IMARES

Institute for Marine Resources & Ecosystem Studies

16-17 March 2015, Bergen, Pieke Molenaar

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Current industry projects with IMARES

- Selectivity improvement projects
  - Nephrops quad- and multi rig trawling
  - Brown shrimp beam trawling
  - Sole pulse trawling and plaice twin-rig trawling
- Discard survival studies

Improve demersal trawl selectivity

- Main selectivity focus on
  - Pulse trawling for sole
  - Twin-rig for plaice
- Trawl designs and selectivity devices are initiated by the industry
- IMARES involved for scientific contribution, catch comparisons and international input
- The industry undertakes first feasibility studies by self sampling
- When results are acceptable IMARES conducts an extensive observer trip for catch comparisons

Demersal pulse trawling

- Mixed fishery
- Main target species: Sole
- Mesh size 80mm
- Towed at 4.5 knots
- Gear height 60cm

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Mixed fishery

- Sole
- Plaice
- Turbot
- Brill
- Whiting
- Cod
- Gurnard
- Dab
- Flounder
- Squid

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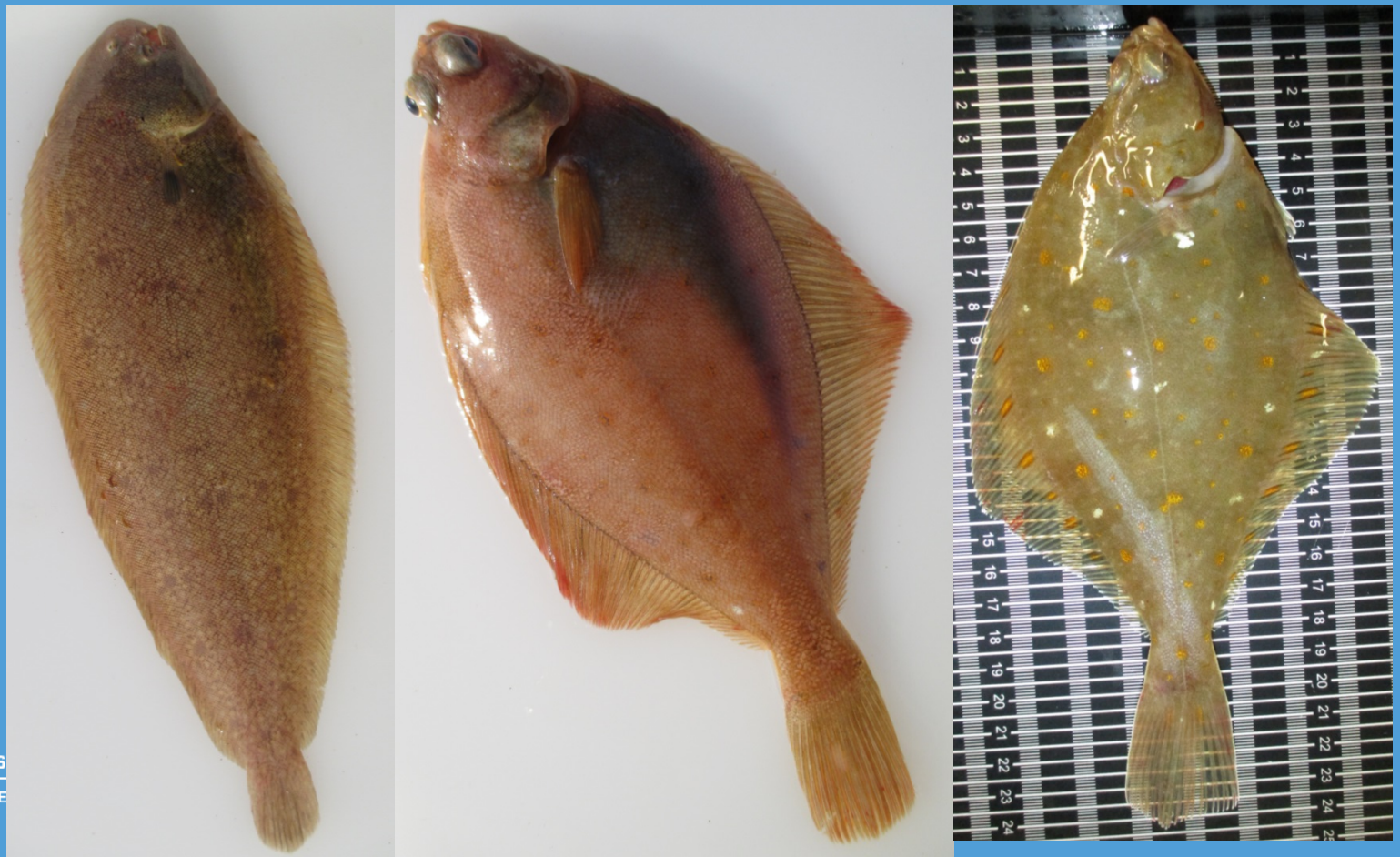
Larger mesh size?

