



ENVIRONMENTAL REPORT

OCEAN INITIATIVES 2022



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EDITORIAL

Ocean Initiatives are a perfect entryway into civic engagement. By organising or participating in an event, citizens are helping to protect the environment from marine litter. With each passing year, an increasing number of people from all over the world are becoming involved. By participating in Ocean Initiatives, volunteers contribute to take action, witness the reality of what is happening on the field and make a change.

This growing mobilisation shows that the environment is more than ever a major concern. Urgent action needs to be taken in order to change behaviour, production patterns as well as legislation.

To ensure the reality on the ground gets reported at the highest political and industrial level, the quantification carried out with the ocean initiatives protocols is particularly important. It gives added value to a cleanup and ensures that the action carried out locally on a beach or riverbank will generate impact on the national and European level. Thanks to the data collected, participants are providing valuable evidence to back up the claims made by Surfrider Foundation Europe as it lobbies European institutions.

The changes, progress and victories achieved in the fight to tackle marine waste are above all thanks to the commitment of these volunteers. Without them, none of it would be possible. They are the driving force for our actions.

A heartfelt thank you to all!

OCEAN INITIATIVES 2022 IN FIGURES





01 GENERAL REPORT



THREE TYPES OF REPORT FORMS IN 2022



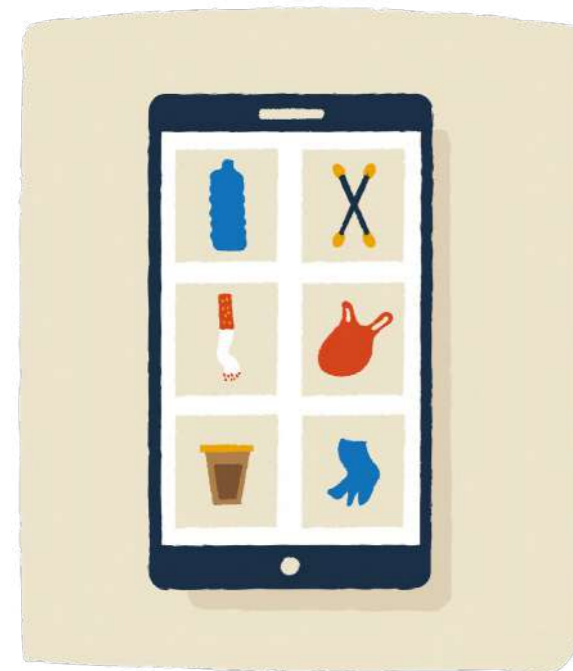
Simplified report form

The organiser fills in the information about the operation itself, as well as the number of cigarette butts counted during their clean-up.



Intermediary report form

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

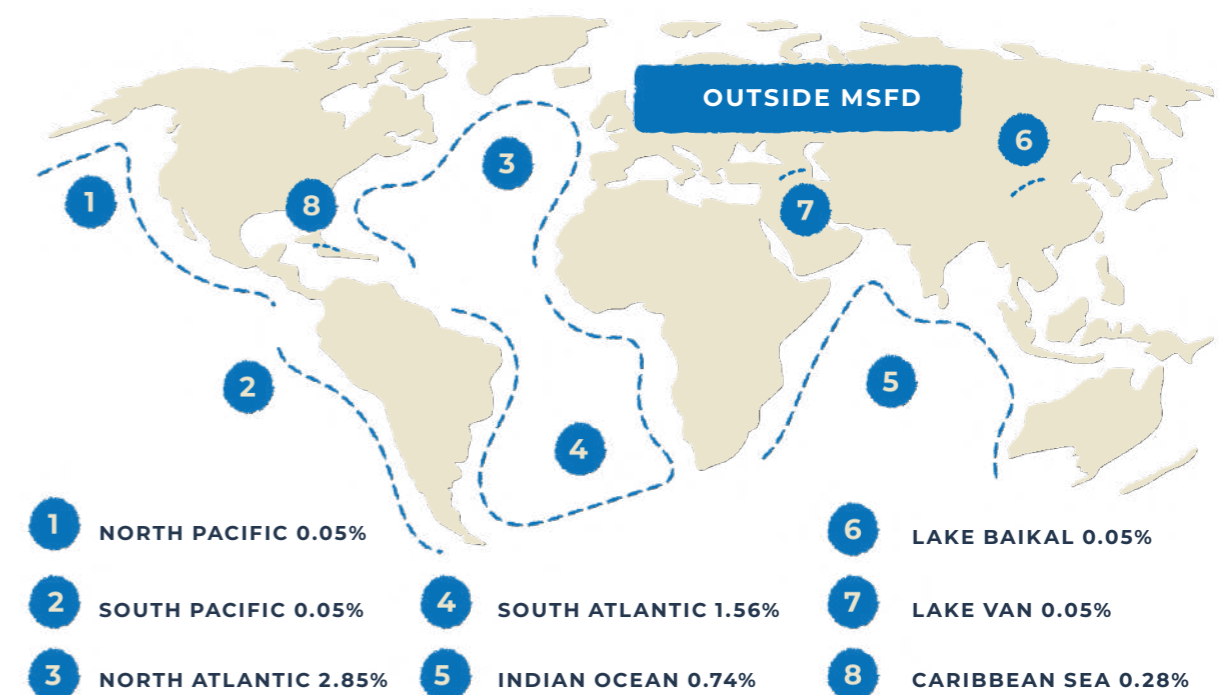
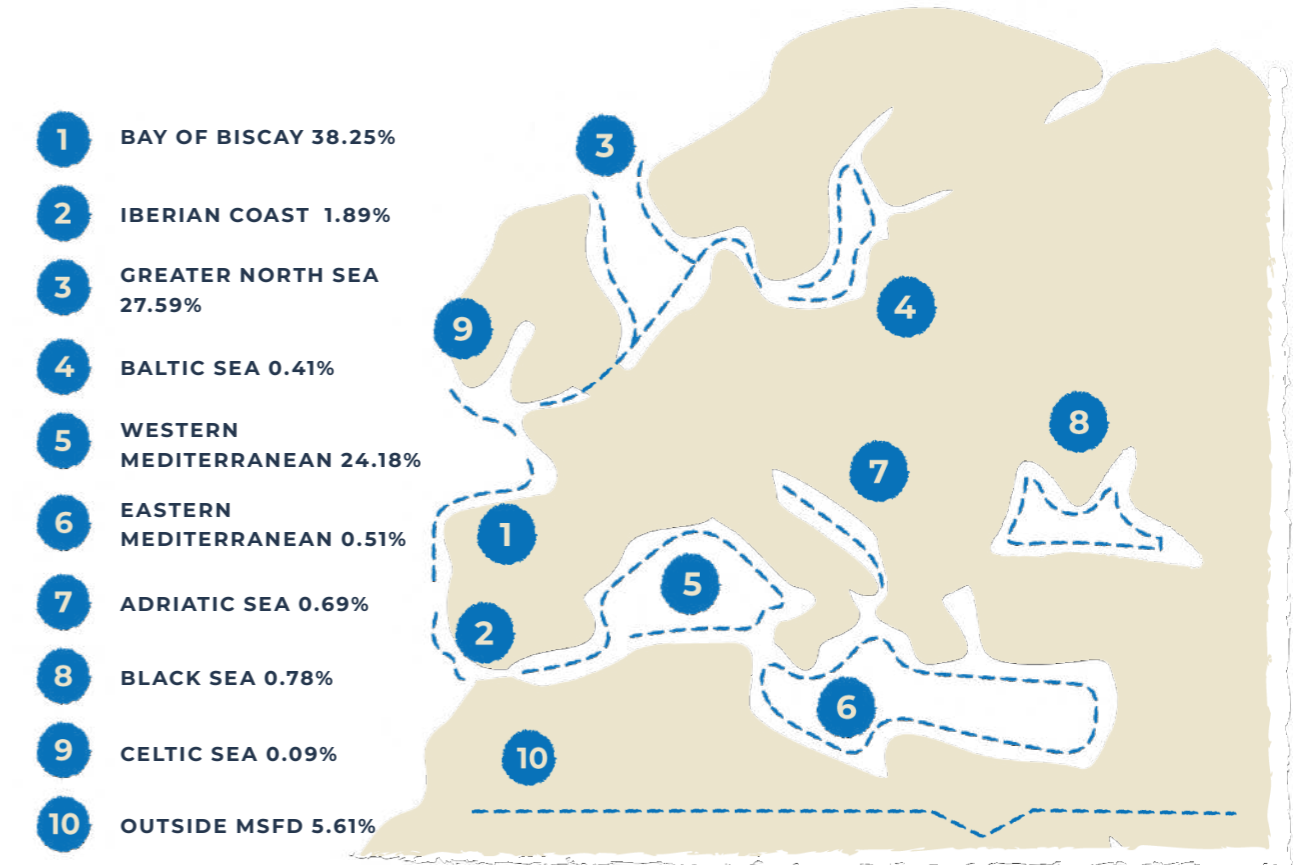


The Marine Litter Watch app

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

WHERE DID LITTER COLLECTIONS TAKE PLACE?

