Cefas Scallop Stock Assessment Channel (27.7.d & 27.7.e) 2017

NWWAC, Madrid: 2018

World Class Science for the Marine and Freshwater Environment

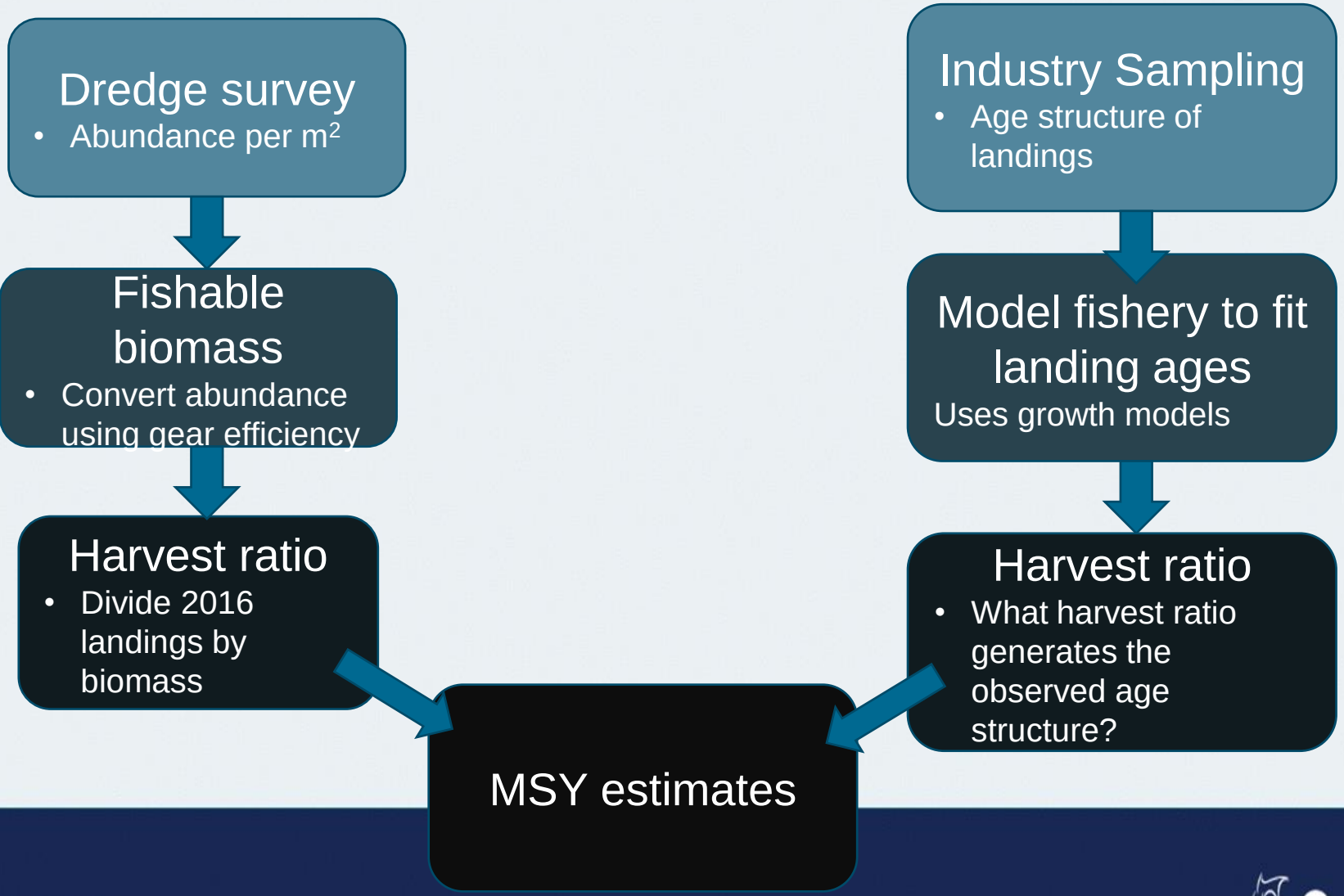
Centre for Environment Fisheries & Aquaculture Science

