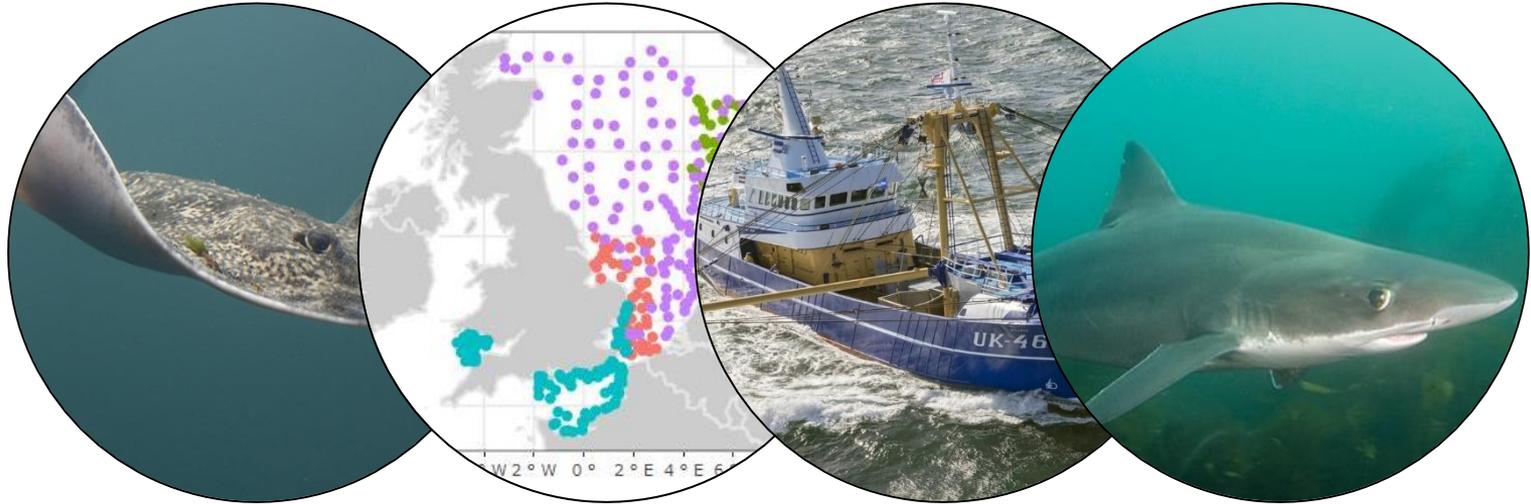


# ICES Working Group on Elasmobranch Fishes (WGEF)



# The assessment process

## European Commission (DGMARE)

Contacted by requester

Iteratively develop request, identify requester's role

Either regular advice

or one off advice

Request formulation

## Simplified framework for ICES provision of advice & quality assurance

Data quality assurance

Community of 1,500 experts

Expert group  
**WGEF**

Workshop  
**WKSHARK**  
**WKSATE**

Knowledge synthesis

Independent external reviewers

Previously reviewed methods & audits

