



OSPAR RAP ML 2 Action A.4.1:

Define measures and strategies for the phasing out or restriction of use of certain plastics prone to become marine litter in complement to the EU SUP Directive

Initial Gap Analysis

2023

Foreword

This gap analysis report is a technical output of OSPAR's second Regional Action Plan on Marine Litter (2022 – 2030). It was prepared to support the progress and delivery of Action A.4.1, which aims to define measures and strategies for the phasing out or restriction of use of single use plastics prone to become marine litter in complement to the EU SUP Directive.

This report was finalized in 2023 and does not consider any subsequent changes.

Acknowledgement

Prepared by the task group for Action A.4.1: France, The Netherlands, and Seas at Risk

1. Introduction

Action A.4.1 of OSPAR RAP ML 2 is dedicated to considering **further measures to address marine litter from single-use plastics**¹, as defined in the Single-Use Plastics (SUP) Directive. This action starts with a **gap analysis** to provide evidence to inform discussions on single-use plastics, prone to become marine litter, that are either not included in the EU SUP Directive or still insufficiently addressed by its measures. The aim is to support discussions on which items most need further investigation and consideration for potential additional SUP measures and strategies.

In order to broaden the scope of the analysis, task leads have investigated various sources of data, and have not limited the analysis to only consider OSPAR marine litter monitoring results. This gap analysis includes relevant data provided by eNGOs, national Contracting Party research, as well as data from other environmental compartments (such as data collected on riverbanks, cities and at local cleanups).

This gap analysis is not intended to be published as an OSPAR official publication but to support ICG-ML in focusing on which items should be considered for further measures under Action A.4.1 and to support ICG-ML and contracting parties in taking part on the revision of the EU SUP Directive.

This report was finalized in 2023 and does not consider any subsequent changes.

2. Structure of the gap analysis

This gap analysis report presents the following sections:

- Section 1: Introduction
- Section 2: Structure of the gap analysis
- Section 3: Evidence from OSPAR's coordinated marine litter monitoring programme
- Section 4: NGO monitoring of SUP marine litter items: Seas At Risk members TOP 20 items (2018-2021)
- Section 5: Additional data from OSPAR CPs including national studies, research projects, data from local NGOs
- Section 6: The gap analysis
- Section 7: List of national measures already addressing some of these items of concern
- Section 8: Conclusion and next steps

3. Evidence from OSPAR marine litter monitoring programme

3.1. OSPAR beach litter monitoring results

3.1.1. Most abundant litter categories

As detailed in the 2023 QSR Beach litter assessment (Lacroix et al., 2022)², the top 15 beach litter types in the OSPAR Maritime Area from 2018 to 2020 presented in Table 1 show a limited number of abundant marine litter items (top 5 rows).

¹ "single-use plastic product" means a product that is made wholly or partly from plastic and that is not conceived, designed or placed on the market to accomplish, within its life span, multiple trips or rotations by being returned to a producer for refill or re-used for the same purpose for which it was conceived.

² Lacroix, C., André, S., and van Loon, W. 2022. *Abundance, Composition and Trends of Beach Litter*. In: OSPAR, 2023: The 2023 Quality Status Report for the North-East Atlantic. OSPAR Commission, London. Available at: <https://oap.ospar.org/en/ospar-assessments/quality-status-reports/qsr-2023/indicator-assessments/beach-litter/>

Unidentified plastic/polystyrene pieces (2,5 - 50 cm) remains the most abundant litter type with a median value of 21 litter items/100 m (representing 30% of beach litter pollution) in the OSPAR Maritime Area.

“strings and cords (diameter less than 1 cm)” rank 2nd with a median value of 17 litter items/100 m (24% of beach litter).

“caps and lids” rank third with 8 litter items/100 m; 12% of beach litter.

“crisp/sweet packets and lolly sticks” rank fourth (6 litter items/100 m; 9% of beach litter).

“other plastic polystyrene items” rank fifth (3 items/100m; 4,5% of beach litter).

“drinks (bottles, containers and drums)”, “cutlery/trays/straws”, “cotton bud sticks” all rank 6th together with “ropes above 1 cm in diameter” (2 litter items/100 m; 3% of beach litter each).

“sanitary towels/panty liners/backing strips”, “plastic containers and tubes”, “net and net cuttings” and “tangled nets, cords and strings” (1 litter item/100 m, 1% of beach litter) all rank 7th.

The data are available : <https://oap.ospar.org/en/ospar-assessments/quality-status-reports/qsr-2023/indicator-assessments/beach-litter/>

Table 1 top 15 litter types in the OSPAR Maritime Area (2018-2020) (Lacroix et al., 2022)

OSPAR ID	Litter type	litter ranking	Number of items / 100 m	% of beach litter
46	Plastic/polystyrene pieces (2,5-50 cm)	1	21	30
32	String and cord (diameter less than 1 cm)	2	17	24
15	Caps/lids	3	8	12
19	Crisp/sweet packets and lolly sticks	4	6	9
48	Other plastic/polystyrene items	5	3	4,5
4	Drinks (bottle, containers and drums)	6	2	3
31	Rope more than 1 cm	6	2	3
22	Cutlery/trays/straws	6	2	3
45	Foam sponge	6	2	3
98	Cotton bud sticks	6	2	3
99	Sanitary items	11	1	1
115	Nets and pieces of net < 50 cm	11	1	1

33	Tangled nets/cord/rope and string	11	1	1
103	Plastic containers / tubes	11	1	1

3.1.2. Most widespread litter categories

In addition to being the most abundant litter type, “plastic/polystyrene pieces (2,5 – 50 cm)” is also the most widespread top litter type, being recorded in the top 10 of 94% of the survey sites, as indicated by Table 2 showing the top litter types present in more than 15% of the survey sites.

