

**Report on the activities of NOWPAP Pollution Monitoring Regional Activity
Center (POMRAC) in 2018-2020**

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 4th 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 7th 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. In 2007 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 the 2018-2019 biennium, part of the financing of several POMRAC activities related to the payment of the work of national experts and the organization of events outside of Russia was allocated through the additional DINRAC budget (80,000 US \$).
5. The 22th Intergovernmental Meeting approved the budget of US\$ 114,250 for 2018-2019 biennium for POMRAC activities (including US\$ 9,250 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. Report of POMRAC activities carried out after the 22th NOWPAP IGM Main activities in 2018-2019

7. In accordance with decisions of the 22nd NOWPAP IGM with the budget approved at this meeting, and with the main lines of POMRAC activities on fields of WG 1, WG 2 and WG ICARM as well as with the directions of the Draft NOWPAP MTS 2018-2023, the following activities were scheduled 2018-2019:

- Joint Activity for WG1, WG2 and ICARM WG with cooperation with RACs, RCU and relevant organizations (PEMSEA, YSLME and others): Development of regional NOWPAP EcoQO targets aligned with SDG indicators (Phase 1) with regional workshop in 2019.
 - Microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian coastal waters.
 - Joint Activity for WG1, WG2 and ICARM WG with cooperation with RACs: the Assessment of trends in river and direct Inputs of contaminants to the marine and coastal environment in the NOWPAP region during the last decade.
8. The following POMRAC activities are suggested for the 2018-2019 biennium:
- to organize the 15th and 16th Focal Points Meetings;
 - to organize Regional Workshop “Development of regional NOWPAP EcoQO targets aligned with SDG indicators (Phase 1)” (in cooperation with RCU, RACs and other relevant organizations);
 - Development of the Regional Overview “Development of regional NOWPAP EcoQO targets aligned with SDG indicators (Phase 1)”;
 - Development of Report: Microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian coastal waters.
 - Development of the Regional Overview the Assessment of trends in river and direct Inputs of contaminants to the marine and coastal environment in the NOWPAP region during the last decade.

Meetings.

3.1.1 The 15th POMRAC Focal Points Meetings

9. The 15th NOWPAP POMRAC Focal Points Meeting was held during 4-5 July, 2018 in Vladivostok, Russian Federation (Fig.1)



Figure 1. 15 FPM in Vladivostok 2018.

The major objectives of this meeting were as follows:

- Overview of the progress made in the intersessional period after the 14th NOWPAP POMRAC Focal Points Meeting
- Discussion and adoption of the Workplan and budget for the activity “Development of regional NOWPAP EcoQO targets aligned with SDG indicators. Phase 1”
- Discussion and adoption of the Workplan and budget for the activity “Assessment of trends in river and direct inputs of contaminants to the marine and coastal environment in the NOWPAP region during the last decade”
- Discussion and adoption of the Workplan and budget for the activity ‘Microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian part of NOWPAP area’
- The progress in the implementation of abovementioned POMRAC activities was presented and discussed. Nomination of the experts for the preparation of national inputs and elaboration of the structure of the inputs are the main intermediate results.
- Workplan and budget of POMRAC activities for the 2018-2019 biennium
- Other matters:
Development of RAP BIO: the Role of POMRAC
NOWPAP follow up and review of SDG 14.1

3.1.2 The 16th POMRAC Focal Points Meetings

10. The 16th NOWPAP POMRAC Focal Points Meeting was held during 30 October - 1 November 2019 in Beijing, China (Fig.3)



Figure 2. 15 FPM in Beijing 30 October - 1 November 2019

The major objectives of 16th Focal Points meeting were as follows:

- Overview of the progress made in the intersessional period after the 15th NOWPAP POMRAC Focal Points Meeting
- Discussion of the results of work on key POMRAC activities:
 - “Microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian part of NOWPAP area”
 - “Development of regional NOWPAP EcoQO targets aligned with SDG indicators, phase 1”
 - “Assessment of trends in river and direct inputs of contaminants to the marine and coastal environment in the NOWPAP region during the last decade”
- The results of developments of abovementioned POMRAC activities were presented and discussed.

After the discussion, the meeting agreed with the results of those activities.

- Workplan and budget of POMRAC activities for the 2020-2021 biennium
After the discussion, the meeting agreed workplan and budget of POMRAC for 2020-2021.

3.1.3 Joint Activity for WG1, WG2 and ICARM WG in collaboration with other RACs, RCU and relevant organizations .

Activity 1. Development of regional NOWPAP EcoQO targets aligned with SDG indicators. Phase 1

11. The 22nd NOWPAP Intergovernmental Meeting (IGM) has approved the Programme of Work for 2018-2019 biennium, including the POMRAC activity: “Development of regional EcoQO targets aligned (where possible) with SDG indicators, phase 1“. During the implementation of EcoQOs activity in 2016-2017, national experts agreed that the following six NOWPAP EcoQO indicators could be applied in their countries:

- Nutrients concentration in the water column (possible SDG indicator 14.1.1)
- Nutrient ratios (silica, nitrogen and phosphorus)
- Chlorophyll a concentration in the water column (possible SDG indicator 14.1.1)
- Harmful algal blooms (HABs)
- Concentration of the contaminants in sediments, water and organisms
- Trends in the amount and composition of litter washed ashore (possible SDG indicator 14.1.1)

12. **Goal** of this activity was to analyze the national numerical targets (where they exist) on the abovementioned NOWPAP EcoQO indicators and suggest (and then discuss) possible regional EcoQO targets aligned to the extent possible with the abovementioned SDGs indicators.

