

Irish Prawn FIP Area 7 report in on the extent of ghost gear fishing in the Irish Prawn fishery (fulfilling Task 5.1 of the workplan)

Rationale for report

- Action 5 of the Irish Prawn FIP aims to develop a strategy to minimise and monitor ghost gear issues
- Task 5.1 in that action sets out to assess the extent to which ghost gear may be a problem in the Irish Prawn fishery
- This is the basis of this report which firstly examines the literature on the issue of ghost gear fishing in prawn trawl fisheries and secondly describes the findings from interviews with Irish prawn fishermen fishing at different scales and across a range of Irish fishing grounds.

Consideration for the impacts of ghost gear is now a scoring requirement within Version 3 of the MSC standard. This is relevant under Principle 2 of the MSC standard and is a distinct scoring guidepost under a wide range of Principle 2 performance indicators including 2.1.2 In-scope management, 2.2.1 ETP/OOS species status, 2.2.2 ETP/OOS species management, 2.3.2 Habitat management strategy and 2.3.3 Habitat information.

The pre assessment was carried out under Version 2 and therefore this report is in preparation for Version 3 of the MSC standard.

A fishery must provide information on the extent to which ghost gear may be an issue within the fishery. The FIP must also provide evidence on how they avoid loss of gear and what procedures are in place on board to retrieve any lost gear. These 2 elements are covered in this report. The fishery is further assessed on measures and/or a strategy to minimise ghost gear and its impact on all in-scope species, on ETP species and on the habitat. This final element will be covered in a subsequent report in fulfilment of Task 5.1.

Review of research on ghost fishing in trawl fisheries

Ghost gear encompasses fishing gear that has been abandoned, lost or otherwise discarded, that continues to fish in the marine environment. In recent years research has been undertaken on the effects of ghost gear and ghost fishing on the marine environment and on mitigation measures to prevent ghost fishing.

Information on the effects of ghost fishing in European demersal fisheries is sparse. One recent study (Mengo et al, 2023) examined the views of English and French fishermen working in the Channel. They found that no active gear (i.e. trawls or seines) were reported as being lost. This supported the findings of other research such as Richardson et al, 2019 who concluded that active gears being attached to the vessel and therefore constantly monitored are less likely to be lost. Furthermore in the case of accidental loss the position will be known

facilitating recovery. In addition, active gear's high value guarantees that strong recovery efforts will be made.

Indirect evidence of the extent of ghost fishing by demersal fisheries in relevant waters was provided by a recent study (Russell et al, 2025) which provided a description on marine litter composition on the seafloor around the UK between 2016-2022 which looked at areas of the North Sea and Celtic Sea. This report noted that abandoned, lost, discarded and end of life fishing gear in the study, such as dolly ropes, net cuttings and trawl nets, were attributable to fishing gears used to catch demersal fish species. However, these are only small components of a demersal trawl and would therefore represent a minimal threat of ghost fishing to the stocks.

There are measures in place in both UK and EU legislation to manage and mitigate ghost fishing and these are described in the section below "Feedback from Irish Prawn Fishermen".

Profile of the Irish Prawn Fishery

The Irish prawn fishery primarily targets the Dublin Bay prawn (*Nephrops norvegicus*), which is a very valuable component of the Irish fishing industry. The fishery uses otter board trawls, and operates in the Irish Sea and Celtic Seas. Vessels often catch other species, like plaice and sole, as part of a mixed catch, and some are adding value by freezing prawns at sea.

The fishery is prosecuted by a number of different vessel types:

1. Freezer Vessels – there are approximately 67 of these in operation in the Irish fleet. These are modern, well-equipped vessels which freeze prawns within four hours of catch. The average trip duration is 7 – 14 days. This vessel type is estimated to be responsible for 70% of Irish Prawn landings by value.
2. Fresh Vessels – these vessels use ice to chill the catch. They are also modern, well equipped vessels. The average trip duration is 3 – 6 days. This vessel type is estimated to be responsible for 25% of Irish Prawn landings by value.
3. Day Vessels – these vessels are small, inshore vessels. Their operations are usually carried out inshore (within 12 miles of the Coast) and the average trip duration is 1 day. This vessel type is estimated to be responsible for 5% of Irish Prawn landings by value.

Fishing operations are carried using bottom trawls. The gear itself is used for several years, ranging from to six years across the vessels. The main reason for purchasing new gear is if a vessel changes how it fishes, e.g., moving from towing two nets to using four nets. Another reason to purchase is if there is an innovation in gear manufacture. An example would be a move to use large mesh in the top sheets over the last two years. Some vessels adapted their gears, by replacing the top sheets in existing nets, while others decided to renew the gear completely. In either case the retirement of gear is a choice and not driven by gear losses at sea.

