

## CONSULTATION QUESTIONS

Please identify the main area of interest you identify with :

- Nature Conservation
- Fisheries
- Industry/Transport
- Energy
- Aquaculture
- Recreation/tourism
- Academic/scientific
- Local authority
- Community group
- Public sector/Regulatory body
- Local Coastal Partnership

Other (Please state)

Comments Nature Conservation - Geodiversity

**Q1. Does the NMP appropriately guide management of Scotland's marine resources?**

Comments - no comments

**Q2. Does the NMP appropriately set out the requirement for integration between marine planning and land use planning systems?**

Comments - no comments

**Q3. Does the NMP appropriately guide development of regional marine planning? What, if any, further guidance is required for regional marine planners in terms of implementation and how to interpret the NMP?**

Comments - no comments

**Q4. The Marine Regional Boundaries Consultation proposed that in addition to regional marine planning, further integrated management of key marine areas would be achieved by designating the Pentland Firth; the Minches and the mouth of the Clyde as Strategic Sea Areas.**

**Should the NMP set out specific marine planning policies for Strategic Sea Areas?**

Comments - no comments

**Q5. Are the objectives and policies in the NMP appropriate to ensure they further the achievement of sustainable development, including protection and, where appropriate, enhancement of the health of the sea?**

Comments - no comments

**Q6. Chapter 3 sets out strategic objectives for the National Marine Plan and Chapters 6 – 16 sets out sector specific marine objectives.**

**Is this the best approach to setting economic, social and marine ecosystem objectives and objectives relating to the mitigation of and, adaptation to climate change?**

Comments - no comments

**Q7. Do you have any other comments on Chapters 1 – 3?**

Comments

Scotland's Geodiversity Forum welcomes the inclusion of geodiversity in the Marine Plan, the importance of which has been recognised by wide support for Scotland's Geodiversity Charter, published by the Forum in 2012 and signed by 48 organisations. As part of ensuring that the strategic objectives should achieve the national vision for clean, healthy, safe, productive and biodiverse seas, we recommend that protection of geodiversity should also be explicitly recognised in its own right as part of our marine heritage and as a foundation for habitats and ecosystem structure.

Scotland's seas contain geodiversity features of national and international scientific importance for a range of interests representing the geological evolution of the North-west European continental margin, the dynamics of marine-based ice sheets and their coupling with climate and ocean circulation patterns, and past and present marine processes <sup>(1, 2)</sup>. These geodiversity interests are also a significant asset for their role in providing ecosystem services, including seabed habitats for marine life and the basis for offshore energy development (oil, gas and renewables) and fisheries.

References cited in this comment:

1 Brooks, A.J. Kenyon, N.H. Leslie, A., Long, D. and Gordon, J.E. (2013). Characterising Scotland's marine environment to define search locations for

new Marine Protected Areas. Part 2: The identification of key geodiversity areas in Scottish waters. Scottish Natural Heritage Commissioned Report No. 432. Available from:

<[http://www.snh.org.uk/pdfs/publications/commissioned\\_reports/432.pdf](http://www.snh.org.uk/pdfs/publications/commissioned_reports/432.pdf)>

2 Gordon, J.E., Brooks, A.J., Rennie, A.G., James, B.D., Chaniotis, P.D., Kenyon, N.H., Leslie, A.B. and Long, D. (in prep.) The selection of Nature Conservation Marine Protected Areas (MPAs) - assessment of geodiversity interests. Scottish Natural Heritage Commissioned Report No. 633.

## **General Planning Policies**

**Q8. Are the general policies in Chapter 4 appropriate to ensure an approach of sustainable development and use of the marine area? Are there alternative policies that you think should be included? Are the policies on integration with other planning systems appropriate? A draft circular on the integration with terrestrial planning has also been published - would further guidance be useful?**

Comments

### **Nature conservation, biodiversity, and geodiversity GEN 12 (page 28)**

Geodiversity is mentioned in the heading but is not addressed in the text. In the opening sentence, we recommend that it should be made clear that Scotland's marine natural resource includes geodiversity. Geodiversity is important in its own right, but also provides the foundation for most habitats and ecosystems, as noted in our comment above. In fact, and in line with the MPA selection Guidelines<sup>(3)</sup>, the presence of key geodiversity features does provide additional scientific justification for the selection of 25 of the 37 possible Nature Conservation MPAs/MPA search locations<sup>(2)</sup>.

