

**DON'T LET THE WASTE INVADE  
OUR WORLD**



**#OceanInitiatives**  
[oceaninitiatives.org](https://oceaninitiatives.org)

# **ENVIRONMENTAL REPORT OF THE OCEAN INITIATIVES 2018**



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# # EDITORIAL

*Fuelled by a steadfast desire to protect the oceans and promote prevention by focusing on education, Ocean Initiatives is celebrating its 24th anniversary this year. 24 years of data collection, 24 years of mobilisation, 24 years of people who want to participate, not spectate, together in the field: 24 years of passionate battle.*

*You may think that this ripe old age means the project is running out of steam but we're pleased to announce that the Ocean Initiatives project has beaten the NGO's long-standing record in terms of scheduled clean-ups and educated people. This year saw 1,420 clean-ups scheduled in over 47 countries worldwide. That means 56,245 people working in the field to fight marine litter.*

*These figures prove that protecting the ocean is now on the agenda and we can't stop now!*

*Surfrider has given participants the chance to become actual pollution spotters and drivers for change for the last 5 years through citizen science. Your involvement gives us a better insight into pollution throughout Europe and the specific issues that different countries are facing to fight the spread of marine litter.*

*The data that's been collected enables us to highlight our message among public decision-makers and companies by showing them how pollution is affecting marine environments and the main «ocean predators». Our warning has been heard as the European Parliament and Council adopted a Directive regarding single-use plastics in early 2019. From 2021, its goal is to reduce single-use plastics at the source and to reduce our consumption of 10 single-use plastic products through several measures ranging from compulsory labelling on certain items to their outright ban.*

*These 10 types of plastic items were not chosen at random. They are the 10 types of disposable plastic waste most often found on European beaches and this has been made possible by the commitment of thousands of people involved in Ocean Initiatives, their patience and their energy counting litter.*

*Every minute counts in the fight against marine litter so we'd like to say a big THANK YOU! This is your victory. It's your relentless commitment and iron will that takes the environmental cause another step further every year and encourages this passion for protecting the oceans.*

*The Ocean Initiatives Team.*

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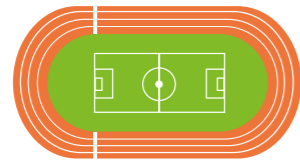
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# 2018

OCEAN INITIATIVES IN 2018:



**56,245**  
PARTICIPANTS



CAPACITY OF THE  
BARCELONA OLYMPIC  
STADIUM



**1,550**  
KM OF LENGTH



**37**  
MARATHONS



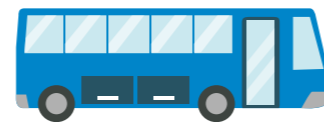
**73,375**  
KM COVERED BY  
PARTICIPANTS



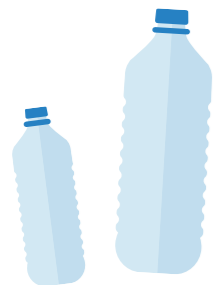
2 TIMES THE  
CIRCUMFERENCE OF  
THE EARTH



**1,977 m<sup>3</sup>**  
OF WASTE



**16**  
BUSES FILLED WITH  
LITTER



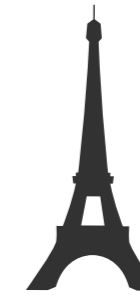
**128,167**  
PLASTIC BOTTLES



**4,747**  
JUMPERS MADE  
WITH RECYCLED  
POLYESTER



**55,099**  
COTTON-BUDS PUT  
END-TO-END



**14**  
TIMES THE  
HEIGHT OF THE  
TOUREIFFEL



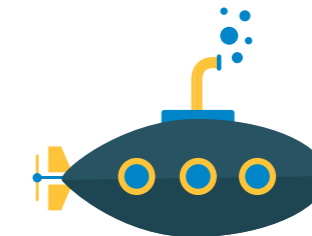
**1,279,101**  
CIGARETTE BUTTS  
PUT END-TO-END



**4**  
TIMES THE HEIGHT  
OF MOUNT EVEREST



**39,170**  
STRAWS



**49**  
SUBMARINES  
END-TO-END



**53,490**  
CANS  
(if the cans were soda cans)



**379,410**  
SUGAR CUBES  
CONSUMED

**01**  
GENERAL  
REPORT

### THREE TYPES OF REPORT FORMS IN 2018

In 2018, we gave the organizers the possibility of filling in several types of reports, after completion of their Ocean Initiatives. They could base their choice on the time taken, their expertise, and their degree of engagement in participatory science.



#### SIMPLIFIED VERSION

The organizer fills in information about the action, but also information on the plastic bottles for beverage found during their operation. This data is used for Surfrider's "Reset Your Habits" campaign.



#### INTERMEDIARY VERSION

The organizer sends us general information about the action and the site chosen for the collection and quantifies 34 types of litter, broken down by material and use.

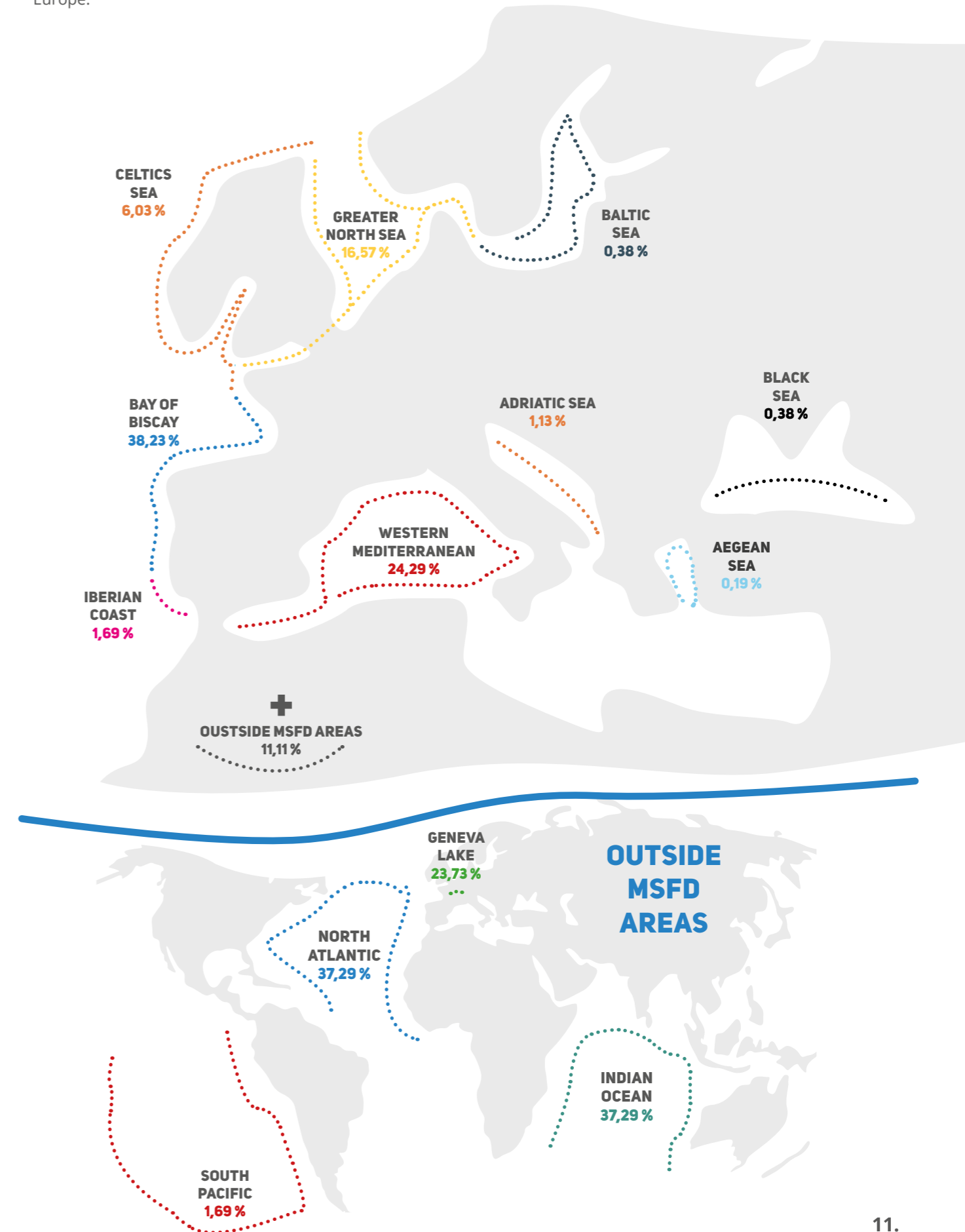


#### MARINE LITTER WATCH APP

Surfrider teamed up with the European Environment Agency to share data from the Ocean Initiatives organized and enter them into a European data base. Thus giving the most engaged and motivated the opportunity to take part in a complete quantification action, in line with the standard European procedure, using the Marine Litter Watch application.

### WHERE HAVE COLLECTIONS TAKEN PLACE ?

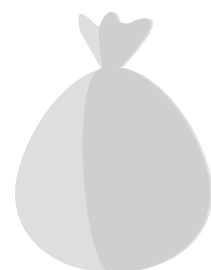
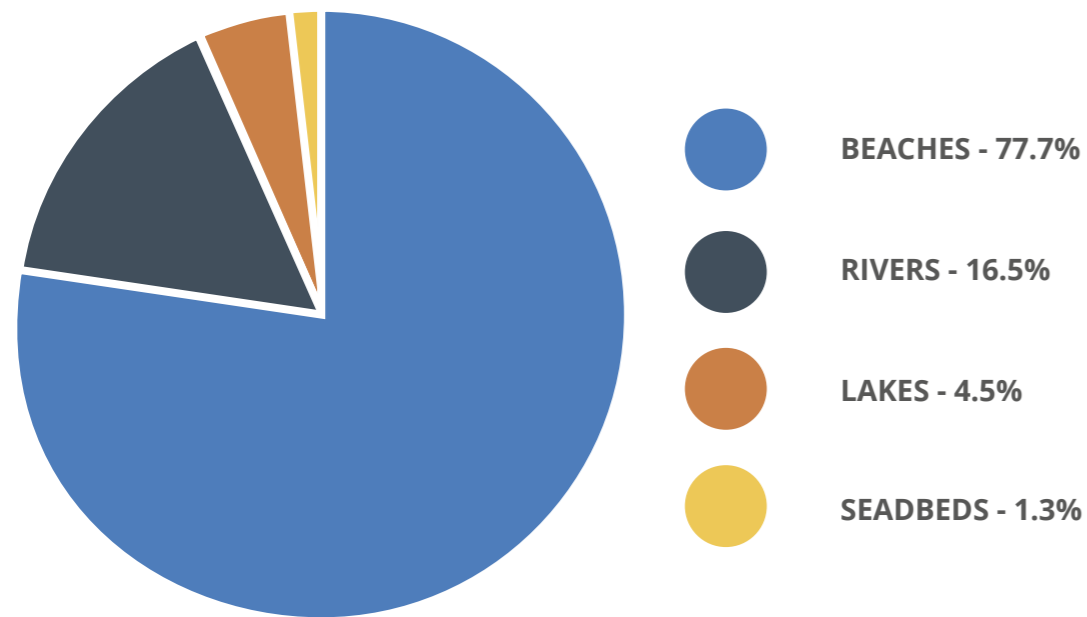
Two groups have been formed to present the areas where Ocean Initiatives have taken place: the large marine spaces in Europe such as those defined by the Marine Strategy Framework Directive (MSFD) and the areas outside Europe.



**KEY DATA**

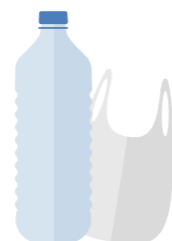
The figures with an asterisk are based on a total of 531 report forms completed (339 simplified and 192 intermediary reports).

**TYPES OF OPERATION**



**10,987\***

Bags of trash were collected by the participants.



**743.731 m<sup>3</sup>\***

Total volume of litter collected.



**20,923\***

People reached, **36.5%\*** of them are schoolchildren.



**582.76 km\***

of coastline length covered by participants.

**TOTAL LITTER COLLECTED BY ORGANIZERS WHO HAVE COMPLETED THE QUANTIFICATION PROTOCOL**

For several years, we have been asking the participants of the Ocean Initiatives to take part in a citizen science action by filling in a complete report form, to improve knowledge of the state of European and world coastlines with regard to marine litter pollution. In order to do this, we asked them to answer questions on the place where their Ocean Initiatives took place and to quantify **34 types of litter, categorized according to materials and uses**. This simplified quantification is based on the master list of the European harmonized protocol.