Tasks: In accordance with signed MoUs, nominated experts from all NOWPAP countries had to analyze the availability of information and implementation prospective for each indicators taking into account the following aspects:

- Scientific background including analysis of advantages and limitations of indicator, based on experience within the NOWPAP region and international knowledge;
- Availability of relevant information, including international and national official sources;
- Assessment of possibility of applying each indicator based on the existing national

legislation.

13. The template of National Inputs was prepared by POMRAC Secretariat. The National Inputs were circulated among POMRAC Focal points, and after notable amendment in accordance with comments provided, have been submitted to the international consultant for the analysis and compilation as a regional synthesis.

14. The preparation of National Inputs with information on above mentioned 3 aspects for each of the above mentioned SDG indicators was a core of this project.

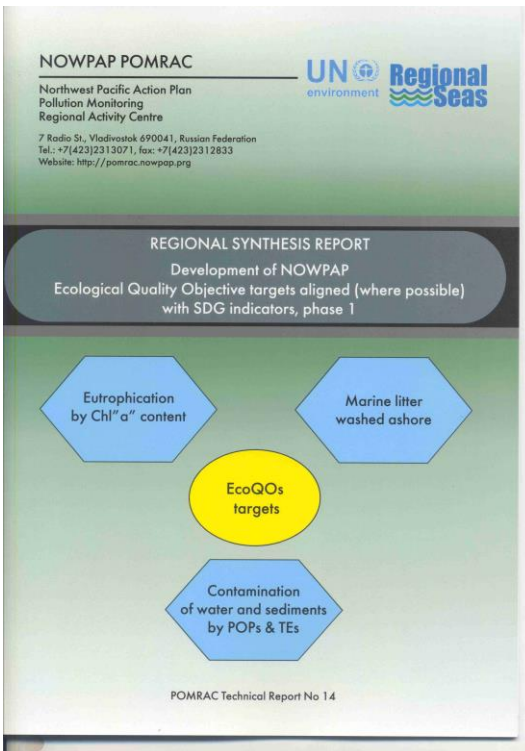
15. Progress on the activity was discussed during **POMRAC Workshop in Vladivostok March 20-21, 2019** (fig. 3)

During the workshop, National Inputs were presented by the nominated experts from NOWPAP member states. Then, experts discussed in detail the suggested targets related to six EcoQO indicators agreed upon earlier. Experts have suggested several designated areas within their respective countries where preliminary EcoQO targets could be tested during the second phase of POMRAC activity “Development of regional EcoQO targets aligned (where possible) with SDG indicators”. In some cases, experts have decided that setting targets on certain EcoQO indicators would be premature or unnecessary.



Figure 3. Workshop “Development of regional NOWPAP EcoQO targets aligned with SDG indicators. Phase 1”

16. Expected outcomes and future direction: The regional synthesis prepared after an analysis of these National Inputs (and preferably after a regional workshop) should be the main output of this project. This synthesis report should be reviewed by NOWPAP RACs, RCU, NFPs, and then published and circulated between relevant stakeholders.



17. Final version of the Regional Synthesis (UNEP/NOWPAP/POMRAC/FPM 16/Inf.4) has been published and distributed, and uploaded at the NOWPAP POMRAC website as technical report.

3.1.3 Activity 2. Assessment of trends in river and direct Inputs of contaminants to the marine and coastal environment in the NOWPAP region during the last decade

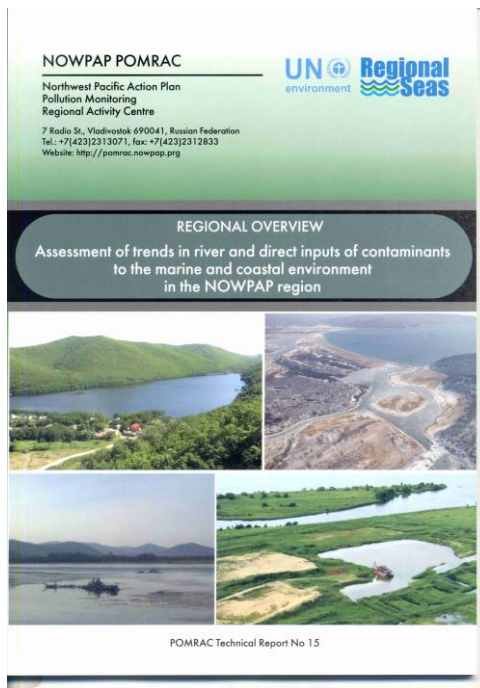
18. Regular assessment of the state of the marine environment is one of the major goals of UNEP NOWPAP as a whole, and NOWPAP POMRAC in particular. Proposed new NOWPAP Medium-term Strategy (MTS 2018-2023) also include regular assessments as a key activity. River and direct inputs of chemical substances are very important factors related to many environmental problems in marine and coastal areas. This is the reason why preparation of the Regional Overview on River and Direct Inputs of Contaminants into the Marine and Coastal Environment in the NOWPAP Region (hereinafter RDI RO) was one of the initial activities of POMRAC. That RDI RO has been published in 2006 and was based on the data of 2002-2004. The necessity to update this information was obvious, especially taking into account the possible effects of global climatic changes. This was a reason of the proposal to prepare new assessment of trends in river and direct inputs of contaminants to the marine and coastal environment in the NOWPAP region during the last decade. This proposal was suggested at the 14th POMRAC FPM, and approved by 21 IGM in 2017.

