

The Marine Bill: Cornucopia or Pandora's Box?

This article considers some of the questions that the Marine Bill will have to address. It is stressed that compromises will have to be made in the face of uncertainty and conflicting demands, and that the Bill represents a key chapter in a longer story, during which we will hopefully continue to consider such questions and adaptively learn how to better manage and conserve our seas.

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Introduction

In Greek mythology, cornucopia was the horn of the goat that suckled Zeus, that became full of fruits, prosperity and whatever else its owner desired, whilst Pandora's Box was given by Zeus to Pandora, but when she opened it against his strict instructions, all the evils and miseries of the world flew out to afflict mankind. It is a matter of perspective and debate as to which of these mythological analogies might best come to describe the outcomes of the forthcoming Marine Bill. Given that statutory action is required as hardly any interest favours retention of the *status quo*¹, because this benefits neither developers nor conservationists, the Bill should have significant consequences. What the nature and magnitude of these consequences should be is again a matter of perspective and debate.

The responses to the ongoing consultation on the Bill² indicate tensions between, on one hand, calls for stricter marine nature conservation provisions and, on the other, calls for more streamlined consents procedures and more certainty for developers. It is almost certain that DEFRA will have to make compromises rather than seeking consensus on some issues³. There is currently much uncertainty and debate as to which way the compromises will err: towards economic development or marine conservation interests and much lobbying is occurring with the aim of influencing the direction in which the Bill will tilt. What most interests do, at least, agree on is that this represents a rare opportunity to make major changes to the policy framework for marine biodiversity conservation and resource exploitation.

There are many questions on which the UK Government will have to take decisions and issues on which it will have to reach compromises. These concern critical elements of the Bill and it is worth considering four such questions, recognising that there are many more.

To what degree can decisions be based on ensuring the health of marine ecosystems?

The 'ecosystem approach' lies at the heart of the Government's strategy to reconcile and integrate conservation objectives with sustainable social and economic development goals. This 'holistic' approach aims to enable the management

of human activities and conflicting objectives in a way that maintains both the health of ecosystems and human well-being, for the benefit of current and future generations. This includes living within our environmental limits⁴. It is a key means of delivering the Government's vision for 'clean, healthy, safe and biologically diverse' seas⁵. Ecosystems are considered to be 'healthy', when the resources and services they provide are flowing sustainably, their structures and processes are being maintained, and their integrity and resilience promoted.

Marine ecosystems are very complex and display high degrees of variability over various spatial and temporal scales. Given our lack of knowledge on these complex and variable structures/processes, it is likely that decisions taken in keeping with the ecosystem approach will have to be made under high degrees of uncertainty on an adaptive *ie* 'learning as we go along' and precautionary basis⁵. In this respect, the precautionary principle is now an important element of many international and national environmental policies. The UK Government has accepted the importance of both the ecosystem approach and the precautionary principle⁶ in various policies, including the Marine Bill consultation² and its antecedents, the *Safeguarding Our Seas*⁵ strategy and *Safeguarding Sea Life*⁷ response.

The precautionary principle requires judgements to be made concerning the cumulative impacts of various development activities on ecosystem structures and processes and the significance of these impacts for the 'health' of the ecosystems. This requires a careful balance to be struck in decision-making processes between the magnitude and scale of ecological impacts and the economic/political impacts of restricting development activities to reduce these ecological impacts. It will be extremely challenging to reach *and defend* these judgements, given the related challenges of proving the significance of observed ecosystem perturbations and establishing cause-effect relationships in complex, spatially interconnected and variable systems, as the significance and causes of ecological perturbations will always be debatable whilst economic impacts will always be more immediate and obvious. Developers fear decisions will err towards ensuring ecosystem health, leading to 'paralysis through precaution', whilst conservationists fear decisions will err towards permitting developments at the risk of causing further ecosystem 'illnesses'. Striking a balance when addressing these contrasting fears will be a major challenge and it is one that will have to be faced when the Bill comes to be finalised and, more importantly, implemented.

To what degree can stakeholders be involved in marine decisions?

