

## OSPAR REGIONAL ACTION PLAN ON MARINE LITTER

### ACTION BRIEFING NOTE: ACTION 39 & 40

Status and finalization of the collective OSPAR action to understand loopholes and best practices in waste management that contribute to marine litter

## The Regional Action Plan for Marine Litter (RAP ML)

OSPAR's marine litter objective is "to substantially reduce marine litter in the OSPAR Maritime Area to levels where properties and quantities do not cause harm to the marine environment". OSPAR 2014 agreed a Regional Action Plan for Marine Litter for 2014-2021; this will be reviewed at the end of this period until spring 2021 after which OSPAR will work on the development of a new or updated RAP.

The RAP ML (2014-2021) defines the four key areas (themes) of actions to be implemented:

- A. Actions to combat sea-based sources
- B. Actions to combat land-based sources
- C. Removal Actions
- D. Education and outreach

The full Regional Action Plan and its outputs can be accessed via <https://www.ospar.org/work-areas/eiha/marine-litter/regional-action-plan>

This Action Briefing Note focuses on the Actions 39/40 which were addressed together. It sets out the issue, its relevance for OSPAR and the North-East Atlantic Ocean, the work that has been completed by regional action under OSPAR and finally highlights possible next steps which could be taken forward through the revision of the OSPAR regional action plan on marine litter.

## The Actions

**Action 39** was to *Highlight those waste management practices that impact significantly on marine litter. Engage with the industry and other authorities, at the appropriate level, in order for them to be able to develop best environmental practice, including identification of circumstances on where litter "escapes" into the marine environment and investigating how to close loops focusing on non-toxic material cycles.*

**Action 40** was to *Share best practice on waste management, e.g. on landfill bans of high caloric wastes (esp. for plastics).*

These actions form a component of Theme B of the RAP ML to combat land-based sources of marine litter under the sub-theme Improved waste prevention and management and were led by Germany.

Geographic scope: the whole OSPAR Maritime Area

# The issue

Significant amounts of plastics leak from land-based sources into the North-East Atlantic as a result of current inefficiencies or insufficiencies in waste management practices and planning, despite there being a long-established history of waste management in the region. The scale of this issue varies both within and between the countries of interest, as do the management approaches and chains of responsibility. One aspect of particular interest for OSPAR is to be able to strengthen the opportunities for cooperation between marine litter and waste management operations in addressing these challenges.

This subject is of particular political relevance given recent revisions in international legislation such as EU waste legislation and Basel Convention, in addition to the general uncertainties around how and why plastic waste leaks, despite established waste management systems, and what could potentially be done about it.

The focus for these actions has been on land-based inputs of macro plastic litter in all five OSPAR marine regions. Point sources as well as diffuse sources on the coasts and inland (input via rivers or winds) were also part of the considerations in the implementation of this action.

## ***Why are waste management plans and practices an issue for marine litter***

### **Waste management as a source of marine litter**

Waste management can be both a problem for introducing litter into the marine environment and a solution. A large proportion of the leaked plastics are caused by inefficient, or insufficient waste management and could be prevented by improved coordination between waste management and marine litter management practices or planning.

There are many, various reasons for the leakage of litter into the marine environment from waste management activities either before, during or after collection. These various factors have been elaborated as a result of the work reported in this note. It has been found to be the result of either a lack of awareness, a lack of knowledge, or that the responsible actors undervalue the potential benefits from marine litter reduction.

There are however opportunities for effective waste management coordinated with marine litter prevention activities that it could be an important solution to the marine litter crisis.

### **Significance of waste management on marine litter**

Significant amounts of plastics leak from land-based sources to the North-East Atlantic although there are differences in the scale of marine litter leaking from waste management within and between OSPAR Contracting Parties. Waste generation, composition and management is very heterogeneous between and with-in countries of the OSPAR maritime region. In most parts of this region, waste management systems have a long history and are considered rather sophisticated, the significance of the 'remaining leakage' is of higher interest than the general problem of a lack of waste management.

Successful implementation of waste policy is therefore a prerequisite to avoid plastic litter entering the marine environment. The EU waste legislation has recently been amended aiming, inter alia, to halt the generation of marine litter and to strengthen the link between waste management and marine litter prevention. The [amended Waste Framework Directive](#) acknowledges that, since marine litter, in particular plastics, stems to a large extent from land-based activities, specific measures should be laid down in waste prevention programmes and waste management plans (see in particular Article 28 paragraph 3 (iii)(f) and Article 28 paragraph 5) . Those measures should be coordinated with the measures required under MSFD and the EU Water Framework Directive (Directive 2000/60/EC).

