

What is the Ecosystem Approach to Fisheries Management?

Marine Theme Objective: Science for Integrated Marine Management

What's the problem?

The Government and the European Commission are committed to adopting an Ecosystem Approach to Fisheries management, but we still need to develop an approach for translating these high level policy commitments into an effective and operational management system.

What are the aims of the project?

The main aim of this project is to develop and pilot an Ecosystem Approach to Fisheries, supported by indicators and management tools that allow managers to track the success of management in meeting objectives.

Specifically, the project will:

- develop, test and report indicators that allow managers and stakeholders to assess the status of the ecosystem and the impacts of fishing;
- develop decision tables that allow managers and stakeholders to see the effects of different management options and to inform choices among them;
- engage with stakeholders to review project progress and discuss management options; and
- develop and recommend a process for implementing an Ecosystem Approach to Fisheries.

Beam trawlers (2007)

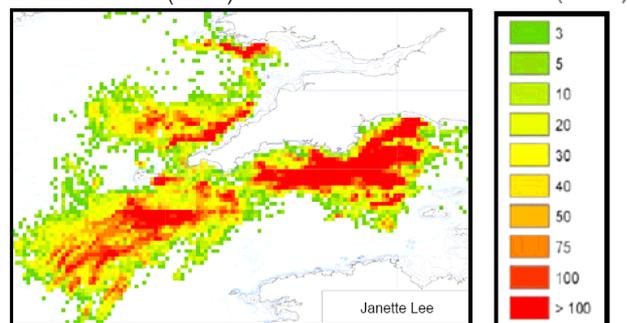


Figure 1: VMS beam trawl data (Source: Simon Jennings)

Which policy areas will the research inform?

The project will support the development and assessment of the management systems needed:

- to create a fishing sector that is “managed effectively as an integral part of coherent policies for the marine environment”, and
- to “promote sustainable fisheries consistent with a diverse and resilient marine environment” (Securing the Benefits & Charting a New Course, 2005).
- the integration of environmental concerns into fisheries management: in support of the objectives of the Marine Strategy Framework Directive (2008); and
- the review of the Common Fisheries Policy.

What is the Ecosystem Approach to Fisheries Management?

What are the results from the project and how will they be used?

The existing objectives for fisheries and environmental management in the study area have been listed and categorised, based on regional, national and international policy drivers and consultation with stakeholders. We have assessed the current state of the environment in relation to objectives and have shown that the impacts of fishing compromise some objectives for food webs, biodiversity and habitats. Indicators have been developed to track these impacts.

To identify when and where fisheries-environment interactions occur we have developed and tested data management systems for describing fishing effort from satellite vessel monitoring system data. Currently, we are developing, testing and validating models that link fishing these measures of fishing effort to changes in food webs, biodiversity and habitats. The models will be used to develop decision tables to describe the consequences of alternate management options for fisheries and environment (by fleet).

The results of this project will allow the UK to provide evidence-based scientific advice on the development and application of an EAF, and will place Defra in a strong position to lead discussions on the EAF in national and international fora. The outputs of the research will allow stakeholders to see the effects of different management options and allow managers to make clear and scientifically defensible responses to questions about the application of an EAF, the progress of the UK Government towards meeting policy commitments, and the significance of fishing impacts.

Further, the results will allow Defra to identify and prioritise the issues to address when supporting an EAF, to work with the fishing industry and other stakeholders to evaluate management options, and to identify and recommend indicators for reporting on the state of the

marine environment. The direction and progress of the project is being guided by a 'User Steering Group'.

Further, the results will allow Defra to identify and prioritise the issues to address when supporting an EAF, to work with the fishing industry and other stakeholders to evaluate management options, and to identify and recommend indicators for reporting on the state of the marine environment. The direction and progress of the project is being guided by a 'User Steering Group'.

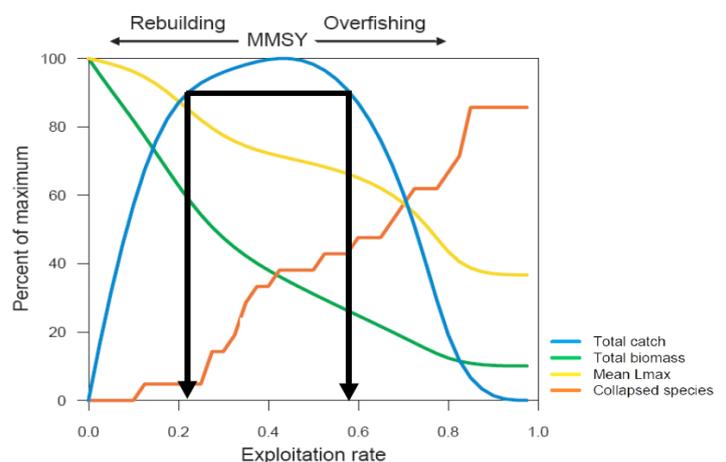


Figure 2: Maximum sustainable yield curve (Source: Jeremy Collie and Simon Jennings)

Where can I find further information about this and related research?

The project website provides information on the full aims of the project and describes publications, other project outputs and the work of the User Steering Group www.cefas.co.uk/eaf

Alternatively, please contact Defra's Marine and Fisheries Science Unit:

marinescience@defra.gsi.gov.uk

Defra Science – did you know?

At any one time Defra manages over 2000 research projects covering a wide range of topics. For more information on current research see <http://randd.defra.gov.uk> and to find out about future research proposals see the Defra Research and Analysis page at: www.defra.gov.uk/evidence/index/htm