



**Northwest
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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 of the 15th NOWPAP POMRAC Focal Points Meeting

Background

1. The Pollution Monitoring Regional Activity Center (POMRAC) is one of the four Regional Activity Centers (RACs) established to coordinate activities relevant to specific components of the Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Action Plan (NOWPAP). Initially POMRAC had responsibility to implement activities related to atmospheric deposition of contaminants and river and direct inputs of contaminants.

2. The 10th NOWPAP IGM has approved plan of future actions “New Directions for the NOWPAP RACs and RCU”. Regarding POMRAC, that IGM confirmed for 2006 and future years the preparation of regional overviews on atmospheric deposition of contaminants and river and direct inputs of contaminants, following with preparation of the State of Marine Environment Report in the NOWPAP Region (SOMER). After that, POMRAC focused on activities related to Integrated Coastal and River Basin Management (ICARM) including land-based sources of pollution. Preparation of NOWPAP SOMER and all activities related to ICARM were implemented in close collaboration with all NOWPAP RACs.

3. The 12th NOWPAP POMRAC FPM (4-5 September 2014, Busan, Republic of Korea) reviewed and discussed major POMRAC activities in accordance with the decisions of the 18th NOWPAP IGM. One of the main POMRAC activities was the development of Ecological Quality Objectives (EcoQOs) in the NOWPAP region. POMRAC FPs and experts as well as representatives of CEARAC, DINRAC, MERRAC and partner organizations (such as OSPAR, PICES, WESTPAC, and YSLME) participated in the meeting.

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

5. In accordance with the decisions of the 20th NOWPAP IGM, the following activities were organized by POMRAC in 2016 – 2017:

- Activity 1. Joint activity of WG1, WG2, ICARM WG: Development of the Regional Overview “Targets and indicators for Ecological Quality Objectives for the NOWPAP region”
- Activity 2. Organization of Regional WS “Targets and indicators for Ecological Quality Objectives for the NOWPAP region” (back to back with 13th POMRAC FPM).
- Activity 3. Organization of Regional workshop/training course on Integrated Coastal Planning/Management (in cooperation with PEMSEA)
- Activity 4. Organization of 13th and 14th POMRAC Focal Points meetings
- Activity 5. Updating, 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 with other RACs, RCU, UNEP, and other relevant organizations, projects and programmes.

6. The 13th POMRAC Focal Points Meeting (FPM) with back-to-back Workshop on EcoQOs (Vladivostok, Russia, 19-20 May 2016) agreed to prepare Regional Overview on possible Ecological Quality Objectives for the NOWPAP region, discussed the format and procedures of work for this and other POMRAC activities on 2016-2017 biennium. The Meeting has adopted the structure and contents of the Regional Overview “Targets and indicators for Ecological Quality Objectives for the NOWPAP region”.

7. The 14th POMRAC FPM (Vladivostok, Russia, 25-26 October 2017) reviewed and adopted the “Regional overview of possible Ecological Quality Objective indicators for the NOWPAP region”, compiled by the International Consultant based on the National Inputs prepared by the nominated national experts. The Meeting discussed future POMRAC activities for the 2018-2019 biennium, including 1) Development of regional NOWPAP EcoQO targets aligned with Sustainable Development Goals (SDG) indicators; 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; 3) Microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian part of NOWPAP sea area. It was decided to present the workplan and budget of POMRAC activities for the 2018-2019 biennium during the next NOWPAP Intergovernmental Meeting for adoption.

8. The 15th POMRAC Focal Points Meeting (FPM) was held in Vladivostok, Russia on 4-5 July 2018 to review the progress of its current activities and to discuss in detail the activities for the 2018-2019 biennium. Focal Points and experts of the NOWPAP member states, namely China, Japan, Korea and Russia participated in the 15th NOWPAP POMRAC FPM. National NOWPAP Focal Point of Russia and NOWPAP RCU representative, as well as representatives of NOWPAP DINRAC, NOWPAP MERRAC, and YSLME also participated in the meeting (Appendix 1).

Day 1 (04 July 2018)

Agenda item 1. Opening of the Meeting

9. The 15th NOWPAP POMRAC Focal Points Meeting was opened at 9:30 am at the Aurora Hotel, Vladivostok on 4 July 2018 by the Director of POMRAC, Dr. Anatoly KACHUR. He welcomed all participants and wished success to the meeting. He gave floor to the National NOWPAP Focal Point of Russia, Ms. Natalia TRETIAKOVA. She also welcomed all member states and partners for their participation and emphasized the importance for the Russian Federation, especially for the Ministry of Natural Resources, of all environmental programmes implemented in the Far East.

