# OCEAN WISE

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# Reducing EPS marine litter in the North East Atlantic

EPS - Expanded Polystyrene

Interreg 🖸

Atlantic Area

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Reducing **EPS** marine litter in the North East Atlantic

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**OceanWise - Wise Reduction of EPS (and XPS) Marine Litter in the** North-East Atlantic Ocean Programme: Interreg Atlantic Area **Total Budget:** €2,853,536.80 **ERDF Contribution: €2,140,152.60** Duration: 36 months, January 2018 – March 2020 Coordinating partner: DGR DIREÇÃO-GERAL DE RECURSOS NATURAIS, CETMAR Ledre

**Partners:** 







pontoverde

sociedade



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# OUR FOCUS / AIM OBJECTIVES / OUTPUTS

# FOAMED POLYSTYRENE (EPS/XPS) MARINE LITTER

OceanWise deals with marine litter in a circular economy perspective. It is focused exclusively on Expanded (EPS) and Extruded polystyrene (XPS) products and applications with a likelihood to become marine litter.





### WHERE THIS ALL BEGUN



EU-Marine Strategy Framework Directive (MSFD) and the OSPAR Convention's

### MARINE LITTER REGIONAL ACTION PLAN

55 actions in total 32 common actions. 4 major themes: - Actions to combat sea-based sources of marine litter - Actions to combat land-based sources of Marine Litter

- Removal Actions
- Education and Outreach

# On OceanWise and the OSPAR RAP: Action 49 of the RAP actions is about 'Elimination, change or adaptation of the products for environmental benefits', which is focused exclusively on the impact of foamed polystyrene.



# OCEANWISE AIM

To **JOINTLY** develop a set of long-term measures to reduce the impact of Expanded and Extruded Polystyrene (EPS/XPS) products as marine litter in the North-East Atlantic Ocean.

→ addressing the entire life-cycle of EPS and XPS products





### OUR OBJECTIVES

Based on resourceefficiency, participatory methods and circular economy principles Identify EPS /XPS products and their source that are more likely to reach the marine environment and impact on its ecosystems;

Propose and test plausible options (reduce, reuse, recycle, recover, alternative materials) to achieve better environmental outcomes within different sectors;

Engage producer and designer communities on the sustainability of specific applications and to explore more circular models;



Develop Circular Economy-oriented methodologies to assess new opportunities, barriers and policy options.

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tools for managers, planners and other stakeholders
 tangible and concrete results on EPS / XPS applications
 new knowledge and methodologies suitable for use

links to the new under validation:

Single Use Plastics (and Fishing Gear) Directive



# **PROJECT STRUCTURE**

Knowledge resource hub on EPS/ XPS and their alternatives

Stakeholders Interactive Platform CIRCULARITY ANALYSES

Policy Recommendations for the management and use of EPS/XPS & Best practices, new solutions and alternatives for the industry Living labs – moving towards better practice. Targeted applications and pilots in users' communities

Catalogue of priority EPS and XPS products and applications and their alternatives



# PRIORITY INDUSTRIES, PRODUCTS & APPLICATIONS

- Fishing industry and ports (Fisheries, Aquaculture, Sea-food fish and sea-food boxes, live bait boxes, floating strucutres)
- Food goods industry (Distribution, Supermarket chains food trays for vegetables, fish, meat, fruit)
  - Consumer goods (appliances)
    - Single-use items used outdoors (take-away, outdoors activities such as festivals)













# STAKEHOLDERS ENGAGEMENT

# OCEANWISE APPROACH

OceanWise approach relies on a wide-view angle and the setup of a multi-sectoral platform that will include:

- → Governmental bodies responsible for marine environment management,
- → Industry and other stakeholders,
- $\rightarrow$  Waste Management authorities,
- → Designers, Circular Economy modelling, I&D specialists in participatory processes, and end-users.





### OCEANWISE STAKEHOLDERS ENGAGEMENT

# 'Interactive Stakeholder Platform'

Specific actions to promote and ensure active involvement by different key stakeholders targeted by OceanWise. Raw material supplier EPS products / packaging industry Retail / supplier / Industry Final consumer End of life (recycle, reuse) Policy makers Alternative EPS products



# **DIALOGUE LIVING LABS: throughout the Atlantic Area**





OUR PROCESS

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### **OUR PROCESS**

### CIRCULAR ECONOMY APPROACH

<sup>"</sup> Address the entire life-cycle of EPS / XPS products & applications

Integrate **Circular Economy** principles from the early design and development phases

<sup>"</sup> LCC (Life Cycle Cost) Assessment: cost analysis of different alternatives

LCC STRUCTURE: PRODUCT LIFE CYCLE PHASES						
Ci Unitary Cost i	MANUFACTURING COSTS (IEC 60300-3-3)		INSTALLATION COSTS (IEC 60300-3-3)			
CONCEPT, DESIGN & DEVELOPMENT (CDD)	BILL OF MATERIALS (BOM)	MANUFACTURING (MAN)	TRANSPORT	INSTALLATION ()	OPERATION & MAINTENANCE (O&M)	DISPOSAL (D)
<b>C9</b>	C1	C1	Ci	Cj	<b>C8</b>	Ck
C10		C2	C1	Cn	Cm	Сх
COSTS CATEGORY: Environmental Costs		C3 C4				
Costs conception, design, development and validation of the product	Costs of acquisition of product components and parts	Costs of manufacturing processes	Costs of transport	Costs of assembly, installation and commissioning	Costs of operation & maintenance throughout the expected life of the product	Costs of decommissioning, disassembly and disposal of the product



### OUR PROCESS

## WISE AND REALISTIC. TOWARDS SUSTAINABILITY

- Marine Litter + Waste Management + Circular Economy
- Listening to stakeholders all along the way and searching for different perspectives
   Reality check #1: Not all problems are equal: some plastics present higher potential for marine litter
   Reality check #2: The new biodegradables are not always biodegradable in real-life, i.e. in the sea
   Reality check #3: An alternative solution or product needs to be tested in the field by real users
   Reality check #4: Sometimes all you need for a more circular economy is a good synergy that links the missing dots in the process
  - From local to regional to national: an Atlantic Area vision (PT ES F IE UK)
    - Compacting locally, tagging, and mapping could increase the value of EPS/XPS for recyclers





# #BeOceanWise





# THANK YOU FOR YOUR ATTENTION !

# www.oceanwise-project.eu



