Sharing best practices part 1:

Monitoring techniques for macrolitter

OSPAR Riverine Litter workshop

Temse, Belgium, June 2025

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Purpose of this presentation

Presenting the OSPAR context regarding riverine litter

Detailing the proposal of OSPAR protocol for the monitoring and assessment of riverbank litter

Introduce the work of the following break-out session

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The OSPAR context on riverine litter

Operational objective S4.O7 of the OSPAR North-East Atlantic Environment Strategy 2020-2030: "**By 2025 OSPAR will develop approaches to prevent and reduce riverine marine litter inputs in cooperation with the relevant international river or river basin commissions, and other appropriate authorities and organizations**"

OSPAR RAP ML2 Action A.3.1: "**monitor, prevent and reduce riverine inputs of macro litter to the marine environment and share knowledge on microlitter monitoring**"

In 2023, creation of the OSPAR riverine litter expert group (REG) with the objective of developing indicators at OSPAR that will be submitted for approval as common indicators

Development of a candidate indicator "riverbank litter" agreed as a first step before addressing floating litter

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Added value of a riverine litter monitoring at OSPAR

⇒ **Provide information on abundance and composition of litter in pathways towards the OSPAR maritime area**

⇒ **Provide information on land-based sources of litter**

⇒ **Complementary to beach litter monitoring to assess effectiveness of measures targeting land-based sources**

- *Closer to terrestrial sources*
- *Not affected by transboundary pollution (or only at a local scale)*

⇒ **(Provide information on river environmental status)**

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Development of the OSPAR Guidelines for monitoring and assessment of riverbank litter

Work conducted by the Riverine litter expert group (REG)

Started in 2024

Taking into account:
-OSPAR beach litter guidelines
-monitoring on-going in OSPAR CPs (in particular in the Netherlands and France)

Proposal of full name indicator: **Abundance, composition and trends of riverine litter washed ashore and/or deposited on riverbanks, including analysis of its spatial distribution and, where possible, sources**.

Development of the OSPAR Guidelines for monitoring and assessment of riverbank litter

Aim of the OSPAR monitoring and assessment programme for the OSPAR riverbank litter candidate indicator:

(i) Production of riverbank litter data and metadata that are comparable across the OSPAR Area and comparable to the OSPAR beach litter monitoring data

(ii) Detection of spatial differences and temporal changes in abundance, composition, and, if possible, sources of litter encountered on riverbank monitoring sites within the OSPAR Area

(iii) Evaluation of the effects and efficiency of OSPAR RAP ML actions on riverine litter abundance (including effects on land based sources)

(iv) Assessment of OSPAR strategic and operational objectives

Development of the OSPAR Guidelines for monitoring and assessment of riverbank litter

Guidelines development and validation includes agreement on:

- Monitoring and sampling strategies
- Data reporting, handling and management
- Quality assurance and quality control procedure
- Assessment methods

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Development of the OSPAR Guidelines for monitoring and assessment of riverbank litter

Guidelines development and validation includes agreement on:

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Proposal of monitoring and sampling strategies

Based on the beach litter CEMP guidelines (common indicator)


OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

CEMP Guidelines for marine monitoring and assessment of beach litter

(OSPAR Agreement 2020-02)[1]

Source: EIHA(2) WP 20/01/04-Add.1

⇒ time-series of abundance of litter categories, individual litter types, groups of litter types and total count of litter items recorded on the OSPAR riverbank litter survey sites, up to four times per year

Litter considered: All riverbank litter items larger than 0.5 cm are surveyed with two different methods:

- Macrolitter items (>2.5 cm) and recognisable mesolitter items (between 0.5-2.5 cm, e.g. lighters, bottle caps)
- Mesolitter (unidentifiable items) and plastic pellets (not detailed here)

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Selection of survey sites

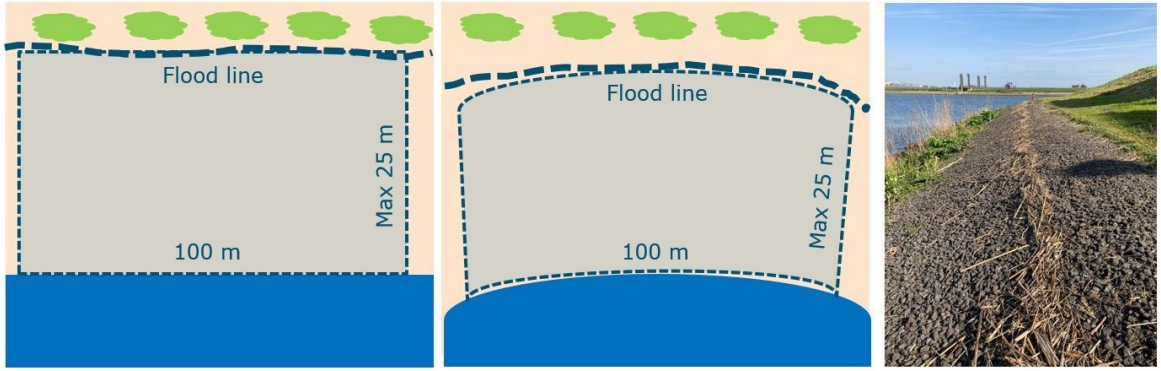
Proposed selection criteria

The riverbanks should, preferably:

- Be composed of sand, gravel, pebbles or grass;
- Should be in an area of the river system that is downstream from urban areas;
- Be safely accessible to surveyors all year round;
- Be accessible to facilitate the removal of riverine litter;
- Be a minimum length of 100 metres;
- Not be subject to other litter collection activities (i.e. riverbank cleaning).

Proposed sampling unit: 100m parallel to the water line

100 metres, measured as a line parallel to the water line.
The 2 sides of the unit are lines perpendicular to this line, from the water line to the flood line (up to a maximum of 25 meter)
The whole 100 m stretch of riverbank is surveyed, from the water's edge to flood line
If in a country-region, riverbanks of 100 m length are lacking or rare, the survey unit can be reduced to a minimum length of 50 m.



Left : a 100m sampling unit, middle: sampling area when riverbank is curved (Adapted from Vriend et al., 2020), right: an example of a flood line on a riverbank.

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Survey frequency

Once per season => 4 datasets per riverbanks per year

Recommended survey periods:
Winter: January
Spring: April
Summer: July
Autumn: October

In rivers that experience annual high discharges (due to snowmelt or heavy rainfall), it is recommended to do monitoring once water levels recede

Safety is the priority!

Sampling and litter identification

Litter sampling: all litter > 5 mm are sampled and removed from the site

Litter sorting: directly in the field or in a sheltered place (taking care to prevent fragmentation or entanglement of litter)

Sorting according to an adapted OSPAR beach litter survey list (133 litter types accross 10 categories based on material or use)

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Breakout session: the floor is yours!

⇒ **Work in groups**

⇒ **Questions to answer (template provided)**

- What barrier to implementation for the draft monitoring guidelines do you identify for your country and why?
- Together with your group, can you give a range (order of magnitude) of how much a potential monitoring strategy can cost per year?
- Are there any regulatory barriers that should be overcome for implementation?
- Which stakeholders (national or international) should be involved in the process?
- What technical elements in the monitoring guidelines hinder implementation?
- Any other things that should be considered?

⇒ **Synthesis and wrap-up**