Marine Management Organisation

Impact evaluation framework for Lyme Bay fisheries management measures (MMO1414)

Aim

To collect baseline data that could be used in future impact evaluations of Lyme Bay fisheries management measures. The study develops an impact evaluation framework and a baseline against indicators in the framework for future evaluations.

Introduction and methodology

As an extension to the Lyme Bay process evaluation of fisheries management measures (MMO1406), MMO commissioned this project to understand the impacts of the newly implemented management measure. The aim was to develop an impact evaluation framework and collate the baseline data for future evaluation of the management measures to assess against. This will allow future analysis of the trade-offs in decision making, and allow the future impacts (positive and negative, intended and unintended) to be tracked.

The Theory of Change (ToC) was co-developed with MMO officers to explain how new management measures are intended to work and the benefits and impacts they are intended to bring. Drawing on the ToC an evaluation framework was subsequently developed. The evaluation framework includes a set of evaluation questions exploring the economic, social and ecological impacts of new management measures. Each evaluation question has associated indicators identifying key information required to answer it.
Baseline data was collected against the indicators and a counterfactual description developed from the baseline data. The counterfactual is used to describe what is projected to have happened had the new management measures not been implemented and represents the evolution of the baseline to 2028.

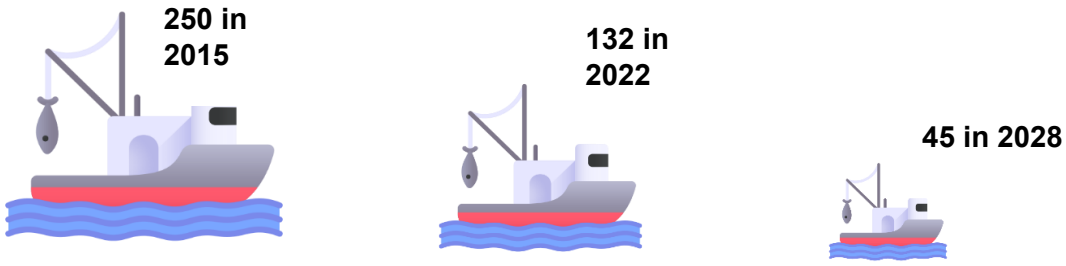
Results

The key findings from the baseline data showed that without management measures there are concerning trends for the Lyme Bay Fishermen's Community Interest Company (CIC) and under 10m (<10m) fishers within Lyme Bay. The under 10m fishers reported challenges in netting for sole due to difficulties in finding safe places to shoot nets leading to concerns over gear loss, ghost fishing, and impact on Dover sole. This is thought to be linked to over 10m (>10m) vessels increasing their fishing effort and landings. At the same time, under 10m(<10m) fishers are expending more effort for decreasing amounts of sole. Profits have decreased year on year for CIC fishers since 2017, resulting in 2021 profits being lower than they were in 2011.

The counterfactual predicts a scenario that could exist if management measures were not implemented using baseline data trends projected into 2028.When projected into 2028 key issues seen in the baseline data would be expected to continue to result in smaller vessel skippers (<10m) experiencing increased levels of stress and operating costs due to gear conflict. This, alongside an estimated reduction in days at sea of 62% and reduction in catch per unit effort of 67%, would increase financial difficulties for smaller vessels. As a result, more of them could be expected to stop netting for sole by 2028. Based on recent trends, the impact evaluation predicts that there would be around 45 <10m vessels fishing for sole in 2028, reduced from 250 <10m vessels in 2015, and 132 <10 vessels in 2022 (see Figure 1). Landings at Axmouth, Beer, Lyme Regis and West Bay would be likely to continue to decrease as a result. Landings of sole might

become dominated by the over 10m vessels at Brixham and Mevagissey. These changes may result in continued and increased negative impact on the wellbeing of the <10 vessel operators. This would increase the dissatisfaction with the MMO, which may result in a reduction in trust between the industry and the MMO as well as requiring further management work for the MMO and others.

Figure 1: The decreasing number of under 10m vessels netting for sole in Lyme Bay (Fishing boat icon courtesy of Chavarria J: https://www.flaticon.com/free-icons/fishing)



Conclusions and recommendations

Building on the Lyme Bay process evaluation of fisheries management measures (MMO1406), this study provides the basis for undertaking an impact evaluation of new management measures. Impacts of new management measures can be compared against the counterfactual (the predicted result in the absence of management) in future. This comparison can be used to assess the benefits of these management measures. Recommendations for MMO are to:

- Undertake an impact evaluation in January 2025 at the earliest to allow a minimum of one year of data to be collected
- Consider putting in place approaches to collect data for any indicators that were missing during development of the evaluation framework
- Begin communicating the need to obtain input from fishers as early as possible to encourage engagement with the impact evaluation so their opinions can be captured.

MMO comments

This study provides a good insight of and context for the benefits of the newly implemented fisheries management measures and builds on the process evaluation of Lyme Bay fisheries management measures (MMO1406). There are some identified data gaps in this framework and MMO may consider a full scale impact evaluation to fill any gaps depending on future resources.

Further information

Please direct any correspondence to the Evidence Team (evidence@marinemanagement.org.uk)