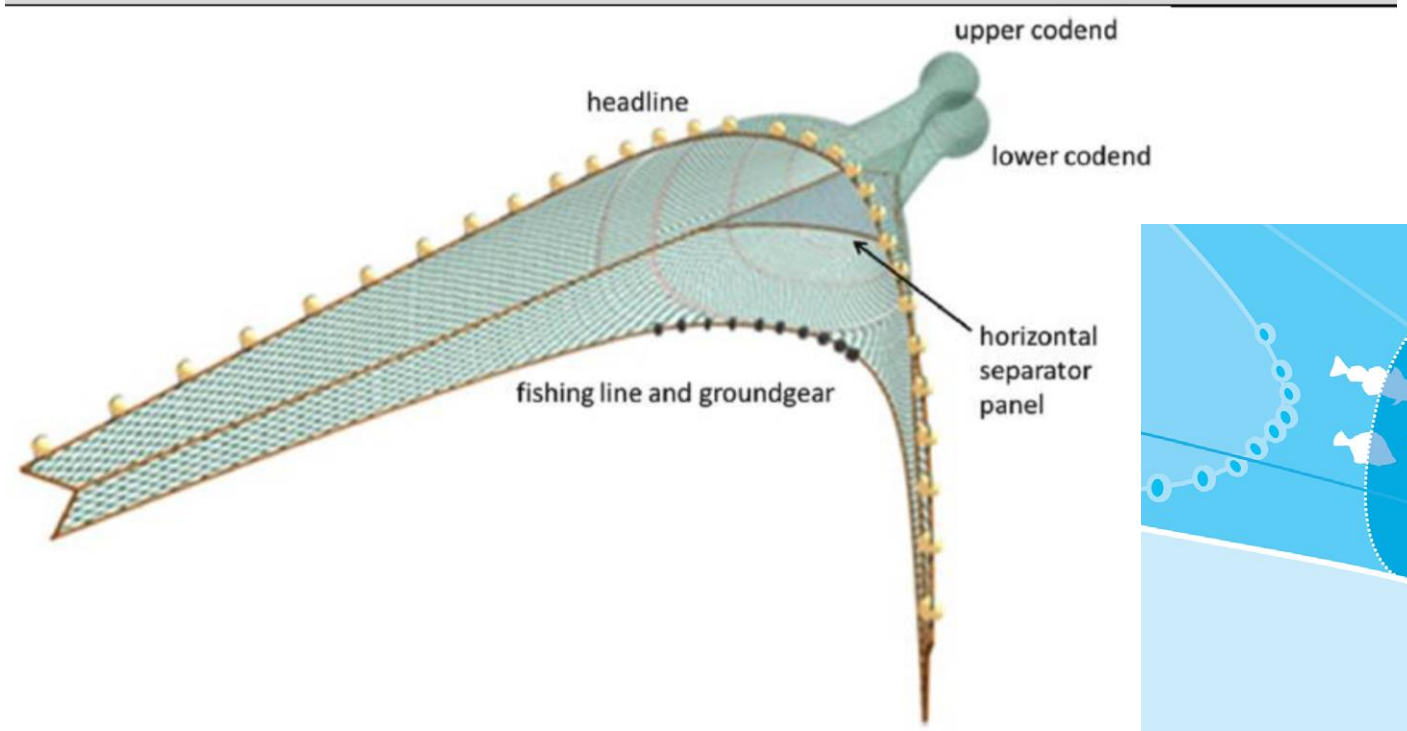
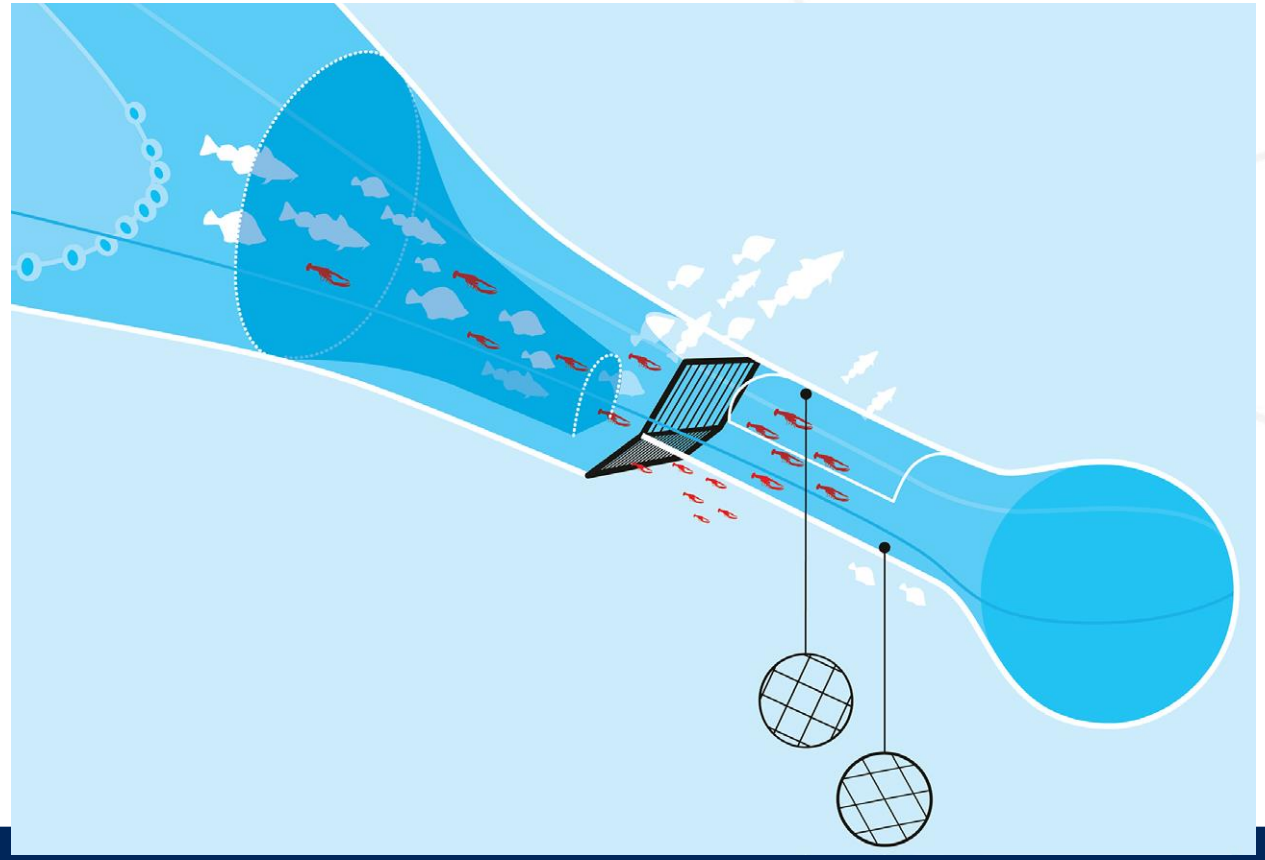
Ways to avoid discards, and the impact on catch advice if we don't.