19. **Goal** of this project was to compile present (up-to-date) information on the river inputs and direct inputs of chemical substances and to estimate the trends during the last decade. This goal is closely connected with analysis of existing monitoring schemes and methods used in the NOWPAP countries. Comparison of the monitoring schemes and methods, including the environmental standards (used now and those used before 2004) was a second major goal of this project.

20. **Tasks.** Project has to be implemented through the National Inputs prepared by experts nominated by POMRAC FPs in accordance with the structure presented at and approved by the 15th POMRAC FPM. Regional overview should be prepared by compilation and synthesis of these National Inputs with the same overall structure.

Methodology features and differences in the river water quality monitoring in all NOWPAP countries have to be reflected in the Regional Overview along with the assessment of inter annual trends in river runoff of contaminants.

Direct inputs of contaminants and data on the wastewaters generation and discharge are assessed in the NOWPAP countries by different methods and formats. These features have to be presented in National Inputs, and to be reflected in Regional Overview.



21. Draft Regional Overview has been compiled by Russian POMRAC FP and was circulated among other POMRAC focal points and experts for the review and comments. After that, amended Regional Overview was discussed at the 16th POMRAC FPM (UNEP/NOWPAP/POMRAC/FPM 16/Inf.5), and circulated among other RACs and National FPs for the comments. After finalization Regional Overview has been published as a POMRAC technical report, distributed, and uploaded at the POMRAC website as technical report

3.1.4 Activity 3. ‘Microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian part of NOWPAP area’

21. POMRAC activity ‘Microplastics abundance in river runoff and coastal waters of the NOWPAP region’ was approved by the 21 IGM in 2017 as part of the activities on WG2 – River and Direct inputs of contaminants into the marine environment of the NOWPAP region. Its basic idea is to assess inflow of microplastic particles with river runoff into the marine area of NOWPAP and to highlight connections with plastic contamination in the adjoining coastal waters.

22. **Goal** of this activity is to obtain background information on the distribution of different kinds of microplastics in the some major rivers within Russian part of the NOWPAP region, and to trace possible impact of river runoff on microplastics quantity and composition in the coastal waters within the Russian part of the NOWPAP region.

23. **Tasks:** The following steps were supposed to achieve the objective of this activity:

- To obtain data on the concentrations of microplastics in the rivers of the Russian part of the NOWPAP region and try to assess the microplastics input to the sea with river runoff. Collecting similar existing data from other NOWPAP countries might allow to estimate the role of river runoff in the microplastics transport.

- To assess and analyze current methods of sampling microplastics in the seawater and fresh water and the sample treatment protocols applied in NOWPAP countries, considering possible development of general guidelines/recommendations for microplastic monitoring in NOWPAP;
- To compare existing data on microplastics quantity and composition in the coastal water within the NOWPAP region, including further collection of the background information on the quantity and composition of plastic particles in the coastal water of the Russian part of the NOWPAP region.
- To assess the possible impacts of river discharge, urban areas, landfills, tourism, fishery, etc. on contamination of marine ecosystems with microplastics; to share national data and to carry out related survey in the Russian part of NOWPAP.

24. Activities:

Rivers and coastal areas within Peter the Great area have been chosen for the study in this project due to maximal anthropogenic press compare with other NOWPAP areas within Russia. 8 typical rivers, including transboundary Tumen R. and Razdolnaya (Suifen) R. were studied.

Seasonal samplings (spring, summer, autumn) have been carried out in rivers in 2018-2019 (fig. 4), and results of the previous studies during 2016-2017 were used as well. Methods using plankton net with 0.1 mm mesh size were effective enough though additional works are needed for the intercalibration purpose.

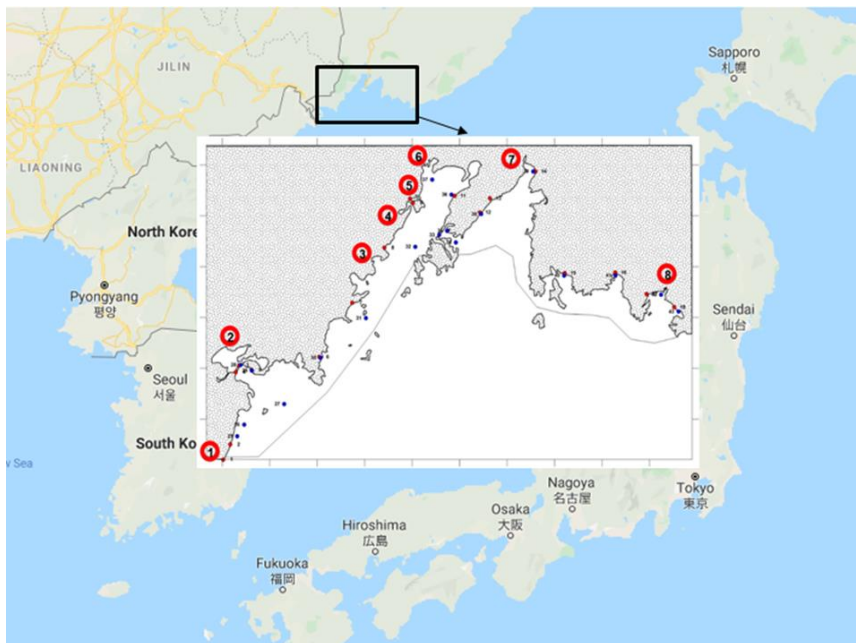


Fig. 4. Sampling sites in the Peter the Great Bay. Red dots indicate sampling sites at the shoreline, blue dots correspond to samples from coastal water. Red circles with numbers correspond to the areas where selected rivers discharge. 1 – Tumen River, 2- Tsukanovka

River, 3- Narva River, 4 – Barabashevka River, 5 – Amba River, 6 – Razdolnaya/Suifenhe River, 7 – Artemovka River, 8 – Partizanskaya River.

