



**Northwest  
Pacific  
Action Plan**

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Northwest Pacific Action Plan  
Pollution Monitoring Regional Activity Center

The Fifteenth NOWPAP POMRAC Focal Points Meeting  
Vladivostok, Russian Federation, 4-5 July, 2018

**Report on the implementation and expenditure of NOWPAP Pollution  
Monitoring Regional Activity Center (POMRAC) activities in 2016-2017**

## 1. Introduction

1. Pollution Monitoring Regional Activity Center (POMRAC) of UNEP Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region (NOWPAP) was established according to the decision of the 4<sup>th</sup> NOWPAP Intergovernmental Meeting (Beijing, China, 6-7 April 1999) on the basis of the Pacific Geographical Institute of the Far Eastern Branch of the Russian Academy of Sciences (Vladivostok, Russia).

2. The overall goal of POMRAC is the coordination of activities and establishment of regional cooperation in monitoring of marine and coastal environment of the Northwest Pacific region within the UNEP NOWPAP framework. Following the results of discussions at the First NOWPAP/3 Coordinating Committee Meeting (Beijing, 21-22 May 2001), the 7<sup>th</sup> NOWPAP Intergovernmental Meeting (Vladivostok, 20-22 March 2002) made a decision on sharing 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 to the marine and coastal environment” and WG 2 “River and Direct Inputs of contaminants to the marine and coastal environment”.

3. It was decided also that POMRAC might later 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 were expected to be implemented in close collaboration with all NOWPAP RACs and with the UNEP/GPA.

4. In 2015, most of POMRAC activities were “frozen” due to problems with processing payments to foreign experts from Russia. 20<sup>th</sup> IGM (Beijing, People’s Republic of China 28-30 October 2015) were decided in order to simplify the administrative process of recruitment of and payment to foreign experts (consultants), to assign the responsibility of implementation of two activities on the development of Ecological Quality Objectives and on the training course on ICARM with a total 2016-2017 biennium budget of US\$ 60,000 to DINRAC, while these two activities will be overseen by POMRAC.

5. The 20<sup>th</sup> Intergovernmental Meeting approved the budget of US\$ 86,000 for 2016-2017 biennium for POMRAC activities (including US\$ 6,000 for RAP MALI implementation).

## 2. Organization and staff

6. The POMRAC Secretariat is hosted by Pacific Geographical Institute of the Far Eastern Branch of the Russian Academy of Sciences (PGI FEB RAS). Day-to-day work is being done by 3 assigned researchers and technicians from the Pacific Geographical Institute working as volunteers:

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### 3. Main activities in 2016-2017

7. POMRAC activities were agreed at the 20<sup>th</sup> NOWPAP Intergovernmental Meeting IGM (Beijing, People's Republic of China 28-30 October 2015). The 20<sup>th</sup> IGM approved POMRAC activities and USD 86,000 were allocated to POMRAC including USD 6,000 for NOWPAP RAP MALI for the 2016-2017 budget, same as the budget of other RACs.

8. In accordance with the decisions of the 20<sup>th</sup> NOWPAP IGM, with the budget approved at this meeting and with the main lines of POMRAC work the following activities were scheduled for 2016 – 2017:

- Activity 1. Joint activity of WG1, WG2, ICARM WG: Development of the Regional Overview “Targets and indicators for Ecological Quality Objectives used in NOWPAP member states”
- Activity 2. Organization of Regional WS “Targets and indicators for Ecological Quality Objectives used in NOWPAP member states” (back to back with 13th POMRAC FPM)
- Activity 3. Organization of Regional workshop/ training course on Integrated Coastal Planning/Management of Regional Guidelines for Integrated Coastal Planning/Management (in cooperation with PEMSEA)
- Activity 4. Organization of 13<sup>th</sup> and 14<sup>th</sup> POMRAC Focal Points meetings
- Activity 5. Update, maintenance and enrichment of POMRAC Website
- Activity 6. Activities of RAP MALI: Increasing public awareness about marine litter problem by developing and distributing promotional materials
- Activity 7. Cooperation, Communication of NOWPAP POMRAC activities, with other RACs, RCU, UNEP, and other relevant organizations, projects and programmes.

