DEMERSTEM conclusions on stock assessment

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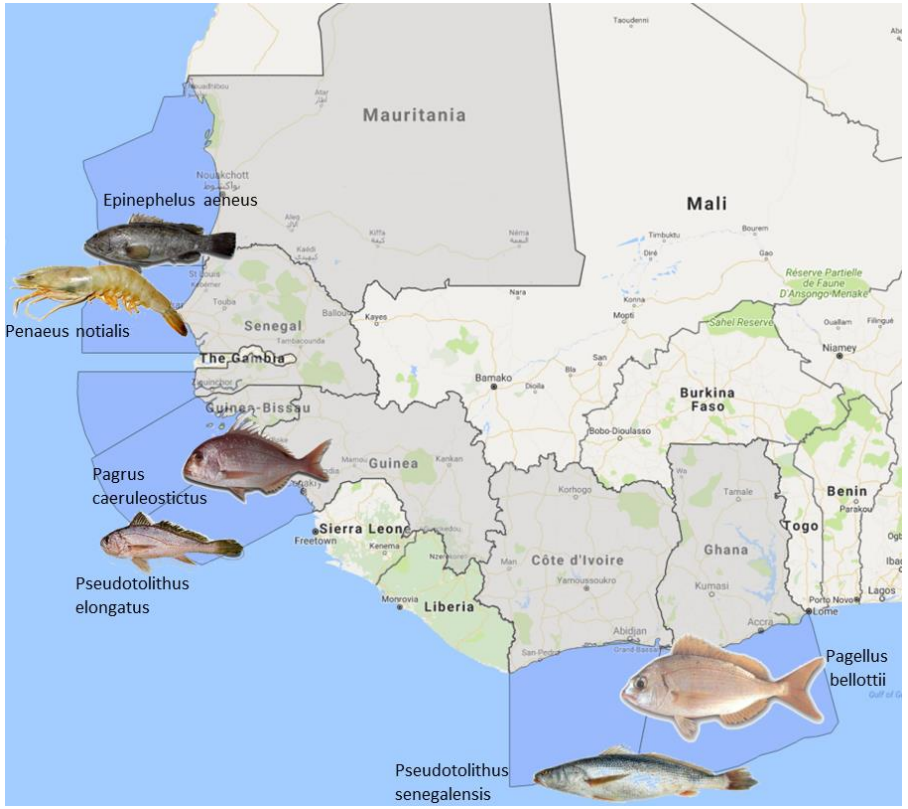
DEMERSTEM - Definition of priority species



The selected stocks correspond to one or more of the following criteria:

- Shared stock
- Commercially important species
- Emblematic species for small-scale fisheries
- Species of importance for European fleets
- Species with coastal nurseries (link to WP2)

