

Annex H13 Method for assessing impacts on recreation

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H13.1 This annex outlines the method used to assess the impacts of recommended Marine Conservation Zones (rMCZs) on the UK recreation sector. The method is presented under the following sections: (1) baseline description; (2) management scenarios; (3) assessment of the impact; and (4) limitations.

1 Baseline description

H13.2 The baseline describes the recreation activities that will be affected by rMCZs at relevant spatial scales, including the levels of participation and importance of different sites for the activity. Activities considered in the Impact Assessment (IA) include angling, boating (pleasure and racing), scuba diving and snorkelling, and shore-based activities such as walking, fossil collecting, rock pooling and wildfowling.

H13.3 Where identified via consultation with stakeholders or secondary sources, expected significant changes to recreation activities are described. Baseline information was obtained via a number of different sources:

- Stakmap (a reference for Stakmap is not yet available), a survey of recreation activity undertaken by the regional Marine Conservation Zone (MCZ) projects during 2009 and 2010. The survey targeted clubs and individuals in order to gather information on the areas used for different activities and the frequency and extent of participation in those activities. The outputs from Stakmap represent only the sample interviewed. Where club representatives were interviewed they were asked to provide data representing the whole club membership, which greatly increased the size of the sample relevant to its population. Despite this, where the numbers are presented in the IA, it should be noted that they may not represent the full number of participants (only representing those interviewed and represented by those interviewed), and many numeric outputs (e.g. number of participants) may therefore be underestimates;
- Informal consultation with recreation stakeholders, which was undertaken throughout the MCZ planning process.
- Collection of information by the regional MCZ projects from recreation stakeholders, landowners, managers, wardens and managers. This occurred during an initial period of June 2011 to January 2012 to inform preparation of the draft IA, and then from February 2012 to June 2012 to address feedback on the draft material in order to produce the final IA. This provided qualitative and quantitative information on the current/future nature and level of participation in affected activities in rMCZs as well as the potential impacts of the management scenarios (discussed below).
- Collection of information on coastal and estuarine rMCZ Reference Areas by Natural England local and regional staff on behalf of the regional MCZ projects. This occurred between November 2011 and December 2011. This provided qualitative and quantitative information on the current/future nature and level of participation in potentially damaging and disturbing activities (as described in JNCC and Natural England, 2010) as well as information with which Natural England were able to establish advice on the likely management of these activities that may be required if the rMCZ Reference Areas are designated. The data collection exercise was undertaken by Natural England as the regional MCZ project liaison officers were no longer in post and to ensure

that sufficient information was obtained with which Natural England could provide management advice to inform the IA.

- Secondary sources where available. These documents are cited individually in the IA where used.

H13.4 Unless specified otherwise, information on recreational activities and the impacts of management for rMCZs was provided through interviews with recreational stakeholders (Stakmap) or sourced from regional stakeholder group or hub discussions.

2 Management scenarios

H13.5 Management scenarios have been identified for each rMCZ that make assumptions about the additional management (over and above the baseline situation) of recreation activities that may be needed to achieve the conservation objectives of features protected by each rMCZ. These scenarios have been used for the purposes of the IA to estimate the potential economic impacts of rMCZs on the sector.

H13.6 The scenarios are for illustrative purposes only and do not constitute recommendations. Following the designation of MCZs the management of recreation activities required will be decided on a case-by-case and site-by-site basis and may differ from the management scenarios used in this IA.

H13.7 The scenarios have been established by the regional MCZ projects drawing on information and advice provided via the regional MCZ project vulnerability assessments, Joint Nature Conservation Committee (JNCC) and Natural England management advice and guidance (JNCC & Natural England, 2010, 2011; Natural England & JNCC, 2011) and other formal and informal meetings and conversations with JNCC, Natural England and public authorities. Additional advice on appropriate mitigation for activities taking place within coastal and estuarine rMCZ Reference Areas that could be damaging and/or disturbing (as specified in JNCC & Natural England, 2010) was provided by Natural England (Natural England, pers. comm., 2012). This additional advice was provided in response to information about the activities taking place in rMCZ Reference Areas that was collected from stakeholders by the regional MCZ projects and Natural England staff (as described in section 1 above).