Other most widespread top litter types are “String and cord (diameter less than 1 cm)” (82% of the survey sites), “Caps/lids” (79% of the survey sites), “Crisp/sweet packets and lolly sticks” (73% of the survey sites), “Other plastic/polystyrene items” (49% of the survey sites), “Cotton bud sticks (44% of the survey sites), ropes (36% of the survey sites) and drinks (33% of the survey sites).

NB: The “cigarette butts” category appears in 32% of the survey sites though absent from the top litter type rank of the OSPAR Maritime Area (Table 2). This is explained by an important spatial heterogeneity, “cigarette butts” being mainly observed in the OSPAR Region Bay of Biscay and Iberian Coast (Top 6), with a median value of 6 cigarette butts/100 m.

Table 2 Most widespread litter types on the 114 considered sites from 2018 to 2020 (most widespread litter types are ranked according to the number of survey site Top 10 they are present in) (Lacroix et al., 2022)

OSPAR ID	Litter type	Most widespread litter type ranking	Number of survey sites where the litter type is in the Top 10	Percentage of survey sites where the litter type is in the Top 10
46	Plastic/polystyrene pieces (2,5-50 cm)	1	107	94%
32	String and cord (diameter less than 1 cm)	2	93	82%
15	Caps/lids	3	90	79%
19	Crisp/sweet packets and lolly sticks	4	83	73%
48	Other plastic/polystyrene items	5	56	49%
98	Cotton bud sticks	6	50	44%
31	Rope (diameter more than 1 cm)	7	41	36%
4	Drinks (bottle, containers and drums)	8	38	33%

64	Cigarette butts	9	37	32%
74	Other wood < 50 cm	10	36	32%
115	Nets and pieces of net < 50 cm	11	35	31%
45	Foam sponge	12	34	30%
33	Tangled nets/cord/rope and string	13	27	24%
3	Small plastic bags	14	24	21%
43	Shotgun cartridges	15	21	18%
22	Cutlery/trays/straws	15	21	18%
6	Food containers including fast food containers	15	21	18%
28	Oyster nets or mussel bags including plastic stoppers	18	18	16%
49	Balloons including plastic valves, ribbons, etc.	18	18	16%

3.2. OSPAR seafloor litter assessment results

The items most commonly found in each sub-region in the 2023 OSPAR QSR assessment³ (2012-2019) were mainly plastic items (bags, caps, bottles, bands, sheets) and **fishing gear items** (synthetic rope, other rope, monofilament fishing line (dolly ropes), tangled fishline, fishing net). Other items included clothing, processed wood, and drinks cans. The top ten lists were similar for each of the OSPAR sub-regions, with **plastic sheeting in top 1 or top 2 depending on the region**.

The top 10 lists for all years (2012-2019) combined per OSPAR Region are provided in Table 3. It shows the most common items found in the different Regions over time. That is, the number of hauls that contained that litter item.

The 2023 Quality Status Report for the North-East Atlantic. OSPAR Commission, London. Available at: <https://oap.ospar.org/en/ospar-assessments/quality-status-reports/qsr-2023/indicator-assessments/seafloor-litter/#collapse-assessment-metadata-384255>

³ Barry, J., Russell, J., van Hal, R., van Loon, W.M.G.M., Norén, K., Kammann, U., Galgani, F., Gago, J., De Witte, B., Gerigny, O., Lopes, C., Pham, C. K., Garcia, S., Sousa, R., Rindorf, A. 2022. Composition and Spatial Distribution of Litter on the Seafloor. In: OSPAR, 2023: The 2023 Quality Status Report for the North-East Atlantic. OSPAR Commission, London. Available at: <https://oap.ospar.org/en/ospar-assessments/quality-status-reports/qsr-2023/indicator-assessments/seafloor-litter/#collapse-assessment-metadata-384255>

Table 3 top 10 lists for all years (2012-2019) combined per OSPAR Region

	Greater North Sea	Celtic Seas	Iberian Coast	Whole region
1	Sheet	Synthetic rope	Synthetic rope	Synthetic rope
	2.146 (31,6%)	647 (16, 8%)	625 (32,8%)	
2	Synthetic rope	Sheet	Sheet	Sheet
	1802 (26,5%)	527 (13,6%)	502 (26,4%)	
3	Monofilament fishline	Monofilament fishline	Monofilament fishline	Monofilament fishline
	1657 (24,4%)	484 (12,5%)	417 (21,9%)	
4	Bag	Bag	Bag	Bag
	1054 (15,5%)	387 (10,0%)	330 (17,3%)	
5	Other plastic	Other plastic	Fishline (tangled)	Fishline (tangled)
	1049 (15,4%)	222 (5,7%)	178 (9,3%)	
6	Fishline (tangled)	Fishing net	Fishing net	Fishing net
	855 (12,5%)	203 (5,3%)	162 (8,5%)	
7	Fishing net	Caps	Rope	Rope and Caps
	380 (5,6%)	151 (3,9%)	138 (7,2%)	
8	Clothing	Fishline (tangled)	Other plastic	Other plastic
	346 (5,1%)	148 (3,8%)	129 (6,8%)	
9	Wood (processed)	Plastic bottles	Plastic bottles	Plastic bottles
	326 (4,8%)	143 (3,7%)	113 (5,9%)	
10	Rope	Band	Cans (drink)	Cans and band
	301 (4,4%)	140 (3,6%)	112 (5,9%)	