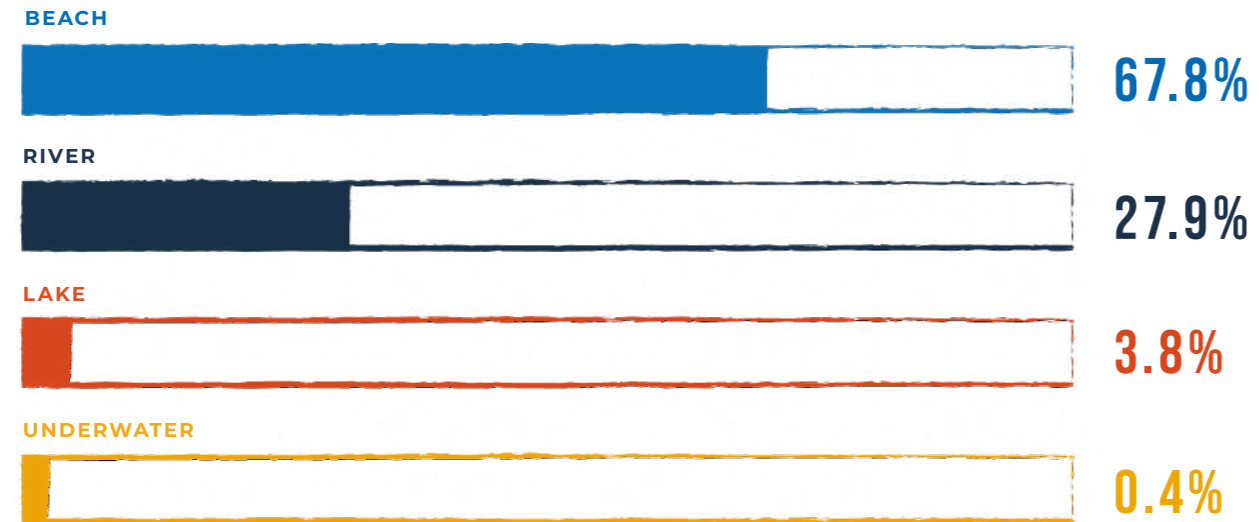
To present the regions where cleanups took place, we have divided the area in two: the major maritime areas in Europe as defined by the Marine Strategy Framework Directive (MSFD), and the regions outside the MSFD.



KEY FIGURES

The figures marked with an asterisk are based on a total of **625 report forms (174 simplified and 451 intermediary)**.

Types of cleanups



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 of the state of European and world coastlines regarding marine litter pollution. To do this, we asked them to answer questions about the location of their collection and to quantify **35 types of litter categorised by material and use**.

This list of litter types is based on the key list of the European harmonised protocol and on the types of litter most commonly found on European beaches.

625 organisers accompanied by 22 529 people took part in this exercise. A total of 1 095 128 litter items were collected during these cleanups representing a total volume of 274 481 m³.

TOP 10 LITTER ITEMS



DISTRIBUTION OF LITTER COLLECTED BY USE

We collected 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).

HUNTING: litter from hunting activities (shotgun cartridges).

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

SMOKING-RELATED



NON-IDENTIFIABLE LITTER



FOOD PACKAGING



FISHING



CONSUMER GOODS



SANITARY AND MEDICAL



HUNTING



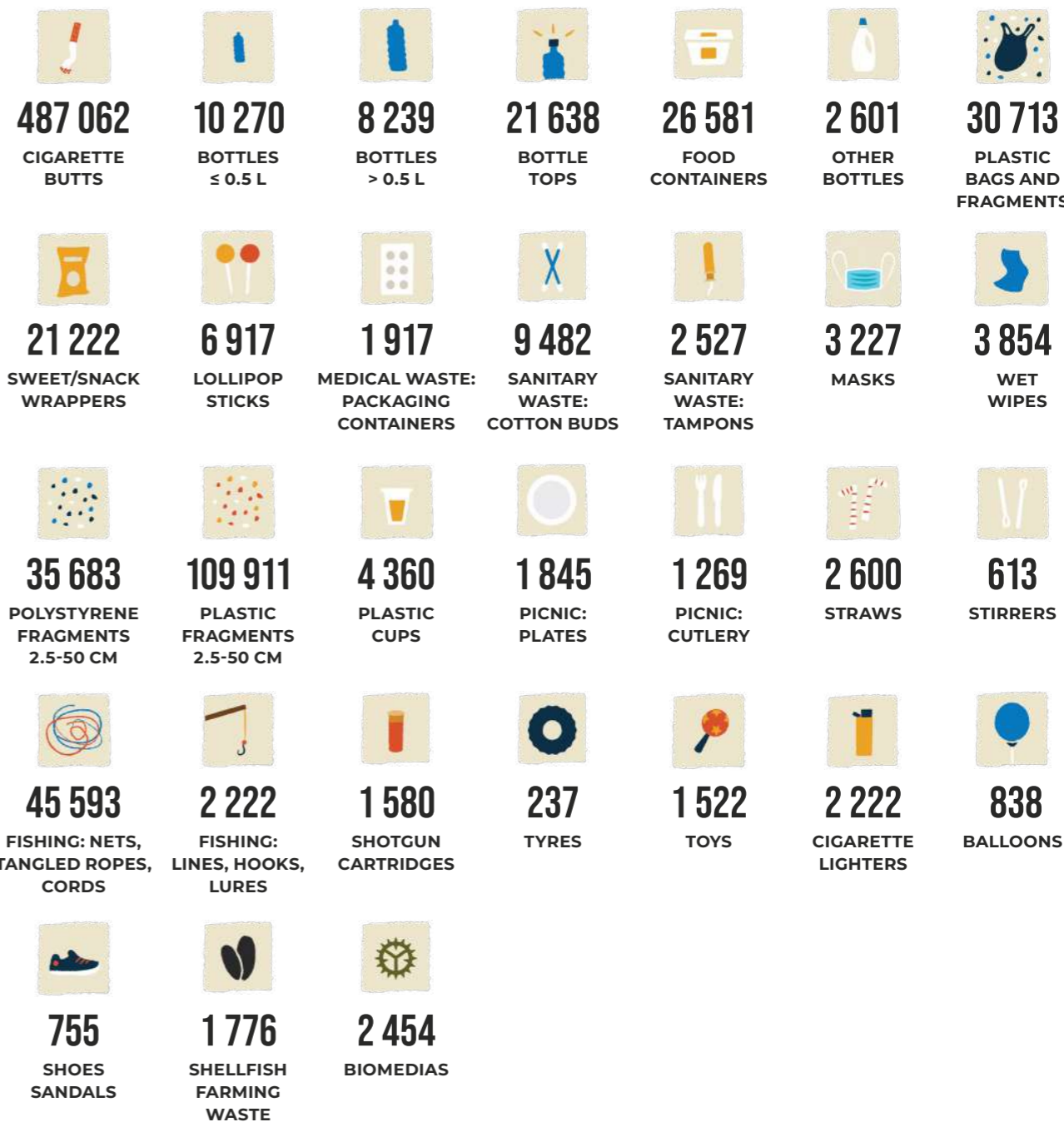
OTHER LITTER



TOTAL LITTER ITEMS COLLECTED

Total number of items collected in 451 operations: 934 106 quantified items.

