs and losses to people, property and livelihood as well as poses risks to health, safety and even lives. And marine litter spoils, fouls and destroys the beauty of the seas and the coastal zone.

Marine Litter and the NOWPAP Region

The NOWPAP region is among the most highly populated regions of the world, and the pressures and demands that this large population brings to bear on the environment are considerable. In a region in which so many people are directly dependant on the marine and coastal environment for their livelihoods, there is an urgent need to protect the natural environment and moreover, manage it in a sustainable manner, so that the following generations will be able to enjoy it and benefit from it.

The countries of the region know that by joining forces it is possible to strike a wise balance between providing for human needs, the use of resources, and development on one hand, and protection and sustainable use of the environment on the other hand. Marine litter has become a major environmental concern of the NOWPAP member countries. Due to the transboundary character of marine litter, there is a clear need to develop regional and national programmes dealing with marine litter.

In acknowledging the need to act on the problem of marine litter, the countries of the NOWPAP region at their Ninth Intergovernmental Meeting on the Northwest Pacific Action Plan (Busan, Republic of Korea, 2-4 November 2004) in Resolution 1:

Recognized the importance and urgent need to establish and develop an activity on Marine Litter in NOWPAP region while avoiding duplications with existing global agreements and through consultations with other international agencies and organisations in the region,

Decided that the newly established RCU will take a lead on developing the Marine Litter activity and that the coordinator of NOWPAP will consult closely with the RACs on how to proceed with this activity,

Agreed that a programme of work and appropriate budget for this activity should be developed by the RCU for the next biennium, based on consultations between the NOWPAP Focal Points, the RACs and the planned 'Intersessional Workshop', and be presented by the RCU for consideration by Tenth Intergovernmental Meeting.

In addition to this, further agreement was made at the Intersessional Workshop (Seoul, Republic of Korea, 25-26 July 2005) in Recommendation 2:

Taking into account the proposal on the Sustainable Management of Marine Litter in the NOWPAP Region presented by the secretariat (UNEP/NOWPAP IS. 1/4) with appreciation,

Being aware of the urgent need to develop and initiate a new project on marine litter in the region,

Recommends that NOWPAP RCU will develop and implement the Marine Litter project in close cooperation with the four RACs and newly nominated marine litter national focal points of the Member States.

Requests the secretariat to present the current draft proposal for discussion at the Tenth Intergovernmental Meeting in Toyama, Japan on 24-25 November 2005 with more detailed description of the four RACs' responsibilities as well as a workplan to be implemented, taking into account the comments and concerns raised by NOWPAP Member States.

These Resolution and Recommendation provided the basis for the preparation of the proposal for the establishment of the Marine Litter Activity (MALITA) in the NOWPAP Region.

B. MARINE LITTER ACTIVITY (MALITA) IN THE NOWPAP REGION

On the basis of Resolution 1 of the *Ninth Intergovernmental Meeting and Recommendation 2 of the Intersessional Workshop on the Northwest Pacific Action Plan*, the Regional Coordinating Unit (RCU) of NOWPAP, in cooperation with UNEP's Regional Seas Programme and in consultation with the RAC directors and the National Marine Litter Focal Points (ML FPs) recently nominated by the NOWPAP Focal Points, prepared this proposal as a road map for the development and implementation of the Marine Litter Activity (MALITA) in the NOWPAP Region.

Objective

The objective of MALITA is to assist in the environmental protection and sustainable development of the NOWPAP region through the development of a NOWPAP Regional Action Plan on Marine Litter.

This amended proposal of MALITA, with the comments and concerns raised by the NOWPAP member states and RAC directors taken into account, is submitted to the Tenth NOWPAP Intergovernmental Meeting for consideration and adoption in response to the Resolution 1 of the Ninth Intergovernmental Meeting and Recommendation 2 of the Intersessional Workshop.

Organisational Arrangements

The RCU, in cooperation with UNEP, will be responsible for the overall management of the MALITA. The four RACs, together with the four ML FPs, will be responsible for various segments of MALITA with detailed responsibilities shown in the following Workplan.