Detailed tables by OSPAR sub-region can be found here:

https://oap-cloudfront.ospar.org/media/filer_public/6e/72/6e725e67-9bfa-470d-a603-3578306ded6c/appendix_3_results_top_10_probabilities_of_litter_in_three_ospar_regions.pdf

3.3. Information from the 2023 QSR indicator assessments to show items which are covered by the Single Use Plastics Directive.

Table 4: SUP items highlighted in the 2023 OSPAR QSR (Lacroix et al., 2022 and Barry et al., 2022)

Note: Items are highlighted in green if SUPD measures in place from 03.07.2021, in orange if only partially covered in SUPD, red if not covered.

Item	Assessment	Assessment info
Caps and Lids	Beach litter	#8 litter items/100 m; 12% #3 by count and widespread
Caps	Seafloor litter	#7 Celtic Seas
Crisp/ sweet packets and lolly sticks	Beach litter	#6 litter items/100 m; 9%. #4 by count and widespread
Drinks (bottles, containers and drums)	Beach litter	#2 litter items/100 m; 3%.#6 by count and #8 widespread
Plastic bottles	Seafloor litter	

Cutlery/trays/straws	Beach litter	#2 litter items/100 m; 3%. #6 by count and #15 widespread
Cotton bud sticks	Beach litter	#2 litter items/100 m; 3%
Sanitary towels/panty liners/backing strips	Beach litter	#1 litter item/100 m, 1%#6 by count and widespread
Cigarette butts	Beach litter	# 9 widespread
Small plastic bags	Beach litter	#14 widespread
Plastic bag	Seafloor litter	#4 item in all areas
Shotgun cartridges	Beach litter	#15 widespread
Food containers including fast food containers	Beach litter	# 15 widespread
Balloons including plastic valves, ribbons etc.	Beach litter	#18 widespread

Table 5: Fishing related items highlighted in 2023 OSPAR QSR assessments

Note: Items highlighted in orange should be covered by fishing gear EPR schemes planned from 2025.

Item	Assessment	Assessment info
Nets and pieces of net <50cm	Beach litter	1 litter item/100 m, 1%. #11 by count and widespread
Tangled nets/ cord/ rope and string	Beach litter	1 litter item/100 m, 1%. #11 by count and #13 widespread
Fishing net	Seafloor litter	#6 item in Celtic Seas and Bay of Biscay and Iberian coast and #7 for Greater North Sea
Oyster nets or mussel bags including plastic stoppers	Beach litter	#18 widespread
String and cord (diameter less than 1cm)	Beach litter	#17 litter items/100 m (24% of the beach litter pollution). #2 by count and #2 widespread
Synthetic rope	Seafloor litter	#1 item in Celtic Seas and Bay of Biscay and Iberian Coast #2 in Greater North Sea
Monofilament fishline tangled	Seafloor litter	
Monofilament fishline	Seafloor litter	#3 item in all areas
Rope (diameter more than 1cm)	Beach litter	#7 widespread

3.4. OSPAR fulmar assessment results (relevant for polystyrene fragments and pellets)

During the 2014 to 2018 period,⁴ 92% of North Sea fulmars had some plastic in the stomach, with 51% exceeding the 0,1g level. On average each fulmar contained 21 plastic particles weighing 0,26g.

⁴ Kühn, S., Van Franeker, J.A. and Van Loon, W. 2022. *Plastic Particles in Fulmar Stomachs in the North Sea*. In: OSPAR, 2023: The 2023 Quality Status Report for the Northeast Atlantic. OSPAR Commission, London. Available at: <https://oap.ospar.org/en/ospar-assessments/quality-status-reports/qsr-2023/indicator-assessments/plastic-in-fulmar/>

Over the past ten years there has been a significant reduction in the mass of plastic in fulmar stomachs. In contrast to earlier years, the reduction is driven by decreases in user plastics and to a less extent by industrial plastics.

In the first assessment, 93% of the fulmars had some ingested plastic, 58% contained more than 0,1g of plastic, and average values per bird were 33 particles and 0,31g.

- In the recent QSR assessments, the fulmars show a slight but not significant decrease of pellets.
- The consumer plastics in fulmars show a significant decrease. However, the available data cannot be attributed to a specific litter type or material (such as polystyrene).
- The threshold of 10% of fulmars having less than 0,1 gram of plastic in their stomachs is not reached.

