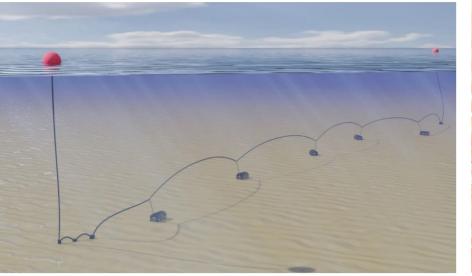
A Fisher's Eye-View: Gear use, recovery and disposal in the Scottish creel fishery

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Introduction

Creel fishing is a static form of fishing widely practised in Scotland's inshore waters. While considered by many to be a very selective and low impact form of fishing targeting prawn, lobster and crab, concerns regarding the amount of fishing gear associated with this sector currently being deployed have recently been raised. Concerns have also been raised about the amount of gear being lost as a result of conflict with mobile fishing vessels, weather and other causes, and the lack of suitable disposal facilities for end-of-life fishing gear. To better understand these issues and their consequences, an online survey aimed at commercial creel fishers was developed.

Methods

The survey was designed in Qualtrics^{XM} and launched in October 2021. It consisted of 12 multiple-choice, short answer, dichotomous and open-ended questions covering fishing activities, concerns regarding gear use and disposal, and the causes and consequences of gear loss. Various distribution techniques were used including advertising via flyers in harbour offices and noticeboards, posting a shareable web link and QR code on social media, emailing local and national fisheries groups and associations, and some word of mouth.

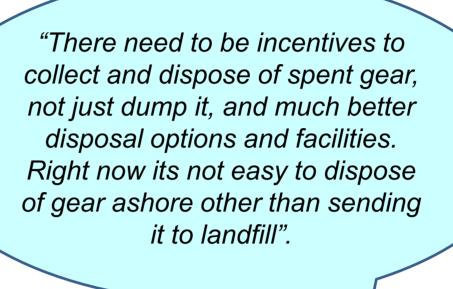
Results

The survey closed in January 2022 and yielded 208 usable responses (quantified as ≥70% complete) from all coastal regions, representing approximately 14% of Scottish commercial creel vessels. Full analysis of the results has yet to be completed, however some initial findings are detailed below:

- **Gear use -** The majority of respondents (63%, n=132) reported fishing with between 100 and 1000 creels. 9% (n = 19) reported using fewer than 100 creels, while 8% (n = 18) reported using more than 2000. This varied geographically and by target species, with highest creel numbers reported along the north-west coast.
- **Gear loss -** 44% (n=91) and 45% (n=94) of respondents reported average annual gear losses of 1-5% and 6-10% respectively. While 3% (n = 6) reported no losses, the remaining 8% (n=17) reported losses of more than 20% of their gear per year. Conflict with other fishing vessels and bad weather were cited as the most common causes of gear loss in all areas. Other causes included snagging on the seabed, contact with abandoned, lost or discarded fishing gear (ALDFG), conflict with other commercial and/or recreational vessels, and interference from marine wildlife.
- **Gear recovery** 96% of respondents reported attempting to recover gear when it becomes lost. 16% (n=33) reported average recovery rates of 80-100%, whereas 45% (n=90) reported recovering less than 20% of lost gear.
- Encounters with ALDFG 10% (n=20) of respondents reported encountering ALDFG at least weekly, 38% (n=79) monthly, and 41% (n=85) annually. When asked what they do with this, 33% (n = 65) of fishers said that they leave ALDFG where they find it, 64% (n=126) take it ashore to dispose of or return to it's owner, and 3% (n=7) move it to another location at sea.
- **Gear disposal** 59% (n=121) of fishers said they did not have access to suitable disposal facilities for end-of-life fishing gear in their local area, and 23% (n=49) admitted to disposing of their own fishing gear at sea at least once in the last five years.



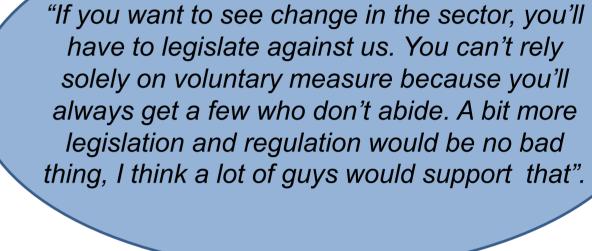
Figure 1. word cloud generated from fisher survey comments regarding issues around gear use, loss, recovery and disposal within their sector.

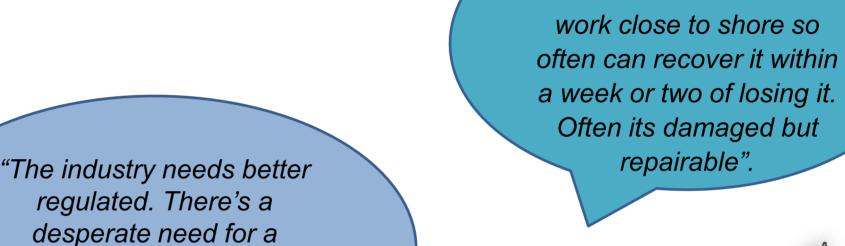


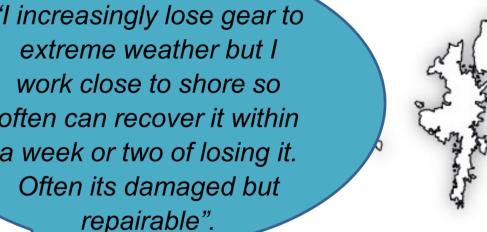
separation of sectors and

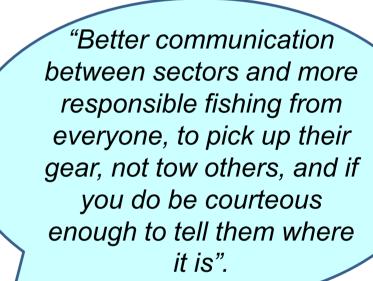
controls on the amount of

gear creel vessels can work".



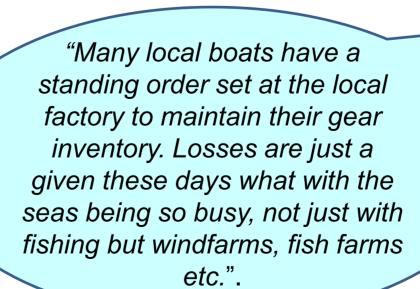








"I recover a large amount of plastic (non-fishing) waste whilst steaming, and also catch a good amount in the creels, I keep a landing net handy for flotsam recovery and have a waste bin at the hauling station".



"Illegal trawlers in the MPAs are the main cause of gear loss for me. There's no consequence for them towing through our grounds so they just keep doing it. There must be 1000s of creels out there that get towed and dumped and never recovered, entangling all sorts, threatening wildlife, polluting".

Figure 2. Anonymous comments received from fishers participating in the survey.

What next?

This survey forms part of a PhD project entitled 'Understanding the scale, impact and potential mitigation of marine animal entanglement in the Scottish static gear fishery' (please also see **Poster #136**). Full analysis of the results will be completed shortly and submitted for publication.