### **Impact on the marine environment**

Once in the marine environment macro plastic particles degrade into microplastics. There are a range of impacts from macro and micro-litter including entanglement, injury and ingestion of litter by wildlife; the colonisation of floating debris by invasive species as well as toxicological effects of hazardous chemicals released by degrading plastics. There are also serious socio-economic implications from the loss of litter via waste management sources, including loss of

tourism revenue, increased clean-up costs, particularly for municipalities along the coast and increased navigation hazards at sea.

## What has been done by OSPAR to address the issue

Actions 39 and 40 of the OSPAR Regional Action Plan for Marine Litter (RAP ML) address the link between land-based waste management and marine litter in the North-East Atlantic. The scope for a background document was discussed by an Action Task Group comprising experts from Germany, the Netherlands, the International Waste Working Group and Plastics Europe. The aim was for this document to set the basis for possible future work that OSPAR may wish to progress at the interfaces of waste management and marine litter input reduction in the regional sea area of the “North-East Atlantic” and possibly beyond. The intention being to minimise land-based inputs of marine plastic litter through wider application of measures in waste management.

This background document<sup>1</sup> was developed by the task lead on the basis of results returned from a “Waste Management Questionnaire”, that had been distributed to all OSPAR Contracting Parties mid 2018. This was supplemented with multiple expert interviews and an extensive literature review. The “*OSPAR Background Document on loopholes and best practices in waste management that contribute to marine litter*” was published in 2021.

This action briefing note highlights the key outcomes of the Background document, namely the:

1. 17 ‘**factors**’ identified within the background document as contributing to leakage of plastics from land to sea (addressing Action 39); and
2. 17 ‘potential priority **fields of action**’ to prevent leakage of plastics and marine litter’ (addressing Action 40);
3. proposed policy recommendations for future consideration.

### 17 factors (F1-F17) most likely to contribute to the leakage of plastics

<b>F1</b>	<b>Production and use of (single-use) plastics:</b> Plastic products that are not produced cannot turn into marine litter. The production and use of plastics is a necessary requirement for marine plastic litter.
<b>F2</b>	<b>Unsatisfactory separate collection and recycling rates:</b> If waste plastics are not collected separately and fed into high-quality recycling processes, other waste treatment forms need to be applied. For several reasons, these alternative treatments for unpreventable plastic waste (especially landfilling) are less desirable from the perspective of marine litter prevention.
<b>F3</b>	<b>Littering:</b> A portion of litter in the (marine) environment that results from the behaviour of individuals who intentionally or unintentionally drop plastic items or plastic waste and is a shared responsibility of producers, distributors and consumers along the lifecycle of a product. These actions are affected by many aspects of waste management, including adequate infrastructure provision, design, maintenance services and awareness raising focused on behaviour change.
<b>F4</b>	<b>Waste crime and illegal dumping:</b> A portion of litter in the (marine) environment is caused by illegal waste dumping activities or other criminal actions in the waste management sectors.
<b>F5</b>	<b>Marine litter is not (sufficiently) addressed in waste management plans:</b> If the issue of marine litter is

<sup>1</sup> [Insert link or footnote with url to the background document when published](#)

	not addressed in waste management plans, opportunities for holistic approaches in national, regional or local programmes are missed. Since many aspects of waste management planning are defined in these plans, resource allocation or other important questions may be affected to the detriment of marine litter prevention.
<b>F6</b>	<b>Insufficient waste management activities or infrastructure:</b> Although the entire population in the region of interest has access to waste management systems, insufficiencies still exist. As examples, long distance to collection points or low collection frequencies can be linked to (marine) litter generation.
<b>F7</b>	<b>Specific waste management practices posing a risk:</b> Plastics can leak during all stages of waste collection, transport, handling, storage and treatment if precautionary measures are not taken. Plastic waste can leak from collection systems during transfer actions, if it is not kept in closed or covered containers. Once waste has been collected and transported to transfer or storage stations, plastics can leak if waste is not kept protected from wind, rain and scavenging by animals.
<b>F8</b>	<b>Insufficient or ineffective financing of waste management:</b> Sophisticated waste management is required for the maximum marine litter prevention. Since associated measures are often costly, current waste management funding is often insufficient to minimize plastics leakage. Besides insufficient funding, ineffective funding schemes can be identified, e.g. if waste prevention is not in a way, rewarded. Extended Producer Responsibility schemes are also considered to be a potential solution, but are not without their challenges to be shaped to guarantee effectiveness.
<b>F9</b>	<b>Inadequate operation of active landfills:</b> Landfilling of plastic waste is forbidden or highly regulated in many countries. Where plastic waste is disposed of this way, or where regulation is not enforced, plastics can leak to the environment through various pathways including into the marine environment.
<b>F10</b>	<b>Historic landfills:</b> Knowledge of historic landfills is often rather limited, but evidence suggests that historic landfills may be a significant source of marine plastic litter, especially if they are located near the coast.
<b>F11</b>	<b>Emissions from sorting and recycling processes or products:</b> Plastics can leak from recycling processes during storage or sorting. Plastics can also leak if they are not the material of interest, e.g. in bio-waste composting.
<b>F12</b>	<b>Unsatisfactory management of plastic waste from agriculture and other environmentally open applications:</b> Plastics that are used in environmentally open applications like agricultural plastics are particularly prone to become litter and marine litter. This is especially true if plastics cannot be retrieved or collection systems are unavailable or unattractive.
<b>F13</b>	<b>Unsatisfactory management of waste from tourism and other coastal activities and industries:</b> Coastal tourism and other coastal activities or industries are responsible for a proportion of marine litter, because they bring the usage of plastics close to the marine environment. Any leakage to the environment here is associated with a higher risk of marine litter generation.