ICES International Council for the Exploration of the Sea
CIEM Conseil International pour l'Exploration de la Mer

Dave Reid; ICES Science Committee Chair

Fishing gear modifications to avoid catching fish you don't want.





ICES. 2023. Workshop 2 on Innovative Fishing Gear (WKING2). https://doi.org/10.17895/ices.pub.24299146

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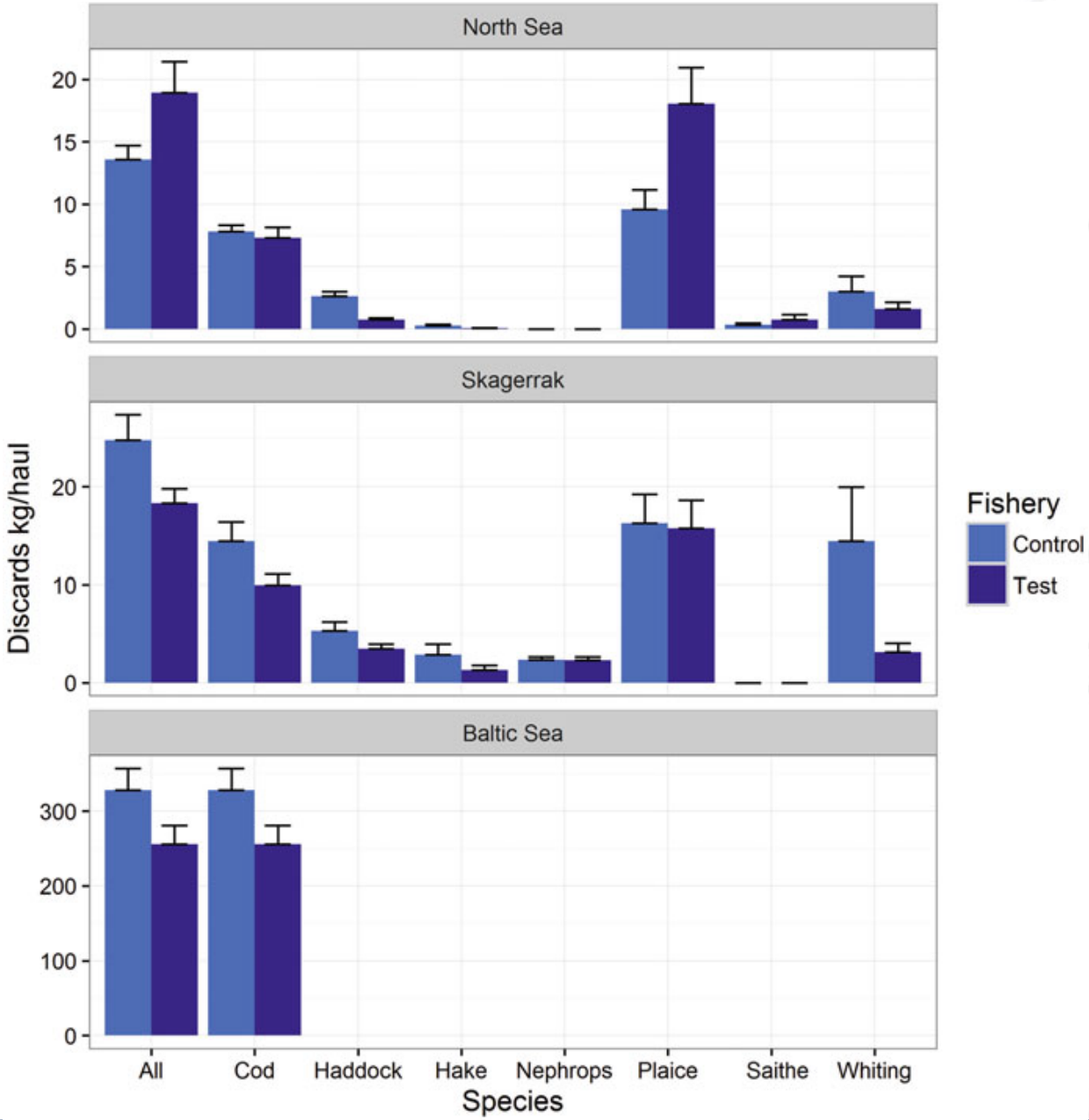

Reid et al 2018 The best way to avoid discards is not to catch them! In: Uhlmann et al The European Landing Obligationhttps://doi.org/10.1007/978-3-030-03308-8