Involving stakeholders is a key element of the ecosystem approach, as this is a means of ensuring that local knowledge is included in decision-making as a tactic for addressing uncertainty. It is also a means of ensuring that conservation objectives are integrated with sustainable social and economic development goals, in keeping with the ecosystem approach. As such, the ecosystem approach is only partly about natural science. It is also about coupling economic, social and political systems with ecological systems in order to achieve better 'governance'. This involves improving the integration or 'coherence' of policies, including the decentralisation of decisions to the lowest appropriate level and provision for all relevant sectors of society to be involved, alongside scientists, in decisions⁸.

Involving stakeholders in decisions that will affect them is another key principle of the Marine Bill consultation² and its antecedents, the *Safeguarding Our Seas*⁵ strategy and *Safeguarding Sea Life*⁷ response. A key question in this respect, however, is who are the stakeholders? Some fishermen, for instance, argue that members of the public, with only indirect marine interests, do not have a sufficient understanding of the seas and the activities that they support, therefore they should not be involved in decisions that directly affect users⁹. The Government, on the other hand, recognises that the seas are a public resource therefore public involvement in decision-making processes should be facilitated¹⁰. Such participation is also central to the concept of ‘stewardship’¹¹. If only direct stakeholders, *ie* people who rely on the seas for their livelihood, are involved, there is a risk that their vested exploitation interests will dominate decisions. If indirect stakeholders are involved, there is a risk that they will be unaware of the complexities of the marine environment and the uses it supports, therefore their participation will be uninformed and preservationist interests will dominate decisions. These arguments go to the heart of wider environmental management debates revolving around two questions: which people should be recognized as ‘stakeholders’? What role should different categories of stakeholders have in decision-making processes?

A related issue is that as the participation of more and different categories of stakeholders is provided for in marine decision-making processes, the potential for conflicts in deliberations increases, including challenges concerning the role of ‘science’ and ‘experts’, particularly in relation to the ecosystem approach. This raises the need for an executive decision-making body to arbitrate on conflicts and take the final decisions in the face of uncertainty and irreconcilable conflicts, *ie* compromises. The Government proposes that a Marine Management Organisation (MMO) might adopt such a role and sets out a number of related issues and options¹², but it is clear that such an organisation will have many questions and major challenges to address.

How will marine spatial planning work?

Marine spatial planning (MSP) is a forward looking system that can provide a holistic approach to managing and protecting the marine environment, addressing cumulative impacts and reducing uncertainty for developers¹³. It is the approach on which the Bill is largely based, and which has been prominent in its antecedents, as it is considered to be both a means of delivering the ecosystem approach and the framework for providing for an appropriate level and breadth of stakeholder participation. MSP has been piloted¹⁴ and trialled¹⁵ in the Irish Sea, though these were essentially exploratory studies that assessed data availability and mapping issues and simulated the development of regional and local plans.

The actual implementation of MSP will not only inherently require the above two questions to be addressed, but will also require the key question concerning the appropriate balance between a proactive plan led and a reactive consents led approach to be addressed. A full analysis of this question is beyond the scope of this comment paper, but it is worth noting that the terrestrial planning system is essentially plan led, whereby different types of development are allocated to specific areas in agreed plans and applications for development consents are assessed against these. Whilst there have been numerous calls for the extension of the planning system to our seas, which is one of the reasons the Government is exploring the potential of MSP, there are

many differences between the land in the sea that make a plan led system very difficult to implement:-

- A given area of sea may often be able to support a diversity of different uses, partly due to the three dimensional and wider-scale nature of seas, whilst land areas are generally more restricted in the number of uses they can support, these uses tending to be more exclusive and intensive.
- The complexity, scale and connectivity of the marine environment, coupled with the importance of assessing cumulative ecosystem impacts on ecosystem structures and processes, means that it will be very challenging to adopt a proactive plan led system as part of an ecosystem approach.
- There is arguably not enough existing data and knowledge concerning the biophysical and use attributes of different areas on which to base a prescriptive, proactive spatial plan that allocates specific development activities to specific areas. Whilst MSP may provide for such data and knowledge to be collated, sufficiently detailed levels are often only generated by developers and regulators through EIA assessments in response to consent applications for major development, and this is likely to continue to be the case given the challenges of studying the marine environment.
- Such major marine development proposals would generally be 'called-in' by the central government for assessment and decision, as are major terrestrial development proposals, in view of but not necessarily based on proactive regional/local plans.

