

# Contribution to the ATLAS Project from IEO-Vigo: an update (2017-18)

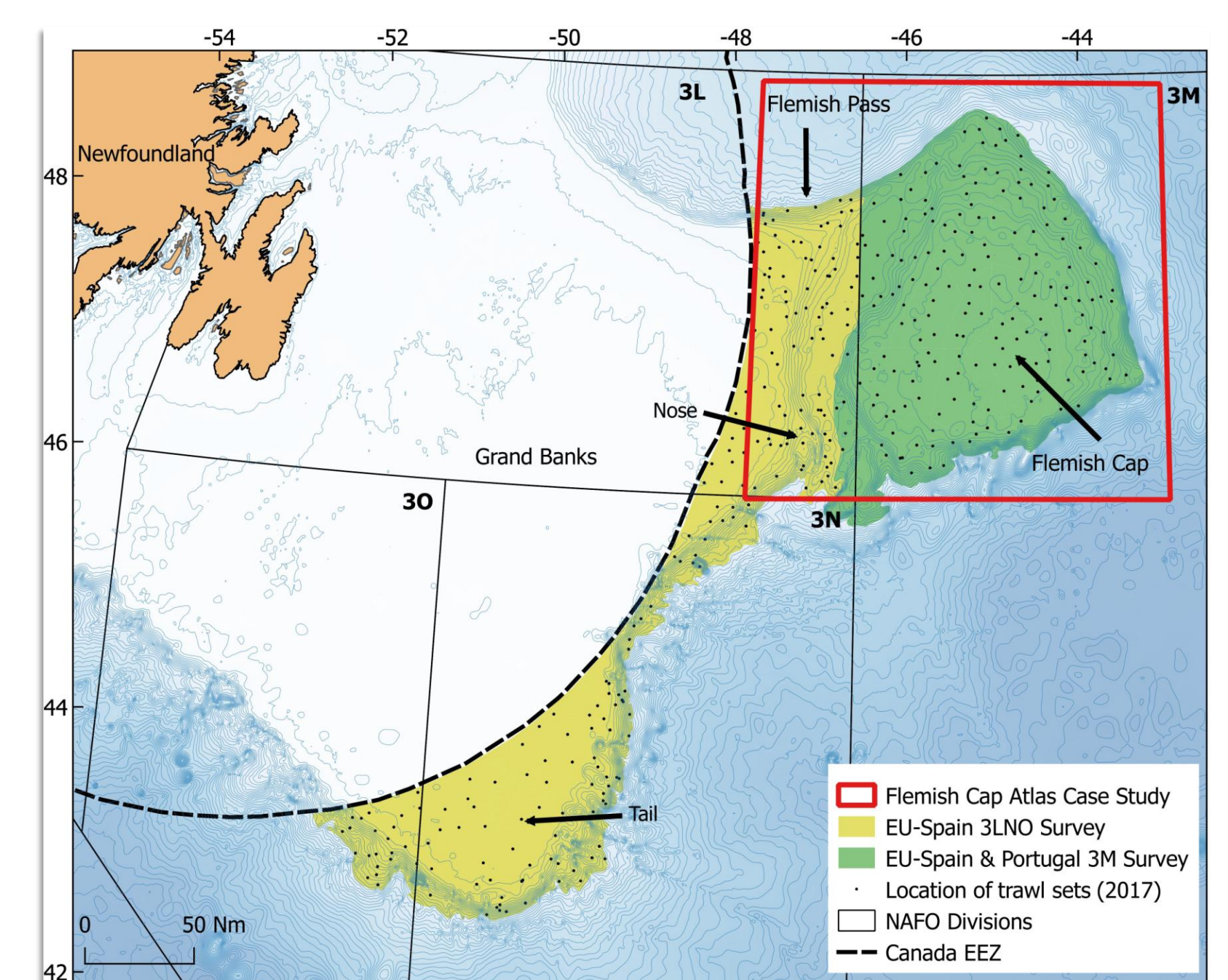
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## Case Study No 11

Case Study Area includes both, the **Flemish Cap** and the adjacent **Flemish Pass**, located in the high seas, in deep waters of the NW Atlantic (area beyond national jurisdiction):

- Important **fishing grounds** for the EU freezer fleet (Greenland halibut, cod, redfish).
- Key area for **conservation of VMEs** (cold water corals & sponges).
- Important area for **marine research** (ecosystem & fisheries).
- Potential area for **"blue economy" activities** (oil & gas).