Plastic



Glass



Metal



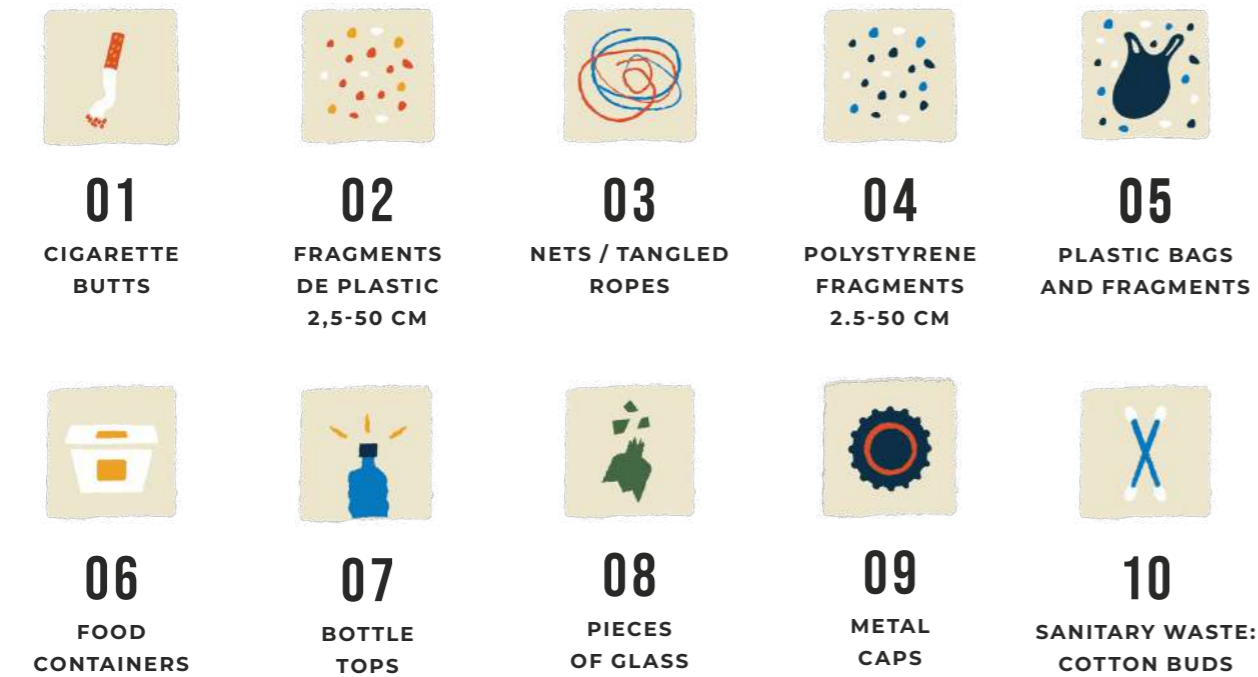
Textile





FOCUS ON THE MARINE ENVIRONMENT: BEACHES AND UNDERWATER

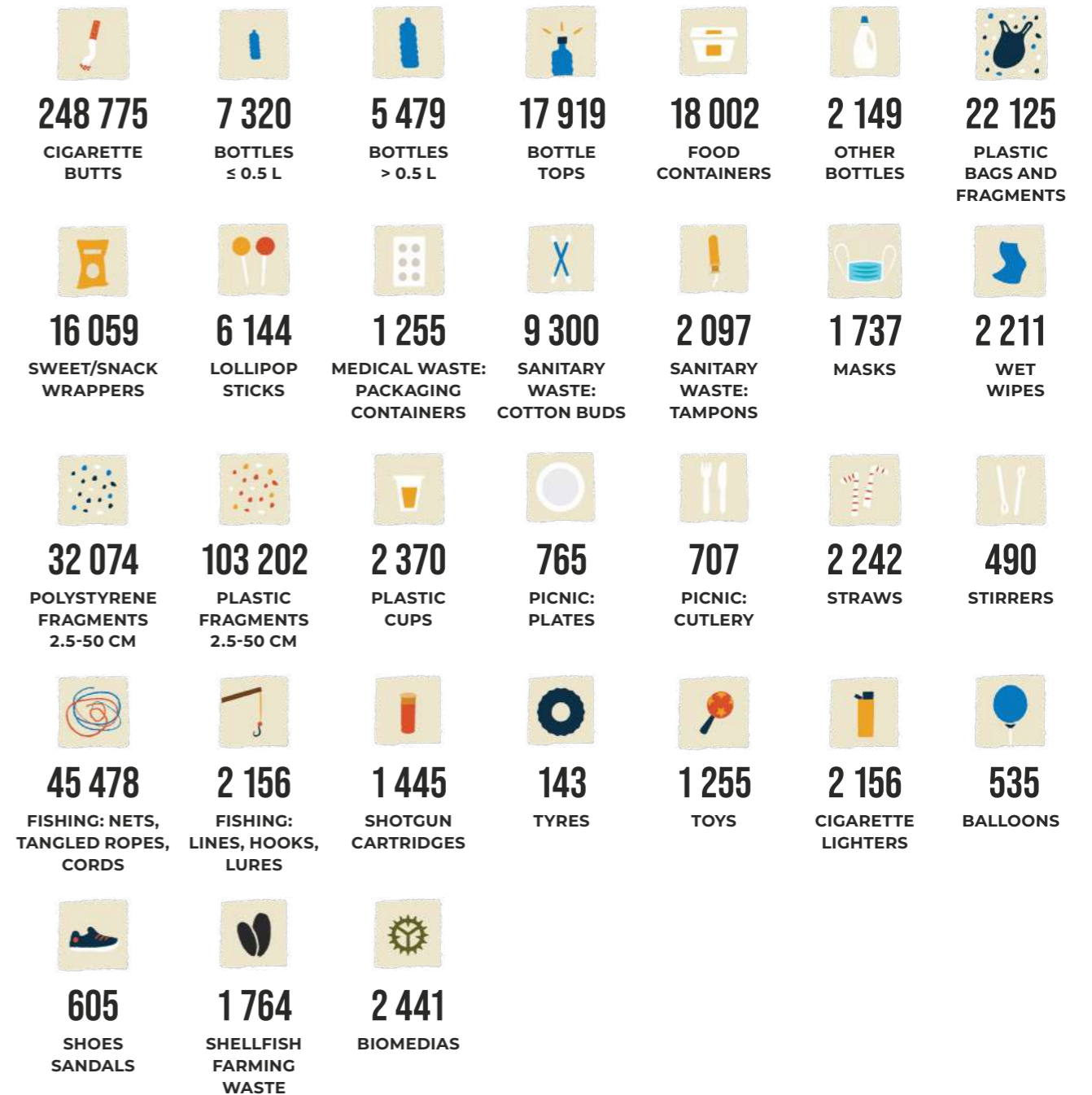
TOP 10 LITTER ITEMS



TOTAL ITEMS COLLECTED

Total number of items collected from 321 operations: 598 978 quantified items.

Plastic



Glass



Metal



Textile





FOCUS ON WATERWAYS: RIVERS AND LAKES

TOP 10 LITTER ITEMS



01

CIGARETTE BUTTS



02

METAL CAPS



03

PIECES OF GLASS



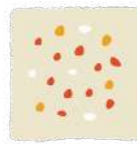
04

PLASTIC BAGS AND FRAGMENTS



05

FOOD CONTAINERS



06

PLASTIC FRAGMENTS 2.5-50 CM



07

CANS



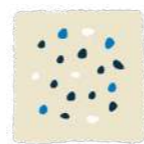
08

GLASS BOTTLES



09

BOTTLE TOPS



10

POLYSTYRENE FRAGMENTS 2.5-50 CM

70%
of litter collected consisted of cigarette butts.

TOTAL ITEMS COLLECTED

Total number of items collected in 130 operations: 335 128 quantified items.

Plastic



238 287

CIGARETTE BUTTS



2 950

BOTTLES ≤ 0.5 L



2 760

BOTTLES > 0.5 L



3 719

BOTTLE TOPS



8 579

FOOD CONTAINERS



452

OTHER BOTTLES



8 588

PLASTIC BAGS AND FRAGMENTS



5 163

SWEET/SNACK WRAPPERS



773

LOLLIPOP STICKS



662

MEDICAL WASTE: PACKAGING CONTAINERS



182

SANITARY WASTE: COTTON BUDS



430

SANITARY WASTE: TAMPONS



1 490

MASKS



1 643

WET WIPES



3 609

POLYSTYRENE FRAGMENTS 2.5-50 CM



6 709

PLASTIC FRAGMENTS 2.5-50 CM



1 990

PLASTIC CUPS



1 080

PICNIC: PLATES



562

PICNIC: CUTLERY



358

STRAWS



123

STIRRERS



115

FISHING: NETS, TANGLED ROPES, CORDS



66

FISHING: LINES, HOOKS, LURES



135

SHOTGUN CARTRIDGES



94

TYRES



267

TOYS



66

CIGARETTE LIGHTERS



303

BALLOONS



150

SHOES SANDALS



12

SHELLFISH FARMING WASTE



13

BIOMEDIAS

Glass



4 003

GLASS BOTTLES



15 137

PIECES OF GLASS

Metal



4 143

CANS



2 219

PIECES OF METAL



17 323

METAL CAPS

Textile



986

CLOTHES OTHER TEXTILES

OTHER LITTER ITEMS COLLECTED IN LARGE NUMBERS

62% of organisers reported finding large quantities of other litter items during their cleanups (items not included in the list).

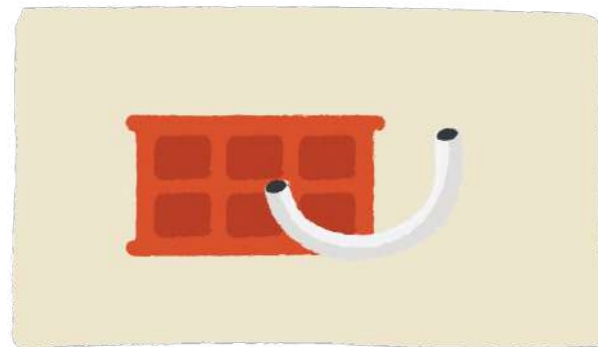
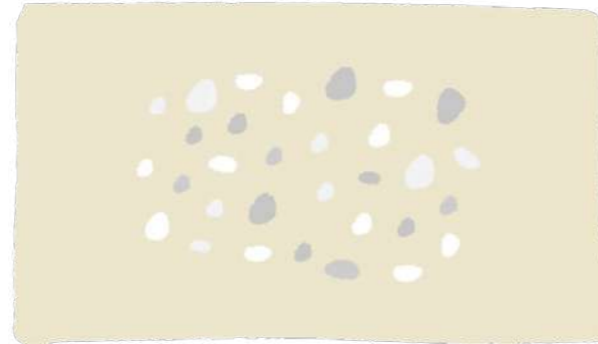


Till receipts

The cleanups organised in areas close to shops revealed a very large quantity of till receipts. 125 receipts were found during a cleanup in Marseille (France).

Pre-production plastic pellets

Many organisers mentioned the widespread presence of small 1 mm beads. An increasingly regular presence on all beaches. At the end of 2022, millions washed up on the beaches of Finistère (France).



Building and construction waste

Illegal dumping of construction waste was reported, both on beaches and riverbanks. This consists of rubble, bricks, insulation materials or pieces of metal. It is usually found in very large volumes.

Cigarette packets

Cigarette butts are the most common waste item. However, they are often found with cigarette packets. They are a real environmental blight.



THE MEDITERRANEAN COASTS: CIGARETTE BUTTS NUMBER 1 LITTER ITEM



Cigarette butts: 65% of litter items

Cigarette butts are a real environmental blight. On the Mediterranean coast, they represent 65% of litter items. It is the highest percentage of all coastlines.

20 000 cigarette butts in one cleanup

On the coast of the town of Toulon (France) 20 000 cigarette butts were picked up during one cleanup.

ALSO...





