Environmentally Friendly Fishing Methods

Project Outline:

In 2021, the Fisheries Conservation Section will continue to develop and test options for fishers and managers which assist in addressing challenges posed by the demersal landing obligation (LO) and improving sustainability in the catching sector. Further work will be conducted on the raised fishing line. A study will examine the potential benefits of underwater lights on achieving further reductions in cod catches in the raised fishing line gear. The study will also highlight the benefit of this gear which was developed by BIM and introduced by the EC as a gear measure instead of a fishery closure in the Celtic Sea.

Aside from gear developments, high survivability exemptions provide an additional means of addressing landing obligation requirements. Such exemptions facilitate continued discarding and efficient quota utilisation on the basis that discard species are highly likely to survive the capture and discarding process. A full captive-monitoring fish survivability study will be conducted on a key landing obligation species using the new mobile fish holding unit.

Climate change is driving green technologies and a renewed emphasis on fuel efficiency as a means of reducing carbon emissions. Likely increases in carbon tax will impact fuel prices and fisheries profit margins particularly in the relatively fuel intensive *Nephrops* fishery. A study will be completed on modified *Nephrops* trawl which aims to further reduce unwanted catches and the amount of netting used by around 20%. Work will also be conducted on new catch sensor in the *Nephrops* fishery which aims to discriminate *Nephrops* and other species in the trawl, helping to reduce bycatch and improve operational efficiencies.

In relation to fisheries interactions with protected species, the section will provide advice to DAFM on EC queries in relation to mitigating cetacean bycatch; review previous work and liaise with the EC on effective gillnet pinger spacing with a view to reducing the economic and environmental costs associated with pinger deployment. We will also participate in the national seal-fisheries focus group and collaborate on an external funding proposal with UCC on seal deterrents.

The section will continue to support and advise DAFM in relation to queries from the European Commission, at technical meetings and workshops, maintain a strong presence at cross agency collaborations with Industry through Industry Science Fisheries Partnership meetings and will continue to support the work of the North Western Waters Advisory Council.

Project Objectives:

- Complete four studies with the Irish fishing industry which aim to reduce unwanted catches and improve the environmental performance of Irish fisheries
- Submit at least one new application for a new gears or survivability exemption under the annual North Western Waters Discard Plan

Expected Benefits:

- 100% of the polyvalent fleet in the Celtic and Irish Seas benefit from new gear option or exemption under the landing obligation.
- Benefits of the raised-fishing line are enhanced and highlighted so it is retained as a gear measure and avoids fisheries closures in the Celtic Sea.
- Industry informed on alternative trawl designs and methods which further reduce bycatch and improve operational efficiency in the Nephrops fishery.
- DAFM and Industry benefit from advice and research on mitigating fisheries interactions with protected species.

Projected Cost: €240,000