

Ending illegal bottom trawling in the Mediterranean Sea

A Call to Action for the General Fisheries Commission for the Mediterranean

Call to Action

Taking decisive action to end bottom trawling in the Mediterranean Sea in areas where it is already banned, and hence considered illegal, should be a top priority for all GFCM Contracting Parties responsible for promoting sustainable fisheries and protecting marine biodiversity. First, it is vital to recognise that not only is illegal bottom trawling taking place in the Mediterranean, but this destructive practice is putting ecosystems and livelihoods at risk, and that many protection measures currently exist only “on paper” - i.e. without full enforcement.¹ Second, urgent steps must be taken to end illegal bottom trawling by strengthening transparency, compliance, and the enforcement of GFCM measures.

To help accelerate government action, several member organisations of the Med Sea Alliance (MSA) have joined forces to examine and expose illegal bottom trawling and recommend concrete solutions to both national authorities and the General Fisheries Commission for the Mediterranean (GFCM).

Why is ending illegal bottom trawling so important?

Today, 73% of assessed Mediterranean fish stocks are fished outside biologically sustainable limits, and on average fishing pressure is twice the level considered sustainable². Marine Protected Areas (MPAs) and other spatial fisheries closures are powerful tools for fish stock recovery and protecting sensitive habitats³. While regulations prohibit trawling in some designated areas or periods, evidence demonstrates that bottom trawling is occurring in areas where it is prohibited.

In November 2022, the MSA launched the interactive online Atlas⁴ of trawling activities in areas of the Mediterranean where trawling is banned and considered illegal. This tool, for the first time, enables the identification of areas with presumed and confirmed illegal trawling. By cross-referencing Automatic Identification System (AIS) data with maps of

protected areas, the Atlas can identify instances where trawlers appear to be fishing in closed areas. AIS is a tracking system that automatically transmits a vessel’s identity, speed and GPS location. The International Maritime Organization (IMO) requires AIS for larger vessels (above 300 gross tonnage that operate internationally), and the EU requires all fishing vessels greater than 15 metres flagged to an EU state to use AIS.⁵

From January 2020 to December 2021, the Atlas recorded presumed infractions of bottom trawling in 35 closed areas by 305 different vessels across 9518 apparent days of fishing activity. In addition, 169 cases of confirmed infractions were found between 2018 and 2021, based on research on media outlets and information released by national control authorities. To date, the Atlas has analysed 726 protected areas, including Fisheries Restricted Areas (FRAs), MPAs (reserves or parks), national closures, and those Natura 2000 sites established under the EU Habitats Directive, where bottom trawling is banned according to the EU Regulation on Mediterranean fisheries.⁶

Bottom trawling is one of the most unselective and destructive forms of fishing, driving significant depletion of fish stocks, capturing high levels of bycatch, causing long-term damage to marine habitats, disturbing significant quantities of carbon stored in seabed sediments, contributing to coastal erosion, and threatening the livelihoods of small-scale fishers who rely on sustainable fish stocks for their income and community well-being.⁷

The impacts of bottom trawling are well documented and include high levels of incidental captures and discards of protected or threatened species, particularly sea turtles, sharks and rays, and some cetaceans. Discard ratios vary widely depending on the fishing method and geographical area. In the Mediterranean, trawlers show by far the highest discard ratios, ranging from 34 to 44 percent across the region. Compounding this issue, bottom trawlers, along with longliners, are accountable for about 80% of the vulnerable species incidentally caught in the Mediterranean and Black Sea.⁸

Moreover, bottom trawling is the most widespread source of human-induced physical disturbance to the ecological integrity of global seabeds.⁹ Trawling can adversely affect habitat complexity, which in turn negatively impacts the biomass, diversity and abundance of marine species. The extent of habitat damage and the speed of recovery can vary significantly, ranging from a few days to decades, depending upon factors such as the habitat type. From a climate perspective, bottom trawling disturbs seabed sediments, representing one of the planet's primary carbon stores.¹⁰ This resuspended sedimentary carbon can then be reconverted to carbon dioxide, which is likely to increase ocean acidification and accelerate the climate crisis by reducing the ocean's capacity to sequester atmospheric carbon effectively.¹¹

Trawling fleets jeopardise the resources that sustain small-scale, community-based coastal fisheries. In certain regions, this can escalate into socio-economic issues, including unfair competition, loss of employment opportunities, heightened food insecurity for small-scale fishing communities, and social unrest.¹² Bottom trawling is also the most energy-intensive fishery, requiring the highest fuel consumption per kilogram of fish, compared to other fishing methods.¹³

What does this mean for the GFCM?

The Contracting Parties of the GFCM must ensure that trawl bans in the Mediterranean Sea are fully enforced and complied with to support the recovery of fish stocks and the protection of sensitive habitats. As a top priority, the GFCM must take concrete and impactful measures to increase transparency and enforcement so that closed areas can be effectively protected from bottom trawling.