UNUSUAL ITEMS

BEACHES AND RIVERS: OUR WASTE REPOSITORY

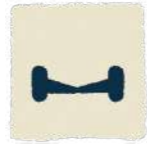
More than 237 cleanups reported the presence of large items during the 2022 Ocean Initiatives. Here are a few examples:



15 CASSETTES



8 LIGHT BULBS



3 HOVERBOARDS



12 GLASSES



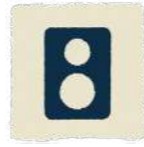
9 PARASOLS



1 SPEAR GUN



14 SYRINGES



1 SPEAKER

HOUSEHOLD ITEMS



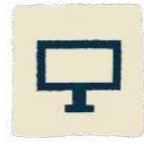
8 CHAIRS



3 MATTRESSES



3 VACUUM CLEANERS



5 TELEVISIONS



1 WASHING MACHINE



6 SUITCASES

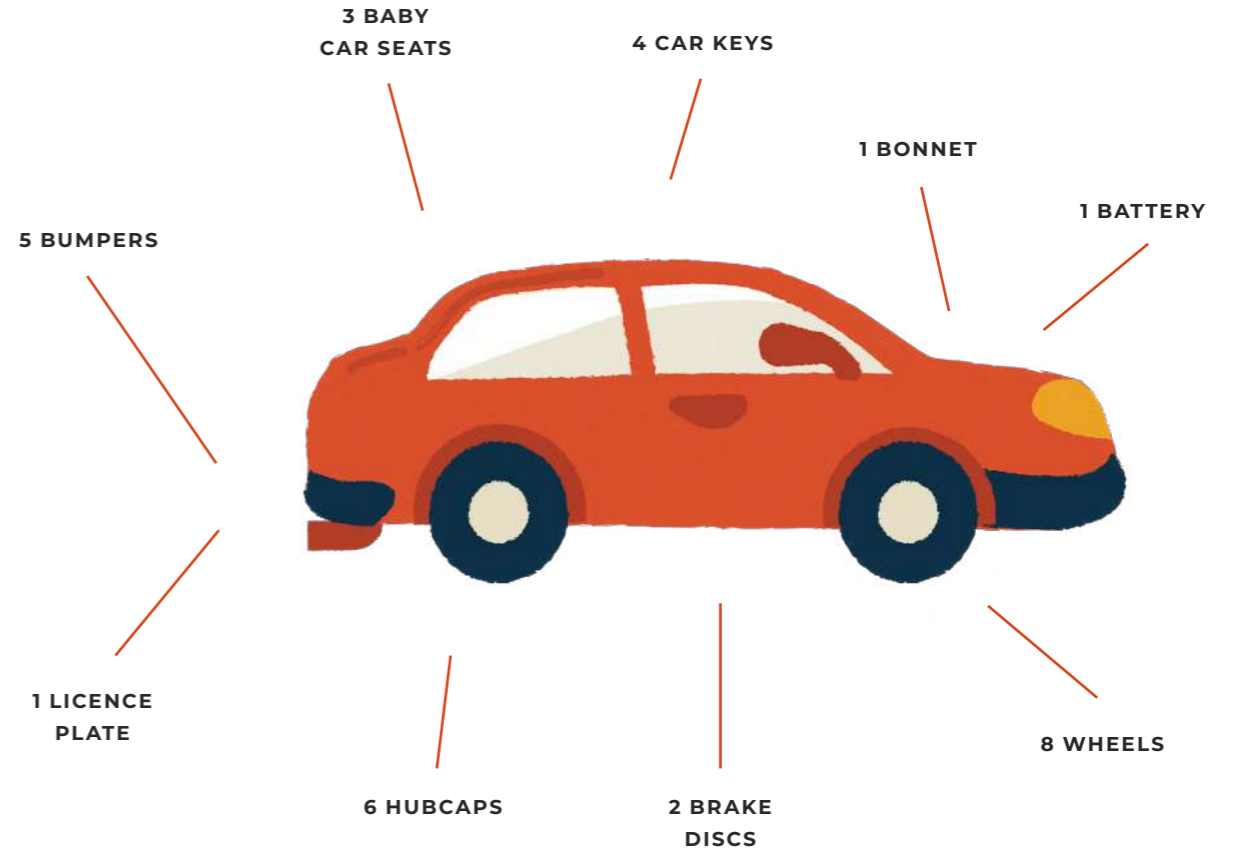


2 REFRIGERATORS



2 COMPUTERS

CAR ITEMS



NOT FORGETTING THE USUAL SUSPECTS



412 TILL RECEIPTS



142 PLASTIC FLOWERS



8 TELEPHONES



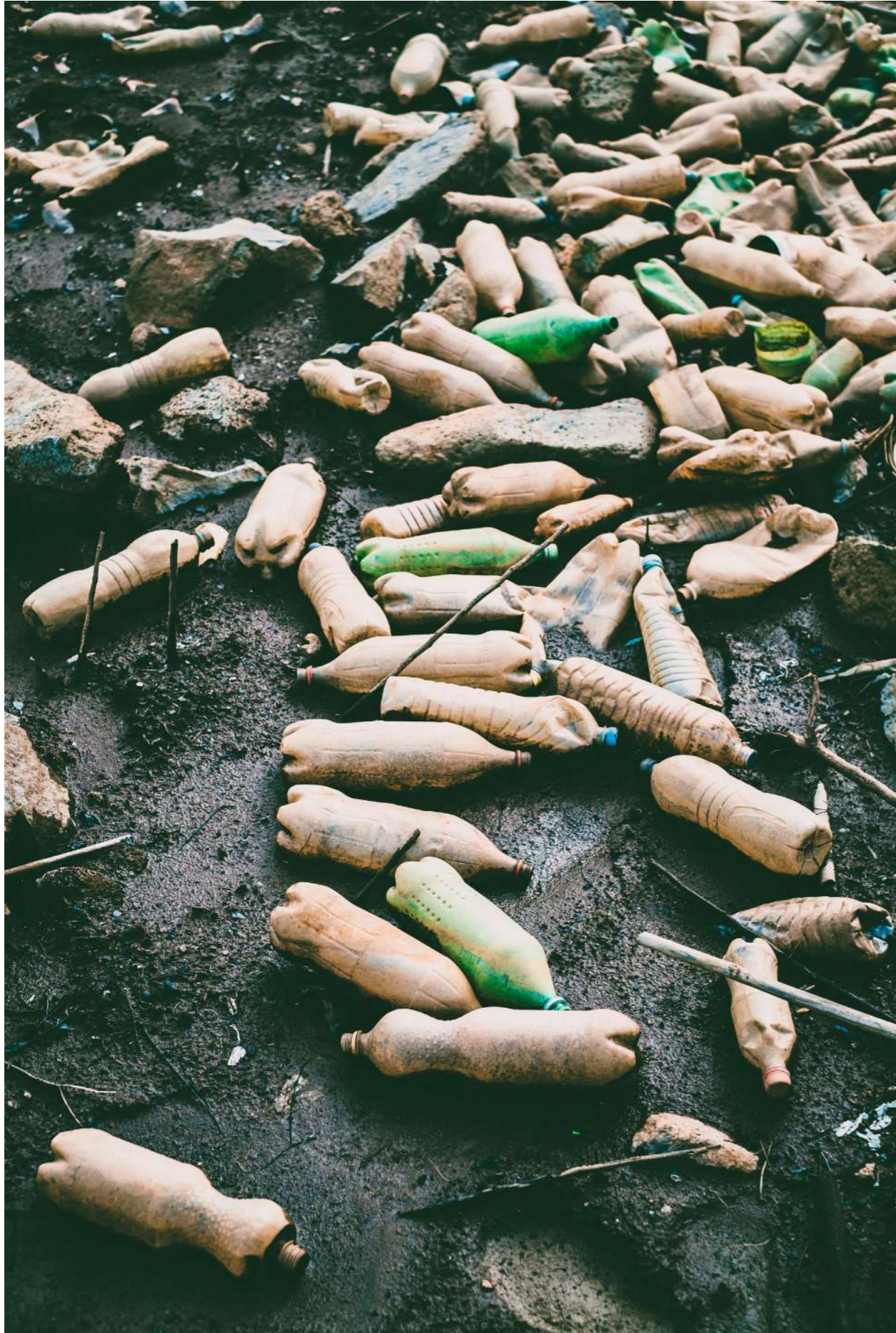
5 SCOOTERS



420 FIREWORKS

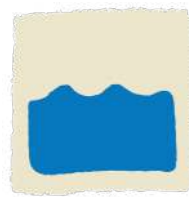


4 BIKES



02 RESULTS BY SEA AREA





BAY OF BISCAY

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

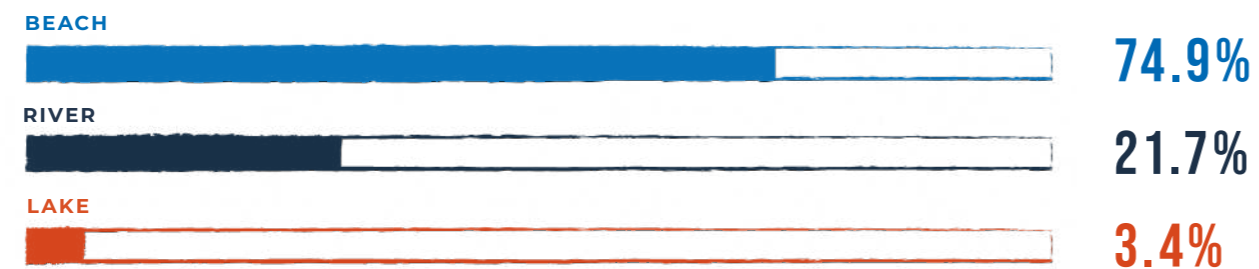
GENERAL DATA FOR THE WHOLE SEA AREA

Extrapolation based on a total of 832 operations which took place in this sea area.