Involvement of UN Agencies/Organisations

The MALITA will be developed in close cooperation with the UNEP Regional Seas Programme;

the Global Programme of Action (GPA) for the Protection of the Marine Environment from Land-based Activities; the International Maritime Organisation (IMO); Intergovernmental Oceanographic Commission (IOC) of UNESCO; the Secretariat of the Basel Convention and the Food and Agriculture Organisation (FAO). This close cooperation is required: a) to ensure that there is no duplication; and b) to use experience and approaches available in other countries, regions, programmes and projects/organisations, for MALITA implementation.

Funding

For the implementation of basic activities of MALITA funds will be provided through the NOWPAP Trust Fund. For high cost initiatives (port reception facilities, landfills, fisheries, etc.), the World Bank, Global Environment Facility (GEF) and other International Financing Institutions should be approached in order to obtain financial support for relevant regional and national efforts.

National activities on ML, including monitoring and cleanup activities, conducted within the framework of MALITA or in coordination with MALITA, should be funded by national resources.

UNEP already initiated the process for the preparation of a GEF MSP (Medium-Size Project) on the management of marine litter. Although the project will be of a global coverage, it will have several pilot regions, and one of those could be NOWPAP. The funds spent on MALITA from the NOWPAP Trust Fund and from UNEP, as well as national funds spent on the implementation of MALITA, will be considered as the counterpart contribution to the GEF MSP. This Project, if approved, will provide additional funds for the implementation of MALITA and additionally will provide a solid base for the development of the Regional Action Plan for Marine Litter Management in the NOWPAP Region.

Work Plan

Activity		Target Date	Participants	Budget, US\$
Initiation of Marine Litter Activity (MALITA) in the NOWPAP region				
1	Nomination of the National Focal Point for Marine Litter (ML) in each of the NOWPAP members	Done	NOWPAP Members	---
2	Preparation of the draft MALITA in cooperation with UNEP and in consultation with RACs and ML FPs	Done	RCU	---
3	Presentation of the draft MALITA at the Intersessional Workshop	Done	RCU	---
4	Presentation of the MALITA proposal at the Tenth Intergovernmental Meeting	November 2005	RCU	---
5	Collection and review of existing information and data relevant to marine litter in each of the NOWPAP members			
5-1	Collection and review of existing information and data relevant to sea-based ML in each of the NOWPAP members	January 2006	MERRAC POMRAC DINRAC	In-kind
5-2	Collection and review of existing information and data relevant to land-based ML in each of the NOWPAP members	January 2006	CEARAC POMRAC DINRAC	In-kind
5-3	Establishment of database on ML related information and data provided by NOWPAP members and data from GPA clearing house	March 2006	DINRAC	2,000

6	Collection of information on relevant legal instruments and programmes on marine litter in each of the NOWPAP countries in English	January 2006	ML FPs, RACs	In-kind
6-1	Review of national legal instruments and programmes provided by NOWPAP members in order to identify gaps and needs in the coverage of ML and make proposals for the revision, if appropriate	April 2006	RCU, Consultant, ML FPs	2,000 1,000 1,000 1,000 1,000
Implementation of MALITA				
7	Preparation and regular update of the overview document on marine litter in the NOWPAP region	May 2006 May 2007	RCU RACs	In-kind
8	Organizing NOWPAP regional meetings and workshops			
8-1	Preparatory NOWPAP regional meeting on ML	April 2006	RCU ML FPs RACs	10,000
8-2	NOWPAP Workshop on ML organized by MERRAC, in conjunction with preparatory NOWPAP regional meeting (above),	April 2006	RCU ML FPs RACs	In-kind
8-3	NOWPAP Workshop on ML organized by CEARAC	Nov.-Dec. 2006	RCU ML FPs RACs	In-kind
8-4	Further NOWPAP Workshops on ML, as necessary	2007	RCU ML FPs RACs	In-kind
8-5	Attend the ML-related meetings organized by the UNEP Regional Seas Programme and GPA	Ongoing	RCU	In-kind
9	Development of regional and national strategies on integrated management of marine litter	November 2006	RCU, Consultant, ML FPs, RACs	3,000
10	Organize that NOWPAP members join the International Coastal Cleanup 2006 and 2007 Campaign (if feasible)	August 2006	RCU CEARAC DINRAC MERRAC POMRAC	1,000 1,000
Building ownerships and partnerships / Information and outreach / Sectoral activities				
11	Approach to the civil society (private sector actors, environmental NGOs and the scientific community) to develop partnerships, and if appropriate develop Voluntary Agreements with partners from civil society	June 2006	RCU	---
11-1	Shipping industry, ship operators, fisheries sector, waterway recreational activity (diving and marinas)	June 2006	MERRAC POMRAC	In-kind
11-2	Tourism industry, manufactures of plastics	June 2006	CEARAC	In-kind
11-3	Waste managers/services, recycling companies	June 2006	MERRAC CEARAC	1,000 1,000
11-4	NGOs and general public	June 2006	All RACs	In-kind

