DEMERSTEM : WP1 – Stock Assessment

Coastal shrimp (*P. notialis*) in West Africa by length frequency analysis

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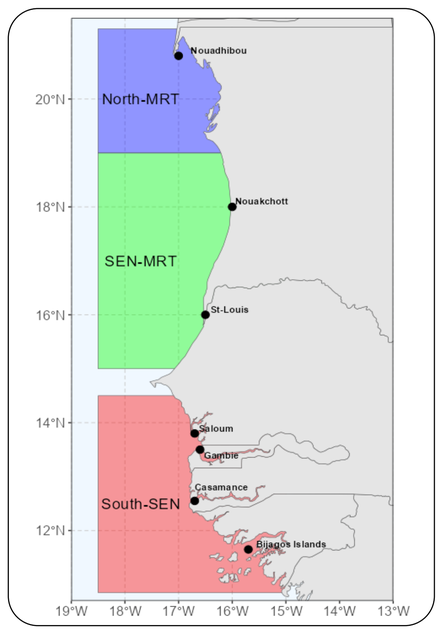
1 Introduction

The **coastal shrimp** (*Penaeus notialis*) is exploited both by artisanal fishing in the various estuaries and industrial fishing at sea. In West Africa, from Mauritania to Guinea, three separate stocks are distinguished and named accordingly to their location (see map).

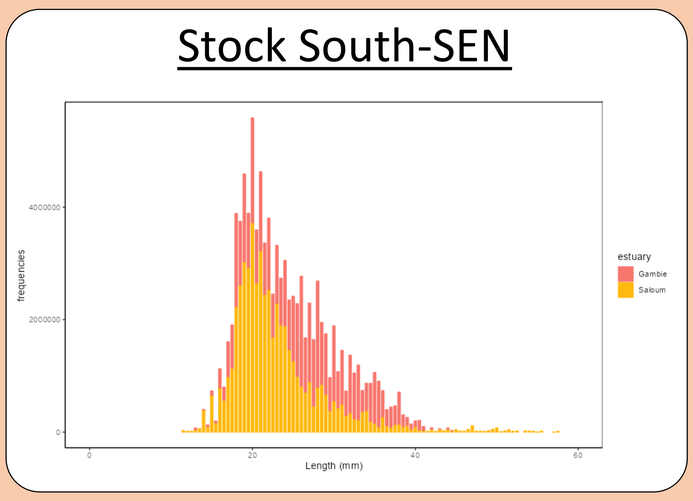
Stocks map



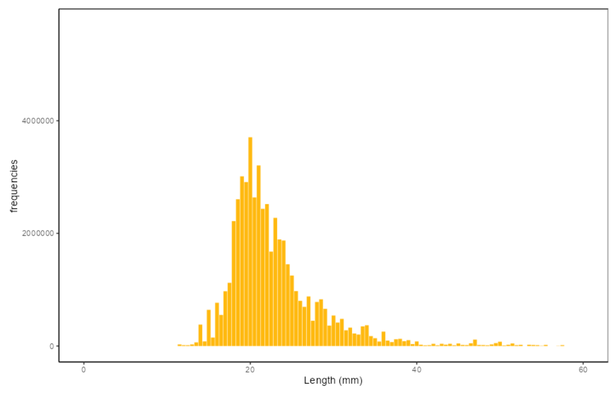
2 Data

Length frequencies on landings (2020-2021)