<b>F14</b>	<b>Unsatisfactory management of construction &amp; demolition waste:</b> Large amounts of plastic waste are produced in the construction and demolition sector. If waste management systems are not appropriately designed, plastic litter can be generated.
<b>F15</b>	<b>Plastic waste inputs from heavy weather events:</b> Heavy weather events can cause the mobilization of significant amounts of plastic waste or plastic litter. They can further generate huge amounts of litter themselves. If heavy rains, flooding or strong winds occur, plastic litter is often transported from land to the oceans.
<b>F16</b>	<b>Insufficient cleaning of open areas:</b> Plastic litter represents a problem regardless of where it occurs. Because of this and because litter on land can often be mobilized again, frequent cleaning is required and litter in any open areas (not only on the coasts), which is not cleaned up as soon as possible causes environmental damage.
<b>F17</b>	<b>Export of plastic waste to countries, where a safe recovery or disposal is not guaranteed:</b> Plastic waste exported for recycling can overstrain local collection and treatment systems in importing countries and accordingly domestic plastic waste may also leak to the world's oceans. Leakage from transport, storage and recycling processes are expected to be higher and of higher importance for marine litter generation than if plastics are not exported for recycling.

**The 17 Priority “Fields of Action” to prevent leakage of plastics and other marine litter**

<b>FoA 1</b>	<b>Awareness raising:</b> Awareness among waste management actors of the existing insufficiencies in waste management systems and their contribution to marine litter is fundamental for marine litter prevention measures in land-based waste management. Similarly important is ensuring awareness among all stakeholders, with the aim that this will lead to changes in attitudes and behaviour, including with respect to the general public, to make the successful adoption of measures possible.
<b>FoA 2</b>	<b>Horizontal integration:</b> Actors from different backgrounds need to join forces to prevent marine litter through measures in waste management. Marine protection experts need to cooperate with waste managers. Such integration, resulting in effective collaboration, is of prime importance and should be fostered, e.g. by sharing experiences.
<b>FoA 3</b>	<b>Performance assessment:</b> The effectiveness of currently implemented systems needs to be assessed to identify those factors contributing to leakage that require the most urgent action. Multiple indicators can be applied to identify specific needs for action and set baselines against which the effects of measures can be evaluated.
<b>FoA 4</b>	<b>Inclusion of marine litter in waste management and waste prevention plans:</b> Waste management and waste prevention plans represent powerful tools in waste management planning. By defining basic strategies in waste management and allocating resources accordingly, these plans represent a great chance for coordinated effort against marine litter inputs. Additionally, the proposed inclusion of such plans is required by EU legislation and