H13.8 The management scenarios that have been identified for each rMCZ are set out in Annex I under the heading 'source of costs'.

3 Assessment of the impact

3.1 Data collection

H13.9 In addition to an ongoing process of data collection that took place via formal and informal meetings throughout the MCZ Project process, information was collected from some recreation stakeholders, landowners, managers and wardens. This occurred during an initial period of June 2011 to January 2012 to inform preparation of the draft IA, and then from February 2012 to June 2012 to address feedback on the draft material in order to produce the final IA. The data that were

collected included quantitative and qualitative information on the impacts of the rMCZ management scenarios. Information gathered from both data collection work streams included:

- information on the baseline, which is described above;
- the ability of individuals to continue to carry out their activity in light of the management scenarios and the availability of local alternative (substitute) sites for their activity;
- any change in the quality of the recreation experience if participants were no longer able to carry out their activity in the rMCZ;
- effects on local recreation and tourism businesses.

3.2 Analysing the impacts

H13.10 The data collected were used to provide a qualitative description of the likely impacts of the rMCZ management scenarios on each affected activity. For most rMCZs, quantitative analysis was limited to identifying the likely number of participants who are expected to be affected.

H13.11 Where possible quantitative estimates of the costs have been estimated. Sufficient data with which to calculate impacts via changes to consumer and producer surplus (the measure used in conventional economic cost–benefit analysis) were not available. Gross value added (GVA) was used as an appropriate alternative. GVA has the benefit of being a less abstract measure than consumer/producer surplus and is more widely understood. GVA measures the contribution to the economy of each individual producer, industry or sector, and is used across government to measure national, regional and sub-regional economic performance (Wainman, Gouldson & Szary, 2010).

H13.12 Where the assessment identified potential changes in expenditure by participants of recreational activities, expenditure is assumed to equate to the revenue flows to recreational businesses. Changes in revenue (either based on expenditure figures, or revenue information provided direct from stakeholders) were converted into the associated changes in GVA based on the assumption that GVA is 47% of revenue. This assumption is based on the conversion factor used for the marine tourism sector in Charting Progress 2 (Defra, 2010).

H13.13 Where significant costs to the local economy have been identified, quantitative estimates have been provided where the information is available. Where possible, adjustments have been made to impacts on the local economy to allow for the substitution of participation between locations and activities, in order to describe the UK-level impact. Impacts on the local economy often differ from the impact on the UK economy as activities displaced from an rMCZ may be relocated elsewhere in the UK, or the expenditure of the displaced activity may be redirected into other activities. Where it has not been possible to make adjustments to allow for substitution, the costs are presented in Annex I as the value that is 'affected' rather than the actual cost to the UK. Assumptions and further discussion on site-specific methods used for calculations are set out in Annex I and Annex N.

H13.14 Relevant details of the costs are provided for each rMCZ in Annex I, with associated calculations and underlying assumptions in Annex N. The main activities for which quantitative costs have been estimated are (and which are provided in Annex N):

- recreational angling – charter boats: estimates of the value of charter boat revenues/yr that may be affected by rMCZ management were obtained directly from relevant charter boat operators. These figures were then converted to estimate the value of GVA that may be affected using the 47% conversion factor. In the Balanced Seas project area it was not possible to establish the extent to which charter boats may visit alternative locations outside the rMCZ in response to rMCZ management, and hence the estimates provided for rMCZ in Balanced Seas project area refer to the value of charter boat revenues (and GVA) affected, rather than the value of potential losses of revenue (and reduction in GVA);
- recreational boat anchoring – use of eco-moorings: estimates of the capital costs of installing eco-moorings, the ongoing operating costs, and the user fees of those moorings were estimated based on data presented in Marine Projects (2011). Adjustments made to the cost data presented in Marine Projects (2011) were made based on the number of eco-moorings being considered in the management scenario. See Annex N for the assumptions used for the adjustments in each case. The capital costs are presented as a one-off upfront cost, and the ongoing costs are calculated as the user fees plus any shortfall in operating costs (i.e. operating costs not covered by the user fees); and
- recreational boat anchoring – yacht racing: estimates of the cost of reduced racing in Falmouth Harbour have been calculated based on the potential reduction in associated expenditure by participants, which was then converted to demonstrate the resultant reduction in GVA (as described earlier). Adjustments have been made for substitution of affected participants between other locations and activities to demonstrate the potential net effect on UK GVA.