The 2023 Quality Status Report for the Northeast Atlantic. OSPAR Commission, London. Available at: <https://oap.ospar.org/en/ospar-assessments/quality-status-reports/qsr-2023/indicator-assessments/plastic-in-fulmar/>

<https://oap.ospar.org/en/ospar-assessments/quality-status-reports/qsr-2023/indicator-assessments/plastic-in-fulmar/>
<https://oap.ospar.org/en/ospar-assessments/quality-status-reports/qsr-2023/indicator-assessments/plastic-in-fulmar/>

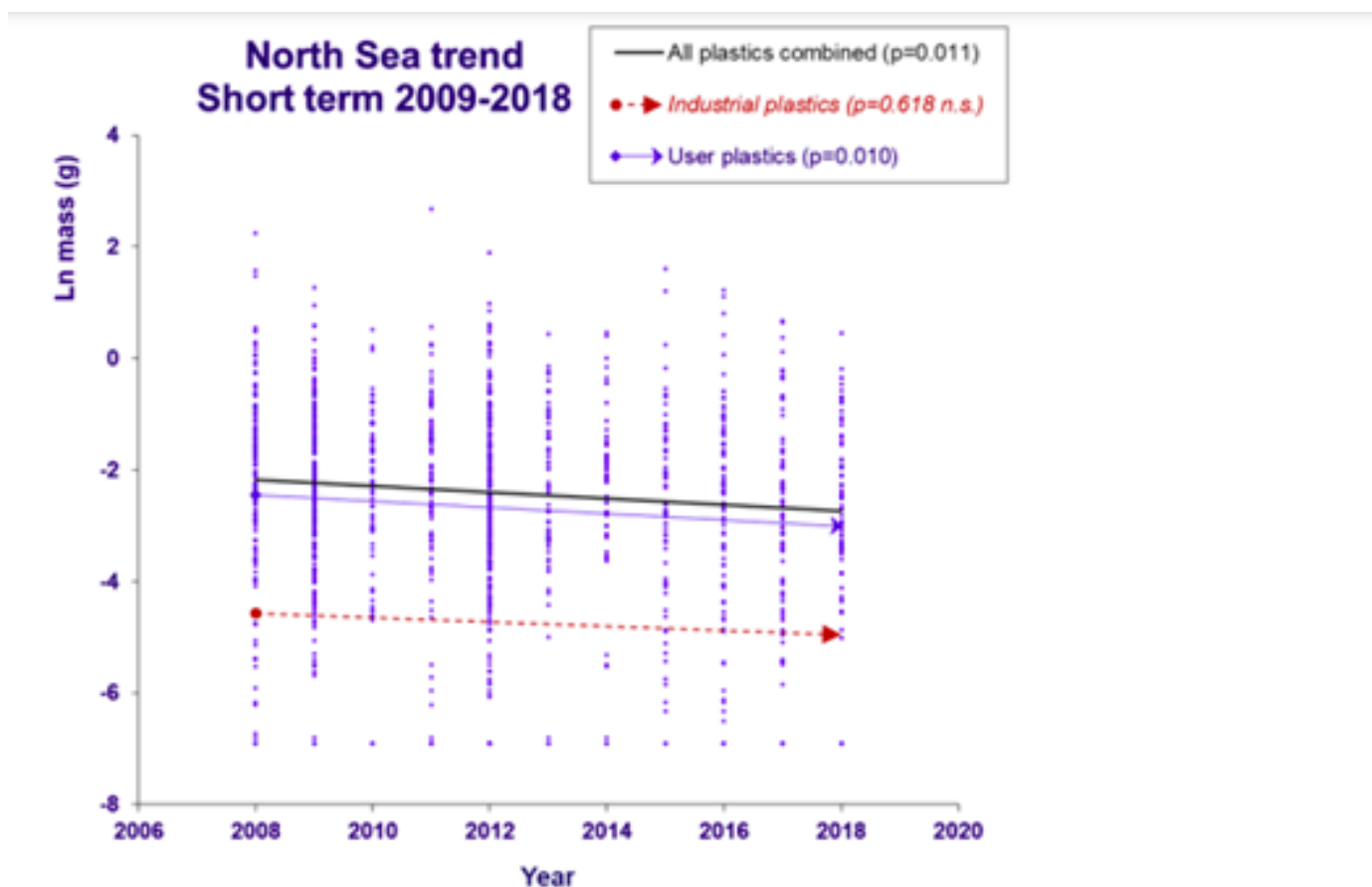


Figure f: Trends in plastic mass in stomachs of fulmars in the North Sea over the most recent ten-year period (2009-2018). Graphs show \ln transformed mass data for industrial plastic and consumer plastic in stomachs of individual fulmars, plotted against year, and linear regression lines for industrial (lower, red line), consumer (middle blue line) and total plastics (top black line). Trendlines are drawn as continuous lines when

4. NGO monitoring of SUP marine litter items: Seas At Risk members TOP 20 items (2018-2021)

This dataset provides the results of recent monitoring activities on both beaches and riverbanks by NGOs (Seas At Risk members) in different countries. Two countries were chosen on purpose outside the OSPAR area to allow some context and comparison with the Mediterranean area: Croatia and Italy.

Items in the table are colour coded, as follows:

All items already covered by measures in the SUP / Plastic bags Directives are coloured in green.

