



Tackling marine litter in the Atlantic Area



3rd NEWSLETTER

Sept - Feb 2019



Secretaria Regional
do Ambiente e Recursos Naturais
Direção Regional do Ordenamento
do Território e Ambiente



Editorial

Halfway through the CleanAtlantic project [Read](#)

Ongoing activities

Mapping marine litter knowledge [Read](#)

Review of economic sectors impacted by marine litter [Read](#)

Monitoring marine litter [Read](#)

Studies on ingested plastic in fishes & entanglement indicators [Read](#)

Modelling marine litter in the Atlantic Area [Read](#)

Citizen's science to study marine litter hotspots [Read](#)

Fishing for litter pilot actions [Read](#)

Awareness-raising activities [Read](#)

Project Events

Workshop: Marine litter: From a global environmental challenge to a job creation driver [Read](#)

3rd Coordination meeting [Read](#)

Workshop with Stakeholders in France [Read](#)

External Events

European Week of Regions and Cities [Read](#)

3er Seminario "Protección del medio marino. Problemática de las basuras marinas" [Read](#)

Annual workshop of the BIOAGUA Network [Read](#)

Atlantic Action Plan consultation workshop. Breakout session 4: Marine litter & plastics [Read](#)

Congreso Nacional de Medioambiente – CONAMA 2018 [Read](#)

Business2Sea – Sea Forum 2018 [Read](#)

MICRO 2018 [Read](#)

LitterDrone International Workshop [Read](#)



Halfway through the CleanAtlantic project

During the last few years, different initiatives have addressed the threats that marine litter poses to the environment and to public health. CleanAtlantic is tackling this challenge on the Atlantic Area with an ambitious and holistic approach covering the state of the art, monitoring, modelling, and mapping tools, collaborative actions for reduction and removal of marine litter, and focusing on training and awareness-raising initiatives.

After 15 months since the project kicked off (September 2017) CleanAtlantic has focused its efforts on the study of the state of the art and the identification, collection and analysis of knowledge on: 1) marine litter initiatives, 2) stakeholders, 3) R&D projects, 4) mapping and modelling tools and technologies, 5) fishing for litter actions, 6) management and prevention of waste coming from aquaculture and fisheries, 7) prevention and retrieval of ALDFG, and 8) training and awareness-raising actions carried out up to date.

Partners have been testing the use of drones and other survey technologies for the identification of floating marine litter. Experimental studies were also carried out to improve our knowledge on the impacts and fate of cigarette butts in the marine environment. A transport model to forecast the formation of marine litter hotspots is under development.

CleanAtlantic participated in marine litter forums, conferences and workshops and has organised 3 dedicated workshops to showcase future project outputs to target users.

In this second half of the project, efforts will be directed towards the delivery of project tangible results such as useful tools, and pilot actions tackling marine litter, and continue reinforcing the liaison with key stakeholders and ongoing initiatives.



2 | Ongoing activities

Mapping marine litter knowledge

CleanAtlantic, in the framework of its capitalisation strategy, has recently launched the compilation of past and ongoing research projects and public/private organisations addressing marine litter at national, EU and international level. Partners are currently identifying the universe of projects and organisations that will be analysed, and in a second stage, they will extract their resources and upload them to an online database that was specially designed for that purpose. The information will be used to build a user-friendly repository of marine litter knowledge that will be publicly available.

In parallel, and led by [CEDRE](#), the project has been running a survey to identify stakeholders and associated past and ongoing initiatives tackling marine litter in the Atlantic area. The survey obtained a high rate of response in France and relatively lower in UK, Ireland and Spain. Data are being currently processed. The survey will be also launched in Portugal very shortly.

Review of economic sectors impacted by marine litter

Our colleagues from [CEFAS](#) have completed a literature review of the economic impacts of marine litter in key sectors (tourism, fisheries, and aquaculture). Basing on this and in collaboration with [USC](#), [MI](#), [DHPLG](#) and [ARDITI](#), several case studies will be performed launching onsite or online surveys that will start in May in UK, Ireland, France, Spain and Portugal, and will develop cost-benefit analysis to estimate strengths and weaknesses of alternative approaches. They will also carry out a study of the potential impact of incentives for increasing the collection and valorisation of marine litter and will propose guidelines and policy recommendations.

Monitoring marine litter

[IEO](#), [CEFAS](#) and [ARDITI](#) are carrying out surveys to test new tools for the monitoring of floating, seabed and beach litter accumulations by using drones, manta trawl sampling, ROVs and satellite data. To harmonise and facilitate the data collection and processing, IFREMER is working on the development of bespoke tools and interfaces compatible with current marine litter data reporting systems.

