

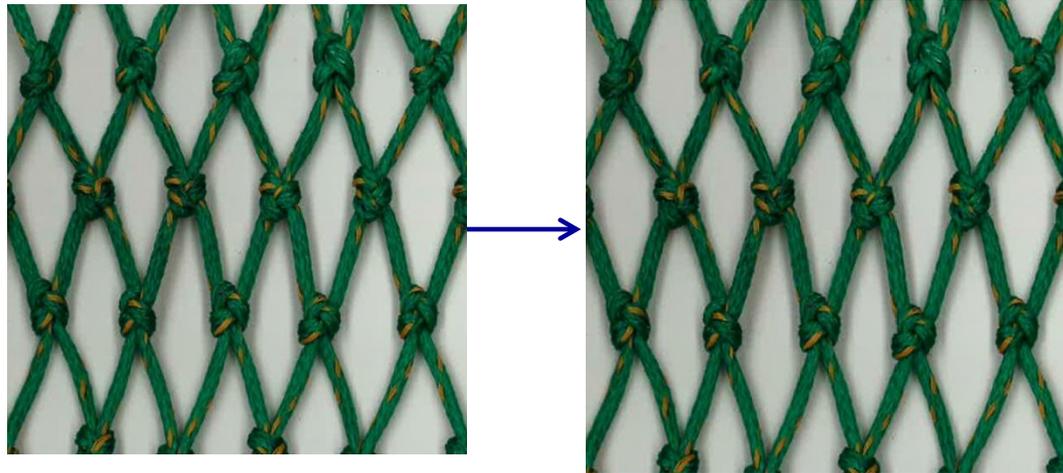


Irish trials to reduce unwanted catches

Daragh Browne

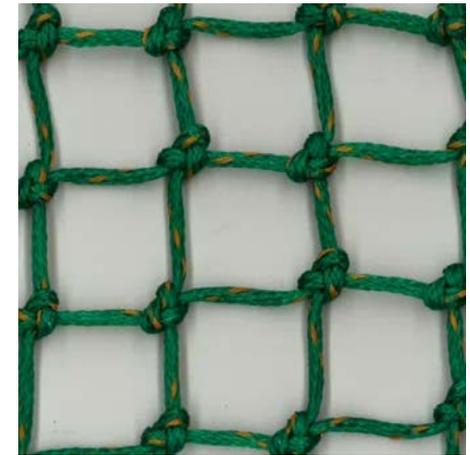
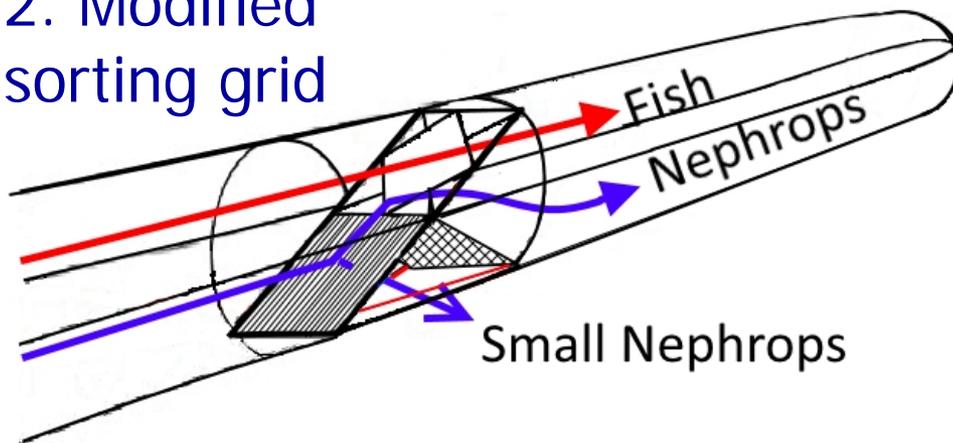
daragh.browne@bim.ie