All items partially covered by measures in the SUP Directive are coloured in orange. The reasons for the orange highlighting can be not all the items in this category are covered (for example for EPS/XPS items) or there are measures, but only part of the full range of possibilities (for example, only part of the awareness-raising measures).

Items not covered to date are coloured in red.

	UK MCS	France SFE	Spain SFE	Ireland Coastwatch	Netherlands Clean Rivers	Italy Legambiente	Croatia Sunce
Top 1	EPS/XPS pieces	Cigarette butts	Cigarette butts	Beverage bottles 70%	EPS/XPS pieces below 50 cm	Plastic fragments 5 to 50 cm	Beverage bottles > 0.5
Top 2	Packets (snacks sweets)	Plastic fragments 2,5 to 50 cm	Plastic fragments 2,5 to 50 cm	Fishing Gear: cords and strings 70%	Plastic fragments (soft) below 50 cm	EPS/XPS pieces 2,5 to 50 cm	Personal care bottles and containers
Top 3	Caps Lids	Plastic cups	EPS/XPS pieces 2,5 – 50 cm	Plastic lined metal cans 60%	Plastic fragments (hard) below 50 cm	Cigarette butts	Engine oil bottles and containers – jerrycans
Top 4	Cotton bud sticks	EPS/XPS pieces 2,5 – 50 cm	Caps and lids	Caps and lids 54%	Beverage containers and their caps	Cotton bud sticks	Non food bottles and containers
Top 5	Cigarette butts	Plastic bags	Snack and sweet packets	Fishing and aquaculture gear 45% (nets, traps and lines)	Packets (snacks sweets)	Beverage bottles > 0.5	Crates baskets and containers
Top 6	Fishing Gear: strings, cords	Caps and lids	Single use plastic cups	EPS/XPS (40%)	Fish fluff	Caps and lids	Caps and lids non food bottles
Top 7	Straws Cutlery	Food containers	Fishing Gear: strings ropes nets	Construction waste 35%	Glass bottles and containers	Fishing Gear: Mussels and oyster nets	Rings for bottle caps
Top 8	Foam and sponge / insulation	Fishing Gear: lines and bates	Plastic straws	Plastic bags 30%	Plastic and EPS/XPS food containers	Plastic cups and cup lids	Snacks and sweet packets
	UK MCS	France SFE	Spain SFE	Ireland Coastwatch	Netherlands Clean Rivers	Italy Legambiente	Croatia Sunce

Top 9	Fishing Gear: lines (angling)	Food containers	Lolly sticks	Tyres (21%)	Plastic fragments	Other EPS/XPS pieces	Lolly sticks
Top 10	Industrial pkg and sheeting	Fishing Gear: mussels oyster nets	Beverage bottles < 0,5	Micro litter (20%)	Strings and cords below 1 cm	Foam and sponge other than PS	Fishing Gear: Mussels and oyster nets
Top 11	Toys, fireworks, party poppers	Snack and sweet packets and wrappers	Plastic lined metal cans	Plastic lined beverage cartons 18%	Textile waste	Construction materials	Fishing Gear: ropes
Top 12	PS > 50 cm	Beverage bottles > 0.5	Fishing Gear: strings and cords	Sanitary items (18%)	Cotton bud sticks	Straws and stirrers	Fishing Gear: strings and cords
Top 13	Wet wipes / lolly sticks / pens	Lolly sticks	Sanitary items	Wet wipes 17%	Wet wipes	Caps and lids	EPS/XPS fish boxes
Top 14	Tampons applicators / food veg bags	Fishing Gear: cords and strings	Snack sweets packets, food containers	Packets (Snacks and sweets)	Plastic straws	Rings of caps	Fishing Gear: Floats buoys
Top 15	Fishing nets / shotgun cartridges / toiletries	Fishing nets & cords entangled	Non food bottles (detergents)	Non food bottles (12%)	Plastic film > 50 cm	Plastic pieces > 50 cm	Industrial packaging and sheeting
Top 16	Cigarette lighters	Beverage cans	Hunting cartridges	Agriculture plastics		Caps/lids chemicals, detergents	Foam & sponge
Top 17	Jerrycans / non food bottles	Cotton bud sticks	Fishing Gear: entangled nets and cords	Single use plastic cups 6%		Detergent bottles and containers	EPS/XPS pieces < 50 cm
Top 18	buckets	Non-food bottles & detergents	Beverage bottles > 0,5	Geotextiles (5%)		Snacks and sweet packets	Construction waste
Top 19	Medical pkg tubes and gloves	Plastic cups	Straws and caps	Cotton bud sticks 5%		Shopping and grocery bags	Cotton bud sticks
Top 20	Fishing gear: Lobster / crab pots	Small beverage bottles + straws	Stirrers	Medical waste 4,5% (plasters, syringes, face masks)		EPS/XPS pieces > 50 cm	Medical pkg & tubes
Major issues to be addressed	Aquaculture gear, wet wipes and vapes are increasing!			FG big issue. Tyres found in 20% of surveys. Agri-plastics increasing!	EPS/XPS fragments in top 10 and 70-80% riverbanks since 2018!	Plastic cups come free with each single coffee very bad practice!	EPS/XPS fragments major issue (2,5 – 50 cm)
Period	2019-2021	2018-2021	2018-2021	2018-2022	2018-2022	2016-2021	2019-2021

5. Additional data from OSPAR Contracting Parties including national studies, research projects, and data from local NGOs

5.1. Belgium

20 surveys carried out by a local NGO (Proper Strand Lopers) at the national level in 2023 which provided the following results: plastic and polystyrene pieces and construction waste were found in the top 3 both times (with plastic / PVC pipes included). Fishing gear was also in the top 10 especially string and cords and net cuttings (nets and pieces of nets) as well as candy and snack wrappers and beverage caps and lids.