Case Study Area & Surveys

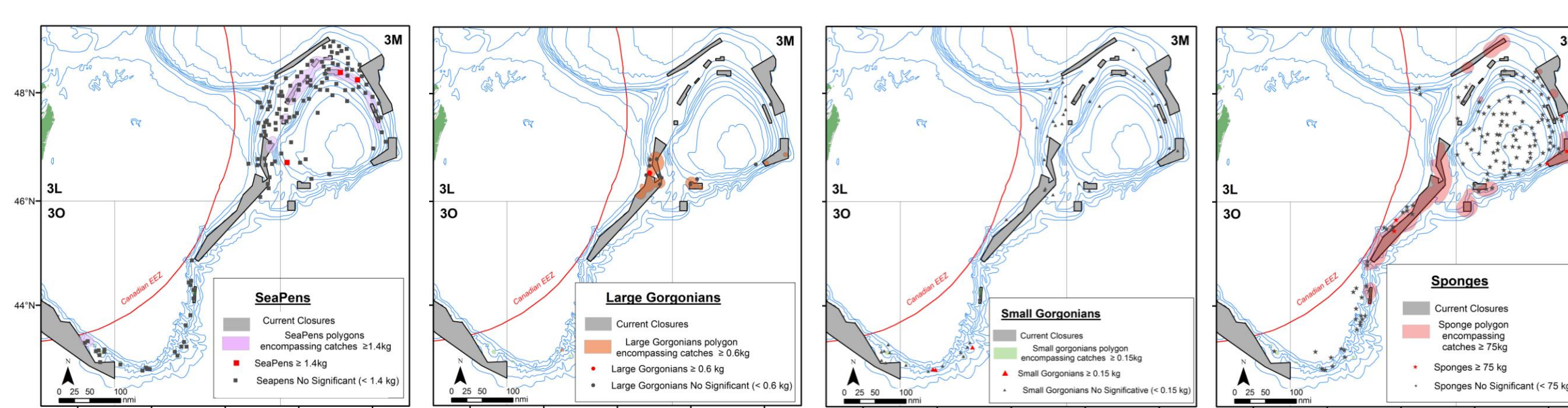
## Surveys

Stratified bottom trawl **EU Groundfish Surveys** in the NW Atlantic (NAFO Regulatory Area, Divs. 3LMNO) focus on assessment of commercial fish stocks, **provide key data and samples on VME indicator species**:

- **EU-Spain 3LNO Groundfish Survey** - Tail and nose of the Grand Banks and **Flemish Pass**.
- **EU-Spain & Portugal 3M Groundfish Survey** - **Flemish Cap**.



R/V Vizconde de Eza (SGP)



Cold water corals and sponges as VME indicator species in the Case Study Area (2017 Survey)  
Photos: E. Román

## Main activities

**WP3** Mapping of VME indicator species; Model the distribution of sea pens, testing different algorithms (SDM); Collection of cold water coral samples (genetic & reproduction); Explore a trait-based approach for cold-water corals; Research on seabed litter (GES Descriptor).

**WP6** Marine spatial planning; Mapping the main uses of the marine space in the high seas, identifying key information for integrated spatial management and risk assessment.

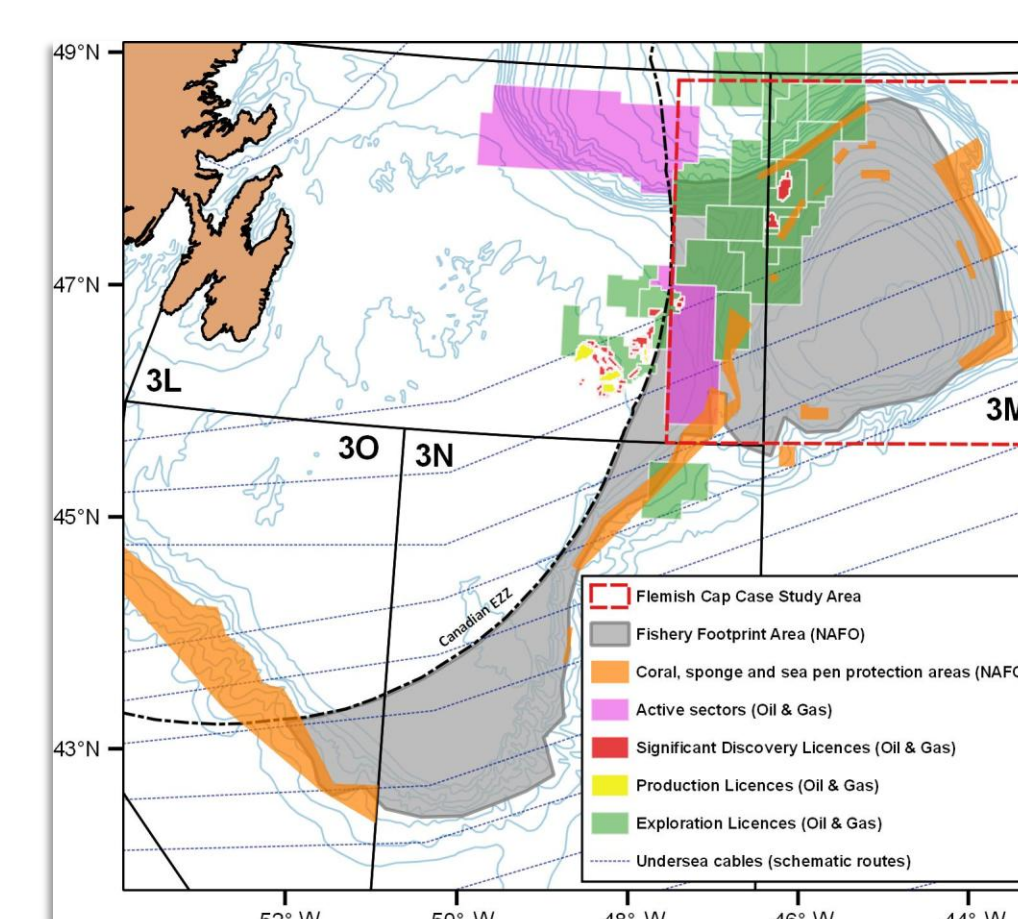
**WP7** Science-policy interface activities (UNGA & NAFO).

