CleanAtlantic sea litter geographical web

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Abstract

A Sea litter data viewer has been developed in the framework of the CleanAtlantic European project. This web application allows access to the litter data of different compartments of the ocean as beach litter, floating litter, and seabed litter. The users can query the statistical distributions of litter concentrations, time series, and the composition of the most frequent types of litter of each geographical item. In order to facilitate access to this type of information to all types of users independently of their data analysis skills, the viewer has developed following criteria of simplicity and usability.

Beach Litter

The beach litter assessment was done over four years, from 2016 to 2019, with data sourced from the OSPAR database. The beaches considered have at least 8 surveys out of the 16 available and they are identified with a circle. The area of the circle is proportional to the density of the litter on that beach. The colour scale is also used to express this. Click on the circles to see the time evolution of the litter and its composition in every beach. Density is expressed as the number of items per 100 m, it was calculated as the median of the data available in the sampling period considered.

Beach: Oyambre

Median Density = 270 items / 100 m

Code	Description	%
98	Cotton bud sticks	20
32	String and cord (diameter less than 1 cm)	16
64	Cigarette butts	13
15	Caps/lids	12
46	Plastic/polystyrene pieces 2.5 cm > < 50 cm	7
00	Other	32

Floating Litter

The results of the floating litter assessment are shown per ICES cell. Data are rendered using a colour scale to represent average densities (number of items per square km), the darker the colour the higher the density. Click on the cells to see: time series, histograms of the litter density (i.e. number of surveys in which a certain density of litter was recorded), and pie charts with main types of litter found. Data were recorded in different oceanographic surveys performed by IEO (Iberian peninsula) and IFREMER (France).

Floating Litter in ICES cell: 16E5

Number of Samplings = 402 Density = 1.30 Items·km⁻²

Code	Description	%
1	Plastic	47
2	Undetermined	20
3	Undetermined Small	19
4	Wood	13
5	Oil	1
6	Fishing	1

Seabed Litter

The results of the seabed litter assessment are shown per ICES cell. The original data, which were obtained from the ICES database, were processed to obtain probabilities of presence of litter in each cell. The results were rendered using a colour scale, the darker the colour the higher the probability (P) of finding seabed litter on that area. P values range from 0 (no presence of litter ever recorded on that area) to 1 (litter recorded in every survey carried out on that cell). Click on the cells to see: time series (changes of probability over time) and histograms (i.e. the number of surveys in which a certain probability of presence of litter was calculated).

Seabed Litter in ICES cell: 26E0

Number of samplings = 870 Litter probability = 0.93