Transboundary Tumen R. and Razdolnaya (Suifen) R. showed maximal level of microplastic abundance one order higher than in other rivers (fig. 5). High water regimes in spring and summer are accompanied by the elevated concentration of microplastic. 2-3 times enrichment of surface layer of river waters compare with subsurface one is a next feature of the spatial-temporal variability of microplastic amount within the river.



Figure 5. Suspected plastic particles in a sample from coastal water near Tumen River estuary prepared for spectra identification (4x magnification) (left) and suspected plastic particles in a sample from Razdolnaya/Suifenhe River prepared for spectra identification (4x magnification) (right).

Surveys show that river runoff of microplastics is evidently an important factor in the land-based pollution of coastal waters, and can be calculated, however more data is required to make detailed comparison to impacts of other land-based sources due to a number of reasons.

Examples of the results of studies of the microplastic content in the waters of rivers of basin of Peter the Great Bay are shown in the figures 6 and 7.

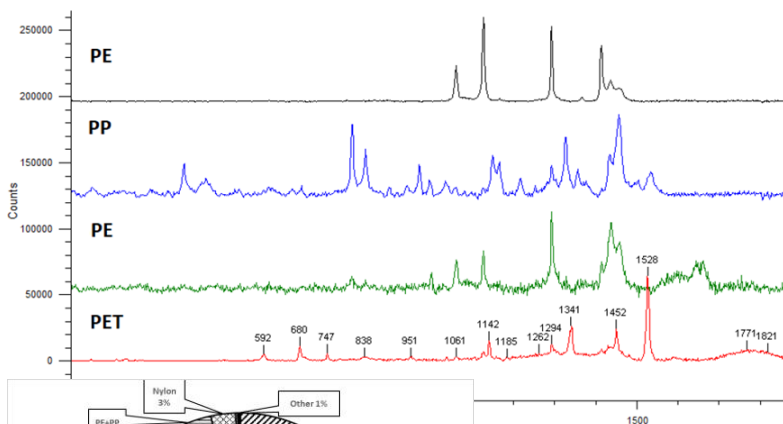
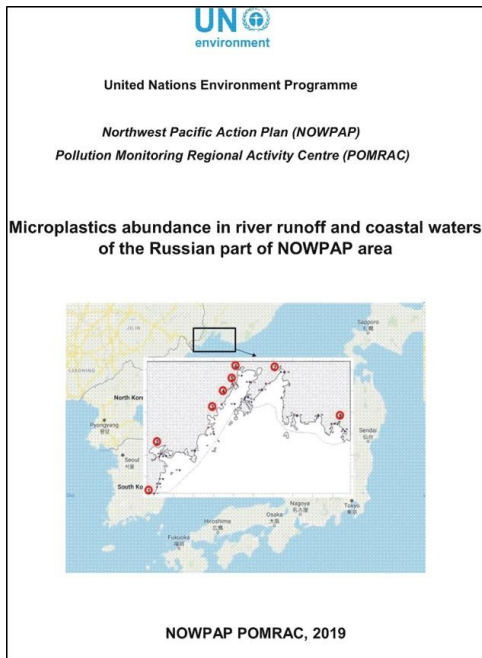


Fig. 6. Examples of Raman spectra used for identification of polymer types of suggested microplastics

Fig. 7. Ratio of basic polymer types detected in all selected rivers



Outcomes. POMRAC secretariat has compiled the draft version of the report before the 16th FPM and shared it with Focal Points and experts for their consideration. After compilation the document was circulated among POMRAC experts and POMRAC FPs for the comments. After amendment the document was circulated among RACs and National Focal Points and uploaded to POMRAC web-site as a technical report.

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

26. Research on microplastics content and migration in the Peter the Great Bay has been carried out in support to the implementation of NOWPAP RAP MALI jointly with MSU (Marine State University) and NSCMB FEBRAS (National Science Center Marine Biology). 5 sampling cruises were completed during the 2018 summer season, (Fig. 8). The 2019 season continues with sampling on the same stations.



Figure 8. Network of stations for monitoring the composition of microplastic in the coastal waters of Peter the Great Bay

Sampling for studying the distribution of microplastics in the coastal waters of Peter the Great Bay was carried out according to the following procedure, which corresponds to the guidelines for harmonization of microplastics monitoring methods on the sea surface (Y. Michida, S. Chavanich, C.A. Cózar, P. Hagmann, H. Hinata, A. Isobe, P. Kershaw, N. Kozlovskii, D. Li, A.L. Lusher, E. Martí, S.A. Mason, J. Mu, H. Saito, W.J. Shim, A.D. Syakti, H. Takada, R. Thompson, T. Tokai, K. Uchida, K. Vasilenko, J. Wang Guidelines for harmonizing ocean surface microplastic monitoring methods, 71 pp. Ministry of the Environment Japan,).

Examples of the results of studies of the microplastic content in the waters of Peter the Great Bay are shown at the Figures 9 and 10.