5.2. France

Results of the PLASTOC project on urban wastewater waste in 4 different sites highlights the huge contribution of urban waste to litter and identifies the following top items for residential areas: wet wipes (top 1 urban litter by weight with 16% of litter) followed by snacks and candy wrappers (8%), drinking cans (6%) and bottles (5%), food containers (4%) and cigarette butts (4%). For commercial areas, results are slightly different with cigarette butts ranking first (28%) followed by food containers (9%) and spray, non-beverage bottles (4%). Wet wipes also rank as top 1 (with 80% in weight) of another residential survey in Grenoble.

(Litter in French urban areas—part 1: composition, sources, and spatio-temporal variations on urban surfaces : <https://hal.science/hal-04734425v1>; <https://enpc.hal.science/hal-03113127v1>;)

(Abundance, composition and fluxes of plastic debris and other macrolitter in urban runoff in a suburban catchment of Greater Paris : <https://enpc.hal.science/hal-03113127v1>)

5.3. Denmark

Harbour collection, urban waste in bigger cities

Beach litter survey in Skagerrak (2022): top 3 construction materials, top 4 dolly ropes, top 6-7 net cuttings and strings, top 8 polystyrene, top 11 PUR insulation material, top 17 snacks and candy wrappers, top 18 strapping bands

Beach litter survey in Kattegat (2022): top 1 insulation foamed materials (PUR), top 3 foamed plastic chips used in packaging (PS), top 5 snacks and sweets wrappers, top 7 industrial plastic sheeting, top 9 shotgun cartridges, top 10 tobacco packaging.

Also flags items such as plastic wrapping for cans and bottles, inner lid for metal caps in beverage containers, detonation cords and seamarks.

5.4. Iceland

Ocean Missions NGO beach surveys carried out in 16 different locations (2022):

Top 2 plastic buoys, top 3 strapping bands, top 5 shotgun cartridges and top 6-7-8-10 net cuttings and fishing gear

Here are the two last reports that have information for the period 2020-2021 <https://oceanmissions.org/wp-content/uploads/impact-report-2020-2021.pdf> and 2022-2023 <https://drive.google.com/file/d/1OF9rxPFRwVZMmjZw-HY0Hq1JrOpjLNS/view>

Fishing gear and single-use plastics account respectively for 11% and 12,3% of the plastic litter collected.

OSPAR beach surveys:

Top 1 Plastic and EPS/XPS pieces (68%!)

Top 2 is shotgun cartridges, which are reported to be mostly from hunting activities on land.

Top 4 and 5 are fishing gear related: strings & cords, tangled nets and net cuttings.

5.5. Netherlands

Numerous beach and river litter surveys and the corresponding top 10 or top 20 items. In OSPAR beach litter data, top 1 and 4 are fishing gear (strings & cords and net cuttings), top 2 is plastic pieces and top 3 snack and candy packaging. EPS/XPS ranks top 7 and industrial packaging and plastic sheeting top 9.

The Litter ID pilot study carried out in 2021 provided detailed results and the following top items: plastic bags, snacks and candy wrappers, food containers and polystyrene items, followed by cans, bottles, tetra packs, cigarette packaging and mesh bags for food and vegetables. On specific beaches and rivers, plastic foils and industrial sheeting as well as yogurt packaging were found in the top 10.

Pieces of plastic foil were found to be respectively top 1 of voluntary river cleanups, top 2 of floating river litter and top 4 of recreational riverbank cleanup. Industrial plastic sheeting was found to be respectively top 6 and 8 of voluntary and professional river cleanups and top 8 of beach clean up.

Floating litter pilot in rivers found EPS/XPS 4 times in its top 10 items, followed by plastic foil, cigarette butts and snacks and candy wrappers.

Citizen science surveys highlight the following items: snack and candy wrappers, food containers, wet wipes, cans and lolly sticks. Also flags items such as plastic wrapping for cans and bottles.

5.6. Portugal

Cigarette butts and polystyrene fragments (mainly below 2.5 cm but also bigger fragments) are the most frequent litter items on Portuguese beaches, alongside unidentified plastic fragments. Strings and cords from fishing gear are ranking 5th in the top ten, alongside SUP items such as caps and lids, cotton buds and snack and sweet wrappers. In remote islands of the Azores, polystyrene and cigarette butts ranked as top 2,4 and 6 most found litter items.

Portuguese APA also flagged several small litter items which are not covered by any measure to date, namely sun umbrella rod end beads, sun protector packaging seals and shampoo/body lotion lid seals.

5.7. Spain

According to urban litter surveys carried out between 2017 and 2021, top 1 urban litter item is cigarette butts, followed by snacks and candy wrappers, and plastic and polystyrene pieces. Wet wipes come next, followed by beverage bottles and cans. Surveys carried out inland in green / countryside areas give sensibly the same result and order although with much less pollution across the board.

