

Planning Scotland's Seas

National Marine Plan
Sustainability Appraisal Report
July 2013

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Table of Contents

	Page
Non-Technical Summary	i
1.0 Introduction	1
2.0 National Marine Plan for Scotland	3
2.1 Relationship with other relevant plans, programmes and strategies	3
2.2 The National Marine Plan	6
2.3 Environmental Protection Objectives	12
3.0 Baseline Information and Context	
3.1 Biodiversity, flora and fauna	14
3.2 Communities, Population and Human Health	22
3.3 Water Quality and Ecological Status	30
3.4 Air quality	36
3.5 Climatic Factors	40
3.6 Cultural Heritage	41
3.7 Landscape/Seascape	44
3.8 Sediments and Coastal Processes	48
4.0 Assessment Methodology	53
5.0 Sustainability Appraisal Results	59
5.1 Biodiversity, Flora and Fauna	59
5.2 Water	62
5.3 Air Quality	65
5.4 Seascape/Landscape	67
5.5 Historic Environment	70
5.6 Climatic Factors	72
5.7 Marine Sediments	75
5.8 Socio-Economic Factors	77
5.9 Assessment of alternatives	80
5.10 Cumulative Effects	82
6.0 Monitoring	84
7.0 Next Steps	84
Appendix 1. SEA/SA Checklist	87
Appendix 2. Environmental Protection Objectives	88
Appendix 3. Assessment Matrices	96
Appendix 4. Assessment of Reasonable Alternatives	150

List of Tables

Table 1.	Key facts about the plan	8
Table 2.	Marine notified habitats and species features of SSSIs	18
Table 3.	National Marine Plan: Sustainability Appraisal Objectives	56
Table 4.	Summary of Cross-Cutting Policies	58
Table 5.	Cumulative effects of the draft NMP and SPP	86

List of Figures

Figure 1.	Nautical Limits around Scotland	1
Figure 2.	NMP policy context (international, European, UK and Scottish marine legislation and policy)	4
Figure 3.	NMP policy context (terrestrial and other planning/regulatory regimes)	5
Figure 4.	NMP objectives	10
Figure 5.	Modelled distribution of broad habitats in Scotland's marine environment	16
Figure 6.	A generic cross-section of the seabed from the coast to deep waters offshore	17
Figure 7.	Marine SPAs, SACs and possible MPAs within Scottish Waters	19
Figure 8.	Scottish Index of Multiple Deprivation 2012: Overall Rank	23
Figure 9.	Highlands and Islands Enterprise Fragile Areas	25
Figure 10.	Areas in Scotland ranked according to access domain	27
Figure 11.	Areas in Scotland ranked according to Health Domain	29
Figure 12.	Coastal and Transitional Waters Classification	31
Figure 13.	National Flood Risk Assessment Map	33
Figure 14.	Overall spills from vessels between 2002-2011	35
Figure 15.	UK Emissions Map of NO _x 2010	37
Figure 16.	UK Emissions Map of PM ₁₀ 2010	38
Figure 17.	UK Emissions Map of SO ₂ 2010	39
Figure 18.	Marine Cultural Heritage Statutory Designations	43
Figure 19.	National Scenic Areas in Scotland	45
Figure 20.	Core Areas of Wild Land in Scotland 2013	46
Figure 21.	Map of Relative Wildness in Scotland	47
Figure 22.	EuroSION Coastal Survey and Erosion Potential	51
Figure 23.	EuroSION Coastal Erosion Survey 2000	52
Box 1.	Pressures on marine biodiversity, fauna and flora	21

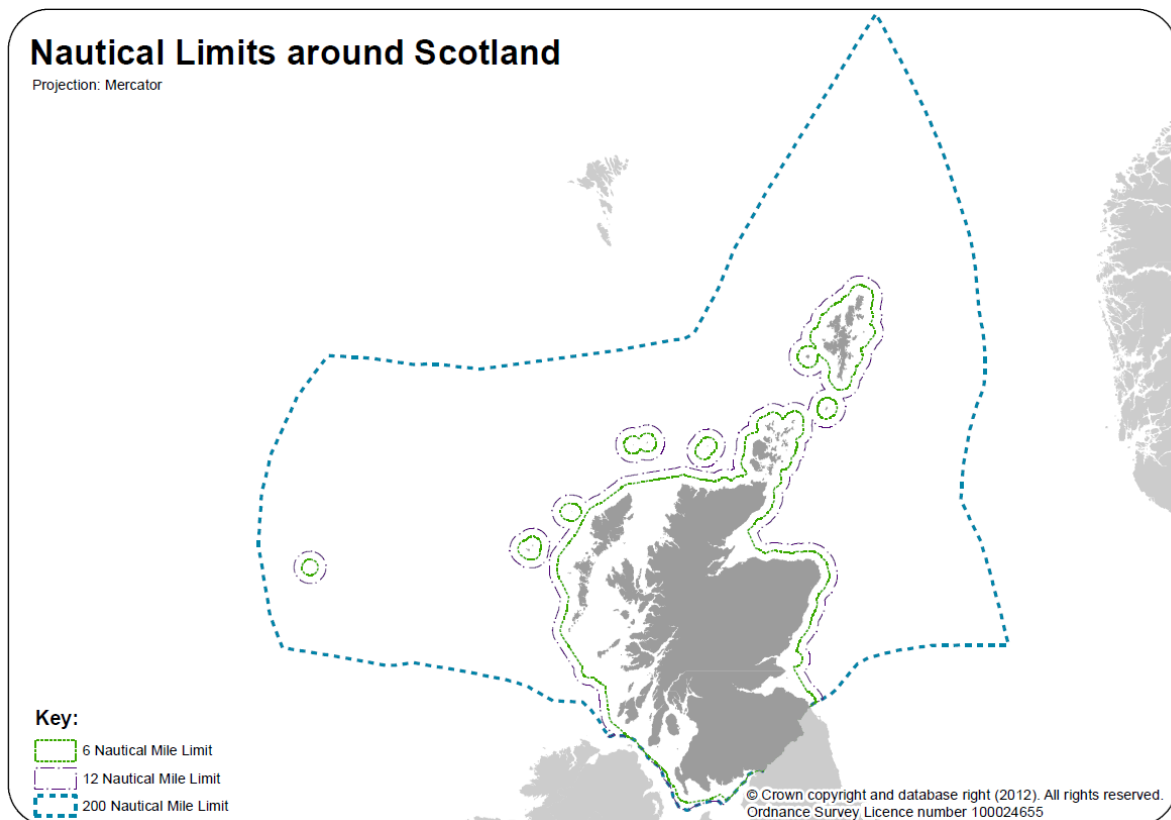
National Marine Plan Sustainability Appraisal Report

NON-TECHNICAL SUMMARY

Introduction

1. Marine Scotland has prepared a draft National Marine Plan (NMP) for Scotland, in accordance with the requirements of the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009. The draft plan covers both Scottish inshore waters (0-12 nautical miles) and offshore waters (12-200 nautical miles) (Figure 1).
2. The Scottish and United Kingdom Governments have agreed that the national marine plan for Scottish inshore waters and a marine plan covering Scottish offshore waters will be published in one document and will be collectively referred to as the “National Marine Plan”. However, it is recognised that the “National Marine Plan” comprises two plans prepared under two separate pieces of legislation.

Figure 1. Nautical Limits around Scotland



What is Sustainability Appraisal?

3. This report summarises the findings from a Sustainability Appraisal (SA) of the draft National Marine Plan (NMP). SA of the draft plan is required by the

Marine and Coastal Access Act 2009. The SA has considered the potential social, economic and environmental effects of the draft plan. The environmental component of the SA is also required under Directive 2001/42/EC and the Environmental Assessment (Scotland) Act 2005.

4. As noted above, SA identifies the likely socio-economic and environmental impacts of plans and policies, and alternatives to them. Taking place at an early stage in the plan preparation process, it ensures that decision-making is informed by relevant environmental and socio-economic information. SA provides opportunities for the public to consider this information and use it to inform their views on the draft plan or policy.

What is the National Marine Plan?

5. The National Marine Plan (NMP) is a five-year plan which sets out a national-level framework for the management of Scotland's marine environment. Its purpose is to assist in managing increasing demand for the use of Scotland's marine environment, encourage the economic development of marine industries and incorporate environmental protection and social considerations into marine decision-making. It also has a role to play in managing the mitigation of, and adaptation to, climate change.
6. The NMP brings together existing national-level policy on the marine environment, provides new policy where this is required at the national level, sets the policy framework for regional marine plans and provides direction to marine and terrestrial decision-makers.
7. The draft NMP has been developed for all users of the sea, including (amongst others) the renewable energy sector, fishing, tourism, leisure and recreational users, ports and harbours, aquaculture and transport. A full list is provided in paragraph 9.
8. The draft NMP contains:
 - the vision for the marine environment, set out in Marine Scotland's marine vision and agreed at the UK level in the Marine Policy Statement;
 - the objectives for the draft plan, based on: the Scottish Government's national objectives; the High Level Marine Objectives; the criteria for 'good environmental status' under the MSFD; and the climate change objectives set out in the relevant legislation;
 - sector-specific objectives; and
 - policies.
9. The NMP's policies are provided in two parts:
 - **Cross cutting policies:** focusing on sustainable economic growth, sustainable development, communities, decision-making, engagement, and the environment. These policies apply to all decisions made in the marine environment and are relevant to all sectors. They ensure that sustainable economic growth and sustainable development remain a priority, so long as they are undertaken in a manner which is sensitive to

local communities, the environment, other uses and the long-term existence of the resource.

- **Sector-specific objectives and policies:** supporting the economic growth of a sector, managing conflicts between marine users or managing particular environmental impacts, for the following sectors:
 - sea fisheries
 - aquaculture
 - wild salmon and migratory fish
 - oil and gas
 - carbon capture and storage
 - offshore renewable energy
 - recreation and tourism
 - telecommunications cables
 - transport: shipping, ports, harbours and ferries
 - defence
 - aggregates

10. The draft plan aims to achieve the Scottish Government's vision for the marine environment of **clean, healthy, safe, productive and biologically diverse oceans and seas, managed to meet the long term needs of nature and people**. It will do this by delivering strategic objectives that will:
- achieve a sustainable economy,
 - ensure a strong, healthy and just society,
 - respect environmental limits,
 - promote good governance, and
 - use sound science responsibly.

How was the Sustainability Appraisal undertaken?

11. This is a strategic-level appraisal of national-level planning policies and sectoral objectives and policies, which broadly assesses their expected effects. A series of key questions ('sustainability appraisal objectives') is used to structure the assessment. Information about the existing marine environment has been used to inform the appraisal and define these appraisal objectives. The appraisal identifies the individual and collective effects of the draft plan's policies and objectives on: the economy (including other users of the sea); communities, population and human health; and environmental features.
12. The appraisal identifies positive and negative effects, including 'cumulative' effects. The assessment has been systematic, and the findings are recorded in a series of tables. The significant impacts are described in detail in the Sustainability Appraisal Report.

Which reasonable alternatives have been assessed?

13. The alternative approaches to the preparation of the draft NMP were considered at the start of and during the marine planning process, and these have been assessed by the SA.
14. Three alternative approaches were identified. The first (do nothing) would continue using the current approach to marine management. The second considered whether different approaches should be used: should the NMP be a high-level strategic plan (i.e. more policy-based) or should it be a high-level spatial plan (i.e. identifying proposals in specific areas)? The third looked at alternative priorities for the NMP: should it be economically-focused? Should it make the environment a priority? Or should it be based on sustainable development, which focuses on the economy, the environment, and social/community interests?

What is the current state of the environment?

15. Scotland's seas are among the most biologically diverse and productive in the world, supporting an estimated 6,500 species of marine animals and plants.
16. Scotland's marine biodiversity is protected by a range of European, UK and Scottish-level designations. Key habitat types include estuaries; lagoons; large shallow inlets and bays; mudflats and sandflats not covered by seawater at low tide; reefs; sandbanks which are slightly covered by seawater all the time; submarine structures made by leaking gases; and submerged or partially submerged sea caves. Key animal species include cetaceans (whales, dolphins and porpoises), seals, seabirds, fish (including sharks, skates and rays) and turtles.
17. Scotland's seas are mostly classed as being of good or better status under the Water Framework Directive (out to 3 nautical miles). There are some poorer quality waters in certain areas, such as the Firth of Forth and the Firth of Clyde. The key risks to the quality of the water environment are from contamination as a result of marine activities, such as the use of anti-fouling paint, pollution from oil and/or chemical spills, and pollution of coastal waters from activities on land, in particular from agricultural activities.
18. Climate change is predicted to lead to an increase in water temperature and acidity, a rise in sea levels, changes in wave heights and changes to coastlines. Climate change is already having an impact on weather patterns. Changes in temperature, levels and timing of rainfall, and more extreme weather events are all expected, affecting other aspects of the environment.
19. In general, the marine sediments around Scotland are sandy or gravelly and originate from deposits during the Quaternary glaciation. Muddy sediments are located principally near-shore or, if further offshore, in depressions on the sea floor where currents may be relatively weak.

20. Scottish waters are quite different between the east and west coasts. The east coast presents mostly uniform depths and shallow inclines interspersed with localised trenches, while the seabed off Scotland's west coast shelves steeply away from the coast, and deep waters occur relatively close to the land.
21. Scotland has high quality landscapes, with many iconic views and scenic areas. Nationally important landscapes are protected as National Scenic Areas, over half of which include coastal and marine elements. Scotland also has extensive areas of relatively remote and inaccessible wild land, particularly in the north and west. Much of the Scottish coastal landscape continues to change through coastal processes such as wave action, sediment movement, erosion and accretion.
22. Scotland's seas and coasts support a wide range of historic and archaeological sites. These are found on the coast, the foreshore and the seabed, ranging from the remains of ships and aircraft lost at sea to harbours, lighthouses and other structures along the coast.
23. In 2011 the population of Scotland was estimated at 5.295 million people. Coastal communities (within 5 km of the coast) make up around 41% of the total population of Scotland. Around two-thirds of people in coastal communities live in large towns and cities; the remainder live in small towns and rural areas, or on isolated parts of the coast.
24. Coastal communities play an important role in Scotland's economy, and many areas are economically successful. Nearly 2% of Scottish employment was in the core marine sector in 2008 and, of this, about one-third was in the fishing, fish farming or fish processing sectors.
25. The majority of coastal communities appear to suffer less income and employment deprivation than the inner city and urban areas in Scotland's central belt. The exceptions are clusters of urban communities in the south-west around Ayr and Irvine, in the north-east around Aberdeen, in Eilean Siar and in some parts of south-west Dumfriesshire.
26. Connectivity is one of the key challenges facing rural and island communities. Lifeline ferry and air services are therefore important in supporting connectivity.
27. Research indicates that, from a health perspective, coastal zones are less likely to be deprived than inland areas.

Pressures

28. There are many pressures on Scotland's seas. An example of some of the pressures on marine biodiversity is provided in Box 1.

Box 1. Pressures on marine biodiversity

Commercial fishing:

- removal of target fish species may affect the sustainability of fish stocks
- discards of fish are a waste of the resource, and also encourage scavenger species
- bycatch inadvertently catches both non-target fish and other species, generally leading to the death of individuals and subsequent decline in populations
- the seabed and its benthic habitat may be damaged by mobile fishing gear, with the consequent loss of marine plants and animals
- removal of target species may also decrease the availability of prey species, leading to declines in populations e.g. of birds

Non-native invasive species may outcompete native species, thereby displacing them from the marine environment.

Marine litter can result in the injury and/or death of marine animals.

Climate change, through increasing sea temperatures, acidification, changes to rainfall patterns, etc:

- may result in populations of marine animals and plants moving further north
- may give rise to population decline
- may result in new competitors arriving in Scottish waters, including non-native invasive species

What are the likely significant environmental effects of the draft NMP?