**191 organizers, accompanied by 7,442 people, got involved in this exercise. The total number of items of litter collected is 370 345 which translates into a volume of 209.375 m<sup>3</sup>.**

**TOP 10 ITEMS**



**79%**

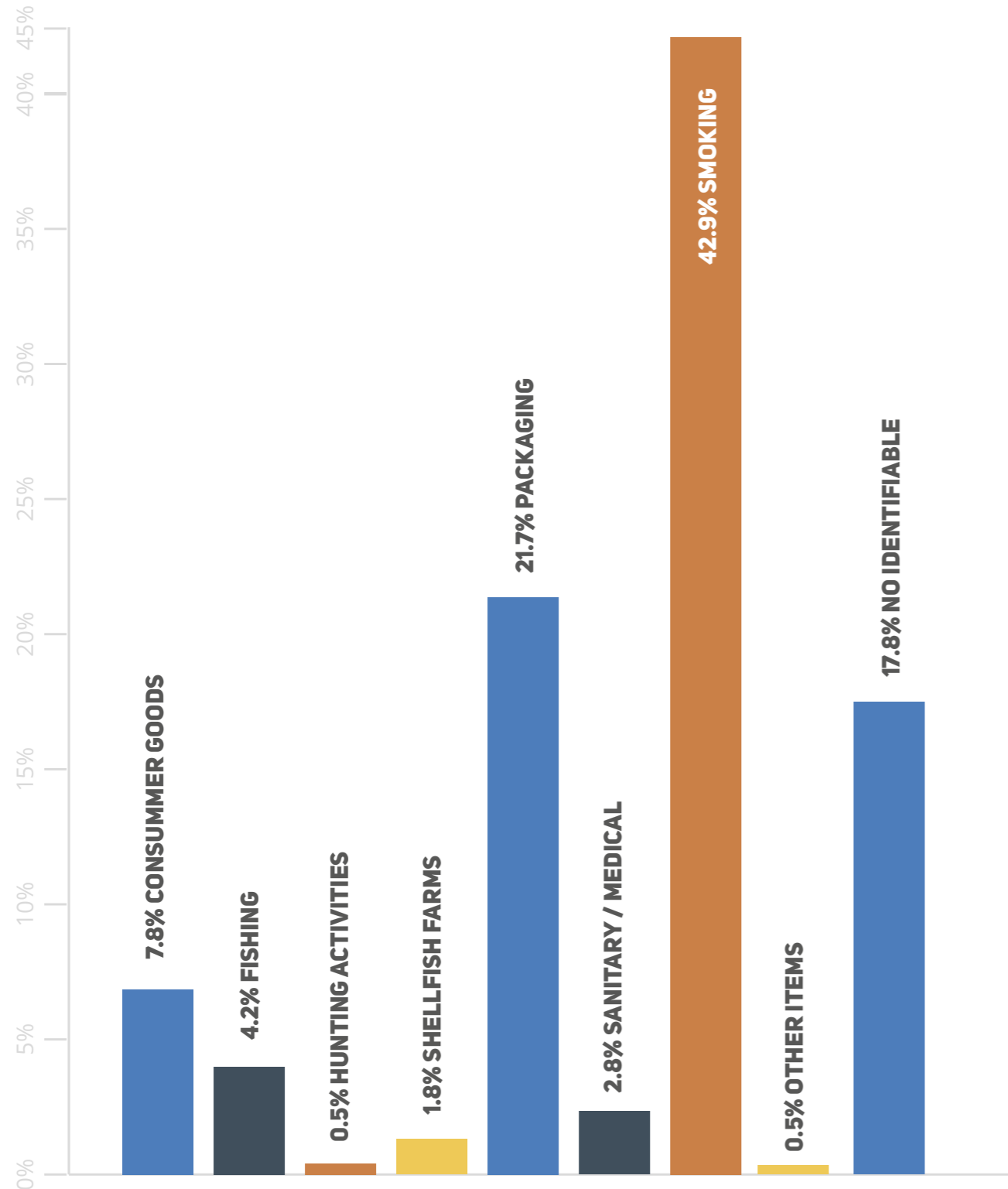
**79% of the waste collected were single-use plastic products.**

“Single-use plastic items” are products destined to be used only once (such as a plastic bag or a straw).

### DISTRIBUTION OF MARINE LITTER BY USE :

We grouped the different types of marine litter by broad usage category. The eight categories are as follows :

- litter from common consumer goods (e.g. plastic bags, toys, shoes and clothes),
- litter from professional and amateur fishing (e.g. cords and fishing lines),
- litter from hunting activities (shotgun cartridges),
- litter from shellfish farms,
- packaging and food packaging litter (e.g. food packaging, plastic cups and cutlery)
- sanitary and medical litter (e.g. medicine packaging, tampons and applicators),
- litter from smoking habits (e.g. cigarette packets and cigarette butts),
- Other litter (identifiable litter that does not fit into the categories, e.g. car parts or biomedias),
- non-identifiable litter (plastic and polystyrene pieces).



### TOTAL OF COLLECTED ITEMS

Total number of items collected in 191 collections: 370,345 quantified items.

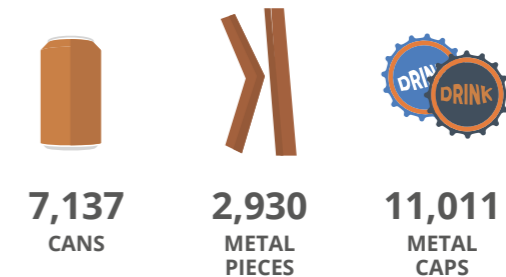
#### PLASTIC



#### GLASS



#### METAL



#### CLOTH





## FOCUS ON MARINE ENVIRONMENT : BEACHES AND SEABED

### TOP 10 ITEMS



### TOTAL OF COLLECTED ITEMS IN MARINE ENVIRONMENT

Total number of items collected in 156 operations: 265,725 quantified items.

#### PLASTIC



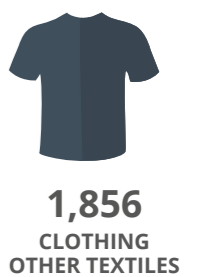
#### GLASS



#### METAL

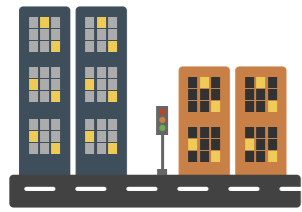


#### CLOTH



## INFORMATION ON THE COLLECTION SITES (MARINE ENVIRONMENT)

We asked organizers to provide us with information about clean-up sites in the marine environment. The sites chosen by organizers may meet several features. The percentages are therefore for reference only.



**75%**

of beaches where the Ocean Initiatives took place are located near a town.



**83%**

of beaches where the Ocean Initiatives took place are very frequented or in tourist areas.



**43%**

of the beaches are near a river or waterway that runs into the sea.



**“8,000,000**  
*of tons of plastic waste  
are dumped in our oceans  
every year.”*



## FOCUS ON WATERCOURSES: RIVERS AND LAKES

### TOP 10 ITEMS



### TOTAL OF COLLECTED ITEMS IN RIVERS AND LAKES

Total number of items collected in 35 cleanups: 104,620 quantified items.

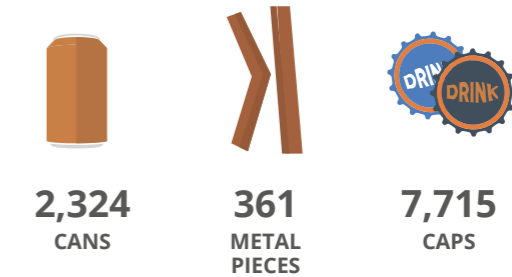
#### PLASTIC



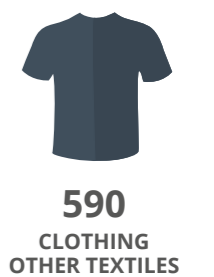
#### GLASS



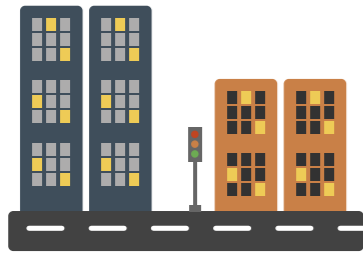
#### METAL



#### CLOTH



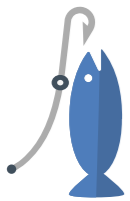
**SOME FIGURES**



**100%**  
of the river and lake banks examined by Ocean initiatives organizers were located near a town or a village upstream.

**INFORMATION ON FRESH WATER SITES (ACTIVITIES)**

These are the main activities carried out on the area where the Ocean Initiatives took place, according to the organizers. Several types of activities can take place on the same area. The percentages are given for information purposes only.



**43%**  
of sites are located near fishing areas.



**20%**  
of sites are located near hunting areas.



**29%**  
are downstream from agricultural areas.



**37%**  
are downstream from industrial areas.



**43%**  
are in areas where water sports take place.

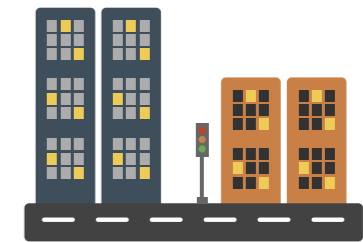
**PERCEPTION OF THE ORIGIN OF THE LITTER**

We have asked participants to tell us what, according to them, is the origin of the litter found during their clean-ups. Here are their answers :



**77%**

For 77% of the organizers, the litter found was related to anti-social behavior: leaving litter behind after a picnic, sport activities, fast food near the river banks.



**20%**

For 20% of the organizers, the litter recovered resulted from poor waste management in towns located upstream. It is thrown out in an urban area and moved by the wind or run-off water and wastewater networks.



Several organizers informed us of an unauthorised dumping site on the river banks or near the site. Some organizers also flagged up the presence of former landfill sites that end up emptying their contents into the waterway.

**OTHER ITEMS COLLECTED IN LARGE NUMBERS**

42% of the organizers reported to have found large quantities of other item types during their quantification (items not included in the item list).



**WET WIPES**

Many people still dispose of these synthetic single-use products in the toilet which damages waste water system. The European "Single use plastic" Directive, adopted in early 2019, has set out several measures ranging from labelling on packaging to establishing extended producer responsibility to restrict pollution by wet wipes.



**CIGARETTE PACKETS**

In addition to cigarette butts, organizers picked up numerous other types of smoking-related litter such as cigarette packets or plastic wrappers. 51 cigarette packets were collected during a single clean-up on a beach near Genoa (Italy).



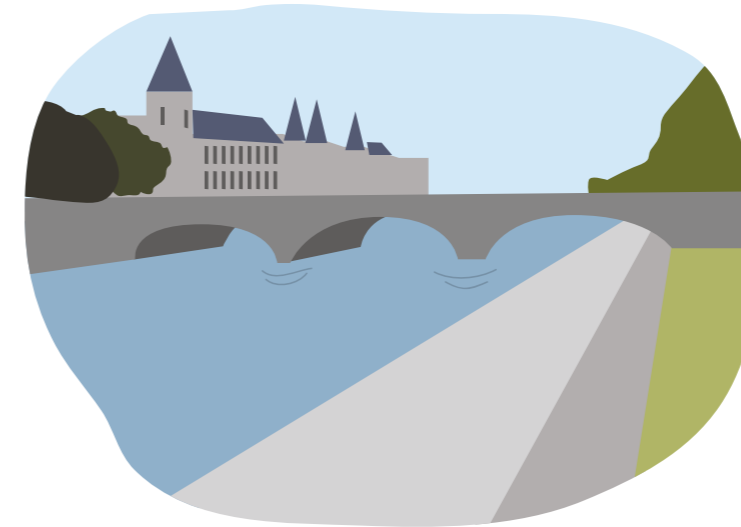
**CORKS**

Organizers collected countless corks during their operations. Over 164 corks were gathered during two clean-ups in Paris near the banks of the Seine!



**CONSTRUCTION WASTE**

Breeze blocks, pipes, rubble, sheaths, insulation; just some of the waste items found by our organizers along all maritime coasts and which are often the result of public or private building work.