Agenda item 2. Organization of the Meeting

2.1. Election of the officers

10. Dr. Kachur invited the meeting to elect the Chair and the Rapporteur for the 15th NOWPAP POMRAC Focal Points Meeting. Following the tradition of previous POMRAC Focal Points Meetings, it was decided that the duty of the chair during this FPM would be performed on a rotational basis. This time the Focal Point of China, Ms. Ye DING, was elected as the Chair, and the Focal Point of Russia, Dr. Vladimir SHULKIN, as the Rapporteur.

2.2. Organization of work

11. The Chair welcomed everyone and explained to the participants the rules of procedure of this Meeting, including the use of English as working language and making all decisions by consensus. She also presented the provisional list of the documents (UNEP/NOWPAP/POMRAC/FPM 15/Inf. 1).

Agenda item 3. Adoption of the Agenda

12. The Provisional Agenda (NOWPAP/POMRAC/FPM15/1) and the Annotated Provisional Agenda (NOWPAP/POMRAC/FPM15/2) were generally approved, however due to delayed arrival of the NOWPAP RCU representative it was decided to rearrange the sequence of some agenda items, postponing Agenda item 4.1 for the afternoon session.

Agenda item 4. Overview of the progress made in the intersessional period after the 14th NOWPAP POMRAC Focal Points Meeting

4.1. Report of NOWPAP RCU representative on the progress in the implementation of the Northwest Pacific Action Plan after the 14th NOWPAP POMRAC FPM

13. Dr. Ning LIU, the Programme Officer of NOWPAP, introduced to the meeting the progress of the entire NOWPAP activities during the intersessional period (UNEP/NOWPAP/POMRAC/FPM 15/3). He highlighted projects completed by RACs, progress on RAP MALI, partnership building as well as resolutions made by the 22nd NOWPAP IGM.

4.2. Report on the implementation and expenditure of POMRAC activities in 2016-2017 biennium

14. The Chair invited Dr. Kachur to report on the implementation of POMRAC activities in 2016-2017 (UNEP/NOWPAP/POMRAC/FPM 15/4). The report covered the results of the 13th and 14th POMRAC FPMs, development of Regional Overview “Targets and Indicators for Ecological Quality Objectives for the NOWPAP region”, RAP MALI implementation and other events with participation of POMRAC (mainly participation in the meetings of other RACs and meetings and sessions of the partner organizations, such as PICES, APEC, etc.).

Agenda item 5. Discussion and adoption of the Workplan and budget for the Development of regional NOWPAP EcoQO targets aligned with SDG indicators (Phase 1)

15. The Chair invited Dr. Shulkin to present the “Workplan and budget for the Development of regional NOWPAP EcoQO targets aligned with SDG indicators (Phase 1)” (Appendix 2). In his

presentation, Dr. Shulkin listed six EcoQO indicators of earlier agreed Ecological Quality Objectives, some of those can be aligned with SDG indicator 14.1.1. He presented detailed schedule and budget of the project implementation for the discussion and adoption by member states. After the presentation, the Chair asked the participants to comment on this agenda item.

16. Dr. Seong-Gil KANG, the Director of MERRAC, noted that the goal of this project is very similar to the goal of activity 'Targets and Indicators for EcoQOs in the NOWPAP region' implemented in the biennium 2016-2017, requesting that this project includes the work to collect the relevant real data in this region and then analyze them along with the EcoQOs indicators framework.

17. Dr. Shulkin answered that the presented activity for biennium 2018-2019 will mainly focus on the in-depth analysis of six indicators most ready to be applied, and national numerical targets of EcoQO indicators and possible alignment of regional EcoQO targets the SDGs indicators. Therefore, six EcoQO indicators agreed by the National Experts will be described in more detail and aligned, where applicable, with existing SDG indicators (which are still under development).

18. Dr. Alexander TKALIN, the consultant of POMRAC, added that in some cases proxy SDG indicators are currently considered.

19. Prof. Osamu MATSUDA, the National Expert of Japan, expressed his concern with next phases of this project. Dr. Shulkin answered that one of the most important points for this activity is its adoption by national decision makers, and the next stage hopefully would be harmonization of scientific methodology.

20. After discussion, the meeting noted the progress and agreed on further implementation of this project.

Agenda item 6. Discussion and adoption of the Workplan and budget for 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

21. Dr. Shulkin presented the Workplan and budget for 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 (Appendix 3). The meeting was invited to discuss and adopt the Workplan and budget.

22. Ms. Ding suggested to amend point 3 of the Structure of National Inputs (brief overview of social and economic situation in 2001-2016) by reducing the time interval to 2006-2016. In addition, she asked to include all National Experts who will prepare National Inputs for the related Regional Overview into the list of authors. Dr. Shulkin agreed with these suggestions.

