# ICES advice for North Western Waters stocks

NWWAC meeting, July 2025

## Plaice benchmarks

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Image Dirk Vonten, Fotolia

# Plaice benchmarks

- 2 benchmarks included plaice – WKBPLAICE, WKBNSCS
- Two stocks for this group
  - 7d Eastern English Channel
  - 7e Western English Channel

# Plaice 7d

- WKBNSCS
- With turbot SA 4 and whiting 7a

# Plaice 7d

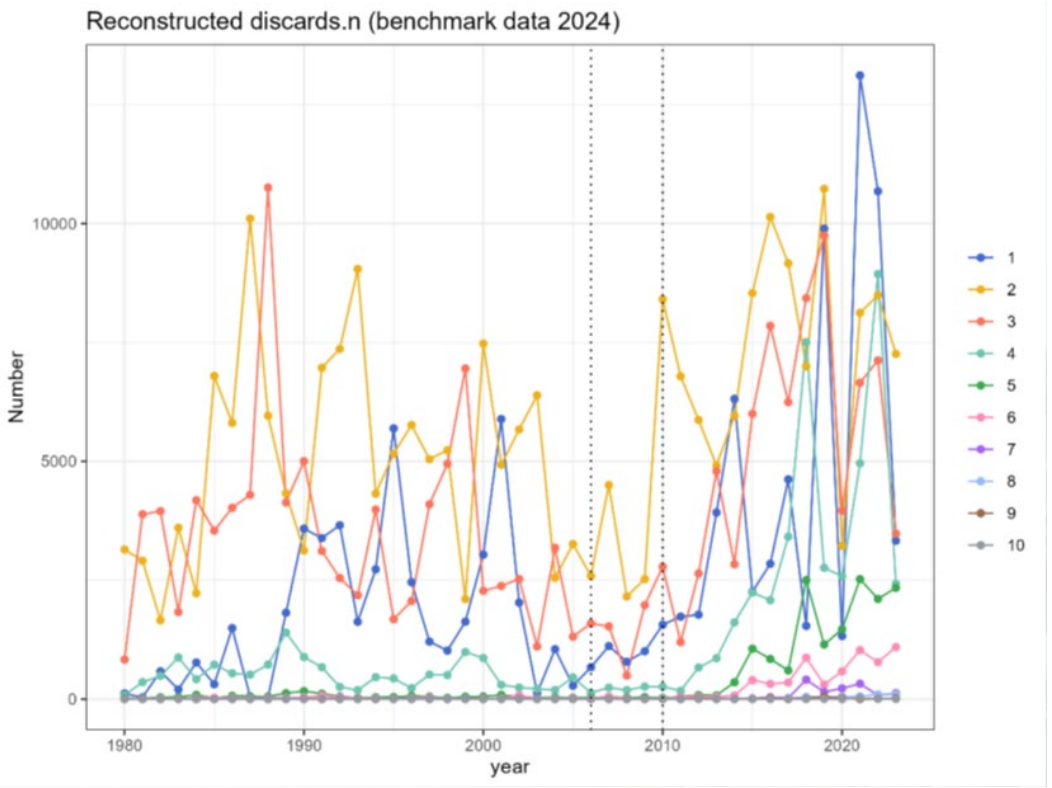
- Stock ID
- Catch data
- Indices of abundance
- Biological parameters
- Assessment method

# Plaice 7d

- Stock ID
  - Discussed the migration issue but no new studies
  - No change
  - Remove 65% of mature individuals caught in Q1 in 7d
    - 50% are from ple.27.420
    - 12.86% from ple.27.7e (revised after benchmark)
  - Recommend more work on the migration issue

# Plaice 7d

- Catch
- No discard data prior to 2006
- Used data from 2006-2010 (a period of stable ratio b/w landings and discards) to reconstruct the time period prior to 2006

