

How scientific advice is developed by ICES for EU Fisheries Policy decisions?

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Chair ICES Advisory Committee



Science for sustainable seas



What is ICES?

HOW WE WORK



Mission

To advance and share scientific understanding of marine ecosystems and the services they provide and to use this knowledge to generate state-of-the-art advice for meeting conservation, management and sustainability goals



Key requesters of advice

Advice published **2023**

198

Fishing opportunities

17

Special requests

6

Overviews +
guides

7

Technical
services

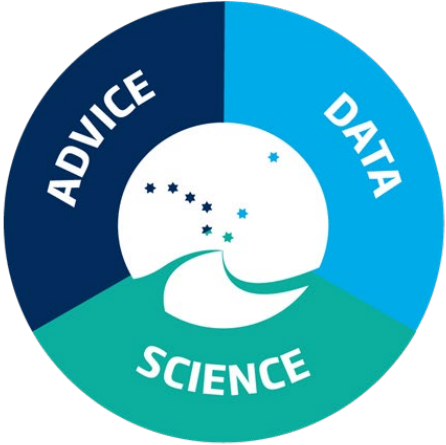
Guide to ICES advisory
framework & principles

Advice on
fishing opportunities

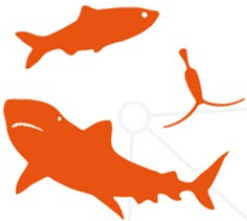
Advice on
ecosystem services
& effects



10 Principles for ICES advice



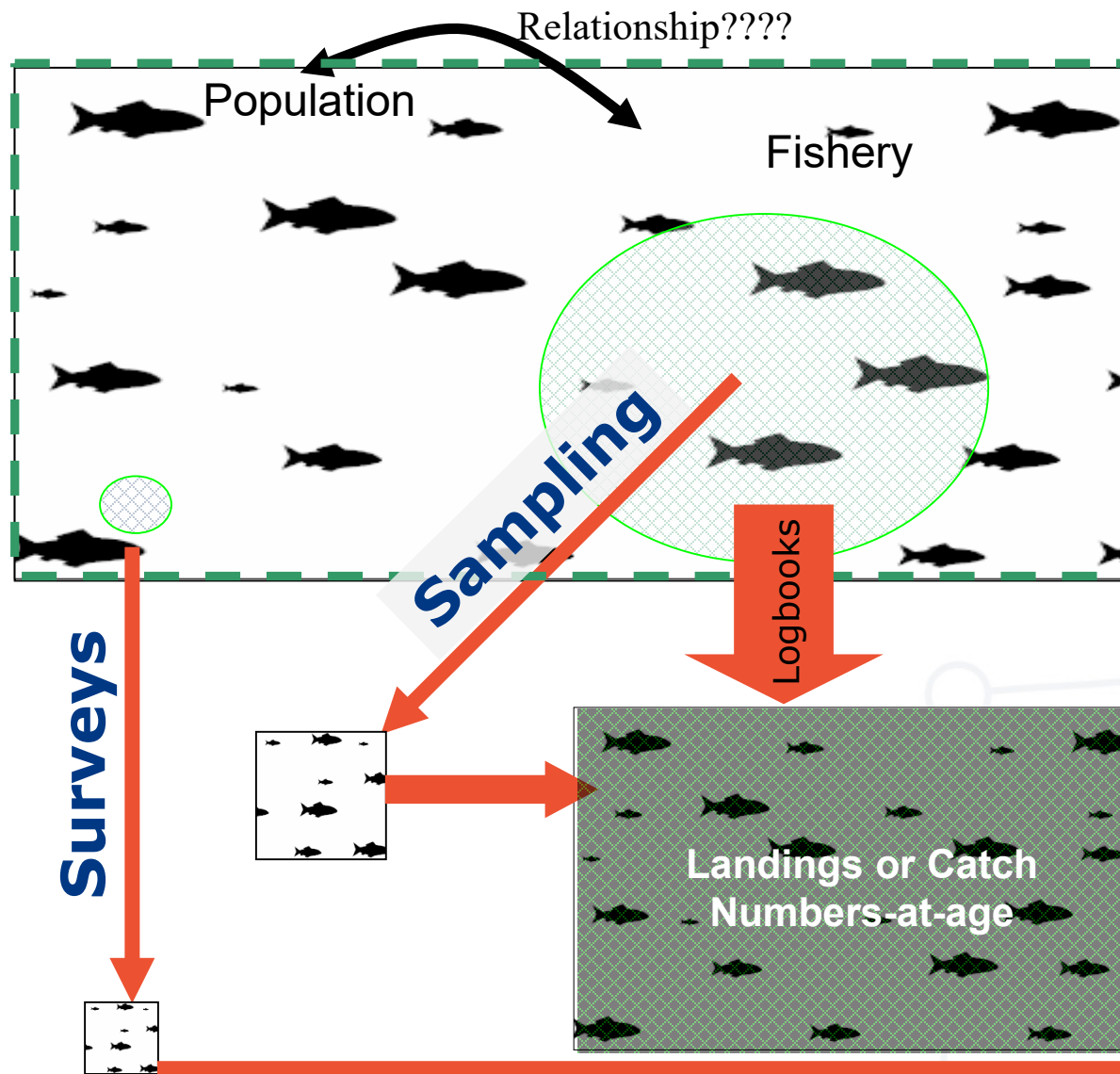
Information
ICES data centre



Understanding
ICES science



Advice for management
ICES advice

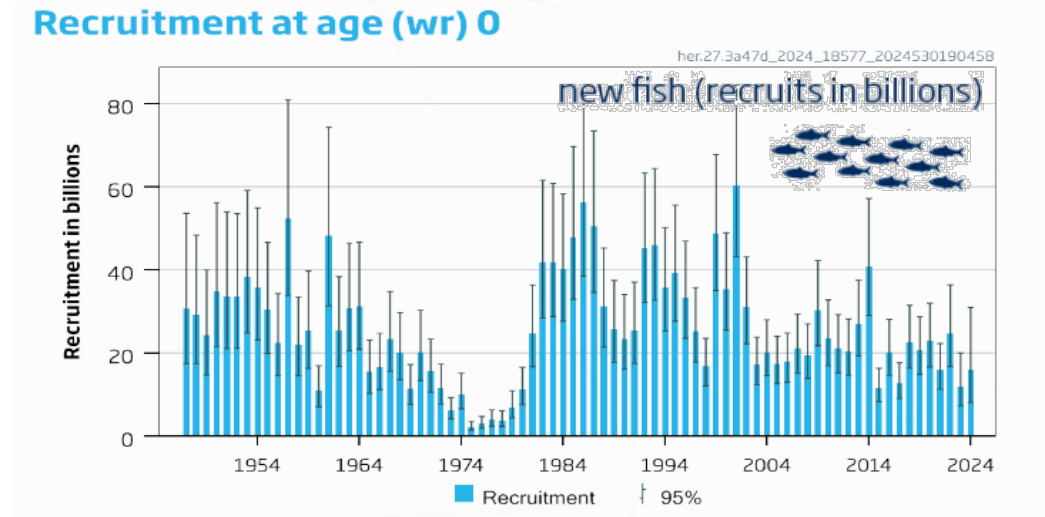
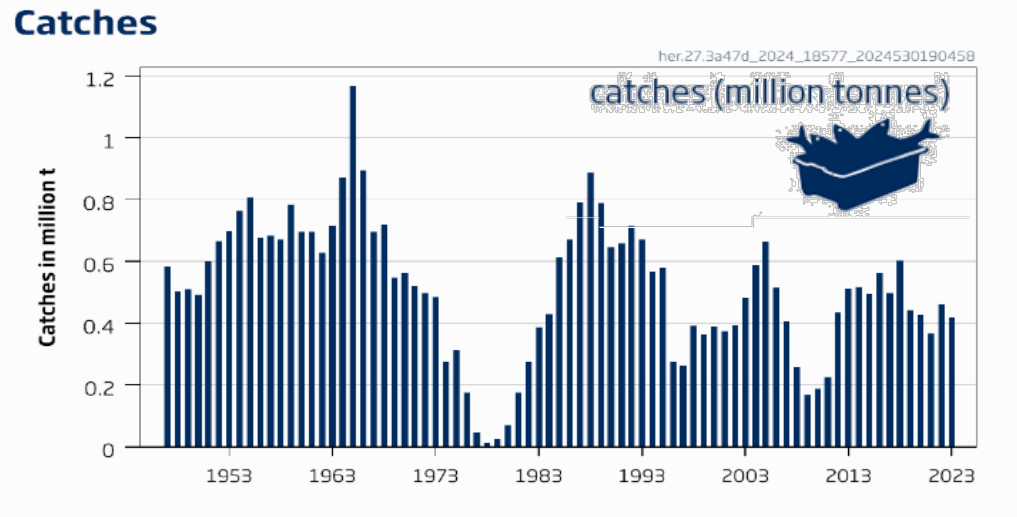