**THE SEINE RIVERBANKS: THE CITIES' BIN**

Several organizers stated that the Seine River and its banks were all too often used as a dumping ground. For example, organizers found: 3 computer screens, 2 backpacks, 3 chairs, over 200 underground tickets, 3 car bumpers, 15 plywood boards, 1 bedside table etc. on the Seine riverbanks

**AND ALSO...**



**21**

Batteries found on a beach in Marseille (France)



**48**

Fishing floats collected on a Biscay beach (Spain)



## WEIRD FINDS

### STREAMS AND OCEANS: THE LARGEST DUMP OF HUMAN ACTIVITY

More than 200 unusual objects were found and listed by participants during Ocean Initiatives in 2018.



2 RELIGIOUS' STATUES



1 GUN AND BULLETS



1 MINITEL



1 BIRD CAGE



1 DENTURE



1 STREET SIGN



4 ASTHMA INHALERS



1 KITCHEN MACHINE



2 PIECES OF RAIL (TRAIN)

### FROM THE HOUSE



3 VACUUM CLEANERS



1 OIL STOVE



1 BOILER



2 TOILETS



2 MICRO-WAVES



1 WASHING MACHINE

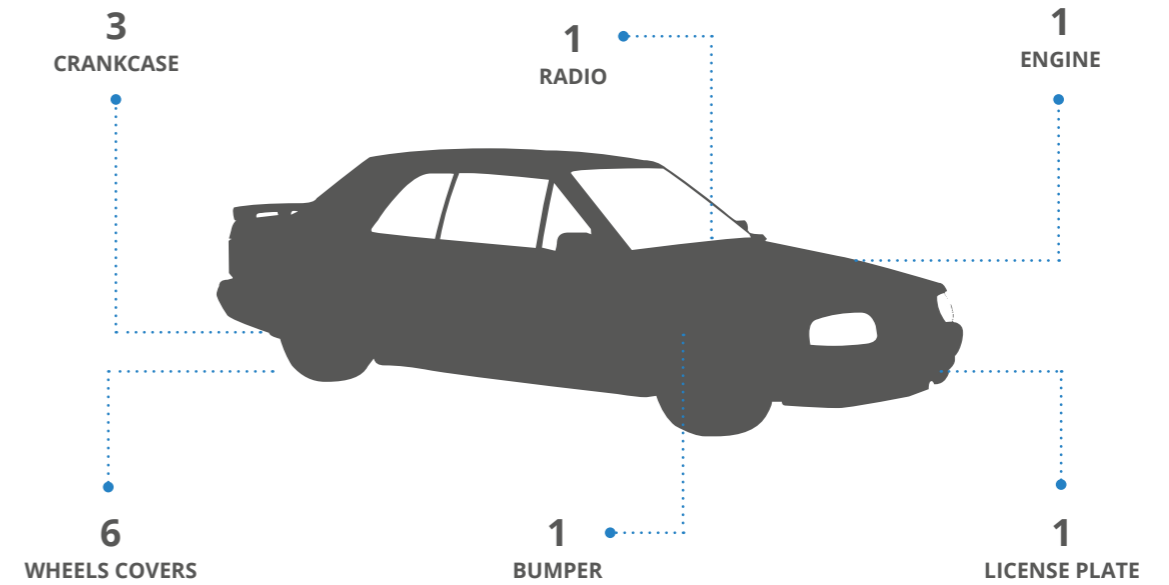


1 SCALE



2 COMPUTERS AND 4 COMPUTERS SCREENS

### CAR DEPARTMENT



### NOT FORGETTING THE USUAL SUSPECTS



4 MOBILE PHONES



2 FLIPPERS



5 PIECES OF ZODIAC



4 EXTINGUISHERS



2 SCOOTERS



60 ELECTRICAL WIRING



21 TROLLEYS



4 BICYCLES, 5 WHEELS + 4 SEATS

**02**

REPORT  
BY SEAS  
AREAS

# BAY OF BISCAY

FROM PENMARCH IN FRANCE TO ORTEGAL CAPE IN SPAIN.

## GENERAL DATA ON THE WHOLE SEA AREA

Extrapolation based on a total of 561 Ocean Initiatives which took place in this sea area.



**23,459\***  
People reached.



**6,089\***  
bags of litter collected by participants.



**612,653 m\***  
613 km of coastline length covered by participants.

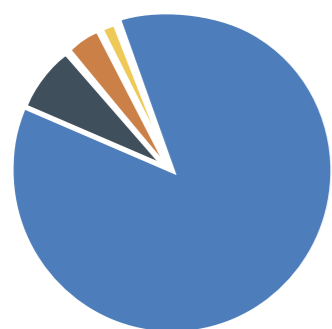


**313.44 m<sup>3</sup>\***  
Total volume of litter collected.

## DATA FROM QUANTIFICATION

82 quantification operations bringing together 3,389 persons took place in Spain (32 operations) and France (50 operations). **93,946 items were picked up and quantified over a distance of 87,400 meters.** The total volume of collected litter is 45.5 m<sup>3</sup>.

## TYPES OF COLLECTION



## TOP 5 OF COLLECTED ITEMS



CIGARETTE BUTTS



PLASTIC PIECES 2,5-50 CM



POLYSTYRENE PIECES 2,5-50 CM



PLASTIC BAGS AND PIECES



BOTTLE CAPS (PLASTIC)

## TOTAL OF COLLECTED ITEMS IN MARINE ENVIRONMENT AND WATERCOURSES

### PLASTIC



**17,731**  
CIGARETTE BUTTS



**692**  
BOTTLES ≤ 0,5 L



**1,279**  
BOTTLES > 0,5 L



**6,024**  
BOTTLE CAPS



**1,071**  
OTHER BOTTLES OR CONTAINERS



**2,748**  
FOOD CONTAINERS



**7,131**  
PLASTIC BAGS AND PIECES



**2,250**  
CRISPS PACKETS SWEET WRAPPERS



**1,941**  
LOLLIPOP STICKS



**437**  
MEDICAL WASTE: PACKAGING, CONTAINERS



**5,648**  
SANITARY WASTES: COTTON SWAB



**565**  
TAMPON APPLICATORS SANITARY TOWELS



**8,144**  
POLYSTYRENE PIECES 2,5-50 CM



**10,567**  
PLASTIC PIECES 2,5-50 CM



**918**  
PLASTIC CUPS



**383**  
CUTLERY TRAYS



**1,240**  
STRAWS STIR-STICKS



**5,371**  
FISHING: CORDS, SMALL CORDS (DIAMETER < 1 CM)



**834**  
FISHING LINES (ANGLING)



**4,285**  
TANGLED NETS/CORDS



**925**  
SHOTGUNS CARTRIDGES



**54**  
TYRES WHEELS



**303**  
TOYS AND PARTY POPPERS



**303**  
LIGHTERS



**325**  
BALLONS INCL. VALVES



**223**  
SHOES SANDALS



**5,448**  
SHELLFISH AQUACULTURE



**1,148**  
BIOMEDIAS

### GLASS



**790**  
GLASS BOTTLES



**2,158**  
PIECES OF GLASS

### METAL



**810**  
CANS



**656**  
METAL PIECES



**749**  
CAPS

### CLOTH



**795**  
CLOTHING OTHER TEXTILES

## TOTAL OF COLLECTED ITEMS IN MARINE ENVIRONMENT

768 bags filled with 86,803 items were picked up and quantified throughout 72 operations of citizen science (31 in Spain and 41 in France) carried out on the beaches and seabeds of this area, over a distance of 62,850 meters. The total volume of collected litter was 38.59 m<sup>3</sup>.

### PLASTIC



### GLASS



### METAL



### CLOTH



## FACTS AND FIGURES

**11.91%**

of waste collected on the beaches came from fishing (ropes, bits of net, lines etc.)

**1**

car was retrieved during an underwater clean-up in Bermeo (Spain)

**X2**

The number of cotton buds found on the Bay of Biscay beaches has doubled since 2017.

**18.80%**

of the litter collected on the Bay of Biscay area was cigarette butts.

**1,755**

Fragments of Shellfish farming-related waste was gathered over less than 1km on a Loire Atlantique beach (France).

**89 KG**

Over 89kg of oyster farming equipment was found (not included in the count) in Carnac in the Morbihan area (56, France).

Regarding the beaches where the citizen science activities were undertaken :



**12.5%**

organizers stated that a festival (village festivity, fireworks display etc.) or meteorological event (spring tide, storm) that occurred before their operation may have affected the amount of litter they found.



**72%**

of beaches are located near a town.

## TYPES OF ACTIVITIES

These are the main activities performed at the area where the Ocean Initiative took place, according to the organizers. At these sites, several types of activities can take place on the same grounds. The percentages are given for information purposes only.



**68%**

of beaches are nautical activity areas (swimming, kite surfing, surfing, sailing, paddle boarding, diving...).



**42%**

of the sites are fishing areas.



**19%**

of beaches are located near shellfish aquaculture.

TESTIMONIAL

**MARISE GONZALEZ VICENTE, LIMPIANDO Y APRENDIENDO**  
**CARREÑO, ASTURIAS (ESPAGNE), 22 MARCH 2018.**



I began to take an interest in the issue of marine litter whilst exploring my region's beaches with a surfer, without a car, on the lookout for the perfect wave. Whilst he surfed, I picked up litter thinking, at that time, it was left by people visiting the beach or sea.

I found out about Surfrider when I saw a spring cleaning operation (which really caught my attention). So I've been organizing one or several projects at my local beaches (Carreño Asturias, Spain) with students from my school or external participants since 2011. I teach 3-6 year olds and I've been working as a teacher in the same town for several years. That means I've had several generations of pupils and all of them can remember our beach clean-ups that we organized during their time at school. Everyone remembers Surfrider.

Surfrider has provided me with constant support, remotely but very closely. The ocean initiatives platform is fantastic. I'm a mature woman with few IT skills but the Ocean Initiatives platform has never posed a problem for me. All the educational materials provided with each of the Initiatives have enabled me to understand more about the problem of marine litter. I think I have learned so much about plastics and microplastics that I'm almost an expert: and that's all thanks to Surfrider. All these educational materials are now part of the school's library and the Ocean Initiatives banners are part of the educational materials in the classrooms.



My students have been using stainless steel flasks for the last two years and we're extremely careful not to produce plastic litter. I launched a playground project which will be a no litter area shared with the seagulls.

I was delighted and touched to hear that our clean-up would appear in a Surfrider report. It's good to know that the litter counts we conduct during each clean-up are useful. I like to say that Ocean Initiatives are here to «get beaches clean and consciences dirty».

The most common types of litter on our beaches are plastics and microplastics that come from both maritime activities and landfill sites. Just remember that beaches were used for landfill until the 80s. Tyres and crates for shellfish farming are the largest types of litter. Then there are cigarette butts and, more recently, dog dirt. I'm convinced that the cigarette butts come from the sewers. The local council leaves the bins on the beach in winter for animal dirt... That's a big mistake as the tides knock the full bins over. When all is said and done, I think it would be better to let the animals do their business in the sand.

I'm currently planning a clean-up for September 1st 2019 where we'll have a team of divers to collect underwater litter. We'll see what happens! There are some fishermen and several people who are very interested in taking part already.

TOTAL OF COLLECTED ITEMS IN RIVERS AND LAKES

115 bags filled with 7,143 items were collected and quantified during 10 operations of citizen science (1 in Spain and 9 in France) performed on the banks of rivers and lakes banks, over a distance of 24,550 meters. The total volume of collected litter is 6.91m³.

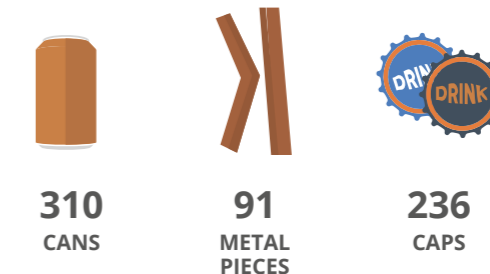
PLASTIC



GLASS



METAL



CLOTH



**FACTS AND FIGURES**



**19.80%**

of the collected litter on river banks in the Bay of Biscay was cigarette butts.



**100%**

of all the clean-ups on watercourse banks found snack packaging (chocolate bars, confectionery, crisps etc.).



**3**

Hubcaps, a bumper and lots of wine making-related litter were found by participants during a clean-up in Margaux (33, France)

**PERCEPTION OF THE ORIGIN OF THE LITTER**

We have asked participants to tell us, in their opinion, what is the origin of the litter found during their actions. Here are their answers:



**100%**

of rivers and lakes monitored by our organizers are situated next to a town.



**90%**

think that the litter came from daily irresponsible behaviour, leaving litter directly on the banks of watercourses (from fishing, parties, picnics or walks).