- 80mm trawls optimized for sole
- Larger mesh sizes results in unacceptable loss of sole catches



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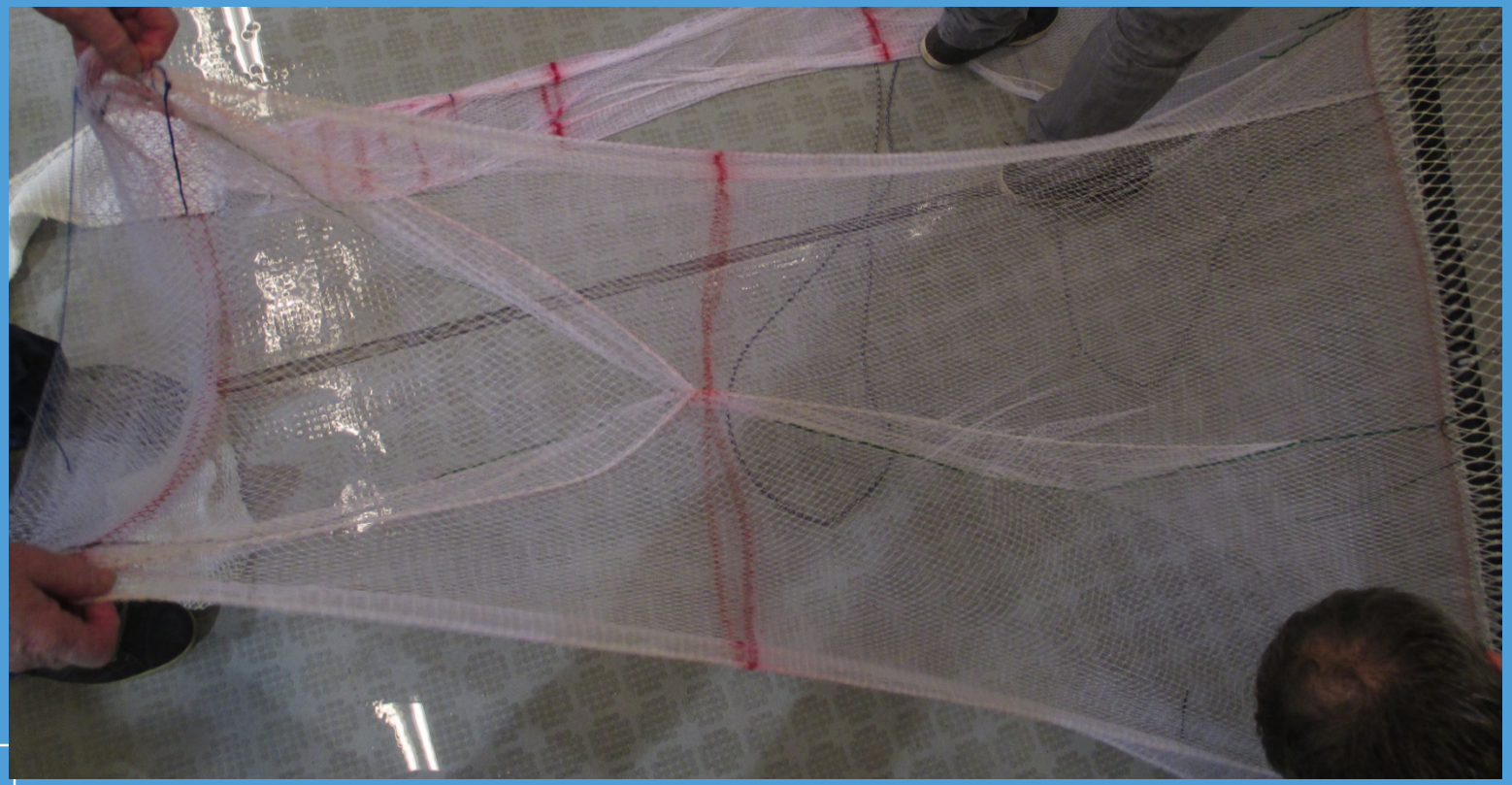
Trawl innovations

