



1. Requirement overview:

Requirements	To develop novel technologies that reduce risks from marine activities to marine protected areas
Requirement detail	<p>Management measures for marine protected areas preclude certain activities because of the environmental risk resulting from the likely impacts of those activities. Novel solutions that can reduce the impact of activities on marine features, may potentially enable those activities to occur</p> <p>This work looks to identify current issues preventing access to marine protected areas for marine fishing and recreation activities to support development of novel technologies to address issues and inform adjustments to management measures.</p> <p>This work would not require MMO itself to develop/test new technologies.</p>
MMO use	<p><b>Marine Conservation:</b></p> <p>Novel solutions that reduce the impact of fishing or recreational activities would allow marine managers to refine the understanding of the likely impacts of activities and enable consideration of potential adjustments to current management measures. This would potentially allow increased activity within marine protected areas with negligible risk to conservation features.</p>
External interest	Natural England, Joint Nature Conservation Committee, Centre for Environment, Fisheries and Aquaculture Science, Seafish
Delivery target	Ongoing

2. Aims and objectives

**Aim:**

To identify current issues preventing access to marine protected areas for marine fishing and recreation activities and encourage development of novel solution (technological or otherwise) that reduce the impacts of these activities.

## Objectives:

Objectives to deliver this requirement include to

- identify the pressures from activities that have potential to negatively impact protected features and are thus acting as a blockers to undertaking the activity
- use improved understanding of blockers to support development of novel technologies that reduced impacts
- ensure revised impacts information in light of new technologies can be used to inform adjustments to management measures

### 3. Existing evidence

MMO	The MMO has not undertaken any previous evidence development for this requirement.
Academic	Welch, et al (2016) undertook an <a href="#">assessment of novel gear designs to reduce interactions between species of conservation interest and commercial fishing nets</a> in the Queensland East Coast Inshore Finfish Fishery (Australia). Testing modified gillnets the report identified fisher behavioural changes, such as avoidance, as more effective than gear type in reducing interactions between fishing gear and species of conservation interest, although certain gear changes were likely to help increase the likelihood of a positive outcome when an interaction did occur.
Other	<a href="#">SEAFISH gear database</a> lists contains information on fishing gears used in commercial fisheries including the selectivity and discard reduction options. This also includes the scientific and technical reports on trials that have been undertaken involving fishing gears, selective devices and discard reduction practices.

### 4. Current activity

The MMO has current evidence activity to review non-lethal deterrents suitable for control of seals from fishing vessels. The MMO, as part of the Department for Environment, Food and Rural Affairs Impacts Evidence Group, is supporting a review of Anchoring and Mooring Impacts in English and Welsh Marine Protected Areas to identify impacts and best practice (Defra project ME6003) and associated eco-moorings that could reduce impact from recreational anchoring/mooring pressure.

### 5. Associated evidence requirements

Ref	Title
R045	Pressures of different fishing gear
R119	A review of non-lethal deterrents suitable for control of seals from fishing vessels

More information on these evidence requirements is available [here](#)

## 6. Potential delivery route

The MMO will deliver this evidence requirement through a combination of **commissioning** relevant activity and **partnering**, particularly with statutory nature conservation bodies through work linking pressures, sensitivities, impacts and management options.

See table 1 for timescales.

## 7. Contact

For more information or to add further research to the existing evidence list please email [evidence@marinemanagement.org.uk](mailto:evidence@marinemanagement.org.uk)

**Table 1: Delivery timescales 2017 to 2020**

Delivery Route	2017				2018				2019				2020			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Commissioning																
Partnering																

Key

	No activity
	Actively undertaking
	Outside of delivery target