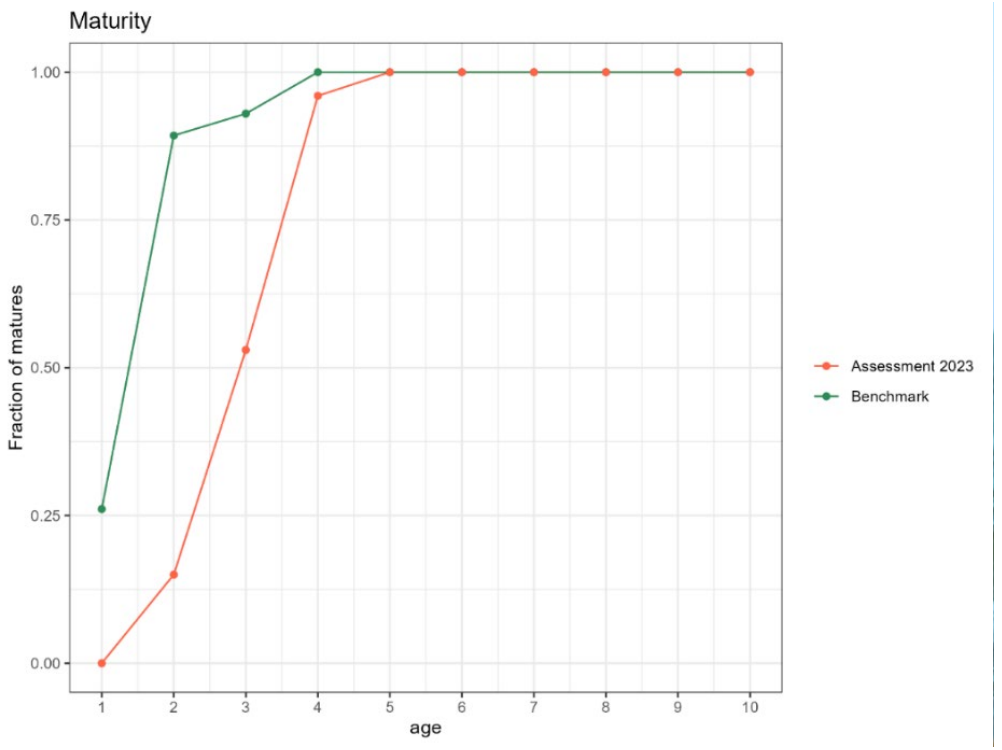


# Plaice 7d

- Indices of abundance
  - Updated the indices (UK BTS from Q3 [B2453] and FR GFS from Q4 [G3425])
  - Explored a recruitment index (French NOURSEINE) but many missing years and will not run for at least next 2 years – tested but not included in final model

# Plaice 7d

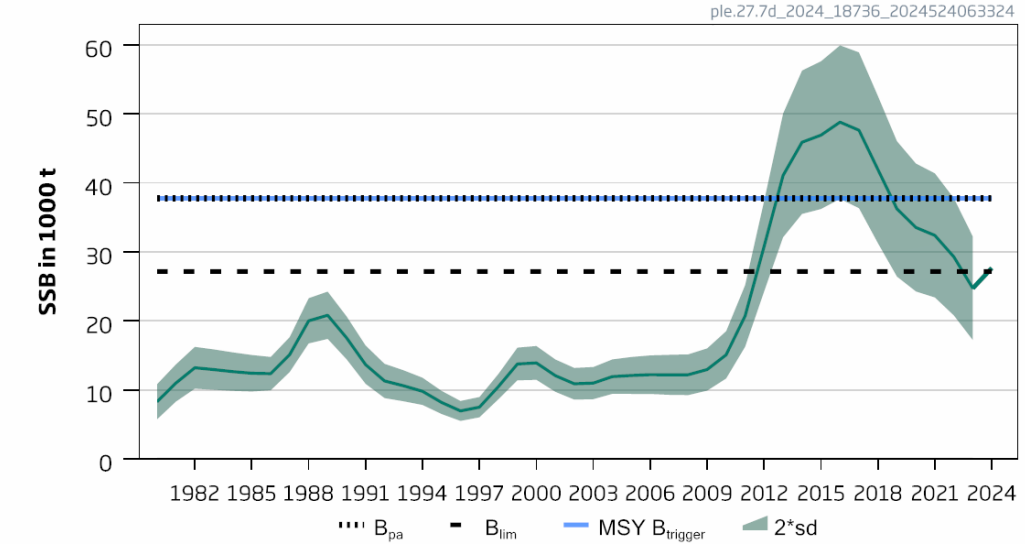
- Biological parameters
- New study – new maturity ogive – earlier maturation
- Natural mortality explored but decided on constant at age