Introduction

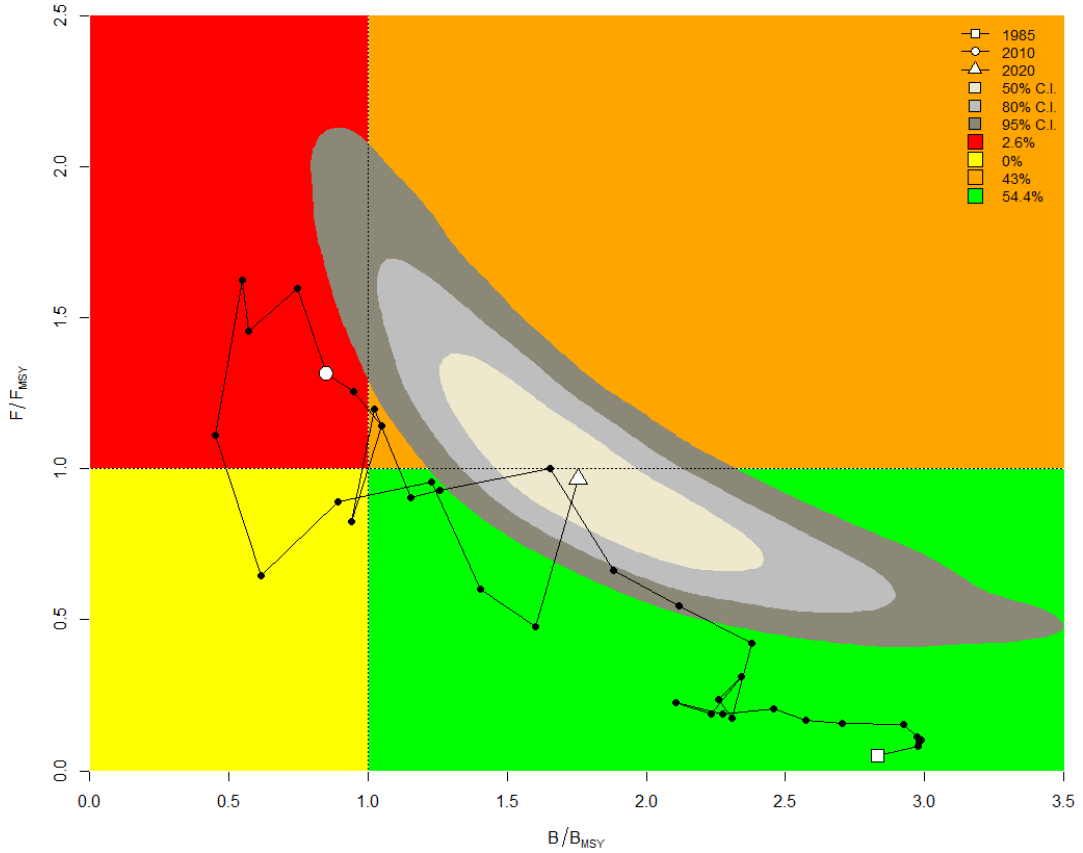
- The stock assessments produced are **documented** and made **available** on the project website

- The **scripts** (R) used for the assessment have been shared within the groups and used as a basis for training in stock assessments

- Improved **traceability** of assessment procedures.

P. elongatus – GIN/GNB

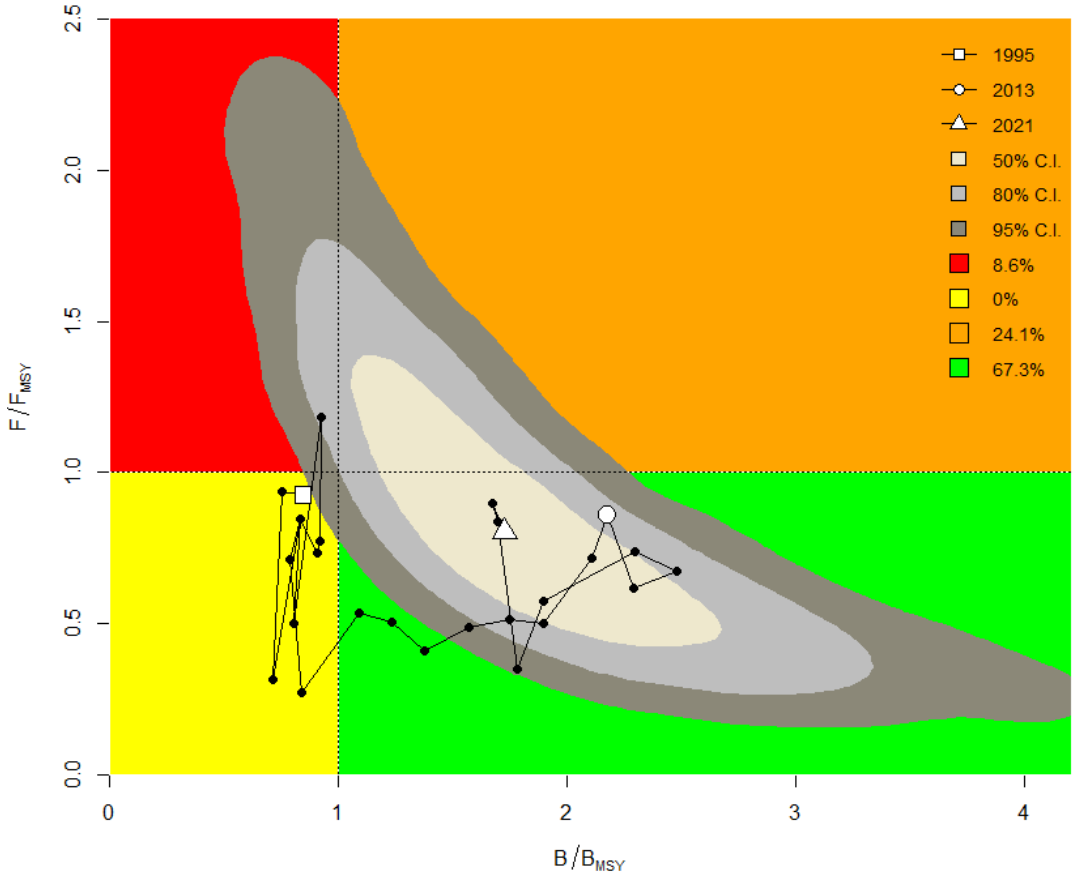
- The production models indicate a **fully exploited** stock with an MSY of **9100** T.
- **The consistency of the diagnoses depends on the use of the longest available time series of catches and fishing effort.**
- **The use of all the available data leads to a different diagnosis from that established by the CECAF working group**