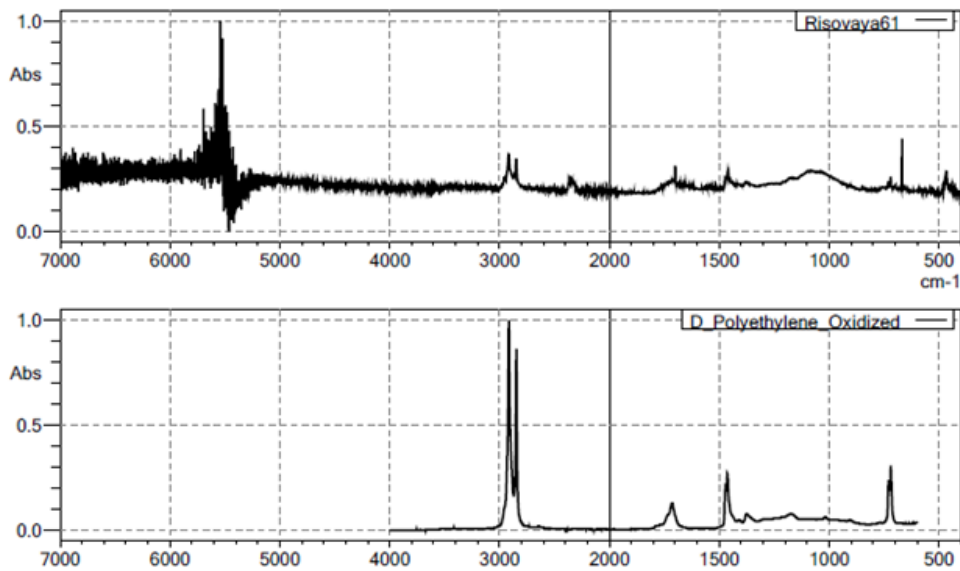


Figure 9. The spectrum of samples obtained in one of the bays of Peter the Great Bay in 2018 (fragment)

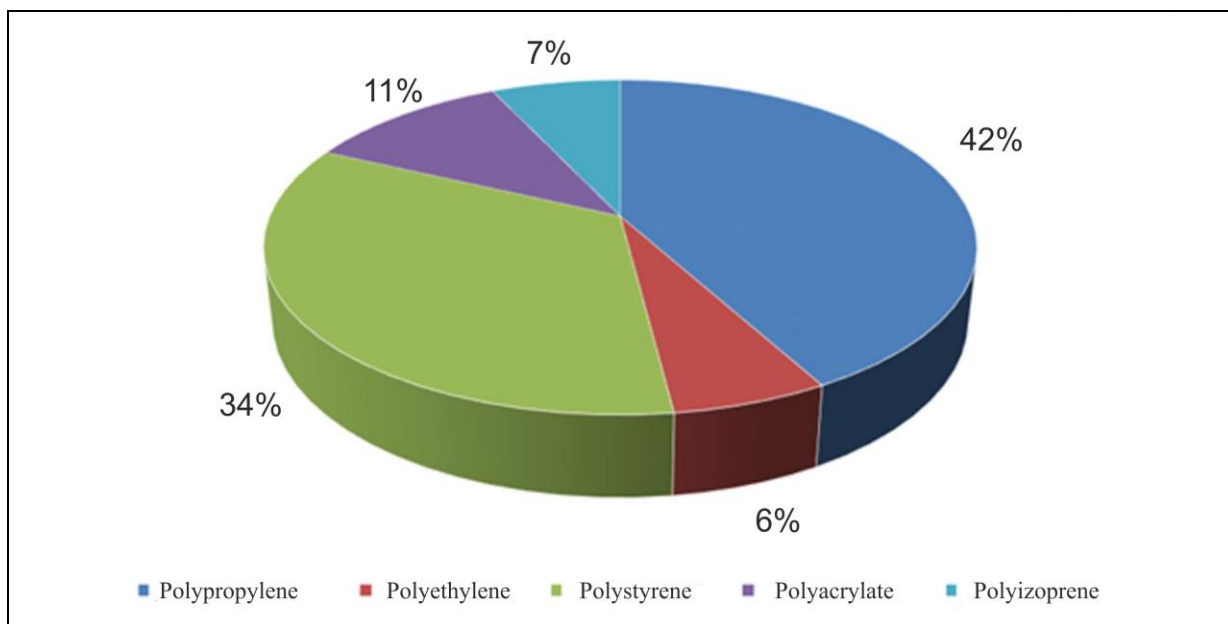


Figure 10. The composition of polymers in the Amur Bay.

3.3 Other POMRAC activities in 2018-2020 after 23 IGM.

27. During 2018-2019, POMRAC staff members were actively involved in the meetings organized by NOWPAP RACs, WESTPAC, PICES and other organizations.

In addition, POMRAC employees participated in a number of scientific and other events with a presentation on the activities of NOWPAP:

- NOWPAP RCU and RACs Meeting, 1-2 April 2019, Busan. Dr. Shulkin made presentation of the possible structure of SOMER-3 prepared by POMRAC Secretariat along with the same prepared by NOWPAP RCU
- Regional Workshop NOWPAP POMRAC – March, 21, 2019, Vladivostok, Dr. Shulkin has presented results of the implementation on the activity “Development of regional NOWPAP EcoQO targets aligned with SDG indicators”
- CEARAC Expert Meeting on Eutrophication Assessment in the NOWPAP Region – March, 22, 2019, Vladivostok, Dr. Shulkin has presented results of eutrophication assessment in the Peter the Great Bay, Russia. Sign of eutrophication were observed in north parts of the Amursky and Usurytsky Bays, areas close to the Tumen River and coastal areas adjoining to Vladivostok city.
- NOWPAP CEARAC FPM, September 9-10, 2019, Toyama, Dr. Shulkin made presentation on the probable scheme of collaboration between NOWPAP RACs at the preparation of SOMER-3
- United Nations Decade of Ocean Science for Sustainable Development (2021-2030) The conference “Marine specially protected natural territories of the World”, devoted to the 120th anniversary of the foundation of the Far Eastern Federal University (FEFU) September 26-30, 2019, Vladivostok, Russia. Dr Kachur made presentation “MARINE

PROTECTED AREAS (AREAS) OF THE NORTH-WEST PACIFIC (current status, management plans and development strategies)”.

