Harbour Porpoise Bycatch Management Option 1: Time-area closures

Time-area closures ban fishing within a particular area, either year-round or for a defined period of time, e.g., seasonal closures.

Time-area closures could be considered within the Stage 4 porpoise MPAs and/or in wider seas (areas of the Management Units within MMO's remit). The advantages, disadvantages and considerations listed below will vary depending on the scale at which the option is implemented. For further detail on spatial scales please see the handout on spatial scales for harbour porpoise bycatch management.

Possible options for time-area closures to manage porpoise at an MPA-level:

MPA site	Closure option
Southern North Sea	Whole-site, year-round closure to gillnet fishing.
	Close the southern winter area in the winter.
	Close to gillnets in: • South winter area in winter • Northwest winter area in winter • Summer area in summer
Bristol Channel Approaches	Whole-site, year-round closure to gillnets.
	Whole-site closure to gillnets in winter.

Advantages	Disadvantages
• Removes porpoise-fishing gear interactions, reducing bycatch • Could encompass areas/times of year when porpoise-gillnet encounter rates are highest.	• High socio-economic impacts, particularly on small vessels that may not easily be able to compensate • Displaced effort to peripheral areas with potentially high porpoise density • Contribute to spatial squeeze • Do not consider the dynamic nature of fisheries and harbour porpoise

Other Considerations:

- Recommended for endangered populations, and areas with consistent bycatch or porpoise aggregation.
- Difficult to predict impacts on fishing fleet behaviour, including gear switching.
- Examples from elsewhere show closures are sometimes not effective at reducing bycatch due to displaced effort, but closures can aid survival (although they may not be sufficient to enable population recovery).
- Could be enforced through a byelaw.
- Due to the low bycatch threshold value for the Celtic and Irish Seas Management unit (82 porpoise per year) and bycatch estimates being close to this in the Bristol Channel Approaches MPA (58 porpoise per year), a closure may be more appropriate for gillnets in Bristol Channel Approaches MPA than in the Southern North Sea MPA. This would need to be weighed against the risks and benefits of other management options.

Summary

At a wider seas scale, unless hotspots are identified, time-area closures would effectively mean a ban of gillnets across all of English waters offshore of 6 nm, which would have high socio-economic impacts and be highly challenging to implement proportionally. At an MPA scale, given the size of the MPAs, the socio-economic impacts and likely displacement of fishing activity, closures would still be challenging. Additional information, such as identifying hotspots of porpoise density, would be required to fully understand the viability of this option and the implications of this management would need to be weighed against the risks and benefits of other management options.

Questions to discuss:

- How would fishing effort be redistributed (displacement)?
- What are the main benefits of this option at either spatial scale?
- What are the main challenges of this option at either spatial scale?
- What are the socio-economic impacts of this option at either spatial scale?
- What are the environmental impacts of this option at either spatial scale?
- What are the practical implications of the option at either spatial scale?
- How feasible is this option to implement at either spatial scale?