



**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

**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 (UNEP/NOWPAP/POMRAC/FPM 15/Inf.4). 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 regionally.

3. Tasks of the project

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.

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 National Inputs. 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 employees 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.

The National Inputs and the results of Russian case study will be presented as technical reports at the workshop and will be published as workshop proceedings.

The procedure for preparing the National Inputs 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.
- The National Inputs will be prepared by either NOWPAP Marine Litter FPs assisted by national experts or directly by national experts hired by POMRAC.

- The draft National Inputs will be submitted to POMRAC Secretariat before the related workshop carried out back-to-back with the 16th POMRAC FPM.

Workplan and budget

Workplan

Activities	2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1. Finalize the workplan								
2. Sign MOUs with experts								
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. Preparation of National Inputs on microplastics in the NOWPAP countries								
6. WS on Microplastics								
7. Discussion and adoption of National Inputs at the 16 th POMRAC FPM (for possible preparation of Regional Overview in 2020-2021)								

Budget

Activity	Cost (USD)
Regular sampling trips to the selected sites of rivers downstream and sea coasts	7,200
Processing of samples for determination of microplastic contents	1,800
Analysis of quantity and quality of microplastic 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 with further development of the National Input	9,000
Total*	33,000

*Preparation of National Inputs of China, Japan and Korea on the microplastic issues in the rivers and coastal waters and Organization of regional workshop back-to-back with 16th NOWPAP POMRAC FPM will be funded under SSFA with DINRAC

Draft Structure of National Inputs
on the Microplastics abundance in river runoff and coastal waters of
the NOWPAP region with a case study in the Russian part of
NOWPAP area

Executive Summary

Introduction (goals, brief general information on river input of microplastic pollution, geographical scope)

Social and economic situation in 2001-2016 (short overview of relevant social and economic aspects related to microplastic contamination)

National monitoring and assessment activities (related to microplastic contamination, 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 coastal water contamination with microplastics

Assessment of trends in river and coastal water contamination with microplastics during the last decade

Conclusions

Data sources (publications, websites and other information sources)