P. caeruleostictus – GIN/GNB

- **In this case study, the models indicate consistent MSY. However, JABBA can be used to represent this confidence interval and a stock status between under- and over-exploitation. A definite diagnosis cannot be made.**

- **Models based on size frequencies are a prospect for refining the diagnosis.**

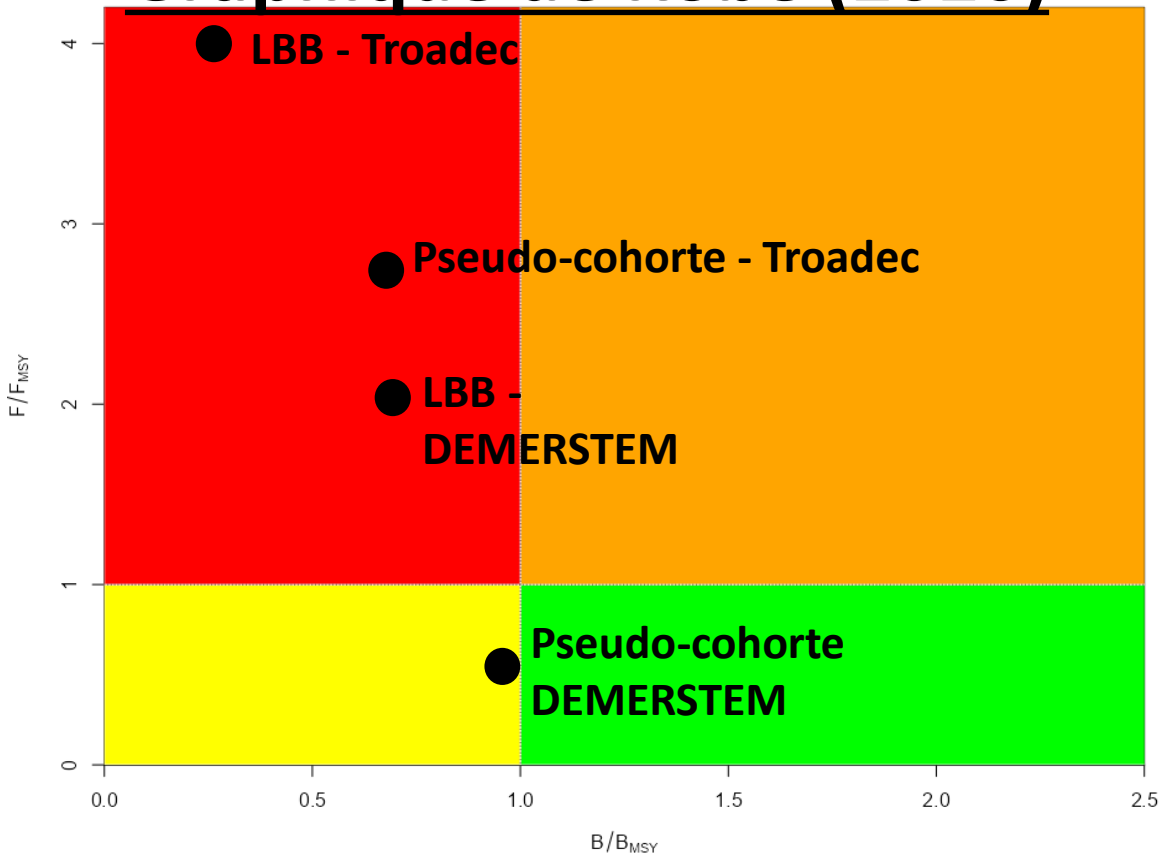


P. senegalensis – GHA/CIV