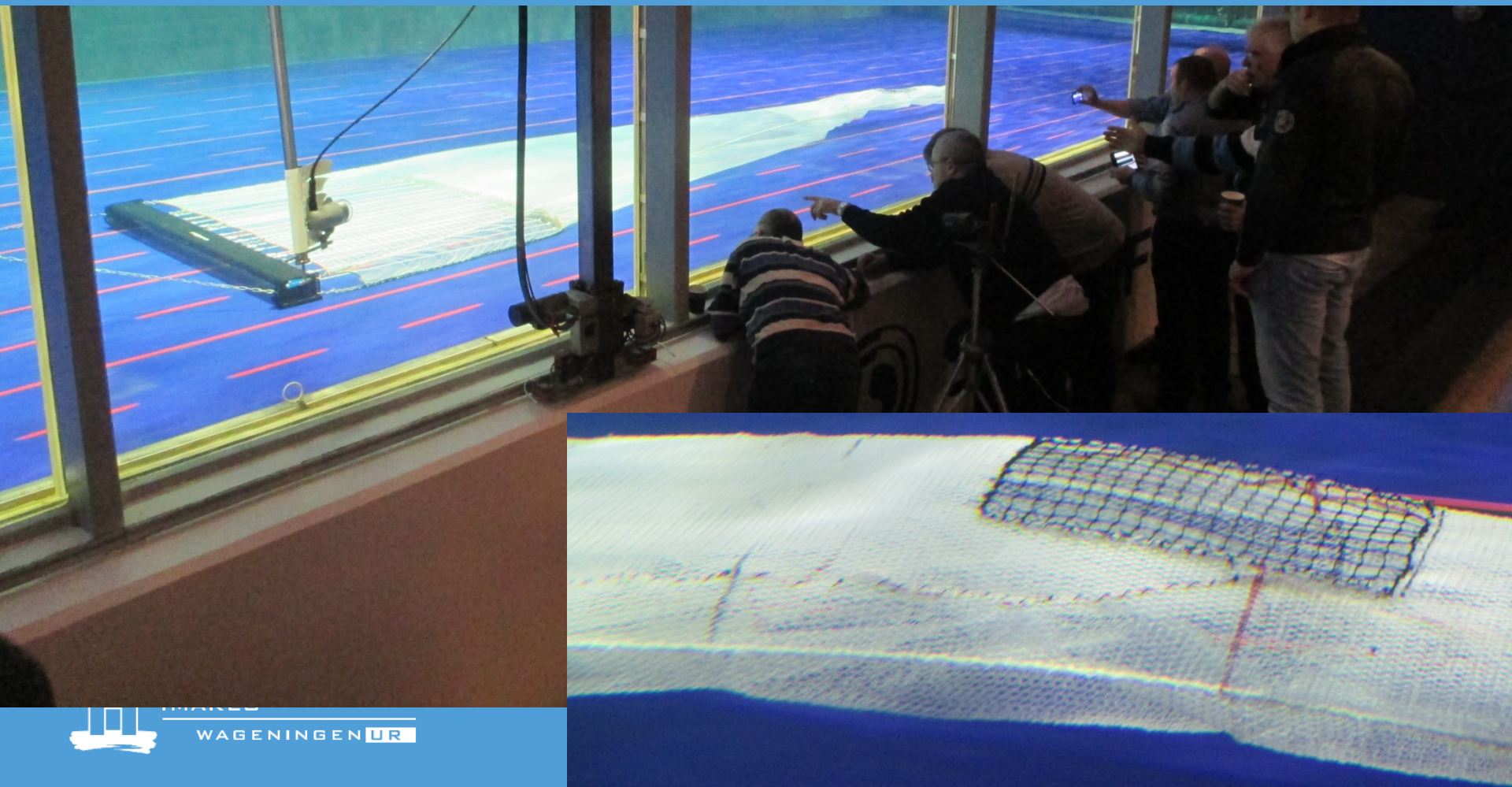
Scale models were tested in the Hirtshals flume tank

- Vertical separation panel to guide all fish to diamond mesh escape panel.