Measures to reduce unwanted *Nephrops* catches



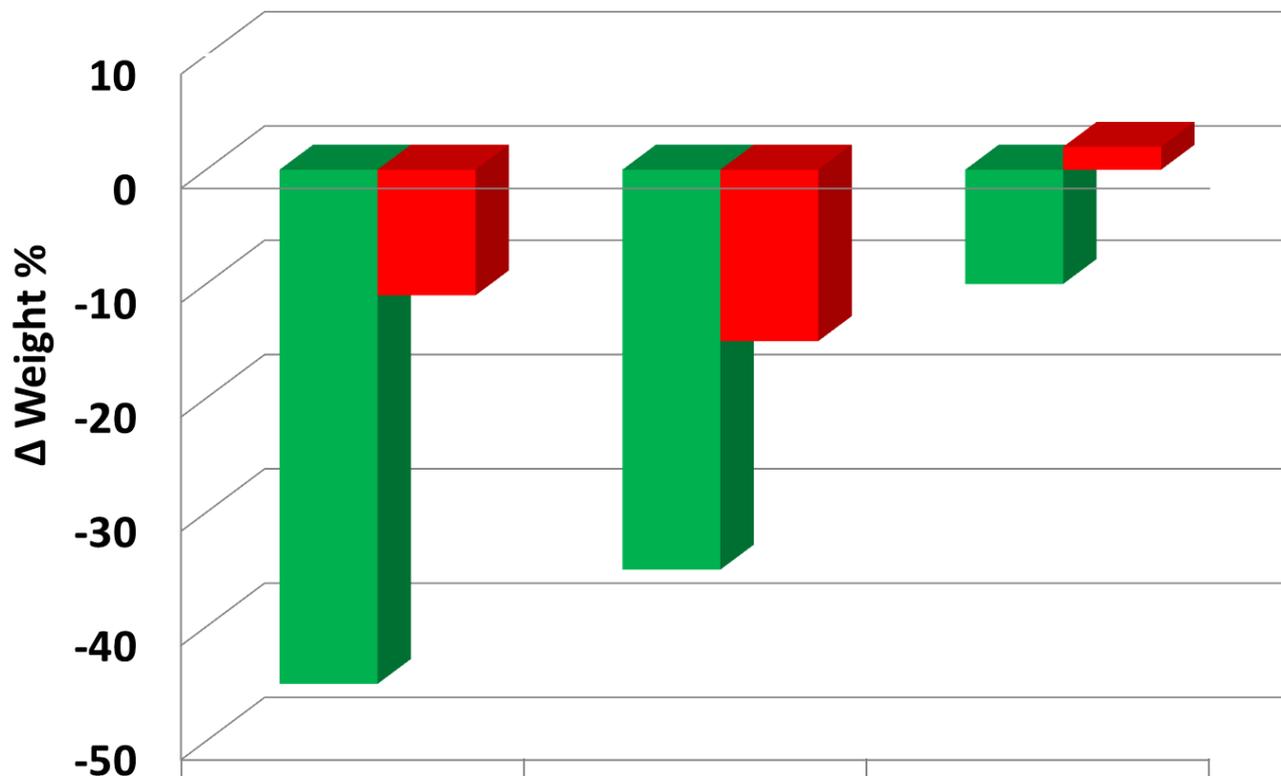
1. 70 to 80 mm codend

2. Modified sorting grid



3. 45, 55, 65 mm square mesh codend

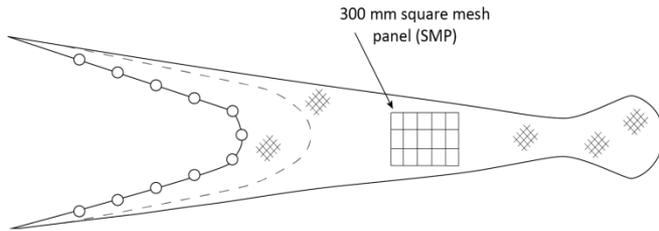
Measures to reduce unwanted *Nephrops* catches



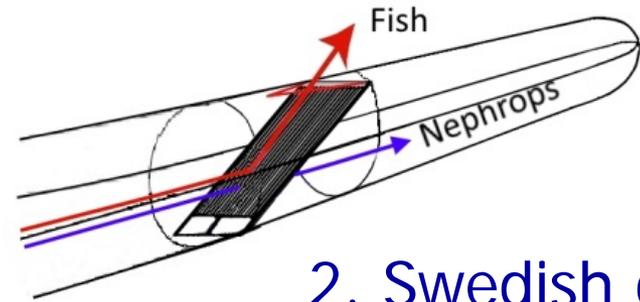
	80 mm codend mesh size	Modified sorting grid	45 mm square mesh codend
■ < MCRS	-45	-35	-10
■ ≥ MCRS	-11	-15	2