23. After discussion, the meeting noted the progress and agreed on further implementation of this project.

Agenda item 7. 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 sea area'

24. Mr. Nikolai KOZLOVSKII, a representative of POMRAC, presented Workplan and budget for POMRAC activity 'Microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian part of NOWPAP sea area' (Appendix 4). The meeting was invited to discuss and adopt the Workplan and budget.

24. Dr. Tkalin asked to clarify which funding amount is included into the activity under SSFA with DINRAC, because it was not shown in the budget table.

26. Dr. Kang suggested to exclude preparation of National Inputs on abundance of microplastics in river runoff and coastal waters of NOWPAP from the workplan because it duplicates activities to be carried out by other RACs, for example CEARAC under 2018-2019 RAP MALI workplan.

27. Ms. Ding expressed her concerns about lack of data in China related to the river runoff of microplastics, therefore she suggested to postpone submission of National Inputs at least for one biennium.

28. Dr. Jongseong RYU, the Focal Point of Korea, mentioned the heavy burden for the member states while preparing National Inputs. Also, he said that it should be clarified what exact data are to be submitted with the Inputs. In addition, he asked who will organize the Expert workshop on Microplastic issues in river runoff and coastal waters of the NOWPAP region. Dr. Shulkin answered that POMRAC will try to involve renowned experts within NOWPAP member states to facilitate conduction of the workshop.

29. Mr. Katsunori YANO, the Focal Point of Japan, expressed his concern about duplication of activities carried out by other RACs and suggested that the possibility of data sharing, nomination of the experts, and details of the workplan should be discussed with Marine Litter Focal Points and Experts.

30. After consideration of comments from Focal Points and representatives of RACs, it was decided to amend the workplan and budget. The Focal Points decided to exclude preparation of National Inputs from the workplan. However, considering the necessity to conduct the Workshop on Microplastic issues in river runoff and coastal waters of the NOWPAP region, following the decisions of the 22nd IGM, it was agreed to conclude MoUs with National Experts (nominated upon agreement of both POMRAC Focal Points and Marine Litter Focal Points) for preparation of detailed presentations on microplastic contamination of coastal and river water to be presented during the Workshop. The structure of National Inputs was excluded from the document, and the budget was revised accordingly with indication of all funding sources, including SSFA with DINRAC.

31. Following the request made by the NOWPAP Marine Litter Focal Points Meeting held in June 2018, POMRAC secretariat was requested to share the progress on this project with NOWPAP Marine Litter Focal Points, including the preparation of the workshop on microplastics.

Agenda item 8. Yellow Sea Large Marine Ecosystem (YSLME) Project, Phase II

32. The Chair invited Dr. Jaeryoung OH, the representative of YSLME II, to give presentation on implementing the second phase of the Yellow Sea Large Marine Ecosystem Project. In his

report, he also mentioned that YSLME developed several activities, which could be relevant to current NOWPAP activity on marine litter, including microplastics, and other EcoQOs.

Agenda item 9. Workplan and budget of POMRAC activities for the 2018-2019 biennium

33. Dr. Kachur introduced to the Meeting the Workplan and Budget for POMRAC in 2018-2019 biennium, which was approved at the 22th NOWPAP IGM (December 2017, Toyama, Japan). The meeting discussed how to implement the workplan (Appendix 5) more efficiently.

34. Dr. Liu encouraged re-establishment of the ICARM Working Group. Dr. Kachur responded that POMRAC secretariat will consider this possibility

Agenda item 10. Arrangements for the 16th NOWPAP POMRAC FPM

35. Dr. Kachur announced to the participants that the 16th POMRAC FPM will be organized around September 2019. The exact venue will be decided during the intersessional period via e-mail communication with Focal Points. The meeting invited China to kindly consider hosting the next POMRAC FPM.

Agenda item 11. Other matters

36. The Chair invited Dr. Liu to present the 'Development of a roadmap for preparation of the Regional Action Plan for Marine and Coastal Biodiversity Conservation in the NOWPAP region' (UNEP/NOWPAP/POMRAC/FPM 15/Inf. 6) on behalf of the CEARAC secretariat. After the presentation, Dr. Liu asked POMRAC Focal Points and Experts to comment on this activity.

37. Dr. Matsuda suggested that there is a possible overlapping of this activity of CEARAC with activities of other RACs, for example EcoQO activity of POMRAC, which uses biodiversity conservation as one of the Ecological Quality Objectives.

38. Dr. Kang noted that the roadmap of this project should be carefully developed, especially considering that the objectives, scope, and workplan for this activity are very ambiguous, and relevant work has been already implemented by CEARAC and other RACs.

39. Dr. Tkalin suggested that two years for the roadmap development is very long period and it would be better to hire a consultant who can prepare the workplan within one year or less.