Cefas

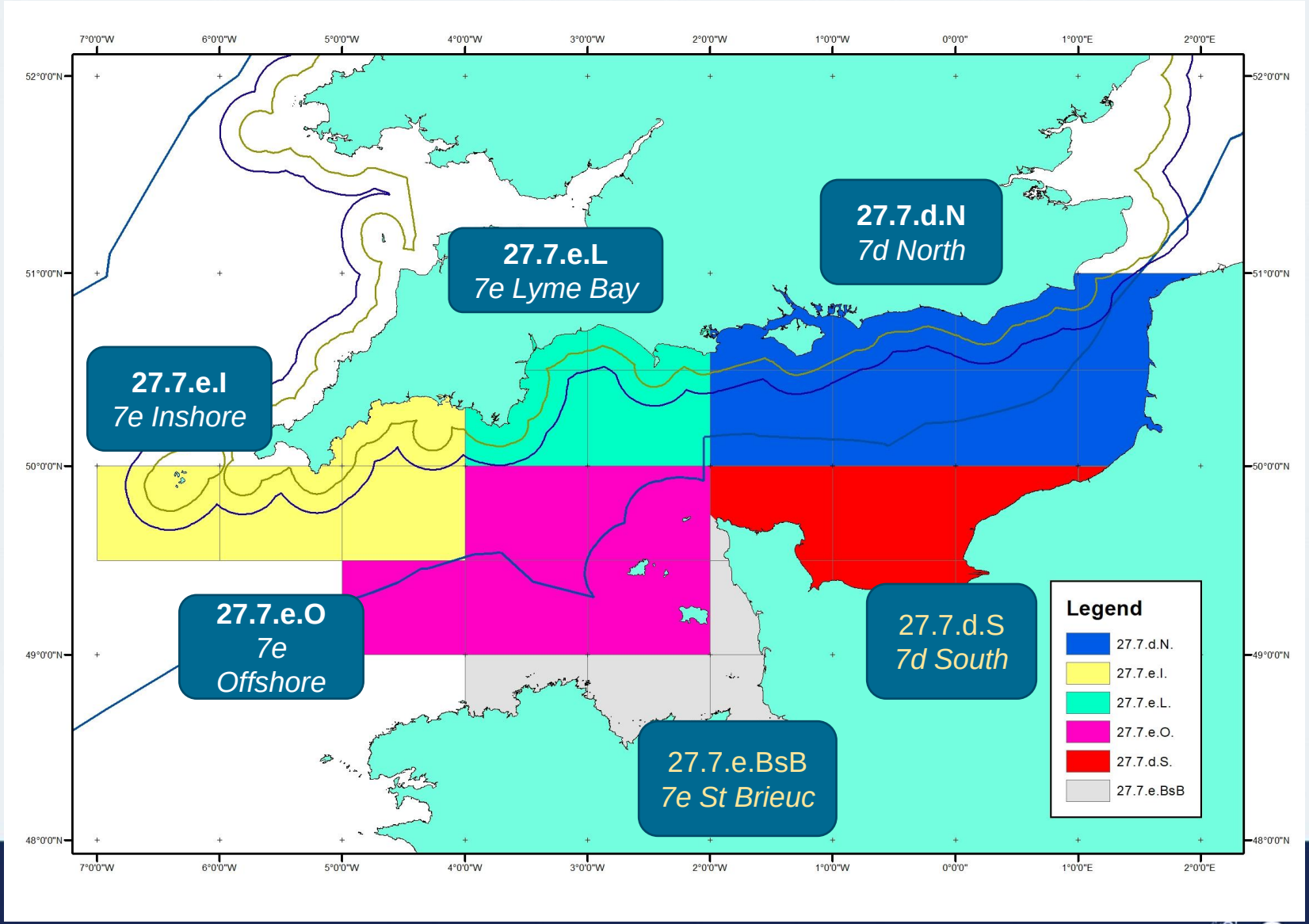
Project development

- 1st year of assessments, anticipated to be annual for the forseeable future.
- Collaborative exercise between Cefas, Defra and UK industry
- Expectations of further refinement over next couple of years.