Measures to reduce unwanted fish catches

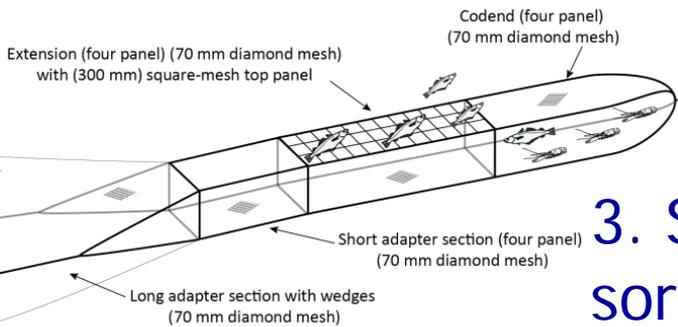
Nephrops trawl



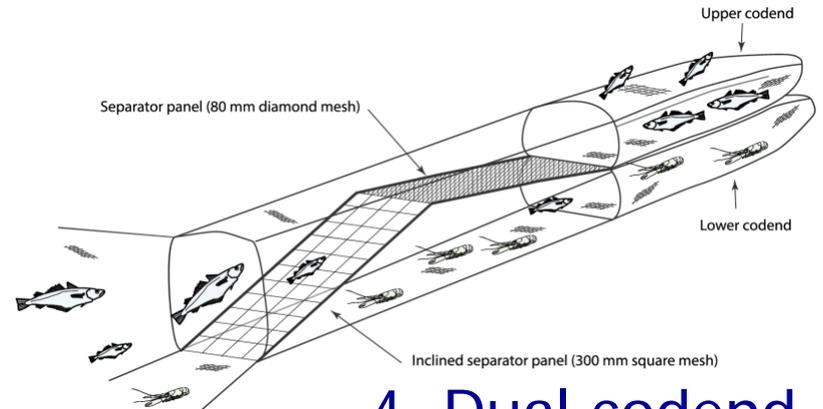
1. 300 mm square mesh panel



