

Recommendation for a national policy on the treatment of fishing gear as it relates to marine litter

Current state of fishing gear waste

The Irish seafood sector currently represents a significant part of our yearly national revenue, with over 14,000 people employed in the industry and over a billion euro contributed every year to our national economy¹. Fishing in general represents a large percentage of European income, with a 2017 estimate valuing the EU aquaculture industry at 5.1 billion euro². Unsurprisingly perhaps, this generates a great deal of waste, with an estimated annual 640,000 tonnes of fishing gear lost or abandoned annually³. In the EU, plastic waste represents 84% of marine litter, of which waste fishing gear represents 27% by count⁴. Waste fishing gear in fact likely represents a larger figure than this 27% given the weight of the gear, which leads to errors in comparing waste items by count. The weight of fishing gear also leads to a higher proportion of fishing gear remaining in the water⁵. We can also see this weight effect in the higher proportions of fishing gear found on beaches with strong tides⁶, which is suggestive of a higher concentration of fishing gear in the water than the 27% found in beach counts. This high level of fishing gear waste represents a serious challenge to the support of an ecologically sound aquaculture in our waters and needs to be addressed with ambitious sustainability measures in order to increase the current level of end-of-life fishing gear recycling in the EU, which is currently estimated at 1-5%⁷.

Problems resulting from fishing gear waste

There are many problems that stem from fishing gear waste, or from the effects of marine litter, on the fishing industry as well as on our oceans' ecosystem. At present, the cost of marine litter to the fishing industry, through damage or catch reduction, is 1-5% annually⁸. Another significant factor to this loss of industry is the prevalence of "ghost fishing", where fish are unintentionally caught by gear/other waste left by the marine industry. In addition to the negative effects of marine litter on equipment and catch, there is also the issue of dolly ropes, which act as sacrificial plastic in order to prevent damage to fishing nets, which are more valuable. These

¹ <http://www.bim.ie/media/bim/content/publications/corporate-other-publications/BIM-Charting-the-Course-in-Sustainability.pdf>

² https://ec.europa.eu/eurostat/statistics-explained/index.php/Fishery_statistics

³ Huntington and Macfayden, *Abandoned, Lost or Otherwise Discarded Fishing Gear*, 2009 (FAO and UNEP)

⁴ *European Commission JRC report, Marine Litter on EU beaches*, 2016

⁵ doi.org/10.1371/journal.pone.0095839

⁶ Unger and Harrison, *Fisheries as a source of marine debris on beaches in the United Kingdom*

⁷ Bergmann, Melanie, Gutow, Lars, Klages, Michael (Eds.), 2015. *Marine Anthropogenic Litter*, Springer

⁸ ISBN 978-3-319-16510-3

dolly ropes not only pose an issue in entanglement, but also shed large amounts of plastic fibres, which end up in the marine ecosystem, and as they are consumed by all forms of life, move up the food chain and onto our plates.

International response to dealing with the issue of fishing gear waste

There have been numerous programmes, studies, and initiatives focused on this issue of fishing gear waste. For example, Iceland is currently collecting over 80% of its fishing nets, and recycling over 70% of them. Iceland has established minimum collection and recycling targets since 2008⁹. Fishing gear in Iceland is entitled to an advanced disposal fee, the collection of which is managed by the Federation of Icelandic Fishing Vessel Owners (LIU), which in fact operates under the cost of their accrued government disposal fees, and so works as a win-win situation for the country⁹. Norway has the Nofir project, which has collected and recycled over 26,000 tonnes of end-of-life fishing gear between 2011 and 2016⁹. Nofir reports that it recycles 30% of collected waste, with the remaining 70% going to incineration. The Chilean government runs the “Start-Up Chile” programme, which provides disposal points for nets which are then recycled to create skateboards and sunglasses⁹. Net-Works turns nylon fishing nets into yarn which is then used for carpet tiles. The Netherlands started the DollyRopeFree project, through which many studies have been carried out in order to find alternative materials and designs to fill the current function of dolly ropes. These studies have to date found polyurethane, biopolymer, and yak leather dolly ropes as possible better alternatives, and are still trialling materials¹⁰. These are all valuable initiatives and offer a keen insight into how we might think about this problem in an Irish context.

Recommendations for national policy on fishing gear waste

1. Work towards banning the present use of dolly ropes in favour of more sustainable materials/designs as it becomes possible to do so. To this end, there must be incentives for producers using better materials with a longer lifetime.
2. Encourage better return of end-of-life fishing gear through Port Reception Facilities (PRF) by increased non-voluntary Extended Producer Responsibility (EPR) schemes as set out in Directive 2008/98/EC. These fees should be 100% indirect, such that fishers are not unduly effected by new legislature, and set at such a level where producers can recover the cost of the end-of-life gear. Fees should be modulated in order to best effect these desired changes, and should also include cleaning costs of equipment collected. This should incentivise producers to design longer-lasting gear through use of better design and material composition. Ideally this would also entail a standardization of fishing gear across Europe to allow for easier collection and recycling. Producers will also be held responsible for awareness raising and clean-up activities. A deposit refund scheme is recommended in order to incentivise returns.
3. Pursuant to the recently adopted EU Single Use Plastic Directive (SUP), Ireland must set up a national minimum yearly collection target of discarded fishing gear, which we recommend setting at 50% before 2025, increasing to 90% by 2030⁹. This should be measured by increased beach and maritime counts which are to be reported annually to the EU Commission.

⁹ 2019_22_10_rpa_bffp_fg_guide.pdf

¹⁰ <http://www.dollyropefree.com/alternatives/index.php?id=41>

4. Update of port waste reception facilities such that separate waste streams are collected to facilitate proper management.
5. A traceability scheme for fishing gear, where possible, such that EPR schemes are easier to enforce. This may also lead to a reduction in Illegal, Unreported, and Unregulated (IUU) fishing, which currently represents a \$10 billion market worldwide¹¹. This scheme could take the form of an e-log for lost gear which would become part of the standard reporting practices in the fishing industry and which would allow for the safe recovery of lost gear.
6. Increased funding to the Fishing For Litter programme currently in place at fishing harbours in Ireland, including incentives for bringing in litter to be disposed of properly. Currently, fishing vessels can request a large waste collection bag to bring in marine litter. However, there is no mandate that they carry such a bag nor is there any incentive to bring in recovered marine litter. As collected marine litter takes up space and weight on the fishing vessel, it reduces the boats' capacity to store landed fish. Such fishermen should be incentivised through a recovery fee to offset any negative economic impact of reduced storage. This economic incentive could be funded from any EPR scheme established for fishing gear.
7. Liaise with the Department of Communications, Climate Action and Environment, which is the lead department in the transposition of the SUP, in the full development of lost fishing gear collection scheme.

¹¹ DG MARE 2016