Allowing bottom trawling to continue in areas where it is banned is just one example of the failure of the GFCM to tackle cases of systemic non-compliance. One way this failure could be addressed is for the GFCM to adopt a long-awaited compliance mechanism that would allow it to impose and take corrective measures. Ministers and high-level officials attending the MedFish4Ever Conference have the responsibility and opportunity to inject the impetus into the GFCM annual session in November 2023 to ensure a swift adoption of such a mechanism and hence contribute to the long-term sustainability of the Mediterranean.

We call on the GFCM members to:

- **Take effective action against cases of non-compliance by adopting a compliance mechanism and implementing effective corrective measures.**
- **Ensure that fishing vessels are fully tracked by requiring mandatory AIS for all fishing vessels above 15 metres by 2030.**
- **Ensure that a Vessel Monitoring System (VMS) is urgently installed on all vessels over 15 metres in order to effectively track fishing activity, tackle illegal trawling, and require vessel trackers on all vessels by 2030. The GFCM should also establish a regional vessel monitoring system to allow for data exchange on fishing activities and to enforce GFCM measures.**
- **Increase transparency of vessel activities, including beneficial ownership, and provide public information on cases of non-compliance and the follow-up or sanctions imposed by authorities.**

¹ Relano V., Pauly D. (2023). The 'Paper Park Index': Evaluating Marine Protected Area effectiveness through a global study of stakeholder perceptions. *Marine Policy*, Volume 151, 105571, ISSN 0308-597X, <https://doi.org/10.1016/j.marpol.2023.105571>.

² FAO. 2022. *The State of Mediterranean and Black Sea Fisheries 2022*. General Fisheries Commission for the Mediterranean. Rome. <https://doi.org/10.4060/cc3370en>

³ Lubchenco, Jane & Guidetti, Paolo & Grorud-Colvert, Kirsten & Giakoumi, Sylvaine & Gaines, Steven & Micheli, Fiorenza & Carlo, Giuseppe. (2016). *The Science of Marine Protected Areas - Mediterranean Sea*.

⁴ <https://atlas.medseaalliance.org/>

⁵ Council Regulation (EC) No 1224/2009 of 20 November 2009. <https://eur-lex.europa.eu/eli/reg/2009/1224/oj>

⁶ Article 4.4 of Council Regulation (EC) 1967/2006 of 21 December 2006. <https://eur-lex.europa.eu/eli/reg/2006/1967/oj>

⁷ For more information on the impacts of bottom trawling see: Halpern, B.S. et al, *A Global Map of Human Impact on Marine Ecosystems*, *Science* 319, 948-952 (2008). DOI:10.1126/science.1149345; Steadman, D., Thomas, J.B., Villanueva, V.R., Lewis, F., Pauly, D., Deng Palomares, M.L., Bailly, N., Levine, M., Virdin, J., Roccliffe, S. & Collinson, T. (2021). New perspectives on an old fishing practice: Scale, context and impacts of bottom trawling. December 2021. <https://oursharedseas.com/new-perspectives-on-an-old-fishing-practice/>; and *Impacts of Bottom Trawling*, OCEANA, Available at: <https://europe.oceana.org/impacts-bottom-trawling/>

⁸ FAO. 2022. *The State of Mediterranean and Black Sea Fisheries 2022*. General Fisheries Commission for the Mediterranean. Rome. <https://doi.org/10.4060/cc3370en>

⁹ Hiddink, J. G. et al. Global analysis of depletion and recovery of seabed biota after bottom trawling disturbance. *Proc Natl Acad Sci USA* 114, 8301-8306 (2017). <https://doi.org/10.1073/pnas.1618858114>.

¹⁰ Epstein, G., Middelburg, J. J., Hawkins, J. P., Norris, C. R., & Roberts, C.M. (2022). The impact of mobile demersal fishing on carbon storage in seabed sediments. *Global Change Biology*, 28(9), 2875-2894. <https://doi.org/10.1111/gcb.16105>

¹¹ Smeaton, C., & Austin, W. E. N. (2022). Quality not quantity: Prioritizing the management of sedimentary organic matter across continental shelf seas. *Geophysical Research Letters*, 49(5), e2021GL097481. <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2021GL097481>.

¹² Whitmarsh, D., Pipitone, C., Badalamenti, F., & D'Anna, G., (2003). The economic sustainability of artisanal fisheries: the case of the trawl ban in the Gulf of Castellammare, NW Sicily, *Marine Policy*, Volume 27, Issue 6, 2003. [https://doi.org/10.1016/S0308-597X\(03\)00062-9](https://doi.org/10.1016/S0308-597X(03)00062-9).

¹³ Rodríguez, Luis, Mascarell-Rocher, Y., Ortega, Mique, Senni, Domitilla. (2022). Exposing the hidden costs of trawling in the Western Mediterranean. *MedReAct*. <https://www.researchgate.net/publication/362326156>