2. Swedish grid



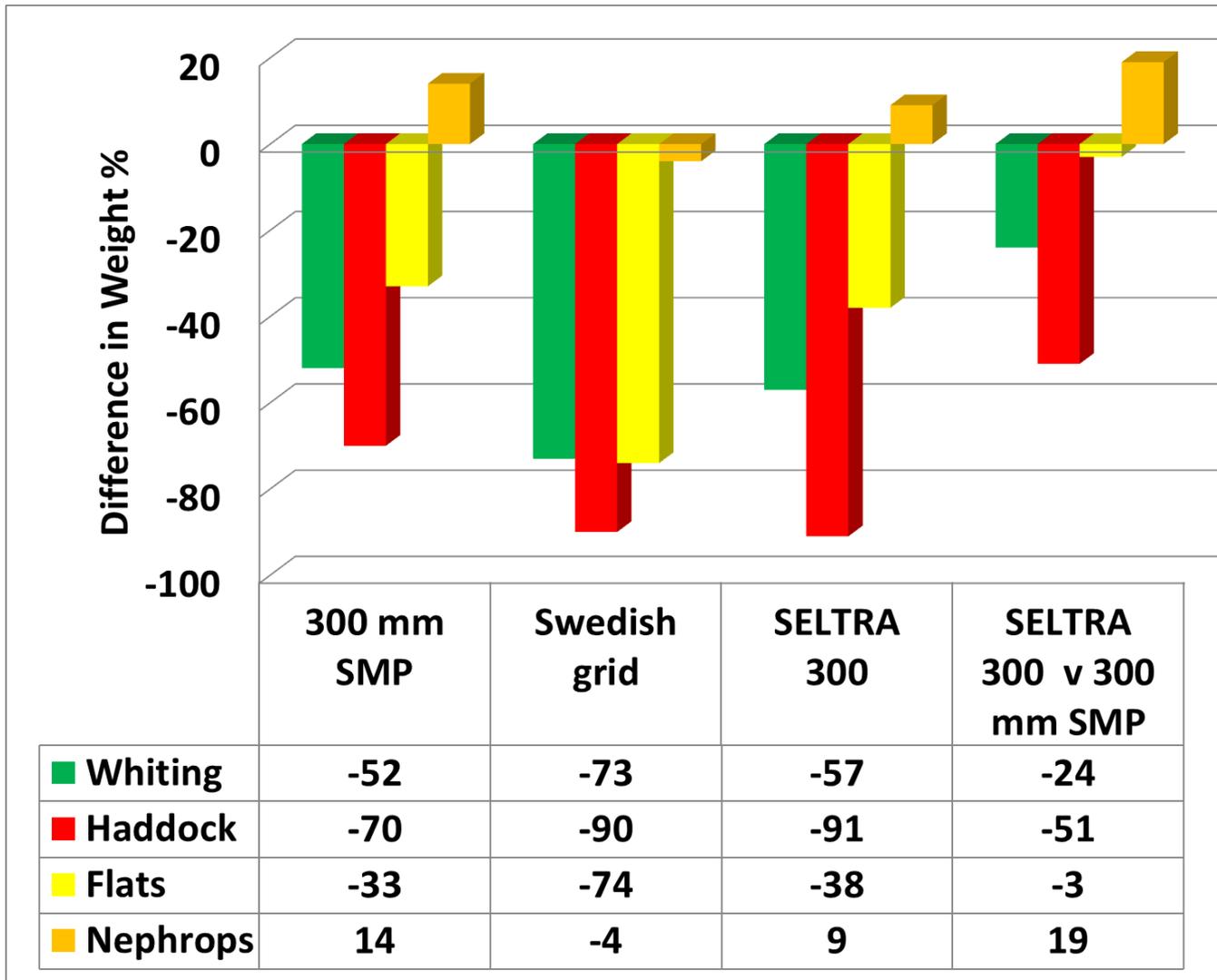
3. SELTRA sorting box



4. Dual codend

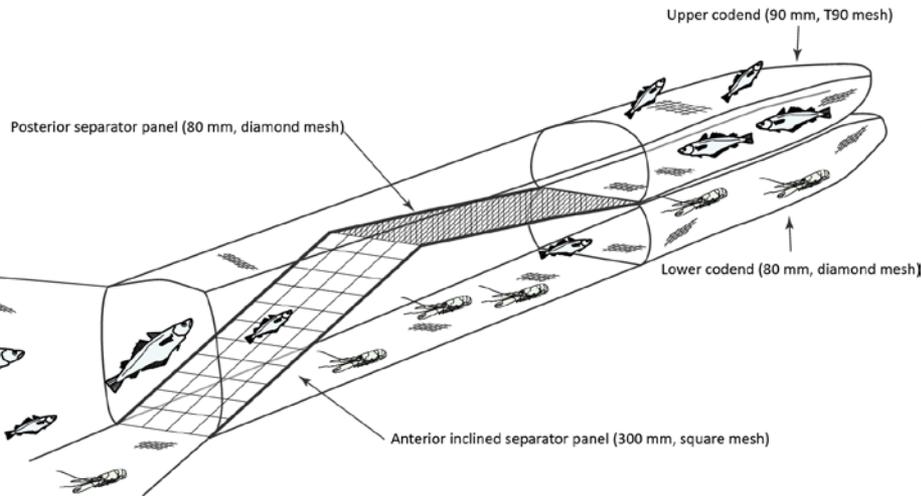
Measures to reduce unwanted fish catches