29. This SA has undertaken a high-level assessment of the sector-specific objectives and policies in the draft NMP. A summary is provided in the following paragraphs.

Biodiversity

30. The objectives and policies of the draft NMP recognise and address the potential for effects on biodiversity, while recognising that the NMP will work in conjunction with the overall legislative and policy framework for the marine environment. Many recognise the need for development and use to be sustainable. In addition, some sectors include policies to deal with specific issues. For example, the policies for sea fisheries focus on managing fishing to ensure sustainability of fish stocks. They also identify the desired outcomes for sea fisheries of marine planning, e.g. protection of vulnerable stocks, improved protection of the seabed, and the need for other sectors (when planning their activities) to take into account the need to protect fish and shellfish stocks and sustain healthy fisheries. The aquaculture policies explicitly address the potential effects of aquaculture on biodiversity, for example through an overarching requirement that aquaculture must be located appropriately, in conjunction with a requirement that these effects are addressed in planning and development. These policies, in conjunction with the cross-cutting biodiversity policies GEN11 and 12, should work to avoid adverse effects on biodiversity.

Water

31. The objectives and policies of the draft NMP recognise and address the potential for effects on the water environment, while recognising that the NMP will work in conjunction with the overall legislative and policy framework for the marine environment. A key issue is accidental spills of oil and chemicals, particularly for the sea fisheries and oil and gas industries. While none of the policies explicitly identify water quality, for example, as an issue, all recognise the need for development and activities in the marine environment to be sustainable. This, taken together with the cross-cutting policies GEN11 and GEN18, should avoid adverse effects on the water environment.

Air

32. The key issue for air quality in the marine environment is emissions of sulphur oxides, nitrogen oxides and particles from vessels. Emission of these pollutants is controlled.
33. None of the sector-specific policies or objectives deals directly with air quality. However, cross-cutting policy GEN15 requires that air quality is taken into consideration when progressing development and use of the marine environment.

Seascape/landscape

34. The objectives and policies of the draft NMP recognise and address the potential for effects on landscape and seascape, while recognising that the NMP will work in conjunction with the overall legislative and policy framework for the marine environment. Some of the sectors explicitly identify landscape policies, for example, aquaculture. Others note the need for development to be sustainable, which includes seascape/landscape interests. For example, offshore renewable energy arrays have the potential for adverse effects on seascape/landscape, the significance of which will depend on the nature of the seascape/landscape in question and on the characteristics of the renewable energy devices being deployed. The policies and objectives for renewable energy recognise the need for development in this sector to be sustainable. For the purposes of this assessment, we have assumed that “sustainable” will therefore include management of unacceptable adverse effects on seascape/landscape. Taken together with the cross-cutting policy GEN14, we therefore anticipate that it will be possible to avoid adverse effects on the most sensitive landscapes and seascapes (e.g. National Scenic Areas, National Parks).

Historic environment

35. The objectives and policies of the draft NMP recognise and address the potential for effects on the historic environment, while recognising that the NMP will work in conjunction with the overall legislative and policy framework for the marine environment. None of the sectors explicitly recognise historic environment interests; however, the commitment to sustainable development or to minimise environmental cost will contribute to the protection of historic environment features. For example, sea fisheries are known to affect historic

environment interests, particularly scallop dredging: Policy 3 ensures protection of the seabed and this will therefore include heritage features. These commitments, taken together with cross-cutting policy GEN13, will work to avoid adverse effects on historic environment interests.

Climatic factors

36. The key issue here for the marine sector is the emission of greenhouse gases (GHG) as a result of fuel consumption. Most sectors that involve vessels (sea fisheries, shipping) are already aware of the need to reduce both fuel consumption and GHG emissions. Transport, for example, recognises the need to reduce GHG emissions from vessels in port through increasing the availability of shore-based electricity and supporting efficiencies in fleet management and technology advances (Objective 6). Again, we have assumed that GHG emissions have been included in sector-specific definitions of sustainable development. This, taken together with cross-cutting policy GEN19, should act to control such emissions.

Marine sediments

37. The majority of policies recognise marine sediments indirectly, through improved protection of the seabed (sea fisheries) or by reference to sustainable development. Two policies specifically identify the need to prevent effects on coastal processes and/or erosion (telecommunications and aggregates). Again, the cross-cutting policies GEN11, 12 and 17 will work with all objectives and policies to avoid adverse effects on marine sediments.

What are the likely significant socio-economic effects of the draft NMP?

38. The sectoral policies in the draft NMP focus on the long-term sustainability of industries in the marine sector. This will have largely positive socio-economic effects, e.g. safeguarding and/or creation of jobs; increased employment in remote island or rural communities supporting community cohesion and resilience; long-term viability of traditional employment sectors such as fishing, alongside development of new sectors such as recreation and tourism. Additional benefits arise from the safeguarding of lifeline ferry routes.
39. Whilst some types of development have the potential for adverse environmental effects, the policies address these by promoting a sustainable approach to planning and decision-making.
40. The sectoral policies also set out clear requirements for engagement and communication between the sectors, as well as means for the resolution of conflict between them. Again, this should contribute to the long-term viability and diversity of the marine sector.
41. Socio-economic and environmental benefits are expected from the draft NMP's cross-cutting policies: whilst there is a strong emphasis on economic growth, this is within the context of sustainable development, and a balance between economic, social and environmental objectives is emphasised. Positive effects on communities, population and human health will arise, for

example, from the continuing commitment to community engagement in the marine planning and decision-making processes. Significant adverse environmental effects should also be avoided by the early consideration of environmental factors in these processes.

What are the likely combined effects of the draft NMP with other plans, when viewed together?

42. The assessment of cumulative effects has looked at the combined effects of the NMP and Scottish Planning Policy, as both are high-level, policy-based documents. The two will work together to set out a framework of social, economic and environmental policies which identify the issues to be taken into account when developing spatial plans and which are to be applied in making decisions about projects and/or activities in the marine and terrestrial environments. These cross-cutting policies also apply to the sectoral and subject-specific policies in the two plans. The cumulative effect of this overarching policy framework is that economic growth is supported, focusing on the right type of development in the right place. The cross-cutting and sector-specific policies of the two policy frameworks will work to avoid and, where appropriate, reduce the potential adverse effects of development on coastal and marine communities (including social effects) and on the coastal and marine environment.

How can these effects be avoided or reduced?

43. Avoidance or reduction of adverse effects has been built into the draft NMP, through inclusion of the cross-cutting policies. These set an overarching framework that applies to all planning and decision-making activities in the marine environment. The wide-ranging nature of these cross-cutting policies (sustainable economic growth, sustainable development, factors for consideration in decision-making – social, community, economic, environmental – as well as requirements for early engagement) means that they will act as balancing measures across the whole policy framework. Thus policies focused on development will be balanced by policies about communities or environment. Development proposals, for example, will need to be progressed and assessed in the context of this balanced policy framework.
44. Much will depend on the implementation of the cross-cutting and sectoral policies, and the regional marine planning system will have a crucial role to play in this regard, as will marine licensing and town and country planning.

What happens next?

45. Following consultation, the draft NMP will be revised in response to comments made on the draft plan and the Sustainability Appraisal Report. The revised draft NMP will then be laid before the Scottish Parliament for consideration. It is expected that the NMP will be adopted and a Post-Adoption Statement published by the end of 2014.

46. The Post-Adoption Statement will explain how issues raised in the sustainability appraisal, and associated views in response to the consultation, have been addressed.

How do I respond to the consultation?

47. Views on the draft NMP and the findings of the sustainability appraisal are now invited.
48. Copies of the draft NMP, the SA report, the BRIA and EQIA are available for viewing during office hours at the Scottish Government library at Saughton House, Edinburgh (K Spur, Saughton House, Broomhouse Drive, Edinburgh, EH11 3XD).
49. Please send your comments to the Marine Scotland NMP team, by 13 November 2013, at the following address:

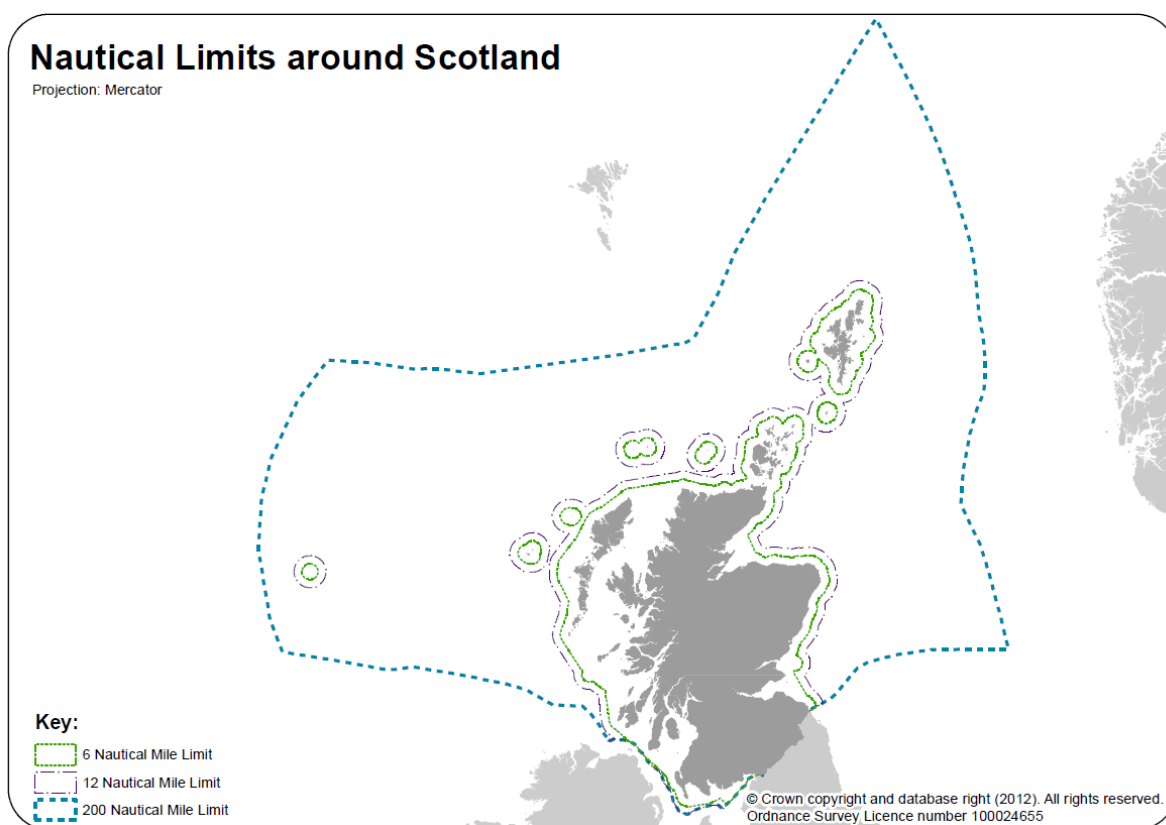
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1.0 Introduction

1.1 Marine Scotland has prepared a draft National Marine Plan (NMP) for Scotland, in accordance with the requirements of the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009. The draft plan covers both Scottish inshore waters (0-12 nautical miles) and offshore waters (12-200 nautical miles) (Figure 1).

1.2 The Scottish and United Kingdom Governments have agreed that the national marine plan for Scottish inshore waters and a marine plan covering Scottish offshore waters will be published in one document and will be collectively referred to as the “National Marine Plan”. However, it is recognised that the ‘National Marine Plan’ still comprises two plans made under two separate pieces of legislation.

Figure 1: Nautical Limits around Scotland



1.3 The draft NMP has the potential to give rise to significant environmental effects. Accordingly, a strategic environmental assessment (SEA) has been undertaken in accordance with the Environmental Assessment (Scotland) Act 2005 and The Environmental Assessment of Plans and Programmes Regulations 2004. In addition, the Marine and Coastal Access Act 2009 requires that the draft plan be subject to an appraisal of sustainability (Schedule 6, Paragraph 10). The SEA and the sustainability appraisal (SA) have been undertaken jointly to fulfil these requirements; the SEA comprises the environmental component of the SA. A checklist setting out compliance with the Environmental Assessment (Scotland) Act

2005 and showing the location of the information within this report is provided in Appendix 1.

1.4 Scoping was undertaken in autumn 2010. A pre-consultation draft NMP was published for public comment in March 2011, and was accompanied by an interim SA Report. The draft NMP and this SA Report have been shaped by the comments received during that pre-consultation process.

1.5 The purpose of this report is to set out the results of the SA undertaken of the draft plan. The SA has been carried out by the Scottish Government's Environmental Assessment Team, on behalf of Marine Scotland.

1.6 The views of the public and the Consultation Authorities on this report are now being sought.

Structure of the SA Report

1.7 The SA report includes the following sections:

- Section 1 comprises this introduction.
- Section 2 introduces the draft plan, including its legislative and policy context, and provides an overview of its content.
- Section 3 provides key baseline information about Scotland's marine environment, building on the information provided in Scotland's Marine Atlas.
- Section 4 describes the approach to the assessment.
- The results of the assessment (including reasonable alternatives) are provided in Section 5.
- Section 6 provides details of the next steps, including consultation timescales.

The Non-Technical Summary precedes this introduction.

2.0 National Marine Plan for Scotland

2.01 The NMP brings together existing national-level policy on the marine environment, provides new policy where this is required at the national level, sets the policy framework for regional marine plans and provides direction to marine and terrestrial decision-makers. Table 1 summarises key facts about the draft plan.

2.1 Relationship with other relevant plans, programmes and strategies

Legislative and Policy Context for Plan Preparation

2.1.1 The draft NMP has been prepared in the context of international, European, UK and Scottish marine legislation, policy and guidance (Figure 2). In addition, marine planning sits alongside terrestrial planning policy and other planning and regulatory regimes which together work to manage sustainable development and use of the coastal and marine environment (Figure 3). Further information is provided in the following paragraphs and in Section 2.2.

2.1.2 At the international level, the United Nations Convention of the Law of the Sea establishes the right of coastal nations to set laws and regulate the use of the marine area out to 12 nautical miles. The Convention also establishes exclusive economic zones from 12 to 200 nautical miles from the coast.

2.1.3 At the European level, the Marine Strategy Framework Directive (MSFD) requires Member States to put measures in place to achieve or maintain good environmental status by 2020 through application of an ecosystem approach to marine management. Member States were required to report on their initial assessment of their seas and to determine good environmental status and associated targets and indicators by 2012¹. The Directive is transposed into UK legislation by the Marine Strategy Regulations 2010.²

2.1.4 At the UK level, the Marine and Coastal Access Act 2009 requires that marine plans are prepared for the UK marine area (0 to 200 nautical miles). The devolved administrations (the Scottish Government, the Welsh Assembly Government and the Northern Ireland Executive) have jurisdiction over marine planning matters from 0 to 12 nautical miles.

¹ <http://www.defra.gov.uk/publications/2012/12/20/pb13860-msfd-strategy-part-one/>

² In addition to the MSFD, the Water Framework Directive, the Habitats and Birds Directives and the Common Fisheries Policy contain provisions for the use and protection of the marine environment.

