

CleanAtlantic

Tackling marine litter in the Atlantic Area

MAC & NWWAC Workshop on Marine Plastics and the Seafood Supply Chain

Brussels, 7th November 2019

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CleanAtlantic in a nutshell



Programme: INTERREG Atlantic Area (2014-2020)

Priority: Biodiversity, natural and cultural assets



General objective: CleanAtlantic aims to protect biodiversity and ecosystem services in the Atlantic Area by improving capabilities to monitor, prevent and remove (macro) marine litter. The project will also contribute to raise awareness and change attitudes among stakeholders and to improve marine litter managing systems.



Start date: 1st September 2017

End date: 31st August 2020



Total budget: 3.249.241,04 € (75% ERDF)



Partnership: 19 organisations from 5 countries (ES, UK, FR, PT, IE)

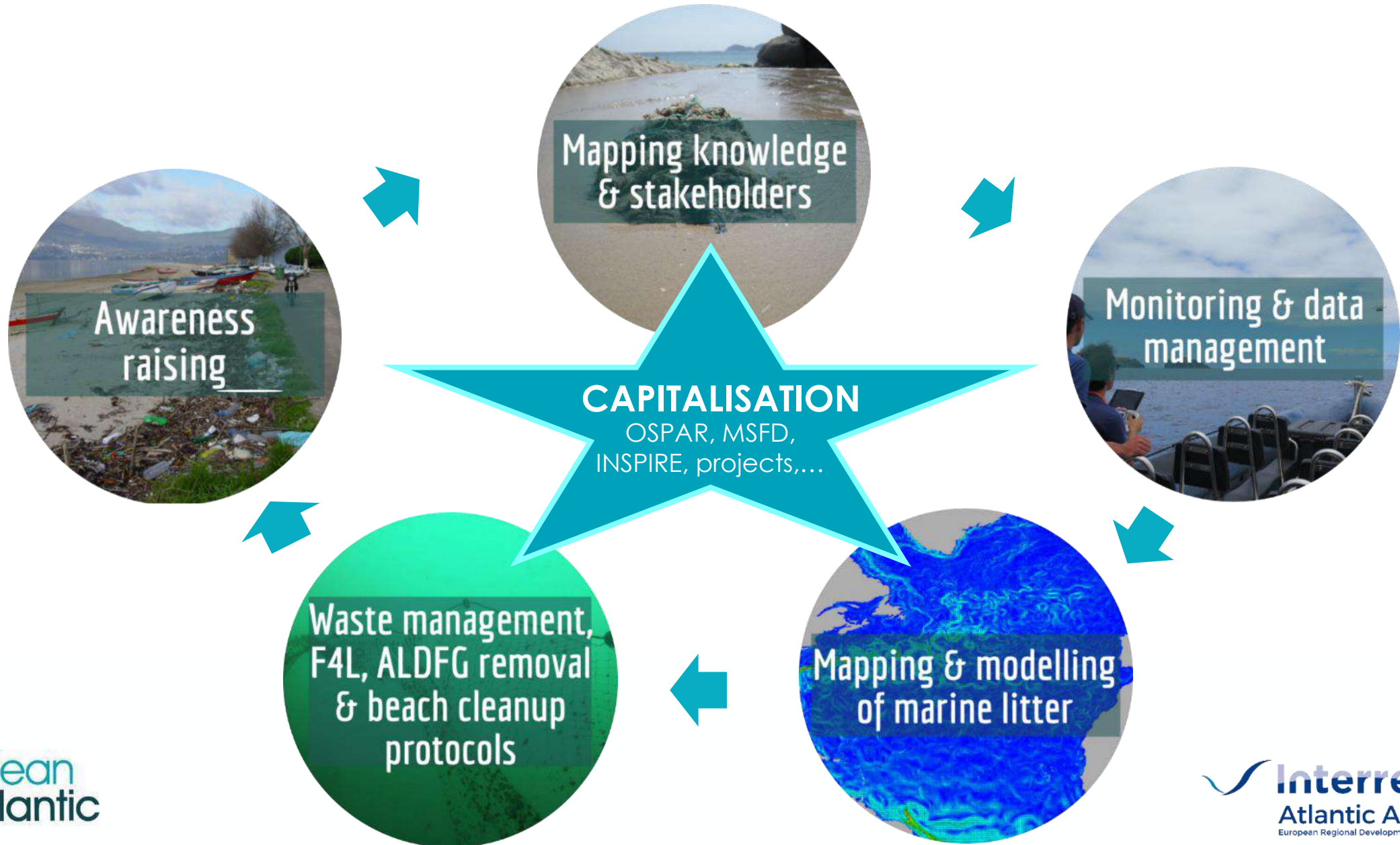
Partnership



Associated



Working streams



Mapping knowledge and stakeholders

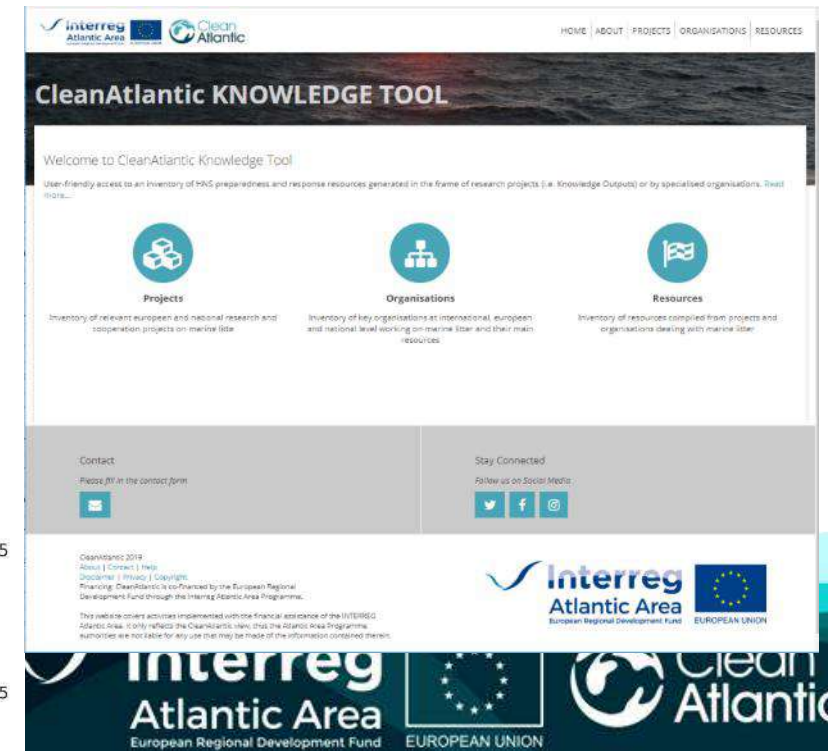
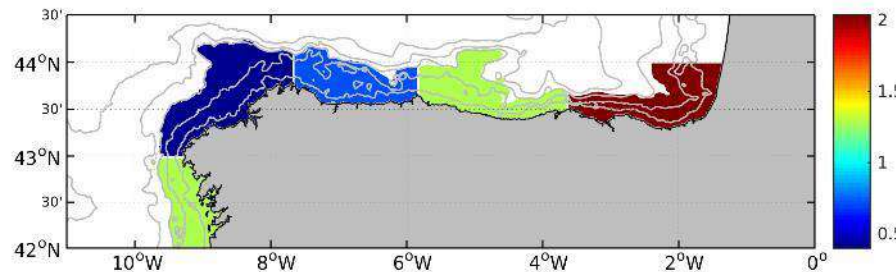
Actions:

- Compilation and assessment of all marine litter information available in the Atlantic Area;
- Identification of stakeholders, best practises, and relevant initiatives;
- Analysis of the economic impacts of marine litter on different sectors.



Results:

- Report on marine litter data and interactive map;
- Report and map of initiatives and stakeholders;
- Online database of projects & resources;
- Economic impact studies: 5 case studies.



Monitoring and Data Management

Actions:

- Reinforcement and support of harmonized monitoring of marine litter in the framework of the Marine Strategy Framework Directive (MSFD):
 - Designing databases and applications compatibles for managing data;
 - Searching for adequate indicators;
 - Assessing new technologies for monitoring;
 - Bringing insight into the environmental impacts of cigarette butts and cotton buds.



Results:

- DB interfaces and apps;
- Improvement of monitoring: MSFD indicators & monitoring strategy for ingestion and entanglement;
- Study of harm caused by cotton buds and cigarette filters;
- Study on marine litter as Non Indigenous Species vector.