40. Dr. Kachur asked Dr. Tatiana ORLOVA to present Russian proposal for the new NOWPAP project "Identification of key indicator species and ecosystems of biodiversity change in the NOWPAP region". Dr. Liu requested to submit this proposal to the RCU for further distribution among national Focal Points for approval.

41. Dr. Liu presented the document "Follow-up and review of SDG 14.1 using NOWPAP mechanism" (UNEP/NOWPAP/POMRAC/FPM 15/Inf. 7). Meeting participants took presented information into account.

Agenda item 11. Adoption of the Report of the meeting

42. A draft report of the meeting was prepared by the Rapporteur and the Secretariat. After discussion and minor changes, the report was adopted.

Agenda item 12. Closure of the meeting

43. The meeting was closed by the Chair at 12:05 on 5 July 2018.



Participants of the 15th NOWPAP POMRAC Focal Points Meeting

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Appendix 2

Workplan and budget for the Development of regional NOWPAP EcoQO targets aligned with SDG indicators. Phase 1

1. Background

After adoption of sustainable development goals (SDGs) by the UN General Assembly in December 2015, NOWPAP activities related to Ecological Quality Objectives (EcoQOs) for the northwest Pacific also have to be aligned with the SDG indicators.

The 22nd NOWPAP Intergovernmental Meeting (IGM) has approved the Programme of Work for 2018-2019 biennium, including an 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 six NOWPAP EcoQO indicators could be applied in their countries. Agreed indicators are as follows:

3.1.1. Nutrients concentration in the water column (possible SDG indicator 14.1.1)

3.1.2. Nutrient ratios (silica, nitrogen and phosphorus)

3.2.1. *Chlorophyll a* concentration in the water column (possible SDG indicator 14.1.1)

3.2.3. Harmful algal blooms (HABs)

4.1.1. Concentration of the contaminants in sediments, water and organisms

5.1.1. Trends in the amount and composition of litter washed ashore (possible SDG indicator 14.1.1)

These indicators are related to eutrophication (first four of them), concentrations of contaminants (though in some countries data are only available for bottom sediments and living organisms while in other countries only for water and sediments), and marine litter (washed ashore).

At this stage, certain SDG-14 indicators related to *Chlorophyll a* concentrations and marine litter (though those indicators are still under development) might be taken into account while comparing approaches of NOWPAP member states in setting up numerical targets for each EcoQO indicator. During this process, NOWPAP member states could align the regional goals/objectives/indicators/targets with the relevant SDGs and associated indicators.

From the experience of other Regional Seas programmes (such as MAP, HELCOM and OSPAR) as well as the MSFD, the logical steps to achieving the Good Environmental Status of

the Regional Seas are as follows. First, countries agree on common regional Ecological Quality Objectives (EcoQOs). Second, they agree on operational criteria (more detailed than EcoQOs). Third, countries agree on common indicators to be applied (taking into account geographical differences). Finally, numerical targets are set (taking into account geographical differences and other factors). After several years, the whole system of EcoQOs, operational criteria, indicators and targets is reviewed and necessary adjustment are made.

2. Aim

Though at a regional level the work on EcoQOs and related indicators has started just recently, each NOWPAP member state has already in place the routine marine environment monitoring system (or systems) and applicable national standards. **Therefore, the aim of this project is to analyze the national numerical targets (where they exist) on the NOWPAP EcoQO indicators and suggest (and then discuss) possible regional EcoQO targets aligned to the extent possible with the above mentioned SDGs indicators.**

3. Main tasks

Each of the above mentioned SDG indicators has different background, availability of information, and implementation potential in each NOWPAP country. Obviously different experts from all NOWPAP countries and all NOWPAP RACs should be brought together for the project implementation. For each indicator the following aspects should be studied and presented:

- 1) Scientific background including analysis of advantages and limitations of indicator, taking into account international knowledge and experience within the NOWPAP region;
- 2) Availability of relevant information, including international and national official sources;
- 3) Assessment of possibility of applying each indicator, taking into account existing national legislation.

The preparation of National Inputs with information on above mentioned 3 aspects for each of the above mentioned SDG indicators will be a core of this project. The template (proposed structure) of National Inputs is prepared by POMRAC Secretariat and presented in Annex 1.

4. Expected outcomes and future direction

The regional synthesis prepared after an analysis of these National Inputs (and preferably after a regional workshop) will be the main output of this project. This synthesis report will be reviewed by NOWPAP RACs, RCU, NFPs, and then published and circulated between relevant stakeholders. In 2019, a regional workshop is planned where national inputs will be discussed and possibility of setting up regional targets (to be suggested by POMRAC Secretariat) will be explored.