Studies on ingested plastic in fishes and entanglement indicator

[IEO](#) and [CEFAS](#) are carrying out studies on micro and meso plastics in fish species that are expected to be completed at the end of 2019. IEO is working on longnose lancetfish. CEFAS is currently testing in laboratory methods for digestion of the stomach contents of mackerel, the digestive track of dab, and the whole organism of mussels. Based on the outcomes of those studies, CleanAtlantic will propose indicators for marine litter impact on biota.

Regarding entanglement of marine organisms, [IFREMER](#) is focusing its activity on the selection of suitable species among various taxa and defining a monitoring strategy. They are considering the potential of invertebrates as an entanglement indicator in the seabed and are developing a protocol to gather observations collected by ROV or diving.

Modelling marine litter in the Atlantic Area

The [IST](#), in collaboration with [USC](#) is working on the development of an open source transport model, designed primarily for marine litter modelling that can use hydrodynamic results from ocean, regional or coastal models. The model is in active development and aims to provide an easy-to-use Lagrangian Tracer model, with a suite aimed specifically at litter modelling in offshore and coastal environments, by incorporating relevant processes such as degradation, buoyancy, and beaching models. The model will be used to predict the hotspots in the Atlantic Area. Preliminary results have been already obtained for Tagus estuary in Portugal.

Citizen's science to study marine litter hotspots

Complementary to the activity above, CleanAtlantic is carrying out the development of models to predict marine litter hotspots in coastal areas. To validate these models, ground truth and field observations are required and in this case, our colleagues from [INTECMAR](#) are using drifter buoys and tagged "mussel pegs". Mussel pegs are plastic items that are inserted into rope droppers used for mussel farming. They are frequently used by the aquaculture sector in the Galician waters and models help to understand how these objects end up accumulated in specific coastal areas. INTECMAR have designed a survey strategy to monitor coastal areas and the presence of mussel pegs that will be performed in collaboration with the [Illa de Arousa High School](#). Students are currently monitoring marine litter accumulations in a series of coastal segments of 600m-long along the Illa de Arousa coastal area, and recording the presence of entire or broken mussel pegs. Students record their findings in a template and upload their pictures to the CleanAtlantic account on Instagram.

Have a look at the progress on this activity in the CleanAtlantic Instagram account [here](#).

Fishing for litter pilot actions

In the framework of the project activities that deal with tackling marine litter, [CETMAR](#) and [CEFAS](#) will organise a series of fishing for litter pilot actions. To do so, the Galician fishing sector will be approached by CETMAR to identify working areas and associated fleets and to prepare logistic (linked to other fishing for litter ongoing actions). Pilot actions are planned for the second quarter of 2019. CEFAS is reviewing current initiatives in UK to prevent and remove ALDFG. In collaboration with [FATHOMS FREE](#), they will assess environment implications, protocols, data management procedures and adequate equipment for ALDFG removal.

Additionally, CETMAR is carrying out a review of ongoing practices in terms of: waste management in ports and on board, fishing for litter, and reducing and recovering ghost gears. All the information gathered will feed an online database with a search engine to facilitate easy access of all interested actors to relevant marine litter resources. Besides, the best practises, guidelines etc. compiled will be used to inspire the design and implementation of the CleanAtlantic pilot actions mentioned above.

Awareness-raising activities

After carrying out some preparatory works (development of the raising awareness strategy, review and collection of information, analysis of the local context, etc.), the CleanAtlantic partners are currently planning actions and campaigns to raise awareness on marine litter in each of the project regions. The planned activities will target coastal communities, scholars, fishermen associations, and citizens in general and will be launched in the upcoming months.

3 | Project Events

Workshop: Marine litter: From a global environmental challenge to a job creation driver

Framed on the [5th Atlantic Stakeholders Platform Conference \(ASPC\)](#) on the 24th October in Vigo, CleanAtlantic organised the [workshop](#): “Marine litter: from a global environmental threat to a job creation driver” in collaboration with [OceanWise](#), [Litterdrone](#), [Ocean Cleanup](#), and [MLStyle](#) projects. The workshop was opened with a series of presentations from the projects above showing how their work addressed marine litter challenges. This session was followed by a debate that focused around: 1) Monitoring, modelling and hotspot mapping, 2) Marine litter removal, and 3) Circular economy.



Through the workshop discussion it was highlighted the strong need to join and make the best use of private and public actors and turn these forces into an efficient multi stakeholder involvement that tackles the environmental problems turning them into opportunities of blue growth and job creation.

3rd CleanAtlantic Coordination meeting

Hosted by CEDRE, on December 3rd and 4th, project partners met in Brest (France) for the III Coordination Meeting. These meetings are intended to review the project progress and plan the next actions for the 6-month period ahead. Additionally, three discussion groups were coupled to the meeting focused on the following topics: 1) marine litter status in the Atlantic Area (data, initiatives, and stakeholders), 2) monitoring of marine litter, data management, and potential synergies with the INSPIRE Directive, and 3) mapping and modelling of marine litter.



