

ASSESSMENT OF GALICIAN SMALL-SCALE FISHERIES USING LENGTH-BASED METHODS (LBMs)

1 MOTIVATION AND CONTEXT OF THE STUDY



Small-Scale Coastal Fleet in the EU

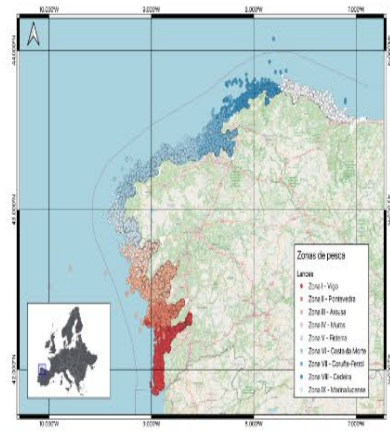
Vessels of less than 12 meters in length (excluding trawlers and draggers)

Small-scale fisheries: a very important sector in Galicia and unique in Europe both at exploitation rate and gear complexity.

Understand stock status of multiple species in a data-limited context.

Apply length-based methods and understand their trade-offs.

2 STUDY AREA AND ANALISED SPECIES



TAXONS



13 TELEOSTS



2 ELASMOBRANCHS



1 CEPHALOPOD

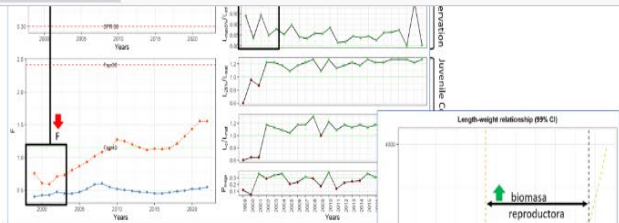
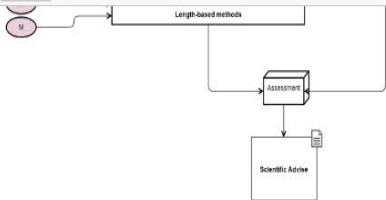


1 CRUSTACEAN

Fishery-dependent data was obtained by observers aboard small-scale vessels operating along the Galician coast, measuring size and weight of some individuals and total catch (per sampled haul).

3 ASSESSMENT PIPELINE

4 EXAMPLE OF RESULTS: DIPLODUS SARGUS

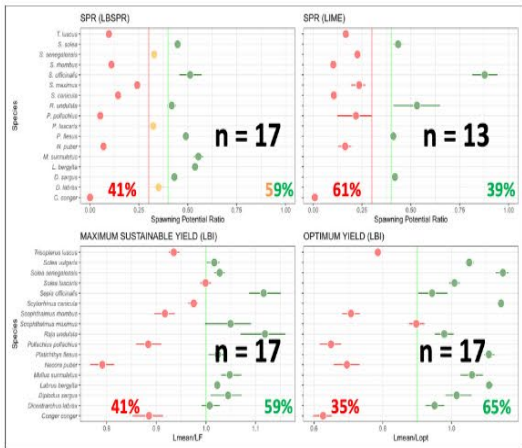
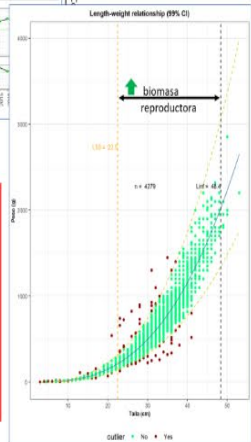


LBMs' stock indicators are checked against a relative index of abundance to provide an assessment.

5 AVERAGE INDICATORS FOR THE LAST THREE YEARS (2020-2022)

Indicator outputs from the three LBM's (left) and length-weight relationship (right) for *Diploodus sargus*.

- ↑ Reproductive Biomass ⇒ ↑ Spawning Potential Ratio (SPR)
- ↑ SPR ⇒ ↓ Fishing Mortality (F)
- ↑ SPR ⇒ ↑ Conservation of adults / Yield?



- ### PROBLEMS FOUND
- Low representativeness of some species.
 - LIME operational and debugging problems.
 - Method's assumed vs real selectivity.

- ### CONCLUSIONS
- Stock-LHT required.
 - In-depth knowledge of species biology.
 - Methods limited by assumed growth models (VBGF).
 - LIME's requirement of M hard to fulfil.

40-60% stocks low SPR

35-41% stocks low YIELD

LBSPR and LBI + optimistic than LIME