H13.15 The IA assumes that participants in recreational activities can be expected to adopt good practice and follow existing codes of conduct in the absence of MCZs. Such codes include the British Sub-Aqua Club's 'The Diver's Code of Conduct',¹ Cornwall Wildlife Trust's 'Marine Creatures' code of conduct² and the British Marine Federation and Royal Yachting Association's 'The Green Blue'.³ The costs of promotion of these codes of conduct by the bodies involved have not been included in the IA because it is assumed that this would take place in the absence of MCZs. While it is acknowledged that adopting good practice and adhering to codes of conduct may impact on participants, the costs of this are not considered in the IA because it is reasonable to expect that they should be adopting them in the absence of MCZs.

H13.16 It should be noted that the costs of managing the rMCZ, including costs such as installing signs and bins, are not included in this method or the recreation costs set out in Annex I. These

¹http://www.bsac.com/core/core_picker/download.asp?id=9887

²http://www.cornwallwildlifetrust.org.uk/Resources/Cornwall%20Wildlife%20Trust/PDF%20Documents/Marine_creatures_code_of_conduct.pdf

³<http://www.thegreenblue.org.uk/>

costs are considered in Annexes H9 and N7. Such costs are deemed to be implementation costs and are therefore not included in the headline costs presented in the IA summary.

H13.17 For rMCZs that include more than one management scenario for recreation activities, a 'best estimate' has been calculated. Best estimates of the cost (where quantitative costs have been estimated) have been calculated based on the relative probabilities of the management scenarios occurring. In the absence of better information, it is assumed that each of the two scenarios has an equal probability of occurring, and the best estimate is therefore taken to be the mid-point of the two. For rMCZs that include only one management scenario, the best estimate is the same as the estimated costs for that scenario.

4 Limitations

H13.18 Limitations associated with the methodology employed include:

- The reliance on estimates of activity participant numbers provided by stakeholder representatives may result in significant overestimates or underestimates of the number of participants who will be affected by the management scenarios. There is very limited secondary information on recreation activities at a local level.
- As Stakmap interviews were conducted with a sample of participants, data extracted directly from Stakmap outputs are likely to result in underestimates of actual participant numbers.
- The IA uses management scenarios that make assumptions about the additional mitigation that is likely to be needed because the outcome of future management decisions is not yet known. The assumptions do not pre-judge the outcome of future management decisions, which may differ from the assumptions being used. If the mitigation requirements for MCZs are different to the assumptions used, this may result in the IA having significantly underestimated or overestimated the true cost.
- For rMCZs where the necessary information is not available to identify the management scenario that may apply, no assessment of impacts has been possible, resulting in a potential underestimation of the impacts on the sector.
- In most instances the cost to the sector has been described in terms of the numbers of participants affected and a qualitative description of any likely changes in the quality of the activity experience. This does not estimate the quantitative cost to the sector.
- Where evidence is not available on which to base adjustments for substitution between activities, arbitrary assumptions have been used based on an understanding of the nature of the activity being affected. As a result the quantitative impacts may underestimate or overestimate the true cost to the UK economy.
- The need for management of damaging and disturbing activities (JNCC & Natural England, 2010) in rMCZ Reference Areas will be established following MCZ verification and monitoring. The management scenarios included in the IA are adopted from advice provided by JNCC and Natural England (2010) and are based on best available information on the activities taking place in the

sites. The management scenarios used in the IA for these activities may overestimate or underestimate the true impact.

- In some instances it was not possible to obtain sufficient information about potentially damaging and disturbing activities on which to establish potential management scenarios. In such cases it has not been possible to assess the potential costs if additional management is required. This omission is likely to result in an underestimation of the costs and is highlighted where relevant in Annex I.

References

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