

## Background

'Ghost gear' is fishing gear which has been abandoned, lost or otherwise discarded at sea and is widely regarded as one of the most harmful forms of plastic marine debris.

Estimates indicate as much as 5.7 per cent of all fishing nets, 8.6 per cent of all traps and 29 per cent of all lines are lost annually.<sup>1</sup> Regional differences also exist, with fishing gear comprising an estimated 27 per cent of beach litter in Europe, 46 per cent of the floating debris in the Great Pacific Garbage Patch<sup>2</sup> and, in a study in the North Pacific Ocean, nearly 90 per cent of marine debris intercepted by longline fisheries was ghost gear.<sup>3</sup>

Abandoned, lost and otherwise discarded fishing gear (ALDFG) is an ever-growing problem, impacting marine resources, wildlife and habitats.<sup>4</sup> When fishing gear is lost, it continues to catch both target and non-target species – also known as 'ghost-fishing' – entangling and killing threatened and protected marine animals and commercially important fish species.<sup>6</sup> Lost gear also damages coral reefs and the seabed, while surface ALDFG presents a significant safety hazard for shipping and maritime activities, such as propeller entanglement.

Once washed ashore, ALDFG blights beaches with plastic litter. Its disintegration further contributes to microplastics in the marine environment and on beaches.<sup>6</sup> The impacts of microplastics on cetaceans (whales,

dolphins and porpoises) and other marine species can include inflammation, cellular tissue damage and altered molecular pathways. Furthermore, ingestion of microplastics has the potential to increase the bioavailability of toxic substances, which is likely to impact all parts of the marine food chain.<sup>7</sup>

The causes of ALDFG are multiple and include enforcement pressure leading illegal fishers to abandon their gear to avoid capture, operational pressure leading to gear conflict and accidental losses, weather events increasing the likelihood of loss or discarding for safety reasons and spatial and temporal pressures on fishing areas from both legal and illegal fishing activity. Indirect causes, such as expensive, inaccessible or non-existent disposal facilities at or around ports, also increase gear dumping and mismanagement.<sup>8</sup>

Beyond fishing gear such as nets, lines and traps, different gear types and their plastic components are known to cause specific and complex environmental and governance challenges for Regional Fisheries Management Organisations (RFMOs) and enforcement agencies. For example, between 2016-20, 96,599 drifting Fish Aggregating Devices (FADs) were deployed in the Western Central Pacific Ocean. Investigation of FAD fates showed 44.1 per cent of FAD buoys (with transmitters) were abandoned, 9.6 per cent were retrieved; 6.6 per cent were beached; 18.4 per cent were sunk, appropriated or had a malfunctioning buoy; and 21.3 per cent were deactivated by the fishing company and left drifting and unmonitored at sea.<sup>9</sup>

As global fishing efforts intensify and seafood remains a vital source of protein for communities around the world, the risks posed by ALDFG for food security, biodiversity and marine and coastal environments warrants further consideration.

# Towards a comprehensive legal approach for fishing gear

Following the adoption of the resolution End Plastic Pollution: Towards an International Legally Binding Instrument at the 5th Session of the United Nations Environment Assembly in 2022 (UNEA-5),<sup>5</sup> countries have a chance to work together to address the root causes of plastic pollution.

Ghost gear is a major contributor to marine plastic pollution and needs a bespoke and tailored approach within the ongoing negotiations for the new global plastics treaty, yet discussions to date have not allowed for a robust exchange on what potential control measures and obligations related to sea-based sources of plastic pollution, such as fishing gear, might look like and how the new governance framework will approach them.

While recent attempts have been made through existing intergovernmental fora, RFMOs and Regional Fisheries Bodies (RFBs) to address elements of the fishing gear pollution issue, including the adoption of the Food and Agricultural Organisation (FAO) Voluntary Guidelines on the Marking of Fishing Gear (VGMFG) and provisions within the International Maritime Organisation (IMO) Action Plan to Address Marine Plastic Litter from Ships, no single instrument or body has adopted a comprehensive strategy which provides for interventions across the full fishing gear lifecycle and has the capability to address the magnitude of the problem.

In recent years, there have also been attempts to promote solutions such as bio-based or biodegradable fishing gear,<sup>11</sup> but in the absence of global standards and comprehensive research on impacts and effectiveness, progress on circular design and alternative materials is fragmented at best.

UNEA Resolution 5/14 makes specific reference to the need for the new instrument to address plastic pollution, including in the marine environment.<sup>12</sup> This includes the development of provisions to promote national and international cooperative measures to reduce plastic pollution in the marine environment and encourage action by all stakeholders, including the private sector, with consideration of traditional, indigenous and local knowledge.<sup>13</sup>

This decision provides the perfect launchpad for exploring a new comprehensive and effective governance framework for fishing gear, implemented as part of a multi-stakeholder action agenda.