#### **3.1.1 Joint Activity for WG1, WG2 and ICARM WG in collaboration with other RACs, RCU and relevant organizations (e.g., PICES, WESTPAC): Development of the Regional Overview “Targets and indicators for Ecological Quality Objectives used in NOWPAP member states”**

9. Several steps were suggested for the development of Ecological Quality Objectives. These steps included:

- Preparation, discussion and approval of the set of EcoQOs;
- Elaboration of the Operational Objectives for each EcoQO;
- Agreement on indicators and targets for each Operational Objective.

10. Suggestions to develop Ecological Quality Objectives for the NOWPAP region were already approved by NOWPAP member states in 2012 and included in the NOWPAP Medium-term Strategy 2012-2017 (MTS). One of the main MTS goals was to develop and adopt a harmonious approach towards coastal and marine environmental planning on an integrated

basis and in a pre-emptive, predictive and precautionary manner (objective (iii) from NOWPAP Action Plan). Suggested Activity for this purpose was Setting Ecological Quality Objectives for marine and coastal environment based on the regular assessments.

11. The List of the Ecological Quality Objectives was based on the vision reflecting the common broadly accepted description of ecological status of the region.

12. According with discussion during regional Workshop “Targets and indicators for Ecological Quality Objectives for the NOWPAP region”, and 13<sup>th</sup> POMRAC FPM decision on the Workplan for development of Regional Overview “Targets and indicators for Ecological Quality Objectives for the NOWPAP region” (Vladivostok, 19-20 May 2016) the following steps have been made till middle of October 2016:

- National POMRAC Focal Points nominated experts for the preparation of National Inputs to the Regional Overview.
- POMRAC agreed with DINRAC that DINRAC would facilitate implementation of EcoQO activity through payments to experts via DINRAC account according the decision of the 20<sup>th</sup> IGM.

13. As a result MoUs were signed between DINRAC and POMRAC, MERRAC, CEARAC, Dr. RYU, Dr. LAN, Dr. MATSUDA, Dr. SHULKIN for the preparation of extended abstracts of RACs activities relevant to the EcoQOs (first three), and for the preparation of national inputs to the Regional Overview (last four) according with decisions of POMRAC FPM. All signed MoUs have been copied to RCU, and all set of MoUs has been sent repeatedly on 17.08.2016.

14. Draft of the Regional Overview “Targets and indicators for Ecological Quality Objectives used in NOWPAP member states” was prepared by International Consultant in March 2017.

15. In April-May 2017, the POMRAC distributed this document among POMRAC Focal points and national experts, as well as other RACs and the RCU for receiving comments and suggestions for improving the document.

16. After receiving comments and suggestions, the International Consultant finalized the text in August 2017. The final text of Regional Overview “Targets and indicators for Ecological Quality Objectives used in NOWPAP member states” was sent for approval to the national coordinators in August.

17. Regional Overview “Targets and indicators for Ecological Quality Objectives used in NOWPAP member states” was printed and distributed in December 2017.

### **3.1.2 The 13<sup>th</sup> POMRAC Focal Points Meeting**

18. The 13<sup>th</sup> NOWPAP POMRAC Focal Points Meeting was held in Vladivostok, Russia on 19-20 May 2016. The major objectives of this meeting were as follows:

A) To review the progress of its current activities:

- Report of NOWPAP RCU representative on implementation of the Northwest Pacific

- Action Plan after the 12th NOWPAP POMRAC Focal Points Meeting  
Report on the implementation and the budget expenditures of POMRAC activities after the 12th NOWPAP POMRAC Focal Points Meeting
- Report on the implementation of RAP MALI in 2014-2015

B) To discuss and adopt the activities for the 2016-2017 biennium:

- Adoption of the structure and contents of the Regional Overview “Targets and indicators for Ecological Quality Objectives for the NOWPAP region”.
- Discussion of the timetable and budget for the Ecological Quality Objectives activity of POMRAC in 2016/2017 biennium
- Workplan and Budget for the participation in the regional training course on Integrated Coastal Planning/Management in cooperation with PEMSEA;
- Workplan and budget for POMRAC RAP MALI Activities for the 2016-2017 biennium; and
- Workplan and budget of POMRAC activities for the 2016/2017 biennium

### 3.1.3 The 14<sup>th</sup> POMRAC Focal Points Meetings

19. The Fourteenth NOWPAP POMRAC Focal Points Meeting was held during 26-27 October 2017 in Vladivostok, Russian Federation,