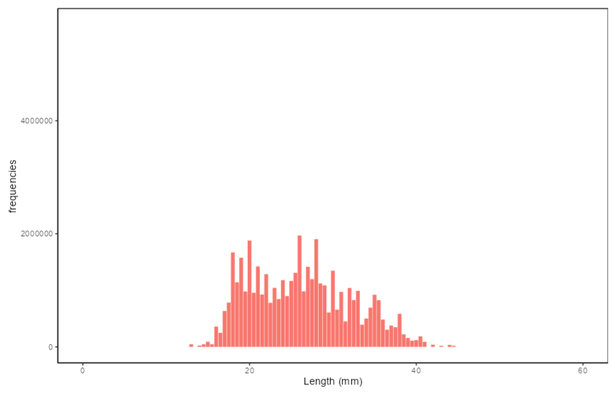
Stock South-SEN



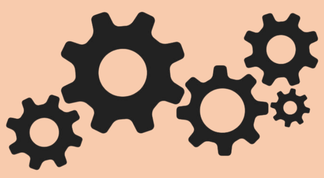
Saloum estuary



Gambia estuary



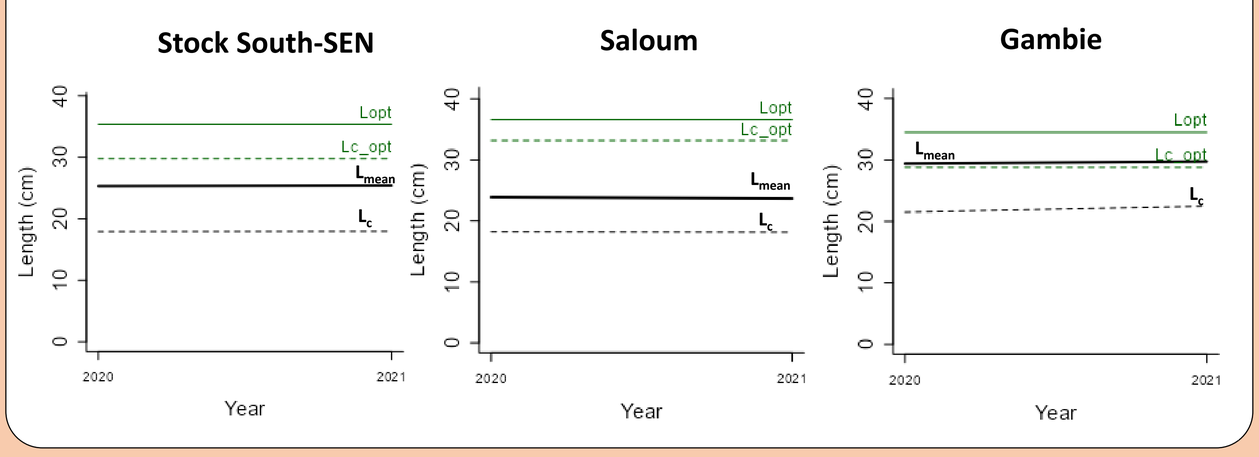
Stock assessment



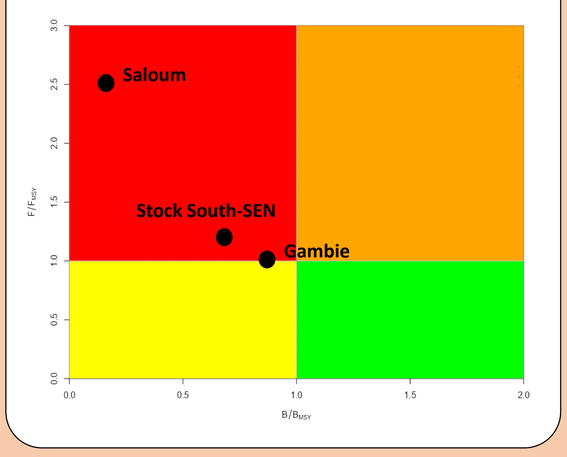
South-SEN stock is the only case study with sufficient data and the analyses focus on artisanal fishery and by distinguishing combined or splitted data by estuaries.

3 Results

Estimates of fishery management indicators (LBB)



Kobe graph (median 2020-2021)



Analyses conducted over the stock or its main estuaries indicates contrasted status between Saloum and Gambia. Overall, estimated values of $B_{20\text{-}21}$ and $F_{20\text{-}21}$ (median across 2020 and 2021) suggest an overfishing status and length indicators suggest fishing of too small individuals.

4 Conclusion

- **The length-based Bayesian Biomass estimation approach (LBB) is a powerful method providing diagnosis on fishing intensity and length indicators estimates**
- **Management should take account gear selectivity as it impact population demographic structure.**

DEMERSTEM project :
http://pescao-demerstem.org/

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