As part of the wider characterisation of Scotland's seas, Brooks et al. (2013) completed an assessment of the geodiversity of the seabed in Scotland's inshore and offshore waters<sup>(1)</sup>. They developed criteria and a methodology in line with the scientific framework of the Geological Conservation Review, which provides the rationale and methods for selecting terrestrial geological and geomorphological Sites of Special Scientific Interest (SSSIs). They identified 8 categories of nationally and internationally important geodiversity interests (equivalent to biodiversity search features in the MPA Selection Guidelines) to represent the geological and geomorphological processes that have had a key influence on the evolution and present-day morphology of the Scottish seabed. Within these 8 categories, they prioritised 35 key 'geodiversity areas' on the seabed in terms of their scientific value and based on the 3 specified criteria - nationally and/or internationally important features, exceptional and/or threatened features and features representative of key aspects of the marine geodiversity of UK waters - as set out in the MPA Selection Guidelines<sup>(3)</sup>.

However, not all of the 35 key geodiversity areas identified under the MPA Selection Guidelines are incorporated within the possible MPA areas/MPA

search locations and existing protected areas (SPAs, SACs), and in many cases the overlaps are only partial with the proposed boundaries. In fact, only 15 of the 35 key geodiversity areas are significantly incorporated (>75% by area) within the possible Nature Conservation MPAs and existing protected marine areas <sup>(2)</sup>. It is clear that the spatial coverage of geodiversity interests in the possible MPAs/MPA search locations and existing protected areas falls short of representing a fully coherent geodiversity network.

As recognised in the Renewables SEA Report, geodiversity features and their component interests are exposed to similar activities and pressures that affect marine habitats, particularly to physical extraction, surface scour/penetration, sub-seabed surface scour/penetration, water flow (tidal current) changes, wave exposure changes and sedimentation changes <sup>(4)</sup>. Many of these features are relict (i.e. formed by processes such as glaciation that are no longer active); like species extinctions, if damaged or destroyed they are irreplaceable. As a general rule, large-scale erosional features are likely to be relatively robust to most pressures, but smaller-scale relict landforms will have a comparatively higher sensitivity. Active sediment systems such as sand banks and sand waves will have a high sensitivity but because they are active, they are (potentially) able to recover from impact if sediment supply is maintained or restored. Just over half of the component interests of the geodiversity features within the 35 geodiversity key areas are potentially sensitive to one or more generic pressures <sup>(2)</sup>.

We therefore recommend that consideration should be given to opportunities to protect geodiversity, to prevent deterioration and, where practicable, support recovery and/or enhancement of degraded features through location, mitigation and consideration of reasonable alternatives. The significance of those key geodiversity areas, or parts of them, not included within the possible MPA areas/MPA search locations and existing protected areas should be appropriately recognised, and accorded appropriate conservation measures according to an assessment of their particular sensitivities and vulnerabilities. The geodiversity interests in the key areas range from large-scale landforms (submarine landslides and trenches) to small-scale dynamic features (sand waves). Consequently, they will have a range of sensitivities to different pressures and hence different conservation/management requirements that need to be addressed at a site-specific scale.

Drawing an analogy with the historic environment proposals, we recommend that marine planning should therefore help to ensure that future marine activities and developments can be carried out in a way that respects our marine geoheritage and conserving what is significant. To achieve this, marine planning and decision making authorities should consider the significance of geoheritage assets, taking into account :

1. generic management principles for geodiversity sites;
2. the potential impacts of development and use on the geoheritage assets in sites of national or international significance both within and outside MPAs;
3. the sensitivities, vulnerabilities and management requirements for the

geodiversity interests in the key areas and the most appropriate conservation strategies in the context of Marine Scotland's 'three-pillar' approach to effective marine conservation in Scotland<sup>(5)</sup>;

4. 'undesigned' assets that meet the criteria set out in the MPA Selection Guidelines, but lie outside the boundaries of the possible MPA areas/MPA search locations and existing protected areas, should be protected;

5. substantial loss or harm should be exceptional and should only be permitted if this is necessary to deliver social, economic or environmental benefits that outweigh the harm or loss.