For beach litter, Marnoba (<https://vertidoscero.com/marnoba/>) surveys carried out between 2014 and 2022 give the following top 5: cigarette butts, followed by two categories of plastic and polystyrene pieces, ropes strings and cords, snacks and candy wrappers.

Fishing gear items flagged outside the ropes strings and cord category are mussels plastic pegs (for which an alternative exists) in Galicia, and PVC octopus pots.

For seafloor litter, Marnoba provided the following top 5: food containers, beverage cans, plastic bags, fishing nets and industrial plastic sheeting (large sheets of plastic are widely used in agriculture in Spain).

5.8. Sweden

According to 75 municipal surveys of urban litter carried out in 2020, top 1 urban litter item is cigarette butts, top 2 is portion snuff (top 5 is snuff packaging), top 3 is plastic packaging, caps & lids, plastic bags and bottles.

Keep Sweden Tidy found the following top 5 items: top 1 cigarette butts, top 2 snuff, top 3 snacks and candy wrappers, followed by ice-cream packaging, straws packaging and plastic bag sealers, food & drink containers / packaging and fishing litter (West coast of Sweden). Also mentions balloons, shotgun cartridges, strapping bands, wet wipes and biofilm support media.

According to a riverine litter survey carried out in 2019: top 1 and 2 are polystyrene (PS) and top 6 is foamed insulation materials (EPS/XPS).

6. GAP ANALYSIS:

In this next section we will distinguish litter items already addressed by existing legislation from the rest, taking available data listed in Section 3, Section 4 and Section 5, as a reference to select most concerning items, that is the items most often found in the environment.

6.1. Selection of the main marine litter items of concern

6.1.1. List of priority items of concern for OSPAR CPs collected via questionnaire + vote:

- 1) **Aquaculture and fishing gear**, in particular strings, cords and ropes and mussel and oyster nets received 8 votes (90%) among which NL, FR, DK, Iceland, ES, PT
- 2) **Cigarette butts** received 6 votes (67%) from NL, FR, DK, NL, ES, PT
- 3) **EPS/XPS, styrofoam** (items and fragments) received 5 votes (56%) from SUE, DK, NL, Iceland, ES
- 4) **Wet wipes** received 5 votes (56%) from FR, IE, UK, ES
- 5) **Snack and candy wrappers** received 5 votes (56%) from NL, FR, ES, BE
- 6) **Beverage cups and cans** received 5 votes (56%) from NL, DK, FR, ES
- 7) **Net cuttings** received 5 votes (56%) NL, BE
- 8) **Tobacco vapes** received 4 votes (44%) from UK, FR,
- 9) **Shotgun items (wads and cartridges)** received 2 votes (22%) from FR, DK
- 10) **Balloons and other party gear** received respectively 1 and 3 votes (from NL, UK, DK)
- 11) **Industrial sheeting / packaging** received 2 votes (22%) from ES, IE
- 12) **Small plastic packaging seals** (for sunscreen, shampoo, body lotion bottles and tubes) **and films** (beverage labels) received 2 votes (22%) from PT, DK

All these are either categorised in **orange** or **red** and therefore are not sufficiently covered by EU measures to date.

This list is also quite consistent with the most widespread marine litter items found in the most recent OSPAR assessments (see **Table 2**) although it does not include the following items found in the OSPAR top 15: caps and lids (top 3 most widespread), cotton bud sticks (top 6), small plastic bags (top 14) and food containers (top 15). We need to consider if these also remain items of concern, especially food containers which are not dealt with specific measures under the SUP directive.

6.1.2. List of priority items of concern for national NGOs and Seas At Risk members

- 1) **Aquaculture and fishing gear**: flagged by All
- 2) **Cigarette butts and tobacco vapes**: flagged by All
- 3) **EPS/XPS, styrofoam and polystyrene pieces and packaging**: flagged by All
- 4) **Wet wipes**: flagged by All
- 5) **Snack and candy packets and wrappers**: flagged by All
- 6) **Beverage cups, lined beverage cans**: flagged by All
- 7) **Beverage bottles**
- 8) **Construction waste**: flagged by most
- 9) **Industrial packaging / sheeting**: flagged by most
- 10) **Tyres**: flagged by most
- 11) **Non-food bottles and containers**: flagged by most
- 12) **Party gear**: glitter, sequins, confetti and **balloons**: flagged by some
- 13) **Agri-plastics and other geosynthetics**: flagged by some

The top 6 items are really consistent with OSPAR items of concern but remaining items are also worth considering as these are mostly emerging litter items with significant local pollution.

Priority order for both these lists above were adjusted following the poll carried out during 2023 ICG ML3, based on how many CPs voted for each item, to reflect how widespread the corresponding pollution is.