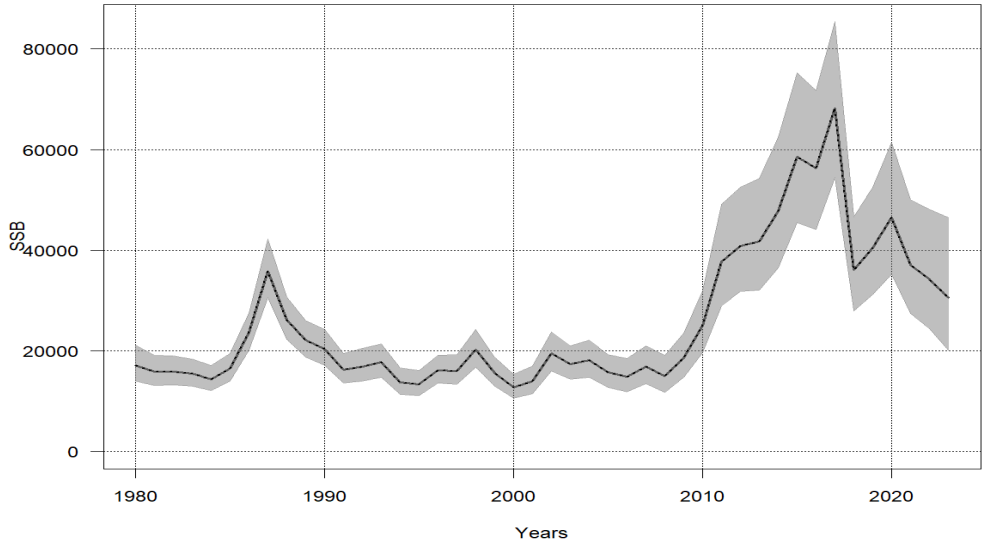


# Plaice 7d

- Assessment model
  - 8 different model configurations tested
  - Final model subjected to suite of diagnostics – SAM (previously Aarts and Poos)

**Spawing Stock Biomass**



# Plaice 7d

- Reference points

| Framework | Reference point | New Value | Old Value | Technical basis | Source |
|---|---|---|---|---|---|
| Maximum sustainable yield (MSY) approach | MSY $B_{trigger}$ | 34942 | 37761 | $B_{PA}$; in tonnes | ICES (2025b) |
| | $F_{MSY}$ | 0.203 | 0.156 | Stochastic simulations (EqSim) based on the recruitment period 1980–2023 | ICES (2025b) |
| Precautionary approach | $B_{lim}$ | 25105 | 27174 | Break-point of hockey stick stock–recruit relationship, based on recruitment period 1980–2023; in tonnes | ICES (2025b) |
| | $B_{PA}$ | 34942 | 37761 | $B_{lim} \times \exp(1.645 \times \sigma) \approx 1.4 \times B_{lim}$, $\sigma = 0.20$; in tonnes | ICES (2025b) |
| | $F_{PA}$ | 0.246 | 0.238 | The F that provides a 95% probability for spawning-stock biomass (SSB) to be above $B_{lim}$ ($F_{P05}$ with advice rule) | ICES (2025b) |
| EU Management plan (MAP)* | MAP MSY $B_{trigger}$ | 34942 | 37761 | MSY $B_{trigger}$; in tonnes | ICES (2025b) |
| | MAP $B_{lim}$ | 25105 | 27174 | $B_{lim}$; in tonnes | ICES (2025b) |
| | MAP $F_{MSY}$ | 0.203 | 0.156 | $F_{MSY}$ | ICES (2025b) |
| | MAP range $F_{lower}$ | 0.147–0.203 | 0.113-0.156 | Consistent with ranges resulting in no more than 5% reduction in long-term yield compared with MSY | ICES (2025b) |
| | MAP range $F_{upper}$ | 0.203–0.246 | 0.156–0.224 | Consistent with ranges resulting in no more than 5% reduction in long-term yield compared with MSY | ICES (2025b) |