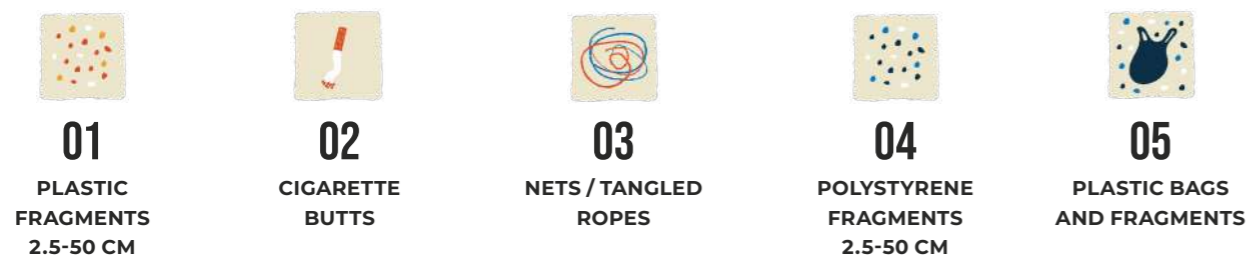


RESULTS FROM THE LITTER QUANTIFICATION

Types of cleanups



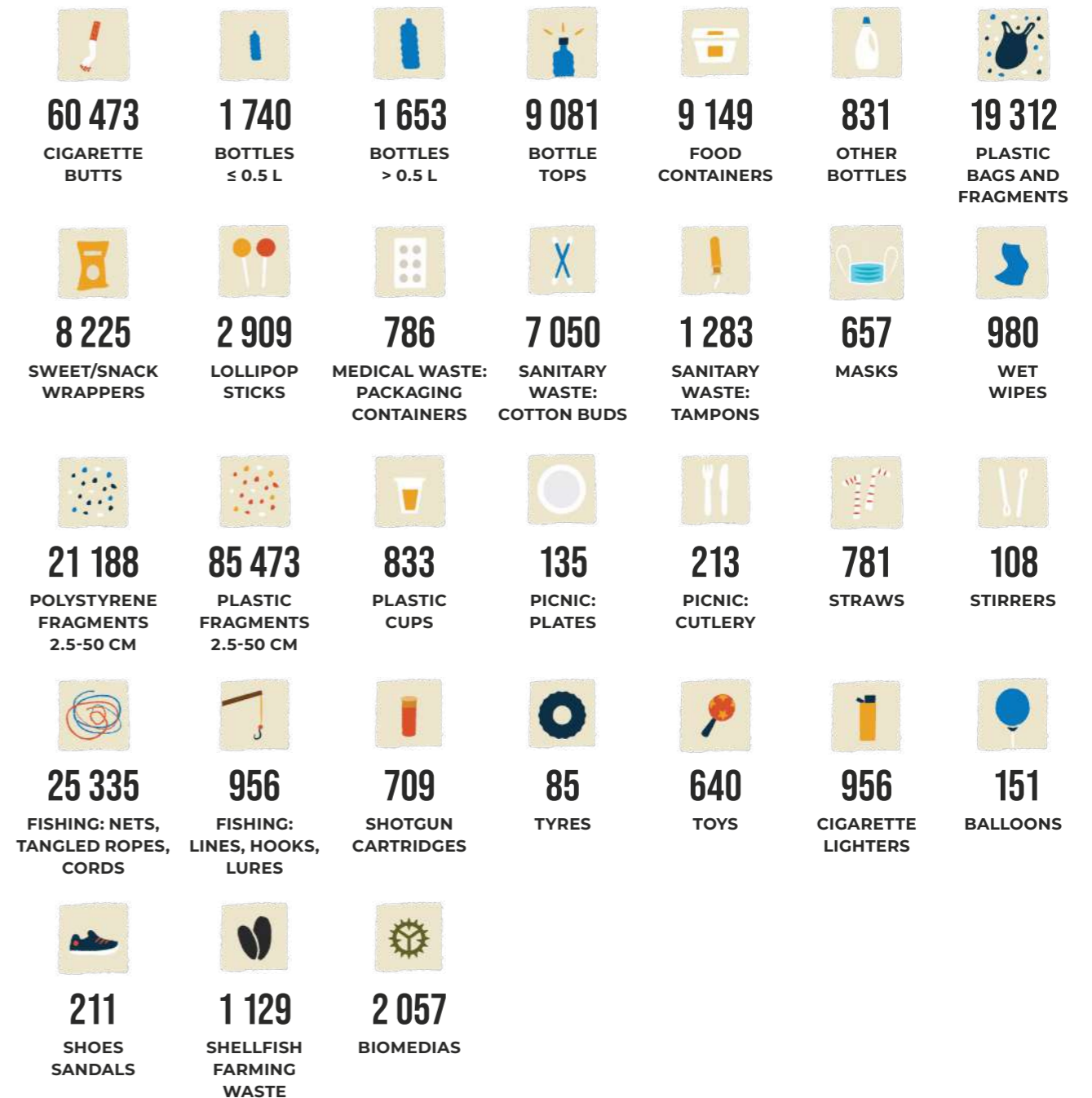
Top 5 litter items



TOTAL LITTER ITEMS FOUND

207 quantification operations bringing together 7 945 people took place in Spain (35 cleanups) and in France (172 cleanups). 281 282 items were collected and quantified over a distance of 180.7 km. The total volume of litter collected was 60.470 m³.

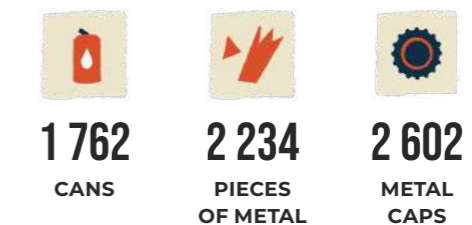
Plastic



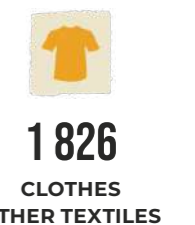
Glass



Metal



Textile



FACTS AND FIGURES



42%

of litter items collected along this area are non-identifiable waste.



10%

of the litter quantified is waste from fishing activities.



130

single-use masks were quantified during a cleanup on a beach in the Landes (France).



472

cotton buds were found along a 500 m stretch during an ocean initiatives event in Bidart in France.



93%

of litter items picked up during ocean initiatives events along the Bay of Biscay are plastic.

ALSO...



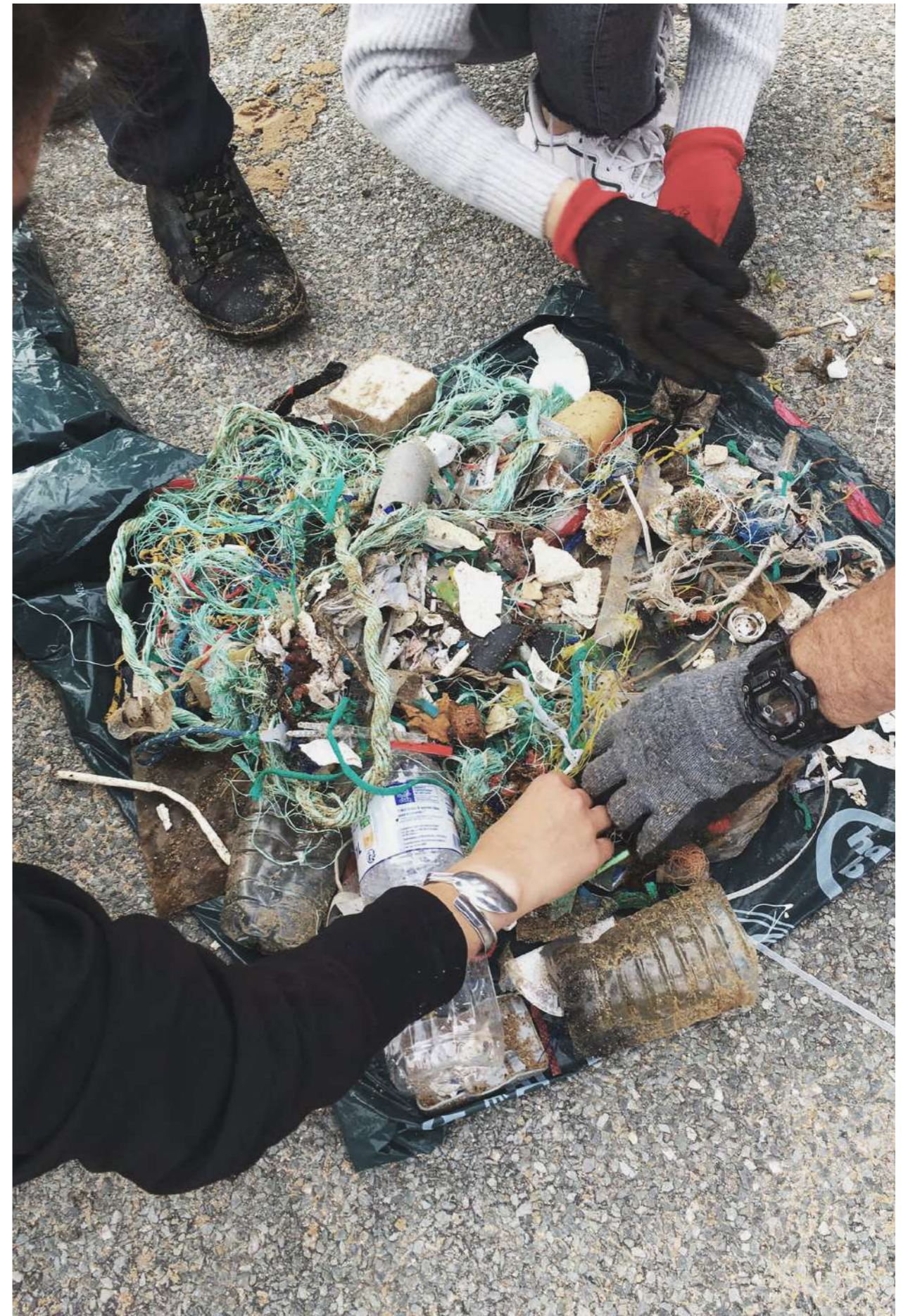
722

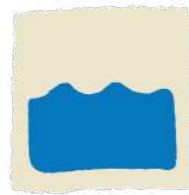
cigarette butts in San Sebastian (Spain) in a cleanup covering 500 m



162

food containers were counted during an Ocean Initiatives event in Ribamontán al Mar in Spain.