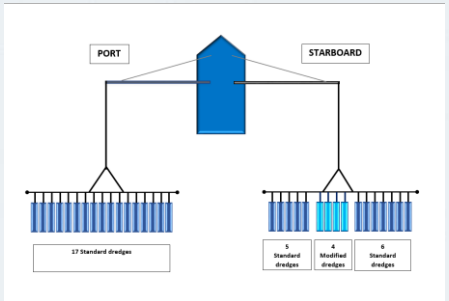
Assessment overview: 2 views of the fishery



Assessment area definition



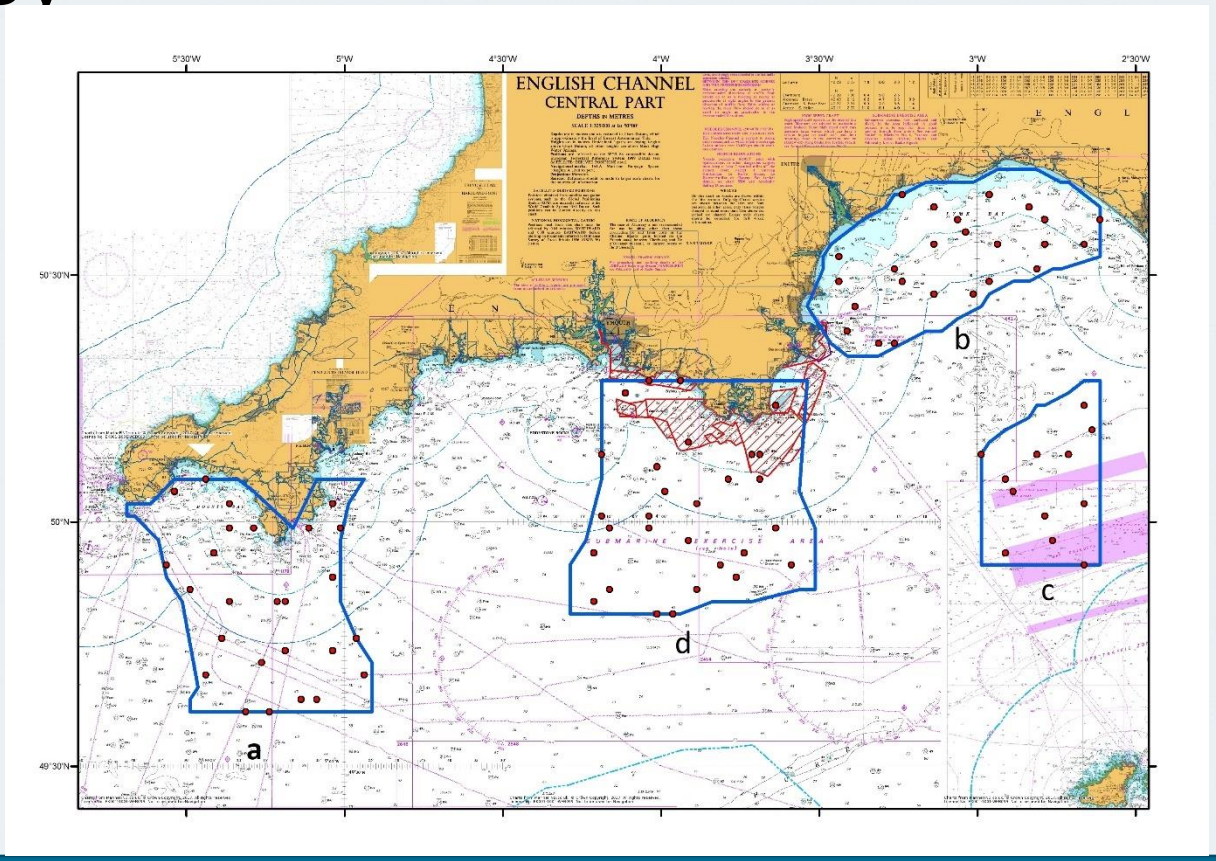
Dredge survey.



- Fished beds identified using VMS
- Random stratified design to ensure spatial coverage
  - UK Industry requested ability to choose some stations
- 15 minute tows on chartered commercial vessel
- Fishable biomass estimated
  - Numbers per square metre * efficiency * area
  - Raise to unsampled areas on bed