5. Schedule

| Time | | Actions | Main body |
|------|-------|---|------------------------|
| 2018 | Q1-Q2 | Nomination of experts and signing MoUs | POMRAC, POMRAC FPs |
| | Q3-Q4 | Preparation of National Inputs | POMRAC, POMRAC Experts |
| 2019 | Q1 | Workshop to discuss possible regional targets and Finalization of National Inputs | POMRAC, POMRAC Experts |
| | Q2-Q3 | Compilation of National Inputs and preparation of draft regional synthesis (report) | POMRAC, POMRAC Experts |
| | Q4 | Finalization and publication of Regional Overview | POMRAC |

6. Budget

| Contract | Timing | Output | To be completed | Counterpart | Budget (US\$) |
|--------------------------------|-------------------------|--------------------|--|---------------------|---------------|
| Preparation of National Inputs | 2018, Q3-Q4 2019, Q1 | National Inputs on | 2018, December, 30 - Draft 2019, March, 1 - Final | Expert(s) in China | 4,000* |
| | | | | Expert(s) in Japan | 4,000* |
| | | | | Expert(s) in Korea | 4,000* |
| | | | | Expert(s) in Russia | 4,000* |

| | | | | | |
|---|-------------|----------------------------------|---------------------|---------------------------------|--------|
| Workshop to discuss possible regional targets and to finalize National Inputs | 2019, Q1 | Workshop report | 2019, March, 1 | POMRAC | 18,000 |
| Compilation of National Inputs and preparation of draft regional synthesis (report) | 2019, Q2-Q3 | Regional report | 2019, September, 30 | POMRAC, hired Consultant/Expert | 5,000* |
| Finalization and publication of Regional report | 2019, Q4 | Publication of Regional Overview | 2019, November, 30 | POMRAC | 4,000 |

* - through the DINRAC SSFA

Structure of expected input from national experts

Indicators for the EcoQO 3: Eutrophication adverse effects are absent:

3.1.1. Nutrients concentration in the water column (possible SDG indicator 14.1.1)

1. Please analyze advantages and limitations of this indicator taking into account existing national standards and experience within and beyond the NOWPAP region.
2. Please describe availability of relevant data and information, including official sources and scientific publications.
3. Please assess possibility of applying this indicator taking into account national legislation and existing national standards.
4. Please provide national numerical standards (targets) related to this indicator. Examples are given in the tables below.

Table 1. National standards of China for nutrient and COD concentrations in sea water (maximum permissible concentration, mgN/L, or mgO/L)

| Indicator | First level | Second level | Third level | Fourth level |
|-----------|--------------|------------------------|----------------------|------------------------|
| DIN | ≤ 0.20 | $0.20 < x \leq 0.30$ | $0.30 < x \leq 0.40$ | $0.40 < x \leq 0.50$ |
| DIP | ≤ 0.015 | $0.015 < x \leq 0.030$ | | $0.030 < x \leq 0.045$ |
| COD | ≤ 2 | $2 < x \leq 3$ | $3 < x \leq 4$ | $4 < x \leq 5$ |

Table 2. National standards of Japan for nutrient concentrations in sea water (maximum permissible annual average, mgN/L, and mgP/L)

| Indicator | Class I | Class II | Class III | Class IV |
|-----------|-------------|-------------|-------------|-------------|
| TN | ≤ 0.2 | ≤ 0.3 | ≤ 0.6 | ≤ 1.0 |
| TP | ≤ 0.02 | ≤ 0.03 | ≤ 0.05 | ≤ 0.09 |

Class I - Conservation area

Class II - Bathing, good catch of wide variety of fish species

Class III - Good catch of most fish species except some demersal fish species

Class IV - Industrial water, catch of fishes tolerant to pollution

Table 3. National standards of Russia for nutrient concentrations in sea water (maximum permissible concentration, mgN/L, mgP/L)

| Water types: | Waters for fishery purposes | | | Bathing waters |
|--------------|-----------------------------|--------------------|------------------|----------------|
| Indicator | Oligotrophic waters | Mesotrophic waters | Eutrophic waters | |
| DIN | < 9.42 | < 9.42 | < 9.42 | < 12.7 |
| DIP | ≤ 0.050 | < 0.150 | < 0.200 | < 1.14 |

3.1.2. Nutrient ratios (silica, nitrogen and phosphorus)

1. Please analyze advantages and limitations of this indicator taking into account existing national standards and experience within and beyond the NOWPAP region.
2. Please describe availability of relevant data and information, including official sources and scientific publications.
3. Please assess possibility of applying this indicator taking into account national legislation and existing national standards.
4. Please provide national numerical standards (targets) related to this indicator.