# Plaice 7e

- WKBPLAICE
- With plaice subdiv 21-23 and subdiv 24-32 (benchmark combined into one stock)

# Plaice 7e

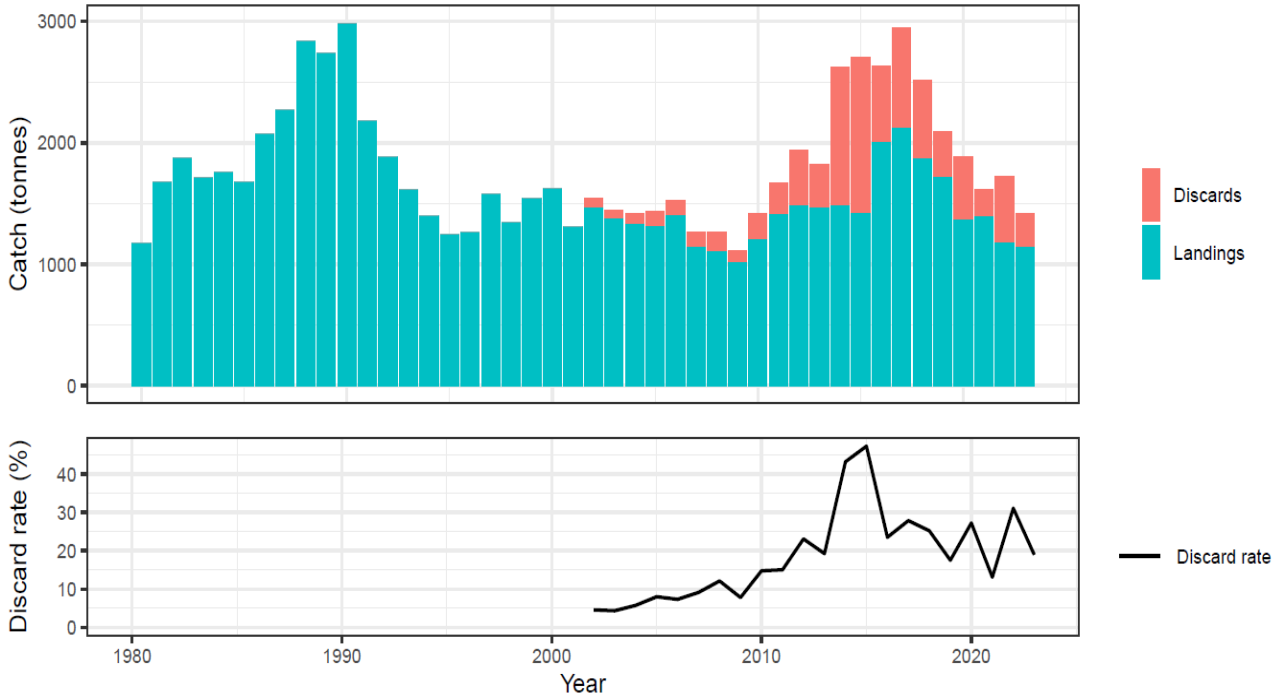
- Stock ID
- Catch data
- Indices of abundance
- Biological parameters
- Assessment method

# Plaice 7e

- Stock ID
  - Discussed the migration issue but no new data
  - No change
  - 12.86 % of catch in 7d are from 7e (revised after benchmark)

# Plaice 7d

- Catch
- Catch data reviewed
- Discards available since 2002 – about 20% - updated annually
- Discard survival 50%