$$N_a = N_{a+1} e^{M_a} + C_a e^{M_a/2}$$

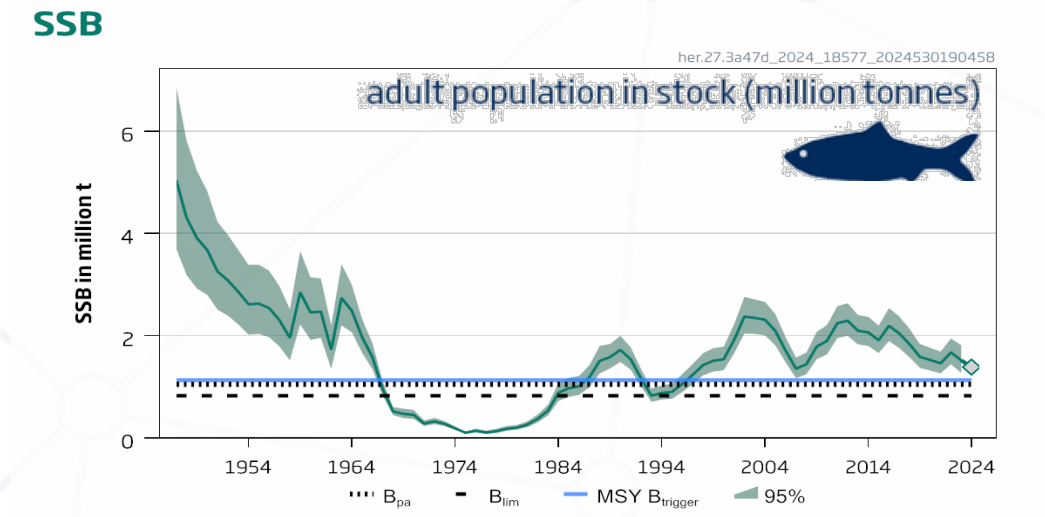
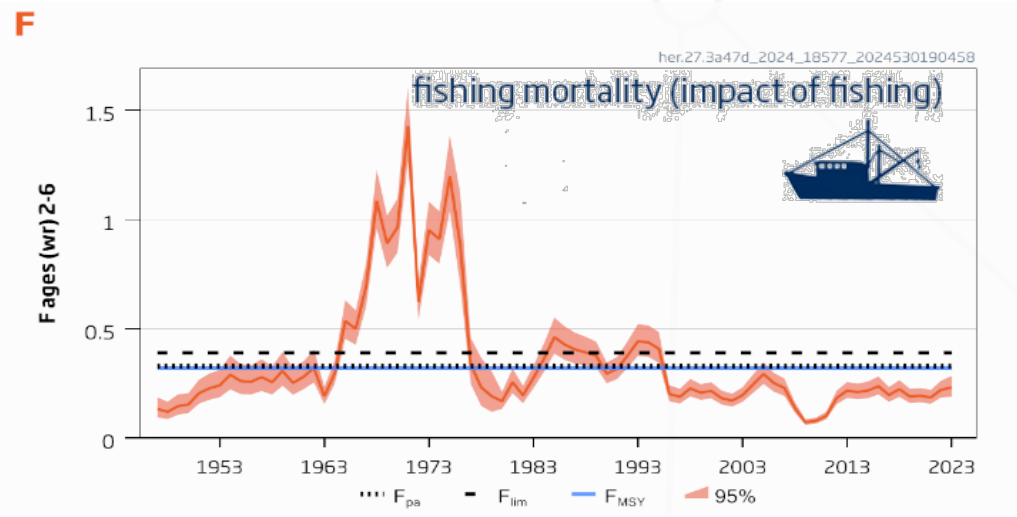
and