References cited in this comment:

1 Brooks, A.J. Kenyon, N.H. Leslie, A., Long, D. and Gordon, J.E. (2013). Characterising Scotland's marine environment to define search locations for new Marine Protected Areas. Part 2: The identification of key geodiversity areas in Scottish waters. Scottish Natural Heritage Commissioned Report No. 432. Available from:

<[http://www.snh.org.uk/pdfs/publications/commissioned\\_reports/432.pdf](http://www.snh.org.uk/pdfs/publications/commissioned_reports/432.pdf)>

2 Gordon, J.E., Brooks, A.J., Rennie, A.G., James, B.D., Chaniotis, P.D., Kenyon, N.H., Leslie, A.B. and Long, D. (in prep.) The selection of Nature Conservation Marine Protected Areas (MPAs) - assessment of geodiversity interests. Scottish Natural Heritage Commissioned Report No. 633.

3 Marine Scotland. (2011). Marine Protected Areas in Scotland's Seas. Guidelines on the selection of MPAs and development of the MPA network. Marine Scotland, Edinburgh. Available from:

<<http://www.scotland.gov.uk/Resource/Doc/295194/0114024.pdf>>

4 Brooks, A.J., Roberts, H., Kenyon, N.H. and Houghton, A.J. (2009). Accessing and Developing the Required Biophysical Datasets and Datalayers for Marine Protected Areas Network Planning and Wider Marine Spatial Planning Purposes. Report No.8 Task 2A. Project code: MB102, Marine Biodiversity R&D Programme. Contract administered by Defra. Defra, London. Available from:

<[http://randd.defra.gov.uk/Document.aspx?Document=mb0102\\_8589\\_TRP.pdf](http://randd.defra.gov.uk/Document.aspx?Document=mb0102_8589_TRP.pdf)>

5 Marine Scotland. (2011). A Strategy for Marine Nature Conservation in Scotland's Seas. Marine Scotland, Edinburgh. Available from:

<<http://www.scotland.gov.uk/Resource/Doc/295194/0115590.pdf>>

### **Coastal processes and flooding GEN 17 (page 35)**

### **Climate Change GEN 19 (page 37)**

We are supportive of the comments in these sections about the potential impacts of climate change and rising sea level on the coast in the coming decades. We suggest that the statement "Sustainable solutions to flood management and coastal defence" (para 4, page 36) should emphasise and promote solutions that utilise natural geomorphological processes.

**Q9. Is the marine planning policy for landscape and seascape an appropriate approach?**

Comments

Yes, we support an integrated approach to managing landscapes that includes consideration of seascapes and recognises their importance for local communities and tourism.

**Q10. Are there alternative general policies that you think should be included in Chapter 4?**

Comments - no comments

### **Guide to Sector Chapters**

**Q11. Do you have any comments on Chapter 5?**

**Are there other sectors which you think should be covered by the National Marine Plan?**

Comments - no comments

### **Sea Fisheries**

**Q12. Do you have any comments on Sea Fisheries, Chapter 6?**

Comments - no comments

**Q13. Are there alternative planning policies that you think should be included in this Chapter?**

Comments - no comments

### **Aquaculture**

**Q14. Does Chapter 7 appropriately set out the relationship between terrestrial and marine planning for Aquaculture? Are there any planning changes which might be included to optimise the future sustainable development of aquaculture?**

Comments - no comments

**Q15. Do you have any comments on Aquaculture, Chapter 7?**

Comments - As noted above (Q8), important small-scale geodiversity features on the seabed may be damaged and relict features are irreplaceable. Potential developments require site-scale sensitivity and vulnerability

assessments.