WESTERN MEDITERRANEAN

FRANCE, SPAIN, ITALY, MOROCCO, TUNISIA, ALGERIA

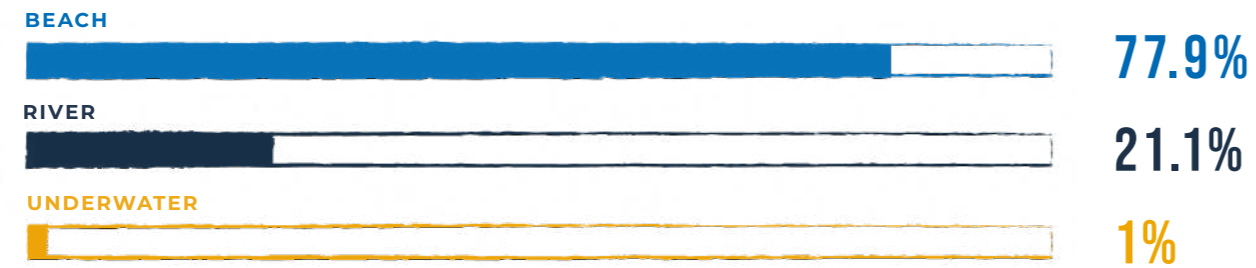
GENERAL DATA ON THE WHOLE SEA AREA

Extrapolation based on a total of 526 operations which took place in this sea area.



RESULTS FROM THE LITTER QUANTIFICATION

Types of cleanups

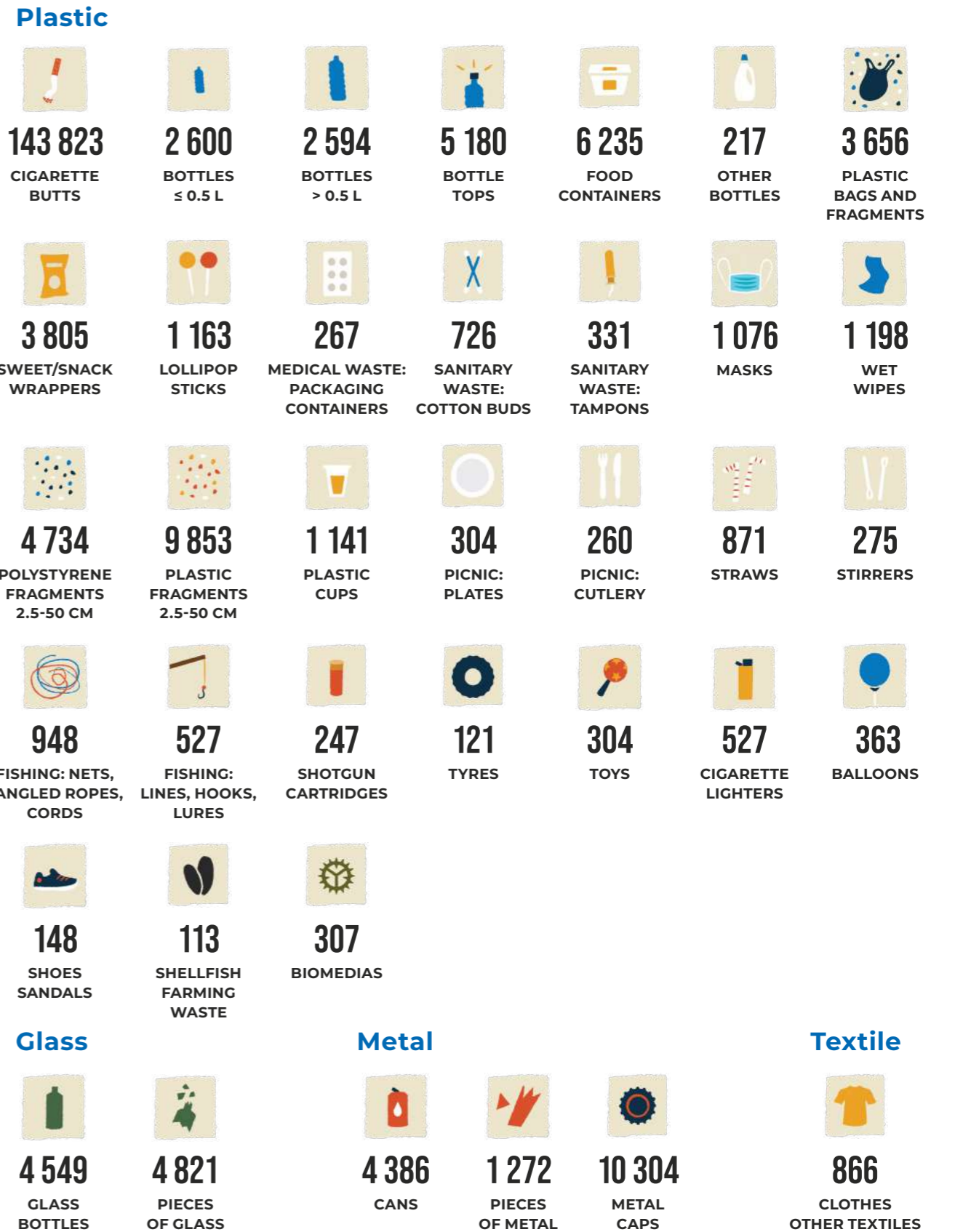


Top 5 litter items



TOTAL LITTER ITEMS FOUND

The 95 quantification operations involving 4 164 people took place in Spain (19), France (73) and Italy (3). 219 805 items were collected and quantified over a distance of 84.6 kilometres. The total volume of waste collected was 106.2 m³.



FACTS AND FIGURES



65%

of litter items collected during the ocean initiatives in the Mediterranean area are smoking-related.



634

sweet/snack wrappers were picked up in Marseille (France) during a collection covering 350 m.



421

plastic bottles collected in Toulon (France) on a 750 m stretch of beach.



88%

of litter items are made from plastic.

ALSO...



150

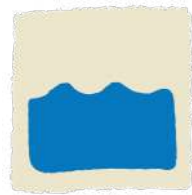
cleaning wipes were picked up in Barcelona (Spain) along a 500 m stretch.



181

plastic plates were found in Malaga (Spain) during an Ocean Initiatives event.





GREATER NORTH SEA

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

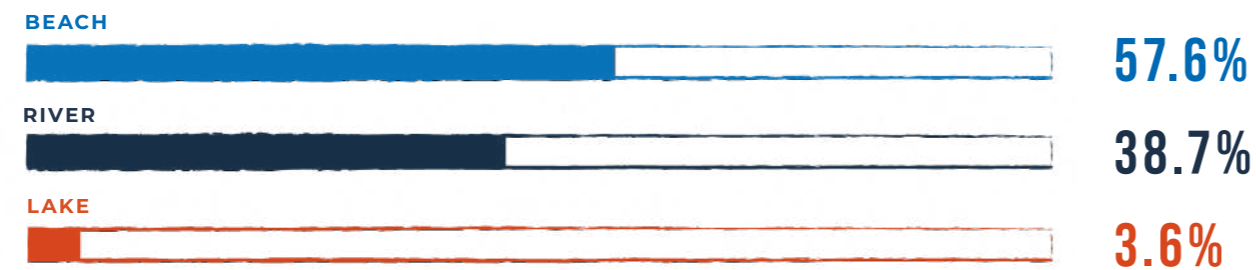
GENERAL DATA FOR THE WHOLE SEA AREA

Extrapolation based on a total of 600 operations which were carried out in this sea area.



RESULTS FROM THE LITTER QUANTIFICATION

Types of cleanups



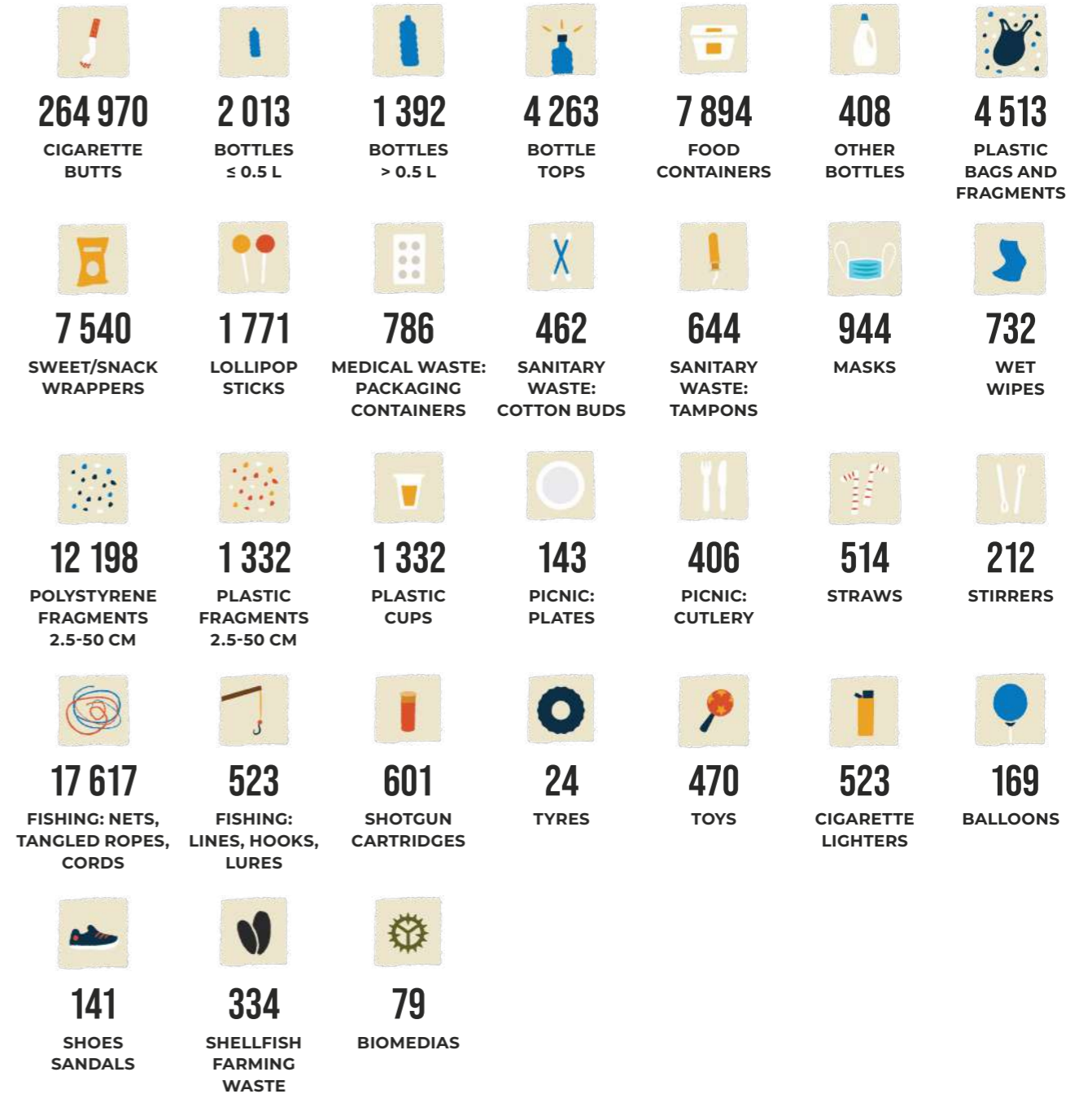
Top 5 litter items



TOTAL LITTER ITEMS FOUND

120 quantification operations involving 3 103 people took place in France (110), Germany (8) and the Netherlands (2). 189 943 items were collected and counted over a distance of 131 190 metres. The total volume of waste collected was 49.7 m³.