12	Development and implementation of long-term regional and national monitoring programmes in order to detect and determine amounts, distribution patterns, effects and trends of ML and identify ML hot spots in the NOWPAP region (based on existing monitoring programmes, if feasible)	August 2006	RCU Consultant	3,000
12-1	Development and implementation of long-term regional and national monitoring programmes on land-based ML, including formats for data gathering and storage	August 2006	CEARAC DINRAC POMRAC	3,000
12-2	Development and implementation of long-term regional and national monitoring programmes on sea-based ML, including formats for data gathering and storage	August 2006	MERRAC DINRAC POMRAC	2,000
13	Formulation and implementation of awareness and education campaigns:	March 2007	RCU	---
13-1	- for general public, various groups within the tourism sector, industry, municipal authorities, local communities	March 2007	CEARAC DINRAC	1,500 1,500
13-2	- for shipping companies, ship officers and crews of recreational, commercial and fishing vessels	March 2007	MERRAC POMRAC	1,500 1,500
13-3	- for media	March 2007	RCU Consultant	1,000
14	Establishment of regional campaigns as a part of public awareness and/or permanent services for cleaning and collecting of solid waste that pollute coastal and marine areas	April 2007	RCU ML FPs, RACs	In-kind, private sector
15	Preparation of brochures in English for the purpose of promoting public awareness on the reduction of ML	May 2007	RCU CEARAC MERRAC	1,500 1,500
15-1	Preparation of brochures in the four NOWPAP languages for the purpose of promoting public awareness on the reduction of ML	August 2007	CEARAC DINRAC MERRAC POMRAC	1,000 1,000 1,000 1,000
16	Development of sectoral guidelines for management of marine litter	September 2007	RCU	
16-1	Shipping, fisheries, boating, diving and cruise lines	September 2007	MERRAC POMRAC	3,000 2,000
16-2	Tourism, costal construction, recycling	September 2007	CEARAC DINRAC	5,000
17	Development of a programme for the improvement of port reception facilities and services for garbage collection from the shipping and the fishing industries	September 2007	MERRAC	5,000 plus private sector
18	Development and improvement of waste management policies and systems	September 2007	RCU Consultant RACs	3,000
19	Development of 'responsible citizenship' guidelines for different target audiences	September 2007	RCU	
19-1	Children and youth	September 2007	CEARAC MERRAC	1,000
19-2	Practical demonstration through awareness-raising campaigns in selected destinations and with selected tourism companies	September 2007	CEARAC MERRAC	1,000