**WP9** Outreach: videos, workshops, exhibitions, etc.

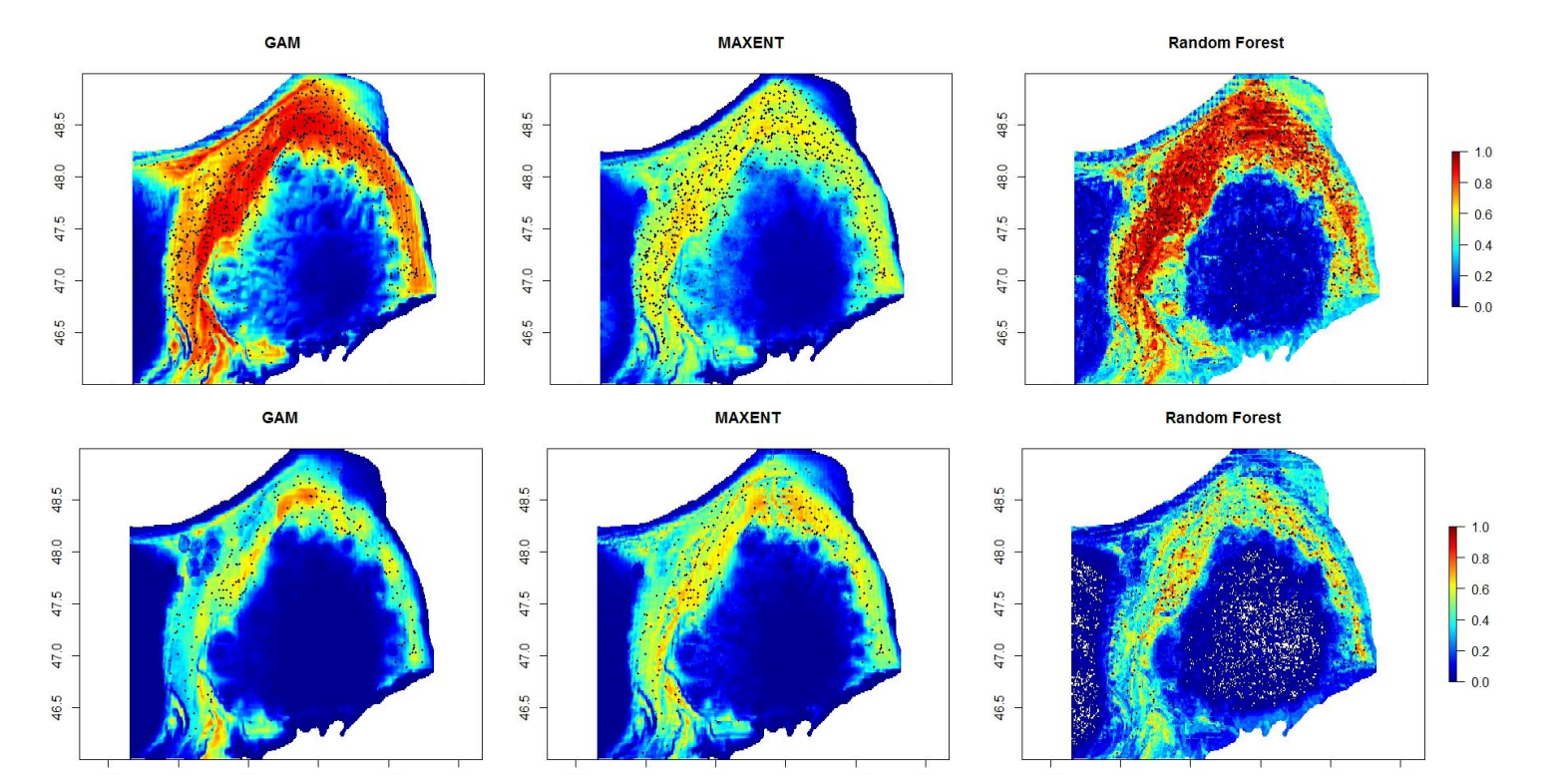
And collaboration in **WP1, WP4 & WP5**



ATLAS in the events of the "IEO-Vigo 100 Year Jubilee"



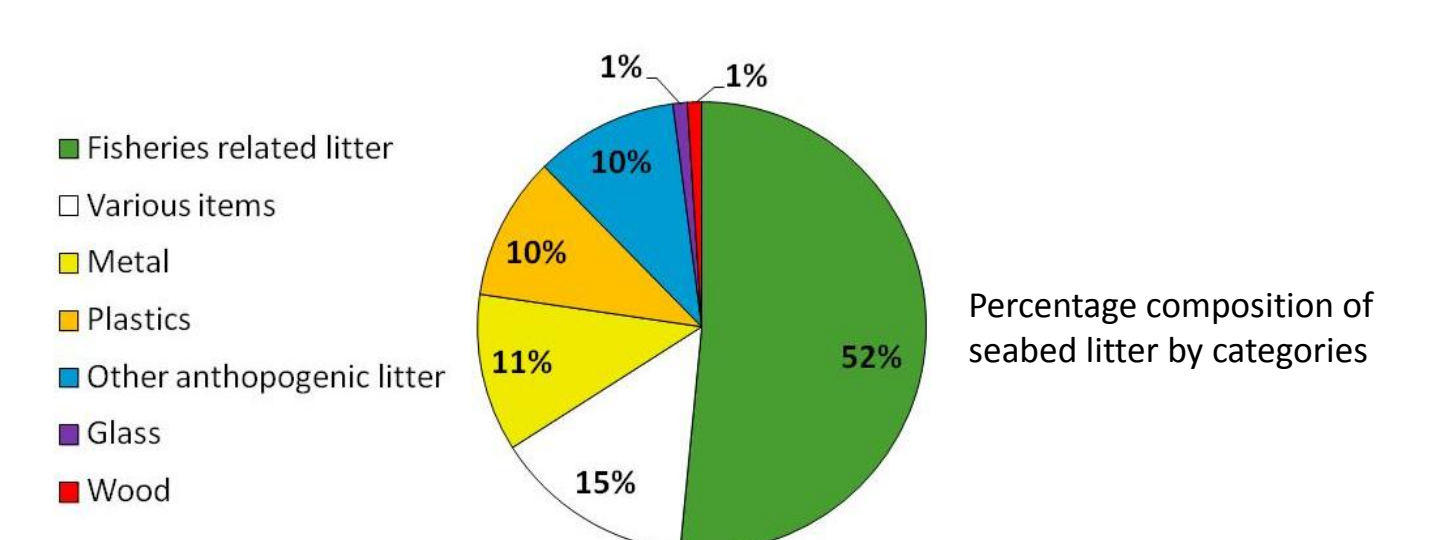
Main uses of the marine space in the Case Study Area



Anthoptilum grandiflorum (top) and Funiculina quadrangularis (bottom) SDMs using survey data from 2007-2017

CATEGORY	TRAIT
Distribution and Habitat	Living habitat
	Living location
	Exposure potential (related to body form)
	Attachment degree
General Biology	Attachment strength
	Movement type
	Mobility
	Preferred sediment
	Maximum size
	Body design
Life Cycle and Reproduction	Degree of flexibility
	Resource capture method
	Food type
	Defence mechanisms
	Intra-specific sociability

21 Biological Traits were identified as suitable to classify corals (baseline classification for further studies)



Distribution of seabed litter in the Flemish Pass using survey data (2006-2017). 1,169 bottom trawls were analyzed. Litter was found in the 8.3% of the total trawls (97 trawls)

## Acknowledgements

EU NAFO Groundfish surveys has been co-funded by the European Union through the European Maritime and Fisheries Fund (EMFF) within the National Program of collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy.



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