Plastic



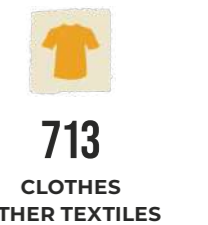
Glass



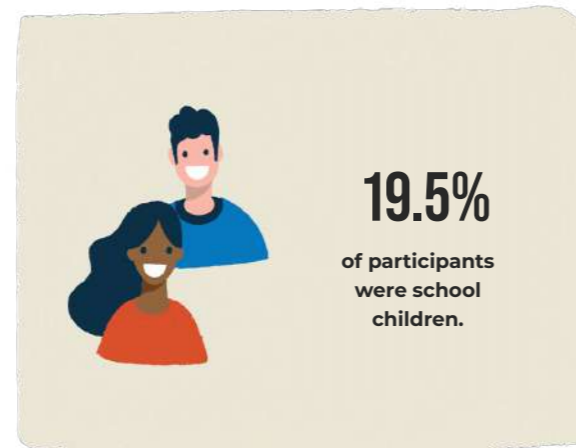
Metal



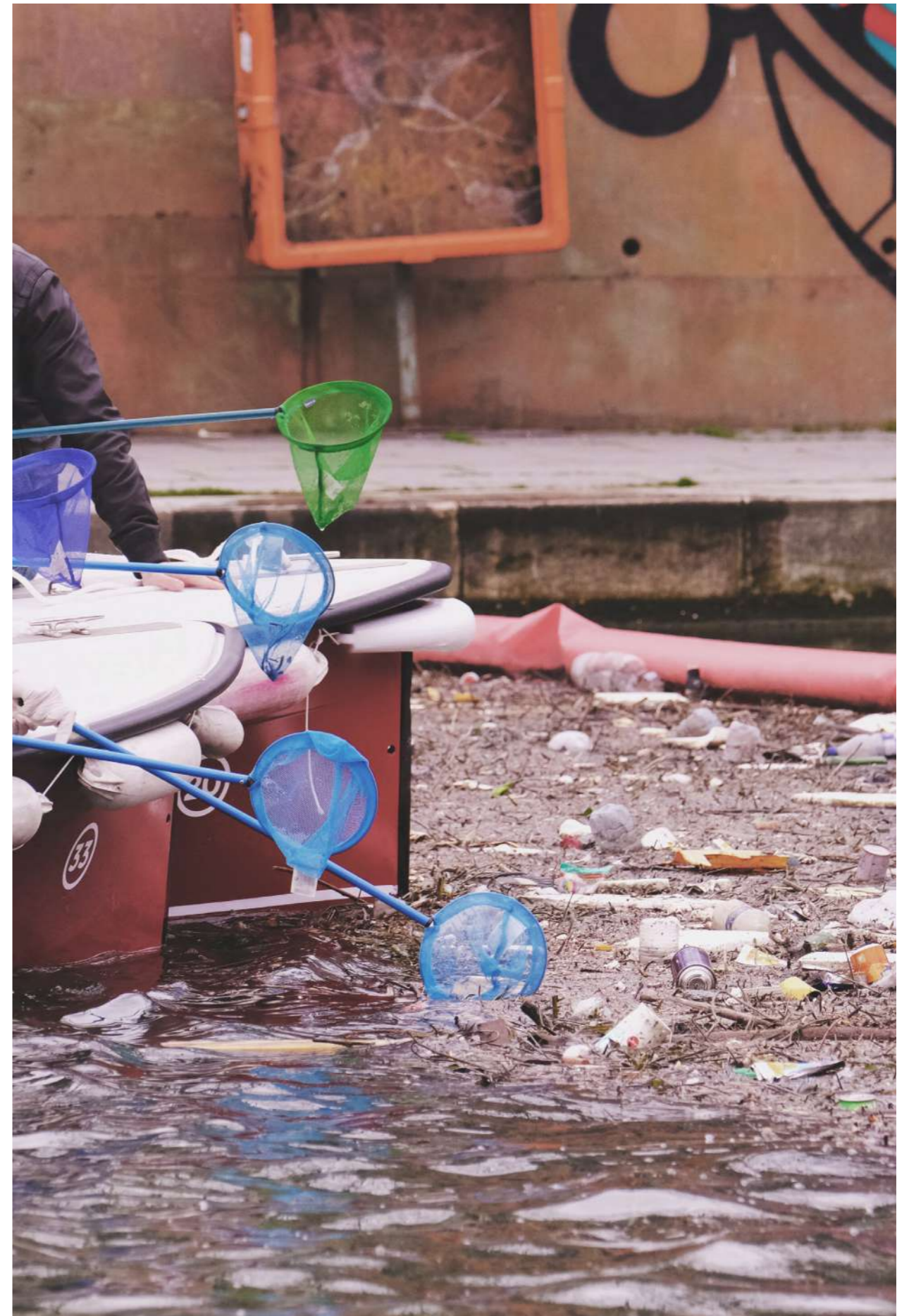
Textile



FACTS AND FIGURES



ALSO...





03 BIOMEDIA



FROM WASTEWATER TREATMENT TO OCEAN POLLUTION

Biomedia are small round plastic objects with a honeycomb structure. They are designed to hold the bacteria used in the biological filtration of wastewater in treatment plants (collective and industrial) as well as in the fishing industry. Biomedia encourage the development of the bacteria which break down the organic matter.

During extreme weather events generating significant water flows (snowfall, storms, heavy rainfall), or in peak tourist periods, the capacity of water treatment plants can become saturated leading to direct discharges into the environment. Biomedia can 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.

Since 2008, Surfrider Foundation Europe's objective has been to establish strict regulations governing the use, processing and management of biomedia to reduce the environmental pollution resulting from their loss.

« An object designed to clean our water has become an object which is polluting our ocean ».

To act directly at the source, Surfrider Foundation Europe is carrying out various investigations helped by citizens and associations to gain better understanding of the process, identify the sources of pollution and identify the producers.

Over the course of the 2022 Ocean Initiatives, 2 454 biomedia were found during 112 cleanup operations on beaches, lakes and rivers (all areas and all shapes combined). Biomedia were found in 26% of Ocean Initiative events. Or in 1 in every 4 cleanups.



NUMBER OF BIOMEDIA FOUND OVER 1000 METRES PER SEA AREA

In total 112 cleanups recorded the presence of biomedia along a distance of 98 km. Participants collected on average 25 biomedia every 1000 m.

TYPES OF BIOMEDIA



| SEA AREA / SHAPE | 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 |
|-----------------------|-----|----|-----|---|-----|----|----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-------|
| Bay of Biscay | 111 | 11 | 378 | 2 | 309 | 38 | 42 | 197 | 499 | 364 | | 18 | 16 | 4 | 1 | | 1 | | 6 | 4 | 7 | 8 | 3 | 3 | 35 | 2 057 |
| Greater North Sea | | | | | 32 | 4 | 4 | 6 | 4 | 33 | | | 5 | | | | | 1 | 1 | | | 6 | 12 | | 199 | 307 |
| Western Mediterranean | | 4 | 12 | 2 | 6 | | 2 | 2 | 2 | 8 | | | 5 | | | | 19 | | 2 | 8 | | | | | 7 | 79 |
| Iberian Coast | | | | | 1 | 4 | | | | 6 | | | | | | | | | | | | | | | | 11 |
| TOTAL | 111 | 15 | 390 | 4 | 348 | 46 | 48 | 205 | 505 | 411 | 0 | 18 | 26 | 4 | 1 | 0 | 20 | 1 | 9 | 12 | 7 | 14 | 15 | 3 | 241 | 2 454 |

WHAT HAPPENED IN 2022?

During 2022, numerous reports from volunteers in the field indicated the presence of biomedica on beaches and along waterways across Europe. Thanks to this feedback, we were able to compile valuable information highlighting new sources of pollution. In order to prevent future pollution and treat existing pollution at its source, we shared our data with professionals in the sector.

In 2022, we were able to identify one major discharge of biomedica into the environment. We received numerous reports along the Bidassoa (a river flowing along the border between France and Spain) as well as on beaches in the south of the Basque Country.



Type K3 biomedica were visible at the beginning of the year on the beaches of Hendaye. The pollution spread to Gironde and was still visible during the summer.

Thanks to the hard work of our community, we were able to locate the origin of this pollution. An inland wastewater treatment plant in Spain was stocking biomedica close to a river. The storage area had been hit by a flood.