Fundraising				
20	Identification and approach to potential funding sources for various components and activities of the RAP on ML	May 2006	RCU RACs ML FPs	---
21	For high cost initiatives (port reception facilities, landfills, fisheries, etc.), approach the World Bank, Regional Investment Bank, Global Environment Facilities and other International Financing Institutions in order to obtain financial support of relevant regional and national efforts	September 2006	RCU RACs ML FPs	---
Regional Action Plan for the ML management (RAP MALI) in the NOWPAP region				
22	Preparation of the draft RAP MALI	June 2007	RCU, Consultant, ML FPs	3,000
23	Presentation of the RAP MALI at the Twelfth IGM	November 2007	RCU	---
Total				70,000

Proposed Elements of the Regional Action Plan for the Marine Litter Management in the NOWPAP region

The Regional Action Plan on Marine Litter in the NOWPAP Region should include, among others, and when feasible, the following elements:

- (a) Programme of enhancement of regional and national legal instruments, programmes and institutional arrangements relevant to marine litter;
- (b) Programme of implementation of regional and national monitoring programmes;
- (c) Development of regional and national strategies on integrated management of marine litter (including regional guidelines for the wise management of marine and coastal litter);
- (d) Approach to the civil society (private sector actors, environmental NGOs and the scientific community) to develop partnerships, and if appropriate develop voluntary agreements with partners from the civil society. This activity should involve all major stakeholders (e.g., shipping industry, ship operators; tourism industry, manufacturers of plastics; waste managers/services; local authorities and municipalities; NGOs and general public);
- (e) Establishment of campaigns and/or permanent services for the cleaning and collecting of solid wastes that pollute coastal and marine areas;
- (f) Participation in annual International Coastal Cleanup Campaigns;
- (g) Development of 'responsible citizenship' guidelines for different target audiences, in particular children and tourists. Practical demonstration through awareness-raising campaigns in selected destinations and with selected tourism companies;
- (h) Formulation and implementation of awareness and education campaigns for the general public, industry, municipal authorities, local communities, shipping companies, ship officers and crews of recreational, commercial and fishing vessels, various groups within the tourism sector, and media;

- (i) Preparation of brochures in various languages for the purpose of promoting public awareness on the reduction of marine litter;
- (j) Development of sectoral guidelines for the management of marine litter (e.g., tourism, boating, diving, cruise lines, coastal construction, fisheries);
- (k) Improvement of port reception facilities and services for garbage collection from the shipping and fishing industries;
- (l) Development and improvement of waste management policies and systems; and
- (m) Identification of and approach to potential funding sources (including Governments) for various components and activities of the Regional Action Plan on Marine Litter.

Several of above proposed activities will be developed during the MALITA phase of the management of marine litter in the NOWPAP region.

Appendix IV

Tenth Intergovernmental Meeting
of the Northwest Pacific Action Plan

Toyama, Japan, 24-26 November 2005

**NOWPAP EVOLUTION:
New Directions for the NOWPAP RACs and RCU**

United Nations Environment Programme

NOWPAP



**Northwest
Pacific
Action Plan**



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Tenth Intergovernmental Meeting of
the Northwest Pacific Action Plan
Toyama, Japan,
24-26 November 2005

NOWPAP EVOLUTION: New Directions for the NOWPAP RACs and RCU

**Regional
Seas**

I. Introduction - the Northwest Pacific Action Plan (NOWPAP)

The Northwest Pacific Action Plan (NOWPAP) was established in 1994, as a part of the UNEP Regional Seas Programme. Following the decisions of the 3rd, 4th and 5th Intergovernmental Meetings (IGM) of NOWPAP (1997-1999), UNEP facilitated, during the years 1998-2001, the establishment of a network of the four Regional Activity Centers (RACs) for NOWPAP. The 3rd IGM (April 1998, Vladivostok) also decided about the demarcation of the activities of the RACs.

UNEP, acting as the Interim Secretariat for NOWPAP since its inception, and following the requests of the NOWPAP IGMs, has also facilitated the process of the establishment of a co-hosted Regional Coordinating Unit (RCU) in Toyama, Japan and Busan, the Republic of Korea. The inauguration ceremonies of both RCU offices took place in November 2004, and they became fully operational in April 2005.