**TESTIMONIAL**

**CÉLINE MORISSEAU, ASSOCIATION MARG'O LOULOUS, CLEAN-UP ALONG THE GARONNE, MARGAUX (GIRONDE, FRANCE), 5 MAY 2018**



*We organized a clean-up walk in our village on the banks of the Garonne. Our aim was to bring together the village's inhabitants and associations and have fun picking up litter together and making our environment cleaner. We thought we'd be able to collect litter in and around the village and along the port but there weren't enough teams to cover all these sectors. I filled in the report on our clean-up on your platform.*

*It's our second walk and we managed to mobilise more people this year. We collected fewer large-sized items this year. Cigarette butts still account for most of the litter, along with drinks bottles.*

*Our day resulted in some interesting encounters. People already aware of the need to protect our environment who want to do more. The children, who had learned all about it at school, were also very engaged and involved both during the walk and when sorting and counting the litter collected.*

*We hope to be able to repeat the walk next year or even organize other events during the year.*



# GREATER NORTH SEA

UNITED KINGDOM, NORTHERN AREA OF FRANCE, BELGIUM, NETHERLANDS, DENMARK, WESTERN AREA OF GERMANY, NORWAY AND SWEDEN.

## GENERAL DATA ON THE WHOLE NORTH SEA AREA

Extrapolation based on a total of 264 Ocean Initiatives which took place in this sea area.



**11,805\***  
people reached.



**8,674\***  
bags of litter collected by participants.



**253,157 m\***  
of coastline covered by participants.

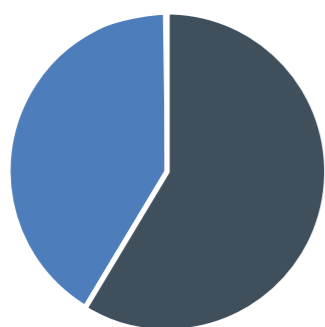


**607.6 m<sup>3</sup>\***  
Total volume of litter collected.

## DATA FROM QUANTIFICATION

28 quantification operations involving 1,252 people took place in France. **101,800 items** (including 67,812 cigarette butts) were collected and quantified over a distance of 26,850 meters. The total volume of collected litter was 26.385 m<sup>3</sup>.

### TYPES OF COLLECTION



● BEACHES - 43%

● RIVERS - 57%

### TOP 5 OF COLLECTED ITEMS



CIGARETTE BUTTS



CAPS (METAL)



POLYSTYRENE PIECES 2,5-50 CM



PLASTIC BAGS AND PIECES



FOOD CONTAINERS

## TOTAL OF COLLECTED ITEMS IN MARINE ENVIRONMENT AND WATERCOURSES

### PLASTIC



**67,812**  
CIGARETTE BUTTS



**841**  
BOTTLES ≤ 0,5 L



**573**  
BOTTLES > 0,5 L



**1,905**  
BOTTLE CAPS



**1,034**  
OTHER BOTTLES OR CONTAINERS



**2,740**  
FOOD CONTAINERS



**2,875**  
PLASTIC BAGS AND PIECES



**1,053**  
CRISPS PACKETS SWEET WRAPPERS



**562**  
LOLLIPOP STICKS



**151**  
MEDICAL WASTE: PACKAGING, CONTAINERS



**349**  
SANITARY WASTES: COTTON SWAB



**407**  
TAMPON APPLICATORS SANITARY TOWELS



**3,783**  
POLYSTYRENE PIECES 2,5-50 CM



**1,819**  
PLASTIC PIECES 2,5-50 CM



**1,310**  
PLASTIC CUPS



**500**  
CUTLERY TRAYS



**937**  
STRAWS STIR-STICKS



**490**  
FISHING: CORDS, SMALL CORDS (DIAMETER < 1 CM)



**307**  
FISHING LINES, (ANGLING)



**452**  
TANGLED NETS/CORDS



**153**  
SHOTGUN CARTRIDGES



**119**  
TYRES WHEELS



**93**  
TOYS AND PARTY POPPERS



**144**  
LIGHTERS



**38**  
BALLOONS INCL. VALVES



**76**  
SHOES SANDALS



**21**  
SHELLFISH AQUACULTURE



**10**  
BIOMEDIAS

### GLASS



**1,129**  
GLASS BOTTLES



**532**  
PIECES OF GLASS

### METAL



**1,593**  
CANS



**306**  
METAL PIECES



**7,293**  
CAPS

### CLOTH



**393**  
CLOTHING OTHER TEXTILES

### TOTAL OF COLLECTED ITEMS IN MARINE ENVIRONMENT

120 bags filled with 12,706 items were collected and quantified throughout 12 operations of citizen science performed on the beaches and sea floor of this area, over a distance of 5,850 meters. The total volume of collected litter was 7.83 m<sup>3</sup>.

#### PLASTIC



#### GLASS



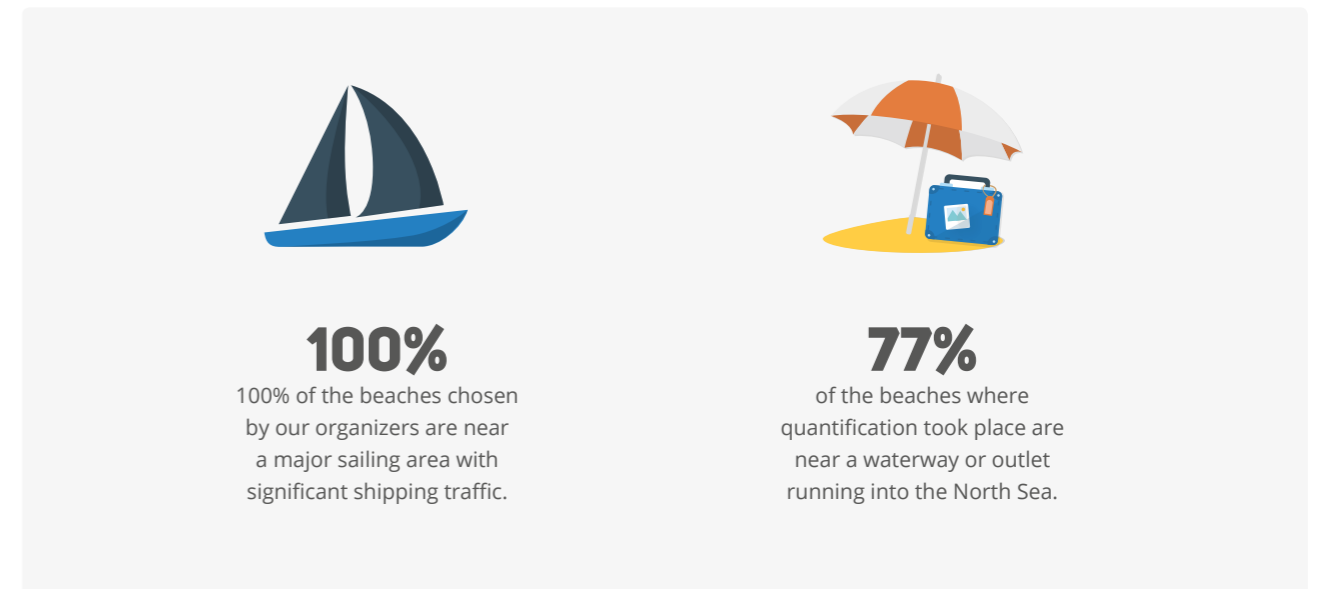
#### METAL



#### CLOTH

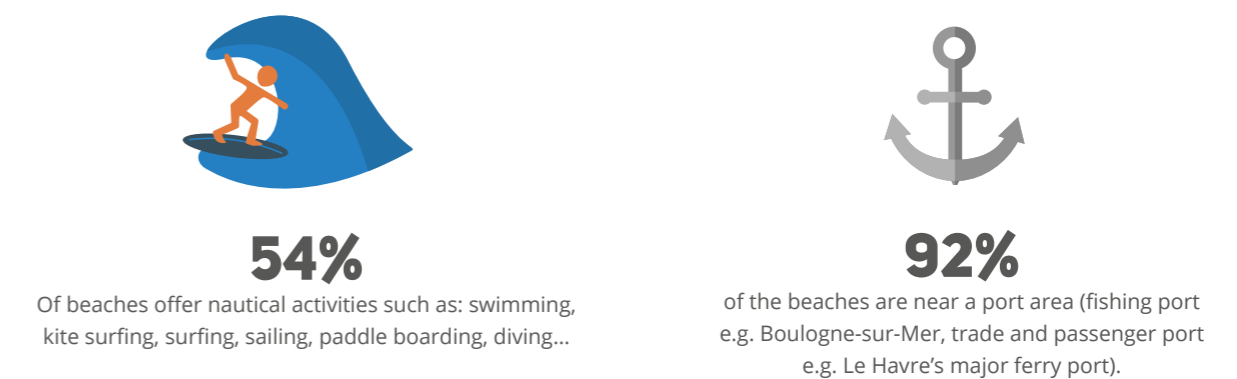


### FACTS AND FIGURES



### TYPE OF ACTIVITIES

These are the main activities performed at the area where the Ocean Initiative took place, according to the organizers. At these sites, several types of activities can take place on the same grounds.



## TOTAL OF COLLECTED ITEMS IN RIVERS AND LAKES

420 bags filled with 89,093 items were collected and quantified on the banks of rivers and lakes in this area, over a distance of 21,000 meters. The total volume of collected litter was 18.555 m<sup>3</sup>.