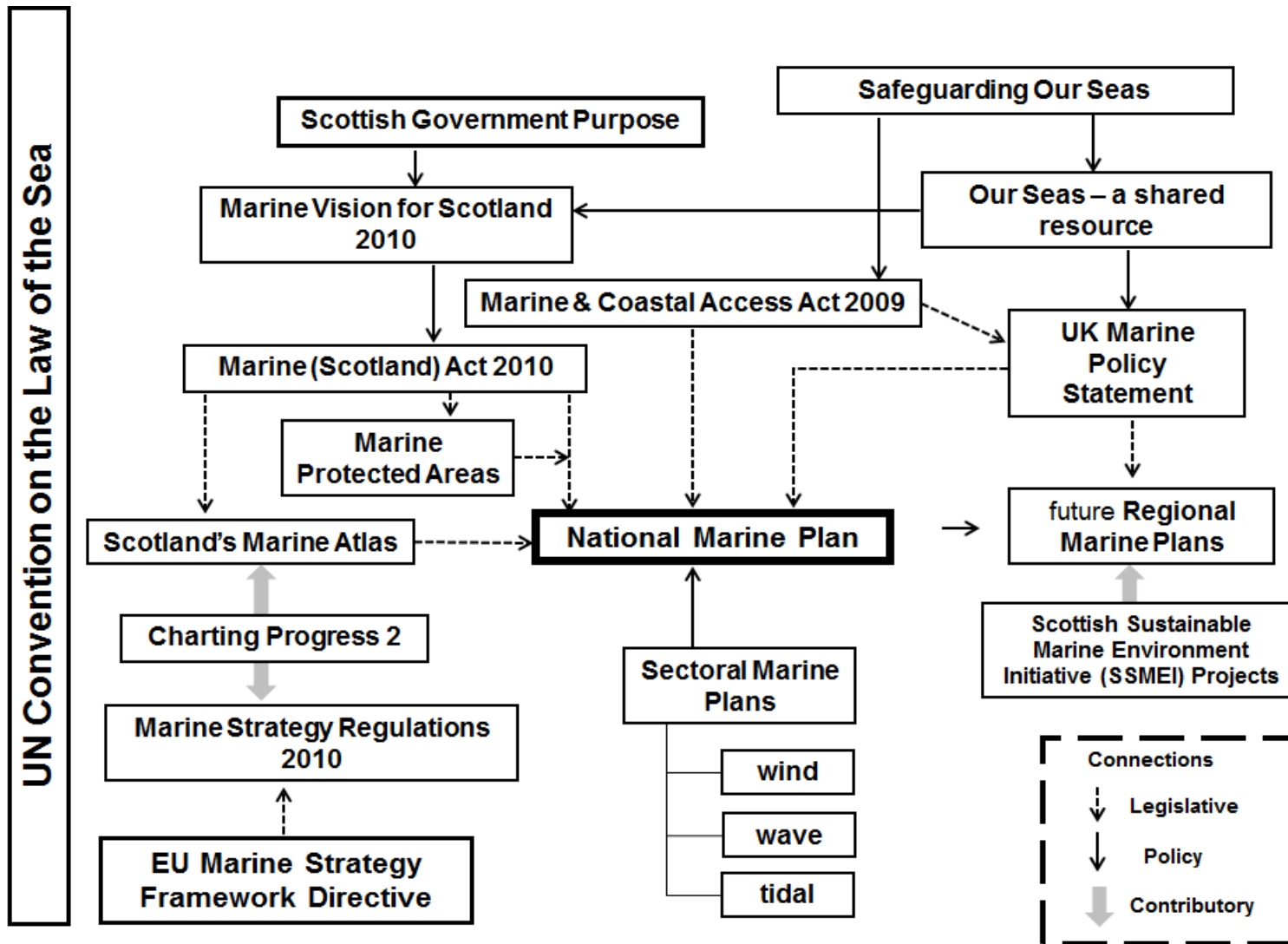


Figure 2. NMP policy context (international, European, UK and Scottish marine legislation and policy)

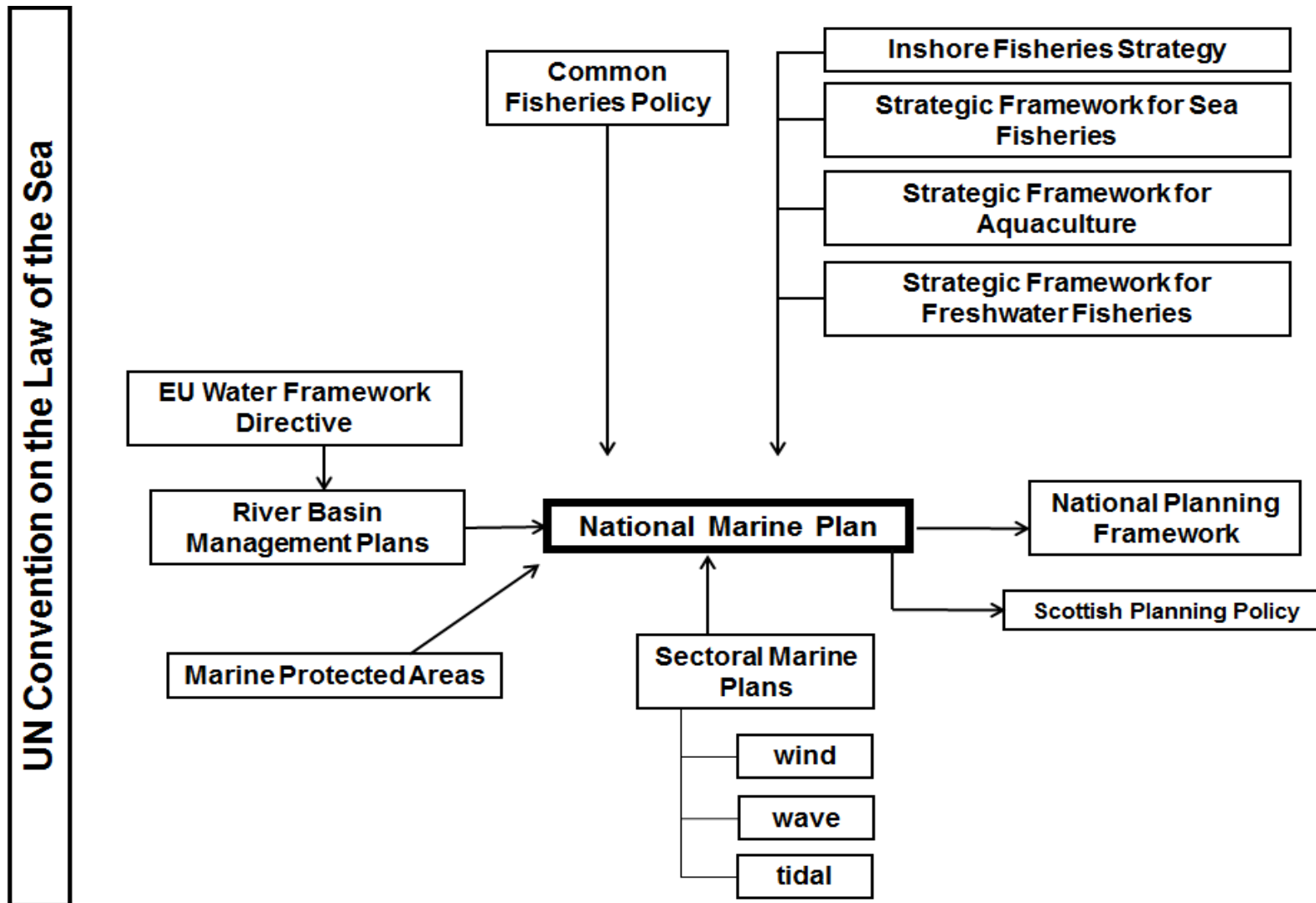


Figure 3. NMP policy context (terrestrial and other planning/regulatory regimes)

2.1.5 In accordance with this legislation, the UK Government and devolved administrations have prepared a joint Marine Policy Statement (MPS). The MPS provides the framework for preparing Marine Plans and for decision-making in relation to the marine environment, and establishes policies and objectives for specific sectors and activities. The MPS builds on the UK vision for *clean, healthy, safe, productive and biologically diverse oceans and seas*³ and the 'High Level Objectives' for the marine environment agreed amongst the four UK administrations⁴ to fulfil this vision.

2.1.6 In Scotland, the legislative and management framework for the marine environment is established by the Marine (Scotland) Act 2010. The Marine (Scotland) Act 2010 builds on the vision established by Marine Scotland⁵, which used the UK vision as a starting point. As previously noted, the Scottish Government has jurisdiction over marine planning matters from 0 to 12 nautical miles. For the purposes of marine planning, the marine area from 12 to 200 nautical miles is executive devolved to the Scottish Ministers. As a result, the draft NMP reflects the legislative provisions outlined in both the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009.

2.1.7 The Marine (Scotland) Act 2010 allows for a system of regional marine planning to be developed for Scottish waters. The regional plans will be directed by the objectives and policies of the National Marine Plan and will draw on existing work undertaken as part of the Scottish Sustainable Marine Environment Initiative (SSMEI). This initiative comprised a series of local marine planning pilot projects, undertaken with the aim of gaining a greater understanding of the nature, value, and management needs of Scotland's marine environment⁶.

2.1.8 There are a significant number of policy and legislative drivers at the national, European and international levels that apply to the various sectors which use the marine environment (including transport, shipping, fishing, energy and renewable energy). For example, the International Maritime Organization (IMO) regulates shipping. These requirements have been taken into account in the draft plan's preparation.

2.2 The National Marine Plan

Purpose and Scope of the Plan

2.2.1 As noted in paragraph 2.1.4, preparation of the NMP is a requirement of the Marine (Scotland) Act 2010 (as this applies to Scottish inshore waters) and the Marine and Coastal Access Act 2009 (as this applies to Scottish offshore waters). The purpose of the NMP is to manage increasing demands for the use of Scotland's marine environment, encourage economic development of marine industries and

³ Set out in *Safeguarding our Seas: a strategy for the conservation and sustainable development of our marine environment*. Defra (2002)

⁴ HM Government (2008) *Our Seas – a shared resource* (Defra)

⁵ Marine Scotland, SNH, SEPA and Historic Scotland. 2010. *Making the most of Scotland's seas: turning our marine vision into reality*. Available at <http://www.scotland.gov.uk/Publications/2010/04/01085908/0>

⁶ for more information, see <http://www.scotland.gov.uk/Topics/Environment/Wildlife-Habitats/protectedareas/SSMEI>

incorporate environmental protection into marine decision making. It also has a role to play in managing mitigation of and adaptation to climate change.

Geographical Scope

2.2.2 The NMP extends from Mean High Water Spring (MHWS) tide to 200 nautical miles. The powers in the Marine (Scotland) Act 2010 extend from MHWS to the seaward limit of the Scottish inshore waters (12 nautical miles). Executive devolution allows Scottish Ministers to plan for Scotland's seas from 12 to 200 nautical miles.

Temporal Scope

2.2.3 The objectives and policies of the NMP will apply for a period of five years, in accordance with the requirements of Section 16 of the Marine (Scotland) Act 2010. This requires that the effectiveness and progress of the NMP be reviewed and reported on within five years of adoption. The findings of the review will assist the Scottish Ministers in deciding whether there is a need to replace or amend the NMP.

Legislative Scope

2.2.4 The NMP applies to the exercise of both reserved and devolved functions (with the agreement of the UK Secretary of State for reserved functions).

Application of the NMP

2.2.5 The draft NMP has been developed for all users of the sea, including the renewable energy sector, fishing, leisure and recreational users, ports and harbours, aquaculture and transport.

Focus of the NMP

2.2.6 The NMP presumes in favour of sustainable development and use of the marine environment, subject to specific processes such as marine licences, and provides direction on Scottish Ministers' goals for the marine environment. It sets objectives and policies which will direct key activities and assist in resolving conflict where it arises.

Regional Marine Plans

2.2.7 The NMP will guide regional planning. The Scottish Marine Regions will be created under secondary legislation. The Scottish Marine Regions Order 2013 will identify and establish their boundaries and is expected to come into force later in 2013. Regional marine plans will be taken forward by Marine Planning Partnerships.

Sectoral Marine Plans: Renewable Energy

2.2.8 The Sectoral Marine Plan for Offshore Wind in Scottish Territorial Waters will inform the NMP. This sectoral plan is being refreshed alongside the preparation of sectoral plans for wave and tidal energy which, once complete, will also inform the NMP; a linked consultation on the sectoral marine plans will be published alongside this consultation.

Planning Context

2.2.9 The draft NMP sits alongside and interacts with existing land use planning regimes and will be consistent with the national planning policy set out in Scottish Planning Policy and the strategic priorities identified in the National Planning Framework 2 (and the forthcoming National Planning Framework 3). The NMP area physically overlaps with terrestrial planning boundaries to ensure that marine and terrestrial planning together will address the whole of the marine and terrestrial environment.

Table 1. Key facts about the plan

Responsible Authority	Marine Scotland
Title	National Marine Plan
Purpose	To manage competing demands for the use of the sea whilst protecting the marine environment.
What prompted the plan?	The Marine (Scotland) Act 2010 introduced a new statutory marine planning framework. Under the 2010 Act, Scottish Ministers must prepare and adopt a national marine plan.
Subject	Marine Spatial Planning
Period covered	2014-2019
Frequency of updates	The plan is to be reviewed up to 5 years from adoption and updated or replaced if required.
Area covered	Scottish inshore (MHWS to 12 nautical miles) and offshore waters (12-200 nautical miles)
Summary of nature/ content	The National Marine Plan states Scottish Ministers' policies for the sustainable development of Scotland's seas, including the setting of economic, social and marine ecosystem objectives and objectives relating to climate change mitigation and adaptation. Sector-specific objectives are also identified.
Objectives?	Yes. These are set out in the draft plan and summarised in the SA report.
Date	Summer 2013
Contact	Marine Scotland NMP team marineplanning@scotland.gsi.gov.uk Telephone: 0131 244 7838

Marine Protected Areas

2.2.10 The Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009 both contain new powers to designate Marine Protected Areas (MPAs). These contribute to a range of measures to manage and protect our seas for current and future generations. The legislation also requires that a network of MPAs in UK seas is created to protect biodiversity and geodiversity. The network will contribute to our agreement with international partners to create an ecologically coherent network of well-managed MPAs in the North East Atlantic. The draft NMP takes cognisance of possible MPAs and a linked consultation on the possible nature conservation MPAs will be published alongside this consultation.

Summary of draft NMP contents

2.2.11 The draft NMP contains:

- the vision for the draft plan, set out in Marine Scotland's marine vision and agreed at the UK level (see Figure 4);
- the objectives for the draft plan, based on: the Scottish Government's national objectives; the High Level Marine Objectives; the criteria for 'good environmental status' under the MSFD; and the climate change objectives set out in the relevant legislation⁷;
- sector-specific objectives; and
- policies.

