



Seine net development
trial of experimental square
mesh panel and internal
cone concepts for the
Shetland mixed
demersal fishery

TARGET SPECIES >

Whitefish

FISHING METHOD >

Seine Net

AREA >

North Sea

VESSEL >

MV Valhalla LK687



AIM OF TRIAL >

To reduce unwanted catch in the seine net fishery, including cod and whiting

In partnership with:



marinescotland

SAFPO

Scottish Association of Fish Producers' Organisations

Supported by:



EUROPEAN UNION
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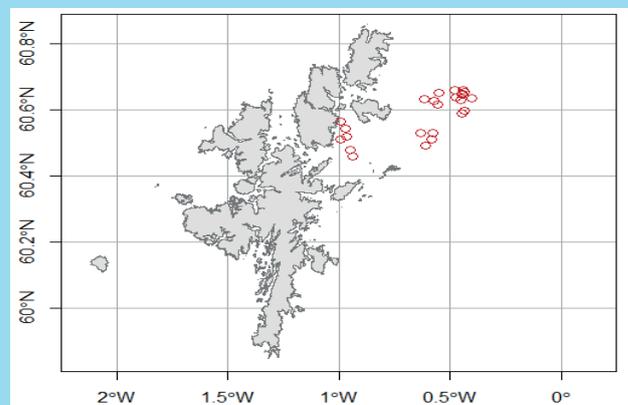
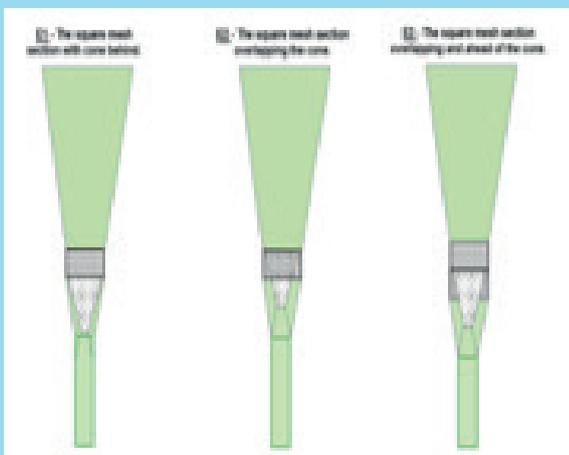
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TRIAL OBJECTIVE >

The trial was designed to minimise unwanted catch in relation to availability of necessary quota and to maximise the catch of large sized fish to meet market requirements.

GEAR MODIFICATION >

The test net was modified to include an internal cone and a square mesh (160 mm) section fitted in three different experimental configurations as per the net plan.



RESULTS >

This development trial has investigated the effects of an internal cone and 160 mm square mesh panel on the catches by a commercial fishing vessel using the Scottish seine net fishing method in the Shetland mixed demersal fishery. Three experimental configurations were trialled in which the relative position of the square mesh panel was varied with respect to the internal cone. An alternate haul methodology was used to compare test net results to those from a control net, with data from 26 valid hauls available over the three experimental configurations.

The statistical power of the available catch weight data was limited due to the low number of hauls for each trial configuration (five test hauls in E1, four test hauls in E2, and four test hauls in E3) and the high inter-haul variability recorded. The analysis of the available length data was further limited due to the low numbers of fish sampled and no fish being measured from control catches. The composition of control catches varied substantially between E1, E2, and E3, further limiting the scope for direct comparison of the experimental configurations. Nonetheless, the results did provide a preliminary indication of a general decrease in test net catches compared to control catches; however, under the Wilcoxon rank sum test, this was only found to be statistically significant in one case (the 97% reduction in test net whiting catches in E3).

Overall, the limited data available from this development trial are insufficient to provide convincing evidence to confirm whether the experimental gear had led to the intended improvement in species selectivity during any of the configurations trialled. Further work on this concept would benefit from an extended trial during better weather conditions and with an improved data collection procedure. Therefore, a more extensive trial is recommended to further assess the effects of the gear modification concept and its application to the Scottish seine net fishing method.