SURFRIDER
FOUNDATION EUROPE

ENVIRONMENTAL REPORT

OCEAN INITIATIVES 2020

PHOTO CREDITS: Surfrider Foundation Europe, Natacha Cagnard, Vishal Banik, Samara Doole, Ishan see from the sky, Oliver Sjostrom, Almos Bechtold, Anabam, Michaël Opsomer, Pierre-Ange Rogliano, Surfrider Paris, Brian Yurasits, Noaa_Crep.

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EDITORIAL

Thank you.

Twenty-six years ago, Surfrider Foundation Europe launched the Ocean Initiatives program. The aim was to raise awareness and collect information on marine litter to put in place a long-term strategy to tackle this pollution at its source. Despite consensus about the negative impact on the environment, litter is still an important issue. Today more than ever, there needs to be a groundswell of change to protect the ocean.

The year 2020 was marked by a pandemic which has notably resulted in the widespread use of single-use plastics. At the same time, the lockdown imposed to contain the epidemic didn't allow us to go out into the field as much as in previous years, to collect valuable information on the litter in the environment. This information is essential for us to be able to bring to light the reality in the field.

Despite this challenging period, you have continued to get involved in our fight to ensure the ocean can once again breathe through this tidal wave of plastic. It's a commitment for today and tomorrow, so that future generations will have the chance to enjoy the marine environment.

All your collective actions do have a substantial impact since they have the power, which mean that you do to, to change things. It's thanks to your determination and your commitment that we can progress a little more each day. The data from your ocean initiatives are used to compile this report which is a powerful tool for communicating with policy makers and manufacturers as well as demanding permanent changes.

The ocean is the last place where waste resulting from human activity accumulates, to different degrees of visibility. 100% of pollution is generated by humans. We are responsible for it, but we can also lead the way to reduce this pollution and change people's habits.

Without you, none of this would be possible, and because your commitment and motivation is such an inspiration to us, we want to say a big thank you to you all! Thank you for working alongside us for the past 25 years!

OCEAN INITIATIVES 2020 IN FIGURES

45 876
PARTICIPANTS

=

1
PARC DES PRINCES STADIUM

1 307 KM
LENGTH

=

DISTANCE FROM ROME – ATHENS

46 790 KM
COVERED BY PARTICIPANTS

=

x 1.2
THE EARTH'S CIRCUMFERENCE

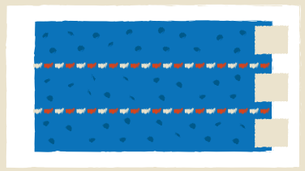
1 010 M³
OF WASTE

=

30
CONTAINERS

679 632
CIGARETTE BUTTS

=



90
OLYMPIC-SIZE SWIMMING POOLS POLLUTED

83 166
BOTTLES

=

x 1.9
THE HEIGHT OF EVEREST

47 622
COTTON BUDS

=

40
FOOTBALL PITCHES

10 559
STRAWS

=

x 43
THE HEIGHT OF THE TOWER OF PISA

17 515
LOLLIPOP STICKS

=

x 5.8
THE HEIGHT OF THE EIFFEL TOWER

4 265
SHOES

=

x 3
THE NUMBER OF BAREFOOT MEPS

9 779
TAMPON APPLICATORS

=

37
YEARS OF USE BY ONE WOMAN

01
GENERAL REPORT

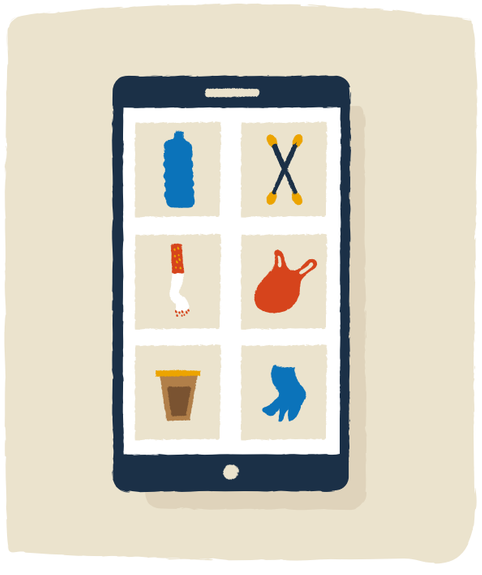
THREE TYPES OF REPORT FORMS IN 2020

Simplified report form

The organiser fills in the information about the operation itself and the number of cigarette butts counted during their collection.

Intermediary report form

The organiser sends us general information about the operation and quantifies 35 types of waste broken down by material and use. The data enable us to monitor for example the application of directives such as the one banning single-use plastics.

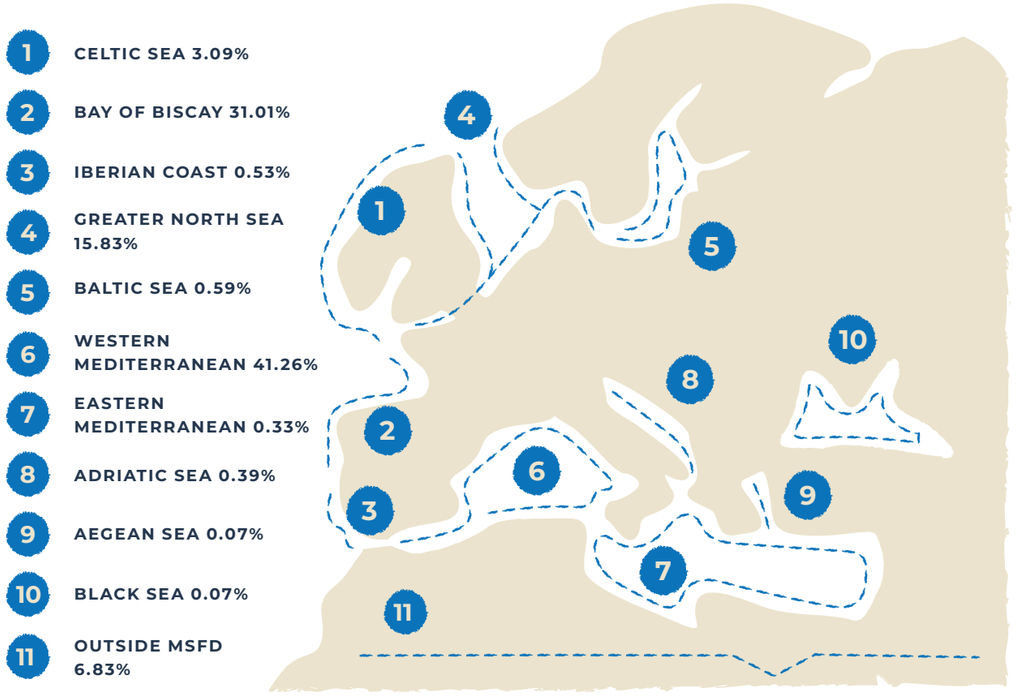


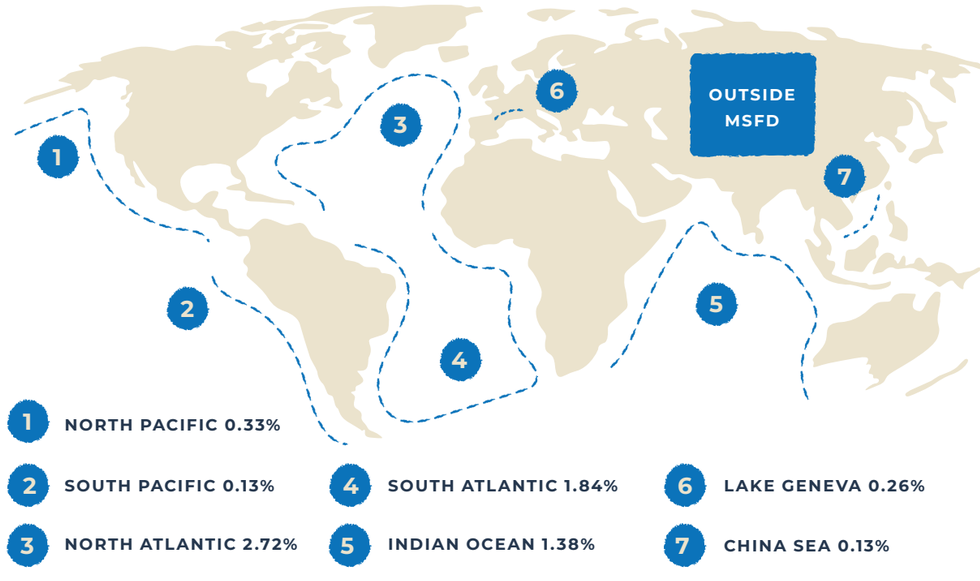
The Marine Litter Watch app

Surfrider Foundation Europe teamed up with the European Environment Agency to share data from the Ocean Initiatives collections and enter them into a European database. More experienced organisers or those wanting to invest more time in collecting and reporting information thereby have the opportunity to take part in a comprehensive quantification operation. They can do that in line with the standard European protocol, thanks to the Marine Litter Watch application.

WHERE DID LITTER COLLECTIONS TAKE PLACE?

For the purposes of this report, the regions where collections took place were divided into two: the major maritime areas in Europe as defined by the Marine Strategy Framework Directive (MSFD), and the regions outside the MSFD.

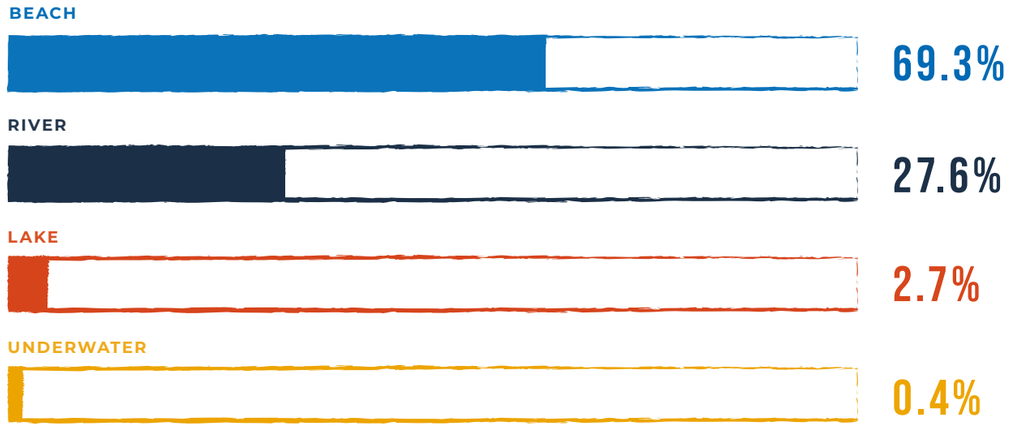




KEY FIGURES

The figures marked by an asterisk are based on a total of
482 report forms (179 simplified and 303 intermediaries).

Types of collection



3 742*

bags of litter were collected by participants.

213.47 M³*

Total volume of litter collected.

12 846*

people took part in community science operations, of which 25.5%* were schoolchildren.

390 KM³*

of coastline covered by Ocean Initiatives participants.

TOTAL LITTER COLLECTED

For several years we have been asking Ocean Initiatives participants to take part in a community science operation by filling in an intermediary report form to help us improve knowledge about the state of European and world coastlines concerning marine litter pollution. To do this, we asked them to answer questions about the location of their collection location and to quantify **35 types of litter categorised by material and use.**

This list of litter types is based on the master list of the European harmonised protocol and on the kinds of litter most commonly found on European beaches. **303 organisers accompanied by 5 537 people took part in this exercise. A total of 373 554 litter items were collected during these operations representing a total volume of 149 413 m³.**

TOP 10 LITTER ITEMS

01
CIGARETTE BUTTS

02
PLASTIC PIECES 2.5-50 CM

03
POLYSTYRENE PIECES 2.5-50 CM

04
FISHING: NETS, TANGLED ROPES, CORDS

05
PLASTIC BAGS AND PIECES

06
PLASTIC BOTTLES (DRINKS)

07
BOTTLE CAPS

08
PIECES OF GLASS

09
COTTON BUDS

10
FOOD CONTAINERS

63%

of the litter collected were single-use items. By single-use, we mean items meant to be used just once (e.g. plastic bottles or straws).

DISTRIBUTION OF LITTER COLLECTED BY USE

We grouped together the different types of litter by broad category of use. The eight categories are:

SMOKING-RELATED: smoking-related litter (e.g. cigarette packets, cigarette butts).

NON-IDENTIFIABLE LITTER: pieces of plastic, polystyrene.

FOOD PACKAGING: food packaging and containers (e.g. food wrappers, cups, cutlery).

FISHING: litter from professional and amateur fishing (e.g. ropes, fishing lines).

