



## 1. Requirement overview

Requirements	The Marine Management Organisation requires a scallop stock assessment to support fisheries management.
Requirement detail	<p>Scallop fishing is not a widely managed activity. With the exception of effort restrictions for 15m and over vessels in area VII, there is limited understanding of fisheries behaviour and whether fishing activities are at a sustainable level.</p> <p>Work to identify current available scallop stocks in English waters and how this has changed through time will help improve forecasting of stock behaviour. The project should include bringing together historic fisheries behaviour with knowledge on fisheries decision making, where potentially the fishery is being driven by external factors beyond stock availability.</p> <p>Fisheries are often monitored and managed against maximum sustainable yields (MSY). Understanding MSY, with associated confidence on the evidence base it was calculated from, for the English scallop fishery, will assist the MMO with ongoing management decision making.</p>
MMO use	<b>Fisheries management:</b> Continued improvement to the delivery of legal obligations.
External interest	Natural England, Deltares, Cefas
Delivery target	2019, Q2

## 2. Aims and objectives

### Aim:

To make a quantifiable assessment of the current scallop stocks and the maximum sustainable yields (MSY), whilst also understanding the predominant drivers of fisheries behaviour to assist management decision making.

### Objectives:

- calculate total available scallop stocks in English waters using best available evidence
- define MSY for scallops in English waters
- define predominant drivers of scallop fisheries behaviour

## 3. Existing evidence

MMO	<p>Details of the 'days at sea' scheme in western waters (ICES Area VII) can be found <a href="#">here</a>. This scheme looks to limit the number of hours vessels over 15m spend at sea in Area VII to keep crab and scallop fisheries within EU effort limits.</p> <p>Fisheries Activity Database (FAD) and Vessel Monitoring System (VMS) data is available.</p>
Academic	<p><a href="#">Howarth and Stewart (2014)</a> explored the effects of scallop dredging on marine ecosystems in the UK. This work demonstrates the importance of managing scallop fisheries, not only from a MSY perspective, but also for the wider impacts on benthic ecosystem caused by current fishing practices. Through several case studies and discussion points this work looks to present the options around sustainable fisheries management and limits to the wider impact caused by scallop dredges.</p> <p>As part of a European Fisheries Fund (EFF) funded project, Bangor University, in collaboration with the Welsh fishing industry, conducted a survey in Welsh waters. This survey was to gather baseline information on scallop distribution, abundance and population dynamics, as well as test the consistency and validity of different assessment methodologies when collecting such data (<a href="#">Lambert et al., 2013</a>).</p>
Other	<p>The Centre for Environment Fisheries and Aquaculture Science (Cefas), on behalf of the Department for Environment, Food and Rural Affairs (Defra), have been exploring approaches for monitoring the English king scallop fishery (<a href="#">Project: MF0238</a>). This project has suggested that the most appropriate assessment approach uses survey data with additional information from biological sampling of the commercial catches. Further work is proposed to implement some of these findings and produce a baseline assessment for the scallop stocks in English waters. This work has yet to finalise the project scope</p>

or delivery timetable.

[Seafish](#) have presented guidance on the responsible sourcing of scallops. As part of this work they have presented landings data, for the UK in 2010, for *Pecten maximus*. This report further discusses the lack of a viable scallop stock assessment in English waters at time of their writing (2013). This work goes on to discuss the possible management and conservation issues that could surround sustainable management of scallops and may have relevance when considering either MSY or strategic management measures relating to this particular fishery.

Marine Scotland Science, on behalf of Scottish Government, carried out a Scottish scallop stock assessment data acquired up to and including 2010 ([Dobby et al., 2012](#)). This work details the state of scallop stocks in and around Scottish waters as well as describing the current management and regulatory framework to highlight options for management measures.

The ICES Scallop Assessment Working Group (WGScallop) met in Galway (2013), in Nantes (2014) and in Jersey (2015) ([ICES WGScallop Report, 2015](#)) to discuss the data availability, provision and methods for stock assessment of scallops. The ICES working group looks to draw together disparate data sets from a range of collaborative nations and sets out some of the practical ways forward for future assessments and management advice. It similarly highlights the need for consistency in data reporting for international assessments. To that end it is worth considering during the process of quantifying scallop stocks in English waters.

#### 4. Current activity

Cefas are currently developing a baseline scallop stock assessment in English waters through an initial Defra project. This work is already underway and has delivered a review of the most appropriate assessment approach for a scallop stock assessment. A project board bringing together stakeholders including fisheries administrations, academia and industry members willing to contribute resources (financial and in kind) has been set up. This board will oversee the progress and delivery of this project and will make decisions to set the direction of the project.

#### 5. Associated evidence requirements

There are no related evidence requirements.

#### 6. Potential delivery route

The MMO will look to partner with organisations of relevance to widen the potential impact of any work undertaken in this area. The MMO will also explore opportunities to influence

the research of others to gather evidence that can be applied within a marine management context. Knowledge exchange is required throughout the duration of this requirement and not limited to when delivery is complete.

### **Partnering**

#### **Delivery window: Q2, 2016 – Q2, 2019**

Having identified the current work being undertaken by Cefas on behalf of Defra, the MMO is well placed to influence this work and make best use of the proposed project deliverables through its current membership of the project board. Further work on fisheries behaviour should be explored, potentially through existing projects or through development of further work upon its completion.

### **Influencing the research of others**

#### **Delivery window: Q2, 2016 – Q4, 2017**

Several universities are heavily involved in fisheries research and there is potential for some elements of this work to be delivered through a Masters or PhD studentship. Work relating to fisheries behaviour and liaising with the scallop industry around England may be suited to such a delivery route.

Although we have set out how we think we can deliver this evidence requirement, we would like to hear from anyone interested in working with us to deliver all or part of this requirement.

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 2016 to 2020**

Delivery Route	2016			2017				2018				2019				2020					
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Partnering	[Black]											Requirement delivered									
Influencing the research of others	[Black]																				
Commissioning								[Grey]	[Grey]	[Grey]	[Grey]									[Grey]	[Grey]
Knowledge exchange							[Grey]														[Black]