$$F_a = \ln\left(\frac{N_a}{N_{a+1}}\right) - M_a$$

This produces a stock assessment



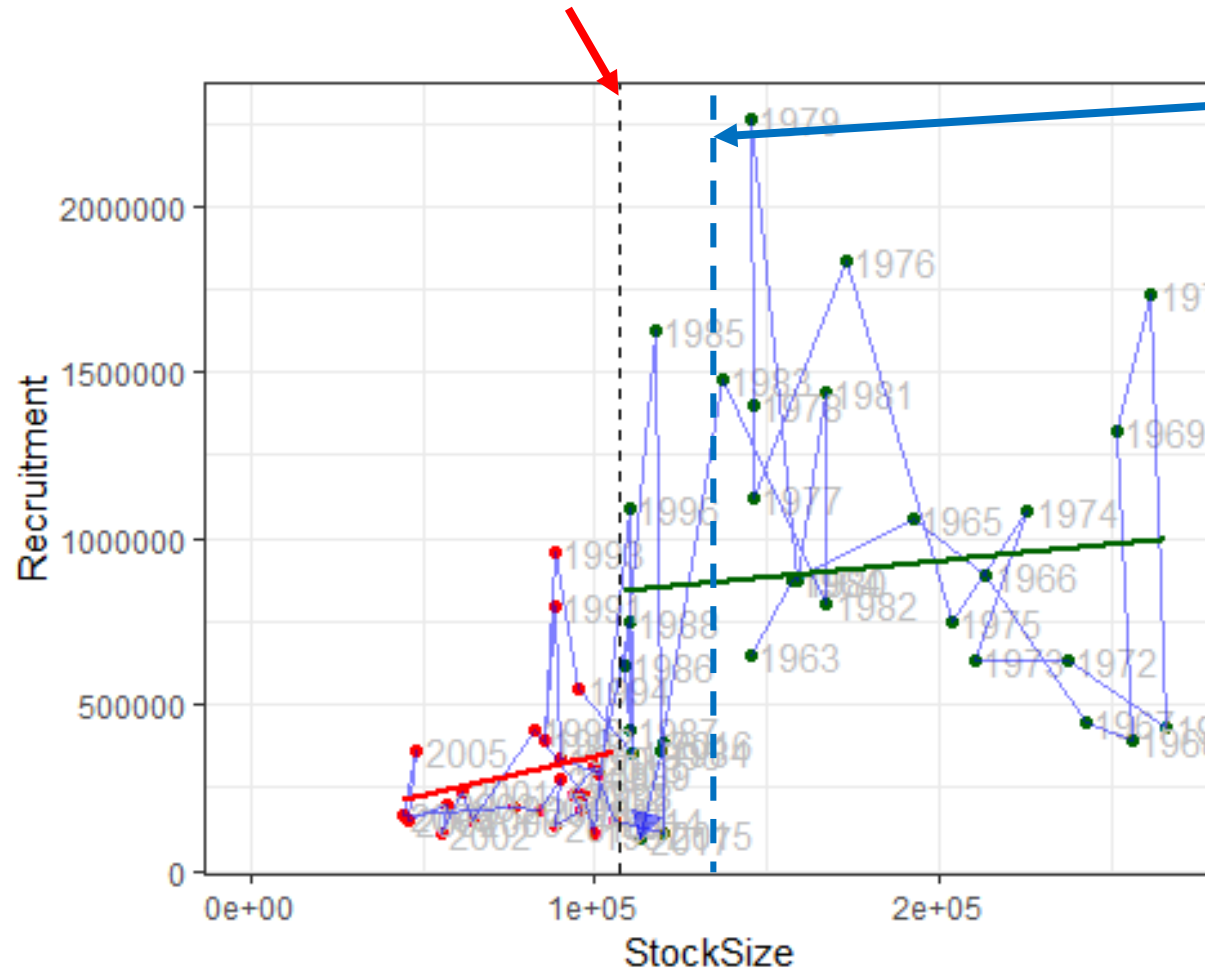
North Sea herring



ICES Precautionary Approach



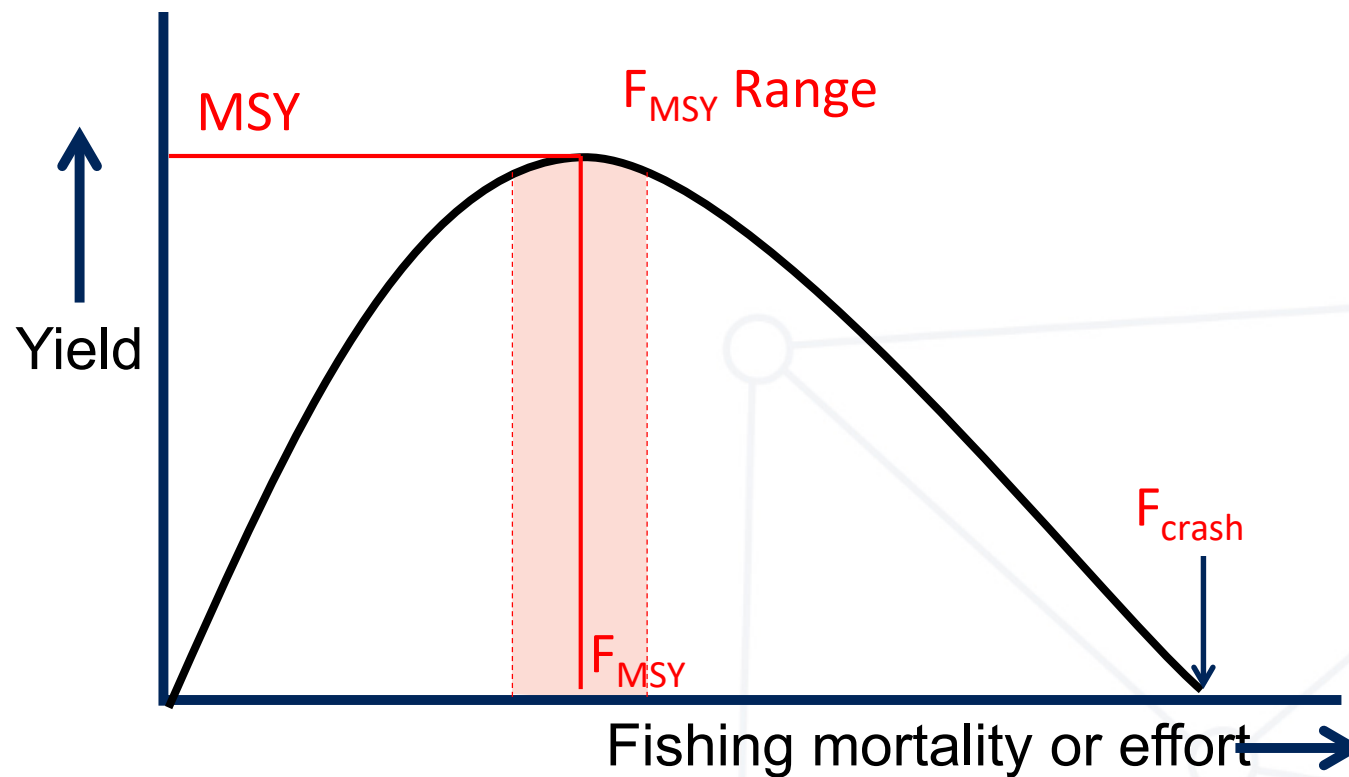
B_{lim} limit reference points associated with *reduced reproductive capacity*



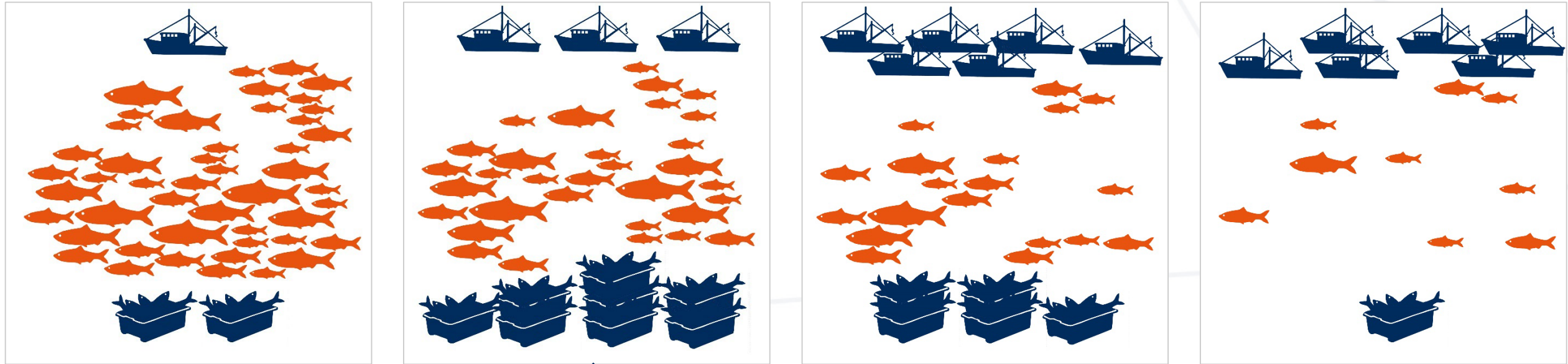
B_{pa} precautionary reference points: “buffers” to *account for assessment uncertainty*

Maximising Yield

- Yield curve shows yield as function of fishing mortality or fishing effort



Reference points maximum sustainable yield (MSY)



ICES interpretation of MSY is maximization of average long-term yield from sustainable stocks

Informing Ecosystems Based Management

- Management of human activities
- Protecting the marine environment
- Consideration of collective and cumulative pressures
- Balancing sustainable use with conservation and restoration
- Collaboration with diverse stakeholders
- Optimization of benefits among diverse societal goals
- Assessing trade-offs across multiple dimensions
- Varying scales (spatial and temporal)