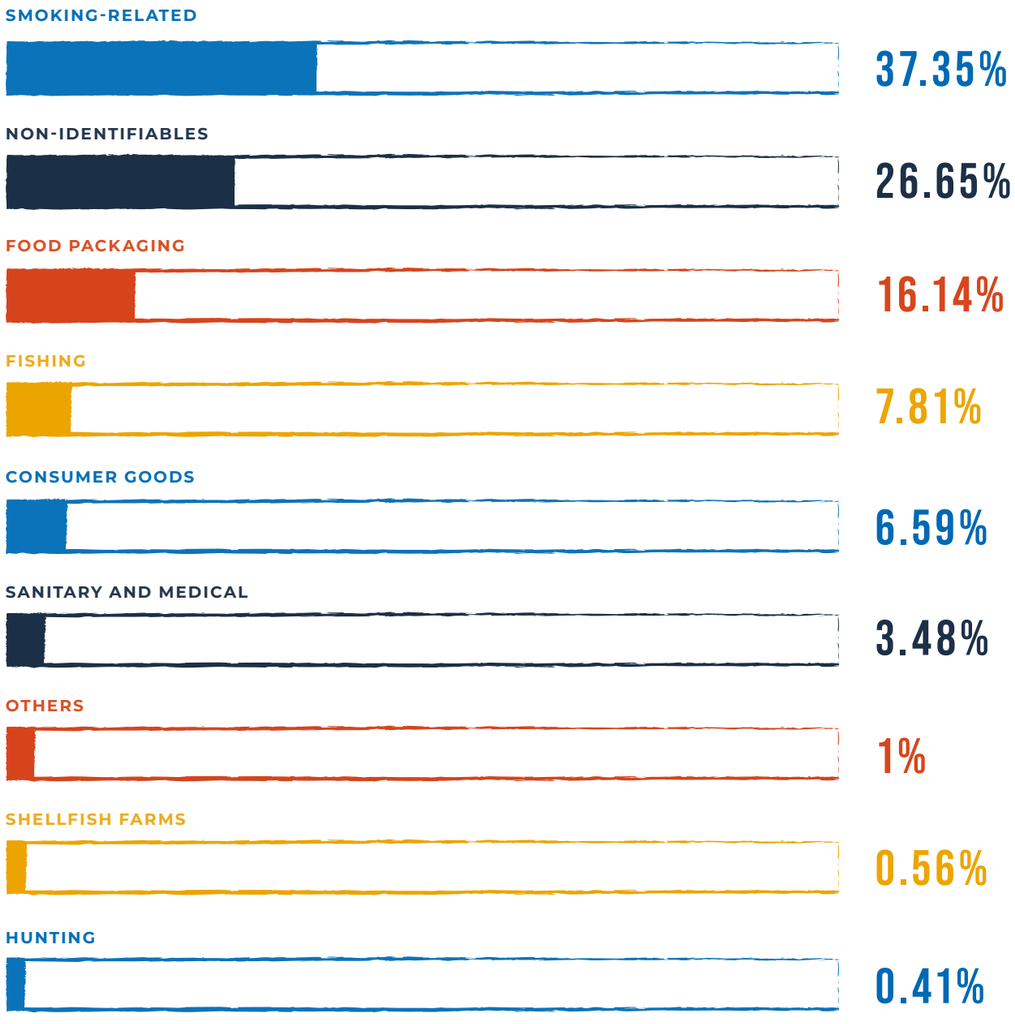
CONSUMER GOODS: litter from everyday consumer goods (e.g. plastic bags, toys, shoes, clothes).

SANITARY AND MEDICAL: e.g. medicine packaging, tampons and applicators).

OTHER LITTER: identifiable litter but which doesn't fit into the other categories, e.g. car parts, biomedia.

SHELLFISH FARMS: litter from shellfish farms.

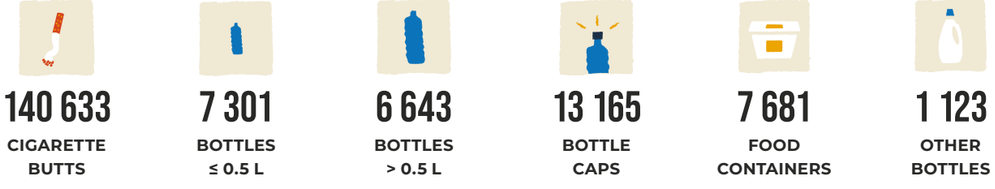
HUNTING : litter from hunting activities (shotgun cartridges).

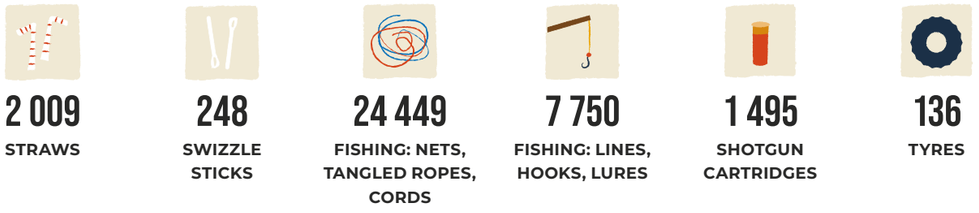


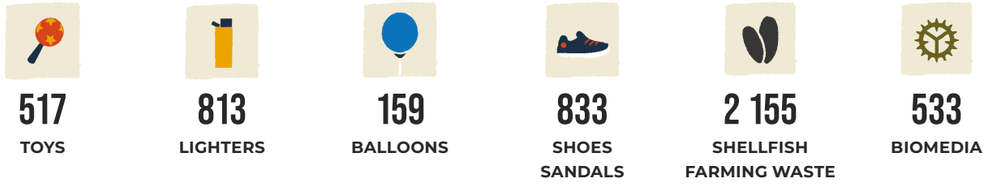
TOTAL LITTER ITEMS COLLECTED

The total number of items collected in 303 operations: 373 554 quantified items.

Plastic







Glass

Metal

Textiles

FOCUS ON THE MARINE ENVIRONMENT: BEACHES AND SEABEDS

TOP 10 LITTER ITEMS

01
CIGARETTE BUTTS

02
PLASTIC PIECES 2.5-50 CM

03
POLYSTYRENE PIECES 2.5-50 CM

04
FISHING: NETS, TANGLED ROPES, CORDS

05
PLASTIC BAGS AND PIECES

06
BOTTLE CAPS

07
PIECES OF GLASS

08
COTTON BUDS

09
FISHING: LINES, HOOKS, LURES

10
FOOD CONTAINERS

62.5%

of litter items found on the beaches were single-use plastic products.

TOTAL ITEMS COLLECTED IN THE MARINE ENVIRONMENT

Total number of items collected from 217 operations: 368 749 quantified items.

Plastic

91 191
CIGARETTE BUTTS

3 685
BOTTLES ≤ 0.5 L

4 792
BOTTLES > 0.5 L

11 030
BOTTLE CAPS

6 045
FOOD CONTAINERS

728
OTHER BOTTLES

8 305
PLASTIC BAGS AND PIECES

4 749
SWEET/SNACK WRAPPERS

3 353
LOLLIPOP STICKS

448
MEDICAL WASTE: PACKAGING CONTAINERS

8 914
SANITARY WASTE: COTTON BUDS

1 818
SANITARY WASTE: TAMPONS

187
CLEANING WIPES

26 275
POLYSTYRENE PIECES 2.5-50 CM

42 287
PLASTIC PIECES 2.5-50 CM

1 225
PLASTIC CUPS

173
PICNIC: PLATES

602
PICNIC: CUTLERY

1 754
STRAWS

221
SWIZZLE STICKS

24 052
FISHING: NETS, TANGLED ROPES, CORDS

7 661
FISHING: LINES, HOOKS, LURES

1 438
SHOTGUN CARTRIDGES

101
TYRES

423
TOYS

566
LIGHTERS

114
BALLOONS

626
SHOES SANDALS

1 974
SHELLFISH FARMING WASTE

533
BIOMEDIA

Glass

2 439
GLASS BOTTLES

9 632
PIECES OF GLASS

Metal

2 023
CANS

1 439
METAL PIECES

2 486
METAL CAPS

Textiles

1 201
CLOTHES OTHER TEXTILES

FOCUS ON WATERCOURSES: RIVERS AND LAKES

TOP 10 LITTER ITEMS

01 CIGARETTE BUTTS

02 PLASTIC PIECES 2.5-50 CM

03 PLASTIC BAGS AND PIECES

04 POLYSTYRENE PIECES 2.5-50 CM

05 BOTTLES ≤ 0.5 L

06 FOOD CONTAINERS

07 BOTTLE CAPS

08 GLASS BOTTLES

09 TEXTILES

10 BOUTEILLES > 0,5 L

TOTAL ITEMS COLLECTED IN WATERCOURSES

Total number of items collected in 86 operations: 99 597 quantified items.

Plastic

49 442 CIGARETTE BUTTS

3 616 BOTTLES ≤ 0.5 L

1 851 BOTTLES > 0.5 L

2 135 BOTTLE CAPS

1 636 FOOD CONTAINERS

395 OTHER BOTTLES

7 090 PLASTIC BAGS AND PIECES

2 275 SWEET/SNACK WRAPPERS

155 LOLLIPOP STICKS

325 MEDICAL WASTE: PACKAGING CONTAINERS

268 SANITARY WASTE: COTTON BUDS

61 SANITARY WASTE: TAMPONS

297 CLEANING WIPES

3 931 POLYSTYRENE PIECES 2.5-50 CM

14 152 PLASTIC PIECES 2.5-50 CM

781 PLASTIC CUPS

29 PICNIC: PLATES

96 PICNIC: CUTLERY

255 STRAWS

27 SWIZZLE STICKS

397 FISHING: NETS, TANGLED ROPES, CORDS

89 FISHING: LINES, HOOKS, LURES

57 SHOTGUN CARTRIDGES

35 TYRES

94 TOYS

247 LIGHTERS

45 BALLOONS

207 SHOES SANDALS

181 SHELLFISH FARMING WASTE

0 BIOMEDIA

Glass

1 876 GLASS BOTTLES

1 615 PIECES OF GLASS

Metal

1 635 CANS

598 METAL PIECES

1 830 METAL CAPS

Textiles

1 874 CLOTHES OTHER TEXTILES

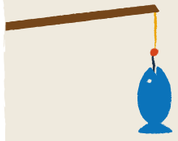
COLLECTION SITES

97%

of the collection sites along rivers and watercourses were located near a town or village upstream.

INFORMATION ON THE COLLECTION SITES

Types of activities taking place on the watercourses where the collections took place. Several types of activities can take place in the same area. The percentages are given for reference only.



46.5%

of sites are important fishing areas.

33%

of sites are located near hunting areas.

44%

are downstream from agricultural areas.

41%

are downstream from industrial areas.

35%

are in areas where sports and/or water-based activities take place.

PERCEPTION OF THE ORIGIN OF THE LITTER

We asked participants to tell us where they thought the litter found during their collections came from. Here are their answers:

100%

of the organisers indicated that the litter came from human activity.

45%

of organisers stated that the litter resulted from of the recreational activities (picnics, walks, parties) of users of site users.

Several organisers reported that much of the litter were probably the result of driver's anti-social behaviour on nearby roads. They tend to throw litter out of their car window and this litter is moved by the wind and rain, ending up in the nearest watercourse.

OTHER LITTER ITEMS COLLECTED IN LARGE NUMBERS

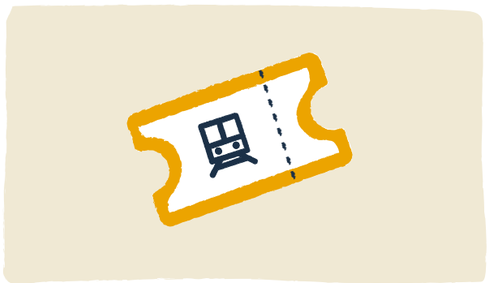
52% of organisers reported finding large quantities of other litter items during their quantification operations (items not included in the list).

Wet wipes

Many people still throw these synthetic single-use products in the toilet, damaging the wastewater systems across the European Union. The European Directive regarding single-use plastic, adopted in early 2019, set out several measures ranging from labelling on packaging to the implementation of extended producer responsibility practices to restrict this type of pollution.

Cigarette packets

In addition to cigarette butts, organisers picked up numerous other types of smoking-related litter such as cigarette packets or plastic wrappers. 51 cigarette packets were collected in a single clean-up along a river downstream of Paris.



Parking/Metro tickets

Many organisers informed us of the presence of parking/metro tickets. During various Ocean Initiatives near towns, hundreds of tickets were counted.

Metal bottle caps

Ocean Initiatives organisers frequently report finding metal bottle caps. During one collection along Bordeaux's quays, no fewer than 1103 caps were picked up.