- **The lack of reliability of some input data means that the diagnosis must be made with caution. Nevertheless, the multiplicity of methods and results makes it possible to propose a diagnosis of overexploitation of the stock.**

- **Sampling should be strenghtened to develop effective ageing methods (sclerochronology, otolithometry, marking/recapture)**

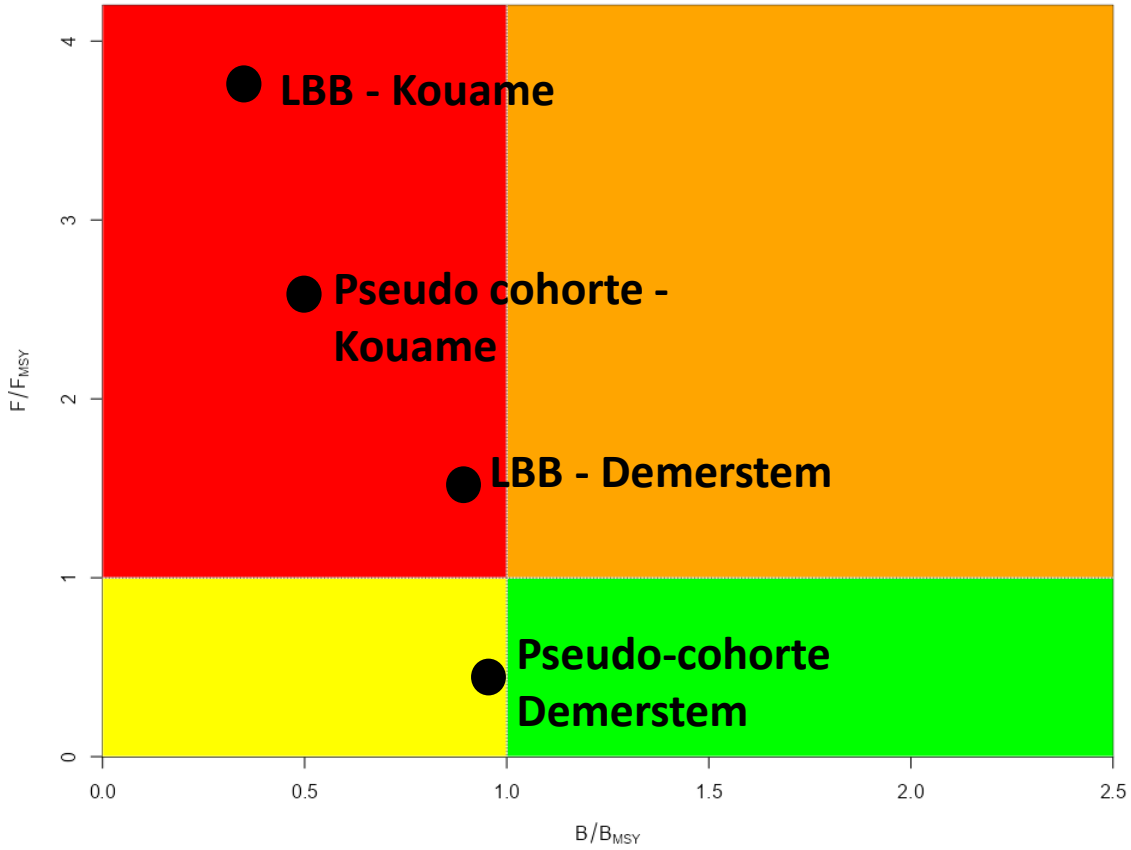
Graphique de Kobe (2020)