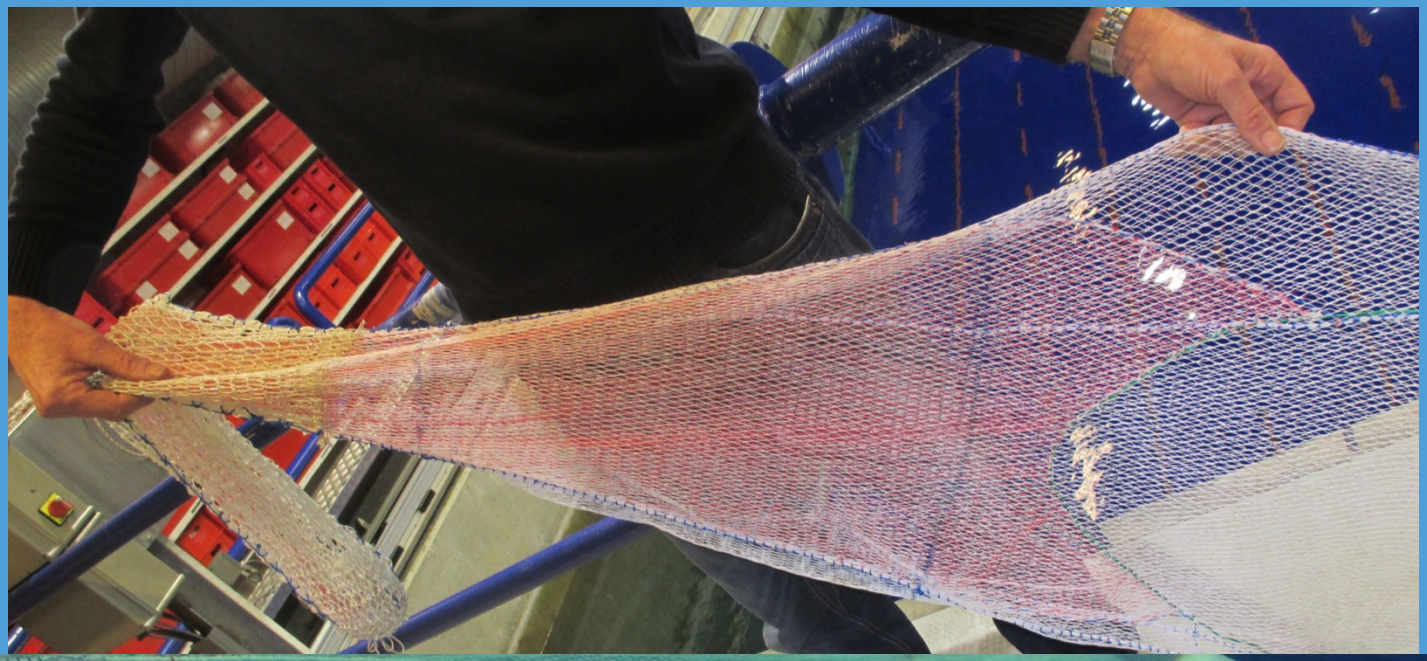
Trawl innovations

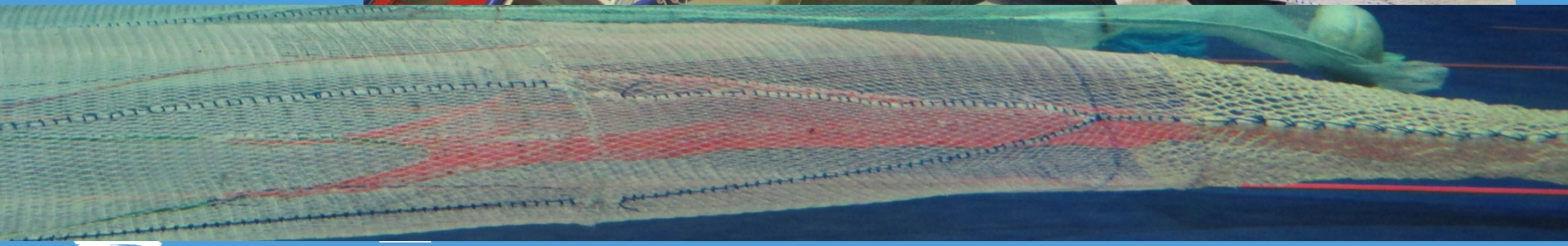
- Inclined horizontal separation panel guiding to a square mesh escape panel.



Trawl innovations

- Inclined horizontal separation panel with 2 cod ends. Upper cod-end lower cod end 80mm, upper 130mm





Twin rig trawling for plaice

- Improve trawl selectivity to reduce bycatch of undersized plaice and dab
- Cod end mesh size 100-116mm -> T90 132mm
- Loss of marketable lemon sole

