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A European project for implementing indicators of marine litter impacts on the loggerhead sea turtle *Caretta caretta* and other biota

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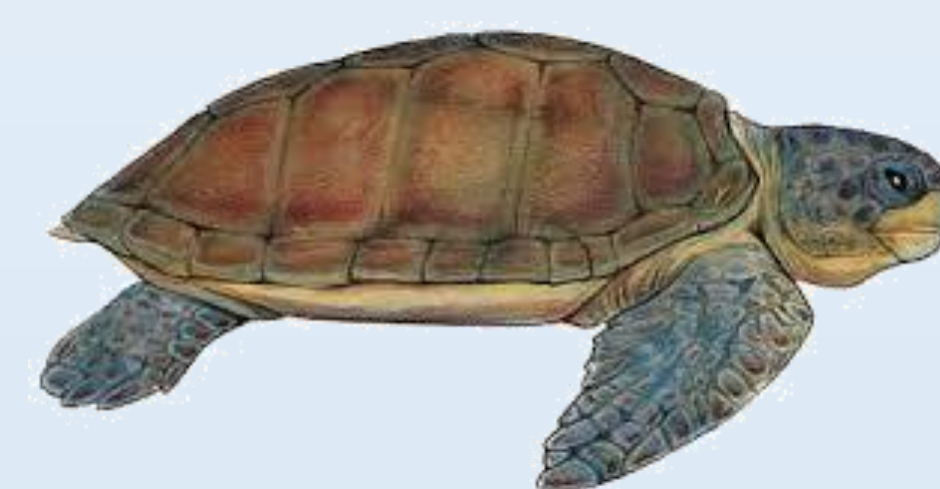
INDICator Impact Turtle: Implementation of The Indicator of Marine Litter on Sea Turtles and Biota in Regional Sea Conventions and Marine Strategy Framework Directive Areas

WHAT IS INDICIT?

World seas and oceans are **polluted by marine debris**, which have **negative impact** on marine organisms.
Europe and regional sea conventions undertake management measures in order **to improve the status of the seas**, and restore them.

Marine organisms can help the managers to **evaluate the efficiency of restoration measures** ; some of them, like sea turtles, play the role of « **indicator species** ».

Marine macro-debris ingested by sea turtles...



... as an **indicator for the monitoring of the Good Environmental Status (GES) of European marine waters** and the **efficiency of national policies to reduce the use of plastics**

LITTER IMPACT ON MARINE ENVIRONMENT

The **European Marine Strategy Framework Directive (MSFD)** aims to achieve the **Good Environmental Status** of marine waters **by 2020**. Two of its indicators concern the impact of **marine litter**.

INDICIT focuses on 3 types of litter impact indicators:

- 1 Litter ingestion by sea turtle**
- 2 Micro-litter ingestion by sea turtle and fish**
- 3 Entanglement in debris (all fauna)**

5,000 billion floating debris



Up to 90% of sea litter is plastics

1,400 impacted species



Diet of a stranded sea turtle

INDICIT is a collaborative 2-year project supported by the European Commission.

INDICIT OBJECTIVES:

- Develop a common approach for monitoring the **marine debris ingestion by sea turtles**
- Assess whether **other species** could be useful indicators, e.g. for **entanglement and micro-debris ingestion**
- Propose a **metric** (global or regional) of **ingested debris by sea turtle** compatible with the evaluation of the **Good Ecological Status of marine waters**

IMPROVING OCEAN STATUS

developing an international perennial network which will collect and exchange key information.

studying the impact of marine litter on marine organisms.

testing existing, and proposing new indicators for monitoring the impacts of litter on marine fauna.

providing training and standardized tools to staff involved in the monitoring of debris impacts.



Essential involvement of rescue centres, stranding networks for data collection



Sea turtle rescue centre



Entanglement in turtle and fish

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