**Benchmarks**

Review methods & process

Peer review

Advice shared

International committee approves advice

Draft advice

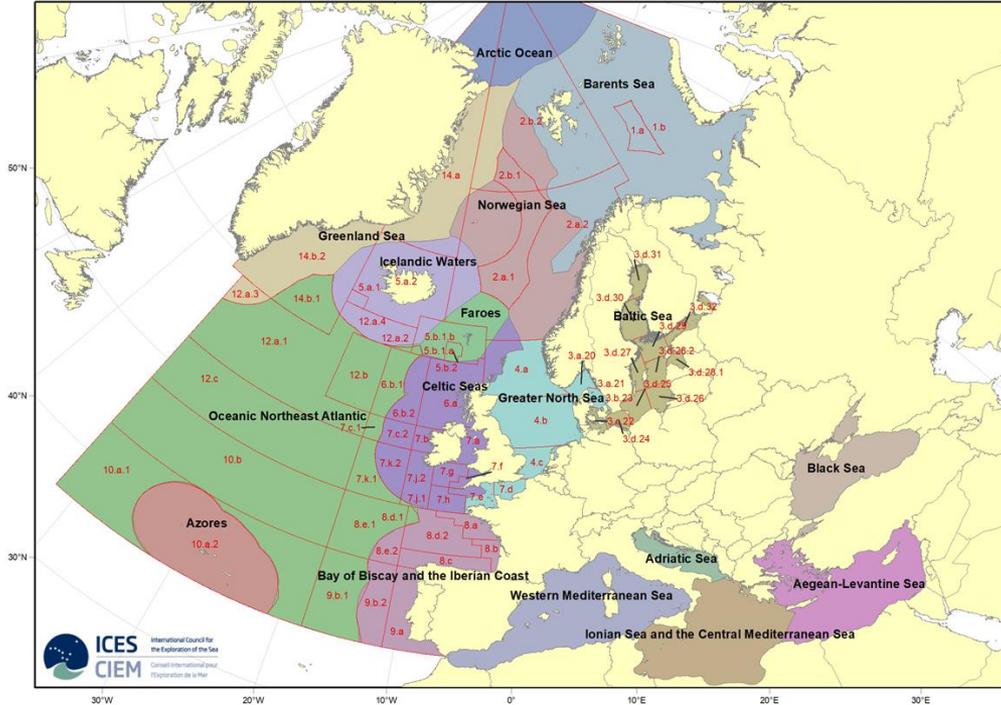
**ACOM**

**ADGEF**

Advice production

# 56 elasmobranch stocks

ICES Ecoregions including ICES Statistical Areas, ices.dk, Dec 2017



- Northeast Atlantic: 11 stocks
- Greater North Sea: 9 stocks
- Celtic Seas: 19 stocks
- Bay of Biscay/Iberian coast: 16 stocks
- Azores: 1 stock

# Stock categories

- 1 category 1 stock:



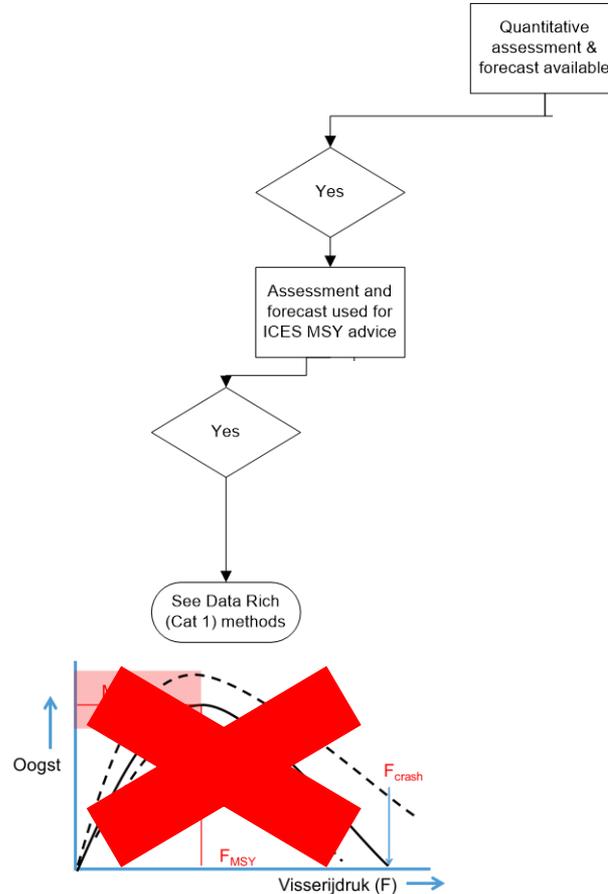
- 4 category 2 stocks (2022):



