

Terms of reference for the HELCOM Expert Group on Monitoring of Radioactive Substances (EG MoRS) 2024-2027

Approved by the HELCOM Source to Sea Working Group via correspondence in August 2024.

Purpose:

The Updated Baltic Sea Action Plan (BSAP, 2021) outlines the following ecological objective on hazardous substances: “Minimal risk to humans and the environment from radioactivity”. The BSAP also states that as shown by the latest HELCOM assessments of pollution by heavy metals, organic contaminants and radioactive substances, the Baltic Sea remains heavily impacted by hazardous substances. In particular, levels of polybrominated diphenyl ethers (PBDEs), mercury and cesium-137 are still high in all parts of the sea, and contaminants of emerging concern, such as some pharmaceuticals, were also found in almost all components of the marine environment.

Already the 2013 HELCOM Copenhagen Ministerial Declaration acknowledged that due to radioactive fallout from the Chernobyl accident the Baltic Sea has the highest concentrations of ¹³⁷Cs of any regional sea and recognized the risk of pollution by radioactive substances caused by nuclear accidents in the Baltic Sea catchment area or farther away. The Baltic Sea furthermore ranks third in the world with respect to ⁹⁰Sr in seawater, with only the Irish Sea and the Black Sea showing higher concentrations. Development in the energy supply sector within the Baltic Sea Region shows continued use of nuclear energy. In addition, NORM industry and medical applications are potential sources of radioactivity to the Baltic Sea environment. This requires enhanced cooperation between the countries of the region on matters related to prevention of environmental impacts on the Baltic Sea ecosystem from operating as well as planned nuclear installations.

The HELCOM Expert Group on Monitoring of Radioactive Substances in the Baltic Sea (hereinafter – HELCOM EG MoRS) aims to support the Source to Sea Working Group by monitoring of radioactive substances and making assessments of the impacts of radioactivity on the marine environment and humans within the scope of work as described below. The HELCOM EG MoRS EG will base its work on the expertise and knowledge of the HELCOM EG MoRS Group collected since 1986.

Duties

The overall duty of the HELCOM EG MoRS is to implement the Helsinki Convention on matters related to monitoring and assessment of radioactive substances in the Baltic Sea. The work is based on relevant HELCOM Recommendations (Recommendation 26/3 [“Monitoring of Radioactive Substance”](#)).

The duties of EG MoRS are per category:

Indicators

- to update as requested HELCOM Baltic Sea Fact Sheets and the core indicator report on radioactive substances in the Baltic Sea

Assessment

- to compile annually data on discharges of radioactivity from civil nuclear facilities to the Baltic Sea reported by the Contracting Parties;
- to compile annually data on discharges and environmental levels of radioactivity in the Baltic Sea submitted to the HELCOM databases, in accordance with relevant HELCOM Recommendations;
- to validate annually all data in the HELCOM MoRS databases of environmental and discharge data and to make them available on relevant electronic media to EG MoRS;

- to produce periodic assessments on radioactivity in the Baltic Sea. These assessments will include levels, inventories and trends for radioactivity in the Baltic Sea and the radiological impact on man and environment;
- to produce thematic reports as requested, e.g. on naturally occurring radionuclides in the Baltic Sea, releases of man-made radionuclides from non-nuclear activities (e.g. hospitals), simple procedures for assessing doses to man from radioactivity in the Baltic Sea;

Monitoring

- to coordinate basic monitoring programmes on radioactive substances in the Baltic Sea carried out by the Contracting Parties in accordance with relevant HELCOM Recommendations and the valid Guidelines;
- to keep the Guidelines on the monitoring of radioactive substances in the Baltic Sea updated;

Cooperation

- to coordinate and organize intercomparison exercises on seawater, and encourage participation in other proficiency tests and intercomparison exercises to assure high quality of the monitoring data;
- to keep under observation the development of trends of export of radionuclides from the Baltic Sea to the North Sea and vice versa, especially the inflow of radioactivity (e.g. ⁹⁹Tc, ¹²⁹I) from Sellafield and La Hague to the Baltic Sea and the outflow of Chernobyl radioactivity from the Baltic Sea to the Skagerrak.

Expected outputs

Expected outcomes of the work conducted in the frame of the Expert Group on Monitoring of Radioactive Substances in the Baltic Sea are detailed in the 2-year workplan of the Expert Group, regularly updated by the Group and approved by the Source to Sea Working Group.

The HELCOM EG MoRS will regularly report to the WG Source to Sea as concerning monitoring and trends of the radioactive substances at sea as well as regarding inputs of radioactive substances to the Baltic from land-based sources.

The HELCOM EG MoRS will exchange information, and also inform the WG Source to Sea on unexpected results and incidents concerning radioactive substances and emergency situations.

Organization of work

The group will consist of experts nominated by the Contracting Parties (national authorities and/or monitoring institutions that are, i.a., responsible for protection of marine environment from contamination by radioactive substances within HELCOM Contracting Parties,) and the IAEA and will be open to other Observers according to HELCOM procedures.

The group will report to and receive guidance from the Source to Sea Working Group.

The mode of work for the expert group will be mainly via correspondence and meetings facilitated by the Secretariat, the expected frequency being 1 meeting per year, of which every second one can have the option of being a physical meeting hosted by a Contracting Party.

A Chair will be elected by the group for a 2-year period.

The HELCOM Secretariat will provide administrative support to the group.

The current Terms of Reference are to be reviewed periodically, every four years, or as the need arises.

Work on indicator development and preparation will take place within expert group meetings and intersessionally, as required. Where necessary, online meetings will be utilized (e.g. smaller sub-

group meetings on specific issues). The Secretariat is available to support experts in establishing and organizing such meetings.