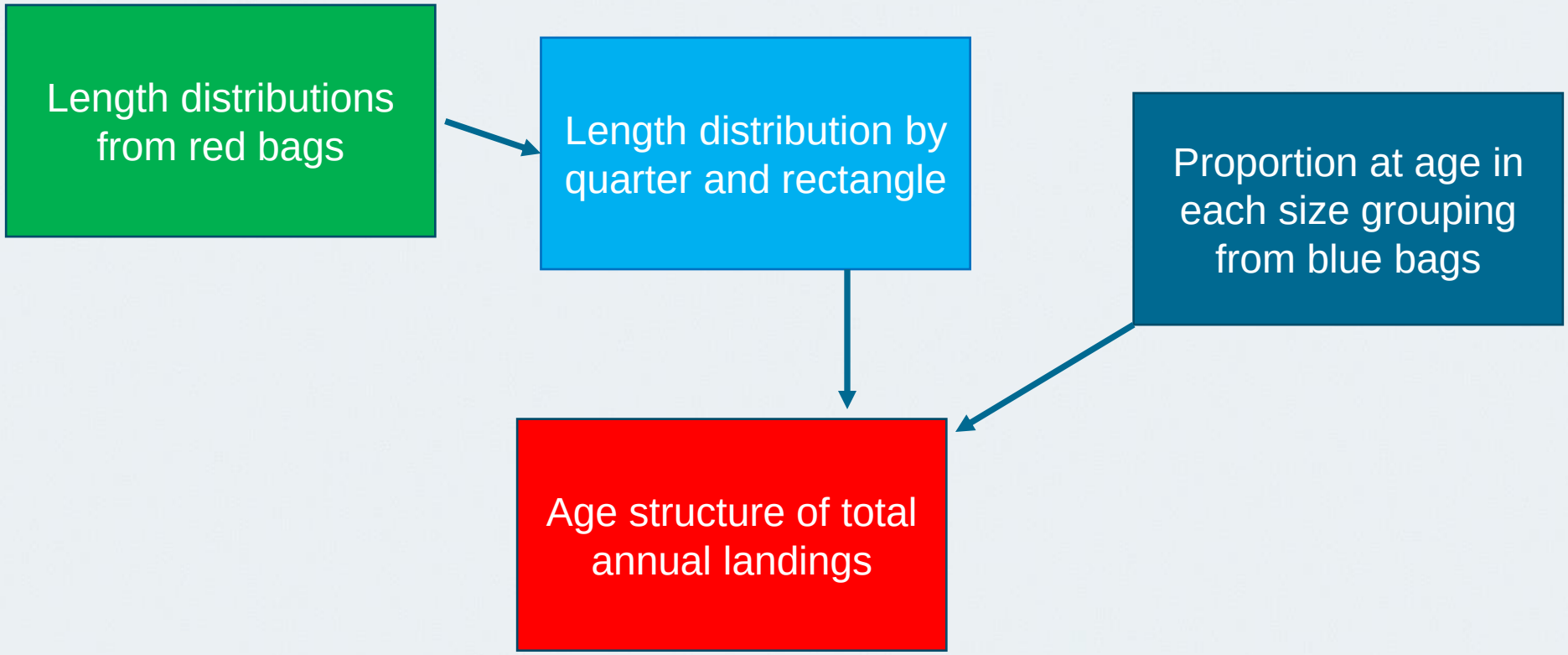
- Harvest ratio = Landings 2016 / Fishable biomass.

TV survey



- Unfished beds defined by discussions with UK fishers
- 4 areas in WEC, 3 surveyed
- Stratified randomised survey design as per dredge survey