For these reasons it is argued that whilst the MSP approach may, to a certain degree and extent, be able to proactively (a) establish principles, objectives and general preferred use categories, (b) collate information on the spatial/temporal distribution of different activities, and (c) collate existing data and knowledge, it is likely to be more inclined towards being a consents led system, though perhaps to a lesser degree and extent than under the *status quo*. Proactive marine spatial plans may be produced in keeping with the concepts of the ecosystem approach and stakeholder involvement, but they will only be significant in so far as they actually form the basis for decisions on development activities and proposals¹⁶. Turning MSP from a concept into reality will clearly pose many major challenges, but the approach may yield significant benefits with regards to highlighting and addressing marine data/knowledge gaps and conflicts between different marine interests/uses, especially if pursued on an adaptive basis.

Will the Bill provide for a network of highly protected marine areas?

It has been argued by many that a key element of MSP will be the inclusion of an ecologically coherent and fully representative network of highly protected marine areas (HPMAs), including nationally important sites, in which all extractive uses are banned. Such a network could make a key contribution to the inter-related objectives of improving marine biodiversity conservation and adopting the ecosystem approach. This is a critical element of the NGO views on what the Bill should achieve, as Helen Meech's article in this volume reports. The NGOs are not alone in this call. English

Nature's maritime strategy includes the objective of fully protecting 20-30% of each marine habitat type¹⁷ and the Royal Commission on Environmental Pollution has recommended that 30% of the UK's seas be fully protected¹⁸. The Government, however, seems less than convinced of such a need. Its response to the RCEP argued that whilst multiple-use marine protected areas (MPAs) have a role, including partial/seasonal fishing closures, they are uncertain about the scientific basis of the RCEP recommendation¹⁹. This may not be an explicit rejection of this recommendation, but it would indicate that the prospects for the inclusion in the Bill of an objective and obligation to designate a target area as HPMA are less than good.

It seems likely that the Bill's emphasis will be on providing for multiple-use MPAs with partial use restrictions on a fit for purpose basis, including for nationally important sites. Whilst this will be an improvement on the current UK MPA network, the omission of an obligation to designate a target area as HPMA will be viewed by many as a fundamental flaw.

Conclusions

It is difficult to reach conclusions at this early stage in the policy process, other than recognising that the bill raises many critical questions, including the four discussed above, and presents many opportunities and challenges. The consultation on the Bill is commendably comprehensive in that few, if any, options are ruled in or ruled out. The responses will be considered and compromises made, leading to the production of a draft Bill for consideration in the 3rd session of this Parliament (Oct/Nov 2007 – Oct/Nov 2008). During the Bill's passage through Parliament many more amendments will be tabled and compromises made, with MPs and Lords lobbying vigorously on behalf of various development and conservation interests. The outcomes of this long, complicated process are highly uncertain. It must not be forgotten that increasing certainty for developers and streamlining the development consents process are key objectives of the Bill - it is not just about improving marine nature conservation measures.

Discussions at a recent workshop for the Marine Bill on the integration of ecological and socio-economic objectives quickly developed into polarised arguments that have been raging at least since the Stockholm Conference (1972) as to whether healthy ecosystems underpin economic development or whether economic development provides for ecosystem conservation initiatives. Such debates will continue, but at least the Bill and subsequent policy initiatives will provide a focus for them in relation to our seas.

This aside, many marine conservationists are stressing that the current Bill represents a once in a lifetime opportunity. However, once the Bill is law, presuming it proceeds through Parliament, it will continue to provide a framework for ongoing debates in relation to questions such as the four above. More importantly, the implementation of the Bill will provide a framework for actually trialling approaches to address such questions as well as the key general question of 'how can we improve marine policy and decision-making processes in order to move towards achieving clean, healthy, safe and biologically diverse seas'. In the light of actual experiences in using the outputs of the Bill in decision-making process and ongoing monitoring and evaluation studies, these questions can be revisited in the future. Acts are routinely improved

through amendments in subsequent Parliamentary sessions and few are repealed. Whether one considers the Marine Bill and, more importantly, the resultant Marine Act as a cornucopia or a Pandora's Box will arguably be a matter of perspective. Hopefully, though, this will be an early chapter in a longer story, through which policies to address many questions, including the above, will be improved on an adaptive basis in the light of implementation experiences, rather than a once in a lifetime opportunity.