Source: ARDIII

Mapping and Modelling

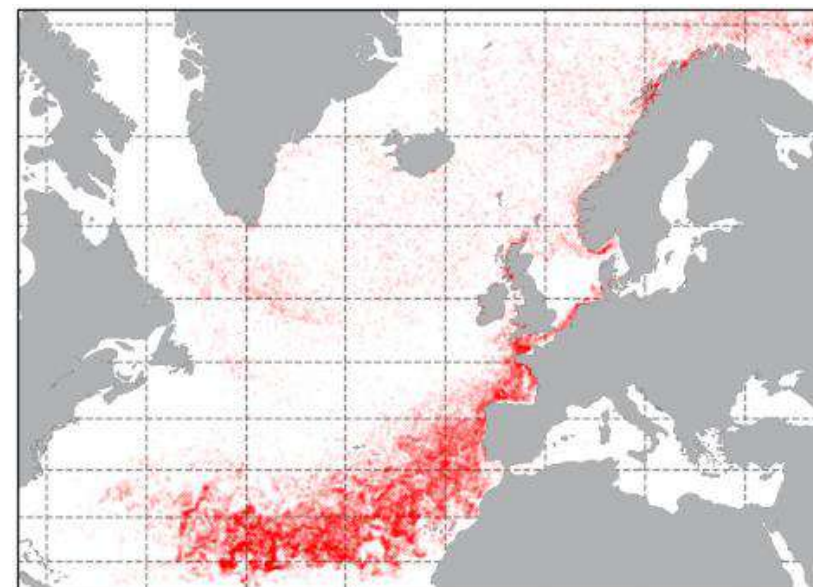
Actions:

- Review of the state-of-the-art of marine litter models;
- Development of software to include marine litter processes in hydrodynamic models;
- Predicting the location of hotspots.



Results:

- State-of-the art on marine litter models;
- Open source Lagrangian model;
- Maps of hotspots;
- Maps of influence of river, land and ocean based sources;
- Marine litter reduction scenarios.



Mapping and Modelling

Maps of influence of ocean-based sources:

- **Description:** The lagrangian transport model is being used to assess the contribution of ocean-based sources to the building up of hotspots.
- **Status:** In progress. Seeking information on the relevance of the contribution of the different sources. Testing different approaches at the Atlantic level (e.g. selecting fishing effort/grounds, maritime traffic intensity). Local case study: pegs lost from mussels rafts in Galicia (ES). It is estimated that > 3 million pegs/year are lost in Galician coastal waters.

Source: INTECMAR



$3340 \text{ rafts} \times 500 \text{ ropes} \times 12 \text{ m} \times 2.5 \text{ peg/m} \sim 50.000.000 \text{ pegs in rafts}$

$\text{losses} \sim 1000 \text{ pegs/raft in a year} \times 3340 \text{ rafts} \sim 3.340.000 \text{ lost pegs/year}$

$3.340.000 \times 0.025 \text{ kg/peg} \sim 83 \text{ Tm}$

Prevention and Removal



Actions:

- Compilation and assessment of information on best practices and protocols for:
 - Waste management onboard and in ports;
 - Fishing for litter activities;
 - Ghost gears: prevention, removal, and impact;
 - Routinely beach clean-up by municipalities.

Results:

- Best practices for:
 - Waste management;
 - Fishing for litter & 2 case studies;
 - ALDFG removal & 2 case studies;
- Guidelines for beach litter clean-up.



Online database
with search engine
+
Electronic Booklets



Prevention and Removal

BEST PRACTICES on fishing related activities:

- Being included in the **CleanAtlantic Knowledge Tool** (176 resources classified already).



Resources

Inventory of resources compiled from projects and organisations dealing with marine litter

Areas of knowledge:



Fishing for litter



Impacts, reduction & retrieval of ALDFG



Waste prevention & management from fishing, aquaculture and ports

Reports	50.56%	90
Protocols / guidelines	14.61%	26
Best practices	10.11%	18
Scientific publication	5.62%	10
Dissemination materials	5.62%	10
Multimedia	3.93%	7
Services / tools / models	3.37%	6
Book / review	2.25%	4
Policy brief	1.69%	3
Case studies	0.56%	1
Other	0.56%	1
Educational packs / training activity / learning module	0.56%	1
Equipment / technology	0.56%	1

Prevention and Removal

PILOT ACTIONS:

- **Fishing for litter:** pilot actions in Spain (Galicia):
 - Passive scheme: Ría de Arousa



NW Spain



Prevention and Removal

PILOT ACTIONS:

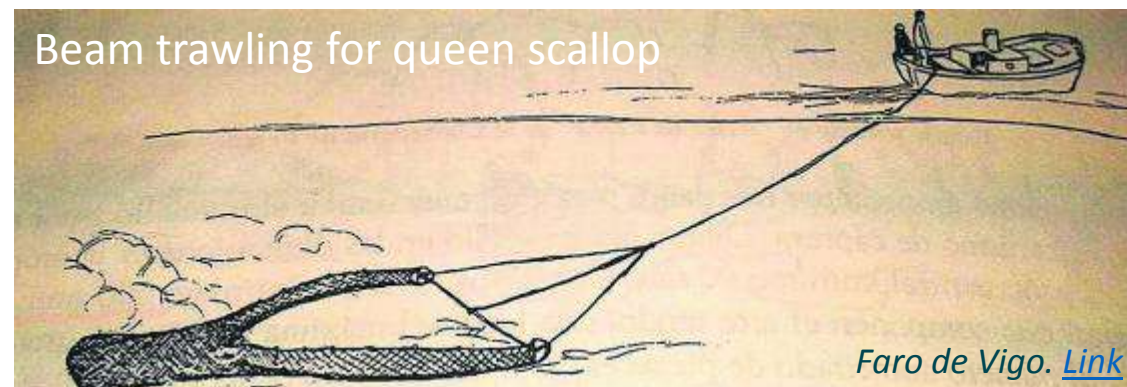
- **Fishing for litter:** pilot actions in Spain (Galicia):
 - Passive scheme:
 - Collaboration with the Arousa Island fishers guild since May 2019: small scale fisheries.
 - Collaboration with the Cambados fishers guild 4th -8th Nov 2019: the 1st week of the queen scallop season.

Shellfish gathering woman in the Arousa Island



Source: CETMAR

Beam trawling for queen scallop



Faro de Vigo. [Link](#)

Prevention and Removal

PILOT ACTIONS:

- **Fishing for litter:** pilot actions in Spain (Galicia):
 - Active scheme: trialing special net designed by TecnoPesca. Collaboration with the Galician Coastguards Service.



PILOT ACTIONS:

- **ALDFG:** 2 pilot actions in Spain and UK:
 - Galicia (ES):
 - Planning on collaborating with the National Park of the Galician Atlantic Islands to retrieve a hotspot of nets located in this protected area.
 - Acquisition and first tests with ROV for locating underwater hotspots.
 - Collaborating with the Galician Aquaculture Institute: Reporting localisation of hotspots found during their diving lessons.
 - UK: Collaborating with Fathoms Free & Odissey Innovation. Cefas funded dives in recreational fishing areas.



Source: CETMAR

BlueROV2
Blue Robotics

Awareness Raising

Actions:

- Compilation and assessment of awareness-raising initiatives;
- Assessing the priorities for awareness raising in participating regions: Local context, target public, etc.
- Production of awareness-raising materials;
- Organisation of awareness-raising activities/events.

Results:

- Awareness raising packages adapted to target local actors and contexts;
- Awareness raising actions in the 5 countries to different audiences: tourist sector, beach goers, policy makers, students, fishers, etc.



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SINGLE-USE PLASTICS IN BEACH LITTER

1st

Top ten in European beaches*

- 1.- Cigarette butts
- 2.- Caps and lids
- 3.- Food containers
- 4.- Cotton bud sticks
- 5.- Plastic bottles
- 6.- Wet wipes
- 7.- Plastic bags
- 8.- Cutlery
- 9.- Cups and caps lids
- 10.- Straws and stirrers

IMPORTANT POINTS!

- 6% of beach litter are cigarette butts
- Degradation time**: 1 to 5 years
- Main pathway: Littering

*How long? Who knows... Est. millions gathered from different sources. For illustrative purposes only. Real degradation times depend on the type of plastic and the environmental conditions of exposure.

* Adapted from: Anna Maria Addamo, Perrine Laroche, Georg Hanks, Top Marine Beach Litter Items in Europe. EUR 25249 EN, Publications Office of the European Union, Luxembourg, 2017.

Interreg Atlantic Area **Clean Atlantic** **#CleanAtlanticTogether**
www.cleanatlantic.eu @Clean_Atlantic

[Link](#) to single-used plastics factsheets in EN, FR, PT, ES, and Galician ➡

Awareness Raising

Example of actions:

- Portugal: collaborating with “A Pesca por un mar sen lixo”: exchange of knowledge between students and fishermen. Promoted by Direção-Geral de Recursos Naturais, Segurança e Serviços Marítimos (DGRM).