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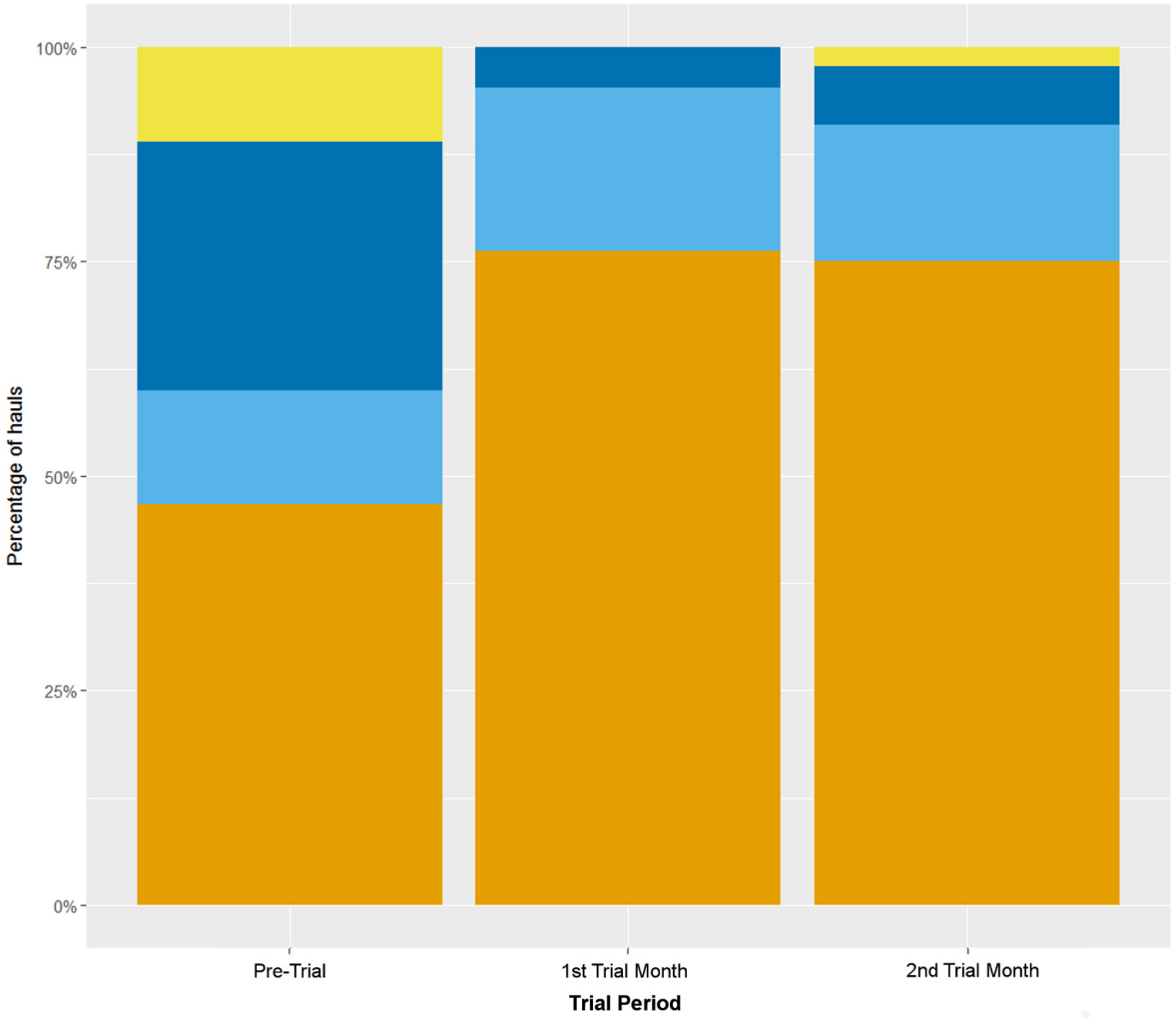
