

CleanAtlantic

Tackling marine litter in the Atlantic Area

Workshop

5th December 2018. CEDRE, Brest (France)



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Atlantic Area

European Regional Development Fund



EUROPEAN UNION



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Objective of the WP and partners involved

WP7

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Objective and partners involved

Objective:

To advance in the reduction of the presence of marine litter in the Atlantic Area

Collaboration with marine stakeholders

- Reducing the inputs from sea and port based sources
- Improving capabilities to remove marine litter from coastal and marine environment



Partners: **CETMAR**, CEDRE, IFREMER, CEFAS, DGRM, IST, MI

Actions:

- Management of wastes from the fishing and port sector
- Fishing for litter in the Atlantic Area
- Reducing abandoned lost and otherwise discarded fishing gears (ALDFG)
- Best practices for beach marine litter clean-up



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Progresses on WP7

BEST PRACTICES:

- **Description:** CleanAtlantic is compiling and classifying all the information [projects and organizations] regarding best practices for waste management in ports and on board, protocols for fishing for litter and for removing Abandoned, Lost or Discarded Fishing Gears.
 - **Status:** In progress
- 119 Identified Resources**
- An **online database** with a user-friendly search engine will be built to facilitate access. ←

CASE STUDIES:



- **Description:**
 - Fishing for litter: 2 pilot actions will be developed in Spain with the involvement of fleets and ports to test protocols, equipment, and data management procedures. One of the actions will include dedicated marine litter removal actions to tackle hotspots.
 - ALDFG: 2 pilot actions will be developed in Spain and UK with the involvement of fleets and ports to test protocols, equipment, and data management procedures.
- **Status:** To be developed in 2019







Online tool on waste management and marine litter removal

CATEGORIES

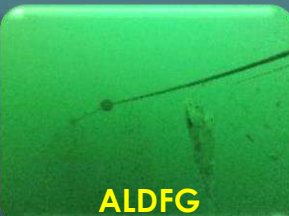





**WASTE MANAGEMENT
RESOURCES**



FISHING FOR LITTER



ALDFG



COAST CLEAN-UP

TYPE OF RESOURCES

Book/Review x

Database x

Dissemination materials x

Guidelines/Standards x

Multimedia x

Prototype x

Report x


Scientific publication x

Services/Tools x

Software/Modelling tool x

Training Activity/Learning Module x

Other x



**SEARCH FREE
TEXT**

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CETMAR
CENTRO TECNOLÓGICO DEL MAR

CETMAR experience on Fishing for litter and waste management initiatives

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Locating and Recovering marine litter

ALDFG retrieval and *Fishing for Litter*



CETMAR
CENTRO TECNOLÓGICO DEL MAR

Previous
Experiences



Nada pola Borda

Limnando os fondos mariños



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OMAR

Environmental Observatory on solid waste from fishing and port activities

Description: Study of waste generation in Galician ports, analysis of the situation, alternatives for sustainable management and education-raising awareness activities

Duration: 2007

Participants: 30 Galician ports



Specific aims:

- To characterize the environmental situation in ports concerning maritime waste
- To analyze management and recycling possibilities of the different waste types

Results/Outputs:

- "Diagnose" of waste generation and management in each port
- Pilot actions (Fishing nets and Expanded Polystyrene [EPS] boxes management schemes)

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Integral Management Model for recovering and recycling of Fishing nets, lights+batteries and EPS.

Description: Improving the quality of marine waters through the correct use-handling, management and recycling of Fishing nets, lights + batteries and EPS



Duration: 2009 – 2011

Participants: Ports of Galicia, Universities, Technological centers and private companies

Specific aims:

- An management and recycling model for all waste generated by the fishing industry
- To promote cooperation between all the stakeholders in this scenario

Results/Outputs: Waste managed during the period of the project

-Fishing Nets:	900 ton
-EPS-boxes:	174 ton
-Batteries:	33.5 ton



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Description: Fishing for Litter action developed in the Galician Rias (NW Spain) in which fishermen for different fleets brought ashore the litter collected in their nets during ordinary fishing operations (gillnets & trawling nets)



Duration: 2009 – 2010

Participants:

Involved Fleets → 152 vessels (artisanal boats + coastal trawlers) 600 fishermen. 11 ports

Specific aims:

- To reduce the amount of marine litter. Collect data about location, typology, quantities, sources and trends
- To evaluate the feasibility of implementing a sustainable scheme in Galician Ports

Results/Outputs:

- ≈ 34 ton marine litter collected

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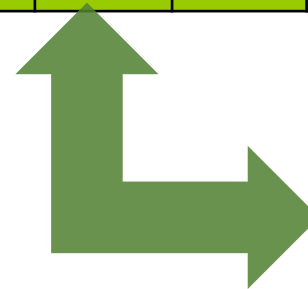
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Results/Outputs:

All ports	Weigh (Kg)	Litter type								
		Fishing gears (nets, ropes, wires, floats, etc.)			Plastic	Metal	Textile	Rubber	Wood-timber	Other
		Gillnets	Trawl nets	Traps-pots						
Total	≈ 34 ton	7.399	3620	4201	3720	4087	1814	1223	925	6890
Percentage %		20	12	14	11 %	12 %	5 %	4 %	3 %	20 %
		45%								



Bags and dumpsters



Description: Initiative to implement passive litter collection and specific campaigns directed to remove litter/retrieve fishing gears from coastal sites using fishing ships as operators (active).