THE BANKS OF THE RHONE: AN AREA OF HIGH ACCUMULATION OF LITTER

22 800 cigarette butts

Several organisers reported that the Rhone and its banks are regularly polluted by various types of litter mainly resulting from anti-social behaviour. Organisers picked up huge quantities of cans, cigarette butts, glass bottles and food containers during their collections. For example, during one them in Lyon, which covered 1 200 m, 22 800 cigarette butts were quantified.

ALSO,

5 320

plastic pieces smaller than 2.5 cm were counted on the banks of the Tarbes.

3 865

pre-production plastic pellets were identified in Gironde around Lège Cap Ferret.

UNUSUAL ITEMS

RIVERS AND OCEANS: A HUGE DUMPING GROUND OF HUMAN ACTIVITY

More than 260 large or unusual items were found by participants during the 2020 Ocean Initiatives.

1 VIDEO RECORDER

1 ARTILLERY SHELL

1 SAFE

46 NITROUS OXIDE CARTRIDGE

1 GUTTER

2 GAS CYLINDER

2 PARASOL

3 BROOM

FROM THE HOUSE

1 SHOWER TRAY

2 MATTRESS

1 TOILET

1 BED

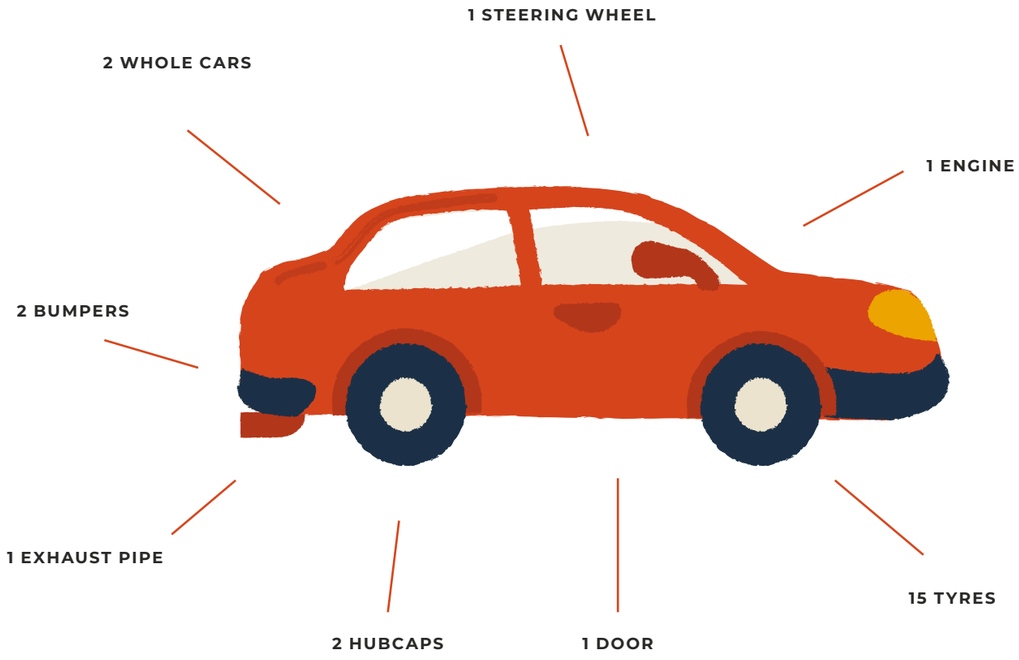
1 WASHING MACHINE

1 WINDOW

1 REFRIGERATOR

2 CHAIRS

CAR SECTION



NOT FORGETTING THE USUAL SUSPECTS

2 SCOOTERS

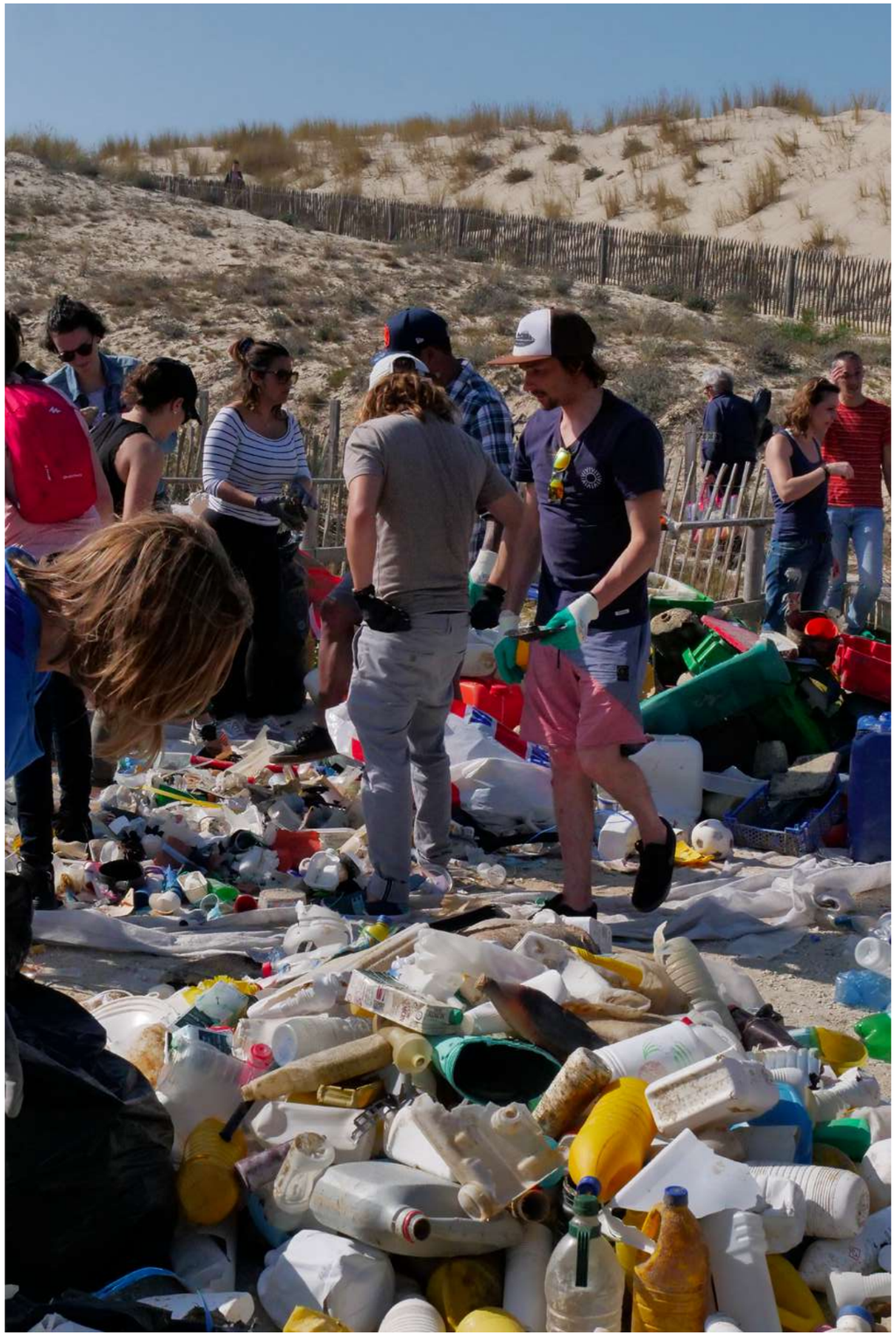
5 TRAFFIC SIGNS

33 PALLETS

4 MOPED

3 FLIPPERS

80 FIREWORKS



02 REPORT BY SEA AREAS

BAY OF BISCAY

FROM AUDIERNE BAY (FRANCE)
TO CAPE ORTEGAL (SPAIN)

GENERAL DATA FOR THE WHOLE SEA AREA

Extrapolation based on a total of 472 operations that took place in this sea area.

2 773*
bags of litter collected by participants.

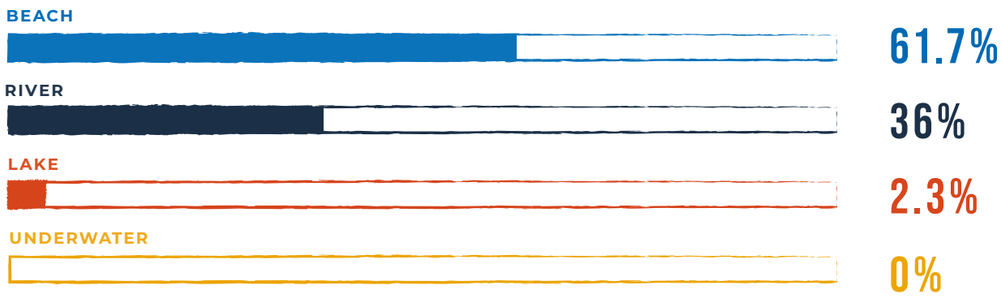
274.75 M³*
Total volume of litter collected.

10 240*
bags of litter collected by participants.

50 300 M*
of coastline, lake shores and riverbanks examined by participants in this sea area.

RESULTS FROM THE LITTER QUANTIFICATION

Types of collection



Top 5 litter items

01 CIGARETTE BUTTS
02 PLASTIC PIECES 2.5-50 CM
03 FISHING: NETS, TANGLED ROPES, CORDS
04 PLASTIC BAGS AND PIECES
05 FISHING: LINES, HOOKS, LURES

TOTAL LITTER ITEMS FOUND IN THE MARINE ENVIRONMENT AND WATERCOURSES

174 quantification operations bringing together 3 358 people took place in Spain (10 collections) and in France (165 collections). 123 076 items were picked up and quantified over a distance of 160 450 metres. The total volume of litter collected is 97.4 m³.

Plastic

18 644 CIGARETTE BUTTS
1 169 BOTTLES ≤ 0.5 L
1 598 BOTTLES > 0.5 L
4 890 BOTTLE CAPS
5 574 FOOD CONTAINERS
521 OTHER BOTTLES
7 023 PLASTIC BAGS AND PIECES
2 547 SWEET/SNACK WRAPPERS
1 163 LOLLIPOP STICKS
381 MEDICAL WASTE: PACKAGING CONTAINERS
2 749 SANITARY WASTE: COTTON BUDS
290 SANITARY WASTE: TAMPONS
395 CLEANING WIPES
4 374 POLYSTYRENE PIECES 2.5-50 CM
34 623 PLASTIC PIECES 2.5-50 CM
527 PLASTIC CUPS
26 PICNIC: PLATES
94 PICNIC: CUTLERY
391 STRAWS
52 SWIZZLE STICKS
16 994 FISHING: NETS, TANGLED ROPES, CORDS
7 049 FISHING: LINES, HOOKS, LURES
479 SHOTGUN CARTRIDGES
41 TYRES
226 TOYS
348 LIGHTERS
68 BALLOONS
241 SHOES SANDALS
1 178 SHELLFISH FARMING WASTE
409 BIOMEDIA

Glass

1 458 GLASS BOTTLES
3 063 PIECES OF GLASS

Metal

1 264 CANS
786 METAL PIECES
830 METAL CAPS

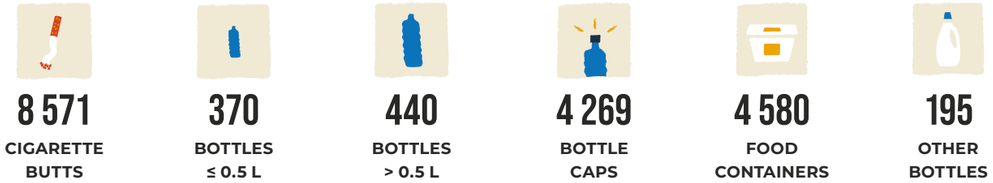
Textiles

2 026 CLOTHES OTHER TEXTILES

TOTAL ITEMS COLLECTED IN THE MARINE ENVIRONMENT

78 006 items were picked up and quantified during 66 operations (1 in Spain and 65 in France) carried out on this area's beaches and seabeds over a total distance of 40 050 metres. The total volume of collected litter was 19.3 m³.