Nephrops trawl

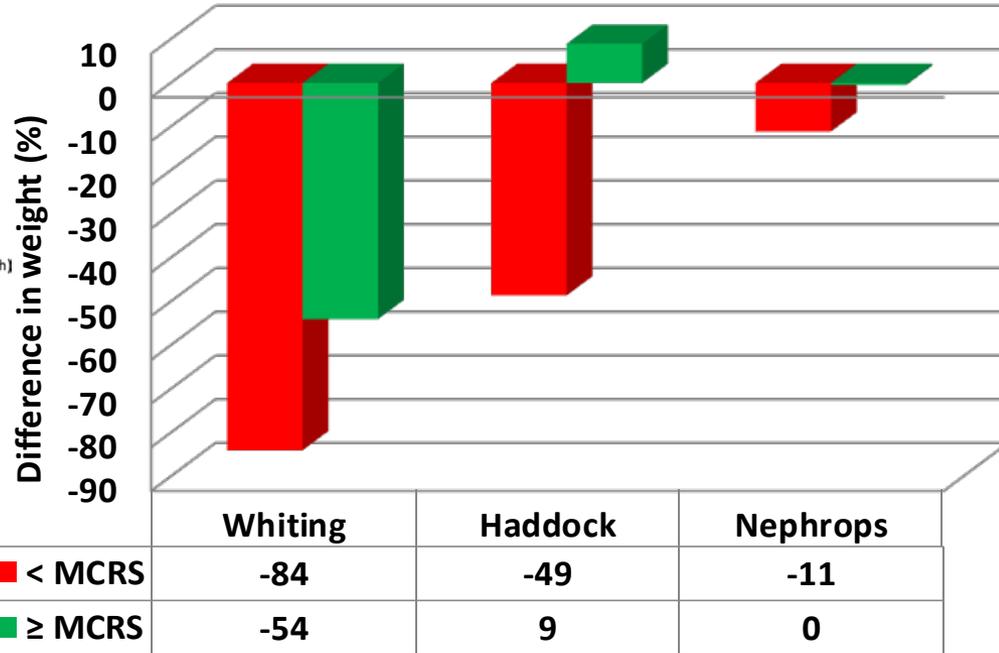


Measures to reduce unwanted fish catches

Nephrops trawl



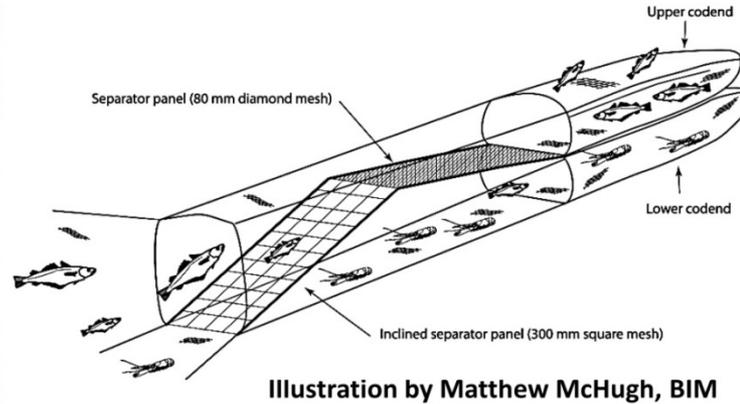
The Dual codend



- Facilitates improved fish selectivity
- 80 mm diamond in bottom, 90 mm T90 mesh in top codend
- Major reductions in < MCRS haddock and whiting
- No loss in catches of >MCRS Nephrops, haddock, flatfish, monkfish and cod
- Losses of > MCRS whiting to be expected

Measures to reduce unwanted fish catches

Nephrops trawl



Clockwise from top left: The catch from a normal codend, illustration of the dual codend with net separator, and resulting separated catches of *Nephrops* and fish

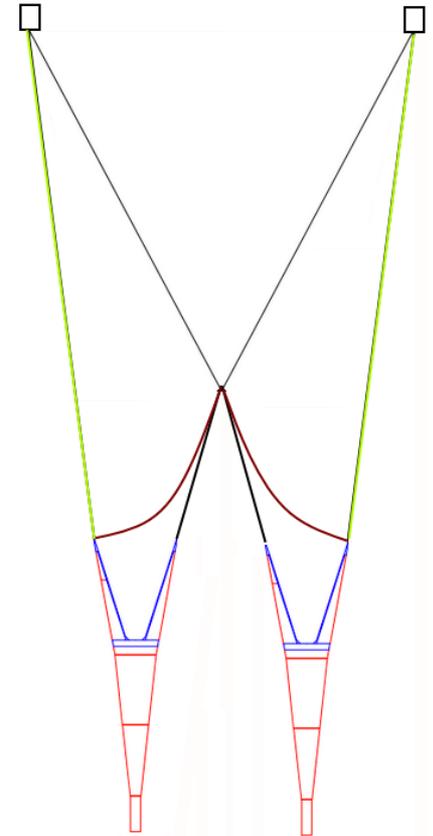
High survivability trial

- ICES VIIb in July/ August 2017
- Nephrops caught using SELTRA 300 and 80 mm codend.
- Held for 15 days (360 hrs) in onshore holding facility
- 64 % survived



Fish counter-herding measures in Irish Sea Nephrops fishery

- Preliminary trial with half-quad-rig and:
 - "Floating" Dyneema sweeps
 - Scaring ropes
- Neither gear directly reduced whiting catches
- Dyneema sweeps caught substantially more *Nephrops* – potential to delay whiting choke.