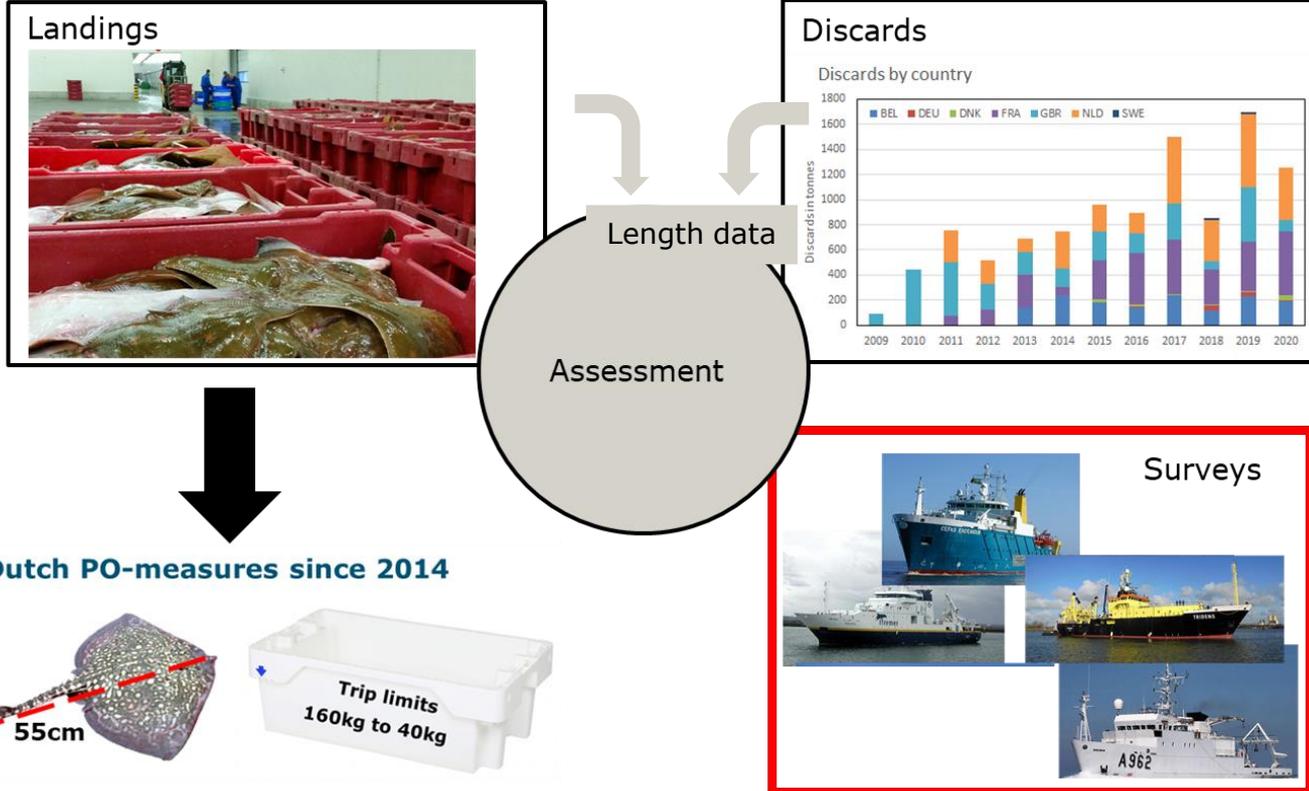
- 25 category 3 stocks:



- 26 category 5 & 6 stocks:

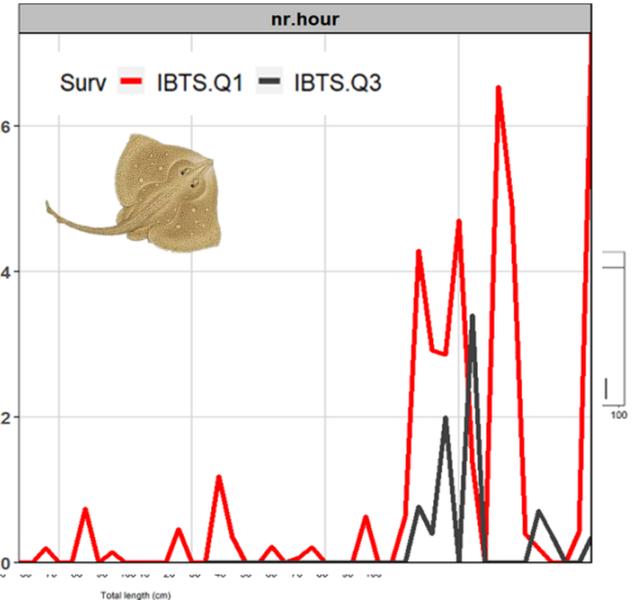
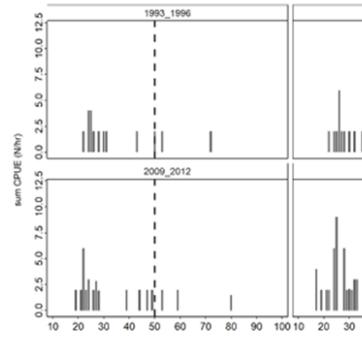
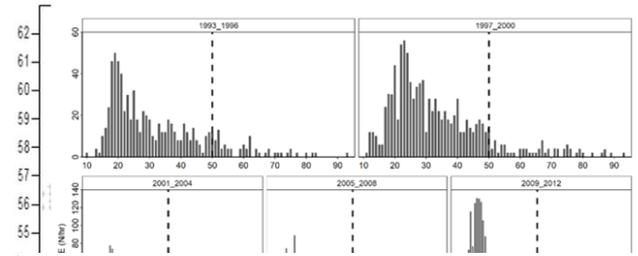


# Assessment data

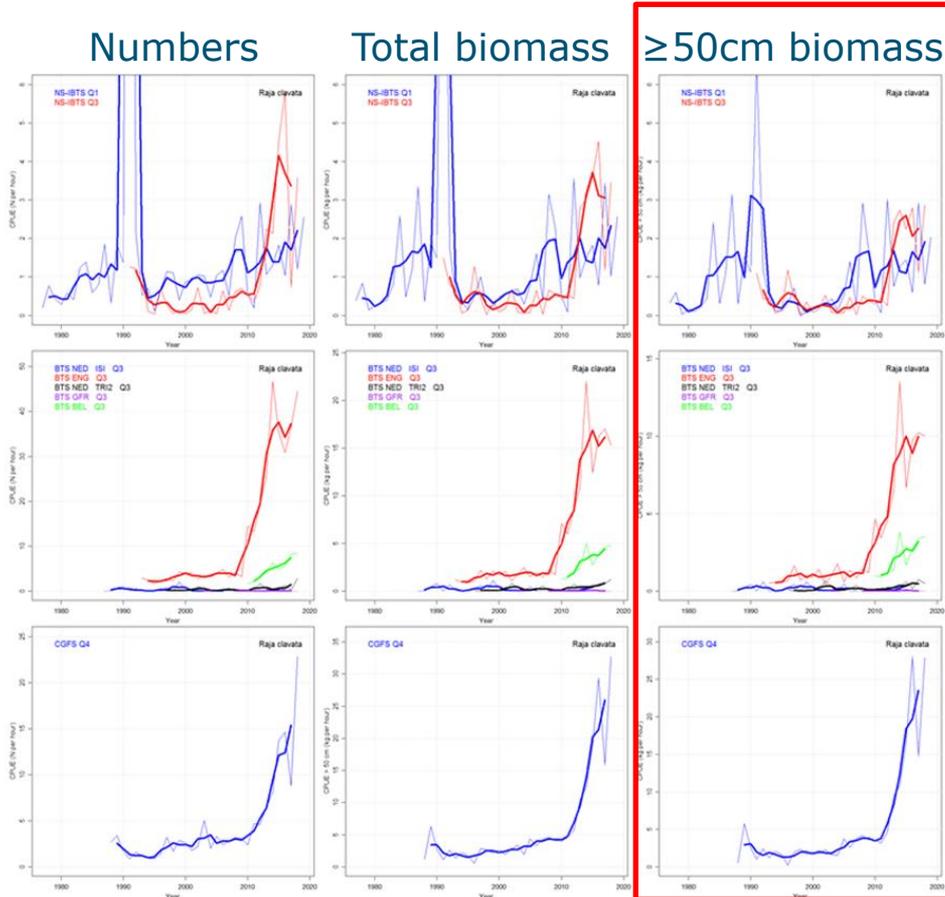


# WKSKATE 2020: Use of surveys

- The survey covers the main or full spatial distribution and bathymetric range of the species.
- The whole population is represented in the survey catch.
- The species is caught regularly along the survey and survey-series.