Plastic



8 571 CIGARETTE BUTTS

370 BOTTLES ≤ 0.5 L

440 BOTTLES > 0.5 L

4 269 BOTTLE CAPS

4 580 FOOD CONTAINERS

195 OTHER BOTTLES

1 837 PLASTIC BAGS AND PIECES

1 640 SWEET/SNACK WRAPPERS

1 055 LOLLIPOP STICKS

181 MEDICAL WASTE: PACKAGING CONTAINERS

2 546 SANITARY WASTE: COTTON BUDS

272 SANITARY WASTE: TAMPONS

181 CLEANING WIPES

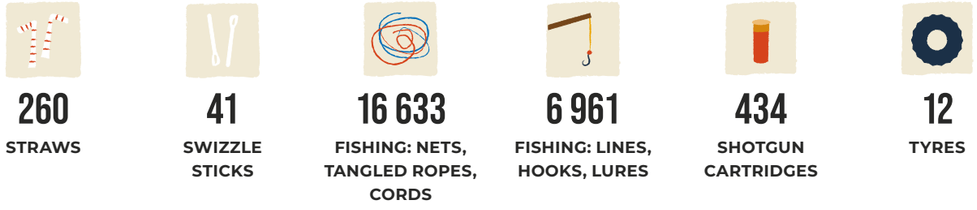
1 876 POLYSTYRENE PIECES 2.5-50 CM

20 657 PLASTIC PIECES 2.5-50 CM

305 PLASTIC CUPS

7 PICNIC: PLATES

63 PICNIC: CUTLERY



260 STRAWS

41 SWIZZLE STICKS

16 633 FISHING: NETS, TANGLED ROPES, CORDS

6 961 FISHING: LINES, HOOKS, LURES

434 SHOTGUN CARTRIDGES

12 TYRES

153 TOYS

126 LIGHTERS

35 BALLOONS

70 SHOES SANDALS

1 000 SHELLFISH FARMING WASTE

409 BIOMEDIA

Glass

182 GLASS BOTTLES

2 117 PIECES OF GLASS

Metal

122 CANS

286 METAL PIECES

310 METAL CAPS

Textiles

297 CLOTHES OTHER TEXTILES

FACTS AND FIGURES

25.5%

of the litter collected in this area were plastic pieces between 2.5 and 50 cm.

20.5%

of the litter collected on the beaches in this area came from fishing (nets, tangled ropes, cords).

7 021

plastic pieces between 2.5 and 50 cm were found along a 350 m stretch during one collection in Les Sables d'Olonne.

130

cotton buds were found during one Ocean Initiative in Tarnos (Landes) covering 500 m.

74%

of organisers reported that no particular weather or tidal event (spring tide, storm) could explain the presence of so much litter.

TYPES OF ACTIVITIES

We asked participants to tell us where they thought the litter found during their collections came from. Here are their answers:

68%

of the Ocean Initiatives were organised in or near a tourist area.

69.7%

of collections were located just next to a town.

TOTAL ITEMS COLLECTED IN WATERCOURSES

426 people picked up and quantified 45 076 items during 52 operations in France carried out around rivers and lakes in this area, over a total distance of 86 350 metres. The total volume of litter collected was 49.158 m³.

Plastic

10 073 CIGARETTE BUTTS

799 BOTTLES ≤ 0.5 L

1 158 BOTTLES > 0.5 L

621 BOTTLE CAPS

994 FOOD CONTAINERS

326 OTHER BOTTLES

5 186 PLASTIC BAGS AND PIECES

907 SWEET/SNACK WRAPPERS

108 LOLLIPOP STICKS

200 MEDICAL WASTE: PACKAGING CONTAINERS

203 SANITARY WASTE: COTTON BUDS

18 SANITARY WASTE: TAMPONS

283 CLEANING WIPES

2 498 POLYSTYRENE PIECES 2.5-50 CM

13 966 PLASTIC PIECES 2.5-50 CM

222 PLASTIC CUPS

19 PICNIC: PLATES

31 PICNIC: CUTLERY

131 STRAWS

11 SWIZZLE STICKS

361 FISHING: NETS, TANGLED ROPES, CORDS

88 FISHING: LINES, HOOKS, LURES

45 SHOTGUN CARTRIDGES

29 TYRES

73 TOYS

222 LIGHTERS

33 BALLOONS

171 SHOES SANDALS

178 SHELLFISH FARMING WASTE

0 BIOMEDIA

Glass

1 276 GLASS BOTTLES

946 PIECES OF GLASS

Metal

1 142 CANS

500 METAL PIECES

520 METAL CAPS

Textiles

1 729 CLOTHES OTHER TEXTILES

FACTS AND FIGURES

1/4

of the litter items found on the banks were cigarette butts.

31.1%

of the litter on riverbanks in this sea area were plastic pieces of 2.5 to 50 cm.

1 575

plastic bags and pieces were collected in one ocean initiative in Saint Pierre de Bigorre (65) covering 750 m.

TYPES OF ACTIVITIES

We asked participants to tell us where they thought the litter found during their collections came from. Here are their answers:

84%

of organisers believed that the litter collected came from the towns upstream of the collection site.

75%

of organisers reported that the litter collected resulted from irresponsible behaviour on the part of people and companies.

TESTIMONIAL

SABRINA NEVEU

MOUTIERS EN RETZ - FRANCE

Some of our pupils get involved in a year-long class project as part of the «young reporters for the environment» contest. We decided to investigate how our daily life in Nantes impacts the oceans (via the Loire).

We organised this Ocean Initiative in order to find out more about the pollution on one of our beaches: What type of litter? Where does it come from? How much? Is there a link with oyster farms? We were helped by the Hirondelle association and they told us about the Ocean Initiatives. The ultimate goal was to organise an event at our school in Nantes to get as many people as possible involved: to raise awareness among the other pupils about this pollution, to further explore the issues with a round table and finally take action with workshops to make things out of old clothes, such as market bags.

On the beach, we mainly collected plastic pieces (683). It was Moutiers en Retz beach, near an aquaculture area. So we found lots of waste related to oyster farming (219), lots of fishing nets pieces (873), plastic bags lumps (107) and food wrappers (193). However, there were very few mermaid tears and biomedia.

We didn't find any unusual litter items, but the pupils were surprised by two things:

Firstly, they initially thought that in half a day, 35 of us could cover (and therefore clean), one kilometre of beach in half a day. In the end, after 2 hours, we had only covered 150 metres. Between the macroscopic scale and everything there was to discover along the foreshore as well as the microplastics, you soon realise that it's never-ending.

Secondly, they struggled to categorise certain types of waste and often mistook them for seaweed, eggs, etc. (One student even thought a feather was false because he thought it looked plastic). Having to follow a strict protocol enabled them to understand that they needed specific knowledge of the foreshore and of the waste itself (e.g. shotgun cartridges) to then be able to understand the origin of this pollution and take appropriate action.

No other type of experience could raise so much awareness!!

WESTERN MEDITERRANEAN

FRANCE, SPAIN, ITALY, MOROCCO, TUNISIA, ALGERIA

GENERAL DATA FOR THE WHOLE SEA AREA

Extrapolation based on a total of 628 operations that took place in this sea area.

5 699*
bags of litter collected by participants.

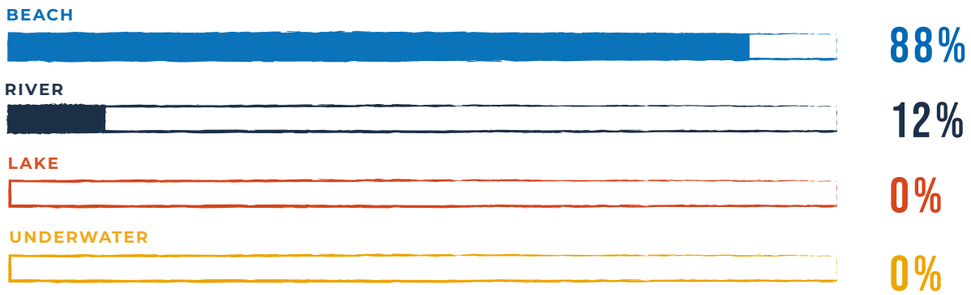
262,9 M³*
Total volume of litter collected.

16 342*
bags of litter collected by participants.

279 665 M*
of coastline, lake shores and riverbanks examined by participants in this sea area.

RESULTS FROM THE LITTER QUANTIFICATION

Types of collection



Top 5 litter items

01 CIGARETTE BUTTS

02 POLYSTYRENE PIECES 2.5-50 CM

03 PLASTIC PIECES 2.5-50 CM

04 COTTON BUDS

05 PLASTIC BAGS AND PIECES

TOTAL LITTER ITEMS FOUND IN THE MARINE ENVIRONMENT AND WATERCOURSES

The 107 quantification operations involving 2 084 people took place in Spain (24), France (55) and Italy (19). 132 530 items were collected and counted over a distance of 47 650 m distance. The total volume of waste collected was 45.86 m³.

Plastic

56 236 CIGARETTE BUTTS

1 804 BOTTLES ≤ 0.5 L

1 605 BOTTLES > 0.5 L

3 629 BOTTLE CAPS

830 FOOD CONTAINERS

316 OTHER BOTTLES

5 366 PLASTIC BAGS AND PIECES

1 986 SWEET/SNACK WRAPPERS

1 887 LOLLIPOP STICKS

198 MEDICAL WASTE: PACKAGING CONTAINERS

6 148 SANITARY WASTE: COTTON BUDS

1 463 SANITARY WASTE: TAMPONS

55 CLEANING WIPES

21 229 POLYSTYRENE PIECES 2.5-50 CM

14 326 PLASTIC PIECES 2.5-50 CM

655 PLASTIC CUPS

113 PICNIC: PLATES

380 PICNIC: CUTLERY

1 275 STRAWS

177 SWIZZLE STICKS

1 599 FISHING: NETS, TANGLED ROPES, CORDS

430 FISHING: LINES, HOOKS, LURES

668 SHOTGUN CARTRIDGES

31 TYRES

203 TOYS

305 LIGHTERS

42 BALLOONS

113 SHOES SANDALS

88 SHELLFISH FARMING WASTE

115 BIOMEDIA

Glass

1 904 GLASS BOTTLES

2 988 PIECES OF GLASS

Metal

1 746 CANS

667 METAL PIECES

1 441 METAL CAPS

Textiles

607 CLOTHES OTHER TEXTILES

FACTS AND FIGURES

208

metal bottle tops were found on Toulon beach in one collection covering 350 m.

37%

of the Ocean Initiatives carried out in this sea area collected more than 100 cigarette butts.

290

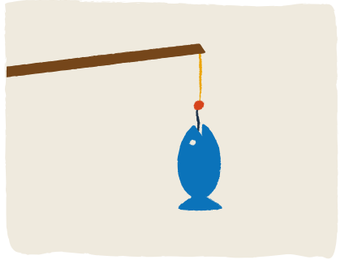
straws were picked up along a 750 m stretch of beach in Valencia (Spain).

50%

of the collections indicated the presence of polystyrene fragments.

TYPES OF ACTIVITIES

We asked participants to tell us where they thought the litter found during their collections came from. Here are their answers:

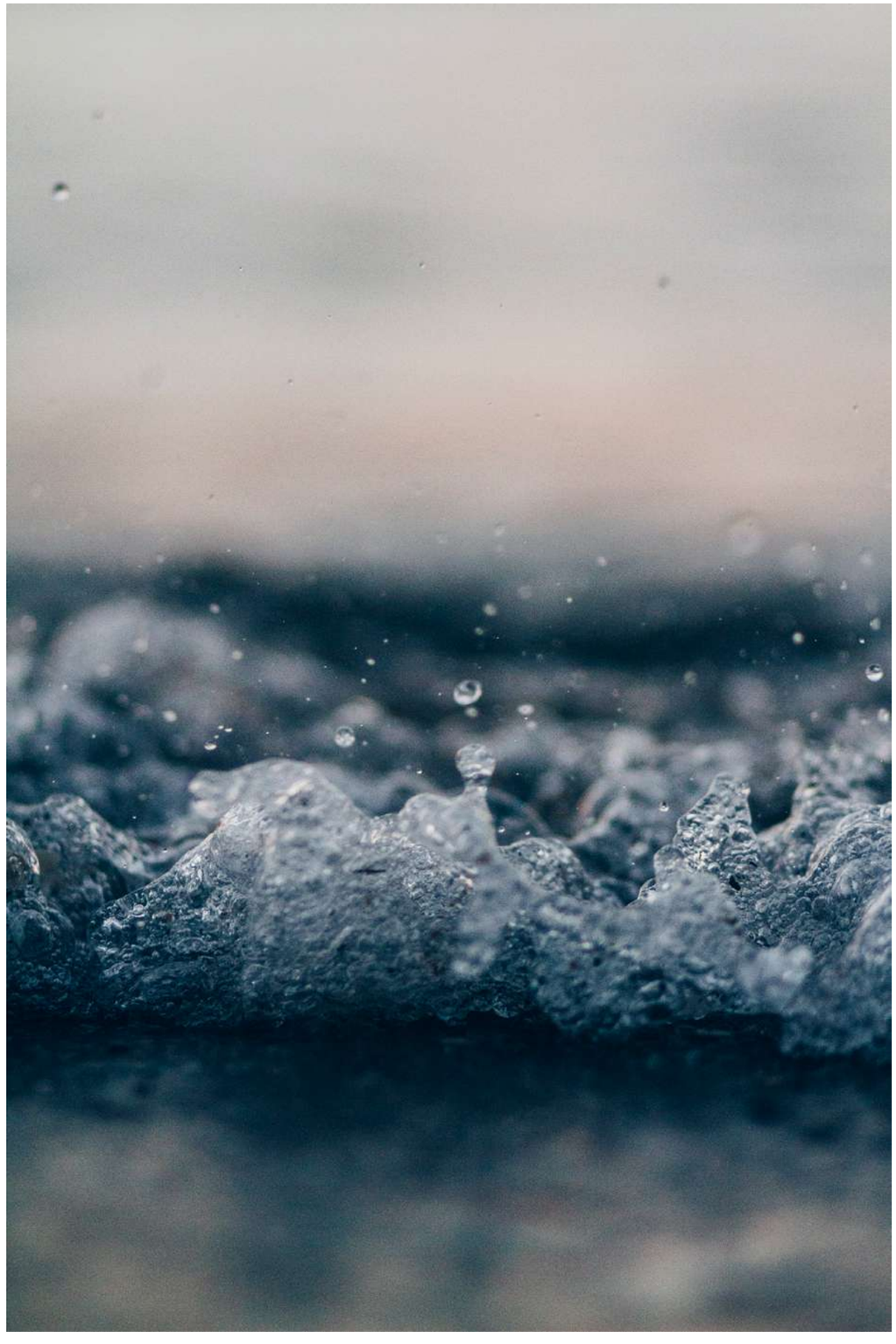


59%

of the Ocean Initiatives collections took place near fishing areas (professional and amateur).