3.2.1. Chlorophyll a concentration in the water column (SDG indicator 14.1.1)

1. Please analyze advantages and limitations of this indicator taking into account existing national standards and experience within and beyond the NOWPAP region.
2. Please describe availability of relevant data and information, including official sources and scientific publications.
3. Please assess possibility of applying this indicator taking into account national legislation and existing national standards.
4. Please provide national numerical standards (targets) related to this indicator.

3.2.3. Harmful algal blooms (HABs)

1. Please analyze advantages and limitations of this indicator taking into account existing national standards and experience within and beyond the NOWPAP region.
2. Please describe availability of relevant data and information, including official sources and scientific publications.
3. Please assess possibility of applying this indicator taking into account national legislation and existing national standards.
4. Please provide national numerical standards (targets) related to this indicator.

Indicators for the EcoQO 4: Contaminants cause no significant impact on coastal and marine ecosystems and human health:**4.1.1. Concentration of the contaminants in sediments, water and organisms**

1. Please analyze advantages and limitations of this indicator taking into account existing national standards and experience within and beyond the NOWPAP region.
2. Please describe availability of relevant data and information, including official sources and scientific publications.
3. Please assess possibility of applying this indicator taking into account national legislation and existing national standards.
4. Please provide national numerical standards (targets) related to this indicator.

The total list of hazardous substances which could be recommended to the observation in the NOWPAP region might cover substances included in the Stockholm Convention on Persistent Organic Pollutants as well as toxic and radioactive elements (Pb, Cd, Hg, Ni, Cu, Zn, Cr, As,

Cs-137), PAH, organotin compounds and petroleum hydrocarbons. Stockholm Convention List includes aldrin, chlordane, DDT, dieldrin, toxaphene, mirex, endrin, heptachlor, hexachlorobenzene (HCB), chlordecone, pentachlorobenzene, lindane (γ -HCH), α -HCH, β -HCH, endosulfan, bromodiphenyl ethers (tetraBDE, pentaBDE, hexaBDE and heptaBDE), pentachlorobenzene (PeCB), perfluorooctanesulfonic acid (PFOS) and its salts, hexabromocyclododecane (HBCD), polychlorinated biphenyls (PCBs), dioxins and dibenzofurans. Some of them (aldrin, chlordecone, dieldrin, endrin, heptachlor, toxaphene) are not relevant for the NOWPAP Region because recent studies in China, Japan and Korea have shown that these substances either are not found in the marine environment or are present in trace amounts and tend to decrease in concentrations compared with previous decades, see e.g. (NOWPAP POMRAC 2015. Regional overview of PTS and POPs issues of ecological concern in the NOWPAP region).

Indicators for the EcoQO 5: Marine litter does not adversely affect coastal and marine environments:

5.1.1. Trends in the amount and composition of litter washed ashore (SDG indicator 14.1.1)

1. Please analyze advantages and limitations of this indicator taking into account existing national standards and experience within and beyond the NOWPAP region.
2. Please describe availability of relevant data and information, including official sources and scientific publications.
3. Please assess possibility of applying this indicator taking into account national legislation and existing national standards.
4. Please provide national numerical standards (targets) related to this indicator.

Appendix 3

Workplan and budget for 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

1. Background

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 is obvious, especially taking into account the effects of global changes. This is 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. Proposal was suggested at the 14th POMRAC FPM, and approved by 21 IGM in 2017.

2. Aim

The main goal of this project is 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) is a second major goal of this project.

3. Main tasks

Project will 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. Suggested structure is presented in Annex 1. Regional overview will be prepared by compilation and synthesis of these National Inputs with the same overall structure.

National inputs and Regional Overview will include the recent available published data on the river runoff of contaminants in the NOWPAP region in the format used in the previous Regional Overview on RDI to allow assessment of the inter annual trends. List of the rivers is also recommended to save for the same reason. Methodology of the river runoff monitoring in all NOWPAP countries is similar in general. At the same time, some differences exist, and influence of this difference has to be reflected in Regional Overview.

Direct inputs of contaminants are counted and registered 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.

The proposed procedure for preparing the National Inputs and the Regional Overview would be as follows:

- The National Inputs will be compiled and written based on the 'Structure and Contents of National Inputs' agreed upon by the 15th POMRAC FPM (in 2018). FPM will also discuss sources of information for the regional overview.
- The National Inputs will be prepared by either the POMRAC FPs assisted by national experts or directly by national experts hired by POMRAC.
- The draft National Inputs will be submitted to POMRAC Secretariat after review and approval by POMRAC FPs no later than by the end of March 2019.
- An experienced consultant from the region, hired by POMRAC, will conduct a preliminary compilation and harmonization of the four National Inputs and will provide comparative analysis, short introduction and summary.
- The 16th POMRAC FPM (in 2019) will discuss and agree the Regional Overview. When approved, the Regional Overview will be published as a POMRAC technical report.