P. bellottii – GHA/CIV

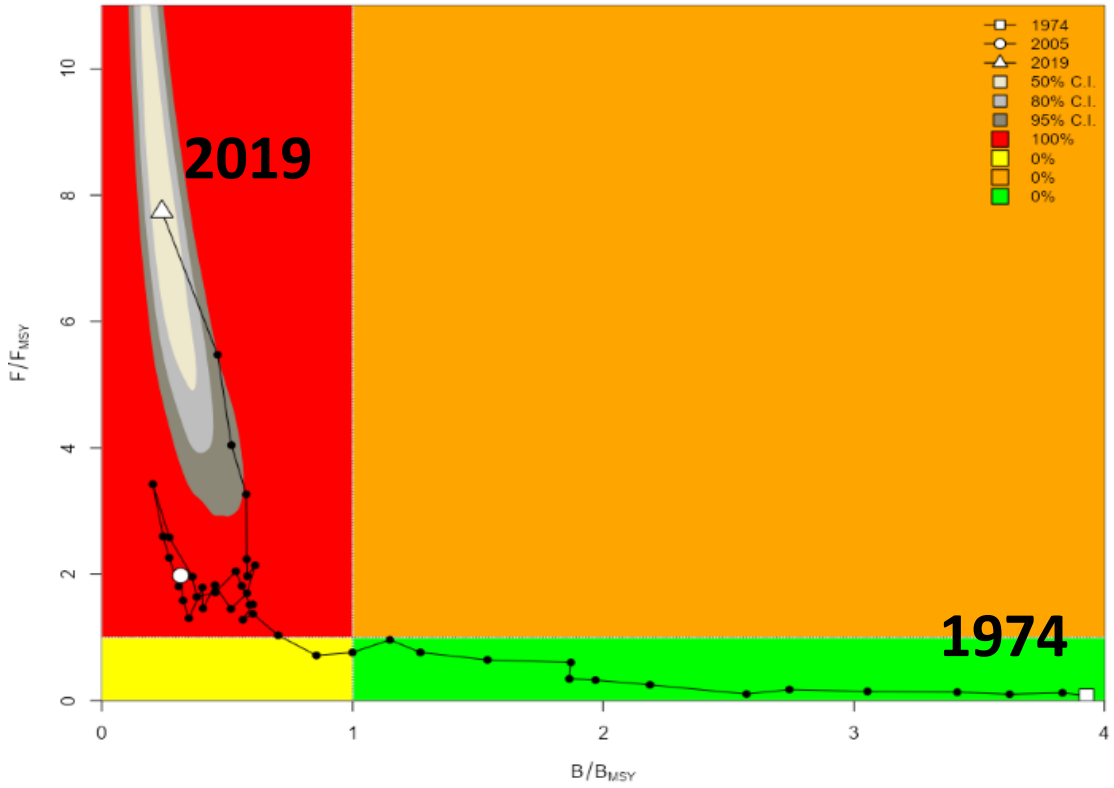
- **Uncertainties on data input conduct us to reject diagnosis**
- **Sampling should be strenghtened to develop effective ageing methods (sclerochronology, otolithometry, marking/recapture)**

Graphique de Kobe (2020)



E. aeneus – SEN/MRT

- **The use of all the available data leads to a diagnosis similar to that established by the CECAF working group**
- **The use of these different adjustment methods makes it possible to represent confidence intervals on the diagnosis.**