After ten years of NOWPAP evolution and establishment of the RCU, it is clear that some changes in the functions of the RACs are necessary. Based on the discussions at the NOWPAP Intersessional Workshop in Seoul, the Republic of Korea, on 25-26 July 2005, it is recommended that the RCU and the RACs would be given the following responsibilities as listed below.

1. The Regional Coordinating Unit (RCU)

The RCU should be the nerve center directing and promoting the Action Plan's activities. The RCU has overall responsibility for the implementation of the Member States decisions regarding the operation of the Action Plan. The RCU should assist, and provide the regional platform of the Action Plan, as much as possible, for the implementation of Global Environmental Conventions. It should be responsible for the follow-up and implementation of legal documents, the Programme of Work and of general strategies and policies adopted by the Member States. The RCU should perform the diplomatic, political and public relations functions of the Action Plan.

The RCU should cooperate with governments, with other UN and non-UN agencies, with international organizations and with NGOs and facilitate the capacity building of the Regional Activity Centers (RACs) and of the Member States.

The RCU should perform all secretariat functions such as the organization of major institutional meetings and oversee the programme implementation. The RCU should also be responsible for the smooth and efficient operation of the RACs and for general management of the Action Plan. The main responsibilities of the NOWPAP RCU offices regarding administrative and substantive issues, as of September 2005, are shown in the table below. These responsibilities are in line with the Terms of Reference for the NOWPAP RCU adopted by the 5th IGM.

Toyama – Coordinator's responsibility	Busan – Deputy Coordinator's responsibility
Administrative issues	
<ul style="list-style-type: none"> • Overall responsibility over NOWPAP activities • General administration (manpower, offices, travel, etc.) • General responsibility for implementation of workplan and budget 	<ul style="list-style-type: none"> • Deputy's secondary overall responsibility (OIC when coordinator on leave or mission) • Administration of Busan office (office, finances, travel, etc.) • Technical and scientific projects
Substantive and cross-cutting issues (covered by BOTH offices under coordinator's overall responsibility)	
<ul style="list-style-type: none"> • Coordination and support to the RACs • Preparation of meetings and reports • Liaison with UNEP and Governments • Development of partnerships, contacts with MEAs, IGOs, NGOs, regional and global projects • Finance and resource mobilization (including GEF) • Public relations, public awareness, publications • Specific programme/project management tasks • Legal aspects, environmental legislation • Capacity building • Other activities not taken by RACs 	

2. The Regional Activity Centers (RACs)

The RACs were established in the different host countries (which also support them financially and logistically) and are aimed to serve all member states, by carrying out activities related to the Action Plan at a regional level ('regional' means the level of the Action Plan's geographic coverage) as agreed and guided by the IGM decisions. The RACs play key roles in the implementation of various components of the NOWPAP. They are financially supported by the NOWPAP Trust Fund and by the host country. The RACs are an integral part of the Action Plan and should report directly to the RCU.

The RACs should promote, develop and carry out capacity building in various environmental fields in the region and strengthen the member states which are more in need.

The present activities of NOWPAP RACs, as decided by the 3rd and 4th NOWPAP IGMs, are as follows:

RAC	Present Activities
CEARAC , Toyama	Special Monitoring and Coastal Environmental Assessment: <ul style="list-style-type: none"> • Harmful Algal Blooms (HAB) • Remote Sensing (RS) applications
DINRAC , Beijing	Data and Information Network <ul style="list-style-type: none"> • Data and Information Management
MERRAC , Daejeon	Marine Environmental Emergency Preparedness and Response <ul style="list-style-type: none"> • Oil Spill Preparedness and Response
POMRAC , Vladivostok	Pollution Monitoring: <ul style="list-style-type: none"> • Atmospheric input of contaminants to the marine and coastal environment • River and direct inputs of contaminants to the marine and coastal environment

II. Recommendation

The suggestions regarding future directions of work of NOWPAP RACs are shown in the table below. These suggestions were discussed at the NOWPAP Intersessional Workshop in Seoul, Republic of Korea, on 25-26 July 2005 and are based on the capabilities of respective national host institutions which are currently hosting the NOWPAP RACs. The transition should be implemented gradually, within several years (please see the table and text on the following pages). Detailed responsibilities of each RAC, their work plans and budgets for 2006-2007 were discussed at their respective Focal Points Meetings in 2005. The work plans and budgets of NOWPAP RACs for 2006-2007 will be discussed under agenda item 10 (document UNEP/NOWPAP IG. 10/8).

