



Agenda Item No. B8

By: Lead Scientific and Conservation Officer
To: Kent and Essex IFCA – 21 May 2019
Subject: Native Oyster update
Classification: Unrestricted

Summary: This paper will provide Members with details of the work carried out regarding management of Native Oyster within the District.

Recommendations: Members are asked to **NOTE** this report

Introduction/Background:

The Authority was last updated on Native Oyster work on 14th September 2018.

Work on native oysters has continued in the following workstreams:

- PhD
- Oyster Stock Surveys
- ENORI Experimentation

- PhD

Alice Lown finalised her PhD thesis and had it printed on 8 April 2019. Following three years of work with KEIFCA, Alice is now preparing for the defence of her thesis on 4 June 2019. A copy of her final approved thesis will follow this process. The impact of the PhD is already improving our understanding of native oyster stocks within the BCRC MCZ.

Alice is continuing to work with both KEIFCA and Essex University to address the questions which we hoped to have answered through an MSc project on oyster stock modelling. This MSc program was not filled despite being advertised twice

through Essex University. As a result, both Natural England and KEIFCA agreed to use the funds available for the MSc to finance the development of a stock model.

2019 Oyster Stock Surveys

The spring 2019 native oyster survey was conducted in March and saw 99 sites surveyed from FPV Tamesis over a five day period. This survey repeated the sites surveyed from 2015 to 2018 and adds to the data collected. Analysis of the survey data using GIS software can show stock estimates for specific areas within the MCZ. Stock can be represented as a number of oysters or as a biomass. These methods have been developed within the PhD project by Alice through interpolation of survey data using inverse distance weighting.

Analysis of the 2019 data appears to show an increase in numbers of oysters in the MCZ as a whole. Closer scrutiny suggests that this increase is predominantly within the Blackwater and Ray Sand locations, with little overall change in oyster numbers in other sites. Biomass calculations have not yet been completed but will be reported in due course.

-Whole site Oyster Survey

An MCZ wide survey was carried out in 2014, with the MCZ being divided into a grid, and each section of the grid being sampled. Where oysters were found in these samples, a further four sub samples were taken within that grid section. In the following years, those sites showing presence of oysters were resampled. It is now five years since the MCZ wide survey and the intention is now to expand the survey to cover the wider MCZ again. Such a survey will highlight any areas which oysters have occupied since the 2014 survey.

-Stakeholder workshop to review best practice in oyster surveys and develop a community lead HRA document

A two day workshop in West Mersea is being organised for 3 to 4 September 2019 with local stakeholders from industry and academia, Natural England, and with organisations from elsewhere around the UK who are currently managing native oyster fisheries, including Sussex, Southern and Cornwall IFCA's and the Department of Agriculture, Environment and Rural Affairs (DAERA) from Northern Ireland. The workshop will cover both the stock survey element of the fishery and a discussion around the Habitat Regulations Assessment. Options around the survey include a grid based system, or a habitat based system to identify populations of oysters within the MCZ. Also included will be discussions around the delivery of the survey and the possibility of stakeholder involvement. The HRA discussion will address the issues around both the management of a fishery within an MPA, and the management of a fishery of a species which is a protected feature of the MPA. This unique situation requires the input from all stakeholders in order to provide the best available solution in line with current regulations and industry best practice.

-ENORI Restoration Trials

April saw the commencement of activity on the latest trial within the restoration box in the Blackwater. Following a year of planning, stone has been placed on the sea bed, which will be followed by test sections of shell. This cultch experiment will be aiming to look at the effects of changing the substrate on the sea bed to allow improved spat settlement and recruitment into the population.

Stone is being used to create a raised platform above the soft sediments of the Blackwater. This stone platform will support various test plots of shell. These test plots will contain a variety of different shell types (cockle, mussel and scallop) in order to determine if settlement and recruitment can be enhanced in this way.

An additional experiment will see spat collectors deployed within the restoration box in an attempt to increase settlement of spat during any spawning event. KEIFCA continues to be involved in these projects through ENORI along with a variety of industrial, educational, governmental and non-governmental organisations.

Recommendations:

Members are asked to **NOTE** this report