2.2.12 In terms of policies, the draft NMP is in two parts:

- Part 1 contains general policies, which apply to all decisions made in the marine environment and are relevant to all sectors. These policies implement the strategic objectives (set out in Figure 4) and describe the parameters within which development and activities may take place, ensuring that sustainable economic growth and sustainable development remain a priority so long as they are undertaken in a manner which is sensitive to the environment, other uses and the long-term existence of the resource.
- Part 2 contains sector-specific policies in sectoral chapters. These have been developed where specific policies are required to support the economic growth of a sector, manage conflicts between marine users or manage particular environmental impacts. These policies cover the following sectors:
 - Fisheries
 - Aquaculture
 - Wild salmon and migratory fish
 - Oil and gas
 - Carbon capture and storage
 - Offshore renewable energy
 - Recreation and tourism
 - Transport: shipping, ports, harbours and ferries
 - Telecommunication cables
 - Defence
 - Aggregates

2.2.13 The wording of the policies is provided in Appendix 3, in the appraisal tables.

⁷ Climate Change (Scotland) Act 2009 and the Marine (Scotland) Act 2010

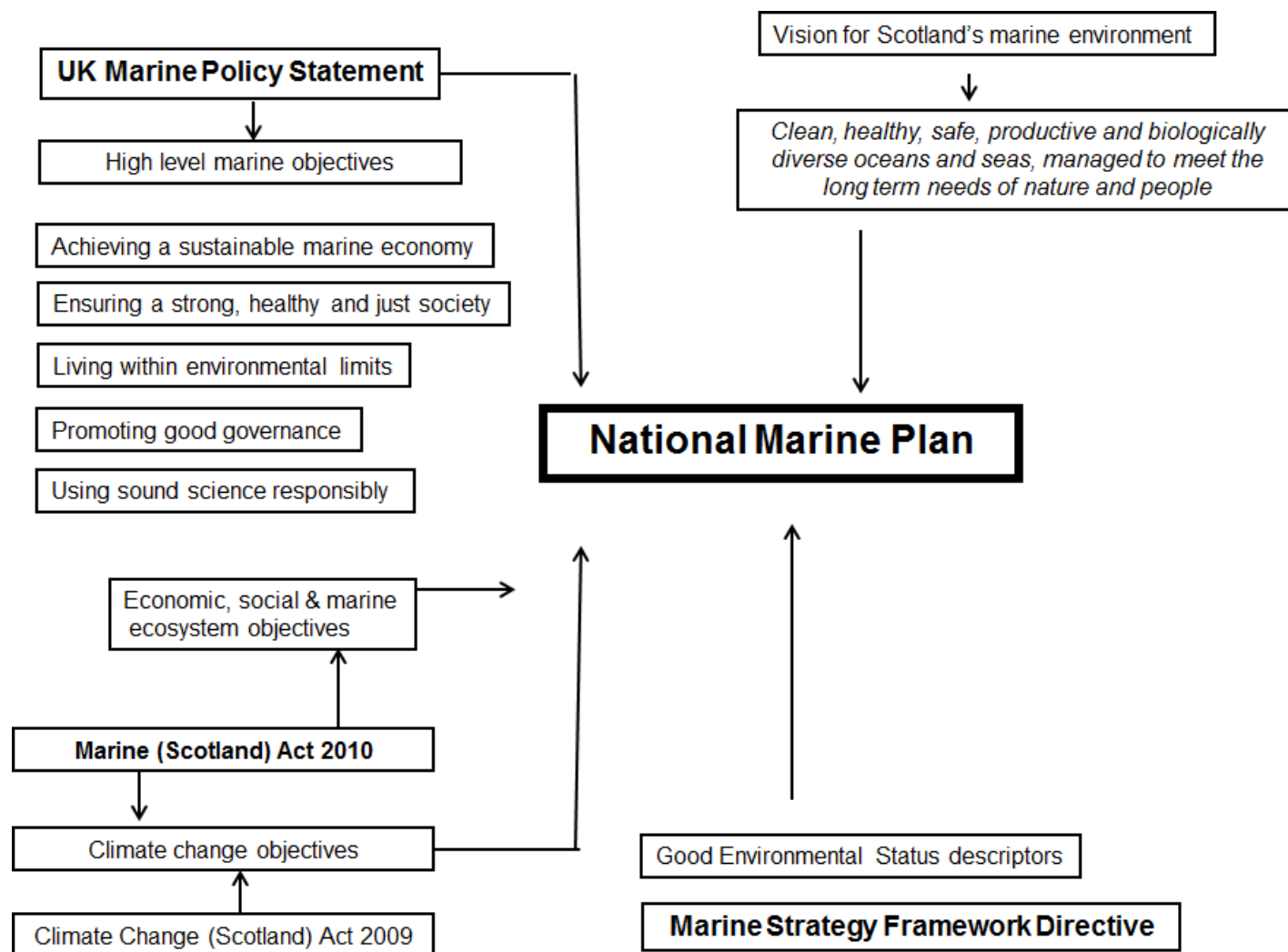


Figure 4. NMP objectives

Reasonable alternatives considered

2.2.14 The Environmental Assessment (Scotland) Act 2005 requires that reasonable alternatives to the draft NMP are assessed as part of the SEA. Alternative approaches to the preparation of the draft NMP were considered at the start of and during the marine planning process, and these have been grouped into three tiers of alternatives:

- Do nothing
- Use of alternative approaches:
 - A high level strategic plan
 - A high level spatial plan
- Use of alternative priorities
 - An economically-focused plan
 - An environmentally-focused plan

2.2.15 Workshops were held with the Consultation Authorities⁸ and key stakeholders in 2011 to discuss the application of alternative priorities, to see what a plan would look like when developed under the different policy drivers (see Section 4 for more details).

2.2.16 Specific alternatives for individual objectives or policies have not been identified. However, in developing the draft NMP, consideration has been given to the weight and level of prescriptive policy developed for the management and use of the marine area and to guide the development of regional marine plans.

2.2.17 In developing planning policies, consideration was given to what type and strength of policy could address key challenges/ issues / objectives, in particular whether the issue:

- can be addressed in an **overarching / general safeguarding policy**
- needs a more **hierarchical** approach, e.g. setting out facilities / activities with different levels of importance and therefore greater or lesser degrees of recognition within the licensing process
- needs **criteria-based** policy, usually providing a framework for the consenting process
- would benefit from a more **enabling / aspirational** policy
- requires **influencing** policy, perhaps where the issue overlaps with or goes beyond the scope of the draft NMP
- cannot be resolved nationally and therefore requires a steer for **regional** plans
- could have a more **spatially defined** policy, to address known national level issues and/or reflect spatial outputs of other planning processes

2.2.18 Consideration has been given to the weight that the different policies and objectives are afforded within the NMP and the option to set 'decision rules' to support decision-makers and guide the development of marine regional plans. This level of prescriptive policy would require a high degree of information gathering and analysis. It was considered that this option would detract from the key purpose and

⁸ Scottish Natural Heritage, Scottish Environment Protection Agency and Historic Scotland

benefit of regional planning at a local level where local conflicts are better understood.

2.2.19 The revised draft NMP sets out clearer policies within the plan to reflect national priorities and to provide a greater element of guidance. As such the draft NMP provides a national framework within which planning decisions can be taken, and more prescriptive decisions will be taken within regional planning.

2.3 Environmental Protection Objectives

2.3.1 The Environmental Assessment (Scotland) Act 2005 requires responsible authorities to identify the broader policy context and the environmental protection objectives relevant to the plan that is being assessed. The broader policy context is described in Sections 2.1 and 2.2.

2.3.2 Relevant environmental protection objectives are set out in Appendix 2. In summary, the following key environmental protection objectives are of particular relevance to the draft NMP:

- **Biodiversity** policies range from broad commitments to protection and enhancement of key species and habitats, to objectives that focus specifically on conserving marine ecosystems. The list of habitats and species is lengthy, with marine features accounting for a significant proportion of all protected resources. Particular protection is afforded to migratory birds and cetaceans through international agreements.
- Relevant objectives that support **population and human health** include those which aim to control bathing water quality. Access legislation and guidance on recreational use are also relevant considerations.
- Objectives relating to the **water** environment (coastal and marine) aim to reduce pollution and improve the overall water quality and ecological status/potential of coastal and transitional water bodies, as well as controlling other operations such as engineering and coastal flood defences. Issues of relevance to this SA include targets for coastal water quality, and objectives to safeguard marine areas from risks of pollution arising from sea and coastal transport. The Water Framework Directive and the Marine Strategy Framework Directive are also relevant and reflected in the plan.
- **Climate**-related objectives set targets for greenhouse gas emissions at the international and national levels. Adaptation to climate change is also a key policy element.
- **Air** quality targets and objectives aim to achieve good ambient air quality. These are supported by national air quality objectives.
- **Cultural heritage** objectives include commitments to protecting the historic environment whilst increasing understanding and awareness of its value. Key objectives relate to coastal and offshore designated and undesignated buildings, archaeology and wrecks.
- Objectives relating to **landscape and seascape** reflect the broader framework provided by the European Landscape Convention, which

emphasises a broad and inclusive approach to landscape protection and enhancement. The diversity and scenic value of coastal seascapes is included as a key theme in the updated Natural Heritage Futures series produced by SNH.

2.3.3 The environmental protection objectives form the basis for the development of the SA objectives used to structure this assessment (Section 4).

3.0 Baseline Information and Context

3.0.1 Scotland's location at the edge of the continental shelf means that it is subject to both subpolar and subtropical influences. The North Atlantic current brings warm water from the Gulf of Mexico to the west coast of Scotland. These warm waters mix with cooler polar waters that are rich in nutrients.

3.0.2 Scotland's coastline is over 18,000 km long, and very varied in nature. There are over 900 islands, including the major archipelagos of Shetland, Orkney and the Outer Hebrides.⁹

3.1 Biodiversity, flora and fauna

3.1.1 Scotland's marine environment supports a diverse complex of different habitats, which in their turn support a wide range of marine plants and animals. This diversity owes much to the factors described in paragraphs 3.0.1 and 3.0.2. Current estimates suggest there are around 6,500 species of animals and plants (excluding microbial flora and seabirds) in Scotland's seas (Scotland's Marine Atlas, 2011).

Key Marine Habitats

3.1.2 The seabed is a critical component of marine ecosystems. Six broad habitat types occur in Scottish waters (Figure 5): intertidal rock, intertidal sediment, subtidal rock, shallow subtidal sediments, shelf subtidal sediments and deep-sea habitats. Figure 6 illustrates the locations of these habitats relative to the shoreline. Overall, mud, sand and coarse sediment are found in the North Sea, to the west of the Hebrides and in the north of Scotland. The seabed in the far west and north of Scotland is characterised by mud and fine clay, with coarser sediments in shallower water and on banks and seamounts¹⁰. Details of these habitats are provided in the following paragraphs¹¹.

3.1.3 Intertidal rock comprises approximately 48% of the Scottish coastline. Large stretches of the west coast and Northern Isles are predominantly rocky, as are the Solway Firth and the Firth of Forth, whereas on the east coast intertidal rock is much more patchy and interspersed by large stretches of sandy and muddy coastline. This habitat, which includes bedrock, boulders and cobbles, is affected by a number of physical factors (e.g. wave exposure, salinity, temperature and tides).

3.1.4 The various animals and plants found on rocky shores are adapted to survive the stresses imposed by regular immersion and emersion in sea water and the associated fluctuations in temperature and salinity caused by exposure to the sun and rain at low tide. The upper regions of many rocky shores are relatively species-poor, particularly on exposed coasts, but areas nearer to the bottom of the shore can

⁹ Information in this overview is taken from Scotland's Marine Atlas and SNH/JNCC (2012) Advice to the Scottish Government on the selection of Nature Conservation Marine Protected Areas (MPAs) for the development

of the Scottish MPA network. SNH Commissioned Report No 547.

¹⁰ Charting Progress 2

¹¹ Information in this section is taken from: Scottish Government (2011) Scotland's Marine Atlas, Information for the national marine plan.

be very species-rich. Rocky shores are popular resting and foraging places for many animals (e.g. harbour and grey seals, otter and various wading birds).

3.1.5 Intertidal sediments comprise around 50% of the Scottish coastline and include mobile shingle and gravel, sand and mud or combinations of these (including sandflats and mudflats), and saltmarsh in the upper shores. Intertidal sediments predominate on the west coast and in estuaries such as the Solway, Dornoch and Cromarty Firths and the Firths of Forth and Tay.

3.1.6 Intertidal habitats support communities that are tolerant of exposure to air and variable temperatures and salinities, particularly the mudflats and sandflats found in estuaries. The more mobile sediments, e.g. relatively coarse-grained sand, support fewer species of animals, whereas less mobile sediments (such as muddy sands) are more species-rich, supporting communities of amphipods, polychaetes and bivalve molluscs. Mudflats, which are found in the most sheltered areas, are finer (silt and clay) and have a high organic content. Intertidal sediments support such features as seagrass beds, blue mussel beds, and native oysters. Mudflats in particular provide habitat for many juvenile fish and for wintering waders and wildfowl.

3.1.7 Subtidal rock is extensive on the west coast and around Shetland, but is only present in isolated pockets on the east coast. Subtidal rock habitats consist of bedrock, boulders and cobbles occurring below low water mark and the communities found in these areas are affected by the availability of light. Shallow areas are typically dominated by seaweeds; communities in deeper areas comprise exclusively marine animals. Subtidal rock supports such features as Northern sea fan and sponge communities; white cluster anemone; pink sea fingers; European spiny lobster; tide-swept algal communities; and biogenic reefs.

3.1.8 Inshore subtidal and shelf sediments cover an extensive area of the seabed, all around the Scottish coast. Inshore subtidal sediments include shingle, gravel, sand and mud extending to the depth at which there is no effect from waves, typically around 50-70m. The shelf sediments extend to around 200m depth.

3.1.9 Inshore subtidal and shelf sediments support such features as burrowing sea anemone; northern feather star; fan mussel; heart cockle; ocean quahog; burrowed mud; maerl beds; maerl or coarse shell gravel with burrowing sea cucumbers; inshore deep mud with burrowing heart urchins; shallow tide-swept coarse sands with burrowing bivalves; seagrass beds; and low or variable salinity habitats.

3.1.10 Deep sea habitats are those occurring beyond the continental shelf break at depths typically greater than around 200m. Knowledge of these habitats is limited but is increasing. They are found almost entirely to the north and west of Scotland, and comprise cold water coral reefs, coral carbonate mounds, submarine canyons, sea mounts and deep sea sediments.¹² They support such features as seamount communities; carbonate mound communities; coral gardens; deep sea sponge aggregations; offshore deep sea muds; and cold-water coral reefs.

¹² Scottish Government (2011) Scotland's Marine Atlas, Information for the national marine plan, Scottish Government pp 100-103

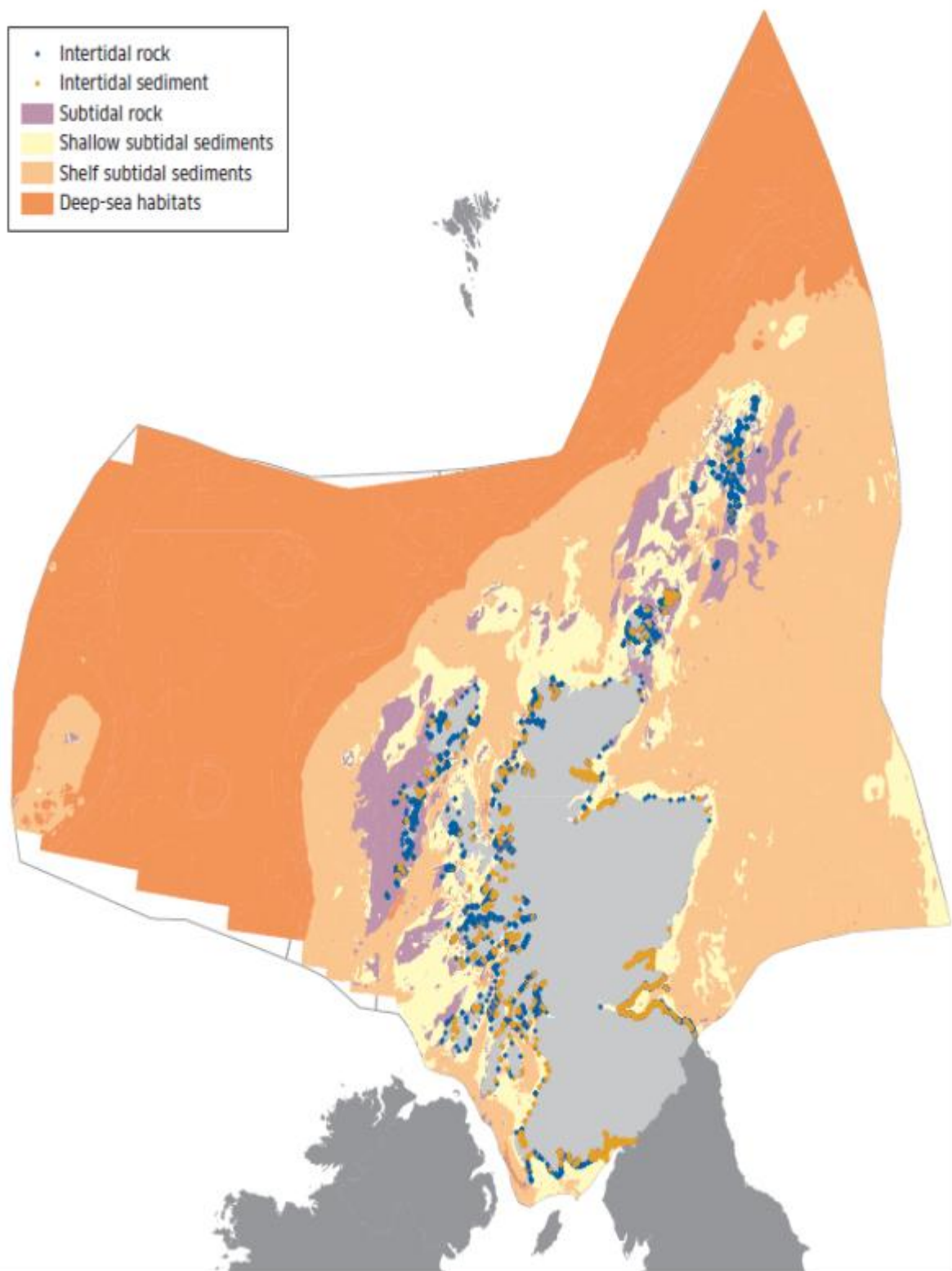


Figure 5. Modelled distribution of broad habitats in Scotland's marine environment¹³