4. Expected outcomes and future direction

Regional Overview is suggested as a main output of the project. This overview will be reviewed and commented by NOWPAP RACs, RCU, NFPs, and then published and circulated among relevant stakeholders (government officials, scientific community) and general public.

5. Schedule

The proposed schedule is as follows.

| Time | | Actions | Main body |
|------|-------|---|------------------------|
| 2018 | Q1-Q2 | Nomination of experts and signing MoUs | POMRAC, POMRAC FPs |
| | Q3-Q4 | Preparation of National Inputs | POMRAC, POMRAC Experts |
| 2019 | Q1 | Finalization of National Inputs | POMRAC, POMRAC Experts |
| | Q2-Q3 | Synthesis of National Inputs and preparation of draft Regional Overview | POMRAC, POMRAC Experts |
| | Q4 | Finalization and publication of Regional Overview | POMRAC |

6. Budget

| Contract | Timing | Output | To be completed | Counterpart | Budget (US\$) |
|---|-------------------------|---|--|---------------------------------|---------------|
| Preparation of National Inputs on the river runoff and direct inputs (RDI) of contaminants to the marine and coastal environment of the NOWPAP region | 2018, Q3-Q4 2019, Q1 | National Inputs on RDI | 2018, December, 30 - Draft 2019, March, 1 - Final | Expert(s) in China | 4,000* |
| | | | | Expert(s) in Japan | 4,000* |
| | | | | Expert(s) in Korea | 4,000* |
| | | | | Expert(s) in Russia | 4,000* |
| Synthesis of National Inputs and preparation of draft Regional Overview | 2019, Q2-Q3 | Regional Overview Assessment of trends in river and direct Inputs of contaminants to the marine and coastal environment in the NOWPAP region during the last | 2019, September, 30 | POMRAC, hired Consultant/Expert | 5,000* |

| | | | | | |
|---|----------|----------------------------------|--------------------|--------|-------|
| | | decade | | | |
| Finalization and publication of Regional Overview | 2019, Q4 | Publication of Regional Overview | 2019, November, 30 | POMRAC | 4,000 |

* - through the DINRAC SSFA

Annex 1**Preliminary structure**

of National Inputs and Regional Overview on 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

- **Executive Summary**
- **Introduction** (goals, brief general information on river and direct inputs, geographical scope including trends of hydrological/climatic conditions during the last decade)
- **Social and economic situation in 2001-2016** (short overview of relevant social and economic aspects related to river and direct inputs of contaminants)
- **National monitoring and assessment activities** (related to river and direct inputs of contaminants, including main features of national policies and laws)
- **National monitoring program(s) including features and changes in methodologies and procedures**
- **Present situation of river and direct inputs of contaminants** (based on the most recent available data)
- **Assessment of trends in river and direct inputs during the last decade**
- **Conclusions**
- **Data sources** (publications, websites and other information sources)

Appendix 4

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’

1. Background

Historically NOWPAP POMRAC has been implementing the activities on WG2 – River and Direct inputs of contaminants into the marine environment of the NOWPAP region. The recent activities involved collection of data on heavy metals and biogenic compounds (including nitrates) in 2010, and on PTS and POPs in 2015.

Since the last biennium, NOWPAP POMRAC also focused on collection of data related to microplastic contamination via rivers after publishing a case study of microplastic contamination in the coastal marine water area in the Russian part of NOWPAP region under the RAP MALI activity. Microplastic contamination is considered globally as one of the priority environmental issues. In relation to other NOWPAP countries, there are no reliable data on river contamination with microplastics in Russia, therefore it was agreed at the 14th POMRAC FPM that the first stage of this work would also include assessment of the contamination in several rivers discharging into the sea area of Russian part of the NOWPAP region. The activity was approved by the 21 IGM in 2017.

2. The goal of the project

The goal of this project is 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.

3. Tasks of the project

The tasks of the project are as follows:

- 1) To assess and analyze current methods of sampling microplastics in the water and the sample treatment protocols applied in NOWPAP countries, considering possible development of general guidelines/recommendations for microplastic monitoring in NOWPAP (a related

workshop and/or e-mail correspondence should be a tool for discussing the applicability of most appropriate methods for the regional monitoring);

2) 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 and in the China/Russia transboundary rivers;

3) All member countries will provide their recommendations on what should be done to minimize the microplastic pollution impact.

4. Implementation plan

Collection of existing data on microplastics abundance in rivers and coastal waters of China, Japan, Korea and Russia will be done by the nominated national experts and submitted as presentations during the Workshop on Microplastic issues in river runoff and coastal waters of NOWPAP region. Limited surveys in the key areas and intercalibration exercises necessary for the harmonization of methodological approaches are also possible, pending availability of additional financial support or in-kind contributions from participating institutions.