20. The major objectives of this meeting were as follows:

- A) Overview of the progress made during the intersessional period after the 13<sup>th</sup> NOWPAP POMRAC Focal Points Meeting:
  - Report of NOWPAP RCU representative on the implementation of the Northwest Pacific Action Plan after the 13<sup>th</sup> NOWPAP POMRAC FPM
  - Report on the implementation and the budget expenditures of POMRAC activities period after the 13<sup>th</sup> NOWPAP POMRAC Focal Points Meeting
  - Report on the implementation of Marine Litter Activity (MALITA)
- B) Review and adoption of the Regional Overview “Targets and indicators for Ecological Quality Objectives for the NOWPAP region”
- C) Discussion of the future POMRAC activities for the 2018-2019 biennium:
  - Development of regional NOWPAP EcoQO targets aligned with SDG indicators.
  - Assessment of trends in river and direct Inputs of contaminants to the marine and coastal environment in the NOWPAP region during the last decade
  - Microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian part of NOWPAP area.
- E) Workplan and budget of POMRAC activities for the 2018-2019 biennium

### **3.1.4 Regional Integrated Coastal Management Training of Trainers (ICM ToT) 20-24 November 2017 (PEMSEA Resource Facility (PRF), Quezon City Camp Netanya, Batangas Philippines)**

#### **21. Objectives:**

The Regional Integrated Coastal Management Training of Trainers (ICM ToT) Workshop was designed to equip participants with better understanding and enhanced knowledge, skills and resources in organizing and conducting Integrated Coastal Management (ICM) training for their national agencies and local governments.

Utilizing PEMSEA tools and materials, participants are effectively trained in delivering the training course in their local context and are provided with opportunities to develop necessary skills to plan and deliver national ICM training workshops.

The training was oriented to participants with a level up knowledge base of the ICM framework and processes and how it can be used towards achieving sustainable development goals (SDGs) and other international commitments.

Through the appreciation and understanding of ICM, participants understood their vital role and their sectors' role in the multi-disciplinary and multisectoral approach of developing and implementing an ICM program.

The training covered 5 days of lectures, experience sharing, case studies, after action review, action planning and a field visit. At the end of the course participants had the opportunity:

- Understand how ICM helps to resolve its responsibilities and obligations in accordance with various national, regional and international agreements and the achievement of sustainable development goals (SDG);
- Evaluate how case studies provide actual lessons on the implementation of ICM and determine how they can use this information for their own planning and application;
- Under the exchange of experience, formulate an action plan for the effective implementation of its role as ICM Training Centers and members of the PEMSEA Training Centers Network (PNLC) in providing technical support to ICM sites;
- Understand marine debris as global environmental problems and solve emerging problems, such as microplastics and ways to solve these problems.

### **3.2 POMRAC activities related to Implementation of NOWPAP Regional Action Plan on Marine Litter (RAP MALI)**

22. NOWPAP RAP MALI budget allocations for the 2016-2017 biennium (as agreed upon by the 20 IGM) determined that the main RAP MALI activity of NOWPAP POMRAC in the biennium of 2016-2017 would be the Research on micro-plastics content and migration in the Peter the Great Gulf.
23. The objectives of the activity/description of each objective:
  - Learning methods of microplastic assessment applied globally and regionally (within NOWPAP members): besides learning the issue theoretically, in June and August 2016

brief training courses on sampling and processing of samples in the Korean Institute of Ocean Science and Technology (KIOST, Republic of Korea) and Kyushu University (Japan) TUMSAT cruise for search of microplastics in the eastern part of the Sea of Japan (29 July-2 August 2016) were attended (Fig. 1).



Fig.1.

- Water sampling in the selected sites of the water area using plankton net/neuston net was used. The water sampling using plankton net and neuston net was carried out in the selected sites in the tidal zone and in the coastal water of Peter the Great Gulf (Fig. 2); besides, water samples from two larger transboundary rivers (the Tumen River and the Razdolnaya River) and small rivers (Amba, Narva, Barabashevka, Partizanskaya, Kievka etc.) discharging into the sea area were collected using pump and net.