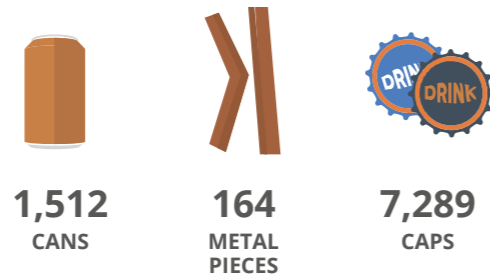
### PLASTIC



### GLASS



### METAL

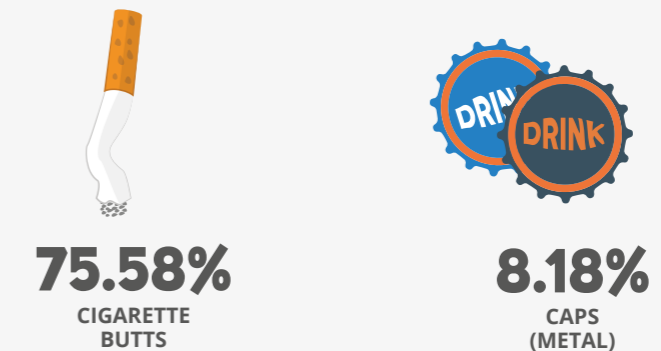


### CLOTH

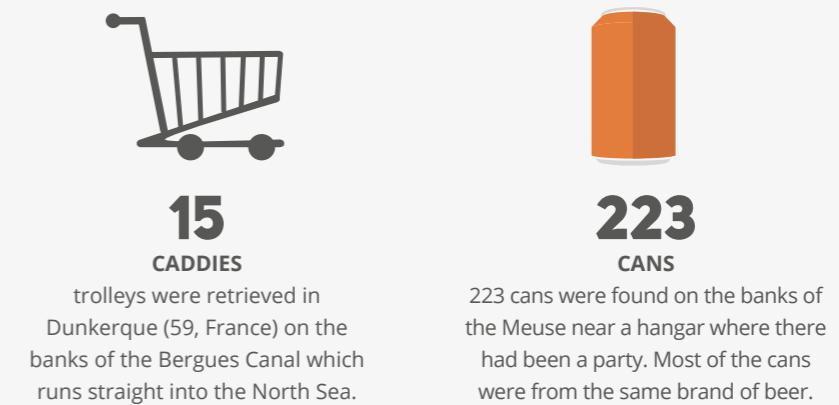


## FACTS AND FIGURES

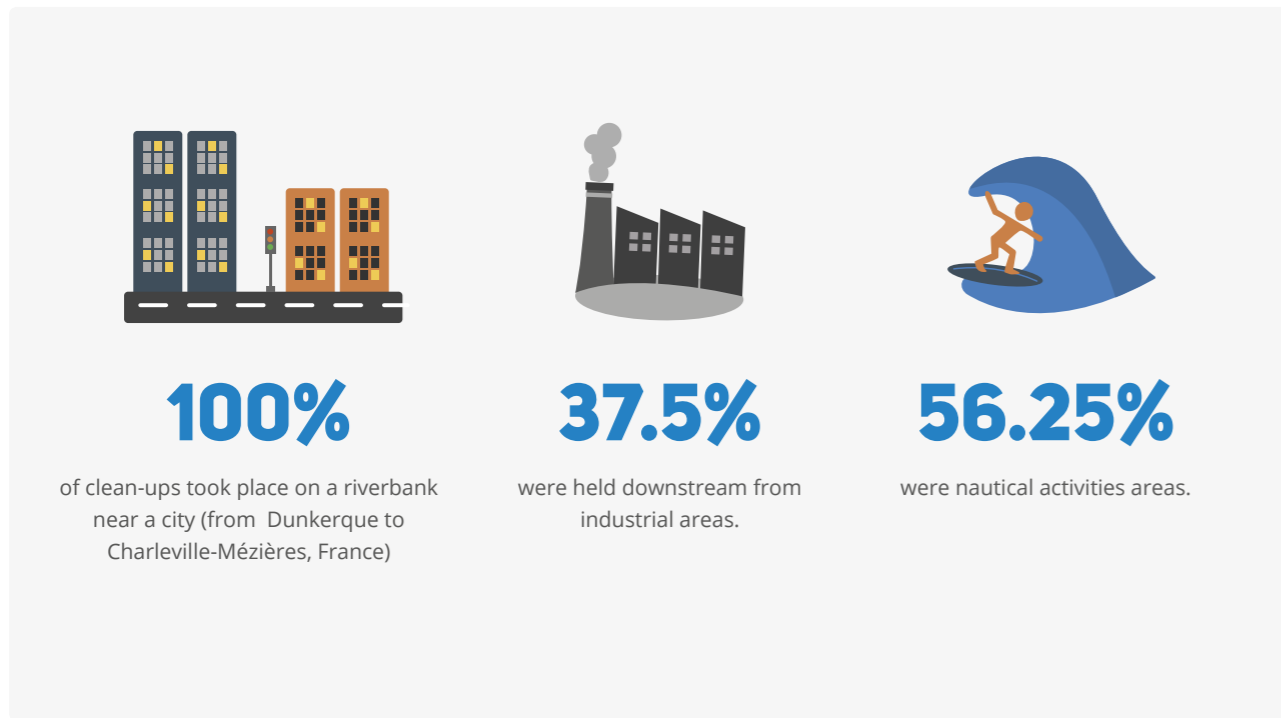
Here are some of the most frequently found items on the riverbanks of this area:



Some organizers conducted their operations on the banks of the Seine around Paris with a specific focus on several items such as cigarette butts and bottle caps, which may explain why they feature so prominently in the counts for the Channel and North Sea.

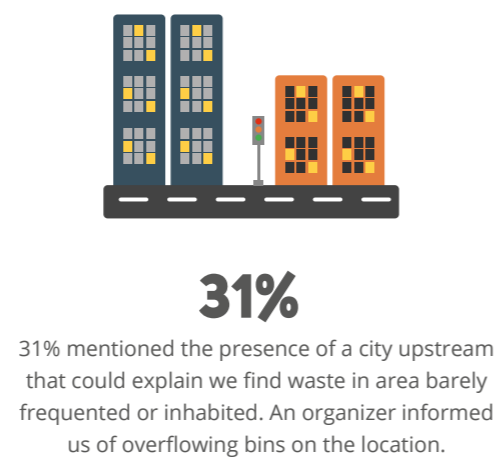


30% of organizers highlighted one-off or exceptional events that may have affected the amount of litter collected (flooding, rises in water level or parties near the riverbanks).



**PERCEPTION OF THE ORIGIN OF THE LITTER**

We have asked participants to tell us, in their opinion, what is the origin of the litter found during their operations. Here are the answers:



**TESTIMONIAL**

**SAMUEL FROIDEVAL, QUEND BEACH CLEAN-UP  
QUEND (SOMME, FRANCE), 5 MAY 2018.**

*I organized this Ocean Initiative, along Quend Beach (in the Bay of the Somme). It's a magnificent place with its wild coastline, fantastic landscapes and exceptional plants and wildlife.*

*The clean-up site, between Quend beach and Saint Quentin en Tourmont point, is a site I know and love. I explored every nook and cranny when I was a child and have continued to do so for more than twenty years. I saw some rather disturbing items of litter, especially after very high tides or storms. Litter such as televisions, tyres, syringes, drums, shoes, a weather balloon with its transmitter, a Second World War mine and on a different note, a dolphin carcass. Not forgetting the usual litter: plastic bottles, bits of fishing net, etc.*

*For me it was clear that this litter wasn't left behind by tourists, or even local inhabitants. The diversity of this litter suggested that it came from a landfill site or a boat having lost containers or dumped its waste in the sea. I knew that for certain when I read the labels on some of the litter. Most of the labels were written in foreign languages (Japanese, Chinese or English). For example, everyone recognises the logo on a Coca-Cola bottle, well*

*I found Coca-Cola bottles with Japanese writing on them! This unusual litter continued to wash up on the beaches for several years. But there hasn't been any for the last 5 or 6 years. However, I still regularly find litter with English writing on it, and even promotional balloons released in England or the United States! It's interesting to see the path the litter has taken to reach the coast here. By air, in rivers, oceans, etc. I know places I describe as 'bottlenecks' with the highest concentrations of litter. I carry out my research on these sites.*

*As far as the Quend Ocean Initiative is concerned, the type of litter most frequently found was unsurprisingly plastic bottles and pieces of fishing nets but also, dozens of these promotional helium balloons. I've been doing research in this area for years and I'd like to discuss my findings with Surf rider. Of course, it doesn't come directly from the sea, but that's where it all ends up.*

*I organized this clean-up at the last minute, there weren't many of us, but there were some really interesting discussions. In fact, it's often easier to share information with a smaller group of people, they're more willing to listen and speak.*



# WESTERN MEDITERRANEAN SEA

FRANCE, SPAIN, ITALY, MOROCCO, TUNISIA AND ALGERIA.

## GENERAL DATA ON THE WHOLE SEA AREA

Extrapolation based on a total of 326 Ocean Initiatives which took place in this sea area.



**11,385\***  
participants reached.



**7,119\***  
bags of litter collected by participants.



**258,905 m\***  
of coastline covered by participants.

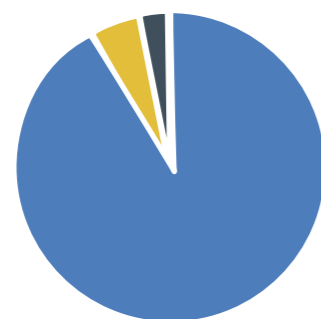


**488.51 m<sup>3</sup>\***  
Total volume of litter collected.

## TOTAL OF COLLECTED ITEMS IN MARINE ENVIRONMENT AND WATERCOURSES

43 quantifications involving 1,503 people took place in Spain (7 operations) France (28 operations) and Italy (8 operations). **129,698 items** were collected and quantified over a distance of **34,150 meters**. The total volume of collected litter is **64,435 m<sup>3</sup>**.

### TYPES OF COLLECTION



- BEACHES - 90.70%
- RIVERS - 2.33%
- SUBMARINE - 6.98%

### TOP 5 OF COLLECTED ITEMS



## TOTAL OF COLLECTED ITEMS IN MARINE ENVIRONMENT AND WATERCOURSES

There was only one count conducted in freshwater in 2018 (Le Lez, 34, France). As Le Lez is a coastal river, we decided to add the results from this clean-up to the citizen science projects conducted in the marine environment (beach and underwater). **933 bags** filled with **129,685 items** were picked up and quantified throughout **72 operations** over a distance of **34,150 meters**. The total volume of collected litter was **64.435 m<sup>3</sup>**.

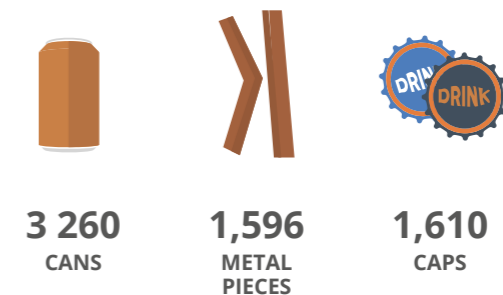
### PLASTIC



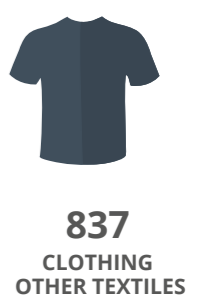
### GLASS



### METAL



### CLOTH



**FACTS AND FIGURES**

**34,258**

Cigarette butts were found in a single clean-up on a beach in Palavas les Flots (34, France).

**1,024**

Plastic bottle caps were collected on a beach in Puig de Santa Maria (Valencia, Spain).

**12**

Plastic chairs were found on a beach in Santo Stefano al Mare (IM, Italy).



**23%**

of organizers stated that meteorological events (spring tide, storm) took place before their operation and that may have affected the amount of litter they found.



**74%**

of beaches where the Ocean Initiatives took place are highly frequented or are in tourist areas.



**67%**

of beaches where the quantification took place are located near a town.

**TYPES OF ACTIVITIES**

These are the main activities performed on the area where the Ocean Initiatives took place, according to the organizers. Several types of activities can take place on the same area. The percentages are given for information purposes only.



**72%**

of beaches are nautical activities areas (swimming, kite surfing, sailing, paddle boarding, diving...).



**67%**

of the beaches are close to professional and amateur fishing areas.

**TESTIMONIAL**

**ALLESANDRO BELLOTI, SEVERAL BEACH CLEAN UPS AROUND IMPERIA (ITALIE), MAY 2018.**

*We decided to organize an Ocean initiative (beach clean up) firstly because we wanted to show first-hand the situation of the beaches because it is only through this way that participants could understand the severity of the pollution.*

*Moreover, the event was an opportunity to inform participants about how important the beach is as a nursery for many animals (for example turtles, crustaceans,) and is a recorder of the sea's health status. In fact, the sea always gives back what we release in it, both natural and artificial things. Most of what you find on the beach was originally in the sea. . Understanding the situation of the beaches can help us to understand the condition of the sea.*

*Finally, this event allowed us to engage people and explain to them that even just a small effort is enough.*

*In fact the most common litter that we encountered during the event, and which we find all the time on the beach but also on the streets, are cigarette butts. People should know that all they need to do is not throw them on the beach. Very funny thing that happened was that, among the litter, we found some false teeth next to an apple core...maybe someone lost them eating an apple!*

*The most satisfying aspect of the event was not only the number of participants (more than 400 despite the rain) but also that many other municipalities have since asked us to join in thanks to the popularity and the success of our beach clean-up.*



# CELTICS SEA

IRELAND, GREAT BRITAIN FRANCE.

## GENERAL DATA ON THE WHOLE SEA AREA

Extrapolation based on a total of 55 Ocean Initiatives which took place in this sea area.



**2,838\***  
people reached.



**209\***  
bags of litter collected by participants.



**78,950 m\***  
Of coastline covered by participants.

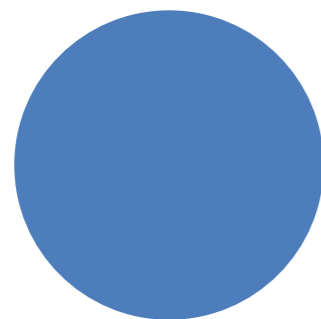


**14.58 m<sup>3</sup>\***  
Total volume of litter collected.

## DATA FROM QUANTIFICATION

10 quantification operations involving 516 persons took place in France. **6,454 items** were collected and quantified over a distance of 14,350 meters. The total volume of collected litter is 2.65 m<sup>3</sup>.

## TYPES OF COLLECTION



● BEACHES - 100%

## TOP 5 OF COLLECTED ITEMS



CIGARETTE BUTTS



GLASS OF PIECES



PLASTIC PIECES 2,5-50 CM



FISHING: CORDS, SMALL CORDS (DIAMETER < 1 CM)



TANGLED NETS/CORDS

## TOTAL OF COLLECTED ITEMS IN MARINE ENVIRONMENT

38 bags filled with 6,454 items were collected and quantified throughout 10 operations of citizen science performed on the beaches of this area, over a distance of 14,350 meters. The total volume of collected litter was 2,65 m<sup>3</sup>.

### PLASTIC



### GLASS



31  
GLASS BOTTLES



593  
PIECES OF GLASS

### METAL



27  
CANS



31  
METAL PIECES



68  
CAPS

### CLOTH



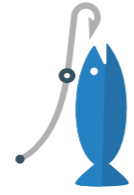
28  
CLOTHING OTHER TEXTILES

### FACTS AND FIGURES



**29.66%**

of the litter collected are cigarette butts.