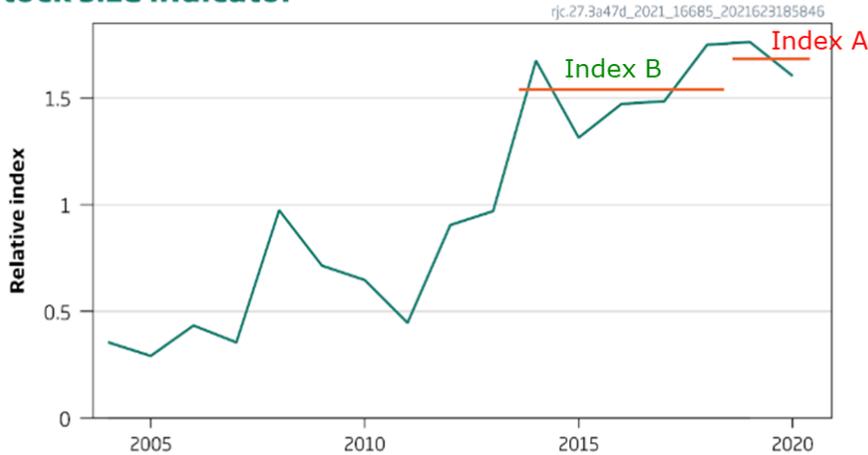
# Example of surveys used in RJC.27.3a47d



- Which surveys are relevant based on WKSKATE?
- Exploitable biomass index ( $\geq 50$  cm)
- Combining surveys
- Apply a 2 over 5 rule

# Stock size indicator

## Stock size indicator



Index A (2019-2020) = 1.68  
 Index B (2014-2018) = 1.54  
 A/B ratio (2 over 5 rule) = 1.09



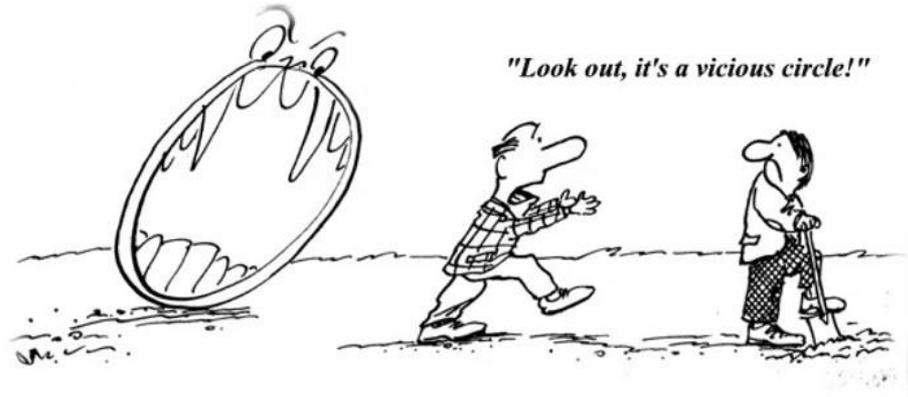
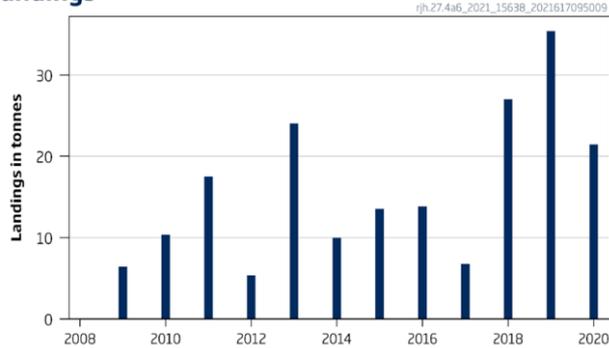
2 Precautionary principles