Source: DGRM

<http://www.cleanatlantic.eu/fishermans-day-cleanatlantic-awards-in-sesimbra/>



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European Regional Development Fund

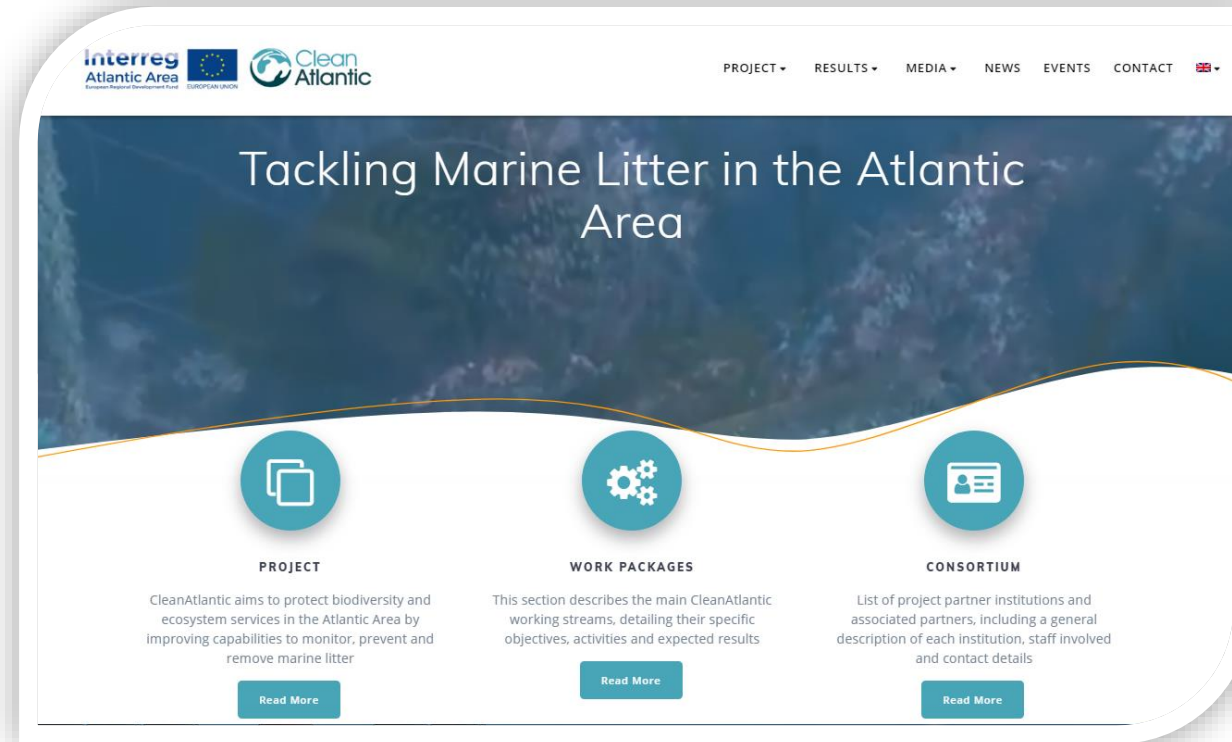


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Dissemination

Follow CleanAtlantic:

- www.cleanatlantic.eu
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-  @Cleanatlanticproject
-  @CleanAtlantic project
- **Poster, leaflets, newsletters;**
- **8 Worskshops:** next 4th Dec in Galway.
- **Final Conference: Vigo 2020.**



Lessons learnt from our experience

Raising awareness and share knowledge

- Raising awareness among all actors (fishers, skippers, ship owners, port operators, waste managers, recyclers, etc.) is essential. For that purpose, meetings, training, and awareness activities (preferably “at pier”) with all the stakeholders are crucial for them to have a sense of ownership of the project and be committed to participating.
- Exchange of knowledge between all actors: learn from success stories.
- Disseminating actions: the role of fishers as “Guardians of the sea” should be made visible.

Fishing for litter: passive scheme

- Adequate collections systems (big bags, bins/containers) should be provided as well as appropriate logistic arrangements at the port.
- Landing of marine litter should not carry any cost to fishers.

Fishing for litter: active scheme

- Hotspots location: fishers' knowledge is essential. Some potential supportive tools: Models to predict litter behaviour and fate, apps for fishers to facilitate reporting of lost gears and hotspots.
- Remove or not to remove: Risk assessment and decision making protocols needed (environmental and economic assessments should be considered).
- Improvement of adequate equipment and methodologies needed: to be adapted to different vessels, depths, oceanographic conditions, etc.



Thanks a lot for your attention!

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