85%

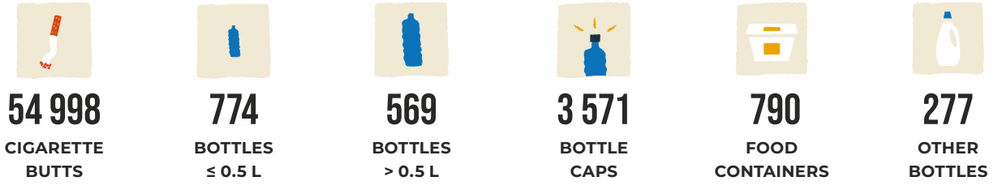
of collections carried out in this sea area were located near towns.



TOTAL ITEMS COLLECTED IN THE MARINE ENVIRONMENT

129 554 items were picked up and counted through 95 collections over a distance of 38 000 metres.
The total volume of waste collected was 43.3 m³.

Plastic



54 998 CIGARETTE BUTTS
774 BOTTLES ≤ 0.5 L
569 BOTTLES > 0.5 L
3 571 BOTTLE CAPS
790 FOOD CONTAINERS
277 OTHER BOTTLES
5 188 PLASTIC BAGS AND PIECES
1 840 SWEET/SNACK WRAPPERS
1 876 LOLLIPOP STICKS
193 MEDICAL WASTE: PACKAGING CONTAINERS
142 SANITARY WASTE: COTTON BUDS
1 438 SANITARY WASTE: TAMPONS
53 CLEANING WIPES
20 842 POLYSTYRENE PIECES 2.5-50 CM
14 216 PLASTIC PIECES 2.5-50 CM
626 PLASTIC CUPS
103 PICNIC: PLATES
368 PICNIC: CUTLERY
1 240 STRAWS
176 SWIZZLE STICKS
1 599 FISHING: NETS, TANGLED ROPES, CORDS
430 FISHING: LINES, HOOKS, LURES
658 SHOTGUN CARTRIDGES
30 TYRES
197 TOYS
303 LIGHTERS
40 BALLOONS
124 SHOES SANDALS
88 SHELLFISH FARMING WASTE
115 BIOMEDIA

Glass

1 845 GLASS BOTTLES
2 795 PIECES OF GLASS

Metal

1 678 CANS
639 METAL PIECES
1 297 METAL CAPS

Textiles

551 CLOTHES OTHER TEXTILES

FACTS AND FIGURES

100%

of the collections carried out on the beaches were near a tourist area and a town.

45%

of the litter collected was made up of cigarette butts.

374

bottle tops were collected along a 400 m stretch of beach in Genoa (Italy).

241

cans were found along a 150 m stretch during an Ocean Initiative in Montgat (Spain).

TOTAL WASTE FOUND IN WATERCOURSES AND LAKES

2 976 items were collected and counted by 97 people over a distance of 9 650 metres.
The total volume of waste collected was 2.47 m³.

Plastic

1 238
CIGARETTE BUTTS

30
BOTTLES ≤ 0.5 L

36
BOTTLES > 0.5 L

58
BOTTLE CAPS

40
FOOD CONTAINERS

39
OTHER BOTTLES

178
PLASTIC BAGS AND PIECES

146
SWEET/SNACK WRAPPERS

11
LOLLIPOP STICKS

5
MEDICAL WASTE: PACKAGING CONTAINERS

6
SANITARY WASTE: COTTON BUDS

25
SANITARY WASTE: TAMPONS

2
CLEANING WIPES

387
POLYSTYRENE PIECES 2.5-50 CM

110
PLASTIC PIECES 2.5-50 CM

29
PLASTIC CUPS

10
PICNIC: PLATES

12
PICNIC: CUTLERY

35
STRAWS

1
SWIZZLE STICKS

0
FISHING: NETS, TANGLED ROPES, CORDS

0
FISHING: LINES, HOOKS, LURES

10
SHOTGUN CARTRIDGES

1
TYRES

6
TOYS

2
LIGHTERS

2
BALLOONS

9
SHOES SANDALS

0
SHELLFISH FARMING WASTE

0
BIOMEDIA

Glass

59
GLASS BOTTLES

193
PIECES OF GLASS

Metal

68
CANS

28
METAL PIECES

144
METAL CAPS

Textiles

56
CLOTHES OTHER TEXTILES

FACTS AND FIGURES

57.8%

of cigarette butts represented 57.8% of the total litter found in rivers and lakes in the western Mediterranean.

60%

The collection organisers reported, in 60% of cases the presence of large size waste.

TESTIMONIAL

ISABEL ARMADA

ALICANTE - SPAIN

We discovered Ocean Initiatives thanks to one of our volunteers. The idea of having a tool enabling us to log the information from a collection and to contact participants quickly, is great.

The help for the equipment and the support during the collection is a real plus that helps us organise our events aimed at combatting marine litter. The most common litter items we found during our collections were drink cans and drink bottles, plastic bags and food wrappers. But we were surprised to find a lot of wet wipes, cotton buds and tampon applicators. This clearly reveals the saturation of waste in wastewater treatment plants.

The most surprising litter item we found was, without a doubt, a soda can with a best by date of 2000. This means the can must have spent at least 20 years in the environment. But the strangest find was a tiger print rug on a beach in Alicante.

During our ocean initiatives, we had lots of participants of all ages (children, parents, grandparents). Local authorities gave us varying degrees of support, but we caught the eye of local media and even national television!

We can't wait to be able to return safely to the field.
Thank you for your help.

CRISTINA CAMARENA

VALENCIA - SPAIN

Over recent months we have carried out numerous collections on beaches and riverbanks. It's been an unforgettable experience.

While we picked up a large quantity of waste during these collections (around 25 000 pieces of plastic and more than 10 000 cigarette butts), that it is not what impressed us the most. Although it was satisfying to leave a clean natural environment behind us, the most amazing thing was to see the number of people willing to roll their sleeves up and get stuck in for the environment. Around 700 people took part in our collections. We've received dozens of messages over the last few months from people telling us that since the Ocean Initiative, they can't help but pick up litter on the beach when they see it since the Ocean Initiative. Once you start to see cigarette butts in the sand, you see them everywhere! So, it's not so much that we picked up a lot of litter during the collections, but it is more about the participants who keep taking action after, in a sustainable manner. The impact is therefore even greater than we could imagined. We've had many memorable experiences during these collections, but for me personally there's one image I'll never forget. On February 15, we organised a collection on Malvarrosa Beach here in Valencia, and a group of 12-year-olds went out of their way to dig up some tyres wedged in the sand. They didn't hesitate, and all got stuck in together. Their parents joined in too. For me, this scene represents what we want to encourage with this type of initiative.

To conclude, I would like to say that, if it has been possible, it is through you. Thank you for your amazing association which gave us the tools and the possibility to organise theses collections. All the waste we collected is no longer in the sea or abandoned on riverbanks, and it is all thanks to you.

TESTIMONIAL

HÉLÈNE HATTRY

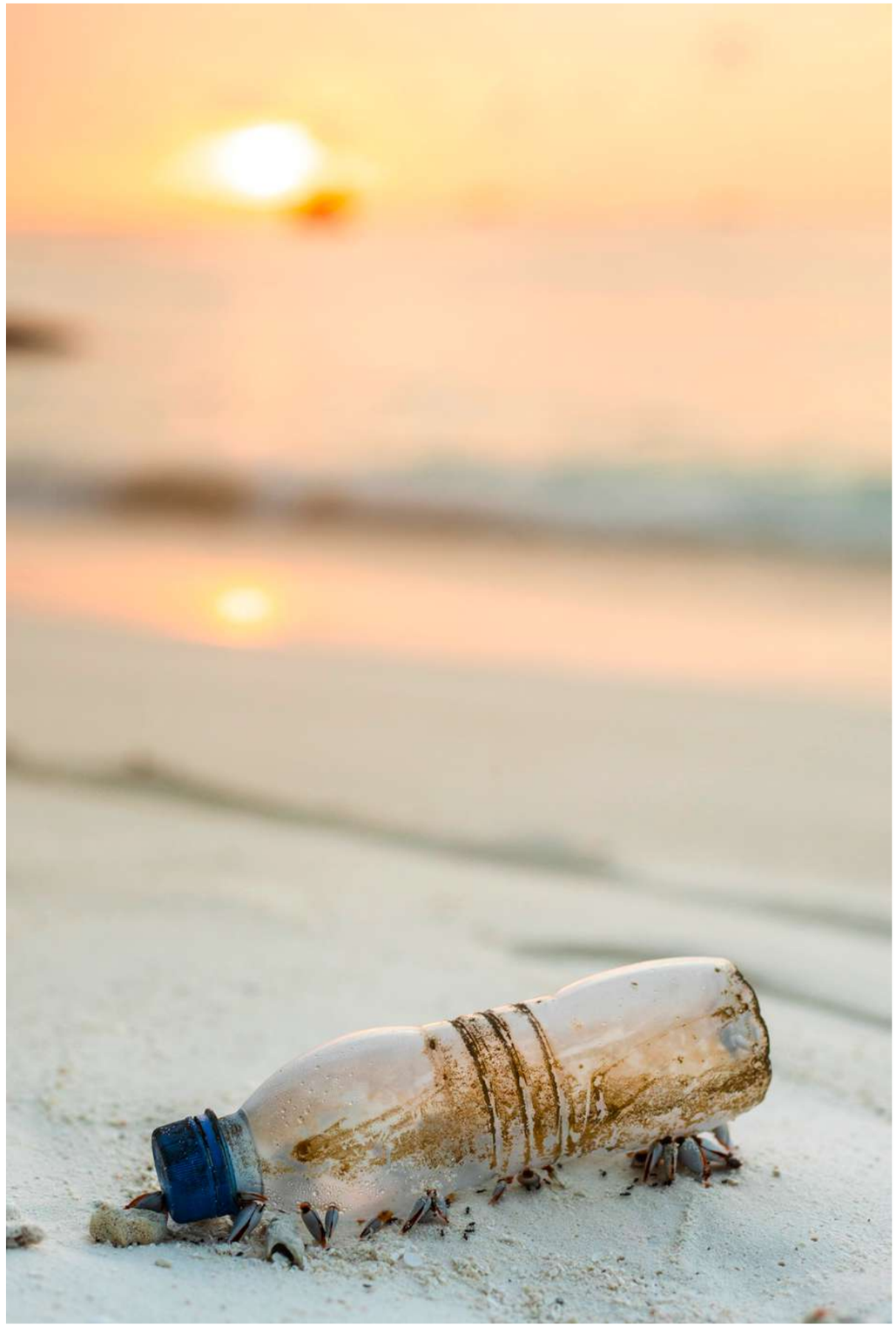
LA SEYNE-SUR-MER - FRANCE

Some of the «eco-delegates» from our secondary school organised this collection on the beach because they were concerned about marine pollution and found it unacceptable to leave the sea in this state. They wanted to do something to make things change.

Along a 200m stretch of beach, we picked up a lot of plastic waste: wrappers, plastic bags, cigarette butts and fishing cord. Under the rocks of the dyke there was a lot of waste (nets, beach chairs, flip flops) which we couldn't reach, as if the rocks had been placed on top of them.

What shocked us the most was the noise of the countless pieces of plastic when we touched the seagrass on the foreshore. We realised then that nature was really affected by plastic, that it has found its way everywhere.

We also found biomedia from wastewater treatment plants, a type of pollution not many people know about. What also shocked us was that when we arrived, the beach looked clean when we arrived, yet waste was hiding in all the little nooks and crannies of the rocks. .



GREATER NORTH SEA

UNITED KINGDOM, NORTHERN FRANCE, BELGIUM,
NETHERLANDS, DENMARK, WESTERN GERMANY, NORWAY, SWEDEN

GENERAL DATA FOR THE WHOLE SEA AREA

Extrapolation based on a total of 241 operations that were carried out in this sea area.