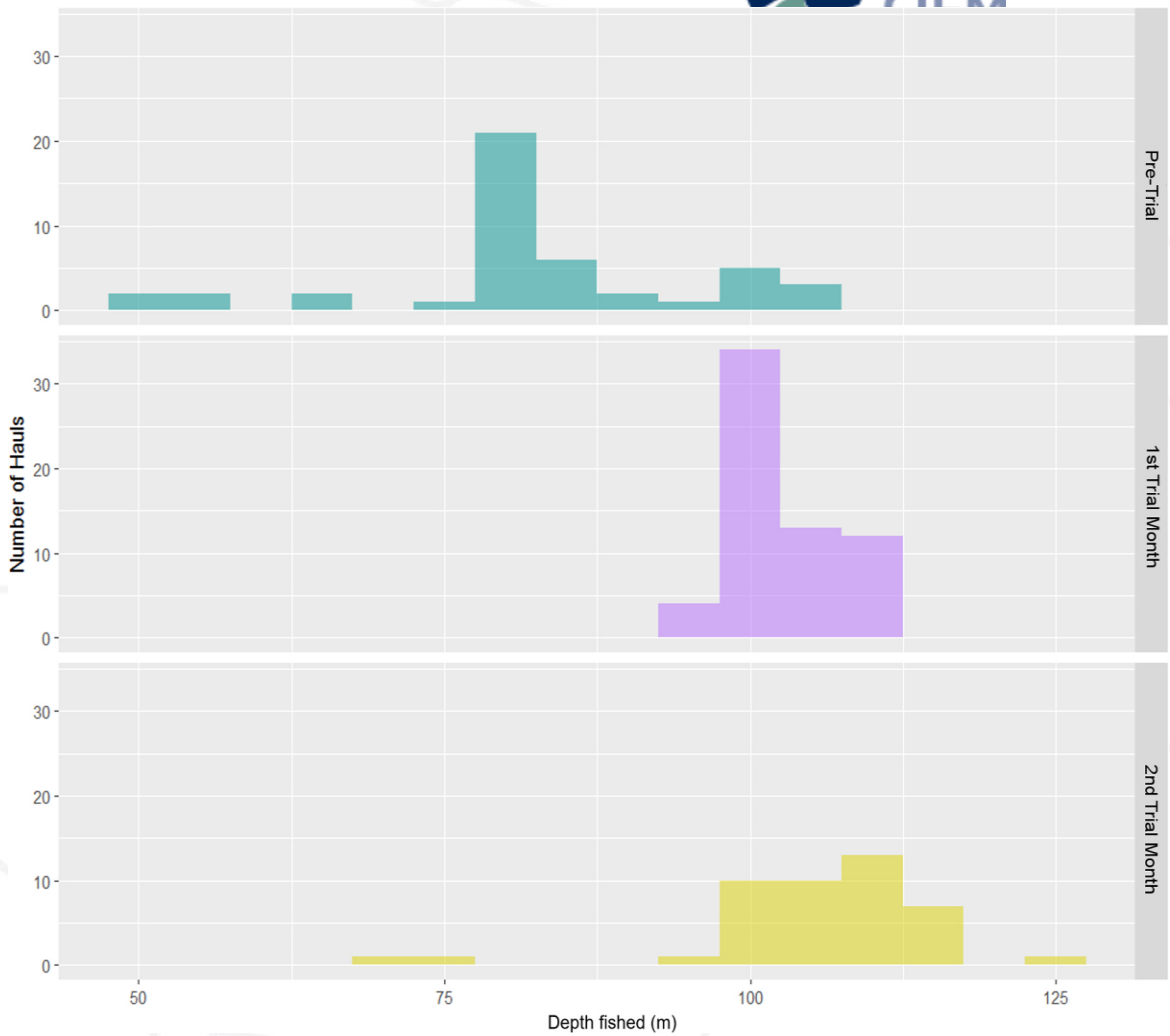
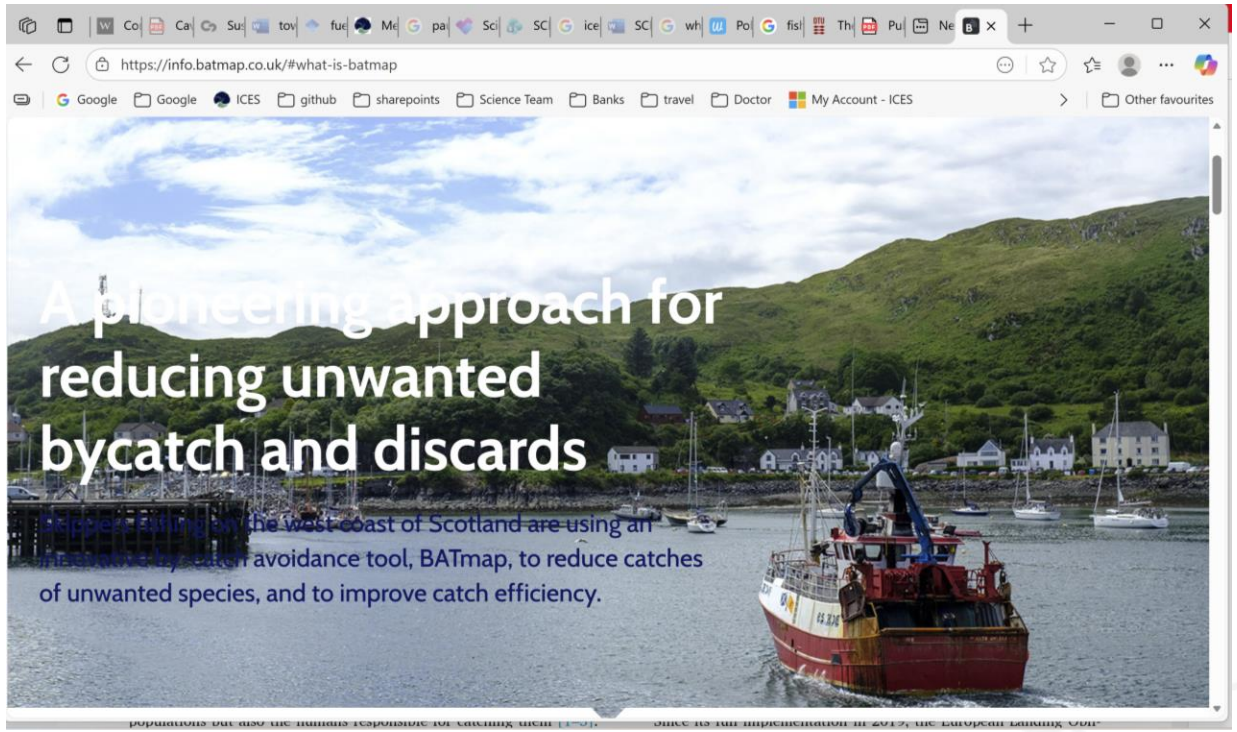