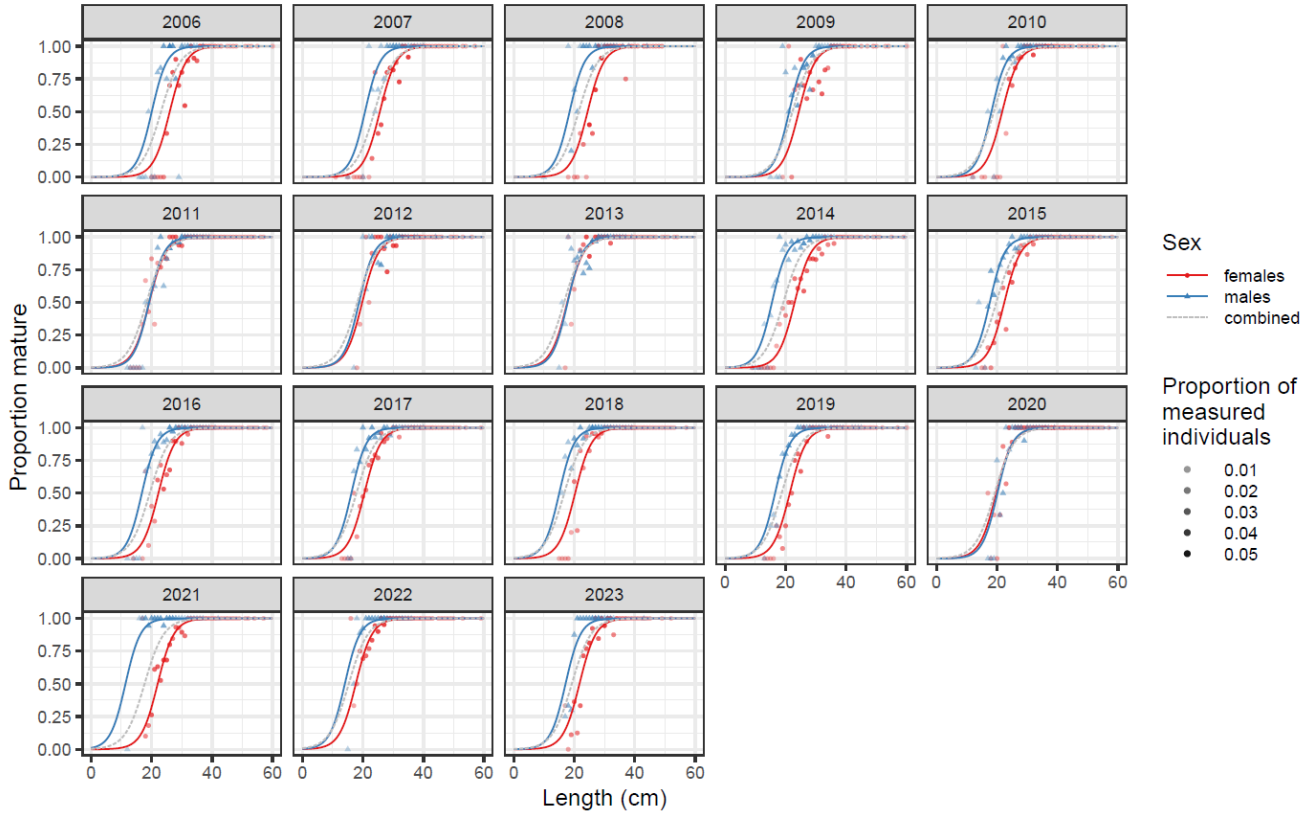


# Plaice 7e

- Indices of abundance
  - Reviewed 2 indices - UK-FSP and Q1SWBeam
  - UK-FSP was retained as index

# Plaice 7e

- Biological parameters
- Catch weights no longer smoothed – used raw values
- Previously ‘borrowed’ ogive – maturities now calculated from survey
- Several natural mortality assumptions tested

