

Royal Society response to the UK Marine Bill Consultation

This document is the response to the UK Marine Bill consultation published by Defra in March 2006. This submission has been approved on behalf of the Royal Society Council, by Professor David Read, the Vice-President and Biological Secretary.

1 Summary

The Royal Society is supportive of the proposal to integrate and simplify the UK's currently fragmented marine regulatory framework and to introduce new measures to facilitate the strategic management and conservation of our seas and marine resources. We believe that the UK Marine Bill presents an opportunity to deliver a reformed marine sector aimed at achieving a sustainable marine environment.

We strongly agree with the sustainable development intent of the Bill and suggest that this be detailed and explicit within the Bill's purpose, principles, and objectives to ensure appropriate implementation and future interpretation.

We also support the intention to underpin the Bill with the principles of ecosystem management, the responsible use of science, and the precautionary and polluter-pays principles. However, we encourage Defra to ensure that these principles are applied consistently across the full range of activities covered by the Bill. For example, taking an ecosystem based approach to managing the marine environment requires that fisheries be managed within this framework. The Royal Society considers carbon dioxide capture and storage in sub-surface geological formations to be a potentially useful tool for reducing carbon dioxide emissions in the future, provided a life cycle approach is taken to the development and implementation of the infrastructure, and that regulators address responsibility and accountability issues associated with the indefinite storage requirements. Finally, we are supportive of the Bill's objective for "better regulation" and the reduction of the administrative and bureaucratic burden on government and stakeholders as long as it does not compromise the sustainability objectives of the Bill. Therefore, to ensure the sustainable utilisation of marine natural resources we recommend the use of statutory tools, as appropriate, for the implementation of the proposed spatial planning, licensing, and marine conservation themes.

2 General Comments

- 1 This Bill presents an opportunity to improve the way in which the marine environment is managed in the UK, and in particular, to facilitate the achievement of the World Summit on Sustainable Development (WSSD) marine goals as they relate to biodiversity, marine protected areas and fisheries specifically. Without significant changes in the underlying principles of marine management in the UK the WSSD 2010 and 2015 targets for biodiversity and ecosystems, and fisheries respectively will not be met.
- 2 Although we are strongly supportive of the sustainable development intent of the Bill, we note the practical difficulties inherent in balancing economic, social and environmental priorities particularly when dealing with economic and infrastructural development and fisheries issues. Trade-offs between sectors will inevitably be required and, as stated in the UK Government's Sustainable Development Strategy (2005), it is important that these are made in an explicit and transparent way. We support the proposed

pre-emptive approach to protecting ecosystems, natural resources, human health and other users and acknowledge that there may be situations of over-riding public interest that compromise the specific environmental, social or economic objectives of the legislation. We encourage the UK Government to consider in advance how these trade-offs should be made and to propose a framework for decision making. We strongly suggest that the final Bill includes sufficient detail regarding its purpose, principles, and objectives to guide its implementation and future interpretation, particularly in these cases.

- 3 The Royal Society is also supportive of the principles of better and simpler regulation. However regulatory and administrative simplification should not compromise the ability of the Bill to achieve the objectives of marine sustainability.
- 4 To help guide the delivery of the Bill's objectives its purpose should be clearly defined. As it is framed on page 10 of the consultation document the emphasis is on the development of the framework and legislative modernisation. We suggest that the purpose of the Bill should instead be outcome driven and reflect the government's vision for the marine environment; ie to deliver clean, healthy, safe, productive and biologically diverse oceans and seas by improving policy delivery and reducing the administrative and bureaucratic burden on stakeholders and government.
- 5 We note the conclusion in *Charting progress: an integrated assessment of the State of UK Seas* (Defra 2005) that there is insufficient scientific evidence to allow an assessment of the status of many elements of marine ecosystems. We note also that the consultation document acknowledges the UK Government's Sustainable Development Strategy (HMG 2005) principle of the responsible use of sound science in the development and implementation of policy. This principle is important for the implementation of each of the main themes (fisheries, planning, licensing, nature conservation, and a new marine management organisation) and for this reason the Royal Society recommends that the use of underpinning science to support evidence based policy development be a regulatory requirement for each.
- 6 We support also the proposal to adopt the precautionary principle in situations where scientific information or understanding is incomplete, but recommend that this be complemented with greater investment in integrated marine scientific research. We note the relevance of Defra's Evidence and Innovation Strategy (E&I) in this respect and refer you to the comments provided by the Royal Society in response to the E&I consultation in early 2006 (Royal Society 2006).
- 7 We also strongly support the integration of the ecosystem approach, and the precautionary and polluter-pays principles as underlying principles of the Bill. However, there is a suggestion within the consultation document that these have not been applied consistently to each theme. For example, the ecosystem approach is identified in section 4 as one of the Bill's underlying principles, and these principles are repeatedly identified as applying to all aspects of the Marine Bill. However, while the ecosystem approach is discussed in relation to the proposed marine planning and licensing systems there is no mention of it in relation to fisheries. Furthermore, the marine conservation theme asks stakeholders which marine management regimes should include consideration of marine ecosystem objectives. This is confusing and suggests some regimes may not be subject to application of the ecosystem approach. Consequently, we encourage Defra to ensure that these principles are applied consistently across the full range of activities covered by the Bill.