Calderwood et al 2021 Trial and error: Tactical changes in fishing behaviour can help reduce discards and exposure to chokes, but scientific trials can fail to spot this. Marine Policy. https://doi.org/10.1016/j.marpol.2020.104365

Fishing behaviour modifications to avoid catching fish you don't want.



An industry-led, cooperative solution

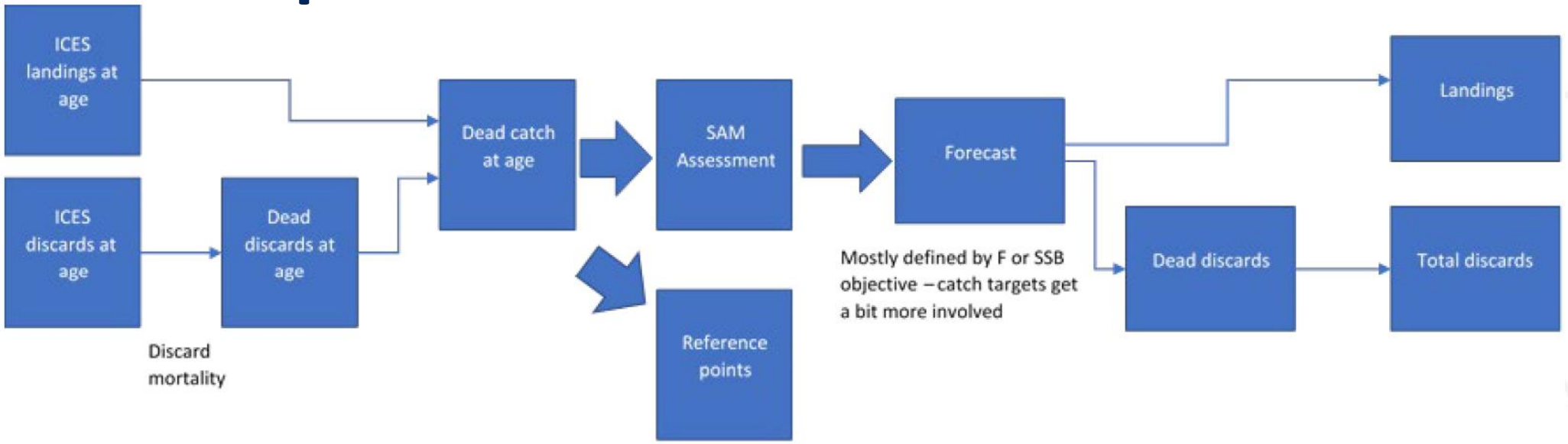
BATmap's cooperative approach reflects the fishing industry's shared commitment to avoiding by-catch. The project is a first for the UK and Europe, and is a great example of innovative collaboration between industry and science.

BATmap is working with fisheries experts worldwide to develop a system that works for Scottish fisheries. Our experience using BATmap on the west coast of Scotland is being used to inform the development of real-time reporting elsewhere.

BATmap, or By-catch Avoidance Tool using mapping, is an app for Scottish skippers to share real-time information about the location of hotspots of fish species that are choke species or of conservation interest with other participating skippers. Marshal et al 2021.

https://aura.abdn.ac.uk/items/4e65739e-f065-4dbf-be54-d200a8d8940

The importance of discards in assessments



- Stock assessments require **accurate estimates** of all fisheries **removals** taken from fish stocks (dead catch) to estimate the impact of fishing on stock.
- But…… accurate and precise estimates require good at-sea-monitoring.
- Currently ~**1% of fishing trips in the ICES area have discard monitoring**.
- In addition, discard survival may occur. This is difficult to estimate.
- Consequently, the **accuracy & precision of discard estimate is low -** impacting on the assessment precision.
- If discard patterns are changing over time, e.g. increasing discards in response to quota limitations, this **can generate bias** in stock assessments.

Slide courtesy fo Colm Lordan: ICES Advice Committee Chair