¹³ Scotland's Marine Atlas. p. 71

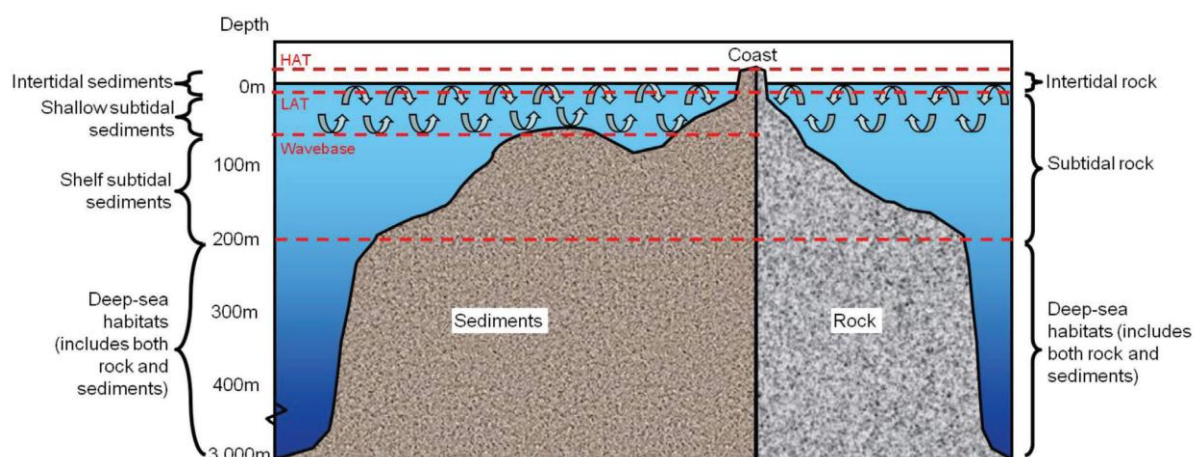


Figure 6. A generic cross-section of the seabed from the coast to deep waters offshore¹⁴

Mobile Species

3.1.11 Scotland's marine environment also supports a wide range of mobile species. These include:

- seals (grey and common or harbour)
- cetaceans. Twenty-three species have been recorded in Scottish waters over the last 25 years. Of these, 11 are regularly sighted.
- birds, both breeding seabirds and overwintering waterbirds
- marine turtles
- sharks and rays, including basking shark and common skate
- commercial fish and shellfish

Protected Habitats and Species

3.1.12 The importance of Scotland's marine ecosystems is reflected in the range of designations which protect them at the international, UK and Scottish levels. The range of habitats protected includes estuaries; lagoons; large shallow inlets and bays, mudflats and sandflats; reefs; sandbanks; submarine structures; and sea caves. A wide range of species is protected, including breeding seabirds, overwintering waterbirds, fish and seals, among others.

3.1.13 In 2012, there were:

- 85 Special Protection Areas (SPAs) with marine associations, affording protection to bird species dependent on the marine environment. Thirty-one of the existing seabird breeding colony SPAs have been extended into the marine environment to include the adjacent waters.
- 40 Special Areas of Conservation (SAC), six candidate SACs, and one possible SAC.

¹⁴ from Charting Progress 2 Feeder Report

- 188 Sites of Special Scientific Interest (SSSI) with marine associations / components, of which 61 overlap with the intertidal environment. The remainder have been designated for bird interests associated with the marine environment. An example of the habitats and species protected at the national level (through SSSI designation) is provided in Table 2.

3.1.14 The Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009 both contain powers to designate Marine Protected Areas (MPAs). These contribute to a range of measures to manage and protect Scotland's seas for current and future generations. The legislation also requires that a network of MPAs in UK seas is created to protect biodiversity and geodiversity. The network will contribute to agreements with international partners to create an ecologically coherent network of well-managed MPAs in the north-east Atlantic. The key overall objective of the nature conservation MPA network is to safeguard the most important natural features in Scottish waters, based on the principle of sustainable use¹⁵.

3.1.15 Possible nature conservation MPAs have been identified, and four further MPA search locations remain to be fully assessed (Figure 7). The evolving MPA network in Scotland's seas builds on the existing network of protected areas (Figure 7), which includes Special Areas of Conservation (SACs); Special Protection Areas (SPAs); Sites of Special Scientific Interest (SSSIs), and fisheries management areas. More information on these other designations and sites is provided in Marine Scotland's report to the Scottish Parliament¹⁵.

Table 2. Marine notified habitats and species features of SSSIs

Habitats	Species
Eel grass bed	Brackish water cockle (<i>Cerastoderma lamarki</i>)
Mudflats	Egg wrack (<i>Ascophyllum nodosum</i> ead <i>mackaili</i>)
Rocky shore	Common seal (<i>Phoca vitulina</i>)
Saline lagoon	Grey seal (<i>Halichoerus grypus</i>)
Sandflats	Stonewort (<i>Lamprothamnium papulosum</i>)
Sea caves	Vascular plant assemblage [covers eel grass communities in some sites]
Tidal rapids	

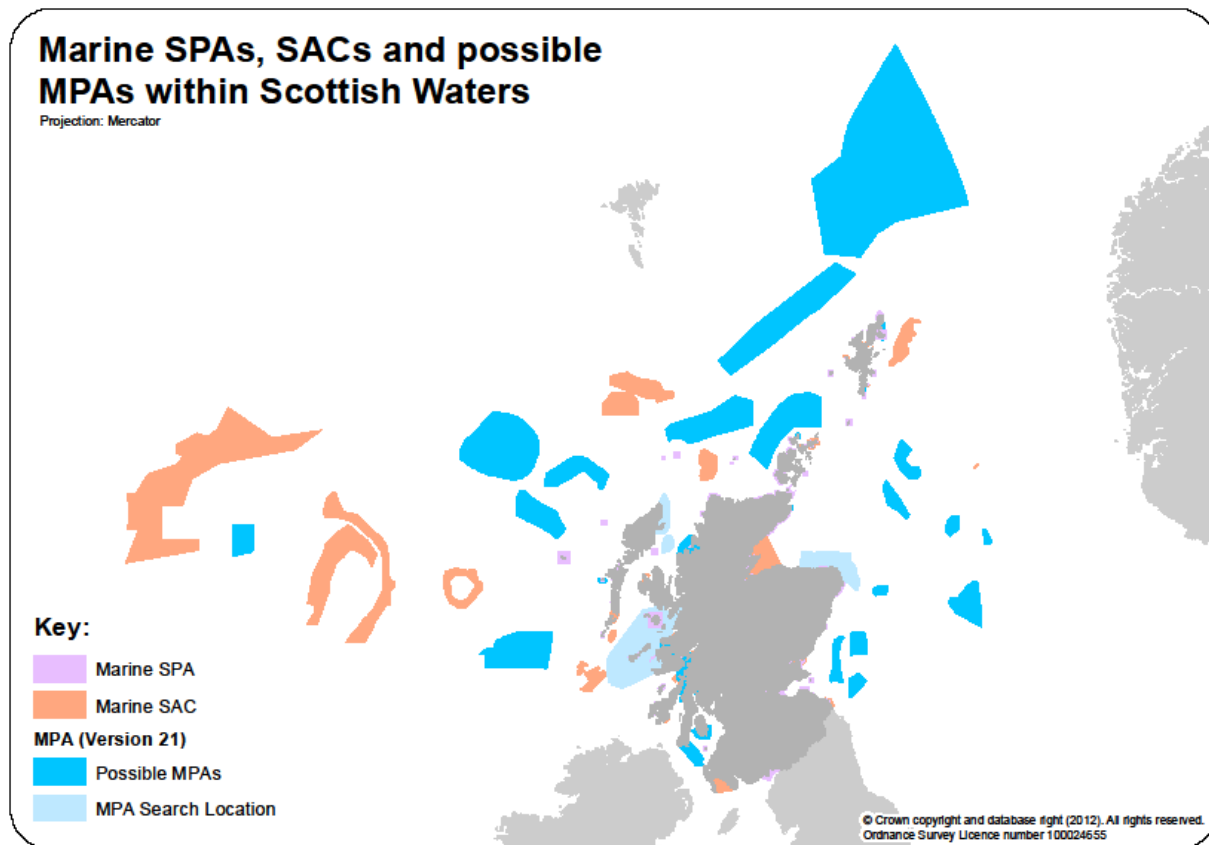
Priority Marine Features

3.1.16 SNH and JNCC have developed a list of Priority Marine Features (PMFs), to provide a new focus for marine conservation activities across the three pillar approach set out in the Marine Nature Conservation Strategy. Some of these PMFs are UK Biodiversity Action Plan species and habitats. UK BAP priority species are those that are identified as being threatened and requiring conservation. There are 74 UK BAP priority marine species listed as priorities in Scotland. These include sea-fan anemone, fan mussel, native oyster and fireworks anemone. These species can be vulnerable to fishing activities. For example, the fireworks anemone is highly

¹⁵ Marine Scotland. 2012. Report to the Scottish Parliament on Progress to Identify a Scottish Network of Marine Protected Areas.

sensitive to mechanical damage from mobile fishing gear, particularly trawling for Nephrops and, to a lesser degree, damage from creels.

Figure 7. Marine SPAs, SACs and possible MPAs within Scottish Waters



3.1.17 SNH and JNCC have made recommendations to Scottish Ministers on PMFs, which comprises a list of PMFs for inshore and offshore waters¹⁶. This includes such marine species as cod, herring, mackerel and ling. The Marine Atlas identifies key PMFs and the pressures affecting them¹⁷.

Trends and Pressures

3.1.18 The Marine Atlas reviewed the condition of the five major habitat types described in paragraphs 3.1.2-10. There were few or no concerns about subtidal rock. Intertidal rock and sediments show evidence of deterioration, with one concern being the introduction of such non-native invasive species as wire weed. The most significant level of concern was regarding the condition of shallow and shelf subtidal sediments, mainly as a result of fishing practices such as demersal fishing (trawling) and scallop dredging. There were also some concerns about the effects of trawling on deep sea habitat.

¹⁶ See <http://www.snh.gov.uk/protecting-scotlands-nature/safeguarding-biodiversity/priority-marine-features/priority-marine-features/>

¹⁷ The Scottish Government. 2011. Scotland's Marine Atlas: Information for the National Marine Plan.

3.1.19 An assessment of the condition of the following species was also made: plankton, cetaceans, grey seals, harbour seals, seabirds, demersal fish, sharks/rays and water birds. Of these, the most concern was expressed about sharks/rays and harbour seals. Populations of sharks/rays are declining and, as these animals are slow growing, late to reach maturity, and typically have low fecundity, populations take some time to recover from such pressures as overfishing. Harbour seal numbers have declined (by over 50%) since 2001 in Shetland, Orkney and the east coast of Scotland, although numbers have remained relatively stable on the west coast and the Inner Hebrides.

3.1.20 Seabird populations are increasing in some areas (Solway Firth and the Clyde, for example) and decreasing in others. In East and West Shetland and along the North Scotland coast, this decrease is most probably related to a shortage of prey species resulting from changes in oceanographic conditions. Like seabirds, waterbirds (wildfowl and waders) are also both increasing and decreasing, depending on the species. The reasons for declines remain to be fully explained but may be due to redistribution of wintering birds across north-west Europe due to climate change effects.

3.1.21 Entanglement of baleen whales in static fishing gear has been observed in Scottish waters, for example, minke whales entangled in creel lines and other ropes. At the time of reporting (2010), such incidents were not considered to be a conservation threat in Scotland¹⁸.

3.1.22 The Marine Atlas also noted that populations of many commercial fish species are declining, and that this is of particular concern in the Solway Firth, North Channel, Clyde, Minches and Malin Sea, North Scotland coast and West Shetland. Several commercial fish stocks were being fished above the levels consistent with achieving maximum sustainable yield in 2011, including northeast Atlantic mackerel, herring (west of Scotland), cod (North Sea and west of Scotland stocks), blue whiting, saithe and monkfish. Other stocks are fished at sustainable levels, including herring (North Sea), haddock (North Sea, west of Scotland, and Rockall) and Nephrops.

3.1.23 Box 1 sets out current and future pressures on marine biodiversity, flora and fauna.

¹⁸ Northidge, S., A Cargill, A Coram, L Mandleberg, S Calderan and B Reid. June 2010. Entanglement of minke whales in Scottish waters: an investigation into occurrence, causes and mitigation. Final Report to Scottish Government CR/2007/49.

Box 1. Pressures on marine biodiversity, fauna and flora

Commercial fishing:

- removal of target fish species may affect the sustainability of fish stocks, particularly where catches are above the level consistent with achieving maximum sustainable yield
- discards of fish are a waste of the resource, and also encourage scavenger species
- bycatch inadvertently catches both non-target fish and other species, generally leading to the death of individuals and subsequent decline in populations
- the seabed and its benthic habitat may be damaged by mobile fishing gear, with the consequent loss of marine plants and animals
- removal of target species may also decrease the availability of prey species, leading to declines in populations e.g. of birds

Non-native invasive species may outcompete native species, thereby displacing them from the marine environment.

Marine litter can result in the injury and/or death of marine animals, through entanglement, ingestion of litter (including plastic microparticles in particular) or both

Dredging:

- can result in loss of and/or damage to the seabed and the habitats that it supports
- may give rise to suspended sediments, resulting in decreased water quality and/or smothering of the seabed if these sediments settle out in a different area
- may disturb marine animals, including through increased noise levels

Marine transport:

- risks collision of vessels with marine animals, resulting in their injury and/or death, with subsequent population declines
- may result in increased coastal erosion, through the action of vessel wakes

Aquaculture:

- may give rise to elevated nutrient levels in and on the seabed, from fish faeces and excess animal feed, which can result in changes to community composition and/or smothering of the seabed
- can damage the seabed and its habitat, through anchoring of infrastructure
- may affect wild salmon, through transmission of sea lice

Marine wildlife watching may result in increased disturbance to populations of marine animals such as whales and dolphins.

Recreation:

- may result in loss of and/or damage to the seabed and its habitat, through anchoring
- may give rise to increased levels of marine litter
- may disturb marine animals, through human and/or vessel presence

Offshore renewables, in future:

- may result in loss of and/or damage to the seabed and its habitat, through anchoring of infrastructure
- give rise to collision risk, e.g. with birds, mammals, etc
- result in changes to sediment transport, through changes in energy levels in the water

Climate change, through increasing sea temperatures, acidification, changes to rainfall patterns, etc:

- may result in populations of marine animals and plants moving further north
- may give rise to population decline
- may result in new competitors arriving in Scottish waters, including non-native invasive species

3.2 Communities, Population and Human Health

Population distribution and change

3.2.1 The population of Scotland in 2011 was estimated at 5.295 million people¹⁹. Coastal communities (within 5 km of the coast) make up around 41% of the total population of Scotland, with 68% of the coastal population living within the 'developed coast' consisting of urban areas such as large towns and cities, and 14% living within the 'undeveloped coast' consisting of small towns and rural holds with agricultural land²⁰. The 'isolated coast' is remote and sparsely populated but contains 18% of Scotland's coastal population²¹. While there are many settlements on the coast, less than 15% of its length has been developed²².