	the process of transposition in national laws is ongoing in most countries.
<b>FoA 5</b>	<b>Prevention of plastic waste:</b> Waste prevention ranks highest in the waste hierarchy and prevention of plastic waste generation should be a priority for marine litter prevention. Several approaches to prevent plastic products becoming waste exist, including through re-design, reuse, repair, or increasing lifespan of the product and elaborated in the background document. Action in this field is needed to decouple plastic waste generation from economic growth worldwide.
<b>FoA 6</b>	<b>Collection and sorting of all plastic waste:</b> Plastic waste that cannot be prevented should be collected and sorted. While a household waste collection system is widely available some types of plastic waste still remains uncollected . To achieve a state of 100% collection of all plastic waste, improvements in infrastructure provision or increased collection and sorting frequencies are measures that are available.
<b>FoA 7</b>	<b>Separate collection and sorting of plastics:</b> Separate collection of plastics is important for further treatment according to the waste hierarchy (see FoA8). Separate collection of plastics generates other benefits as well and examples of well-functioning systems are widely available but may be challenging to implement, e.g. due to budget restrictions.
<b>FoA 8</b>	<b>Increase of plastic recycling rates:</b> Besides being desirable from multiple perspectives (resource efficiency or energy consumption), recycling plastic waste can contribute to marine litter prevention in several ways. If plastics are recycled, they may be perceived as a high-value material with cascading, positive effects on littering rates. A circular economy, as envisaged by the EU Circular Economy Action Plan, with the economic interest to keep all produced plastics in a technical loop can contribute to leakage prevention in different ways.
<b>FoA 9</b>	<b>Optimization of waste collection and transport:</b> It is widely acknowledged that plastic waste can leak before, during and after collection, transport, storage and any treatment. Several technical solutions are available to minimize this leakage and measures to put more of them into practice can contribute to preventing plastics leakage to the (marine) environment.
<b>FoA 10</b>	<b>Reduction of risk of leakage from landfills:</b> In places where plastics are landfilled, leakage prevention measures should be taken. A variety of measures are available, depending on the reason why the plastics leak (e.g. biota interference or winds) and where they leak from (e.g. intermediate storage or the landfill itself). Marine litter prevention is supported if these precautionary measures are taken. Nevertheless, following the waste hierarchy, landfilling of plastics should be prevented in the first place.
<b>FoA 11</b>	<b>Reduction of emissions from sorting and recycling:</b> Similarly to leakage from landfill sites, precautionary measures should be taken at recycling plants, especially if some or all of the treated plastics are not the desired material in the process. Regulations regarding emissions to the air or to waterbodies are required. The regulatory approach followed for bio-waste recycling products should be evaluated and adjusted at the EU level if necessary.

FoA 12	<b>Cleaning of litter on land:</b> Since several factors contributing to leakage of plastics to the environment are very difficult to eliminate or even address, cleaning of plastic litter from land will always remain important. Cleaning should be extended to areas that are currently not cleaned frequently. Guidelines for safe and effective cleaning could help to prevent marine litter.
FoA 13	<b>Application of economic instruments:</b> With multiple examples, economic instruments provide a set of measures to support marine litter prevention. Suggested by many experts, economic instruments may present softer alternatives to a regulatory approach, guarantee more stakeholder support and even yield higher impact and/or lower costs. A wider uptake of economic instruments is thus recommended. Examples of such instruments described in the background document include deposit refund systems, taxes or fees, product levies, fines or penalties, waste pricing such as Pay-as-you-Throw (PAYT) and extended producer responsibility (EPR) schemes, amongst others.
FoA 14	<b>Green Public Procurement:</b> Trends in worldwide plastics markets can be influenced with the enormous market influence of the public sector's buying decisions. Desired developments (e.g. towards waste prevention or plastics recyclability) can be pushed if public actors have the freedom and awareness to decide accordingly.
FoA 15	<b>Waste management concepts or practices for certain sectors:</b> Those sectors, which have been identified to be of special importance for plastic leakage from land to sea need to adopt marine litter prevention measures. Waste management for tourism and other recreational activities and events especially near the coast must combat individual littering and guarantee safe disposal of unavoidable plastic waste. Collection systems for plastic waste from construction & demolition as well as for agricultural plastics need to be established up or extended where they exist already.
FoA 16	<b>Enforcement of regulations:</b> Regulations already exist in most of the fields mentioned above but weak enforcement interferes with their effectiveness. Best practice knowledge of waste legislation enforcement needs to be gathered, followed and shared, e.g. in the field of littering, waste crime and illegal waste exports.
FoA 17	<b>Communication platforms and material:</b> Any available knowledge should be shared much more widely. To achieve this, new platforms and means of communication are required. Improvements in horizontal and vertical communication locally, nationally and internationally should be envisioned for achieving a link between waste management and marine litter prevention.

## Barriers to progress

- Complexity: this is an example of an issue that touches the edge of OSPAR's competence and requires collaboration and partnership with different competent organisations at different scales.
- Expertise: access to waste management expertise lies outside of the OSPAR network.
- The waste management sector considers its role as end-of-pipe and rightfully states that the whole plastic product chain needs to design and implement solutions together.

## Potential options for future work (next steps)

The background document proposes a set of policy recommendations that OSPAR may wish to consider to inform any future work:

- The legal existing legislation should be used to greater effect and sound collaboration between the marine litter and the waste communities need to be further established.
- The integration process (horizontal integration of waste management experts and marine litter experts) should be developed with assessments of waste management performance to identify those factors contributing to leakage relevant to the site and context.
- Available measures should be evaluated and discussed with wide stakeholder participation.
- Implementation of measures should be accompanied with on-going monitoring of their effectiveness (e.g. by applying adequate indicators).
- Experiences and knowledge regarding the link between waste management and marine litter as well as litter prevention measures in waste management should be shared more actively.

The 17 factors most likely to contribute to the leakage of plastics as well as the 17 priority fields of actions identified to prevent leakage of plastics and other marine litter should be jointly considered in more-depth for the definition, adoption and implementation of specific measures in waste prevention and waste management plans.