**Table 1** Thornback ray in Subarea 4 and in divisions 3.a and 7.d. The basis for the catch scenarios.\*

Index A (2019-2020)		1.68
Index B (2014-2018)		1.54
Index ratio (A/B)		1.09
Uncertainty cap	Not applied	-
Advised landings for 2020 and 2021 (issued in 2019)		2237 tonnes
Discard rate		Unknown
Precautionary buffer	Not applied	-
Landings advice **		2446 tonnes
% Advice change ***		+9%

# What about the category 5 & 6 stocks?

## Landings



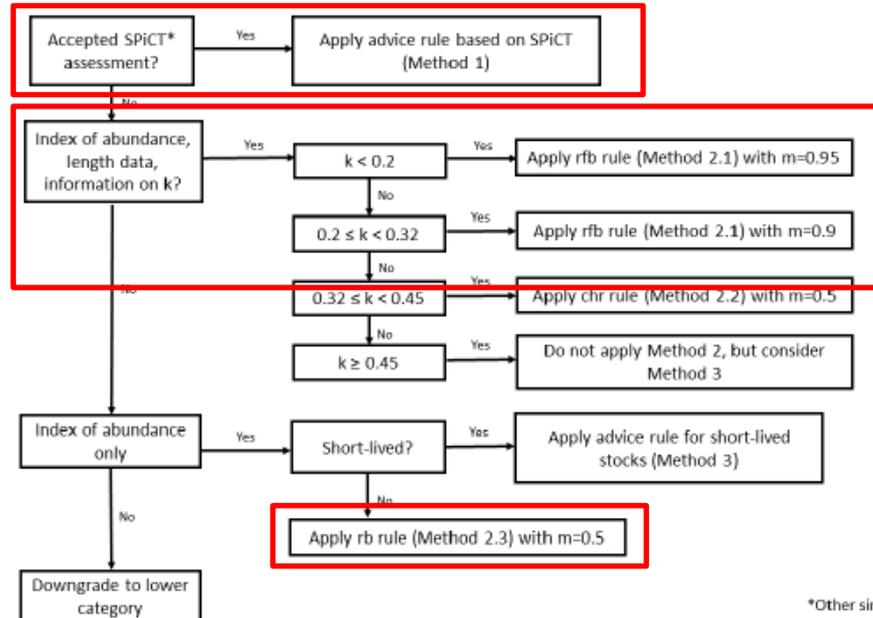
**Table 1** Blonde ray in Subarea 6 and Division 4.a. The basis for the catch scenarios\*.

Advised catch for 2020 and 2021 issued in 2019		9 tonnes
Discard rate		Unknown
Precautionary buffer	Applied	0.8
Landings advice **		7 tonnes
% Advice change ***		-20%