3.2.2 A positive sense of place is important to people living in many rural and coastal areas, and the importance of the quality of the environment raises concerns that detrimental effects on amenity could lead to decreasing populations and adversely impact on property values and businesses.

Employment and Deprivation

3.2.3 Coastal communities play an important role in Scotland's economy, and many areas are economically successful.

3.2.4 Employment information indicates that around 1.6% of Scottish employment was in the core marine sector in 2008 and, of this, some 31% of employment was in the fishing, fish farming or fish processing sectors²³. The industries that contribute to the core marine sector include:

- construction of water projects;
- renting of water transport equipment;
- fish farms;
- fishing;
- processing and preserving of fish and fish products;
- sea and coastal water transport and supporting activities;
- building and repairing of ships and boats;
- service activities incidental to oil and gas extraction excluding surveying; and
- extraction of crude petroleum and natural gas.

Detailed information on the extent and value of activities in and use of the marine environment is provided in Scotland's Marine Atlas (2011) and in the draft NMP.

¹⁹ Scotland's Census 2011 (2012) Statistical Bulletin [online] Available at: <http://www.scotlandscensus.gov.uk/en/censusresults/bulletin.html>

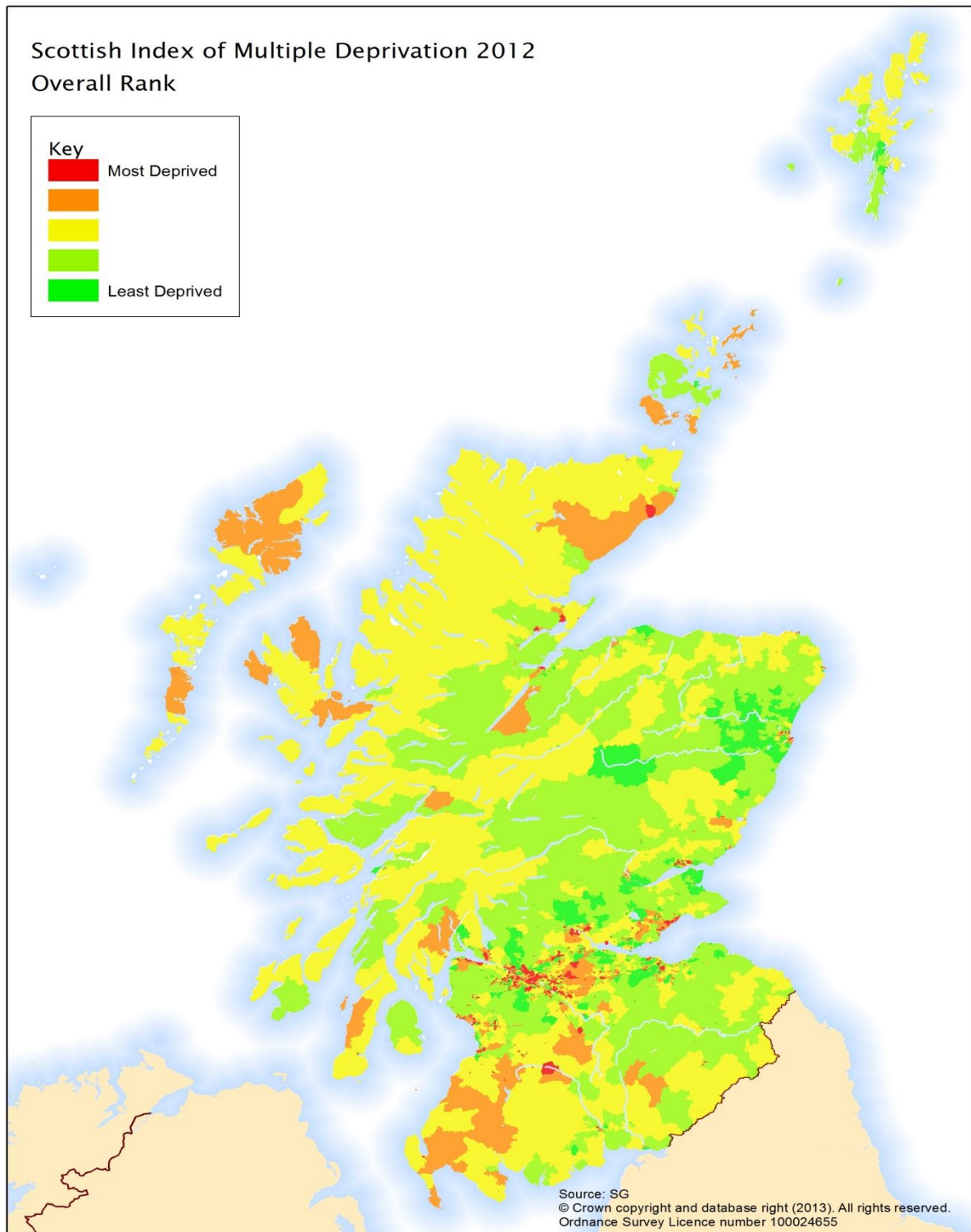
²⁰ The James Hutton Institute (2010) Scotland's Coastal Assets [online] Available at: http://www.hutton.ac.uk/sites/default/files/files/publications/hutton_coast_booklet_web.pdf

²¹ *ibid*

²² Scottish Government (2008) National Planning Framework 2 [online] Available at: <http://www.scotland.gov.uk/Publications/2008/01/07093039/3>

²³ Scottish Government (2011) Scotland's Marine Atlas, Information for the national marine plan, Scottish Government

Figure 8. Scottish Index of Multiple Deprivation 2012: Overall Rank



3.2.5 The Scottish Index of Multiple Deprivation (SIMD) ranks small areas (datazones)²⁴ from the most deprived to the least deprived. It analyses data for a number of indicators across the domains of income, employment, health, education, skills and training, housing, geographic access and crime. Key findings from the SIMD 2012²⁵ show that multiple deprivation in Scotland has become less concentrated over time. In SIMD 2004, nearly half of all datazones in the most deprived 10% across Scotland were in Glasgow City. In SIMD 2012 this dropped to 35.8%, with increases in other areas. The most deprived datazones include parts of Renfrewshire and Glasgow City. North Lanarkshire, Fife, Renfrewshire and East Ayrshire have seen relatively large *increases* in their share of datazones in the 15% most deprived areas in Scotland between SIMD 2009 and SIMD 2012. Glasgow City, Edinburgh City, West Lothian, Aberdeen City and South Lanarkshire have seen relatively large *decreases* in their share of datazones in the 15% most deprived areas in Scotland between SIMD 2009 and SIMD 2012.

3.2.6 Neighbourhood statistics data for local authorities with a coastline and the Scottish Index of Multiple Deprivation (SIMD) show that the majority of coastal communities are not included within the lowest percentiles, and appear to suffer less income and employment deprivation than the inner city and urban areas in Scotland's central belt²⁶. The exceptions are clusters of urban communities in the south-west around Ayr and Irvine, in the north-east around Aberdeen, in Eilean Siar and in some parts of south-west Dumfriesshire. The mapping of the Scottish Index of Multiple Deprivation (Figure 8) shows the spatial concentration of disadvantage in urban areas of Scotland, particularly west central Scotland, but also in other areas.

3.2.7 There is an east-west split in the rural characteristics of coastal communities, with the islands, north and west coasts typically having smaller populations and experiencing greater distances to services. Communities on the west coast and islands typically have a greater reliance on marine businesses and related industries as part of their local economy. Communities in the east and north, including Shetland, are active in the oil and gas sectors. Further details are provided in the following paragraphs.

3.2.8 There are challenges for some coastal and island communities. This includes some of the more remote areas such as Eilean Siar, parts of Caithness and Sutherland and Kintyre, where there has been a continuing decline. Through the Fragile Areas Programme, Highlands and Islands Enterprise (HIE) and local authorities are giving particular attention to the needs of the Outer Hebrides, north Skye, the outlying islands of Orkney and Shetland, the Argyll islands and the remote west mainland. The locations of more fragile areas in these parts of Scotland are shown in Figure 9.

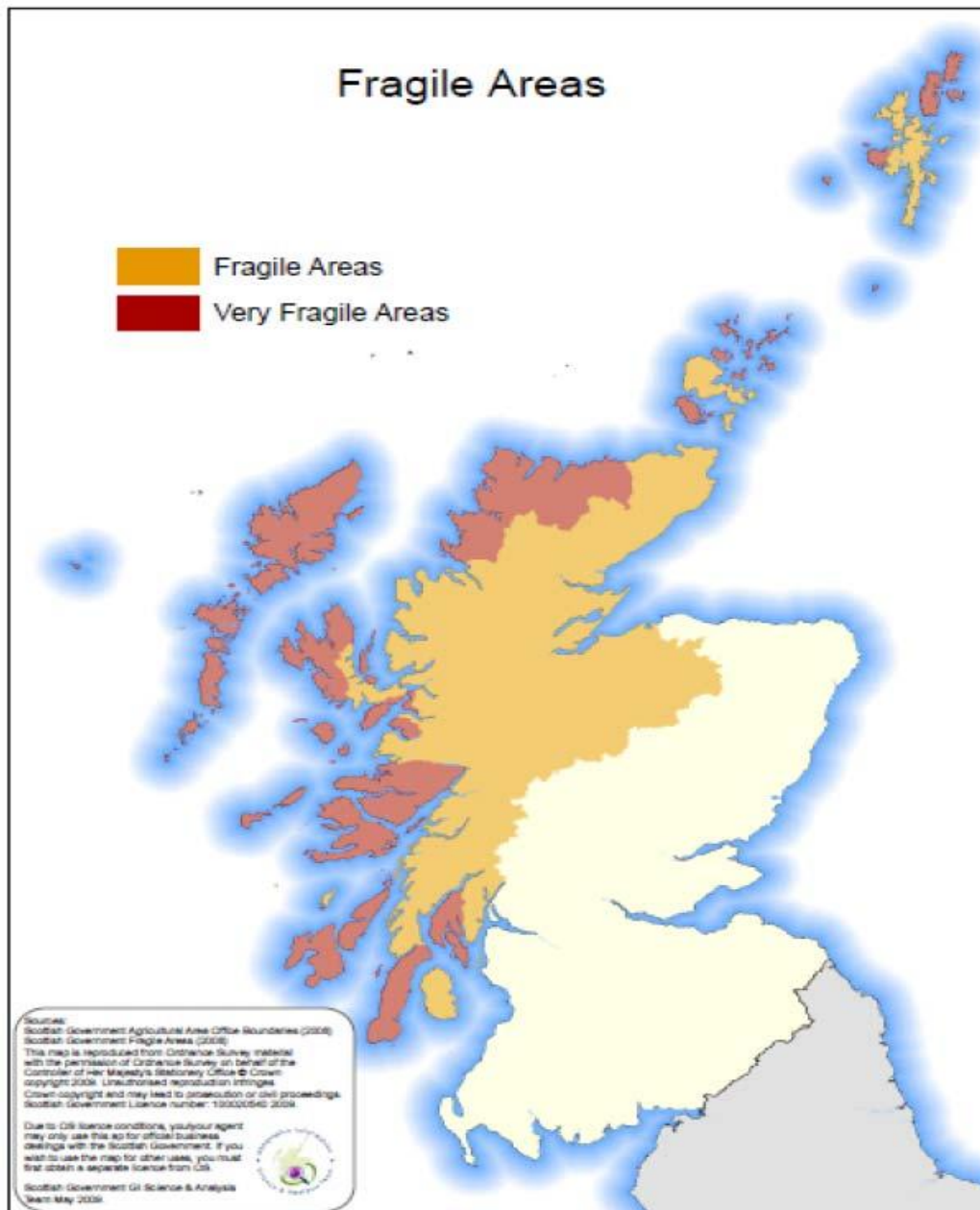
²⁴ Datazones have roughly the same population, however the boundaries of datazones are kept constant although the populations may change over time.

<http://www.scotland.gov.uk/Topics/Statistics/SIMD/FAQs>

²⁵ SIMD 2012 Results <http://simd.scotland.gov.uk/publication-2012/simd-2012-results/overall-simd-results/key-findings/>

²⁶ Scottish Government (2012) Scottish Index of Multiple Deprivation [online] Available at: <http://simd.scotland.gov.uk/publication-2012/>

Figure 9. Highlands and Islands Enterprise Fragile Areas²⁷



²⁷ Highland and Islands Enterprise work in Fragile Areas [online] Available at: <http://www.hie.co.uk/about-hie/our-priorities/strengthening-communities-and-fragile-areas/fragile-areas.html>

North East

3.2.9 Scottish coastal communities play an important economic role in the north-east. Aberdeen Harbour, for example, is important in providing support to the offshore industry and in accommodating a growing volume of freight.

3.2.10 Peterhead is the North Sea's largest white fish port, and also provides logistical support for the North Sea oil and gas industry whilst handling an increasing number of cruise vessels. The port of Montrose provides import and export services for agricultural and oil related businesses and is a base for oil rig support vessels.

North

3.2.11 The Moray Firth area has experienced substantial growth, while Orkney and Shetland have benefitted from oil and gas related activities.

North West

3.2.12 The expansion of salmon and shellfish farming, tourism, food processing, small-scale manufacturing and service provision has contributed to growth in areas such as Skye, Mull, Arran, Wester Ross, Ardnamurchan and mid Argyll, underlining the importance of their coastal location and character.

West and South West

3.2.13 Ayrshire and the south-west are an important gateway for Scotland, with extensive coastal areas of a rural character. Coastal towns such as Ayr, Troon and Hunterston play an important role as key transport corridors in the region.