2 080*
bags of litter collected by participants.

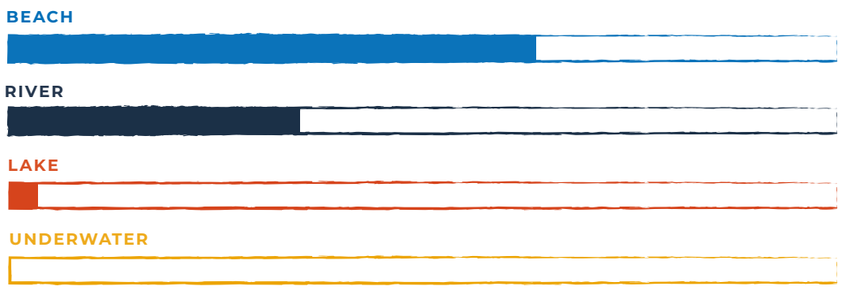
106.33 M³*
Total volume of litter collected.

6 237*
bags of litter collected by participants.

234 023 M*
of coastline, lake shores and riverbanks examined by participants in this sea area.

RESULTS FROM THE LITTER QUANTIFICATION

Types of collection



60%
36.7%
3.3%
0%

Top 5 litter items

01	02	03	04	05
CIGARETTE BUTTS	PLASTIC PIECES 2.5-50 CM	FISHING: NETS, TANGLED ROPES, CORDS	PLASTIC PIECES 2.5-50 CM	PIECES OF GLASS

TOTAL LITTER ITEMS FOUND IN THE MARINE ENVIRONMENT AND WATERCOURSES

38 quantification operations bringing together 542 people took place in France (35) and Germany (3).
55 656 items were collected and quantified over a distance of 36 900 m. The total volume of waste collected was 16.7 m³.

Plastic

39 216	706	721	930	751	221
CIGARETTE BUTTS	BOTTLES ≤ 0.5 L	BOTTLES > 0.5 L	BOTTLE CAPS	FOOD CONTAINERS	OTHER BOTTLES
527	**804**	**250**	**51**	**150**	**70**
PLASTIC BAGS AND PIECES	SWEET/SNACK WRAPPERS	LOLLIPOP STICKS	MEDICAL WASTE: PACKAGING CONTAINERS	SANITARY WASTE: COTTON BUDS	SANITARY WASTE: TAMPONS
12	**1 890**	**1 631**	**219**	**1**	**57**
CLEANING WIPES	POLYSTYRENE PIECES 2.5-50 CM	PLASTIC PIECES 2.5-50 CM	PLASTIC CUPS	PICNIC: PLATES	PICNIC: CUTLERY
136	**16**	**2 070**	**102**	**257**	**9**
STRAWS	SWIZZLE STICKS	FISHING: NETS, TANGLED ROPES, CORDS	FISHING: LINES, HOOKS, LURES	SHOTGUN CARTRIDGES	TYRES
41	**45**	**31**	**45**	**767**	**5**
TOYS	LIGHTERS	BALLOONS	SHOES SANDALS	SHELLFISH FARMING WASTE	BIOMEDIA

Glass

532	1 094
GLASS BOTTLES	PIECES OF GLASS

Metal

415	275	1 439
CANS	METAL PIECES	METAL CAPS

Textiles

175
CLOTHES OTHER TEXTILES

TOTAL ITEMS COLLECTED IN THE MARINE ENVIRONMENT

207 bags containing 17 968 items were collected and counted during 22 operations carried out over a total distance of 24 250 metres. The total volume of waste collected was 12.7 m³.

Plastic

6 585 CIGARETTE BUTTS

103 BOTTLES ≤ 0.5 L

291 BOTTLES > 0.5 L

509 BOTTLE CAPS

300 FOOD CONTAINERS

214 OTHER BOTTLES

344 PLASTIC BAGS AND PIECES

332 SWEET/SNACK WRAPPERS

219 LOLLIPOP STICKS

38 MEDICAL WASTE: PACKAGING CONTAINERS

138 SANITARY WASTE: COTTON BUDS

55 SANITARY WASTE: TAMPONS

0 CLEANING WIPES

1 864 POLYSTYRENE PIECES 2.5-50 CM

1 555 PLASTIC PIECES 2.5-50 CM

114 PLASTIC CUPS

1 PICNIC: PLATES

15 PICNIC: CUTLERY

65 STRAWS

1 SWIZZLE STICKS

2 059 FISHING: NETS, TANGLED ROPES, CORDS

101 FISHING: LINES, HOOKS, LURES

255 SHOTGUN CARTRIDGES

6 TYRES

29 TOYS

24 LIGHTERS

21 BALLOONS

39 SHOES SANDALS

764 SHELLFISH FARMING WASTE

5 BIOMEDIA

Glass

145 GLASS BOTTLES

888 PIECES OF GLASS

Metal

100 CANS

247 METAL PIECES

425 METAL CAPS

Textiles

122 CLOTHES OTHER TEXTILES

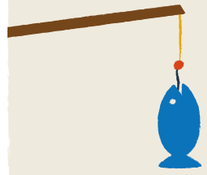
FACTS AND FIGURES

40%

of collections reported the presence of disposable masks.

110

hunting cartridges were quantified during one collection in Fort-Mahon-Plage (France).



77%

of collections found litter from fishing activities.

TYPES OF ACTIVITIES

We asked participants to tell us where they thought the litter found during their collections came from. Here are their answers:

87%

of organisers indicated that the Ocean Initiative took place near a tourist area.

100%

of beaches were near a maritime shipping area.

70%

of collection sites were also popular water sports locations.

TOTAL WASTE FOUND IN WATERCOURSES AND LAKES

16 collections with 37 688 items were organised around watercourses in this sea area, over a total distance of 12 650 metres. The total volume of waste collected was 4 m³.

Plastic

32 631
CIGARETTE BUTTS

603
BOTTLES ≤ 0.5 L

430
BOTTLES > 0.5 L

421
BOTTLE CAPS

451
FOOD CONTAINERS

7
OTHER BOTTLES

183
PLASTIC BAGS AND PIECES

472
SWEET/SNACK WRAPPERS

31
LOLLIPOP STICKS

13
MEDICAL WASTE: PACKAGING CONTAINERS

12
SANITARY WASTE: COTTON BUDS

15
SANITARY WASTE: TAMPONS

12
CLEANING WIPES

26
POLYSTYRENE PIECES 2.5-50 CM

76
PLASTIC PIECES 2.5-50 CM

105
PLASTIC CUPS

0
PICNIC: PLATES

42
PICNIC: CUTLERY

71
STRAWS

15
SWIZZLE STICKS

11
FISHING: NETS, TANGLED ROPES, CORDS

1
FISHING: LINES, HOOKS, LURES

2
SHOTGUN CARTRIDGES

3
TYRES

12
TOYS

21
LIGHTERS

10
BALLOONS

6
SHOES SANDALS

3
SHELLFISH FARMING WASTE

0
BIOMEDIA

Glass

387
GLASS BOTTLES

206
PIECES OF GLASS

Metal

315
CANS

28
METAL PIECES

1 014
METAL CAPS

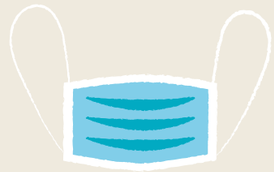
Textiles

53
CLOTHES OTHER TEXTILES

FACTS AND FIGURES

18 255

cigarette butts were collected on the quays of the Seine in Rouen (France).

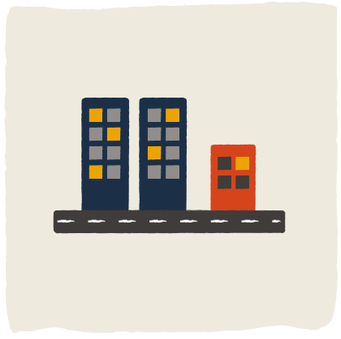


54

surgical masks were collected by participants of an ocean initiative in Paris, over a 250-metre stretch (France).

TYPES OF ACTIVITIES

We asked participants to tell us where they thought the litter found during their collections came from. Here are their answers:



72%

of organisers believed that the waste resulted from anti-social behaviour in large towns upstream.

25%

of collections took place following unusual weather events (heavy rainfall/wind) which caused the litter to accumulate on the riverbanks and in the rivers.

TESTIMONIAL

MARIE JOURDAIN

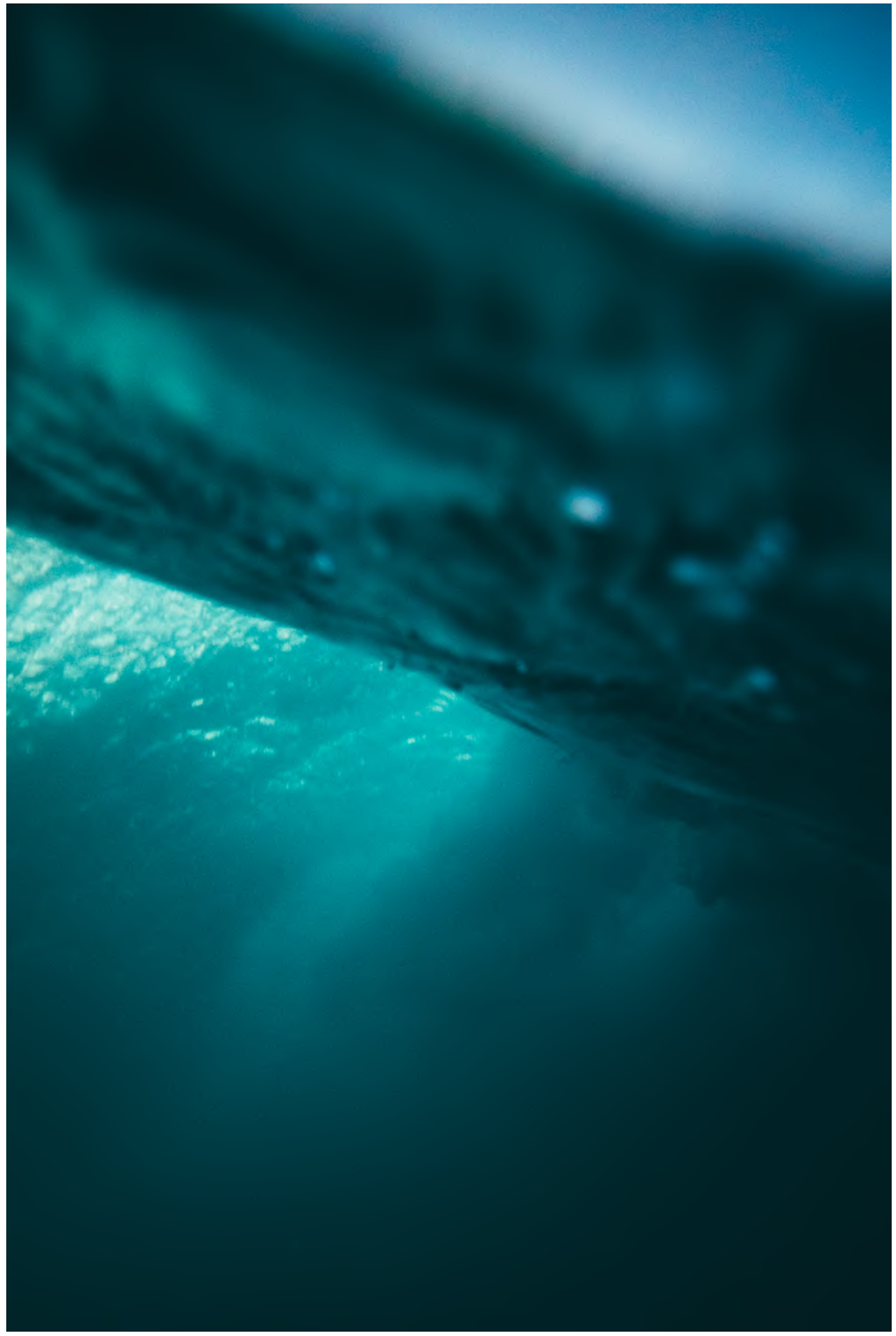
PARIS - FRANCE

I'm from the Landes region of France and became aware of the need to protect the oceans at a very young age. I really started to get involved by taking the time to clean the beaches, in summer and winter, whenever I went walking there.

I joined the volunteer branch of Surfrider Foundation Paris in 2020 to carry on this type of action and I organised my very first Ocean Initiative in September. For me, it's essential to get involved in towns and cities to fight against plastic pollution in our oceans. It's also important to raise people awareness.

This is what I liked about my Ocean Initiative because we talked about these issues. We picked up a huge number of cigarette butts (4000 in one hour). It was the most common litter item we found. We also picked up plastic litter (cups, cutlery, wrappers, etc.).

