



Session 4

## Estimating dynamics of population fecundity to understand spawning tactics in *Ethmalosa fimbriata* (Bowdich, 1825) in an upwelling environment

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### Abstract

Fluctuations in abiotic factors, e.g., temperature, salinity, food availability, will result in specific spawning tactics. This drives some populations to create reproductive strategies to ensure the survival of their offspring. The analysis of comparative functional responses can be used in different contexts to improve the understanding and prediction of the environmental impact on small pelagic population fecundity (PF). Successful recruitment into a population is subject to variations in fecundity. Significant seasonal and inter-annual differences in PF of *Ethmalosa fimbriata* in southern Senegalese coastal waters could be observed. Here we show that the population is able to fit its spawning tactic to variable conditions in an upwelling environment. It appears that *E. fimbriata* aims at spawning in water temperatures of around 24°C and at an upwelling intensity of 3 m<sup>3</sup> s<sup>-1</sup> m<sup>-1</sup>. Understanding the spawning tactics of an highly exploited fish species is important in the context of climate change to get efficient forecast in countries where fisheries is crucial at socio-economical level, in order that decision maker can provide ad hoc adaptation plan for the fisheries sector.



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The both last ICAWA edition, 2017 and 2018, was done as a joint event with other closely related meeting. In 2017 with the inauguration of the OSCM in Cabo Verde underlining AWA cooperation with INDP and UNICV as well as Geomar and collaborators. In 2018 ICAWA was join to Preface final meeting following the memorandum of understanding signed a couples of years before between the two consortium and which have led at the end to a common policy session followed by the redaction of a policy brief taking advantage of the results of the both projects. Some abstract aside ICAWA joint session are missing see the orgniser to get more information.

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