Pulse Fishing

Pulse trawling as a promising alternative to beam trawling

Beam trawl

Beam trawling works by dragging tickler chains across the seabed to startle the fish and make them leap into the net. Tickler chains dig into the seabed, disturb the sediment and cause mortality of organisms in the trawl track.

Pulse trawl

- Improved selectivity of sole.
- Reduced fuel consumption.
- Reduction of discarded benthic fauna and undersized fish.
- Indication of higher survival of discarded sole and plaice.

Weak electric pulses make the fish leap into the net.

Pulse trawl effects

Multi-annual research program
- A 4 year research program has started in 2016 to study the size selectivity and the effects on environmental aspects, fish species and other marine organisms.
- An international steering group guides the research and the annual international stakeholder dialogue meetings.
- The ICES WGELECTRA is involved and the advice of ACOM has been accommodated in the research project.

Fuel consumption

- 46%* (> 300 hp cutters)

Composition of the catch (> MCRS)

Beam trawling
- Sole
- Plaice
- Turbot/brill
- Other fish

Pulse trawling
- Sole
- Plaice
- Turbot/brill
- Other fish

Discards benthic fauna and undersized fish

- More than 50% reduction

- About 20% reduction in the seafloor swept per fishing hour.
- Reduced penetration of the gear into the seafloor.

References

Van der Reyden et al., 2017. doi: 10.1093/icesjms/fsx019

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