The event went really well, with a good atmosphere and a lovely sunset. At first we were a bit saddened when we saw the area to be cleaned (Les Invalides and the quays) but it just motivated us even more!



CELTIC SEA

IRELAND, GREAT BRITAIN, FRANCE.

GENERAL DATA FOR THE WHOLE SEA AREA

Extrapolation based on a total of 47 operations that took place in this sea area.

352*
bags of litter collected by participants.

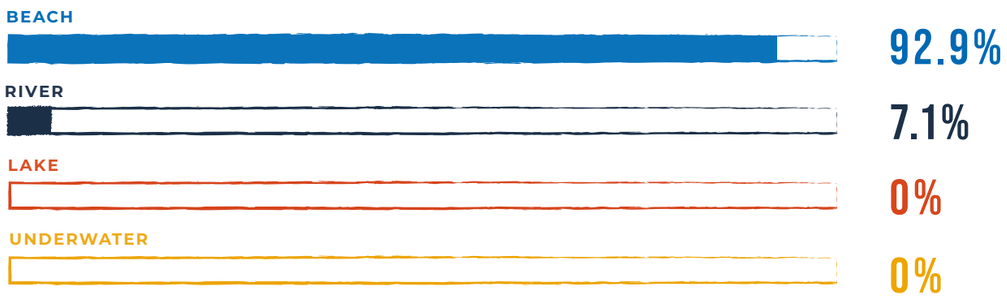
16.8 M³*
Total volume of litter collected.

6 213*
bags of litter collected by participants.

36 865 M*
of coastline, lake shores and riverbanks examined by participants in this sea area.

RESULTS FROM THE LITTER QUANTIFICATION

Types of collection



Top 5 litter items

01 PIECES OF GLASS

02 FISHING: NETS, TANGLED ROPES, CORDS

03 PLASTIC PIECES 2.5-50 CM

04 CIGARETTE BUTTS

05 BOTTLE CAPS

TOTAL LITTER ITEMS FOUND IN THE MARINE ENVIRONMENT AND WATERCOURSES

98 bags filled with 14 065 items were collected and quantified during 14 operations, bringing together 289 people, over a total distance of 11 050 metres. The total volume of waste collected was 4.7 m³.

Plastic

1 547 CIGARETTE BUTTS

66 BOTTLES ≤ 0.5 L

85 BOTTLES > 0.5 L

1 071 BOTTLE CAPS

126 FOOD CONTAINERS

15 OTHER BOTTLES

718 PLASTIC BAGS AND PIECES

625 SWEET/SNACK WRAPPERS

82 LOLLIPOP STICKS

29 MEDICAL WASTE: PACKAGING CONTAINERS

27 SANITARY WASTE: COTTON BUDS

15 SANITARY WASTE: TAMPONS

0 CLEANING WIPES

306 POLYSTYRENE PIECES 2.5-50 CM

1 799 PLASTIC PIECES 2.5-50 CM

37 PLASTIC CUPS

2 PICNIC: PLATES

5 PICNIC: CUTLERY

30 STRAWS

0 SWIZZLE STICKS

2 964 FISHING: NETS, TANGLED ROPES, CORDS

131 FISHING: LINES, HOOKS, LURES

66 SHOTGUN CARTRIDGES

4 TYRES

13 TOYS

31 LIGHTERS

5 BALLOONS

17 SHOES SANDALS

77 SHELLFISH FARMING WASTE

5 BIOMEDIA

Glass

129 GLASS BOTTLES

3 767 PIECES OF GLASS

Metal

70 CANS

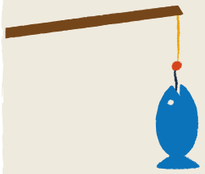
121 METAL PIECES

39 METAL CAPS

Textiles

46 CLOTHES OTHER TEXTILES

FACTS AND FIGURES



22.5%

of the litter collected across the Celtic Sea area was related to fishing.

100%

of Ocean Initiatives carried out in this sea area found the presence of litter related to fishing activities.

2.5 KM

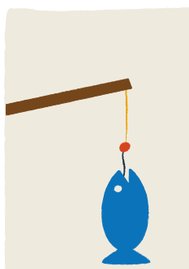
One cigarette butt was found every two metres in Brest along a 2.5 km stretch.

TYPES OF ACTIVITIES

We asked participants to tell us where they thought the litter found during their collections came from. Here are their answers:

92%

of beaches were located near a tourist area.

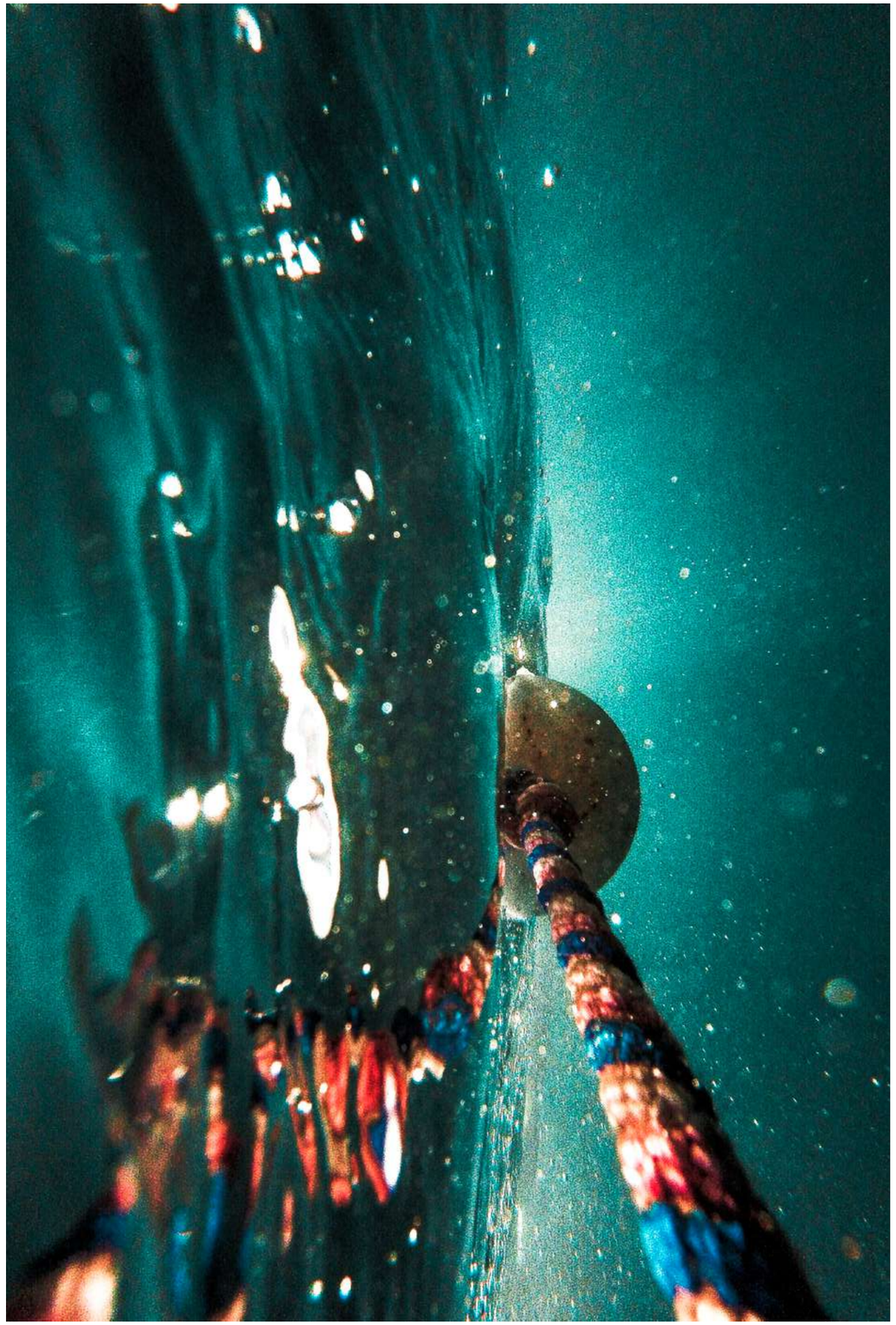


100%

of beaches where collections took place were located near fishing areas (professional and amateur).

70%

of the organisers reported that no specific weather or tidal event (spring tide/storm) could explain the litter's presence around the collection time.



OTHER SEA AREAS

In this report, we present the results of community science projects for each sea area. To do this, we need a minimum number of completed report forms to ensure that the data is representative of the pollution in each sea area. Organisers were involved in counts across Europe but we don't always have enough data to present them separately. It is why we've decided to let them speak for themselves so they can share their work and experience of pollution.

NORTH ATLANTIC

CHARLY PUAUD

CANARY ISLANDS - SPAIN

We are Ecovoyage d'Arvik, a sailboat Atlantic tour to raise awareness of plastic pollution. Along our way, we organise beach clean-ups in isolated places which are not easy to access by land.

The Ocean Initiatives enable us to transfer the data from our beach clean-ups to the Surfrider Foundation so they can be used to fight against plastic pollution. Our operation took place in a pebble cove full of litter on a sparsely populated island in the Canaries.

We found huge amounts of hard plastic pieces which had spent time in the sea, a lot of bottle tops as well as fishing ropes and nets. Under the pebbles on the beach, we also discovered lots of small pieces of hard plastic less than 2cm which were very difficult to pick up. During our clean-up, the waves kept bringing in other plastic waste. I should just point out that the island is actually a natural reserve! And all the waste obviously came from the sea. Since our bags were full, we had to stop the clean-up and we had to walk 3k to the recycling bins on the other side of the island.

BALTIC SEA

JORGEN SECHER

SWEDEN

I've always loved the sea and sea-based activities, like surfing, kitesurfing and swimming. The ocean has given me so much, so it was high time I returned the favour! A litter collection seemed like a useful action in which I could get other inhabitants of the island involved.

We found all sorts of plastic - from abandoned fishing nets to bottles and plastic wrappers. We also found tyres and other waste items which must have been thrown directly on the ground and not washed up by the ocean.

At first it was a bit difficult to organise a collection on the island when I wasn't a resident. The island's inhabitants thought that a litter collection wasn't necessary as the locals were already picking it up «all the time». They didn't need help from mainland. When I looked for local businesses to sponsor the collection by providing hot dogs and coffee, no one was interested. So I provided it all myself. At the end of the first collection, we were all chatting and eating together when an elderly local man came over and asked if the pile of litter had really all just been collected on that one beach in one day. When we told him it had, he admitted that the collection was a good idea after all.

This year, we organised the second collection in collaboration with the local association «Plogga» and local businesses fully sponsored us. It was great fun and we collected a lot of waste together!

03
BIOMEDIA

POLLUTION OF WATERCOURSES AND BEACHES BY BIOMEDIA

From the field to the creation of guidelines for professionals

Since 2008 Surfrider Foundation Europe has been monitoring the pollution generated by biomedia, also known as biofilm carriers. These are small round pieces of plastic with holes which are found in high numbers on beaches or riverbanks across the world. Biomedia are used as a medium for bacteria during the biological water treatment phase in collective and industrial water treatment plants as well as in the fish farming sector to break down organic matter.

During extreme weather conditions, heavy water flow can lead to a saturation of a plant's treatment capacity of plants leading to discharges into the environment. Biomedia can then be found in rivers and on the coast. The poor condition of some fish farms as well as extreme weather events can also result in the loss of biomedia within these facilities.

Surfrider is calling for strict regulations for the use, processing and management of bacterial media to reduce the environmental pollution resulting from their loss.

To combat this specific source of plastic pollution, Surfrider Foundation Europe is carrying out investigations aimed at improving understanding of the process, identifying the manufacturers as well as the users and tracing the source of the waste.

Over the course of the 2020 Ocean Initiatives, **533 biomedia were found during 37 clean-up operations on beaches, lakes and rivers** (all areas and all shapes combined). Biocarriers are found in 1 out of 10 collections. **More than 76.7% of the biocarriers picked up by our organisers were found on beaches in the Bay of Biscay. 21.6% were found in the Western Mediterranean Sea area.**

NUMBER OF BIOMEDIA FOUND OVER 1000 METRES PER SEA AREA

In total 37 collections recorded the presence of biomedia along a linear distance of 39.35 km. Participants collected on average 14 biomedia every 1 000 m.

TYPES OF BIOMEDIA PER SEA AREA

17 different models of biomedia were observed on the Bay of Biscay coast during the 2020 Ocean Initiatives. Unsurprisingly, models 5 and 9 were the most common on this coastline. We suspect that two accidents that occurred in 2009 and 2010 in industrial treatment plants (paper mills) in Northern Spain are behind the pollution of the Bay of Biscay beaches by these two biomedia models. To our knowledge, it's the most significant pollution we've found in terms of time and quantity on the entire Atlantic coastline. Models 10 and 13 were mostly collected on the shores of the Mediterranean, and in smaller numbers, on the Bay of Biscay beaches.