#### INC-2 'options paper' and submissions on fishing gear

Following the first session of the Intergovernmental Negotiation Committee (INC-1), the UNEP Secretariat prepared <u>UNEP/PP/INC.2/4</u> – also known as 'the options paper' – outlining the views expressed by Member States during INC-1 and subsequent written submissions on potential options for elements of the new instrument.

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In total, 62 governments, including groups of governments (such as the Africa Group, the Alliance of Small Island States, the European Union, the Group of Latin America and Caribbean Countries and the High Ambition Coalition,) and 176 stakeholder submissions were made. Within the context of potential measures, actions and approaches, there was limited input among submissions by governments on fishing gear. Among those submissions mentioning fishing gear,<sup>14</sup> the recovery of ALDFG and remediation of legacy pollution, Extended Producer Responsibility (EPR) schemes for fishing gear, as well as the development of guidance, were emphasised. However, there was a tendency to rely on existing frameworks and initiatives such as those from FAO and IMO. There was nevertheless strong support for a 'sectoral approach' (including fishing gear) to dealing with plastic pollution, for example in the Africa Group's submission.

The map shows an indication of support for measures on fishing gear and sea-based sources of plastic pollution,



#### Support a Provision on Fishing Gear/ Sea-Based Sources

\*This map does not reflect a political or legal position on borders

Map: Created by Environmental Investigation Agency and the Center for International Environmental Law • Source: UNEP Pre-Session Submissions • Created with Datawrapper

based on the submissions. In the options paper, the references to fishing gear from member states have been captured under possible core obligation nine, "eliminating the release and emission of plastics to water, soil and air" (page 10), specifically the provision on fishing gear which suggests Parties could "Take effective measures to prevent and reduce loss of fishing gear containing plastic and leverage existing efforts, including those of the Food and Agriculture Organisation of the United Nations, and the International Maritime Organisation." [18 (d)].

Further reference has also been made under possible core obligation 10 "addressing existing plastic pollution" (page 11) with regard to "measures to remediate plastic pollution, including in the marine environment and areas beyond national jurisdiction, taking into account the new draft agreement under the United Nations Convention on the Law of the Sea (UNCLOS) on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction"(BBNJ) [19(a)(i)] and to "[e]liminate ghost gear pollution in the environment … in collaboration with the FAO and IMO" [19(b)(i)].

While these inclusions provide scope for further deliberations on approaches for fishing gear within the new instrument and promote coordination with existing instruments, the focus is solely on the elimination of releases into the environment. It fails to capture the need for an holistic framework that deals with all stages of the fishing gear lifecycle, including design, use, trade and end-of-life treatment.

It is worth noting that within the VGMFG, for example, there are provisions related to trade and market-based measures to promote traceability of fishing gear across the supply chain and the promotion of gear-marking in seafood certification schemes. But while the guidelines are voluntary and the options paper focuses more on downstream aspects, it is unclear whether sufficient scope is provided to effectively build on this framework within the treaty.

# How the new agreement can fill current legal gaps – a dedicated programme of work on fishing gear

The current regulatory framework is fragmented and inadequate to address ghost gear. As a result, the new international agreement should create a global framework that can facilitate common challenges, promote shared objectives and operationalise key recommendations for effective governance.

The best way to achieve this is to set out a dedicated programme of work to develop a comprehensive global strategy on fishing gear. A dedicated programme will allow coordination and expansion of existing initiatives while promoting integration with adopted guidance and supporting policy development and implementation at the national level. The programme should include:

a) **an article on fishing gear** setting out, as a core obligation, the reduction of ALDFG. Provisions would include implementing product design criteria, legal and sustainable usage, mandatory reporting and environmentally sound and safe retrieval of lost gear and adequate end-of-life treatment to facilitate collection, ease of disassembly, recycling and safe disposal

b) **a mechanism to develop a comprehensive strategy**, in cooperation and coordination with other UN agencies including, but not limited to, IMO and FAO, RFMOs, national fisheries authorities and other relevant agreements or organisations

c) **specific provisions**, which could take the form of control measures or guidelines adopted by the Conference of the Parties on port reception facilities, EPR, environmentally sound waste management, licensing schemes, reporting, fishing gear design, environmentally sound and safe retrieval and fiscal incentives. These guidelines could take into account and potentially improve upon existing guidelines. Another provision, for example, could be to operationalise guidelines on licensing schemes. Licences should include fishing gear restrictions on different types of gear deemed particularly vulnerable to becoming ghost gear and require gear marking, gear design standards, reporting of lost gear and retrieval. Licenses should include penalties for violations and could provide information on fiscal incentives such as buyback or deposit-refund schemes that incentivise fishing vessels to return derelict gear and retrieve lost gear

d) **initiating a multi-stakeholder action agenda**, including non-governmental stakeholders across the value chain, including fishing gear producers, fishing and seafood companies, port authorities, local municipalities, recyclers, certification bodies and regional fishery bodies, among others. This should assure a clear and comprehensive strategy over the entire lifecycle of fishing gear, provide stakeholder engagement through participation and designated responsibility, mobilise resources and enhance capacity building, and exchange of information and expertise. All of this can provide institutional support for the treaty and streamline tackling ALDFG.

