

# Identifying the information requirements and approaches for assessing the socio-economic impacts of MCZ networks

Marine Objective Theme: Science for Integrated Marine Management

## What's the problem?

The Marine and Coastal Access Act provides for the identification, designation and management of a suite of sites termed Marine Conservation Zones (MCZ) in English territorial waters and waters offshore of England, Wales and Northern Ireland. The sites will contribute to the overall network of Marine Protected Areas (MPA) in UK waters. The MCZ provisions in the Act state that the design of the suite of MCZ sites may need to take account of the economic and social consequences of designation. This has been interpreted as 'seeking to minimise any economic and social impacts where this is consistent with the achievement of conservation goals'. Yet how do we achieve this? At what point in the process is it best to consider this type of data; what sort of data should be used; and what tools are available to allow this to occur. An investigation of best practice occurring in the international arena, was considered a useful starting place to help address these questions.

## What are the aims of the project?

Adequate inclusion of socio-economic interests in MPA network planning has been widely recognised as fundamental to the success of such initiatives. It is important that a clear process is established for taking account of socio-economic factors and that the uses and limitations of available socio-economic data are understood and taken into account within the planning process.

The project has sought to review and identify international best practice concerning how socio-economic factors have been taken into account in other MPA and non-MPA planning initiatives as well as more theoretical approaches from academic literature. Options for incorporation of these approaches into the process for identifying and designating regional MCZ networks have then been evaluated leading to options on what, when and how socio-economic data should be taken account of. The review of experiences and approaches and the development of options was supported through a workshop attended by MPA planning experts and relevant stakeholders.

The project also reviewed the availability of socio-economic data and information that might be and made recommendations on data and information requirements and the points in the MPA planning process at which different types of information may be required.



Figure 1. Vessel traversing lock-gate, Hull (Courtesy: ABP)

## Which policy areas will the research inform?

This work will support the implementation of the Marine and Coastal Access Act and the development of any guidance on how the regional MCZ projects should take account of socio-economic factors in MCZ planning and also inform associated data and information requirements.

The work is potentially of broader interest in the context of marine planning in considering trade-offs between social, economic and environmental factors in decision-making.

Funded by:



# Identifying the information requirements and approaches for assessing the socio-economic impacts of MCZ networks

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

### Review Outcomes

The process of network design adopted in the MPA case studies reviewed as part of the project were generally iterative, with network proposals being developed, tested and refined against ecological and socio-economic criteria. Within this process, different tools and information were used at different stages.

In the initial phases of network design, all the case studies used simple spatial (mapped) data on the location (and in some cases importance or value) of the primary socio-economic activities. In the areas studied, this largely related to commercial fisheries, but some areas also included hydrocarbon extraction, cables, shipping and significant recreational interests. A number of studies have compiled socio-economic information into an overall regional profile.

Initial evaluations of the socio-economic impacts of MPA network options have generally been assessed using simple spatial analysis tools within geospatial databases (GIS) to identify the extent and severity of possible interactions. In a few cases more complex network design tools have been used. Preferred network options emerging from this initial design process are then subject to more detailed assessment as part of an iterative deliberation process. The deliberation process continues to make use of spatial data but also includes a broader range of non-spatial data on the characteristics of relevant socio-economic activities. The MPA case studies made extensive use of cost impact assessment tools during this deliberation phase to assess economic costs.

Very few of the case studies reviewed made explicit assessments of social impacts or considered in detail the policy consequences of different network options, although both of these factors are regularly included in other (terrestrial) planning processes. Many of the case studies conducted formal Impact Assessments (IAs) towards the end of the network design process. These IAs generally used cost benefit analysis techniques to assess economic costs and potential environmental benefits. Some of the studies highlighted the relative lack of quantitative information on benefits. Information generated by the IAs often led to further iterations of network design.

### Considerations for the UK Context

The approach to incorporating socio-economic considerations in the development of UK MCZ recommendations needs to be well structured so that information is collected in a proportionate manner and clearly presented to decision-makers at different stages in the process.

In the initial stages of network design, it is suggested that options should be developed using simple spatial information on the location of socio-economic activities. Most of the spatial data required is available although comprehensive commercial fisheries data remains a gap. Options might be developed using simple map-based approaches, although, given the complexity of the ecological criteria being developed, it is likely that specialist network design tools will also need to be applied. Simple spatial analysis tools should be used to compare and evaluate options.

During the detailed deliberation phase, a broader range of non-spatial data on the characteristics of relevant socio-economic activities will be required, for example, market structure, operational regimes, dependencies and interactions, economic value, pressures and impacts and the costs of restriction measures to support achievement of conservation objectives. A variety of assessment tools will need to be applied within an overall assessment framework as there is no single assessment tool that can address all issues. The most useful tools are considered to include cost benefit analysis to assess economic costs and benefits, social impact assessment to evaluate social impacts, together with a consideration of the consequences of designation on the achievement of social and economic policies.

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

The study was undertaken by a consortium (ABPmer, eftec; Peter Jones (University College London), and Jim Claydon (Independent Planning Consultant)) led by ABPmer. For further information please contact [shull@abpmer.co.uk](mailto:shull@abpmer.co.uk) or

Alternatively,

Contact Defra's Marine and Fisheries Science Unit, Nobel House, 17 Smith Square, London.

### 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: <http://www.defra.gov.uk/evidence/index/htm>