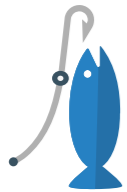


**17.7%**

of collected litter are linked to fishing activities.

### TYPES OF ACTIVITIES

These are the main activities carried out in the area where the Ocean Initiatives took place, according to the Ocean Initiatives organizers. Several types of activities can take place in the same area. The percentages are given for information purposes only.



**70%**

of beaches are fishing areas (professional and amateur).



**80%**

of beaches are nautical activity areas (swimming, kite surfing, surfing, sailing, paddle boarding, diving...).



**50%**

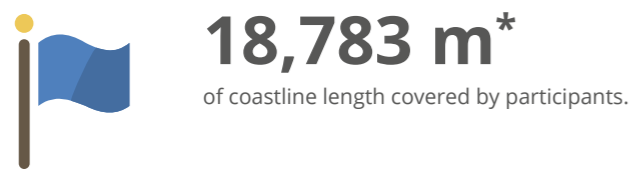
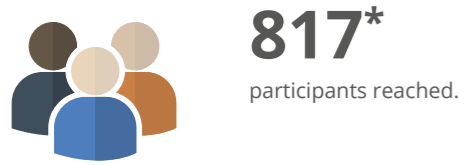
of the beaches are near a port area.



# INDIAN OCEAN

## GENERAL DATA ON THE WHOLE SEA AREA

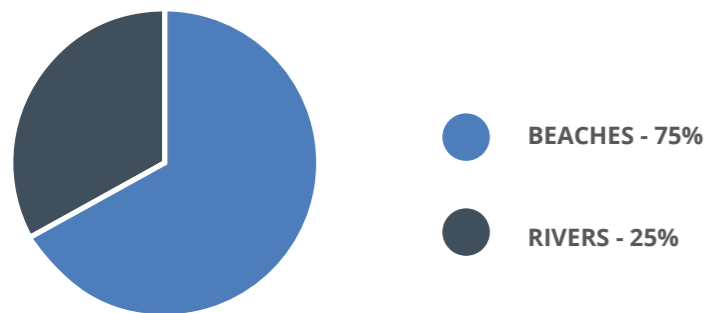
Extrapolation based on a total of 49 Ocean Initiatives which took place in this sea area.



## DATA FROM QUANTIFICATION

12 quantification operations bringing together 200 people took place in Reunion island (France), Indonesia (1) and Kenya (1). **17,002 items** were collected and quantified over a distance of **4,600 meters**. The total volume of collected litter is **13.49 m<sup>3</sup>**.

### TYPES OF COLLECTION



### TOP 5 OF COLLECTED ITEMS



## TOTAL OF COLLECTED ITEMS IN MARINE ENVIRONMENT

**182 bags** filled with **14,653 items** were collected and quantified throughout **9** operations of citizen science performed on the beaches of this area, over a distance of **3,950 meters**. The total volume of collected litter was **9.95 m<sup>3</sup>**.

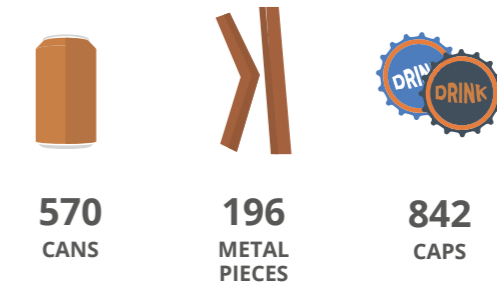
### PLASTIC



### GLASS



### METAL



### CLOTH



FACTS AND FIGURES



**29.73%**

of collected litter are plastic cigarette butts.



**45%**

food or drink packaging, straws and cups (all materials) accounted for 45% of the litter collected on the beaches on this coastline.



**12**

baby food pouches were found by one of our organizers during a clean-up on Reunion island (France). This item was mentioned by 2018's Ocean Initiatives participants on several occasions along with Capri-sun pouches.



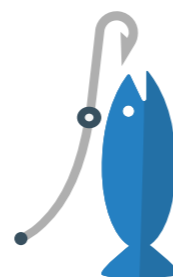
**100%**

Plastic bottles were found on 100% of beaches in the Indian Ocean where there were clean-ups during the Ocean Initiatives.



**77%**

Of beaches where the clean-ups took place were located near river mouth or ravines.



**56%**

of sites are located near fishing areas.

TOTAL OF COLLECTED ITEMS IN RIVERS AND LAKES

27 bags filled with 2,794 items were collected and quantified throughout 3 citizen science activities performed on the river banks of this area, over a distance of 650 meters. The total volume of collected litter was 3.54 m<sup>3</sup>.

PLASTIC



GLASS



**246**  
GLASS BOTTLES



**0**  
PIECE OF GLASS

METAL



**347**  
CANS



**29**  
METAL PIECES



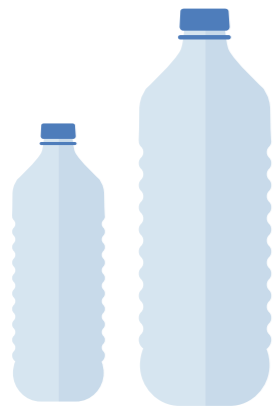
**156**  
CAPS

CLOTH



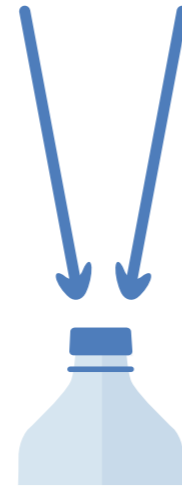
**3**  
CLOTHING OTHER TEXTILES

## FACTS AND FIGURES



### 406

beverage plastic bottles (less or equal to 500 ml) were collected on a river bank of the Reunion island.



### 306

bottle caps were quantified in a beach at Monbasa (Kenya).

## TESTIMONIAL

### SONIA SERRA, ALLONS MET' PROPRE !, LA RÉUNION – ST-DENIS SAINT-DENIS, LA RÉUNION (FRANCE), 1<sup>ER</sup> JULY 2018.

*On Réunion we're surrounded by the sea. And unfortunately, it's difficult to go and admire it without being struck by the amount of litter on the beaches.*

*I've already taken part in and organized several Ocean Initiatives and, in 2018, along with several associations we decided to organize a special day to hold Initiatives at the same time, at several points along the coast.*

*For me, the Ocean Initiatives are above all a fantastic tool for organizing events and raising the public's awareness while taking part in a concrete project with a solid scientific approach in terms of the sorting and counting of the litter.*

*During the clean-ups, half of what we collect is water or soda bottles, then there are a lot of cigarette butts, consumer waste, scrap metal such as car parts, a lot of microplastics and waste from fishing boats. It depends on the site, of course.*

*One type of litter which particularly surprised us and we find a lot of is the so-called 'modern' fruit puree packaging. This type of litter is so common it should be included on the report sheet.*

*At each clean-up, we are always astounded by the amount of litter which could so easily be avoided, particularly consumer waste (bottles, food packaging, etc.), especially when there are bins provided on the site.*

*As ever, cigarette butts are a real problem, but I'm shocked to have to pick them on the island's most beautiful sites. I don't understand how people can come to the sea, admire the ocean and then just throw away their cigarette like that.*



# NORTH ATLANTIC

GADELOUPE (FRANCE), FRENCH GUYANA, MARTINIQUE (FRANCE), MOROCCO, MEXICO, SENEGAL.

## GENERAL DATA ON THE WHOLE SEA AREA

Extrapolation based on a total of 69 Ocean Initiatives which took place in this sea area.



**2,363\***  
participants reached.



**3,105\***  
bags of litter collected by participants.



**53,906 m\***  
of coastline length covered by participants.

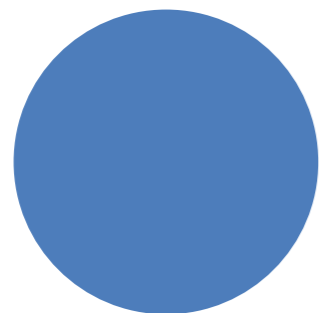


**231.32 m<sup>3</sup>\***  
Total volume of litter collected.

## DATA FROM QUANTIFICATION

7 quantification operations bringing together 265 people took place in Guadeloupe island (1), Mexico (1), Morocco (3), Martinique island (1) and Senegal (1). **9,631 items were picked up and quantified over a distance of 6,100 meters. The total volume of collected litter is 11.82 m<sup>3</sup>.**

## TYPES OF COLLECTION



● BEACHES - 100%

## TOP 5 OF COLLECTED ITEMS



## TOTAL OF COLLECTED ITEMS IN MARINE ENVIRONMENT AND WATERCOURSES

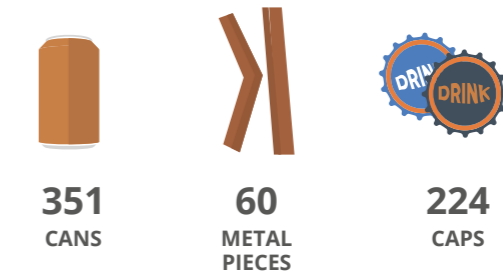
### PLASTIC



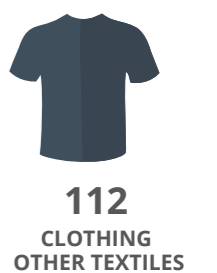
### GLASS



### METAL



### CLOTH

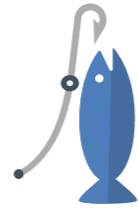


QUELQUES CHIFFRES



**14.09%**

of collected litter in this area are plastic bottles.



**14.51%**

of collected litter in this area are plastic bottles caps.



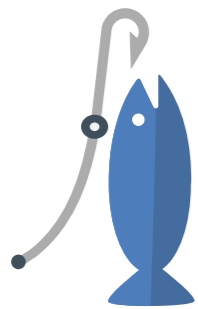
**3,600**

bottles (over 500ml) were picked up on a French Guyana beach (not counted for the total).



**1+1**

scooter and a washing machine were picked up during a clean-up in French Guyana.



**87.5%**

of the beaches are close to professional and amateur fishing areas.



# OTHER COASTAL AREAS

We're presenting results from citizen science projects on the coastline in this report. That means we need a minimum number of completed report documents to have data representing coastline pollution. Organizers were involved in counts throughout Europe (Adriatic, Aegean, Iberian coast etc.) but we don't have enough data to present them separately. That's why we've decided to let them speak for themselves so they can share their work and experience of pollution.

# AEGEAN SEA

## TESTIMONIAL

### INGRID AYSU «SAVE OUR OCEANS», SEVERAL BEACH CLEAN-UPS IN NORTHERN TURKEY TURKEY, JULY 2017.

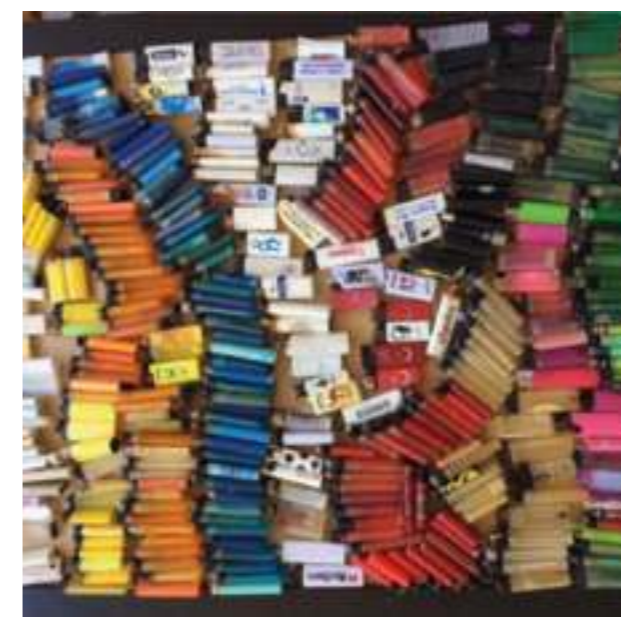
I decided to organize Ocean Initiatives due to the alarmingly huge amounts of trash, mainly plastics littering the coast where we live, in Turkey's Northern Aegean. I was swung into action with my daily beach walks with our two rescue dogs. I became interested in the subject and read widely. I fear that the damage we have done our oceans has already gone too far. «Out of sight, out of mind» people, at least in Turkey, just don't care and it saddens me. Our region of the Mediterranean comes right out on top according to a recent WWF report on plastics in the seas. I keep plugging away.