- The 1st Meeting of the Northeastern Asia Water Research Council (‘tentative’). 23-24 May 2019, Daejeon, Republic of Korea, Dr. Kachur made presentation “Problems of use of water resources of the Russian Far East”
- 1st Technical Workshop on the preparation of the Regional Seas Programme SDG 14 Outlook Report 25-27 November 2019, Helsinki, Finland, Dr. Kachur took part as a representative of NOWPAP.

4.0 POMRAC Budget and Expenditure for 2018-2019

Table 1. Budget 2018-2019 from Trust fund of NOWPAP

Budget	
Results/Outputs	Total Cost (USD)
Activity 1 – Develop the regional overview of NOWPAP Ecological Quality Objectives (EcoQO) targets aligned with SDG indicators (Phase 1)	
Finalizing and printing of the National Inputs and Regional overview of the NOWPAP EcoQO targets aligned with SDG indicators (Phase 1)	4,000
Report of the regional workshop “Development of the Regional Overview “Development of regional NOWPAP EcoQO targets aligned with SDG indicators (Phase 1)”	18,000
Sub-total	22,000
Activity 2 – Prepare Assessment of trends in river and direct inputs of contaminants to the marine and coastal environment in the NOWPAP region	
Finalizing and printing of the regional assessment of trends in river and direct inputs of contaminants to the marine and coastal environment in the NOWPAP region	4,000
Sub-total	4,000
Activity 3 - Prepare the Regional Report on microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian coastal waters	
Regular sampling trips (surveys) to the selected sites of rivers downstream and sea coasts	7,200
Processing of samples for microplastic concentration	1,800
Analysis of quantity and quality of microplastics particles by FTIR, Raman SC and other methods	15,000
Preparation of the report on microplastic quality and abundance in the Russian rivers and coastal waters	9,000
Sub-total	33,000
Activity 4 - Strengthen regional capacity on pollution monitoring through knowledge and information sharing and capacity building	
Organization and participation in the 15 th and 16 th Focal Points Meetings	22,000
Preparation of meeting reports	6,000

Communication expenses	2,000
Inputs to NOWPAP RAC activities and technical reports, contributions to national, regional and global meetings and processes	10,000
Sub-total	40,000
Activity 5 - Update, maintain and enrich POMRAC website	
New design of the website	400
Maintenance and regular updates of the website	1,600
Sub-total	2,000
Activity 6 - Undertake research on microplastics content and migration in the Peter the Great Gulf in support of the implementation of NOWPAP RAP MALI (Joint Activity with MSU (Marine State University) and NSCMB FEBRAS (National Science Center Marine Biology))	
Sampling surveys at the selected coastal areas	4,000
Processing of samples	950
Analysis of microplastic by FTIR, Raman SC	7,500
Field report on the surveys on microplastics content and migration in the Peter the Great Gulf, Russia	800
Sub-total	13,250
Total Cost	114,250

Table 2. POMRAC Expenditure for 2018-2019

Activity	Original Budget (USD)	Expenditures in (2018) (USD)	Expenditures incurred in (2019) (USD)	Total Expenditures (USD)
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”	22,000	2,000	8,000	22,000
The regional workshop “Development of the Regional Overview “Development of regional NOWPAP EcoQO targets aligned with SDG indicators (Phase 1)”			12,000	
Sub-total	22,000	2,000	20,000	22,000
Activity 2				
Prepare Assessment of trends in river and direct inputs of contaminants to the marine and coastal environment in the NOWPAP region	4,000	0	4,000	4,000
Sub-total	4,000	0	4,000	4,000

Activity 3				
Prepare the Regional Report on microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian coastal waters	33,000	22,000	11,000	33,000
Sub-total	33,000	22,000	11,000	33,000
Activity 4				
Organization of 15 th and 16 th POMRAC Focal Points meetings	40,000	33,750	6,250	40,000
Sub-total	40,000	33,750	6,250	40,000
Activity 5				
Update, maintenance and enrichment of POMRAC Website	2,000	1,000	1,000	2,000
Sub-total	2,000	1,000	1,000	2,000
Activity 6				
Undertake research on microplastics content and migration in the Peter the Great Gulf in support of the implementation of NOWPAP RAP MALI	13,250	10,250	3,000	13,250
Sub-total	13,250	10,250	3,000	13,250
Total	114,250	69,000	44,250	114,250

5.0 Workplan and Budget of POMRAC for 2020-2021 as approved at the 16th POMRAC FPM (Beijing, China 2019)

Taking into consideration the output and outcomes of the past activities on fields of WG 1, WG 2 and WG ICARM as well as the directions of the NOWPAP MTS 2018-2023, and taking into account the responsibilities and activities of POMRAC in 2020-2021 should focus on the following issues:

- Joint Activity for WG1, WG2 and ICARM WG with cooperation with RACs, RCU and relevant organizations (OSPAR, PEMSEA, PICES, WESTPAC, YSLME and others): “Development of NOWPAP EcoQO targets aligned (where possible) with SDG indicators, phase 2” with a joint regional POMRAC-CEARAC workshop (Priority area of MTS a and b)
- Activity for WG2 Microplastics abundance in river runoff of the NOWPAP region with a case study in the Russian coastal zone. (Priority area of MTS b)
- Joint Activity for WG1, WG2 and ICARM WG with cooperation with RACs: the preparation of SOMER-3 – The integrated assessment of environmental problems, status and trends related to existing and changing natural and socio-economical conditions in the NOWPAP region with Workshop in the second half 2020 for the final discussion and approval of SOMER-3 contents and structure (Priority area of MTS a)

The following POMRAC activities are suggested for the 2020-2021 biennium:

- To organize the 17th and 18th Focal Points Meetings;
- To organize Regional Workshop “Development of NOWPAP EcoQO targets aligned (where possible) with SDG indicators, phase 2)” (in cooperation with RCU, RACs and other relevant organizations);
- Development of NOWPAP EcoQO targets aligned (where possible) with SDG indicators, phase 2”);
- Preparation of SOMER-3 with aim of integrated assessment of environmental problems, status and trends related to existing and changing natural and socio-economical conditions in the NOWPAP region
- To organize Regional Workshop in 2020 for the final discussion and approval of SOMER-3 contents and structure (in cooperation with RCU, RACs and other relevant organizations);
- Development of Regional Overview “Microplastics abundance in river runoff of the NOWPAP region” (joint activities from Russian side with Far Eastern Federal University, Marine state University and National Science Center Marine Biology).

Full Workplan and Budget 2020-2021 from Trust fund of NOWPAP
(Approved by national NOWPAP focal points)

Budget	
Results/Outputs	Total Cost (USD)
Activity 1 • Development of NOWPAP EcoQO targets aligned (where possible) with SDG indicators, phase 2”;	
Preparation national inputs for RO	22,000*
Compilation of National Inputs and preparation of draft regional synthesis report	5,000*
Finalizing and printing of the National Development of NOWPAP EcoQO targets aligned (where possible) with SDG indicators, phase 2”;	2,000
Report of the regional workshop “• Development of NOWPAP EcoQO targets aligned (where possible) with SDG indicators, phase 2”;	18,000
Sub-total	47,000
Activity 2 – The preparation of SOMER-3 (phase 1)– The integrated assessment of environmental problems, status and trends related to existing and changing natural and socio-economical conditions in the NOWPAP region	
Workshop on SOMER-3 structure	18,000
Preparation Draft of SOMER-3 (phase 1)– The integrated assessment of environmental problems, status and trends related to existing and changing natural and socio-economical conditions in the NOWPAP region	30,000*
Finalizing and printing of SOMER 3 in 2022 (phase 2)	
Sub-total	48,000
Activity 3 - Prepare the Regional Overview ‘Microplastics abundance in river runoff and coastal waters of the NOWPAP region’ for the biennium of 2020-2021	
Preparation of and draft RO and finalization National Inputs on the river runoff of microplastics to the marine and coastal environment of the NOWPAP region	21,000*
Seasonal survey of microplastic runoff with river NOWPAP region RF include Amur/Heilong	7,000
Finalization and publication of the regional Overview	4,000
Sub-total	32,000
Activity 4 - Strengthen regional capacity on pollution monitoring through knowledge and information sharing and capacity building	
to organize the 17th and 18th Focal Points Meeting	36,000
Preparation of meeting reports	6,000
Communication expenses	5,000
Inputs to NOWPAP RAC activities and technical reports, contributions to national, regional and global meetings and processes	9,000
Sub-total	56,000
Activity 5 - Update, maintain and enrich POMRAC website.	
New design of the website	1,000
Maintenance and regular updates of the website	1,000
Sub-total	2,000
Total	185,000

Due to the known difficulties in the payments to the abroad experts/consultants through the POMRAC budget, some revision in the original budget was necessary.

After lengthy consultations with the RCU and the RACs, a preliminary decision was obtained to make payments to national experts and consultants through the UNEP system with payment through the RCU. As a result, the budget was divided into the direct budget of POMRAC and the budget through the RCU.

POMRAC Workplan and Budget 2020-2021 subject to this agreement

Budget	
Results/Outputs	Total Cost (USD)
Activity 1 Development of NOWPAP EcoQO targets aligned (where possible) with SDG indicators, phase 2)	
Staff and Other Personnel Costs (Preparation national inputs for RO; Compilation of National Inputs and preparation of draft regional synthesis report; Report of the regional workshop “Development of NOWPAP EcoQO targets aligned (where possible) with SDG indicators, phase 2)”)	18,000
Supplies Commodities and Materials (Finalizing and printing of the National Development of NOWPAP EcoQO targets aligned (where possible) with SDG) indicators, phase 2)”) ;	2,000
Sub-total	20,000
Activity 2 – The preparation of SOMER-3 (phase 1)– The integrated assessment of environmental problems, status and trends related to existing and changing natural and socio-economic conditions in the NOWPAP region	
Staff and Other Personnel Costs (Workshop on SOMER-3 structure; Preparation Draft of SOMER-3 (phase 1)– The integrated assessment of environmental problems, status and trends related to existing and changing natural and socio-economic conditions in the NOWPAP region)	16,000
Supplies Commodities and Materials (Finalizing and printing of SOMER 3 in 2022 (phase 2)	2,000
Sub-total	18,000
Activity 3 - Prepare the Regional Overview ‘Microplastics abundance in river runoff and coastal waters of the NOWPAP region’ for the biennium of 2020-2021	
Staff and Other Personnel Costs (Preparation of and draft RO and finalization National Inputs on the river runoff of microplastics to the marine and coastal environment of the NOWPAP region; Seasonal survey of microplastic runoff with river NOWPAP region RF include	13,000