The profile of the fleet is made up of vessel towing three different configurations of gear:

1. Single Rig Trawl – in this case the vessel tows one single net.
2. Twin Rig Trawl – in this case the vessel tows two nets side by side.
3. Quad Rig Trawl – in this instance the vessel tows four nets side by side.

Feedback from Irish Prawn fishermen

Due to the fact that there have been no empirical studies of the prevalence of ghost fishing in the Irish Area 6 & 7 Prawn fisheries FIP Co-ordinators conducted a series of interviews with fishermen targeting Prawns across different prawn fishing grounds and at different scales of operation. The points below summarise their views which were extremely consistent across all fishermen contacted.

Extent of gear losses

The FIP interviewed five skippers of demersal trawlers engaged in Prawn Fisheries in area VII (including in Functional Unit 16). Three of the vessels are fishing with twin rigs and two fishing with quad rigs. The home ports of the vessels:

- Castletownbere
- Kinsale
- Clogherhead

The results were similar across all vessels, as follows:

All confirmed that gear loss is not an issue in the Fishery. They set out their own experiences in the Fishery and why gear loss is not an issue.

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The cohort interviewed were all in agreement regarding the loss of full nets. This is not an issue for a number of reasons. Firstly, in the event that a towing wire broke during fishing, a very rare occurrence which can happen, the gear is easily retrieved as there are other wires attached to the trawl gear. Secondly, in the extremely unlikely event that a vessel broke several towing wires or had to drop the gear due to a problem with the vessel, such as a hydraulic breakdown on the winches or engine failure, the gear is buoyed for later retrieval or can be located using GPS positioning. All vessels have sophisticated GPS positioning equipment and track plotters. The vessels carry “creeps”, which are a steel type of anchor with multiple fins. These can be towed at the end of a wire over the lost gear and they will pick up the gear which can then be retrieved.

The fishermen also pointed out that, even if a net were lost, it would not continue to fish as it collapses on the bottom when it is not being towed by the vessel. Therefore, there would be no impact on the Fishery of lost Prawn trawls.

All demersal trawls have a footrope on each net. This is the part of the net that is in contact with the ground while towing for Prawns. There are two categories of footropes used on FIP vessels. The first is “clean” footropes and these are used on very clean, flat seabed conditions and normally consist of two-inch rubbers threaded onto a wire. The vessels using these only fish on this bottom type and they get very little damage of any kind to the gears. These vessels stick to areas they have worked for many years and the seabed they fish on has been well mapped. The second type of footrope used are “rockhopper” footropes. These have two-inch rubbers and then a larger disc, which is normally from six inches in diameter to 14 inches in diameter, spaced out at intervals along the length of the footrope. This keeps the trawl off the ground and allows the vessel to traverse over small patches of hard substrate and stones. This enables the vessel to fish on mud, the Prawn habitat, and then traverse a harder part of the ground onto the next patch of mud. On occasion these nets can be torn. However, the vessels have skilled net menders onboard and the nets are repaired, either onboard or onshore when the vessel returns to port. The nets are repaired and always used again so even tearing a net does not lead to the retirement of gear. A tear in a net can be of two types: firstly, a rip, which is easily mended by stitching together the torn pieces. Secondly, a larger tear may require a section to be replaced. In this case an old section may be cut out and then replaced with a new section. Old sections of net are not discarded by the vessels as they regard them as a risk to their own vessel and other vessels at sea. If discarded the old sections can float on the surface and easily foul propellers. For this reason, the old sections are brought ashore and disposed of in line with harbour waste management plans.

In Ireland, “Fishing for Litter”¹ is a state-backed initiative where commercial fishing vessels bring ashore debris they catch in their nets. Participation in this initiative is a requirement for all FIP vessels.

The Environmental Protection Agency is currently putting in place an Extended Producer Responsibility (EPR) Scheme which will officially commence in January 2026. In Ireland a contractor has been appointed to allow fishing gear producers to comply with SI No. 612 of 2022.² The EPR means that there will be a charge put in place when a new net is purchased. This charge is placed in a fund which is then used for the appropriate disposal of end-of-life fishing gear. This all derisks the likelihood of gear being disposed of in the marine environment, as a register is being implemented in the gear manufacturers. This means there will be accountability for gear being put onto the market and retired at the end of its life.

¹ <https://fishingforlitter.org/ireland/>

² <https://haulitback.ie/>

Bord Iascaigh Mhara (Ireland's Seafood Development Agency) has been involved in several projects to reuse end-of-life fishing gear. Under the Net360 banner, end-of-life gears have been used in the manufacture of peaks in baseball caps, waste bins and various containers.

In summary, the practices of the fishermen themselves and the range of state initiatives in place all confirm that gear loss and ghost fishing is not a significant issue in the Prawn Fishery.

References

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