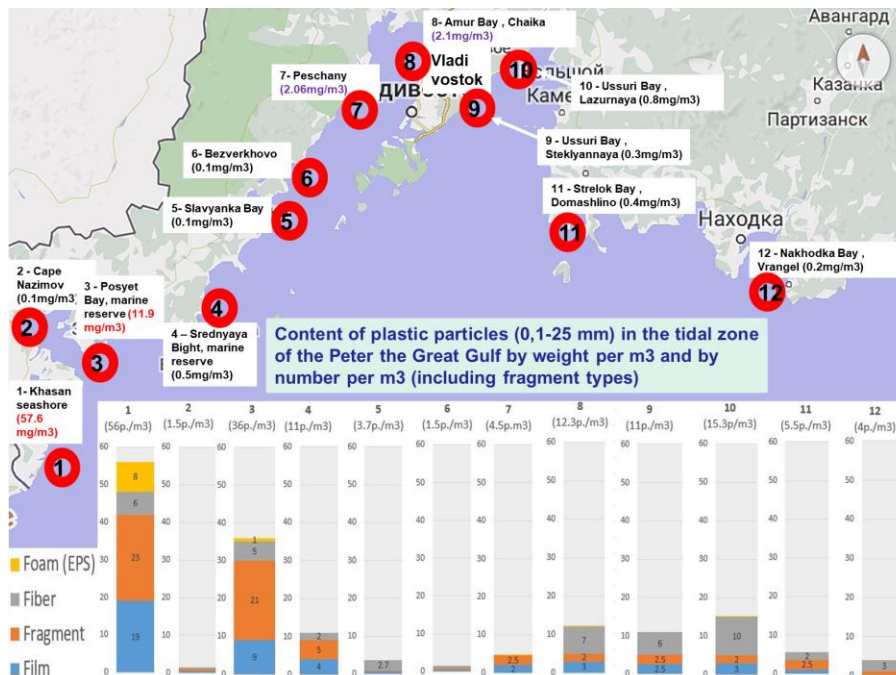


Fig. 2. Basic sampling locations and revealed concentrations of plastic particles by fragment type (quantitatively and by weight)

- The draft report of the survey was presented on 14<sup>th</sup> Meeting of POMRAC Focal Points. The results of this survey were published as a technical report in February 2018 (UNEP/NOWPAP/POMRAC/FPM 15/Inf. 4).
24. To support the activity on Organization of 2016 NOWPAP ICC and Workshop on Marine Litter Management in Primorsky Kray, Russia, POMRAC and UNEP signed SSFA UNEP/SSFA/DEPI/2016/MCEB-NOWPAP/014 B17-40PNL-11207-SB-004861.01.01 - 14AF0001 20 June 2018 (Total Cost: USD 20,000).
  25. The 2016 NOWPAP ICC and Workshop on Marine Litter Management was held in Slavyanka, Primorsky Krai, Russia on 23-24 September 2016. Representatives of administrative bodies, representatives of NGOs and researchers from four NOWPAP member countries (China, Japan, Korea and Russia) made their presentations concerning coastal waste management programs, studies of marine litter (macro-and micro-litter distribution), and cleanup actions organized by municipalities and local activists along river and marine coastal areas in their countries (Fig. 3).
  26. After the RAP MALI working meeting, the ICC event was held at a beach near Slavyanka settlement. Participants of the Workshop and Rap MALI meeting attended the event together with local high school students. The litter collected on the beach was weighed and categorized according to the standards applied in UNEP Regional Seas programmes. The results of the ICC will be later available at the NOWPAP CEARAC website and at the website of the Ocean Conservancy.



Fig 3. 2016 NOWPAP ICC in Primorsky Kray, Russia

### 3.5 Other POMRAC activities in 2016-2017

27. Within the framework of the XI International Environmental Forum “Nature without Borders” October 30 - 31 2017, Vladivostok, POMRAC participated in preparation of

topic session “Development of environmental monitoring, assessment and measures taken to eliminate transboundary environmental threats.