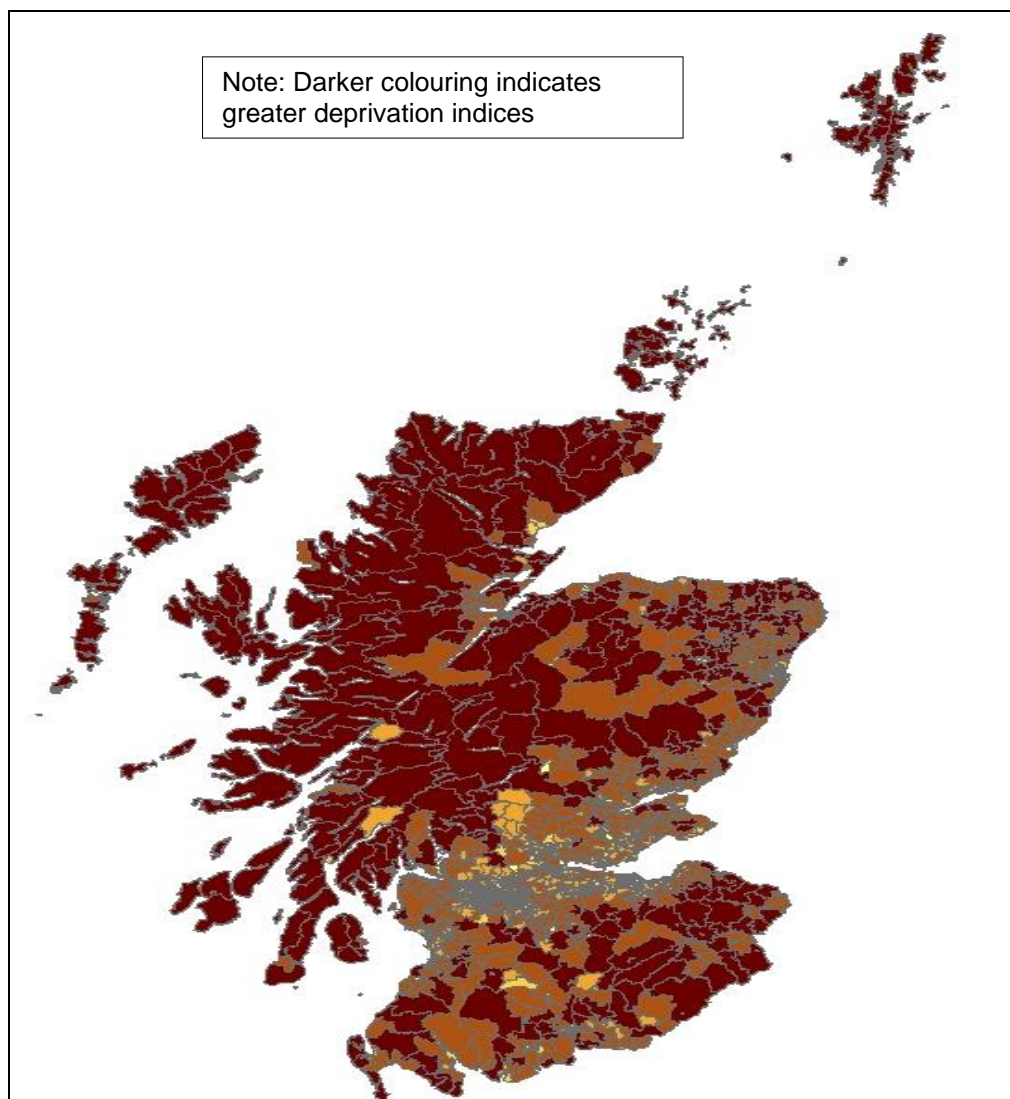
Marine Transport and Connectivity

3.2.14 Connectivity is one of the key challenges facing rural and island communities. Figure 10 shows that coastal communities are within the lowest percentiles when assessed in terms of the index focusing on access to services.

3.2.15 The Scottish Government continues to pilot the Road Equivalent Tariff (RET) for some ferry services and is seeking to improve access and connectivity by promoting improved integration between public transport and existing ferry routes. The Scottish Government also subsidises flights to the Highlands and Islands for residents, reflecting the importance of these lifeline services to communities.

3.2.16 Ferries are a key component in maintaining connectivity to and between Scotland's more fragile and remote communities, including the islands. Many ferry routes are subsidised by Scottish Government or local authorities to maintain or improve the economic and social conditions of the Highlands and Islands. This includes support to business and tourism, delivery of goods and access to schools and healthcare.

Figure 10. Areas in Scotland ranked according to Access Domain (Source: Scottish Index of Multiple Deprivation)



3.2.17 In total Scottish ferries carried some 7.9 million passengers in 2011²⁸. Of these:

- CalMac ferries carried about 5 million passengers;
- Northlink ferry services carried 304,000 passengers to and from Orkney and Shetland;
- Orkney Ferries intra-island services carried 337,800 passengers; and
- 615,000 passenger journeys were made on Shetland Islands Council services.

There were 1.9 million passenger journeys between Scotland and Northern Ireland in 2010.

²⁸ Transport Scotland (2012) Scottish Transport Statistics No 31: 2012 Edition. Available at: <http://www.transportscotland.gov.uk/strategy-and-research/publications-and-consultations/j251205-142.htm>

3.2.18 There are four international airports in Scotland with scheduled services: Edinburgh Airport, Glasgow International Airport, Aberdeen Airport and Glasgow Prestwick International Airport. Highlands and Islands Airports Limited operate eleven small airports across the Highlands, Orkney, Shetland and the Western Isles (Sumburgh, Kirkwall, Wick, Stornoway, Inverness, Benbecula, Barra, Tiree, Islay, Dundee, and Campbeltown)²⁹.

Health, wellbeing and deprivation in coastal areas

3.2.19 Health SIMD³⁰ data (Figure 11) demonstrates that coastal and island communities are mostly ranked within the top 20-100% of all areas in Scotland, although there are parts of the north and the Western Isles where health conditions appear to be in or moving towards the lower percentiles.

3.2.20 Research has identified that coastal zones are less likely to be deprived than inland areas³¹ with just 6% of these areas in the East Region falling into the most deprived percentile (compared with 12% of all data zones), 0% in South West (compared with 3% of all data zones) and 11% in West Region (compared with 15% of all data zones). The North East had just 2% (compared with 15% of all data zones), the West Region just 1% (compared with 9% of all data zones), and the South West 0% (compared with 1% in all data zones).

3.2.21 Between 2006 and 2011, the mental well-being of adults in Scotland averaged a score of 50³² (the score can range between 14 and 70, with a higher score indicating better well-being).

3.2.22 Access to the outdoors can provide opportunities for exercise with benefits for physical and mental health and well-being, including reducing obesity and combating stress. The number of adults who made at least one recreational visit to the outdoors was around 78% between 2005 and 2008, with the most commonly visited areas being parks and open spaces (37% of visits). Whilst some 50% of people overall have local greenspace within five minutes of their home, this figure is 39% in deprived areas.³³ Greenspace provides a key opportunity for direct contact with the natural environment, particularly in urban areas, and this has measurable physical and psychological benefits.

3.2.23 Findings from the Scottish Health Survey 2010 for the adult population found that 44% of the population had participated in sporting activities in the previous four weeks. This decreased with age, from 68% of those aged 16-24 down to 13% of those aged 75 and over. Common activities for adults include working out at the gym, doing exercises, swimming and running/jogging.³⁴

²⁹ Highlands and Islands Airports (undated) [online] Available at: <http://www.hial.co.uk/>

³⁰ Scottish Government (2012) Scottish Index of Multiple Deprivation [online] Available at: <http://www.scotland.gov.uk/Topics/Statistics/SIMD/>

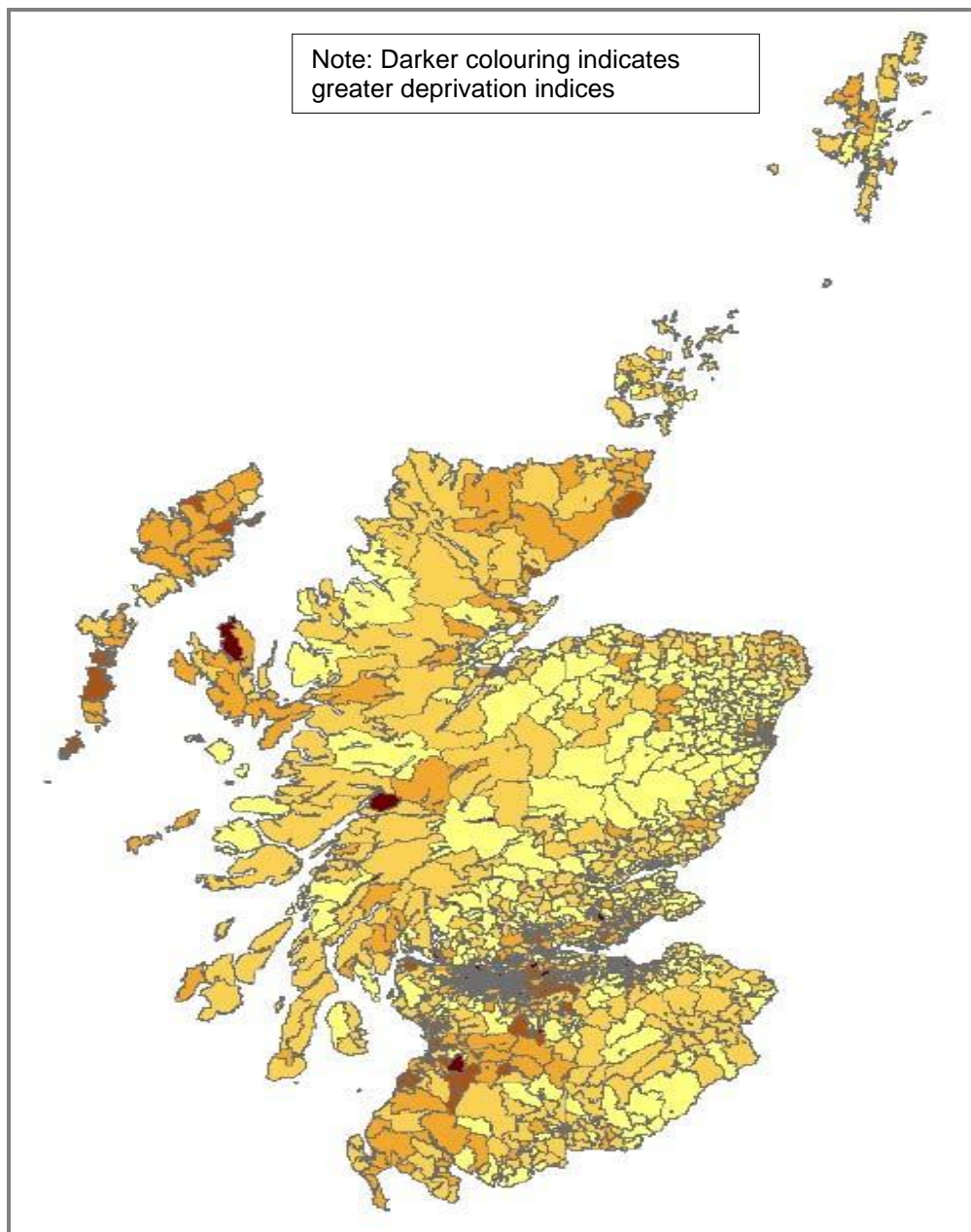
³¹ ABPMer (2012) Socio-economic baseline Reviews for Offshore Renewables in Scottish Waters, Marine Scotland

³² <http://www.scotland.gov.uk/About/Performance/scotPerforms/indicator/wellbeing>

³³ Greenspace Scotland (2011) Greenspace Use and Attitude Survey 2011 [online] Available At: <http://www.greenspacescotland.org.uk/1greenspace-survey-2011.aspx>

³⁴ Scottish Government Statistics Health of Scotland's population <http://www.scotland.gov.uk/Topics/Statistics/Browse/Health/TrendPhysicalActivity>

Figure 11. Areas in Scotland ranked according to Health Domain



3.3 Water Quality and Ecological Status

3.3.1 Scottish waters are quite different between the east and west coasts. The east coast presents mostly uniform depths and shallow inclines interspersed with localised trenches, while the seabed off Scotland's west coast shelves steeply away from the coast, and deep waters occur relatively close to the land.

3.3.2 There are various mechanisms in place for monitoring and managing the quality of Scottish waters. Each takes a different focus and approach:

- The Water Framework Directive establishes a framework for the protection of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater, with the aim of ensuring that all aquatic ecosystems meet 'good status' by 2015.^{35,36}
- River Basin Management Plans³⁷ have been prepared for the Scotland and Solway-Tweed River Basin Districts to address the requirements of the Water Framework Directive in relation to the management of Scotland's river systems. Both plans also provide an overview of the state of the water environment for their districts.
- Scotland's coastal waters are monitored by SEPA to measure performance and compliance with targets for coastal water quality status under the Water Framework Directive.

3.3.3 Scotland's seas are mostly classed as being of good or better ecological status under the Water Framework Directive (out to 3 nautical miles). There are some poorer quality waters in certain areas, such as the Firth of Forth and the Firth of Clyde. The key risks to the quality of the water environment are from contamination as a result of marine activities, such as the use of anti-fouling paint, pollution from oil and/or chemical spills, and pollution of coastal waters from activities on land, in particular from agricultural activities.

3.3.4 In 2011, the ecological status³⁸ of 61% of Scotland's surface water bodies was good or better (Figure 12)³⁹. The following were in good or better condition:

- 96% of coastal waters;
- 86% of estuaries;
- 54% of rivers; and
- 63% of lochs.

³⁵ JNCC (2011) Council Directive 2000/60/EC establishing a framework for Community action in the field of water policy (Water Framework Directive), [online] Available at: <http://jncc.defra.gov.uk/page-1375>

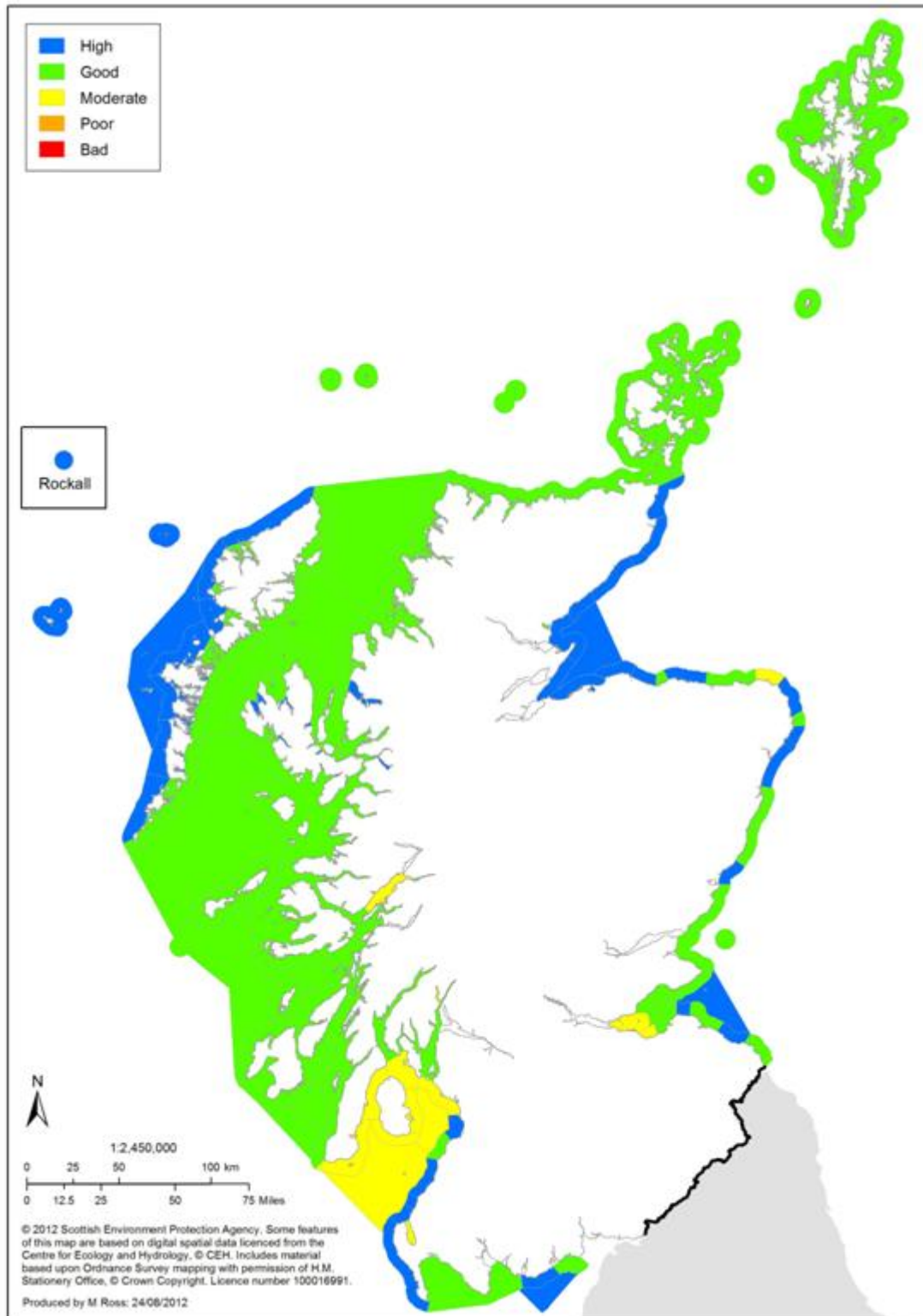
³⁶ European Commission (2011) EU Water Legislation and the Water Management Directive, [online] Available at: http://ec.europa.eu/environment/water/participation/notes_en.htm

³⁷ SEPA River Basement Management Plans, Available at: http://www.sepa.org.uk/water/river_basin_planning.aspx

³⁸ For all surface waters, classification describes the ecological quality of water bodies (this includes both ecological and chemical status). Ecological status is discussed further in "The river basin management plan for the Scotland river basin district 2009–2015", available at http://www.sepa.org.uk/water/river_basin_planning.aspx

³⁹ SEPA (2012) 2011 aquatic classification results and comparison to previous years. Available at: http://www.sepa.org.uk/water/monitoring_and_classification/classification.aspx

Figure 12. Coastal and Transitional Waters Classification 2011 (Source: Scotland's Environment website)⁴⁰



⁴⁰ http://www.environment.scotland.gov.uk/our_environment/water/coastal_waters/description.aspx

Bathing waters

3.3.5 In 2012, 98% of Scotland's 83 bathing waters achieved the mandatory standard for bathing water quality and almost two-fifths also met the more stringent guideline standard. In summary, of the 83 identified bathing waters:

- 32 (39%) were classified as being of guideline quality for EU compliance;
- 49 (59%) were classified as being of mandatory quality for EU compliance; and
- 2 (2%) were classified as being of failing quality for EU compliance⁴¹.