The marine litter we encounter most are: Dominantly single use items such as water bottles, soft drink bottles, plastic bags, straws and just about every conceivable plastic item you can imagine. This is in addition to cigarette butts. There is just so much macro plastic littering our beaches, I haven't even attempted micro plastics or even cigarette butts... there is just so much.

I started this work coincidentally at the height of the refugee crisis. Refugees were crossing from our coast line to the Greek island of Lesbos. In one of the first big beach clean-ups we organized we found items left by refugees that had presumably drowned including inflatable boats, refugee ID cards and pathetic cheap plastic children's life jackets. These were sad and shocking sights.

I often say going to a beach in my area is like sitting in an ash tray! There are so many cigarette butts. The other thing I say is «When I was a child growing up in Australia I used to collect sea shells, now I collect plastics» Sad hey!

In addition to giving education sessions at schools, we run workshops for children where we create art from the plastics, we have collected along our otherwise magnificent coast line.



# ADRIATIC SEA

## TESTIMONIAL

### AMANDINE BORGEO, SEVERAL BEACH CLEAN UPS CROATIA.

FROM MAY TO JUNE 2018.

*3 friends and I thought up field project ideas whilst organizing a clean-up for Surfrider. We set ourselves the challenge of a fundraising bike ride through the Croatian islands - we thought we could organize beach clean-ups on-site since we were going past the Adriatic Sea. To sum up, we four all want to protect the marine environment and the environment in general so that's why we wanted to plan beach clean-ups whilst visiting Croatia. Instead of having a negative «tourist impact» on our environment, we wanted to do the opposite.*

*From memory, we found lots of cigarette butts, cotton buds and microplastics. The beaches were relatively clean most of the time (no flying plastic bags, not many bottles) but there were definitely small items like those I've just mentioned. However, I remember that we found a huge amount of plastic/glass bottles inland, on the roads and paths to the beach. Litter collection required quite a bit of motivation on our part after a day cycling but we did it because we're a good team. Sometimes people on the beach would help us whilst others thought we were walking dustbins and came to put their rubbish in our bags so they didn't have to walk 100m to the bins on the beach. The more we looked for litter on the floor, the more obsessed we got with it as that's all we could see, even when we weren't doing clean-ups!*

*It was a good thing to do with a team because you walked on the beach, you chatted and picked up litter at the same time. What was a bit disappointing was that so few people joined us despite the Ocean Initiatives banner that we displayed and having posted the clean-ups on the website. The banner message may not have been clear enough from a distance and maybe holidaymakers couldn't understand it if they didn't speak French.»*



**03**

BIOMEDIAS

### SEWAGE FILTER MEDIA AND POLLUTION OF THE AQUATIC ENVIRONMENT

Since 2008, Surfrider has noted a growing presence of plastic wheels, called sewage filter medias, biomedias or biocarriers, on beaches and on the banks of waterways firstly in France and then in Europe. These biomedias (or bacteriological biofilm carriers) are used as a medium for bacteria during the biological wastewater treatment phase in collective and industrial water treatment plants.

The proliferation of these plastic objects in the sea and on the coasts, is adding to the pollution caused by marine litter. In order to fight against this specific source of plastic pollution, Surfrider carried out investigations aimed at improving understanding of the process, identifying the manufacturers and the users and tracing up the source of the waste.

Over the course of the 2018 Ocean Initiatives campaign, 1,508 biomedias were found during 55 clean-up operations along beaches, lakes and rivers (all areas and shapes combined). Biomedias were found in 25.6% of operations. More than 87% of the biomedias picked up by our organizers were found on beaches in the Bay of Biscay. 9.5% were found along the coastline of the Western Mediterranean sea.

### NUMBER OF BIOMEDIA PICKED UP EACH 1000 METERS PER SEA AREA

SEA AREA	NUMBER OF BIOMEDIA PICKED UP EACH 1,000M PER SEA AREA
Bay of Biscay	13
Western Mediterranean	3,6

### TYPES OF BIOMEDIAS / SEA AREAS



23 different biomedias models were found on the Bay of Biscay coastline during the 2018 Ocean Initiatives project. Unsurprisingly, models 8 and 9 were the most common on this coastline. We suspect that two accidents which occurred in 2009 and 2010 in an industrial treatment plant (paper mills) in Northern Spain were why these two biomedias models had polluted the Bay of Biscay beaches. To our knowledge, it's the most significant pollution we've found in terms of time and quantity on the entire Atlantic coastline.

Models 6, 12 and 13 were mostly collected on the shores of the Mediterranean, and in smaller numbers, on the beaches of the Bay of Biscay.



SEA AREAS / MODEL	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
Adriatic sea	0	0	0	0	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0
Bay of Biscay	75	38	155	112	68	6	17	153	436	136	5	5	4	38	23	1	1	0	11	0	1	5	21	2	1
Indian Ocean	0	0	0	0	6	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0
Celtic seas	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0
Greater North sea	0	0	0	0	0	2	0	15	6	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Western Mediterranean	2	0	5	1	0	68	4	0	0	11	0	30	20	0	1	0	0	0	0	1	0	0	0	0	1
<b>TOTAL</b>	<b>77</b>	<b>38</b>	<b>160</b>	<b>114</b>	<b>78</b>	<b>76</b>	<b>21</b>	<b>168</b>	<b>442</b>	<b>147</b>	<b>5</b>	<b>37</b>	<b>25</b>	<b>43</b>	<b>25</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>21</b>	<b>7</b>	<b>2</b>

Mid-March 2018, a municipal water treatment plant in the Salerno area near Naples (Italy) was affected by a series of technical issues leading to the release of thousands of biomedias (Biochip, model 13 above) in a river running into the Tyrrhenian Sea (Mediterranean). The biomedias spread widely on the Ligurian coast and as far as the French coastline. Surfrider got involved very early on and brought participants into the 2018 Ocean Initiatives to monitor this new type of pollution so they could distinguish the extent of the pollution and map it. Thanks to you, we've gathered over 40 testimonials that we have sent to French and Italian science institutes tracking the pollution. This biomedias model was also found in a dead turtle's stomach by the Le Grau du Roi sea turtle treatment centre. Surfrider continues to closely monitor this form of pollution along with all other forms past and future.



## REPORT ON THE POLLUTION OF BEACHES AND WATERCOURSES BY PLASTIC

Many recent reports indicate the presence of and pollution by biomedias across Europe. These reports were made through Ocean Initiatives as well as by citizens concerned about the health of their beaches and waterways. Thanks to all these reports, we have been able to carry out a full investigation enabling us to compile valuable information on biomedias and to trace up the sources of a part of this pollution. In order to prevent it, we have shared the results of our research with professionals from the water sector.

This study allowed us to constitute an overview of the global operation of water treatment systems and specific processes relating to biocarriers. Additionally, we studied the use of biomedias and the main forms of pollution observed in order to understand their origins. Using these observed cases of malfunctions within the system and thanks to the collaboration of industry professionals, we have been able to produce guidelines aimed at reducing the emission of biocarriers into the environment.

By publishing this report, we hope not only to share our observations with politicians and environment professionals to help improve practices and mitigate pollution risks, but also to share it with the Ocean Initiatives observers who enabled us to gather this precious information to understand this pollution.

But this battle isn't over and pollution continues. So if you've seen biomedias pollution, don't forget to let us know through the Ocean Initiatives provisional report page or direct using this form.

Every case we resolve brings us one step closer to ending pollution!

More informations : <https://surfrider.eu/en/our-missions/scientific-legal-expertise/biomedias-70164.html>



**04**

FOCUS  
ON PLASTIC  
BOTTLES

## PLASTIC BOTTLES, IN THE TOP 10

Plastic bottles and their caps are part of the top ten items most often found on beaches and in rivers. They are single-use plastic items which, used every day and mainly outdoors, are often found in the environment, where they become real predators for aquatic animals and plants. However, alternatives exist and would help reduce this pollution at its source.

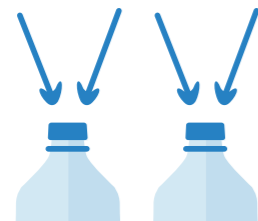
As part of the program to fight against single-use plastic marine litter, Surfrider has developed the 'Reset your habits: reusable bottles can make the difference' campaign. The global objective aims at reducing the use of plastic bottles, polluting the coastline and marine environment. Reset Your Habits is calling for a wide-sweeping change in behaviour within society, urging us to modify our consumption and production patterns to limit their impact on the environment. This involves replacing single-use plastic bottles with reusable ones, among other sustainable alternatives.

To improve our understanding of consumer habits as well as the pollution of aquatic environments by this everyday object, we asked organizers of Ocean Initiatives to count the number of plastic bottles found on beaches, in lakes, rivers and on the seabed. This helped us highlight the reality of the pollution as well as drawing attention of manufacturers and public authorities to the faults in the system (from production to end of life).



**3.83%**

Plastic drinks bottles (all sizes) represent 3.83% of litter collected during the 2018 Ocean initiatives campaign.



**4.07%**

Plastic bottle caps account for 4.07% of the litter found during the 2018 Ocean Initiatives operations.

**44,954**

bottles of all sizes were collected during 398 clean-ups across the world.



**21,977**

**BOTTLES**  
Bottles of 50 cl or less.



**22,977**

**BOTTLES**  
Bottles of more of 50 cl.

Around 128,167 bottles are estimated to have been collected by organizers\*



**16%**

of bottles were picked up in rivers and lakes banks.



**84%**

of bottles were picked up on beaches.



**74.95%**

bottles of 50 cl or less were collected in 74.95% of Ocean Initiatives.

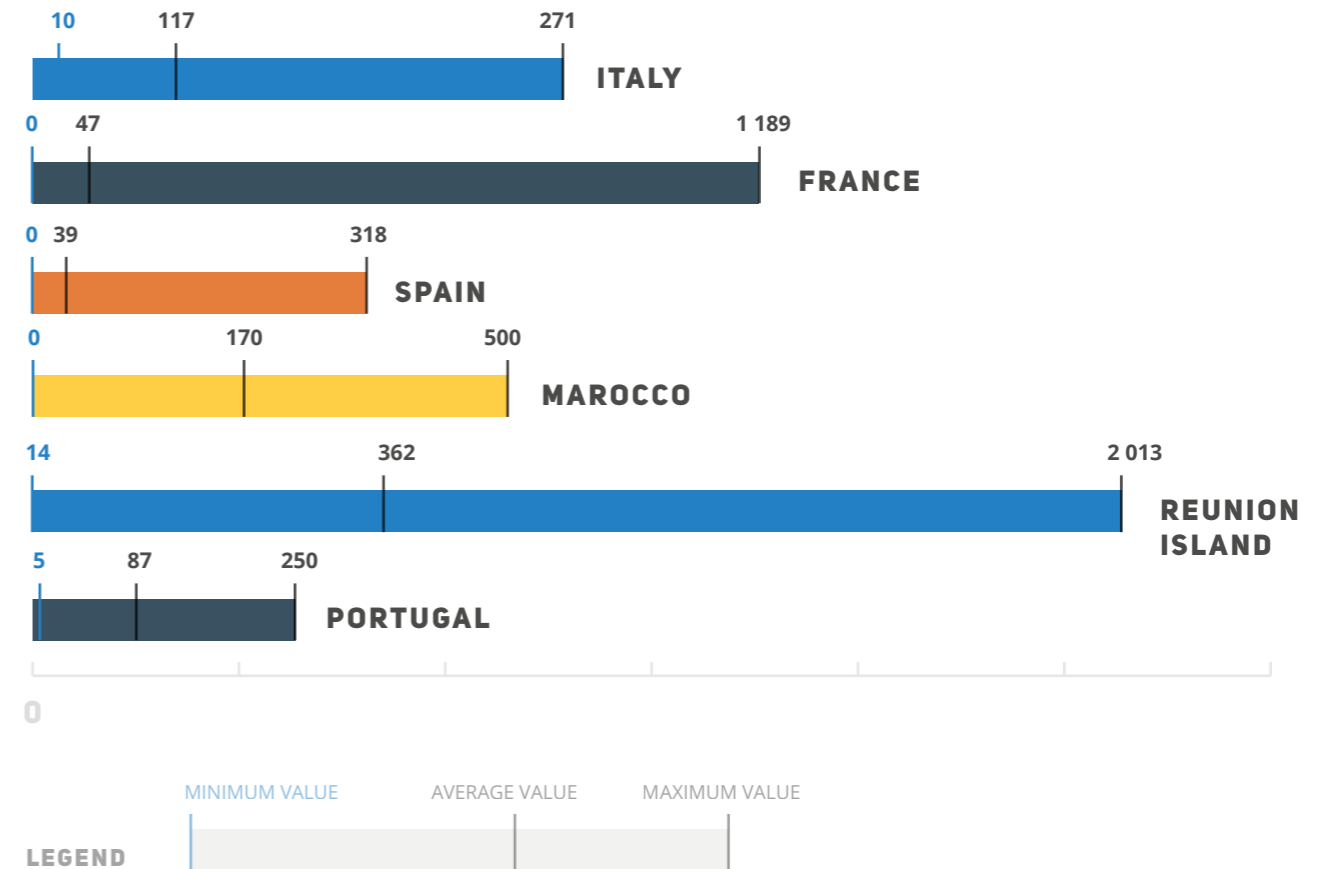


**73.26%**

bottles of more of 50 cl were collected in 73.26% of Ocean Initiatives.