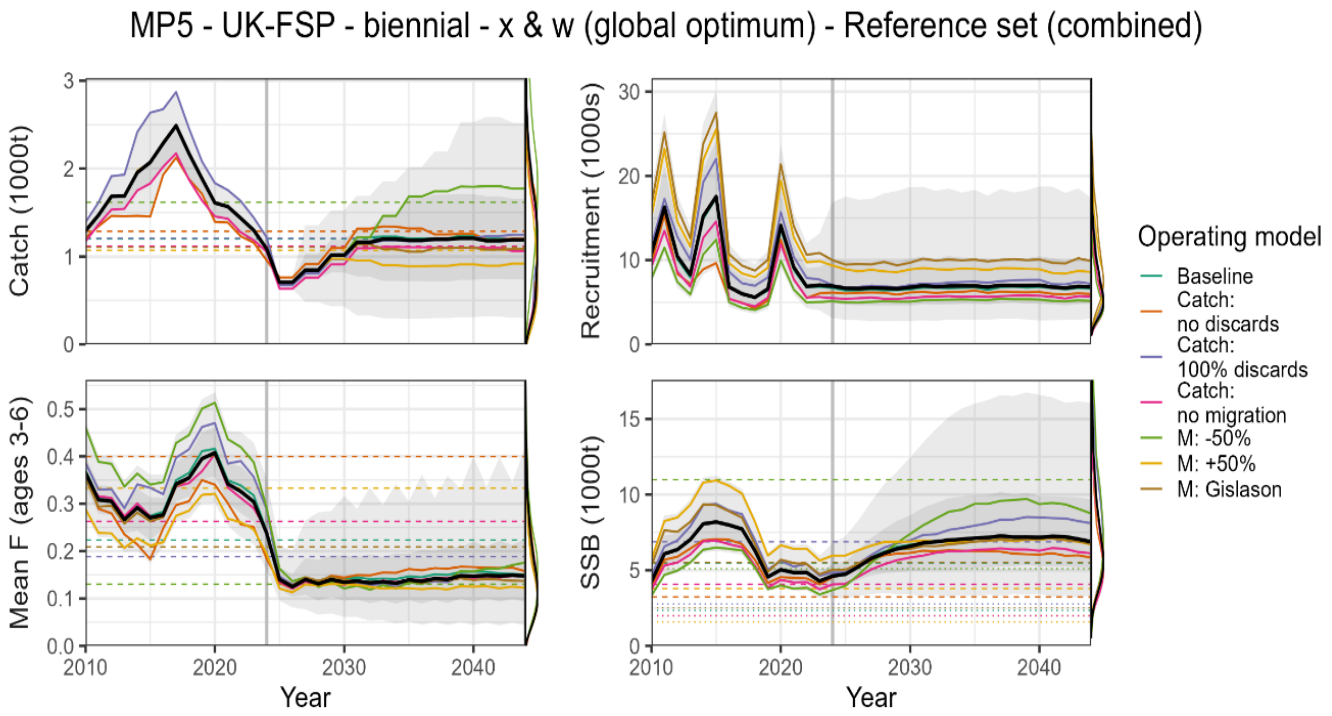


# Plaice 7e

- Assessment model
  - Attempted category 1 – too much uncertainty
  - Used MSE to develop CHR method for specific stock
  - Developed 14 operating models and tested 10 different HCRs across them
  - OMs varied in natural mortality assumptions, recruitment level, discarding, migration, catch relative to TAC, uncertainty in indices
  - HCR varied in which index used, annual or biennial advice, what was tuned (only HR multiplier or also multiplier defining Itrigger)
  - Performance against  risk less than Blim, Catch/MSY, SSB/BMSY

# Plaice 7e

- Selected HCR
- Highest long term catch, highest long term SSB
- Advice every 2 years using the UK-FSP survey, robust even to recruitment failure



# Plaice 7e

- CHR calculation (I × HR × b × m)
- I=most recent biomass index (avg last 2 years)
- HR=MSY proxy harvest rate=1395
- b=I/trigger if I<trigger otherwise 1
- m=1 for this stock
- HR, trigger and m all part of the ‘tuning’

- Then need to account for discards and discard survival
- Catch advice [CHR calculation]/[1 – discard rate × discard survival]
- Landings corresponding to advice [advised catch] × [1 - discard rate]

- Also make calculation including fish caught in 7d