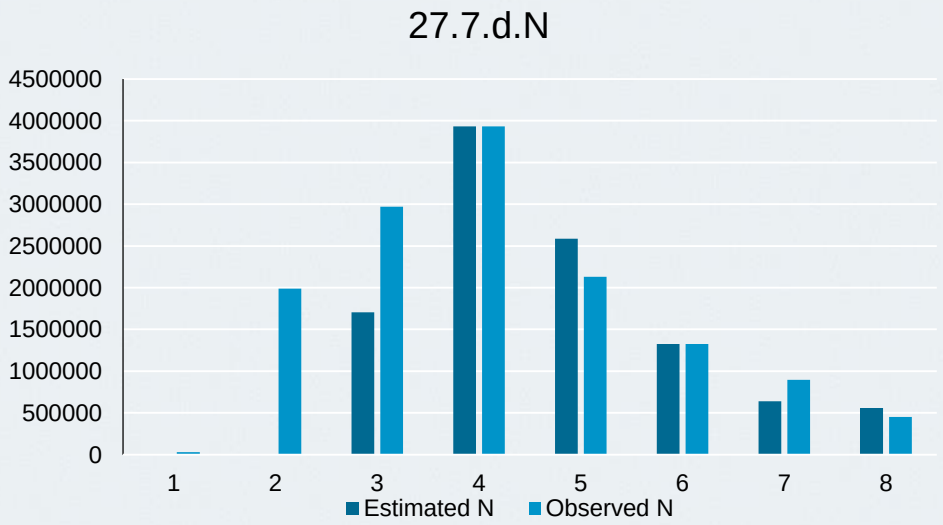
Landings sampling



Using sampling scheme data to estimate Harvest Rate

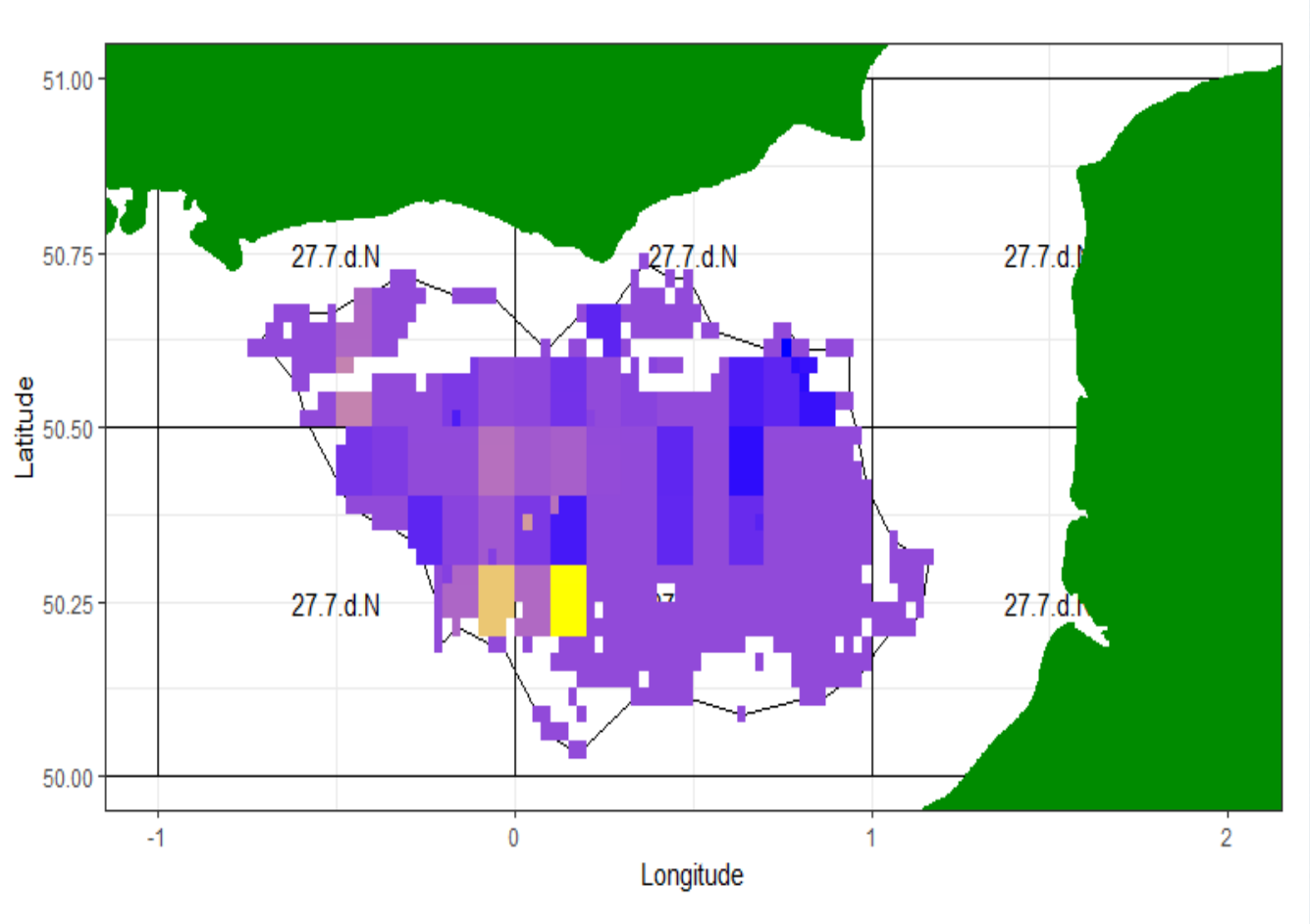
Observed age structure from sampling scheme