EUROPEAN NEWS

Surfrider has been commissioned to write a pollution prevention guide which will be submitted to the OSPAR convention regional action plan. Furthermore, impelled by the large quantity of data gathered over recent years, the European Commission has integrated the issue of biomedica into the Urban Wastewater Treatment Directive. This represents another step forward in the process to convince politicians and manufacturers that strict regulations governing the use and storage of biomedica are necessary in order to protect the ocean.

This battle isn't over and pollution continues. So, if you've witnessed biomedica pollution, don't 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 this pollution!



04 FOCUS ON CIGARETTE BUTTS



CIGARETTE BUTTS, THE BIGGEST SOURCE OF OCEAN POLLUTION

Since 2020, we have focused in particular on cigarette butts through the report forms provided to Ocean Initiatives organisers. Huge quantities of cigarette butts are found in the ocean and on the ground. Every year, it is estimated that 4 500 billion cigarette butts are thrown into the environment across the world. 40% of them are thought to end up in the ocean. This is a significant number, especially when cigarette butts have a double impact in terms of pollution.

Plastic pollution

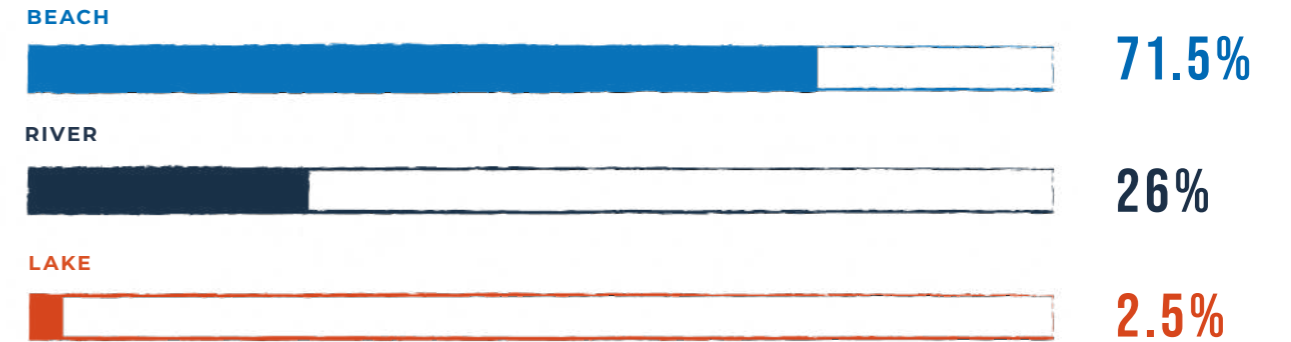
Two-thirds of the weight of a cigarette corresponds to the filter. This is the part of the cigarette made from plastic, specifically cellulose acetate. The filter is very light and once thrown on the ground, it will be swept away by the wind and rain towards sewer drains and waterways, eventually ending up in the ocean. Once into the water, the butts break down little by little and generate micro and nano plastics which can no longer be collected.

Chemical pollution

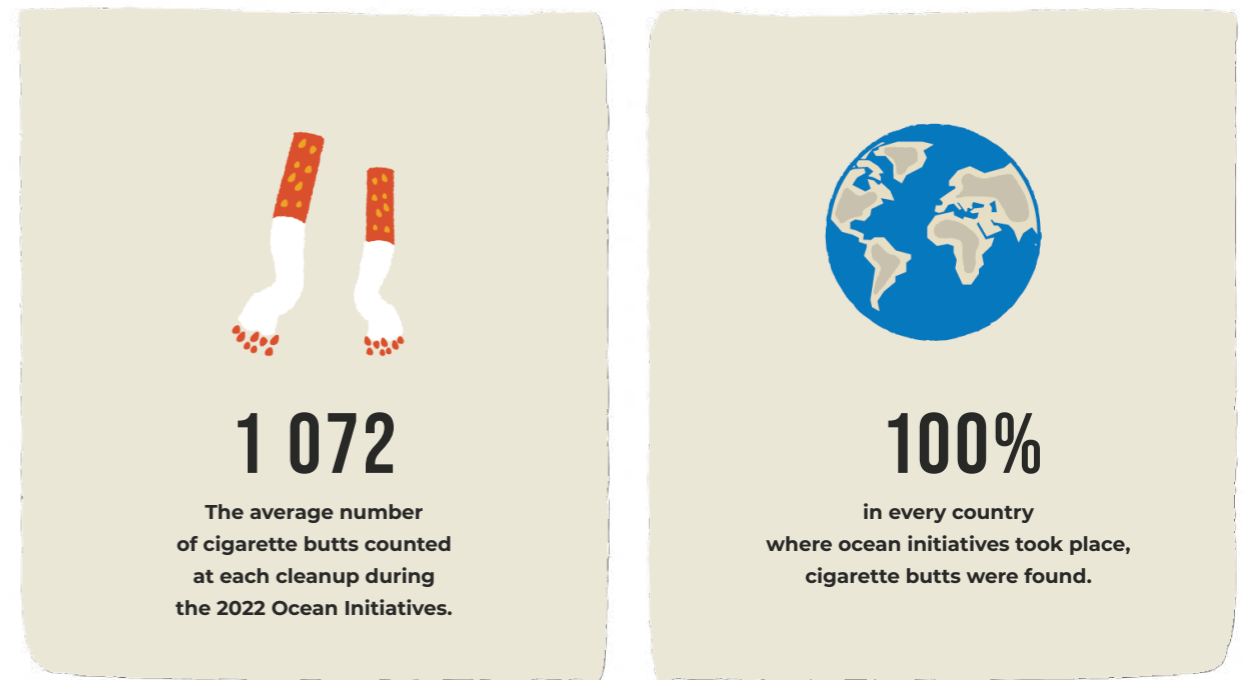
Cigarette butts contain different chemical substances (up to 4 000). These include heavy metals such as mercury, cadmium and lead as well as pesticides, phenols, nicotine and tar; Cigarette butts are classed as toxic waste. Indeed, 1 cigarette butt can pollute up to 1000 litres of water, making it unsuitable for consumption, harming local plants and wildlife as well as the food chain.



WHERE CIGARETTE BUTTS WERE FOUND



FACTS AND FIGURES



AVERAGE NUMBER OF CIGARETTE BUTTS COLLECTED PER COUNTRY



362
SPAIN



1 307
FRANCE



1 046
GERMANY



665
ITALY

20 025

cigarette butts were quantified during one cleanup along 2.5 km in Toulon. That's 8 cigarette butts for every metre.

90 000

cigarette butts were collected by Ocean Initiatives volunteers during a cleanup in Paris (France).

16 000

cigarette butts were collected by a single cleanup in Saint Malo (France) during the Route du Rhum yacht race.

PROPORTION OF CLEANUPS WITH CIGARETTE BUTTS BY SEA AREA

- 1 BAY OF BISCAY 92%
- 2 IBERIAN COAST 75%
- 3 GREATER NORTH SEA 96%
- 4 BALTIC SEA 100%
- 5 MEDITERRANEAN 94%
- 6 EASTERN MEDITERRANEAN 100%
- 7 ADRIATIC SEA 100%
- 8 BLACK SEA 100%



- 9 NORTH ATLANTIC 70%
- 10 SOUTH ATLANTIC 85%
- 11 INDIAN OCEAN 100%



Regulations concerning cigarette butts

Until now, cigarette butts have not been subject to any specific measures despite their undeniable impact on the environment. Across the European Union, they are collected along with regular household waste even though they are classed 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 «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.

Thereby, in 2019, through the European directive on single-use plastics (SUP), it was made mandatory for every member state to put in place for 2021 an extended producer responsibility scheme for the collection and processing of cigarette butts.

In other words, 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. At the beginning of 2021, France became the first European country to introduce such a measure.

Surfrider Foundation Europe's recommendations

Surfrider Foundation Europe is fully committed to supporting the implementation of new cigarette butt prevention and management measures within the European Union.

Thanks to the feedback from actions on the ground, we can use the data as a basis for the recommendations we establish to policy makers and manufacturers. We continue to act and demand the reinforcement of the extended responsibility of companies to go further. For example, by including an eco-contribution to be imposed on tobacco-producing industries to counter the pollution generated.

Transparency regarding the data on the quantity 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 limiting cigarette butt pollution if there is no incentive to make cigarettes more ecological, for example by radically reducing the quantity 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 local level, creating smoke-free places and campaigns to raise awareness on 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.

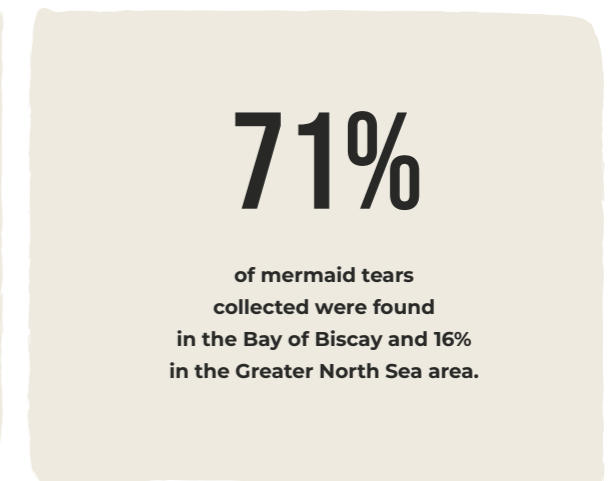
Mermaid tears are very light. The wind and rain are two elements which disperse the pellets in the environment. Every year, millions are found in rivers and the sea. They have a huge impact on sea life and the coastal environment.

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.



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



COLOURS FOUND DURING THE CLEANUPS

Pre-production plastic pellets can come in several colours. The colour of these microplastics can help the investigation establish whether the pollution is a result of a past event or regular leakage.





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