Supplies Commodities and Materials (Finalization and publication of the regional Overview)	4,000
Sub-total	17,000
Activity 4 - Strengthen regional capacity on pollution monitoring through knowledge and information sharing and capacity building	
Staff and Other Personnel Costs (Preparation of meeting reports of the 17th and 18th Focal Points Meetings)	51,000
Operating and Other Direct Costs (Communication expenses)	5,000
Sub-total	56,000
Activity 5 - Update, maintain and enrich the POMRAC website.	
Staff and Other Personnel Costs (A new design of the website; Maintenance and regular updates of the website)	2,000
Sub-total	2,000
Activity 6 Reviewing the status of marine litter management in the NOWPAP Region; Revision of the NOWPAP Marine Litter Work Plan; Organization of the International Coastal Clean-up Campaign	
Staff and Other Personnel Costs	20,000
Operating and Other Direct Costs	10,000
Sub-total	30,000
Total	113,000

The COVID-19 pandemic quarantine leads to the significant slowdown and changes in the implementation process of POMRAC activities in 2020. After approval by correspondence work plan and budget of NOWPAP for 2020-2021 in April 2020, SSFA for POMRAC has been signed in June 2020. The nomination of the national experts and international consultants for the implementation of POMRAC activities approved by 16th POMRAC FPM was the major task for the last 3-4 months. This process included the elaboration of the ToRs for each activity, nomination of national experts by POMRAC focal points, arrangement of the registration of experts through the RCU. Activity on the preparation of the regional overview on the microplastic abundance in river runoff included some direct steps on implementation: sampling companies have been carried out in July-August 2020.

Features on the implementation of different POMRAC activities are presented below.

Activity 1 Development of NOWPAP EcoQO targets aligned (where possible) with SDG indicators, phase 2).

Terms of References for the National Inputs of this activity include the following tasks:

- Task 1: Determine “baseline values” for the designated area where the four EcoQO targets will be tested, taking in consideration relevant national standards and recent monitoring data. Inform RCU and POMRAC on the results.
- Task 2: Review the relevant monitoring data (nutrients, *Chlorophyll a*, contaminants, marine litter) during the last 5 years and compare with the suggested EcoQO targets.
- Task 3: Attend the regional workshop and present the results of EcoQO targets testing within the designated area.
- Task 4: Make suggestions on possible adjustments (if needed) in EcoQO targets agreed upon in 2019.
- Task 5: Review recent progress in leading RSPAPs (HELCOM, MAP, OSPAR, etc.), relevant projects and programmes (e.g. YSLME-2), UNEP- and IOC-led working groups on SDG 14 indicators (*Chlorophyll a*, nutrients, marine litter, etc.).
- Task 6: Compile the results of Tasks 1-5 in the National Report and submit to the NOWPAP RCU and POMRAC for comments.

Tasks for the international consultant who will compile and analyze National Inputs will include:

- Task 1: Analyse the “baseline values” for the designated areas where the four EcoQO targets will be tested to be submitted by four national experts. Provide comments, if necessary, through the RCU and POMRAC.
- Task 2: Review the four National Reports to be submitted by national experts where relevant monitoring data (nutrients, *Chlorophyll a*, contaminants, marine litter) during the last 5 years should be compared with the suggested EcoQO targets, taking into consideration relevant national standards. Provide comments through the RCU and POMRAC.
- Task 3: Attend the regional workshop where the results of EcoQO targets testing within the designated areas will be presented by national experts.
- Task 4: Make suggestions on possible adjustments (if needed) in EcoQO targets agreed upon in 2019.
- Task 5: Summarize the findings of the four National Reports in the form of regional synthesis report, while taking into account recent progress in leading RSPAPs (HELCOM, MAP, OSPAR, etc.), relevant projects and programmes (e.g. YSLME-2), UNEP- and IOC-led working groups on SDG 14 indicators (*Chlorophyll a*, nutrients, marine litter, etc.). Submit the regional synthesis report to the NOWPAP RCU and POMRAC for comments.

For the time being POMRAC has three national experts and international consultant for the implementation of EcoQOs targets activity:

Prof. Jong Seong KHIM from Seoul, ROK

Prof. Hongjun LI from Dalian, China

Dr. Yury ZUENKO from Vladivostok, Russia

Dr. Alexander TKALIN from Russia as international consultant

National experts were nominated by POMRAC focal points of different countries. Unfortunately, Prof. Osamu MATSUDA nominated for this activity from Japan has declined this offer by personal reason, and POMRAC is looking for another expert for this job.

The arrangement process of nominated experts is continuing through the Nairobi HQ under supervision of RCU.

Activity 2 – The preparation of SOMER-3 (phase 1)– The integrated assessment of environmental problems, status and trends related to existing and changing natural and socio-economic conditions in the NOWPAP region

The implementation of the SOMER-3 activity is at the initial stage because major goal for 2020 on this activity was the discussion of the SOMER-3 structure among NOWPAP RACs and RCU. Prof. Khim from Korea and Dr. Shulkin from POMRAC agree to be moderator of this process, and POMRAC is working to involve more experts in the process.