Suggested Responsibilities and Activities of the NOWPAP RACs

RAC	RESPONSIBILITIES and ACTIVITIES
CEARAC	<p>2004-2005:</p> <ul style="list-style-type: none"> • WG3 on Harmful Algal Blooms (HAB) • WG4 on Remote Sensing (RS) of the Marine Environment • National Reports on HAB and RS • Integrated Reports on HAB and RS <p>2006-2007:</p> <ul style="list-style-type: none"> • Working Groups on HAB and RS (continued) • Land Based Sources of Pollution (with other RACs) • Marine Litter (with other RACs) - might be linked with general waste management practices on land and with 3R (reduce, reuse, recycle) initiative
POMRAC	<p>2004-2005:</p> <ul style="list-style-type: none"> • WG1 on Atmospheric Deposition (AD) of Contaminants • WG2 on River and Direct Inputs (RDI) of Contaminants • National Reports on AD and RDI <p>2006-2007:</p> <ul style="list-style-type: none"> • Regional Overviews on AD and RDI • State of Marine Environment Report (with other RACs) • Integrated Coastal and River Basin Management • Land Based Sources of Pollution (with other RACs)
DINRAC	<p>2004-2005:</p> <ul style="list-style-type: none"> • DINRAC website and databases of experts and institutions • NOWPAP policy on data and information sharing • National reports on data and information management • Guidelines for NOWPAP meta-database establishment • Study on GIS-type products and applications in NOWPAP region <p>2006-2007:</p> <ul style="list-style-type: none"> • NOWPAP Clearing-House - storage and easy retrieval of data resulting from all NOWPAP activities (oil spills, HAB, atmospheric and river inputs of contaminants, biodiversity data, legal issues, etc.) • A “switchboard” to provide links to resources available in NOWPAP member countries
MERRAC	<p>2004-2005:</p> <ul style="list-style-type: none"> • Oil Spill Preparedness and Response • NOWPAP Regional Oil Spill Contingency Plan (RCP) and MOU • Specific projects on oil spill modeling; sensitivity mapping; dispersant application; shore clean-up

	<ul style="list-style-type: none"> • Training exercises <p>2006-2007:</p> <ul style="list-style-type: none"> • Oil and Chemical Emergency Preparedness and Response (within a framework of NOWPAP RCP, including specific projects and training exercises) • Marine-Based Pollution (MARPOL and OPRC, with IMO) • Marine Litter (with other RACs) <p>At a later stage:</p> <ul style="list-style-type: none"> • Ballast Waters and Alien Invasive Species (with GloBallast II) • IMO conventions • Liability and Compensation
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1. CEARAC

The Special Monitoring and Coastal Environmental Assessment Regional Activity Center (CEARAC) in Toyama, Japan, currently has two Working Groups (WG3 on Harmful Algal Blooms and WG4 on Remote Sensing of the Marine Environment). In 2005-2006, the experts of these working groups will prepare National Reports and then the Integrated Reports on these two issues for the NOWPAP region. These documents might contribute to the State of Marine Environment Report in the NOWPAP Region which would be prepared in 2006-2007. Then, CEARAC might consider focusing on activities related to land based sources of pollution and marine litter.

