Marine Management Organisation

Harbour porpoise bycatch management evidence: what is available and how you can help

What bycatch evidence is currently available?

Below are the main evidence sources that are currently available on harbour porpoise bycatch and gillnet activity in UK waters:

- **Bycatch estimates (porpoise killed per year) in the harbour porpoise Assessment Units, including estimates by gear type –** evidence shows that the estimated number of porpoise killed per year by gillnets is over threshold values that could impact porpoise populations in the North Sea and the Celtic & Irish Seas Assessment Units (ICES, 2021; Taylor et al., 2023).
- **Bycatch estimates for UK net fisheries per ICES region –** evidence shows that bycatch from UK gillnet fisheries is generally highest in the southern North Sea (ICES area 4c), and the English Channel and Celtic Sea (7d to g) (Defra, 2018, 2023).
- **Bycatch estimates for UK net fisheries per gillnet metier (type) –** evidence shows that three metiers account for almost 90 % of the estimated bycatch: light twine gillnets generally used to catch smaller species (such as red mullet, bass and whiting); heavy tangle and trammel nets; and heavy twine gillnets typically used for larger gadoids (Kingston et al., 2023). Evidence also shows that bycatch rates are particularly high for heavy twine gillnets targeting hake and are lowest for light twine nets targeting small flatfish (Northridge et al., 2019).
- **Evidence on areas with high risk of porpoise bycatch –** evidence shows that bycatch by bottom-set gillnets off the southwest coast of the UK has been a long held concern (Tregenza et al., 1997). Bycatch risk maps show that the southern North Sea, the eastern part of the English Channel (year round) and western English Channel (particularly in summer) are high risk areas (Evans et al., 2021; Irvine et al., 2024).
- **Gillnet effort days (for all vessel sizes) by ICES rectangle across the Assessment Units –** evidence shows potential hotspots of gillnet effort in areas overlapping or adjacent to the two porpoise MPAs (Gibin et al., 2024).
- **Gillnet effort days in the MPAs –** evidence shows that most gillnet effort in the MPAs is by vessels under 12 m in length (Gibin et al., 2024). The web maps show that there is spatial variation in UK under 12 m gillnet effort throughout the MPAs.
- **Vessel Monitoring System (VMS) report density (for all vessels over 12 m in length) in MPAs –** evidence presented in web maps shows that there is no over 12 m effort by drift nets in the MPAs. Additionally, over 12 m effort by anchored nets is limited (Gibin et al., 2024).

What evidence gaps could you help fill to inform management decisions?

There are a number of important evidence gaps, that if filled, could provide additional context to determine an appropriate management option, and determine the appropriate spatial scale and circumstances at which management could be applied.

The primary bycatch evidence gaps we need your help filling are:

- **Bycatch hotspots or coldspots –** any areas and times of year with high or low risk of porpoise bycatch;
- **Bycatch across gillnet fisheries –** any metiers/fisheries with high or low risk of porpoise bycatch; and
- **Location of gillnetting effort by vessels under 12 m in length.**

Other important evidence gaps we need your help filling are:

- If ADD effectiveness for reducing harbour porpoise bycatch varies across different gillnet metiers, such as anchored versus drift nets.
- Efficiency of and preference for any specific ADD device types.
- Gillnet net lengths and soak times typically used in MPAs by vessels of different sizes for estimating disturbance footprints relative to noise thresholds.
- Dinner bell effect on seals or dolphins, where animals learn to associate ADD sounds to the presence of nets and potential prey with food.
- Methods that could be used to determine a bycatch level above which effort limitation or dynamic time-area closures would apply.
- Any options missing from the potential management options document.
- Any methods/practices already undertaken that reduce porpoise bycatch.

Notwithstanding these evidence gaps, MMO has legal obligations[1,2] to ensure the impacts of fishing on MPAs in English waters offshore of 6 nm are managed in a way that is compatible with their conservation objectives. **Additional evidence on the location, gear types used and time of year when you have observed bycatch may help to address these evidence gaps and enable MMO to make management decisions that minimise the impacts on fishers and other sea users whilst still fulfilling our legal duties.**

[1] https://www.legislation.gov.uk/uksi/2017/1012/contents
[2] https://www.legislation.gov.uk/uksi/2017/1013/contents

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