FAÇADE / FORME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	TOTAL
Golfe de Gascogne	10	3	12		37	54		33	181	14	5		3	1	1	2					5	12	30	6		409
Manche Mer du Nord			1																					4		5
Méditerranée Occidentale		1	2	4	34				3	43		2	19						2	3				1	1	115
Mers Celtiques										2						1	1							1		5
TOTAL	10	4	15	4	70	54	0	33	184	59	5	2	22	1	1	3	1	0	2	3	5	12	30	12	1	533

STUDY ON THE POLLUTION OF WATERWAYS BY BIOMEDIA

Many cases of the presence of and pollution by biomedia have been reported back to us across Europe through Ocean Initiatives as well as by citizens concerned about the health of their beaches and their waterways. Thanks to all these reports, we have been able to carry out a full investigation that allows us to compile valuable information on biocarriers and to trace some sources of this pollution. In order to prevent the pollution of the aquatic environment, we have shared the results of our research with professionals from the water sector.

The study carried out allowed us to draw up an overview of the global functioning of water treatment systems and the specific processes relating to biomedia. We also studied the use of biomedia and the primary forms of pollution observed in order to understand the origin. By using these observed cases of malfunctions within the system and thanks to the collaboration of industry professionals, that we have been able to draw up guidelines to reduce the emission of biomedia into the environment.

By publishing this report, we hope to share our observations in a first place, with elected leaders and environmental professionals in order to encourage a change of habits and to limit pollution risks. Then, in a second place with Ocean Initiatives participants, who have enabled us to gather valuable information to understand this form of pollution.

In 2020, Surfrider continued to assess the different areas where biomedia were found. This is essential information to present to public decision-makers and in particular the newly elected members of the European Parliament to draw their attention to the issue.

This battle is not over, and pollution continues. So, if you have seen biomedia pollution, do not forget to let us know through the Ocean Initiatives intermediary report form or directly using this form. Every case we resolve brings us one step closer to ending pollution!

For more information on biomedia:

https://surfrider.eu/en/our-missions/marine-litter/biomedia-70164.html

https://youtu.be/fHoHjpkiy10

04
FOCUS ON CIGARETTE BUTTS

CIGARETTE BUTTS, THE BIGGEST SOURCE OF OCEAN POLLUTION

Since 2020, cigarette butts have become the litter item that we are monitoring with all the report forms provided to Ocean Initiatives organisers. Huge quantities of cigarette butts are found in the ocean. It is estimated that 4 500 billion cigarette butts are thrown into the environment across the world every year. 40% of them are thought to end up in the ocean. A high number, especially when we know that cigarette butts have a double impact on pollution.

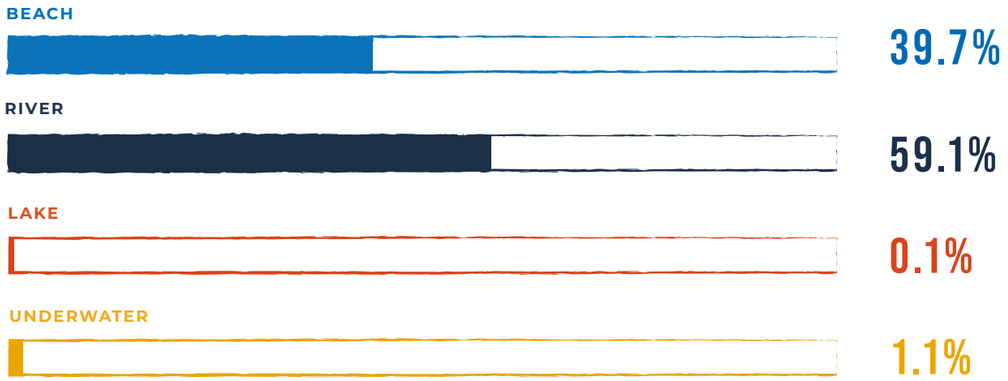
Plastic pollution

Two-thirds of the weight of a cigarette is the filter. This is the part of the cigarette is made from plastic, specifically cellulose acetate. The filter is very light and when it's thrown on the ground, the rain and wind will carry it to the drains and watercourses which then act as a highway transporting the cigarette butts to the ocean. Once in the water, the butts gradually break down into microplastics.

Chemical pollution

As well as plastic, cigarette butts contain up to 4000 different chemical substances. These include heavy metals such as mercury, cadmium and lead as well as pesticides, phenols, nicotine and tar. These substances mean cigarette butts are classified as toxic waste. Indeed, 1 cigarette butt can pollute up to 500 litres of water and make it unsuitable for consumption and harm local plants, as well as wildlife and the food chain.

WHERE CIGARETTE BUTTS WERE FOUND



FACTS AND FIGURES

286

the average number of cigarette butts counted per collection.

100%

in every country where Ocean Initiatives took place, cigarette butts were found.

AVERAGE NUMBER OF CIGARETTE BUTTS COLLECTED PER COUNTRY

405
SPAIN

282
FRANCE

87
ITALY

378
RÉUNION ISLAND

484
ARGENTINA

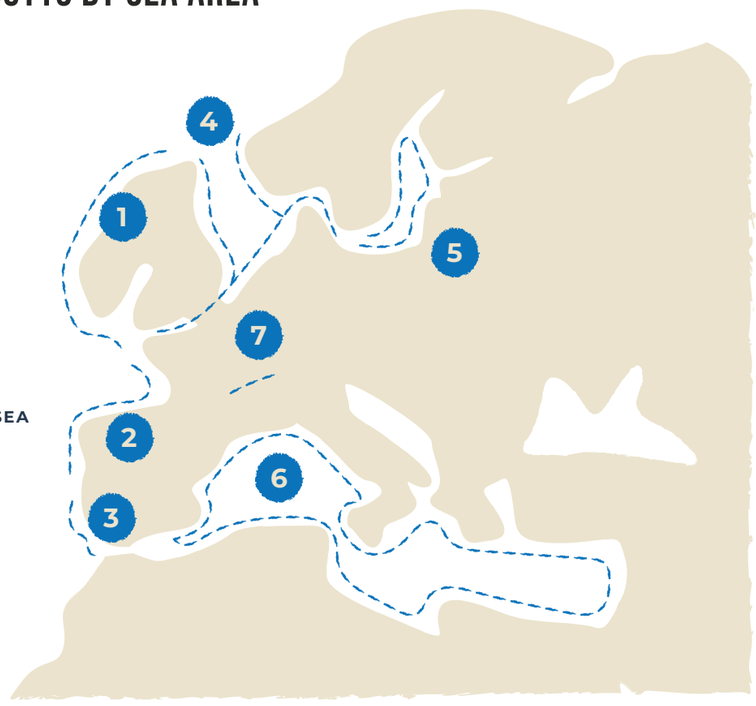
31 055
cigarette butts were counted along a 750 m stretch in a collection in Cologne, Germany.

5 120
Cigarette butts were collected by Ocean Initiatives participants during a collection in Barcelona (Spain) covering 5 km.

18 021
cigarette butts counted along a 750 m stretch during a collection in Bordeaux.

PROPORTION OF COLLECTIONS WITH CIGARETTE BUTTS BY SEA AREA

1. **40%** CELTIC SEA
2. **80%** BAY OF BISCAY
3. **34%** IBERIAN COAST
4. **70%** GREATER NORTH SEA
5. **100%** BALTIC SEA
6. **71%** MEDITERRANEAN
7. **100%** LAKE GENEVA



Regulations relating to cigarette butts

Cigarette butts are not subject to any particular measures, despite their undeniable environmental impact. They are collected along with regular household waste across the European Union even though they are classified as toxic waste. Private collection systems are slowly being put in place to try to re-use cigarette butts, notably in the energy sector.

Over recent years, the principles of the «polluter pays» and extended producer responsibility have been increasingly advocated as a means of halting this pollution and making companies responsible for the end-of-life of the products they sell.
Therefore, in 2019, through the European directive on single-use plastics, it was made mandatory for every member state to put in place for 2023 an extended producer responsibility scheme to collect and treat cigarette butts.

In real terms, tobacco manufacturers must pay for: the collection of cigarette butts through a dedicated channel, the transport, cleaning and treatment of cigarette butts littering public spaces as well as campaigns to raise people's awareness.

The recommendations of Surfrider Foundation Europe

Surfrider Foundation Europe is fully committed to support the implementation of new cigarette butt prevention and management measures within the european union.

Thanks to the feedback from your actions in the field, we can use the data as a basis for the recommendations we make to policy makers and manufacturers. We are continuing to act and demand the reinforcement of companies' extended responsibility of companies and for it to go further by including, for example, an eco-contribution imposed on tobacco-producing industries to counter generated pollution.

Transparency concerning the data on the number of products sold and collected is also necessary in order to have a clear vision of the extent of the pollution. This must be accompanied by the proper transposition of the 2019 european directive by member states. However, the measures will not be effective in reducing cigarette butt pollution if there is no incentive to make cigarettes more ecological, for example by radically reducing the number of chemical pollutants they contain. This approach requires improved scientific knowledge on the impact of cigarette butts on the environment in order to put forward suitable solutions. On the local level, the putting in place of smoke-free places and campaigns to raise awareness of the environmental impact of cigarette butts must be escalated so that all citizens are aware of the issues.

05
FOCUS ON MERMAID TEARS

THE MERMAID TEARS, AN UNNOTICED POLLUTION

Mermaid tears, also called pre-production plastic pellets (PPPs), are small plastic cylindrical beads or pellets the size of a lentil. They are the raw materials used by manufacturers to make plastic objects by melting, moulding or extruding them.
However, mermaid tears are extremely volatile objects. Each year, millions end up in our waterways and the sea affecting marine life in addition of the coast. The pollution may arise during the handling of the PPPs, their transport or their storage. Their small size means they are not always visible and are regularly mistaken for sediment.

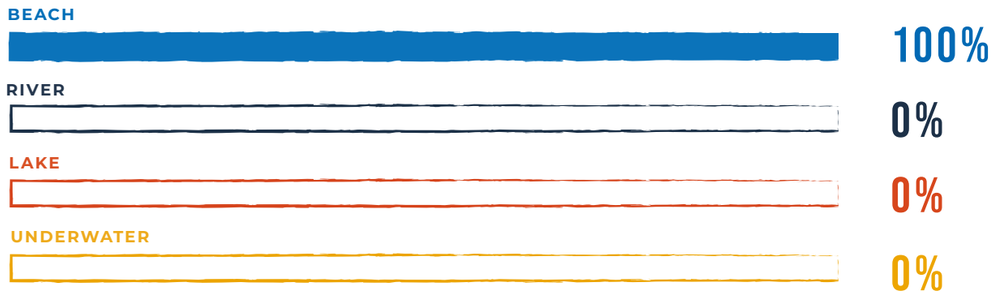
Surfrider Foundation Europe is particularly interested in this type of pollution. PPPs have therefore been included in Ocean Initiatives operations since 2018 in order to identify the location and quantity present in the environment. Collection organisers and participants are asked to look out for them during their event and to report back to us if any are found.

The observations which are transferred to us are analysed and shared with specialist associations, scientists and public authorities. We want to warn policy makers about this microplastic pollution, which most of the time goes unnoticed and for which there are currently no regulations. We want concrete measures aimed at those producing, transforming and transporting plastic pellets to limit their discharge into aquatic environments.

For more information on mermaid tears:

https://surfrider.eu/wp-content/uploads/2020/11/report-pellet-pollution-2020.pdf

PLACES WHERE PRE-PRODUCTION PLASTIC PELLETS (PPPS) HAVE BEEN FOUND



20%

of Ocean Initiatives organisers have reported the presence of PPPs on their collection site.

39%

of mermaid tears found are located in the Bay of Biscay and 30% in the Mediterranean.

40%

of collections reporting on mermaid tears tell us that they are present in substantial quantities.

COLOURS FOUND DURING THE COLLECTIONS

Pre-production plastic pellets can come in several colours. Knowing the colour of these microplastics can go into a body of evidence to identify long-standing pollution or a regular influx. Several colours have been found in the same collection

19 TRANSPARENT · **30 WHITE** · **9 BLACK** · **8 RED**

Autres couleurs retrouvées

6 BLUE · **4 ORANGE** · **6 GREEN** · **5 YELLOW** · **2 PURPLE** · **2 BROWN** · **1 GREY**

SURFRIDER
FOUNDATION EUROPE

OCEAN INITIATIVES

Ocean Initiatives is a programme aimed at reducing marine litter at its source. Through local litter collections around rivers, lakes, beaches and seabeds, Surfrider Foundation Europe aims to bring about a societal change. The data collected during these operations also enable us to produce status reports to push for the adaptation of the European regulatory framework.

www.oceaninitiatives.org