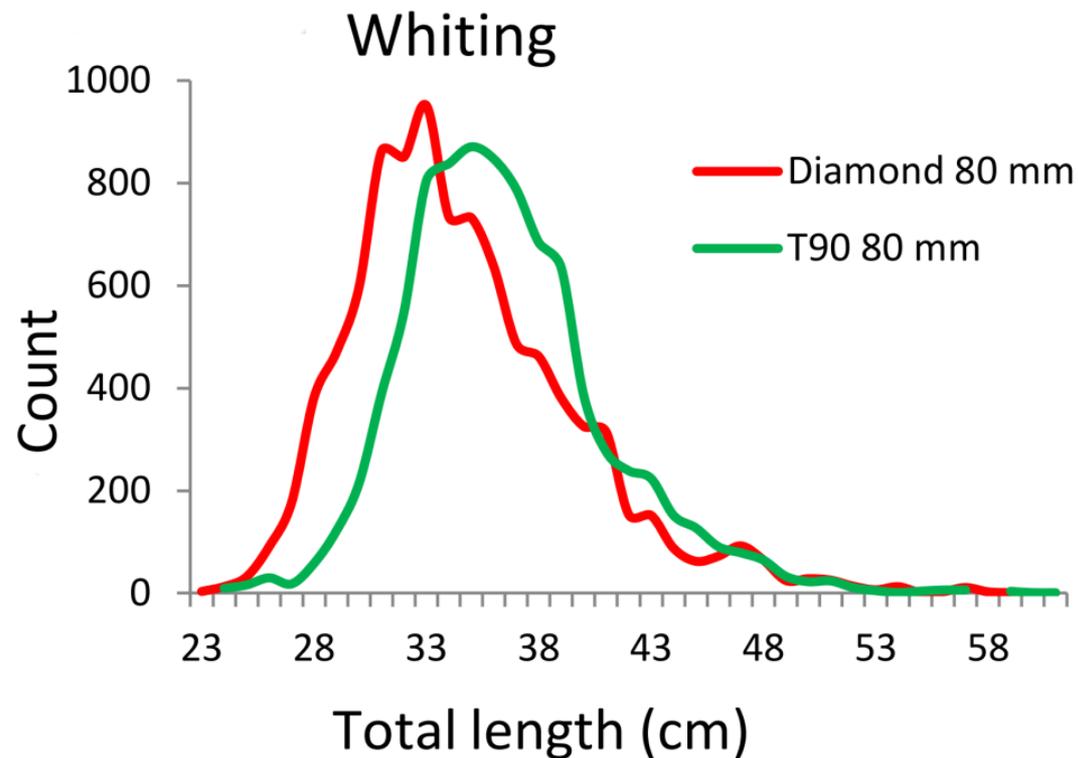
Further codend mesh size trial

- In response to 2017 Commission proposal to increase min. codend mesh size to 90 mm in ICES sub-area VII *Nephrops* fisheries.
- Trial in February 2018 with quad-rig *Nephrops* trawler in Irish Sea:

Codend	Nominal codend mesh size (mm)	Codend circumference (no. of open meshes round)
Control	80	120
Test 1	80	100
Test 2	80	80
Test 3	90	100

Whiting: T90 mesh

- 67% reduction in below market size fish (32 cm)
- 16% increase in market size fish
- Major improvements in fish quality



Top: Standard codend; bottom: T90 codend

Cod: Raised fishing line



Raised fishing line

- Cod: 36 % ↓
- Haddock: 37% ↑ Whiting 87% ↑
- Flats, monk, skates and rays: 50 – 70% ↓
- Total catch value under current regulations: 14% ↑
- Other modifications possible