28. POMRAC staff participated in the next meetings for problems Nature protection in NOWPAP Region:
  - International Symposium on Sustainable Coastal Ecosystems 11<sup>th</sup>-14<sup>th</sup> January, 2017 Beijing, China. Kachur A. Major problems and challenges in the North-Western Pacific coastal area (Russian part).
  - AASSA-Tokyo Workshop on “Role of Science for Inclusive Society,” 1-3 March, 2017. Kachur. A. Extreme natural and anthropogenic processes and hazards to human health in the Pacific Russia (considering of planned sustainable development programs).
  - Asian Large Marine Ecosystems towards a Regional Assessment of Asian LMEs / Centre for Coastal and Marine Resources Studies Bogor Agricultural University Bogor, Indonesia April 25<sup>th</sup> – 26<sup>th</sup>, 2017. Dr. Kachur Anatolii N. Comparative Effects of Pollution Stress on Large Marine Ecosystems of the West Bering Sea, Okhotsk Sea and Japan/East Sea Large Marine Ecosystems.
  - Caspian Sea Day – 2017. The role of the framework convention for the protection of the marine environment of the Caspian Sea in achievement of the environmental sustainable development of the Caspian Sea region and interaction on the UN Sustainable Development Goals. 10-11 August 2017, Astrakhan, Russian Federation. / Kachur A. Experience in implementing the UNEP Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the North-West Pacific Region (NOWPAP) for the use of the Tehran Convention in the Caspian region.
  - PICES-2017 Annual Meeting. Environmental changes in the North Pacific and impacts on biological resources and ecosystem services. Vladivostok, Russia, Sept. 22 — Oct. 1, 2017:
    - 1) V. M. Shulkin, A.N. Kachur and A.V. Tkalin. Elaboration of Ecological Quality Objectives as a step forward in enhancing cooperation to protect the marine environment in the Northwest Pacific.
    - 2) Nikolai Kozlovskii. River discharge as a source of plastic litter pollution in the Northwest Pacific Russia.
  - The Second All-Russian Conference with International Participation, Dedicated to the Ecology Year in Russia “Far Eastern Seas and their Basins: Biodiversity, Resources, Environmental problems” Vladivostok, 3-4 October, 2017. Shulkin V.M., Kachur A.N., Kozhenkova S.I. Development of the Ecological Quality Objectives and their indicators for the sea and coastal zones of northwestern Pacific.
  - Sixth Scientific and Practical Conference "Geosystems in Northeast Asia". Vladivostok, April 19-20, 2018. Kachur A.N., Kozhenkova S.I., Shulkin V.M. Activity of NOWPAP POMRAC for achievement of the Sustainable Development Goals.
29. During 2016-2017, POMRAC staff members were actively involved in the meetings organized by all NOWPAP RACs, WESTPAC, PICES and other organizations.

#### 4. POMRAC Expenditure for 2016-2017

Activity	Original Budget (USD)	Expenditures in (2016) (USD)	Expenditures incurred in (2017) (USD)	Total Expenditures (USD)
<b>Activity 1</b>				
Joint activity of WG1, WG2, ICARM WG: Development of the Regional Overview "Targets and indicators for Ecological Quality Objectives used in NOWPAP member states"	7,000	0	7,000	7,000
<b>Sub-total</b>	<b>7,000</b>	<b>0</b>	<b>7,000</b>	<b>7,000</b>
<b>Activity 2</b>				
Activity 2. Organization of Regional WS "Targets and indicators for Ecological Quality Objectives used in NOWPAP member states" (back to back with 13 <sup>th</sup> POMRAC FPM)	20,000	20,000	0	20,000
<b>Sub-total</b>	<b>20,000</b>	<b>20,000</b>	<b>0</b>	<b>20,000</b>
<b>Activity 3</b>				
Participation in the Regional workshop/ training course on Integrated Coastal Planning/Management	10,000	0	10,000	10,000
<b>Sub-total</b>	<b>10,000</b>	<b>0</b>	<b>10,000</b>	<b>10,000</b>
<b>Activity 4</b>				
Organization of 13 <sup>th</sup> and 14 <sup>th</sup> POMRAC Focal Points meetings	35,000	15,000	20,000	35,000
<b>Sub-total</b>	<b>35,000</b>	<b>15,000</b>	<b>20,000</b>	<b>35,000</b>
<b>Activity 5</b>				
Update, maintenance and enrichment of POMRAC Website	1,000	500	500	1,000
<b>Sub-total</b>	<b>1,000</b>	<b>500</b>	<b>500</b>	<b>1,000</b>
<b>Activity 6</b>				
Activities of RAP MALL: Increasing public awareness about marine litter problem by developing and distributing promotional materials	6,000	3,000	3,000	6,000
<b>Sub-total</b>	<b>6,000</b>	<b>3,000</b>	<b>3,000</b>	<b>6,000</b>
<b>Activity 7</b>				
Cooperation, Communication of NOWPAP POMRAC activities, with other RACs, RCU, UNEP, and other relevant organizations, projects and programmes.	7,000	3,000	4,000	7,000
<b>Sub-total</b>	<b>7,000</b>	<b>3,000</b>	<b>4,000</b>	<b>7,000</b>
<b>Total</b>	<b>86,000</b>	<b>41,500</b>	<b>44,500</b>	<b>86,000</b>