## AVERAGE NUMBER OF BOTTLES COLLECTED PER COUNTRY (EUROPE AND OVERSEAS REGIONS)

This diagram indicates the average number of plastic drinks bottles collected per country from lakes, beaches and rivers. For each country, the minimum and maximum number of bottles collected is represented.





**25.23%**

Plastic drinks bottles (all sizes) represent 25.23% of litter collected in the North Atlantic area.



**7,519**

In Reunion island 7,519 bottles were collected over 5,400 meters during 12 clean-ups).



**2,234**

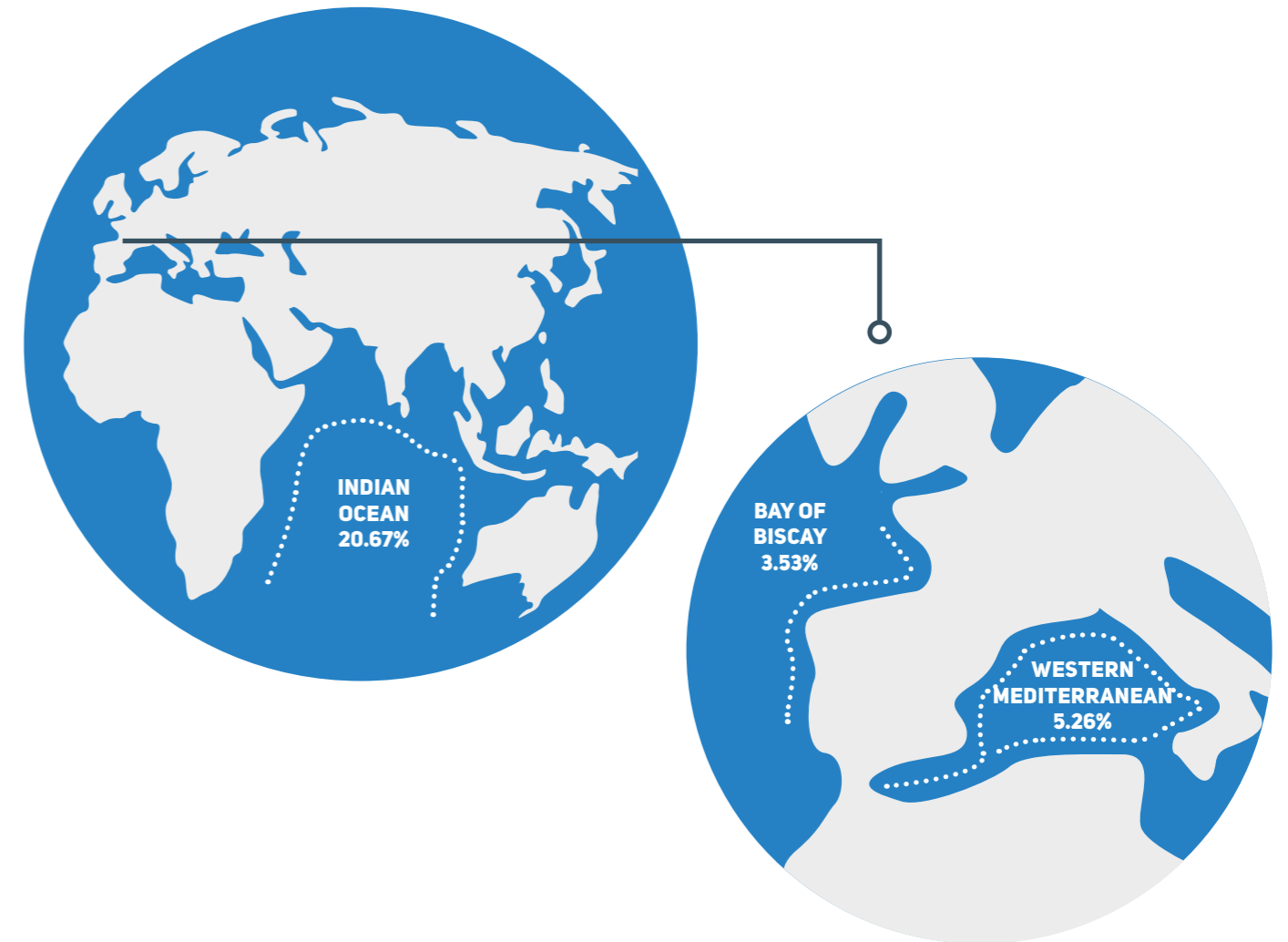
Bottles were found in a single clean-up in Kenya (1,586 of 50 cl or less and 648 of more than 50 cl).



**5,023**

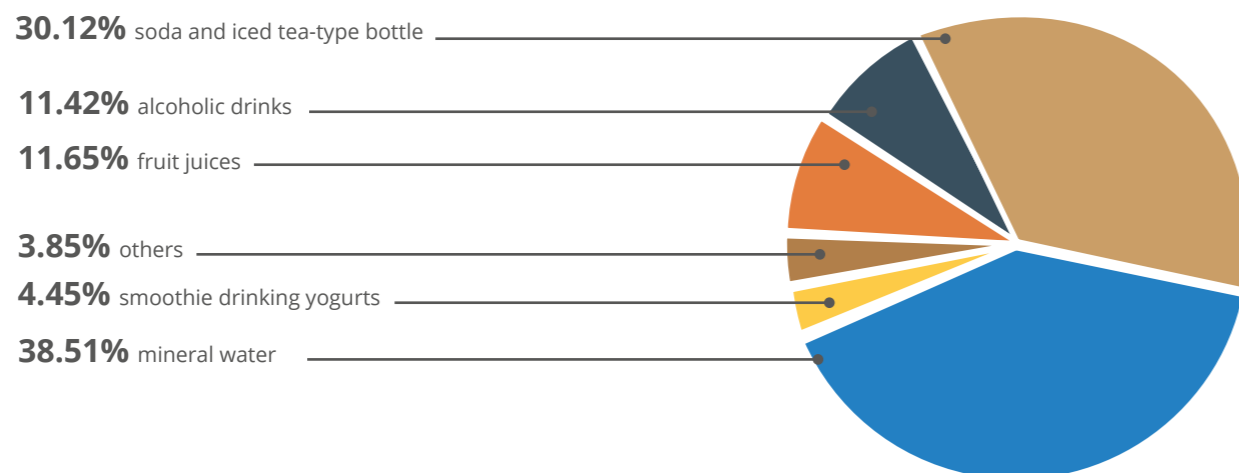
Plastic bottles (1,265 of 50 cl or less and 3,758 more than 50 cl) were picked up and quantified during 6 beach clean ups in Algeria over 1,900 meters.

**% OF PLASTIC DRINK BOTTLES COMPARED TO THE TOTAL OF LITTER PER SEA AREA**



**TYPES OF PLASTIC BOTTLES**

318 organizers identified the types of drinks bottles (from all countries).



**BEST PRACTICES GUIDE FOR PLASTIC BOTTLE-FREE CITIES**

Citizens, industrialists and politicians, we all have a role to play in eradicating these plastic bottles from our environment, by refusing to use this single-use packaging, by rethinking its design, its method of production, consumption and its end of life.

Cities home to high populations are among the main sources of litter. Cities exemplify «local action» as regards ecological transition and, as such, are key players in fighting pollution.

That's why Surfrider Foundation Europe has put together a [good practices guide for public authorities](#) with 20 initiatives to reduce this form of pollution at the source by working throughout its life cycle to limit the production and consumption of plastic bottles, promote reusable and sustainable alternatives and improve plastic bottles' eco design and end-of-life. This guide also includes solutions for improved awareness and education among citizens so they can play an active role in this transition.

Cities, communities and states can use it to get inspiration, adapt and implement these good practices to make their commitment to the war against plastic pollution a reality. Paris and Barcelona are already committed to the cause.

## ■ A EUROPEAN PLASTIC BOTTLE CLEAN-UP OBJECTIVE

Following its plastic strategy, an action plan to review how we use plastic and react to the pollution it generates, the European Union adopted a [Directive to reduce the negative effects of certain plastic items on the planet](#).

This European legislation intends to ban, reduce consumption, manufacture eco-friendly designs, improve labelling and the collection of certain single-use plastic products including plastic bottles.

It requires Member States to achieve a rate of 90% plastic bottle collection by 2029 and the adoption of certain eco-design measures such as a 25% recycled plastic content in bottles launched on the market for 2025 and attached caps.

Through its Europe-wide monitoring, petitioning and coalition work, Surfrider has been part of recognising plastic bottles as the most common form of litter found on beaches and as a disposable plastic product that requires measures to be taken to stop them flooding the environment. The NGO will now monitor the effective and ambitious implementation of these European measures nationwide.



**05**

FOCUS  
ON MERMAID  
TEARS

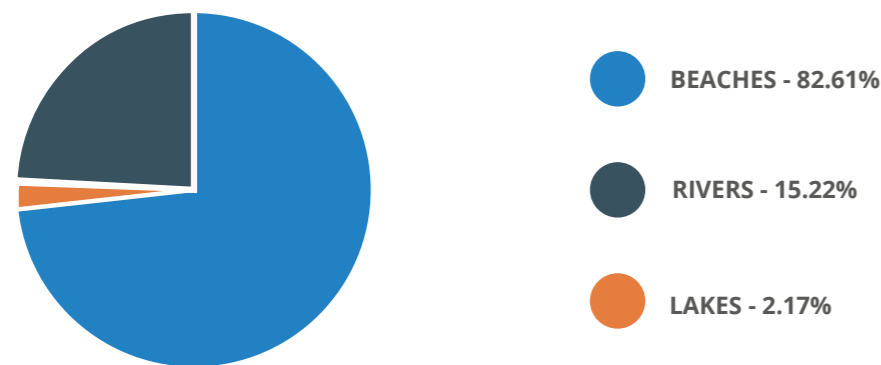
Since 2018's ocean initiatives, we've been asking organizers and participants to keep their eyes peeled during clean-ups and help us monitor pollution from pre-production plastic pellets in sediment.

Pre-production plastic pellets, or mermaid tears, are small plastic beads, cylinders or pellets the size of a lentil. They are made and used in industry to make all our plastic products. Millions are lost every year and end up in the waterways and marine environment where they can easily mix into the sediment.

The results of observations will be sent to specialist associations who have been reporting to public bodies on a regular basis for years. We want to warn decision-makers about this little-known form of microplastic pollution as there are currently no regulations for businesses producing, processing and transporting pre-production plastic pellets so they can restrict their emission in the marine environment.

This year, 21% of Ocean Initiatives organizers found mermaid tears during their clean-ups.

### WHERE PRE-PRODUCTION PLASTIC PELLETS WERE FOUND



Pre-production plastic pellets were retrieved in 24% of clean-ups on the Bay of Biscay coastline and 42% on the Irish Sea coastline.

**Please note:** one organizer found an astronomical amount of these pre-production plastic pellets around a saltwater lake in Vieux Boucau (France).

**26.8%**

of organizers found a significant amount of pre-production plastic pellets at the top of beaches: 1,000 pellets or more per square meters (sign of a long-standing accumulation related to strong tides).

**43.9%**

of organizers observed large amounts of pre-production plastic pellets in sea debris: 100 pellets per linear meters (sign of regular influx).

**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.**

### COLOURS OF THE MERMAID TEARS FOUND

(several colours can have been found in a single beach clean up)



### OTHER (details below)





# OCEAN INITIATIVES

Ocean Initiatives is a program aimed at reducing marine litter at the source. Through local operations around rivers, lakes, oceans and sea beds, Surfrider's main objective is to support a societal change. The data collected during the Ocean Initiatives enable situational analyses, leading to an adaptation of the European regulatory framework.

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[www.initiativesoceanes.org](http://www.initiativesoceanes.org)