



**Northwest
Pacific
Action Plan**

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Northwest Pacific Action Plan
Pollution Monitoring Regional Activity Center

The Thirteenth NOWPAP POMRAC Focal Points Meeting
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**Workplan and budget for POMRAC Marine Litter Activities for the
2016-2017 biennium**

1. Background

Marine litter is now recognized as a significant part of marine pollution that destroys the ecological, economic, cultural, recreational and aesthetic values of the marine and coastal environment of the Northwest Pacific region.

Microplastic pollution, as an aspect of marine litter pollution, attracts increasing attention these days due to the biological hazards it causes by ingestion of smaller plastic particles by marine animals and fish, as it is able to concentrate PCB, POPs, plasticizers, and other hazardous chemical substances, which are supposed to cause diseases in marine life.

The Twentieth Intergovernmental Meeting approved NOWPAP RAP MALI work plan and budget for the 2016-2017 biennium. The meeting encouraged NOWPAP Member States to carry out activities to prevent, monitor and remove marine litter at a national and local level through the implementation of the NOWPAP RAP MALI. NOWPAP RAP MALI budget allocations for the 2016-2017 biennium provide US\$ 6,000 for implementation of RAP MALI activities by each Regional Activity Center, including POMRAC.

The studies on microplastic pollution of the marine environment in the Russian part of the North-West Pacific region were initiated quite recently, and as of now the data of these studies are very scarce and incomplete. In order to study concentration, composition, size and ways of transition of the marine microplastics in the Peter the Great Gulf (Far Eastern Russia), it was decided to include this activity into the workplan of NOWPAP POMRAC.

In acknowledgement of the problems imposed by marine litter in the region and recognizing that the issue of microplastic pollution is an urgent issue in the region of NOWPAP, the Twentieth Intergovernmental Meeting of the Northwest Pacific Action Plan (Beijing, People's Republic of China 28-30 October 2015) has decided that in the biennium of 2016/2017 the Pollution Monitoring Regional Activity Center in cooperation with Maritime State University named after Nevelskoy will perform the Research on micro-plastics content and migration in the Peter the Great Gulf.

2. Aim

Aim of this activity is to prepare the Research report on micro-plastics content and migration in the Peter the Great Gulf to promote for better understanding of marine litter pollution in the Russian part of the NOWPAP region.

3. Main tasks

3.1. To reveal presence or absence of microplastic pollution in the specified plots of the water area.

The sampling of surface water will be carried out by trawling of a neuston net. Then collected samples will be processed in the laboratory and undergo microscopic analysis for revealing microplastic particles.

3.2. To carry out Fourier Transform - infrared (FT-IR) spectroscopy of retrieved microplastic samples

The FT-IR spectroscopy will be needed for qualitative assessment of the retrieved specimens. This work is planned to be done in cooperation with other research institutions, probably with Korea Institute of Ocean Science and Technology (KIOST).

The samples obtained during the study will be also stored for further analysis on concentration of POPs and other hazardous substances through application of mass-spectroscopy or chromatography.

3.3. To map surface water pollution and hotspots of microplastic pollution

The area of survey would include sites with various level of human pressure across the Peter the Great Gulf, i.e. sites adjoining to urban areas, river mouths, natural reservations, etc.

3.4. To compile the Report on the microplastic content and migration in the Peter the Great Gulf

The report should be compiled by POMRAC in cooperation with marine litter Focal Points of Russia.

4. Expected outcomes

After preparation, the Report will be available at the web site of NOWPAP POMRAC. The activity will reveal the level of microplastic pollution in the Russian part of the NOWPAP area and it would be possible to compare the related data from other member countries.

5. Schedule of implementation of the activity

The funding for this activity from UNEP trust fund is 6,000 US\$.

The output of this activity is expected to be the Research report on micro-plastics content and migration in the Peter the Great Gulf. The delivery date is 30 October 2017.

The stages of the activity are as follows:

Stage	Period of implementation
1) Sampling of seawater with a neuston net	Summer 2016
2) Visual separation using a stereomicroscope and counting (2016)	Autumn 2016
3) Qualitative assessment of microplastic samples	2016/ 2017
4) Mapping and modelling	2017
5) Report compilation	By October 30, 2017

6. Other activities:

On 12th July – 10th August 2016, Tokyo University of Marine Science and Technology plans to carry out a survey cruise around Japan intended as the Joint research project on marine litter for sharing methods of visual survey and microplastics survey. This survey is expected to become the first step on the way to standardize monitoring methods of marine litter in North West Pacific. POMRAC was also invited to participate in one leg (a trip from a port to a port) from 14th to 22nd July for a joint survey with foreign scientists.