2. DINRAC

The Data and Information Network Regional Activity Center (DINRAC) in Beijing, China, is responsible for providing data storage and retrieval as well as information network for all NOWPAP activities. The DINRAC website was envisioned as a primary source of environmental data and information for the NOWPAP region and also as a “switchboard” to provide links to resources available in NOWPAP member countries. It is suggested that in addition to data resulting from other NOWPAP RACs activities (oil spills, HABS, atmospheric and river inputs of contaminants, etc.), biodiversity data could be also included into DINRAC database. DINRAC should serve as a NOWPAP Clearing-House, providing information about all NOWPAP-related activities and eventually also information about the state of marine environment in the NOWPAP region.

3. MERRAC

The Marine Environmental Emergency Preparedness and Response Regional Activity Center (MERRAC) in Daejeon, the Republic of Korea, has accumulated substantial expertise during the last several years. The MOU on the NOWPAP Oil Spill Regional Contingency Plan has been recently signed by NOWPAP Members. According to MERRAC vision for the future, chemicals spills and marine litter will be included in its scope of activities. MERRAC will work in close cooperation with the IMO on marine-based pollution issues (e.g., MARPOL and OPRC). The work on tanker ballast waters (including alien invasive species) as well as on liability and compensation issues is also envisioned for the future.

4. POMRAC

The Pollution Monitoring Regional Activity Center (POMRAC) in Vladivostok, Russia, currently has two Working Groups (WG1 on Atmospheric Input of Contaminants and WG2 on River and Direct Inputs of Contaminants). In 2005-2006, the experts of these working groups will prepare

National Reports and then the Regional Overviews on these two issues. These documents might contribute to the State of Marine Environment Report in the NOWPAP Region which would be prepared in 2006-2007. Then, POMRAC might consider focusing on activities related to Integrated Coastal and River Basin Management which includes land-based sources of pollution. All activities related to land-based sources of pollution will be implemented in close collaboration with all NOWPAP RACs and with the UNEP/GPA.

5. Joint activities implemented by RACs

During the NOWPAP Intersessional Workshop, member states requested the RCU to ensure synergy among RAC activities. According to RCU suggestion (prepared in close consultation with RAC directors), the following activities will be implemented jointly by NOWPAP RACs (not in the order of priority).

- **MALITA:** detailed responsibilities of each RAC and RCU in implementation of the MALITA work plan are presented in the document UNEP/NOWPAP IG. 10/6.
- **Report of the State of Marine Environment in the NOWPAP region:** to be prepared jointly by CEARAC and POMRAC, with specific chapters submitted by DINRAC and MERRAC.
- **Land-based Activities (LBA) including the GEF PDF-B project focusing on persistent toxic substances (PTS).** Regarding the PDF-B phase of the GEF project, NOWPAP RACs, NOWPAP RCU, national experts and organizations will be involved in its implementation. The detailed responsibilities will be defined during the first meeting of the Project Steering Committee.
- **Integrated Coastal and River Basin Management:** to be lead by POMRAC, but with active participation of CEARAC and other RACs.
- **Data and Information Management:** though this activity is definitely under DINRAC portfolio, without data and information supply from other NOWPAP RACs, DINRAC can not implement it efficiently.

The overall goal of NOWPAP is a sustainable development of the region. Therefore, in the long-term, new NOWPAP projects related to the sustainable development could be considered. Currently, the outcomes of the most of NOWPAP activities can be considered as contributions to the sustainable development.

Finally, it should be kept in mind that all RACs, according to their Terms of Reference, are working for the NOWPAP as a whole, not for the host country. Therefore it's not exactly critical which RAC is leading specific activity. The NOWPAP RCU will ensure that all RACs are involved in implementation of these activities.

**Pollution Monitoring Regional Activity Center of UNEP Action Plan for the Protection,
Management and Development of the Marine and Coastal Environment of the Northwest
Pacific Region (POMRAC NOWPAP)**

**Региональный Центр по мониторингу загрязнения окружающей среды Плана
действия ЮНЕП по охране, управлению и развитию морской и прибрежной среды
в Регионе северо-западной Пацифики**

Report of the the 4th NOWPAP POMRAC Focal Points Meeting

Qingdao, China

25-26 April, 2006

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