- 8 We appreciate that Defra is not inviting comments on fisheries proposals for the Marine Bill because of the extensive programme of consultation on this topic in the past and the intention to consult on specific proposals in the future. However, if the UK Government is serious about implementation of an ecosystem approach to the sustainable management of the marine environment then fisheries must be considered to be an integral part of the Marine Bill. Furthermore, the UK Marine Bill should provide the strategic direction to guide work relating to fisheries in other policy areas such as sustainable development, conservation, energy and transport. Fish stock management must be considered within the broader context of a sustainable marine environment.
- 9 We believe that marine reserves are an important tool in fisheries and environmental management and are one of the best ways of adopting a more ecosystem-based approach to marine management. As reviewed in the Royal Commission on Environmental Pollution's (RCEP) report, significant evidence exists to suggest that reserves can be a powerful tool to help rebuild stocks and habitats damaged by fishing (RCEP 2004).

3 Question responses

3.1 Spatial Planning

Q1 Is it appropriate for the UK Government to consider creating a new system of marine spatial planning?

Q2 Should Government consider statutory provisions within the Marine Bill in order to implement a new system of marine spatial planning or should alternative methods be considered?

The Royal Society is supportive of the proposal for the creation of a new system of marine spatial planning and agrees with the RCEP (2004) that a statutory basis is important for delivering strategic long term objectives. A statutory basis also has the advantage of providing clarity and regulatory certainty to stakeholders.

Q6 Do you have any views on the broad underlying principles of marine spatial planning.

We support the four underlying principles (sustainable development, an ecosystem approach, better regulation and compliance with international and European obligations) as proposed, but suggest that to reflect the principles discussed in part 4 of the consultation document, the use of scientific evidence to underpin decision making should be added.

Q25 Do you have any views on the need to consider the sustainability and environmental impacts of spatial plans, including the use of SEA in the process?

The consideration of sustainability and environmental impacts of spatial plans will be fundamental to ensuring the long-term sustainability of the marine environment. These processes are particularly important for promoting the conservation and sustainable use of natural resources and biodiversity and for facilitating the integration of biodiversity into other policy areas (eg transport and energy). We therefore support the application of environmental impact and Strategic Environmental Assessments (SEA) and recommend that the application of these assessment processes be included as a statutory requirement within the Bill.

3.2 Licensing

Q50 Do you have any views on the capture and subsequent storage of carbon dioxide in naturally occurring sub-seabed geological structures to alleviate the effects and impacts of climate change and ocean

acidification? Q51 Do you have any views on the creation of fit-for-purpose licensing provisions for the capture and storage of carbon dioxide in naturally occurring sub-seabed geological structures?

The Royal Society is pleased that Defra has recognised the importance of ocean acidification in the Marine Bill. In our report on Ocean Acidification (Royal Society 2005a) we encourage world leaders, when setting targets for reductions of CO₂ emissions, to take account of the impact of CO₂ on ocean chemistry as well as climate change, and recommend that all possible approaches be considered to prevent CO₂ from reaching the atmosphere.

The primary focus of the UK Government's strategy for CO₂ emission reduction should be to reduce CO₂ emissions and to ensure that other mitigation options do not place net additional pressure on the marine environment. We agree that carbon capture and storage (CCS) in sub-seabed geological structures should be considered as a potential tool for, and one of a number of possible approaches for, reducing CO₂ emissions. Other approaches should include using less energy, using renewable and low carbon energy sources, and developing technologies that allow for the continued use of fossil fuels while reducing our greenhouse gas emissions.