6.2. Identification of items still to be covered or insufficiently covered by existing legislation:

The most polluting SUP items found are only partially (**orange**) or not at all (**red**) addressed by the SUP Directive with specific measures, as this is reflected by the colour code in both lists. Just to recap with a proper list:

6.2.1. Items of concern to both CPs and NGOs which were addressed by the SUPD through bans or consumption reduction measures as of 03.07.2021 yet still present in the environment

- Beverage bottles and caps
- cotton bud sticks
- straws
- cutlery
- balloon sticks
- stirrers
- takeaway polystyrene cups
- food containers

6.2.2. Items of concern to both CPs and NGOs which were partially addressed by the SUPD or plastic bag directives and yet still present in the environment

- Cigarette butts (with EPR measures as of 2023 and awareness raising measures)
- Food containers and beverage cups (only addressed with consumption reduction from 2026)
- Wet wipes, sanitary items, crisps / snack packets and candy wrappers (with EPR measures and labelling from 2025)
- Shopping and grocery vegetable/fruit bags (some bags remain allowed or marked with reusable when not)
- Fishing gear and aquaculture gear (with EPR schemes from 2025)
- Balloons (with EPR schemes from 2025)

Some of these items constitute a major source of marine, riverine or urban litter (food containers, bottles, cups, wet wipes or snack and candy wrappers) and should therefore be targeted with additional measures. Other items such as cigarette butts were covered by measures which remain to be implemented on the ground (EPR schemes for tobacco were due in 2023).

6.2.3. SUP items identified which are not addressed to date (single-use items underlined, packaging items in italics)

- Agriculture plastics,
- Beverage cans (plastic lined or plastic containing),
- Buckets,
- Coffee capsules,
- Confetti and glitter (only partially addressed by REACH restriction on microplastics)
- Construction waste, in particular polystyrene and other foam used for insulation or packaging

- Detergent / cleaning / spray bottles and containers,
- Disposable pens and razors,
- Disposable lighters,
- Domestic medical packaging, blisters, gloves and tubes, plasters
- EPS/XPS packaging items,
- Fireworks and fireworks pieces
- Free / promotional plastic toys
- Geosynthetics (geotextiles, geomembranes, agriplastics)
- Hotels' mini toiletries,
- Industrial packaging and sheeting,
- Jerrycans / engine oil containers,
- Lolly sticks,
- Personal care bottles / containers,
- Shotgun wads,
- Single-use construction materials,
- Single-serve packaging (for jam, honey, sauces, butter, olive oil...),
- Single-use nappies,
- Teabags,
- Tobacco or flavoured vapes (both single-use and refillable ones)

6.2.4. SUP items identified by OSPAR CPs which should be addressed by additional measures

The 2 lists of priority items of concern presented above under 8.1. were presented to ICG ML members at their last meeting of 2023, and a poll was carried out for CPs to vote on priority items to be analysed within OSPAR.

The outcome of that vote gave the following priority order, including items already (in green), partially (orange) or not at all (red) addressed by the SUP Directive with specific measures.

- 1) Beverage cups, lined beverage cans received 8 votes (89%)
- 2) Single-serve packaging for jam, honey, butter, olive oil and sauces received 7 votes (78%)
- 3) Aquaculture and fishing gear received 7 votes (78%) and net cuttings 6 votes (67%)
- 4) Fireworks and fireworks pieces received 6 votes (67%)
- 5) Cigarette butts and tobacco vapes received respectively 6 (67%) and 5 votes (56%)
- 6) EPS/XPS, styrofoam and polystyrene pieces and packaging received 5 votes (56%)
- 7) Small packaging seals and films received 5 votes (56%)
- 8) Snack and candy packets and wrappers received 5 votes (56%)
- 9) Wet wipes received 5 votes (56%)
- 10) Lolly and sweet sticks received 5 votes (56%)
- 11) Free/promotional plastic toys received 4 votes
- 12) Beverage bottles received 4 votes (44%)
- 13) Tyres: received 4 votes (44%)
- 14) Non-food bottles and containers: received 3 votes (33%)
- 15) Party gear: glitter, sequins, confetti and balloons: received 3 votes (33%)
- 16) Agri-plastics and other geosynthetics received 2 votes (22%) and was flagged by several NGOs
- 17) Construction waste: received 2 votes (22%) and was flagged by several NGOs
- 18) Industrial packaging and sheeting received 1 vote (11%) but was flagged by all NGOs

7. Conclusion and next steps

The task group for Action A.4.1 are working towards having a clear set of recommendations for Contracting Parties to put to the European Commission during its review process for the SUP Directive. However, the task group also hopes to identify any other items for which more immediate measures can or should be pursued, with specific consideration of where OSPAR can add value.

Gathering this data was the first step to further understand where OSPAR can add value to existing EU measures and strategies to limit single use plastic items and fishing gear in becoming marine litter. This gap analysis hopes to inform discussions within ICG-ML on which items are most in need of further investigation, and consideration for potential further SUP measures and strategies.

At ICG-ML(3) 2023, the task group presented the above gap analysis report and invited ICG-ML members to consider the lists presented in Section 6.1.1 and 6.1.2, and which of these items should be the initial focus of the task group to discuss these measures. At the ICG-ML meeting, a live poll took place and distributed points to nationally relevant items in both priority lists to rank them properly. It was also decided to address both items already addressed and still unaddressed with specific measures.

Following the discussions at ICG-ML(3) 2023, the gap analysis document was finalised and the task group will now begin discussing potential measures. The initial results of these discussions will be presented at ICG-ML(1) 2024.