Fact Sheet
Beach Litter

HELCOM Indicators

Description

Beach litter is probably the indicator most used worldwide to monitor the input of marine litter to the aquatic ecosystems. Surveys of litter on the beach allow for a detailed evaluation of litter in terms of amounts and composition. Its strength lies on the provision of information on potential harm to marine biota and ecosystems as well as social harm (aesthetic value, economic costs, hazard to human health) and, to some extent, on sources of litter and the potential effectiveness of management measures applied.

What is already happening?

Mean change: The status assessment of marine beach litter in the Baltic Sea for 2016-2021 shows that 11 out of 16 sub-basins are above the HELCOM threshold value of 20 litter items per 100 m beach. The most found category of litter is various plastic items and fragments above 2,5 cm. Several of the items on the top-ten list are related to single use plastics and other types of used plastic. Single use plastics is a common litter item and is a driving force for the trends of marine litter. Marine litter from sea-based sources are only contributing slightly to littering on Baltic Sea beaches.

Extremes: After a stagnation in 2020 due to the Covid-19 pandemic, the global plastics production increased to 390.7 million tonnes in 2021[1]. Thus, it may be envisaged that part of this plastic production is mismanaged after used and ends up in our shorelines both as macro and microlitter.

What can be expected?

Mean change: At the regional level, the implementation of the 2021 HELCOM Regional Action Plan on Marine Litter is expected to enable the achievement of the marine litter ecological ("no harm to marine life from litter") and managerial objectives ("prevent generation of waste and its input to the sea, including microplastics" and "significantly reduce amounts of litter on shorelines and in the sea") of the 2021 Baltic Sea Action Plan to be achieved by 2030.

Extremes: Lau et al., published in 2020[2] an estimate of the effectiveness of interventions to reduce plastic pollution. They modelled stocks and flows of municipal solid waste and four sources of microplastics through the global plastic system for five scenarios between 2016 and 2040. They found that implementing all feasible interventions would reduce plastic pollution by 40% from 2016 rates and 78% relative to "business as usual" in 2040.

Other drivers

Litter present on beaches comes both from land- and sea-based sources. Land-based sources are often linked to consumer behaviour, such as recreational/tourism activities. Other land-based sources are riverine inputs and inputs from storm water overflows. Important sea-based sources are professional and recreational ships as well as fishing related activities. Thus, beach litter monitoring can reflect trends of littering of the coast/beaches including coastal waters and possibly also litter transported over long distances. Beach litter can, to a certain extent, be linked to sources and pathways, which is a fundamental step for a subsequent definition of measures aimed at acting on those sources and pathways to minimize the presence of marine litter in the aquatic environment.

Knowledge gaps

Future work needs to focus on the harmonisation of protocols, preferably by implementing the EU Joint List of Litter Categories for Marine Macrolitter Monitoring[3] by all HELCOM Contracting Parties. Furthermore, there is a need for better coverage with continuous monitoring efforts on beaches in all sub-basins, representing different types of beaches including remote ones.

Policy relevance

The historic agreement at the resumed Fifth Session of the United Nations Environment Assembly (UNEA 5-2) in March 2022 to develop an international legally binding agreement to end plastic pollution by 2024 is the best exponent of the policy relevance of marine litter in general and plastic litter in particular. HELCOM is committed to support the development of the global instrument, as stated in a voluntary commitment on the matter at the UN Ocean Conference held in Lisbon in June 2022.

1 PlasticsEurope. (2022) Plastics – the Facts. https://plasticseurope.org/knowledge-hub/plastics-the-facts-2022/
2 Lau, W.W.Y. et al. (2020) Evaluating scenarios toward zero plastic pollution. Science https://doi.org/10.1126/science.aba9475
3 Fleet, D., Vlachogianni, Th. and Hanke, G., (2021) A Joint List of Litter Categories for Marine Macrolitter Monitoring. EUR 30348 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-21445-8, doi:10.2760/127473, JRC121708 https://mcc.jrc.ec.europa.eu/main/dev.py?N=41&O=459