References and notes

¹ *Review of marine nature conservation - interim report* (2001) European Wildlife Division, DEFRA, para. 146. www.defra.gov.uk/wildlife-countryside/ewd/rrrpac/marine/10.htm

² *A Marine Bill: a consultation document of the Department for Environment, Food and Rural Affairs* (2006) www.defra.gov.uk/corporate/consult/marinebill/index.htm

³ Comments made by senior DEFRA representative at the Marine Bill Forum, London, 18 May 2006.

⁴ Para 4.5 of consultation document cited in note 2.

⁵ *Safeguarding Our Seas* (2002) www.defra.gov.uk/environment/water/marine/uk/stewardship/index.htm

⁶ The precautionary principle: “Where evidence exists of likely significant impacts or damage, we will make decisions that aim to avoid damage to the ecosystem, marine resources, human health or other users, and put in place pre-emptive measures to protect them, rather than trying to repair damage (which may be irreversible) after the event. Nevertheless, where it is in the public interest, there may be circumstances where some damaging activities will go ahead with suitable requirements for mitigation or (where possible) compensation of damage. As a final resort, those who do cause damage should be held responsible and pay for it rather than the burden being shouldered by the tax-payer – in line with the polluter-pays principle”. Para. 4.10 of consultation document cited in note 2.

⁷ *Safeguarding Sea Life: the joint UK response to the Review of Marine Nature Conservation* (2005) www.defra.gov.uk/wildlife-countryside/ewd/rmnc/index.htm

⁸ Arguments included and principles cited in Laffoley, D.d'A et al. (2003) *Adopting an ecosystem approach for the improved stewardship of the marine environment: some overarching issues*. English Nature Research Reports, No. 538. www.english-nature.org.uk/pubs/publication/PDF/538.pdf and Laffoley, D.d'A et al. (2004) *The ecosystem approach: coherent actions for marine and coastal environments*. www.english-nature.org.uk/pubs/publication/pdf/ecosystemapproach.pdf

⁹ Author's own ongoing research: *Fishermen's perspectives on the challenges raised by no-take zone proposals in SW England*.

www.homepages.ucl.ac.uk/~ucfwpej/icem.htm#SWNTZ

¹⁰ Para. 2.3 and 4.7 of document cited in note 2.

¹¹ “We see stewardship as entrusting people with a responsibility to care for the community they belong to. It means involving people in protecting the oceans and seas and using the resources they offer wisely. The benefits of stewardship include better decision-making, reduced reliance on regulation, generating a positive role for people and organisations and greater inclusiveness.” Para. 122 of document cited in note 5.

¹² Section 11 of document cited in note 2.

¹³ Box 1, p. 5 of document cited in note 7

¹⁴ *The Irish Sea Pilot Final Report: marine nature conservation and sustainable development* (2004) www.jncc.gov.uk/page-2767

¹⁵ *Marine Spatial Planning Pilot* (2006) www.abpmer.net/mspp/

¹⁶ “The world moves into the future as a result of decisions, not as a result of plans. Plans are significant only in so far as they affect decisions... if planning is not part of a decision-making process, it is a bag of wind, a piece of paper, and worthless diagrams” Boulding KE (1974) *Reflections on planning: the value of uncertainty*. www.fs.fed.us/eco/eco-watch/ew910321

¹⁷ English Nature (2005) *Our coasts and seas – making space for people, industry and wildlife*. www.english-nature.org.uk/Science/coasts_and_seas/default.asp

¹⁸ Royal Commission on Environmental Pollution (2004) *Turning the tide: addressing the impact of fisheries on the marine environment*. www.rcep.org.uk/fishreport.htm. Para. 8.96

¹⁹ *The UK Government Response to the Royal Commission on Environmental Pollution's Twenty-Fifth Report Turning the Tide – Addressing the impact of fisheries on the marine environment* (2006)

www.defra.gov.uk/fish/sea/pdf/turningtide-govresponse.pdf. Pp. 8-9.

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