Seasonal study of microplastic concentrations in Tumen river, Suifenhe river and Ussury river (which are the transboundary rivers between Russia and China) will be carried out by the personnel of Pacific Geographical Institute FEB RAS. Additional synchronized surveys will be carried out in the near-estuary coastal water of the Peter the Great Gulf (Russia) for the determination of migration ability of microplastic particles of different genesis, comparing this data to the 2016/2017 survey and further monitoring in the coastal water of the Peter the Great Gulf (this part of activity is planned to be carried out within RAP MALI funding). The samples collected during these surveys will be studied (processed and analyzed) jointly with other research institutions as a contract work.

Workplan and budget of 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'

Workplan

| Activities | 2018 | | | | 2019 | | | |
|--|------|----|----|----|------|----|----|----|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| 1. Finalize the workplan | | | | | | | | |
| 2. Sign MOUs with experts for preparation of national summaries (presentations) for WS on microplastic issues | | | | | | | | |
| 3. Collect information on microplastics in river and coastal waters within the NOWPAP region | | | | | | | | |
| 4. Seasonal surveys of microplastics in rivers and coastal areas within the Russian part of the NOWPAP region | | | | | | | | |
| 5. WS on Microplastic issues in river runoff and coastal waters of NOWPAP region* | | | | | | | | |
| 6. Discussion and adoption of Workshop results at the 16th POMRAC FPM (for possible preparation of Regional Overview in 2020-2021) | | | | | | | | |

*With presentations from NOWPAP member states on microplastic contamination in river runoff

Budget

| Activity | Cost (USD) |
|--|------------|
| 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 |
| Organization of regional workshop back-to-back with NOWPAP POMRAC FPM* | 30,000* |
| Total | 63,000 |

*Under SSFA with DINRAC

Appendix 5

Workplan and Budget of POMRAC for 2018-2019 Biennium

1. Introduction

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 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; WG 2 – River and Direct Inputs of contaminants into the marine and coastal environment. From 2007, POMRAC has started practical implementation of activities related to *Integrated Coastal Area planning and integrated coastal area Management (ICARM WG)*. These activities were implemented in close collaboration with all NOWPAP RACs and with the UNEP/GPA and under coordination of RCU.

In 2011 16th NOWPAP IGM adopted NOWPAP Medium-term Strategy, 2012-2017. One of the main MTS Objectives for Theme 1, Integrated coastal and river basin management (ICARM), is 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). One of the suggested activities for this Theme is Setting Ecological Quality Objectives for marine and coastal environment, based on the regular assessments.

In Draft NOWPAP Medium-term Strategy, 2018-2023 MTS 2018-2023 Objective for priority area “Assess status of the marine and coastal environment” is ***NOWPAP countries are presented with and use reliable information and data on the state of marine and coastal environment to support evidence-based policy making process.*** *Outcomes/ Expected Accomplishments* for this priority area are as follows:

- 2.1. NOWPAP member states are provided with integrated periodic assessments of state of marine and coastal environment and its individual components, including (but not limited to) biodiversity, chemical and biological pollution, harmful algal blooms, marine litter, oil and HNS threats, and climate change impacts to inform and foster policy action;
- 2.2. “Good environmental status” of the NOWPAP is defined and provides a baseline and direction for member states action;
- 2.3. NOWPAP member states, through the NOWPAP Data and Knowledge Management Portal, have free and user-friendly access to data and reliable information on coastal and marine environment collected from members, NOWPAP RACs, other institutions and projects;
- 2.4. New and emerging environmental issues, including climate change impacts on

socio-ecological systems in the NOWPAP region, are identified and addressed by member states, as appropriate.

2. POMRAC Workplan and Budget for 2018 - 2019 Biennium

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 Draft NOWPAP MTS 2018-2023, and taking into account the abovementioned responsibilities and activities, POMRAC in 2018-2019 should focus on the following new issues:

1. Joint Activity for WG1, WG2 and ICARM WG in cooperation with RACs, RCU and relevant organizations (OSPAR, PEMSEA, PICES, WESTPAC, YSLME and others): Development of regional NOWPAP EcoQO targets aligned with SDG indicators (Phase 1), with regional workshop in 2019.
2. Joint Activity for WG1, WG2 and ICARM WG in 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.
3. Microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian coastal waters (Activity of WG2), with Regional Workshop, which will be organized by DINRAC.

Taking into account the abovementioned, **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 the Regional Overview “Assessment of trends in river and direct Inputs of contaminants to the marine and coastal environment in the NOWPAP region during the last decade”.
- Development of Report: Microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian coastal waters.

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 |