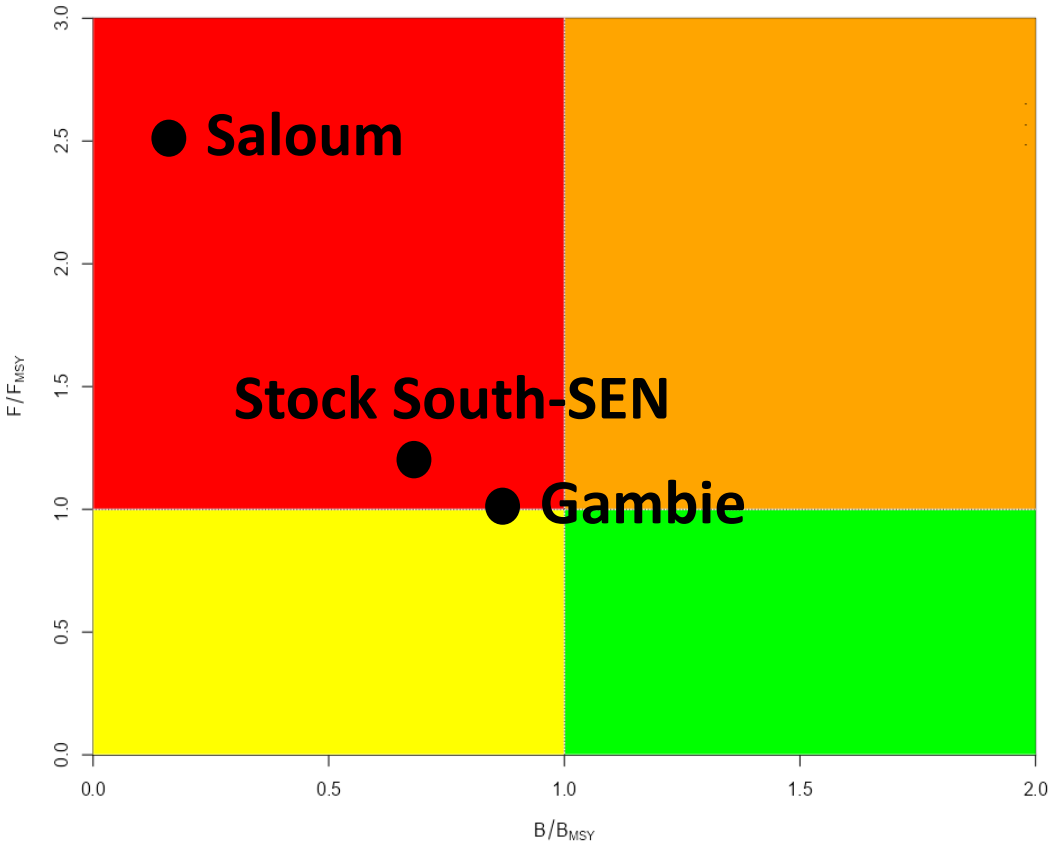


P. notialis – SEN/MRT

- **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.**

Kobe graph (median 2020-2021)



Summary of results

	Species	Countries	Production model: Pseudo-equilibrium	Production model: JABBA	Length-based model: Rec. Pseudo-cohort	Length-based model: LBB
	*P. elongatus*	GIN – GNB	**3/5**	**3/5**		**1/5**
	*P. caeruleostictus*	GIN – GNB	**2/5**	**2/5**		**1/5**
	*P. senegalensis*	GHA – CIV			**2/5**	**3.5/5**
	*P. bellottii*	GHA – CIV			**1.5/5**	**2/5**
	*E. aeneus*	MRT – SEN	**4/5**	**4/5**		**3/5**
	*P. notialis*	MRT – SEN				**2.5/5**

Overexploited

Underexploited

/5 Confidence in the diagnostic

Conclusion

- The use of different methods improves reliability but is still dependent on the quality of the data
- Complementarity of methods allowed to conclude on the state of the stock and in other cases it was impossible to conclude on the state
- Invest more in collecting size frequency data

Thank you
Merci