Duration: 2012 – 2014

Participants: Involved fleets → 67 vessels, 235 fishermen, 4 ports (Atlantic and Mediterranean coast)

Specific aims:

- To remove litter (with fishermen involvement) and gain data
- To design and test a protocol to develop litter/gear removal with a specifically-designed gear to be performed on board of a fishing trawler.

Results/Outputs:

-Passive Litter collection

45.075 kg => 13.642 kg (30%) fishing gear + 31.433 kg (70%) of “other”

-Active removal of litter: 2.000 kg (75% fishing gear)

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Results/Outputs:

Passive Litter collection

ZONE	LITTER TYPE	WEIGH (Kg)	%
Atlantic	Fishing gears	11,625	30%
	Others	27,540	70%
	Subtotal	38,895	100%
Mediterranean	Fishing gears	2,017	32%
	Others	4,363	68%
	Subtotal	6,380	100%
TOTAL	Fishing gears	13,642	30%
	Others	31,433	70%
	Subtotal	45,075	100%

Zone	Campaign	Kg/day	Fishing gears	other
Atlantic	1 (4 trawls)	400	347	53
	2 (4 trawls)	485	440	45
	3 (4 trawls)	115	70	45
	4 (6 trawls)	1,000	800	200

Active removal of litter

Depth range: 110-184

Substrate: Sand - Mud



Litter removal with specifically-designed gear on board of a fishing trawler

Creeper



Trawl



Ongoing initiatives

ML-STYLE PROJECT

General aim: to design and implement an integrated waste management system of Marine Litter and Port and Fishing Waste (food packaging plastics, EPS boxes, end-of-life fishing gears, plastic boxes, etc) and evaluate the capacity/potential for valorisation of those materials to be used as raw material for new products for textile industry

Framework: Blue Growth initiative from Vigo port

Funding: INDITEX

Budget
400.000 euros

Duration: July 2018-July 2020

Partnership:

INDITEX, Port of Vigo, Port of Marín and Ria de Pontevedra, JJ Chicolino, CETMAR, Fishing vessels and associations.



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ML-Style Project Presentation

ML-STYLE PROJECT

2 years

Activities

- Cleaning the seabed.**
FFL + Fishing nets retrieval
- Study of port activities waste**
Companies and fish auctions
- Green point**
Disposal zone for selective collection
- Waste characterization**
Quantities, typologies & deterioration degree
- Study of valorisation options**
For the recovered materials
- Manufacturing of new and different stuff**
From recycled material
- Socioeconomic/Environmental assessment**



Expected Results

- Marine litter removed and Assessment of the litter removal capacity**
Types of fishing gears and fleet scales
- Diagnosis waste generated**
Companies and fish auctions
- Green port areas**
Installed/equipped in the Ports of Vigo & Marin
- Enhanced knowledge on the recycling potential**
Quality and quantity - different type of materials
- Production of “pilot samples”**
Clothes, ancillary materials, fashion complements (e.g. textile fiber, packing, hangers).
- Study on the economic feasibility**
Implementation of a management system for upcycling those materials.

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Lessons Learnt

• LITTER COLLECTION

- ✓ Passive Litter collection: The operational scheme fits well with the normal fishing operations. Adequate collections systems (big bags, bins/containers) should be provided.
- ✓ The active removal of litter technical protocol and the equipment developed performed reasonably well, but the costs of the operations are high. Improvements on retrieval equipment are necessary.

• WASTE MANAGEMENT

- ✓ Logistic support at the port and adequate port reception facilities are keys.
- ✓ Incorporation of good practices and the improvement of port infrastructure and equipment have resulted in a better management of fishing nets in all ports compared to decades ago.
- ✓ Correct handling, identification and separation of material types & appropriate cleaning is key to reach a cost-efficient process → Recycling .



Lessons Learnt

• RECYCLING

✓ There is sound scientific knowledge and expertise regarding recycling, but:

- Need for and organized operational-logistic scheme → Waste geographically disperse and in small scale
- Need to integrate stakeholder within a network (fishermen, ports, net menders and producers, waste managers, plastic producers/recyclers, etc.).
- Complexity of recycling marine litter → material in bad conditions (physical deterioration of materials). New and innovative recycling processes



>Higher potentials

- Waste well handled and disposed in port areas
- Improvement of recycling potential for end-of-life fishing nets

• LEARNING, AWARENESS AND DISSEMINATION ACTIVITIES

- ✓ Seafarers involvement is essential. Meetings, training and awareness activities (when feasible “at pier”) will contribute to create a common goal and vision of healthier seas.
- ✓ Fishermen efforts should be made visible to the society to improve their image and promote their active role as “guardians of the sea”.



Thank You

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