**Q16. Are there alternative planning policies that you think should be included in this Chapter?**

Comments - no comments

### **Wild Salmon and Migratory Fish**

**Q17. Do you have any comments on Wild Salmon and Migratory Fish, Chapter 8?**

Comments - no comments

**Q18. Are there alternative planning policies that you think should be included in this Chapter?**

Comments - no comments

### **Oil & Gas**

**Q19. Do you have any comments on Oil and Gas, Chapter 9?**

Comments - As noted above (Q8), important small-scale geodiversity features on the seabed may be damaged and relict features are irreplaceable. Potential developments require site-scale sensitivity and vulnerability.

**Q20. Are there alternative planning policies that you think should be included in this Chapter?**

Comments - no comments

### **Carbon Capture & Storage (CCS)**

**Q21. Do you have any comments on Carbon Capture and Storage, Chapter 10?**

Comments - As noted above (Q8), important small-scale geodiversity features on the seabed may be damaged and relict features are irreplaceable. Potential developments require site-scale sensitivity and vulnerability.

**Q22. Are there alternative planning policies that you think should be included in this Chapter?**

Comments - no comments

### **Offshore Renewable Energy**

**Q23. Should the NMP incorporate spatial information for Sectoral Marine Plans?**

Comments - no comments

**Q24. Do you have any comments on Offshore Renewable Energy, Chapter 11?**

Comments - As noted above (Q8), important small-scale geodiversity features on the seabed may be damaged and relict features are irreplaceable. Potential developments require site-scale sensitivity and vulnerability.

**Q25. Are there alternative planning policies that you think should be included in this Chapter?**

Comments - no comments

### **Recreation and Tourism**

**Q26. Do you have any comments on Recreation and Tourism, Chapter 12?**

Comments - no comments

**Q27. Are there alternative planning policies that you think should be included in this Chapter?**

Comments - no comments

### **Transport (Shipping, Ports, Harbours & Ferries)**

**Q28. Should the NMP specifically designate national significant ports/harbours as described in Chapter 13: Marine Planning Policy Transport 2?**

Comments - no comments

**Q29. Do you have any comments on Transport, Chapter 13?**

Comments - no comments

**Q30. Are there alternative planning policies that you think should be included in this Chapter?**



Comments - no comments

### **Telecommunication Cables**

**Q31. Do you have any comments on telecommunications, Chapter 14?**

Comments - As noted above (Q8), important small-scale geodiversity features on the seabed may be damaged and relict features are irreplaceable. Potential developments require site-scale sensitivity and vulnerability.

**Q32. Are there alternative planning policies that you think should be included in this Chapter?**

Comments - no comments

### **Defence**

**Q33. Do you have any comments on Defence, Chapter 15?**

Comments - no comments

**Q34. Are there alternative planning policies that you think should be included in this Chapter?**

Comments - no comments

### **Aggregates**

**Q35. Do you have any comments on Aggregates, Chapter 16?**

Comments

We support the general objective that existing and potential future marine aggregate sites are protected from other development that would compromise extraction. However as noted in our response to Q8 above, large-scale aggregate extraction from the seabed has potential to alter or destroy important sites of geodiversity interest, particularly small-scale relict features. We would like to see reference to protection of geodiversity included in the "living within environmental limits" section.

**Q36. Are there alternative planning policies that you think should be included in this Chapter?**

Comments - no comments

### **Business and Regulatory**

**Q37. Please tell us about any potential economic or regulatory impacts, either positive or negative, that you think any or all of the proposals in this consultation may have.**

Comments - no comments

### **Equality**

**Q38. Do you believe that the creation of a Scottish National Marine Plan discriminates disproportionately between persons defined by age, disability, sexual orientation, gender, race and religion and belief?**

Yes  No

**Q39. If you answered yes to question 23 in what way do you believe that the creation of a Scottish National Marine Plan is discriminatory?**

Comments - no comments

### **Sustainability Appraisal**

**Q40. Do have any views/comments on the Sustainability Appraisal carried out for the NMP?**

Comments - no comments