We remind Defra that while the capture of CO₂ from large stationary sources is technically feasible it is expensive, and without an appropriate incentive or an economic framework to fund its installation and use, it is unlikely to be deployed widely. Capturing CO₂ and compressing it for transportation and storage requires additional plant and processing infrastructure so consideration must be given to the potential scale of the industry and associated infrastructure required if CCS is to deliver substantial reductions in CO₂ emissions. A full life-cycle analysis of the environmental, social, and economic impacts should be undertaken.

More fundamentally, when developing policy in this area we encourage Defra to take into account the different physical characteristics and logistical challenges posed by the marine environment (as opposed to terrestrial sites). These differences will need to be addressed through research and development programmes and will have to be reflected within policy, planning and licensing frameworks. If a separate framework is developed specifically for marine CCS, potential issues may arise regarding the boundary definition of marine and terrestrial sites. The regulatory system must be capable of managing these.

In terms of CCS regulation the Royal Society has previously recommended that consideration be given to issues relating to the storage of CO₂ including clarification around who will own, regulate, fund, monitor and maintain the indefinite storage of CO₂ (Royal Society 2005b). Consideration should also be given to the timescales required for implementing the appropriate regulatory and legal agreements, and potential issues relating to liability and compensation. Such a licensing system should also be subject to environmental impact assessments, and/or strategic environmental assessments, as appropriate, to ensure the benefits of CCS outweigh the costs.

3.3 Protecting the marine environment

Q52 Which marine management regimes or processes should include the consideration of marine ecosystem objectives? Q53 Should the consideration of objectives be required through policy guidance, changes to management regimes or a statutory duty?

Given that an *holistic ecosystem approach* is identified as an underlying principle of the Marine Bill in the consultation document, marine ecosystem objectives should be applied to all marine management regimes or processes including spatial planning, licensing, fisheries, environmental monitoring and conservation

management. The consideration of these objectives should be a statutory duty but guided through policy (for example via Planning Policy Statements) to ensure consistency in application.

We note that as part of the purpose of the Bill is to simplify legislation any new mechanisms should not add to the regulatory burden but should replace and extend existing designation tools.

Q55 Should the new mechanism complement or replace legislation on Marine Nature Reserves?

The Royal Society is supportive of the use of the Marine Bill to introduce a flexible mechanism for the designation and management of marine protected areas. Part of the purpose of the Marine Bill is to simplify legislation, so it is important that any new designation mechanisms should not add to the regulatory burden but should replace and extend existing designation tools.

Q58 Do you agree that, where options exist, a range of factors including social and economic considerations should be taken into account in choosing between sites.

When choosing between sites the primary criteria should be the contribution of the site to achieving the purposes of conservation, promotion of recovery, and protection as outlined in sections 10.53 and 10.54 of the consultation document. Social and economic factors will of course also be important but should be considered within this context.

In December 2005 the New Zealand Government launched a policy and implementation plan for marine protected areas (<http://www.biodiversity.govt.nz/pdfs/seas/MPA-Policy-and-Implementation-Plan.pdf>). This document considers issues relating to marine classification, setting suitable level(s) of protection taking into account relevant sectoral interests, integration of pre-existing marine protection designations, and site selection. As with the UK Marine Bill proposal, this framework aims to integrate the responsibilities of a range of government departments and regional authorities. This may be of interest to Defra in its consideration of issues relating to site designation.

Q59 Should we include provision for altering site boundaries or de-designation of sites? Under what circumstances?

The principle of adaptive management should be integral to the long-term management of sites and the regulatory framework should include sufficient flexibility to enable changes to be made as site conditions change. Boundary modifications are likely to be required to take account of changes that occur, for example, as a result of the alterations in species distributions or habitat characteristics expected to occur as a result of climate change. However, de-designation of sites should be provided for only under exceptional circumstances. Criteria for designating (and de-designating) sites should be based on scientific evidence, and long-term monitoring and reporting must be a requirement for all sites. The Royal Society report on Measuring Biodiversity for Conservation (Royal Society 2003a) provides guidance regarding the establishment of methodologies for this purpose.

Q69 Do you consider that unlicensed activities currently threaten the conservation of marine ecosystems and biodiversity? If so, which activities are of most concern and why? The Royal Society considers the impacts associated with fishing (including discards, bycatch and illegal fishing) to be the most important threat to the marine environment. Coastal development and pollution are also serious, but drastic reductions in fish stocks and changes in communities of invertebrates in many areas of the seabed have been primarily driven by fishing (Royal Society 2003b).

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