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MISTIC SEAS III
MACARONESIA

Descriptor 4. Food Web

Food web

A food web is a **set of organisms that interact through what they eat and what eats them.** From producers to consumers, these trophic links or interactions between species are complex and constantly changing as they are influenced by changes and fluctuations in the relative abundance of different components and in their feeding needs.

Assessment of food webs will need to include as many taxa as possible comprising all trophic levels. The **3 important properties of food webs** are structure, functioning and dynamics.

Study

Monitoring the degree to which food webs are affected by anthropogenic activities requires the compilation of information on marine organisms diversity and biomass, towards assessing the food web status. This is most appropriately achieved by dividing faunal groups into trophic guilds such as benthivorous fish, planktivorous fish, filter-feeding benthos, etc. (ICES, 2015b).

Indicators

Model Indicators: Mean Trophic Level (MTL), Trophic Spectra, Cum-BiomassTL

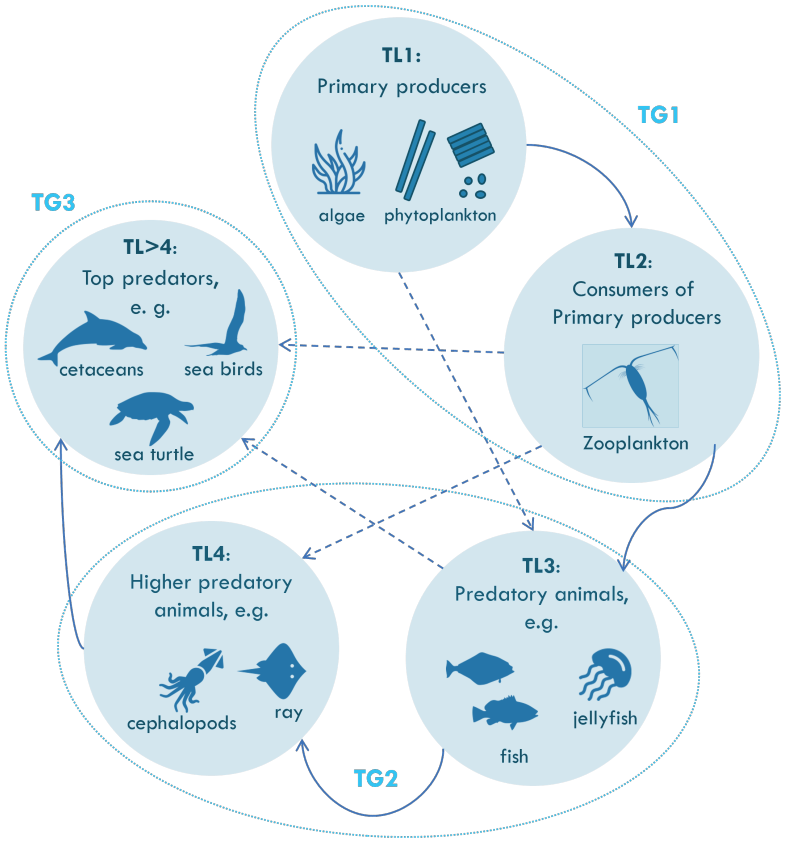
Non model indicators

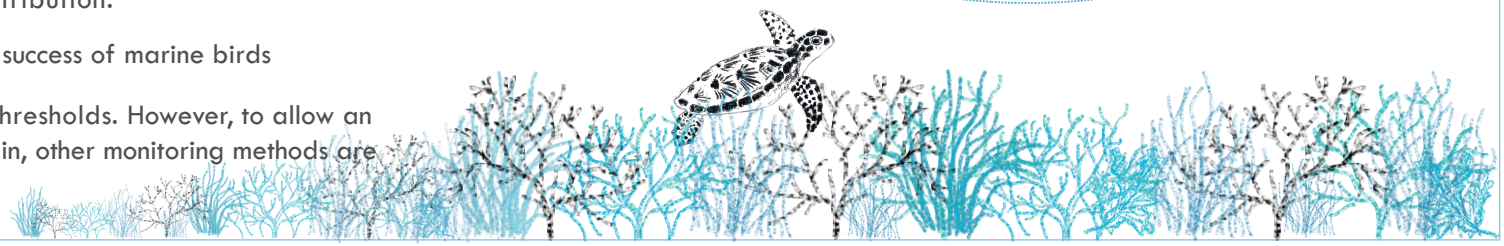
- D4C1
  - TG1 - PH1/FW5 Plankton functional types;
  - TG2&TG3 - Species composition and relative abundance
- D4C2
  - TG1 - PH2 Plankton Biomass/Abundance;
  - TG2&TG3 - catchMTL;
- D4C3
  - TG2&3 FW3, Typical Length, Large Fish Indicator, BH5
  - Benthos size freq. distribution.
- D4C4
  - B3: FW1 Reproductive success of marine birds

Non model indicators require evaluation of thresholds. However, to allow an integrated evaluation system of the trophic chain, other monitoring methods are necessary.

Trophic Level

In the framework of the Mistic Seas III project, **5 trophic levels** (TL) (and 3 trophic guilds (TG)) were selected for analysis **in the 3 regions:**





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