## Conclusion

Ghost gear is a complex issue and will require a package of policies coordinated globally and implemented nationally, regionally or internationally, covering the full lifecycle of plastic fishing gear and involving multiple stakeholders, in order to be effective.

While some initiatives arguably fall under the competencies of existing instruments and sectoral bodies, significant shortcomings exist in the current governance framework. The new global agreement on plastic pollution should serve as the umbrella framework for the adoption and implementation of a comprehensive global fishing gear strategy, or 'sectoral approach', to dealing with plastic pollution in fisheries and the harms caused by the plastic materials themselves. This should be in full recognition that, on topics where there exists a potential overlap of competencies with existing instruments, joint working groups would be established to clarify respective roles, share knowledge, data and best practices, build capacity and align activities and funding.

However, the new global plastics treaty provides a fresh opportunity to deal with assumptions about existing activities and their effectiveness and to create a clear path for an ambitious action on this pervasive and problematic source of pollution.

# References

- Richardson, K., Hardesty, B. D., Vince, J., & Wilcox, C. (2022). Global estimates of fishing gear lost to the ocean each year. Science Advances, 8(41). Available <u>here</u>. Richardson, K., Hardesty, B. D., & Wilcox, C. (2019). Estimates of fishing gear loss rates at a global scale: A literature review and meta-analysis. Fish and Fisheries, 20(6), 1218–1231. Available <u>here</u>.
- European Commission (2018). New Proposal will Tackle Marine Litter and "Ghost Fishing." Available <u>here</u>. Lebreton, L. et al. (2018). Evidence that the Great Pacific Garbage Patch Is Rapidly Accumulating Plastic (Sci Rep 8, 4666). Available <u>here</u>.
- Uhrin, A.V. et al (2020). Relative Abundance of Derelict Fishing Gear in the Hawaiibased Pelagic Longline Fishery Grounds as Estimated from Fishery Observer Data (Sci Rep 10, 7767). Available <u>here</u>.
- GESAMP (2020). Sea-Based Sources of Marine Litter A Review of Current Knowledge and Assessment Data Gaps (Second Interim Report of GESAMP Working Group 43). Available <u>here</u>.
- Convention on Biological Diversity (2016). Marine Debris: Understanding, Preventing and Mitigating Significant Adverse Impacts on Marine and Coastal Biodiversity (Report of the Subsidiary Body on Scientific, Technical and Technological Advice, UNEP/CBD/ SBSTTA/20/INF/9). Available <u>here</u>. Greenpeace (2006). Plastic Debris in the World's Oceans. Available <u>here</u>
- Potential microplastic release from beached fishing gear in Great Britain's region of highest fishing litter density. Available <u>here.</u>
- Mattsson, K., Johnson, E. V., Malmendal, A., Linse, S., Hansson, L.-A., & Cedervall, T. (2017). Brain damage and behavioural disorders in fish induced by plastic nanoparticles delivered through the food chain. Sci. Rep. 7:11452. doi: 10.1038/s41598-017-10813-0 (more references available).
- Macfadyen, G. et al (2009). Abandoned, Lost or Otherwise Discarded Fishing Gear (FAO Fisheries and Aquaculture Technical Paper No. 523, UNEP Regional Seas Reports and Studies No.185). Available here.
- 9. Report on analyses of the 2016/2021 PNA FAD tracking programme. Available here.
- United Nations Environment Assembly (2022). Resolution 5/14 End Plastic Pollution: Towards an International Legally Binding Instrument. UNEP/EA.5/Res.14 [hereinafter UNEA Resolution 5/14]. Available <u>here.</u>

- Phys Org (2021) "Bio-based and biodegradable nets could be the solution to 'ghost nets' jeopardizing sea life." Available <u>here.</u>
- 12. UNEA Resolution 5/14, at Operative Paragraph 3 (chapeau). Available here.
- 13. Ibid. at Operative Paragraphs 3(c) and (l).
- 14. See for example, Canada, Kenya, Norway, Philippines, UK, Switzerland or AOSIS. Available <u>here.</u>
- 15. Commission Implementing Regulation (EU) No 404/2011 of 8 April 2011 laying down detailed rules for the implementation of Council Regulation (EC) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the Common Fisheries Policy OJ L 112, 30.4.2011, p. 1–153 (entered into force 8 April 2011) 'Commission Implementing Regulation (EU) No 404/2011'), Section 2, Marking and identification of fishing gear and crafts. Available here.