Model population
Growth rates from recent studies
Tries to match to observed catch

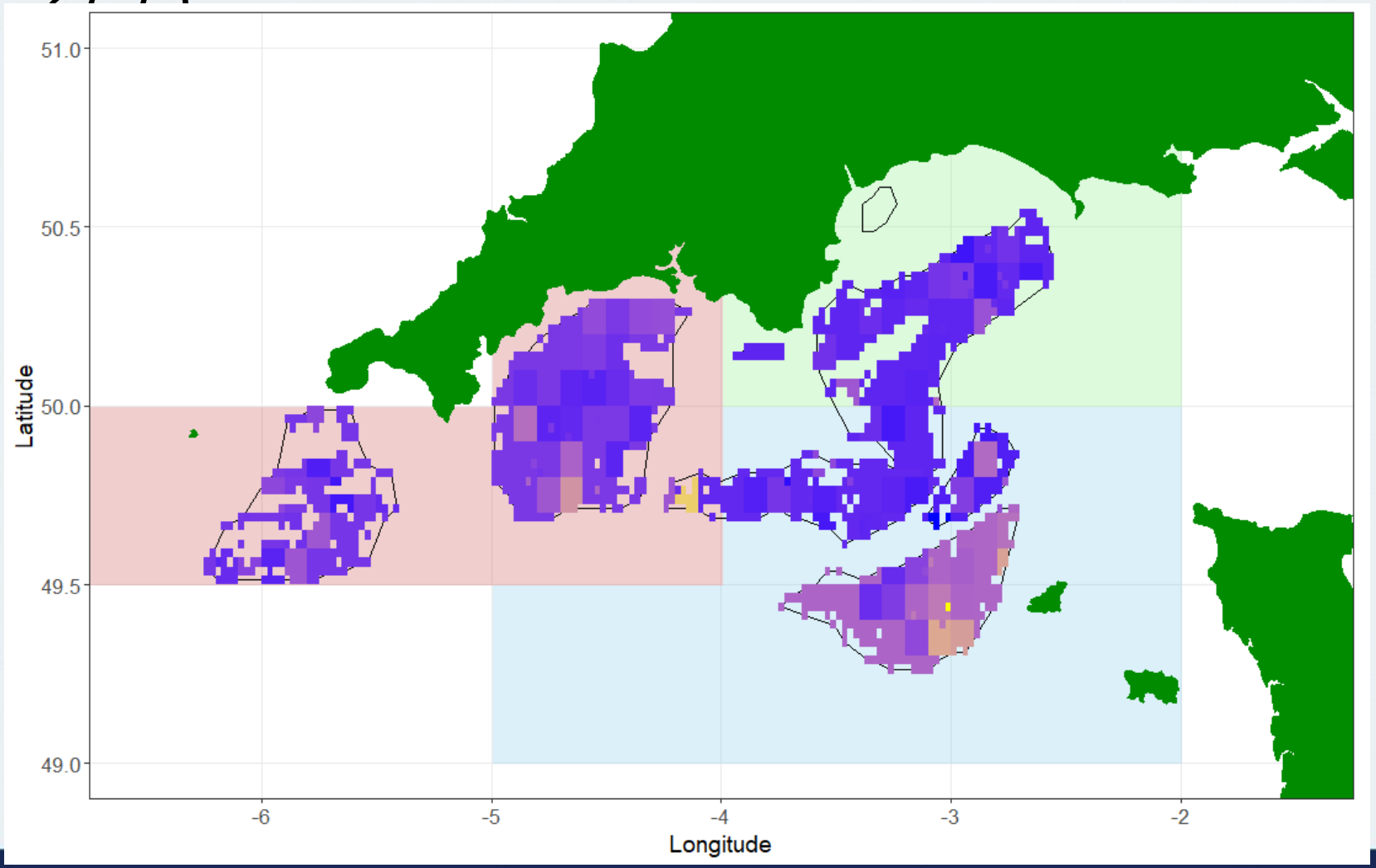


Estimates the **recruitment** and subsequent **fishing pressure** required to match observed age structure

