

CIESM Congress Session : Feeding ecology and physiology

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Moderator's Synthesis

Following the presentations on feeding ecology and physiology of marine species (mainly fish) from the Mediterranean, the debate on main knowledge gaps, challenges and hot topics on the area highlighted these key points:

1. We have gathered information on dietary patterns and food web structure using different approaches, mainly from direct observation or biochemical markers (stomach content analysis, stable isotopes, fatty acids) and modelling. But how can we make them work together? There is a need to direct our efforts towards approaches that can integrate information coming from different methods and the scientific community would benefit from more collaboration between “experimental scientist”, “theoretical scientist” and “modelers”.
2. Feeding ecology and food webs are complex systems that we are generally forced to simplify by aggregating species into functional groups. By doing this we have successfully identified general patterns but we still need to further explore and evaluate the impact of individual variability on feeding patterns and their effect in overall food webs. Individual-based approaches appear as a fruitful avenue for this topic.
3. The concept of “trophic niche” is at the center of feeding ecology and food webs. Scientists should acknowledge that depending on the methods used, the inferences that we make are only “proxys” of this niche (e.g., isotopic niche vs trophic niche) and try to include in their analysis other environmental or biological interactions that can better translate the niche concept.

