
Identifying the blackspot seabream's essential habitats to promote sustainable spatial fishery management

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Résumé

Pagellus bogaraveo is a demersal species distributed from the Northern coasts of Morocco to Scotland and the Azores in the NE Atlantic, as well as in the Mediterranean Sea. Its high commercial value and low productivity make the species highly sensitive to overfishing and stock decline has been reported for this species since the 1970s in the Bay of Biscay. In this study, we identified essential habitats of the blackspot seabream in order to develop relevant spatial management measures and preserve this harvested species.

The specific objectives were to identify the extent of the realized niche of the species, compare it to the current species distribution, and to identify essential habitats associated to the different life stages of the species.

To do so, an ensemble species distribution models (SDMs) approach was used, which combines a species' occurrence data with environmental estimates. Occurrence data consisted in a combination of several presence/absence datasets from scientific surveys, fisheries landings data and punctual observations. Environmental parameters consisted in bathymetry, slope, currents, sea surface and sea bottom temperature, salinity and seafloor characteristics.

As occurrence data originated from populations exploited at varied levels, selecting parts of the dataset to produce SDMs enabled to identify the extent of the potential spatial distribution of *P. bogaraveo* and its core as well as essential habitats for adults and juveniles.

It appeared that the Bay of Biscay population, which collapsed in the 1970s, now occupies the core of its spatial distribution and that essential habitats of adults and juveniles are distinct, allowing for different potential spatial management measures.

Mots-Clés: *Pagellus bogaraveo*, Species Distribution Model, Spatial distribution

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