Workshop with Stakeholders in France

Coupled to the III Coordination meeting in Brest, on the 5th December, our partner CEDRE organised a [workshop](#) with stakeholders in France to showcase technical aspects addressed in CleanAtlantic and learn from the local and regional initiatives ongoing in the area. It focussed on three main topics:

- 1) Best practices on waste management in harbours and preventing measures for reducing marine litter
- 2) Best practices on litter collection and potential support tools
- 3) Best practices on valorisation of litter items.



4 | External Events

During the last four months CleanAtlantic attended numerous events and was presented in a number of international and national forums, workshop, conferences and symposiums that organised special sessions dedicated to marine litter. Below it is the list of events where CleanAtlantic objectives and activities were presented:

European Week of Regions and Cities

CleanAtlantic was invited by the Interreg Atlantic Area Programme Joint Secretariat to attend the [EWRC](#) in Brussels, on the 8th-11th October as part of the exhibition “Made in Interreg: A Journey into Transnational Cooperation”. Aiming at raising awareness, the CleanAtlantic stand displayed two objects:

- A marine litter transparent box that contained a selection of marine litter items found in the Atlantic Area seas and beaches.
- A plastic box filled with beach sand in which the top-ten single-use plastic items were buried. Participants were invited to look for plastic items within the sand and to discuss about their degradability, impact in the marine environment, and how to reduce them at source.



3rd Seminario “Protección del medio marino. Problemática de las basuras marinas”

Aiming at diagnosing the knowledge and experience gained in marine litter and fishing for litter projects, the [workshop](#) analysed the feasibility to create a long-term sustainable fishing for litter national scheme. It was organised by [MITECO](#) & [CEIDA](#) in Oleiros, A Coruña, Spain, on the 3rd – 4th October. Supported by INTECMAR and IEO, CETMAR presented an overview of CleanAtlantic project.

Annual workshop of the BIOAQUA Network

The BIOAQUA Network organised its annual workshop on the 30th October, in the University Campus in Vigo, and invited CleanAtlantic to present the project and participate in the marine litter discussions.

Atlantic Action Plan consultation workshop. Breakout session 4 Marine litter & plastics

CleanAtlantic was invited to the consultation workshop organised by the [Atlantic Action Plan](#). CleanAtlantic participated in the Breakout session 4: Marine litter and plastics, which was held in Liverpool on the 7th November. Participants discussed marine litter technical and scientific challenges that will inspire actions for the next Atlantic Action Plan.

Congreso Nacional de Medioambiente – CONAMA 2018

[CONAMA](#) is the Spanish National Congress on the Environment that is organised in Madrid every two years, the last edition happened in November 26-28th 2018. At this event, CleanAtlantic was presented in two sessions: one fully dedicated to marine litter and promoted by a dedicated working group under CONAMA ([link to workshop documentation](#)), and the other organised by the Spanish Ministry of Finance, who organised a training workshop on focusing on the Interreg Programme.

Business2Sea – Sea Forum 2018

CleanAtlantic participated in [Session 2: Marine litter and circular economy in the marine industry](#), which took place on the 15th November, in Porto (Portugal).



MICRO 2018

The International Conference “[MICRO2018 Fate and Impacts of microplastics: knowledge, actions and solutions](#)” took place in Lanzarote on the 19th-23rd November. Two CleanAtlantic communications were presented by our partners from the Spanish Oceanography Institute (IEO):

- Ingestion of plastic debris (macro and micro) by longnose lancetfish (*Alepisaurus ferox*) in the North Atlantic Ocean - J. Gago*, S. Portela, A.V. Filgueiras, M. Pauly Salinas and D. Macías.
- Dynamics of floating marine debris in the northern Iberian waters: a model approach - by Diego Pereiro Rodríguez, Carlos Souto Torres, Jesús Gago.

LitterDrone International Conference

[LitterDrone](#) was a project funded under the BLUE LABS programme that sought to develop innovative tools for the control and management of marine litter through drones. As this project reached to an end in January 2019, their partnership organised the final workshop on the 11th December in Madrid, in the Ministry for the Ecological Transition’s Assembly Hall. At this international event CleanAtlantic presented its main working streams, and more deeply all the activities ongoing around the use of drones as tools for marine litter monitoring.



cleanatlantic@cetmar.org



Disclaimer: This newsletter covers activities implemented with the financial assistance of the INTERREG Atlantic Area. It only reflects the author’s view, thus the Atlantic Area Programme authorities are not liable for any use that may be made of the information contained therein.