# Moving forward....

- WKLIFE X methods for Category 3 stocks as being more precautionary

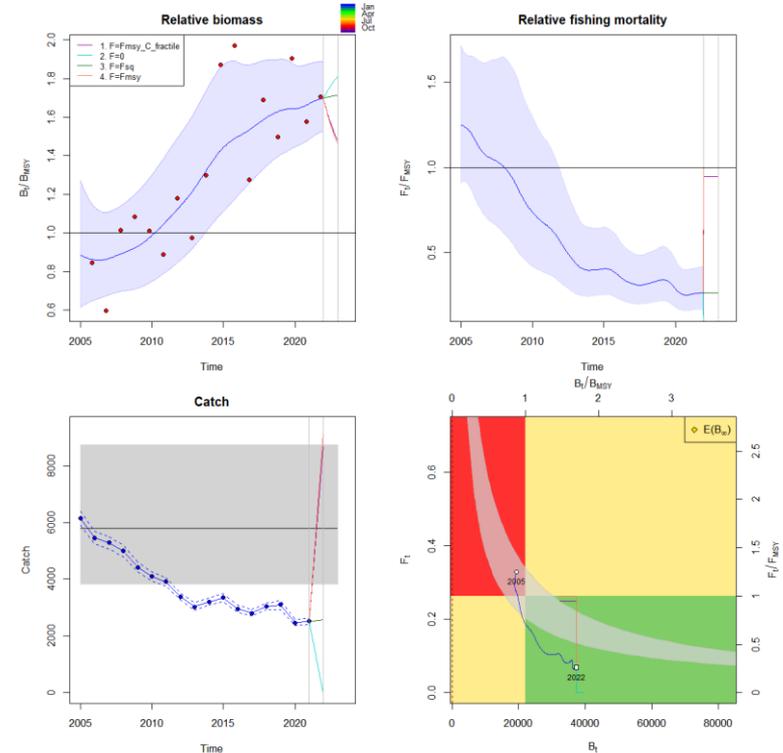
- Surplus Production models
- RFB
- RB



\*Other similar models (e.g. Jabba) that have been simulation-tested could be used

# Surplus Production models

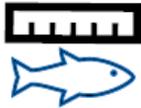
- Data-limited and no information on age or length required
- MSY approach
- Reference points for  $F_{msy}$  and  $B_{msy}$
- Input data:
  - Catches over time
  - Survey data
  - Life-history data
- Used in WKELASMO and WKBELASMO



# Rfb-rule



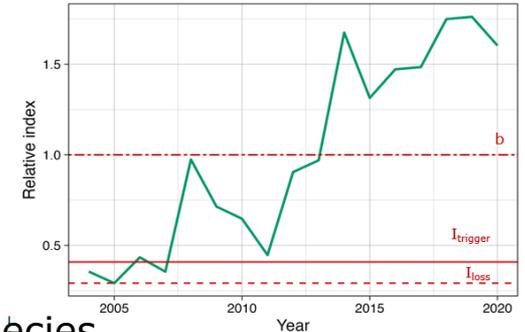
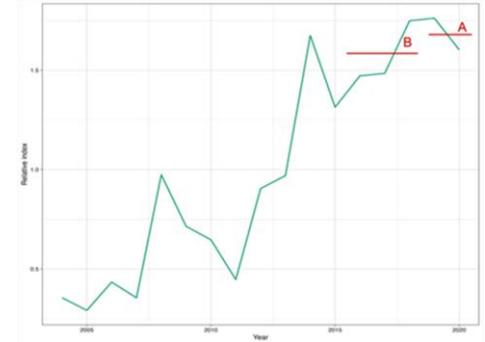
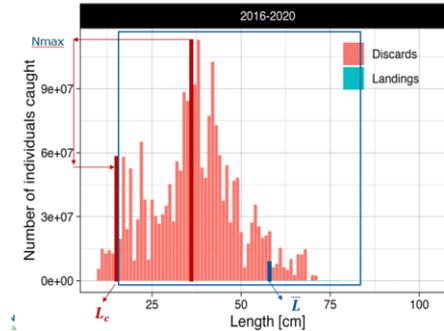
r: biomass ratio (survey trend)



f: fishing proxy (length data)



b: biomass safeguard



$$A_{y+1} = A_y r f b m$$

new advice

previous advice

multiplier (tuning parameter)

Based on life-history of the species

# Approach 2022 - 2024

- Consecutive benchmarks
  - WKELASMO 2022 (por.27.nea, rju.27.7de, rjn.27.678abd, rjc.27.8abd)
  - WKBELASMO 2023 (rjc.27.3a47d, rjm.27.3a47d & rjh.27.4bc7d)
  - WKBELASMO2 2024 (Iberian waters?)
- WGEF 2022
  - Advice for 31 stocks
  - 13 category 3 stocks applied WKLIFE X methods
- WGEF 2023
  - Advice for 25 stocks including quadrennial advice
  - 11 category 3 stocks using WKLIFE X methods
  - Explore conservation status advice

Thank you for  
your attention!

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