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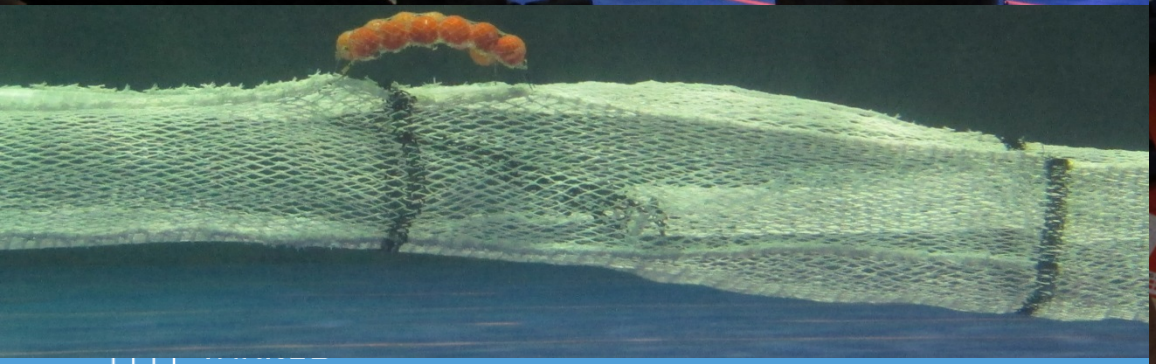
Nephrops trawl selectivity

- Improve 80mm trawl selectivity to reduce bycatch of undersized plaice and dab
- Bycatch of marketable fish important for this fishery

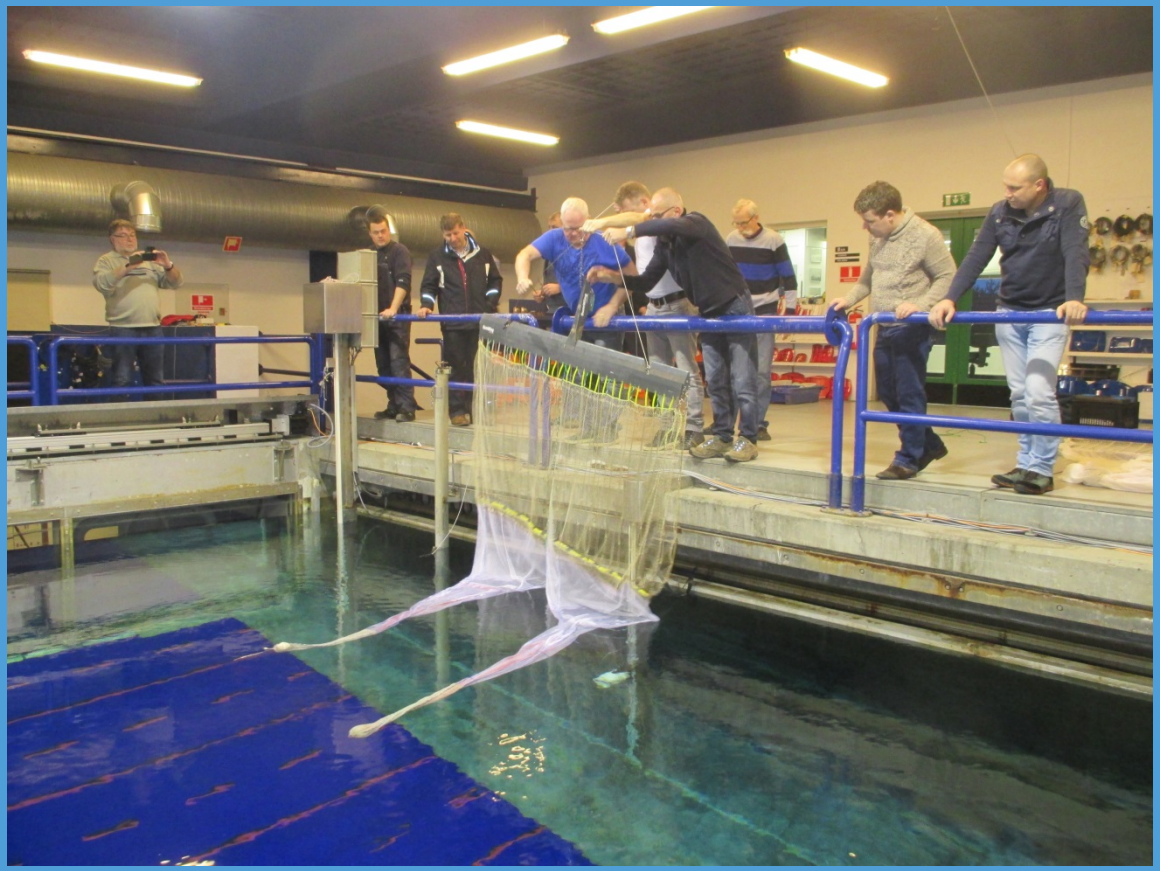
- Trials with a four sided trawl with diamond mesh escape panels resulted in reduced catches (17%) of discards and landings.

Nephrops trawl selectivity

- Inclined square mesh escape panel
- Trials will be done this summer



Thank you



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