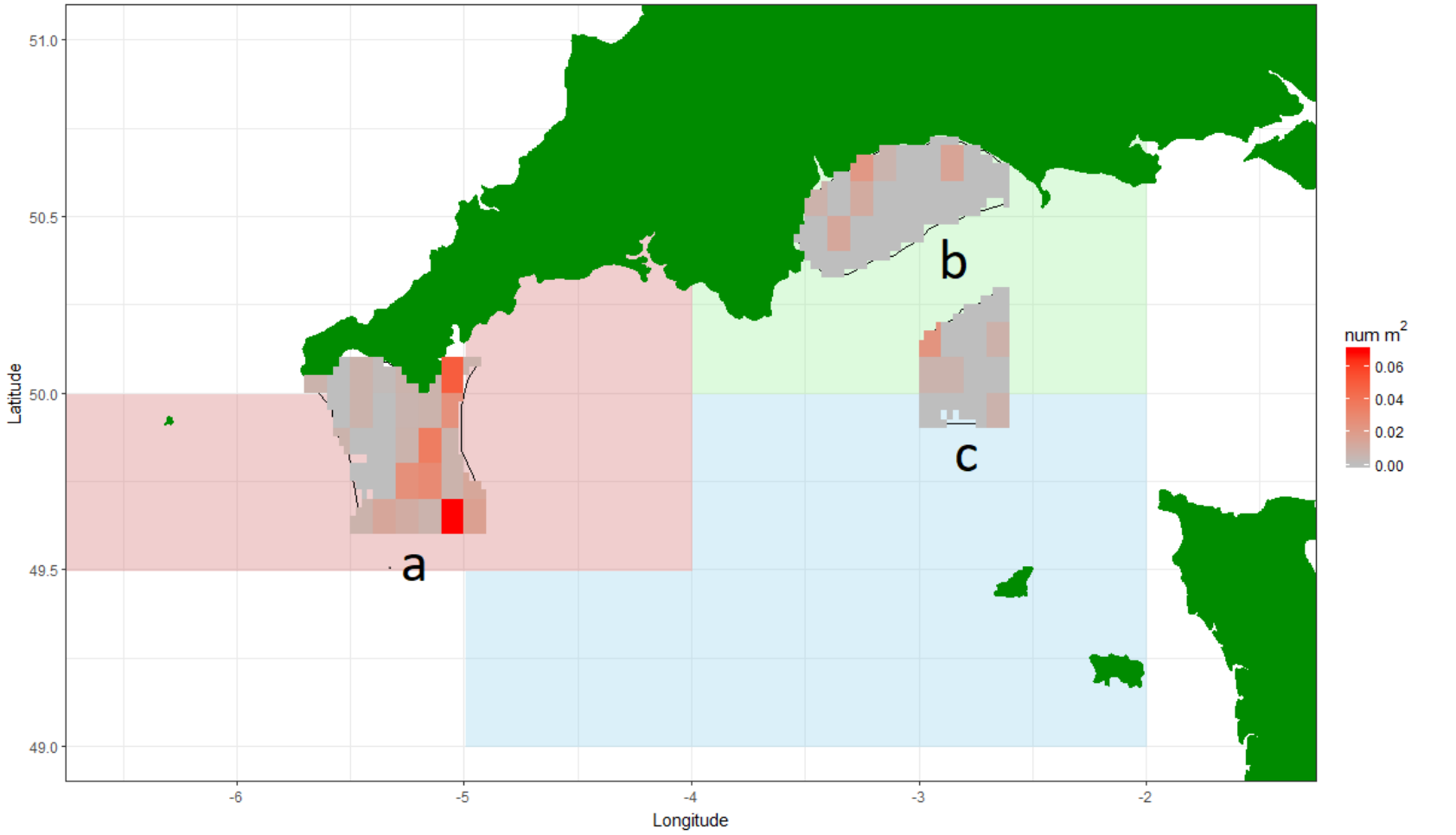
Dredge survey results – 27.7.d.N



Dredge survey results – 27.7.e



TV survey results



Conclusions

- First year
- Relatively high uncertainty
- ICES WG considered the approach appropriate.
- Estimates of Harvest Rate differ between the survey and fishery-age composition.
- Estimate of Harvest Rate from survey assessment possibly more robust given data limitations.
- Considerable biomass lies inside unfished areas (7e).
- Age structure stronger than inside the Baie de Seine.
- Report release due end of March 2018.