



Modelling the ecosystem and population dynamics of anchovy in the Bay of Biscay

A better understanding and assessment of the evolution of marine resources under the combined effects of fishing and climate change is becoming an important economic and ecological issue. Certain fish species, particularly small epipelagic fish, are very vulnerable to changes in environmental conditions from year to year and to fishing efforts. For example, the biomass of the anchovy stock in the Bay of Biscay has varied over the years. A significant collapse in the early 21st century led to the closure of fisheries for five years, with a substantial impact on the bay's economy. One way to investigate this type of evolution is through modelling. Our work focuses on modelling the evolution of the anchovy population using the SEAPODYM fish model (Spatial Ecosystem and Population Dynamics Model). SEAPODYM simulates the spatial dynamics of fish populations using an Eulerian advection-diffusion-reaction (ADR) approach, representing a population structured by age and whose mechanisms evolve according to life stage

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