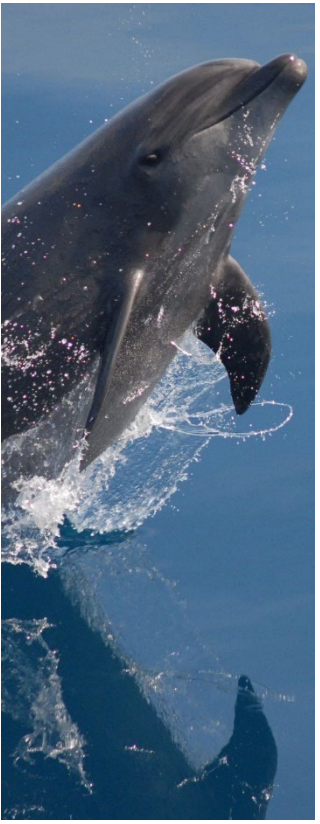

Using cetaceans as indicator species of the impacts of marine litter

Celia Le Ravallec, ACCOBAMS Secretariat

EU Marine Strategy Framework Directive

• **Descriptor 10 on Marine Litter: Properties and quantities of marine litter do not cause harm to the coastal and marine environment.**

4 Criteria (Commission Decision 2017/848/EU):

- D10C1: composition, amount and spatial distribution of litter
- D10C2: composition, amount and spatial distribution of micro-litter

- D10C3 (Secondary): The amount of litter and micro-litter **ingested** by marine animals is at a level that does not adversely affect the health of the species concerned. Member States shall establish threshold values for these levels through regional or subregional cooperation

- D10C4 (Secondary): The number of individuals of each species which are adversely affected due to litter, such as by **entanglement**, other types of injury or mortality, or health effects. Member States shall establish threshold values for the adverse effects of litter, through regional or subregional cooperation.

RSC Marine Litter Indicator Assessments

OSPAR:

- Beach litter
- Seabed litter
- Plastic Particles in **Fulmar Stomachs** in the North Sea
- Marine Litter ingested by **Sea Turtles**

Barcelona Convention (IMAP)

- Common Indicator 22: Trends in the amount of litter washed ashore and/or deposited on coastlines
- Common Indicator 23: Trends in the amount of litter in the water column including microplastics and on the seafloor
- Candidate Indicator 24: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and **marine turtles** (EO10)

What about cetaceans?

Establishing relevant indicators at the MSFD scale

- **Easy to use**
- **Large distribution (→ harmonize RSCs)**
- **Propensity to be impacted by litter (e.g. ingestion, entanglement) relative to environmental pollution level**
- **Scientific rigor: Should show significant variations relative to restoration efforts**