Flooding

3.3.6 Flooding has affected many of Scotland's coastal communities, through river flood events, coastal flooding resulting from high tides and storm conditions, and surface water flooding following heavy rainfall events. The SEPA National Flood Risk Assessment provides an overview of flood risk in Scotland. It identifies that coastal flooding accounts for around 17% of all predicted flooding impacts in Scotland.

3.3.7 A review in 2008 of 340 historic coastal flood records spanning a 160-year period identified flooding around much of the Scottish coastline, with the highest number of reported events from the Solway Firth, the Moray Firth, Aberdeenshire and the Firth of Clyde. Flooding in the north-west of Scotland was less frequent than in other parts of the country. However, the Sniffer report on Coastal Flooding in Scotland also identified that storms driven in from the Atlantic Ocean during periods of strong westerly winds are associated with a higher incidence of coastal floods in Scotland⁴².

3.3.8 Low-lying communities located along estuaries and coastlines are considered to be particularly vulnerable to coastal flooding, and around 27,000 residential and commercial properties in Scotland are considered to be at risk of inundation by a 1 in 200 year coastal flood. The areas considered to be most at risk of coastal flooding include Scotland's populated firths (i.e. Firth of Forth, Firth of Tay, Firth of Clyde and the Inner Clyde Firth), sections of Scotland's east coast, and parts of the Northern and Western Isles⁴³ (Figure 13). With rises in sea level, and increases in storm surges and waves predicted with further climate change⁴⁴, the frequency and severity of flooding in Scotland's coastal areas is anticipated to increase, and likewise, the number of properties at risk.⁴⁵

⁴¹ SEPA. Scottish bathing waters 2012-13. Available at:

http://www.sepa.org.uk/water/bathing_waters.aspx

⁴² SNIFFER (2008) Coastal Flooding in Scotland: A Scoping Study, Final Report, Project FRM10, August 2008. Page ii. Available at:

http://www.sniffer.org.uk/files/7013/4183/7993/FRM10_final_030908_with_security.pdf

⁴³ SEPA (2011) Flood Risk Management (Scotland) Act 2009, Flooding in Scotland: A consultation on Potentially Vulnerable Areas and Local Plan Districts [online] Available at:

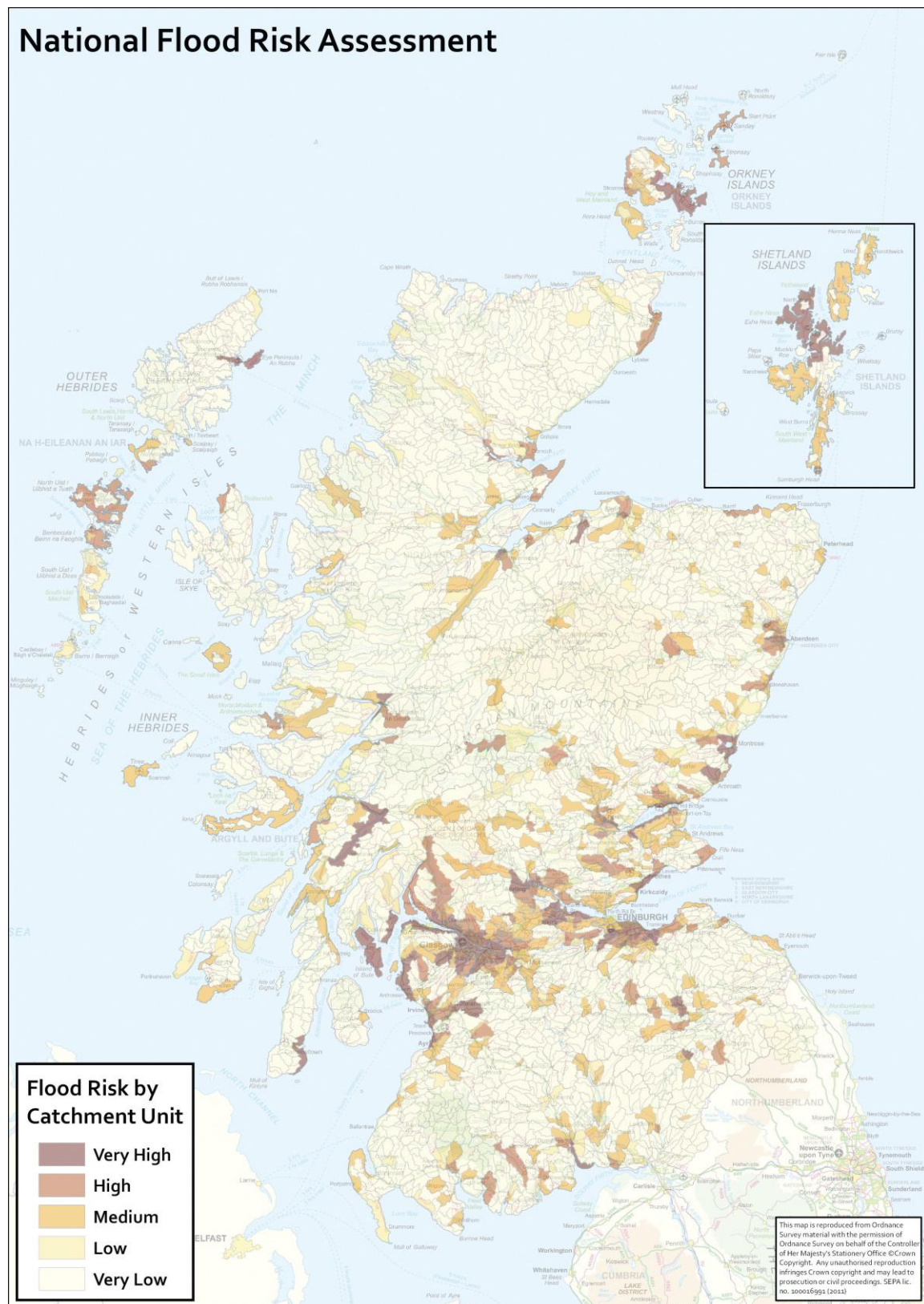
http://www.sepa.org.uk/flooding/flood_risk_management/consultations/flooding_in_scotland.aspx

⁴⁴ The Scottish Government (2011) Scotland's Marine Atlas, Information for the National Marine Plan, March 2001, pg. 188-189.

⁴⁵ SEPA (2012) Coastal Flooding in Scotland [online] Available at:

http://www.sepa.org.uk/flooding/be_flood_aware/types_of_flooding/coastal_flooding.aspx

Figure 13. National Flood Risk Assessment Map⁴⁶



⁴⁶ SEPA (2011) Flood Risk Management (Scotland) Act 2009, Flooding in Scotland: A consultation on Potentially Vulnerable Areas and Local Plan Districts [online] Available at: http://www.sepa.org.uk/flooding/flood_risk_management/consultations/flooding_in_scotland.aspx

Spills

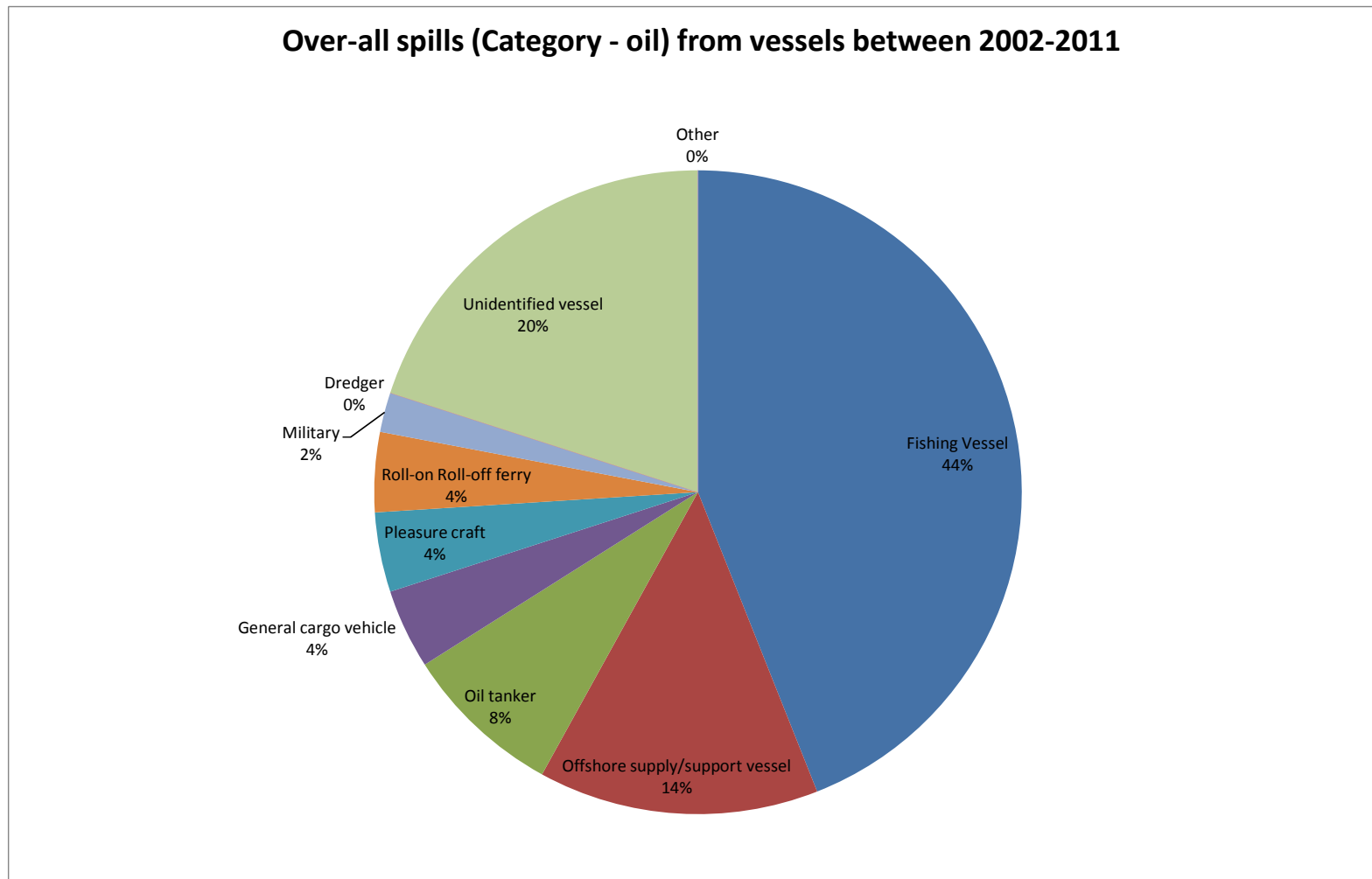
3.3.9 A key issue pressure on water quality is accidental spills, e.g. oil. Reporting by the Advisory Committee on Protection of the Sea (ACOPS)⁴⁷ has identified spills from vessels and from oil and gas installations for the years 2002-11. Vessels include fishing vessels, offshore supply/support vessels, oil tankers, general cargo vessels, pleasure craft, roll-on roll-off ferries, military vessels, dredgers and unidentified vessels. The average number of spills per year is 50. The majority of spills (44%) come from fishing vessels (Figure 14), with the volume of most spills being between 0-99 litres. All were the result of incidents (e.g. bunkering spills) or accidents (e.g. running aground, sinking). Spills were either treated by clean-up operations or tended to disperse naturally.

3.3.10 ACOPS also reported discharges from oil and gas installations and vessels operating in UK waters. For example, in 2011:

- A total of 279 accidental oil discharges were attributed to oil and gas installations including those operating in the west Shetland Basin. (The data does not facilitate disaggregation between Scottish offshore waters and UK offshore waters.)
- There were 240 notified accidental discharges of chemical substances. Over 80% were considered under the OSPAR list of substances used and discharged offshore as Posing Little or No Risk to the Environment (PLONOR). None of the chemicals spilled are included in the OSPAR list of chemicals for priority action, which are considered to pose the greatest hazard. None of the spill incidents resulted in a significant environmental impact.
- There were 24 incidents involving surface sheens or thicker oil slicks reported by the nearest offshore installation but attributed to a discharge from a 'third party' elsewhere that was generally assumed to have been a passing vessel.
- Four offshore supply/support vessels had accidental discharges of oil to Aberdeen Harbour in 2011.

⁴⁷ Reports are available at <http://www.acops.org.uk/>

Figure 14. Overall spills from vessels between 2002-2011 (Source: ACOPS)



3.4 Air quality

3.4.1 The National Atmospheric Emissions Inventory maps⁴⁸ for NO_x, PM₁₀ and SO_x show elevated levels along key shipping routes, including the IMO routes through the Minches and along the Atlantic coast of the Western Isles (Figures 15, 16 and 17), and routes in the Firths of Forth and Clyde. Similar elevated levels can be seen in the Firth of Lorn, on routes to Orkney and Shetland, and on routes departing from/arriving at Aberdeen.

3.4.2 Atmospheric emissions from shipping are controlled at international, European and UK levels. Annex VI of the MARPOL Convention⁴⁹ limits the level of NO_x and SO_x from engine emissions:

- NO_x emissions are limited to between 17.0g/kWh and 7.7g/kWh depending on vessel age and engine rated speed. This is scheduled to be reduced further following a technical review in 2013.
- The North Sea is designated as an IMO Emission Control Area (ECA) for SO_x. From 1 January 2012 SO_x limits have been set at 3.50% m/m outside the ECA. Emissions of SO_x are limited to 1.00% m/m within the ECA, and are set to fall to 0.10% m/m from January 2015.

The Sulphur Content of Liquid Fuels Directive⁵⁰ (as amended by Directive 2005/33/EC) limits the sulphur content of fuel used by vessels to 1.5%.

3.4.3 The domestic ferry and Scottish fishing fleets predominantly run on marine gas oil. Ferries on a few routes (e.g. to Orkney and Shetland) run on intermediate fuel oil.

3.4.4 Air pollution can have repercussions for many aspects of quality of life, including human health. Long-term exposure to poor air quality is associated with a number of health complaints, including an increased risk of cardiopulmonary disease⁵¹. Emissions from marine vessels have the potential to be felt in ports and the communities in their environs, for example, due to the running of engines to provide onboard power whilst vessels are in port.

3.4.5 Thirty-two Air Quality Management Areas (AQMAs) are designated in Scotland.⁵² They are predominantly located inland, in urban areas, and are mainly linked to road-based transport. All are designated as a result of nitrous oxides (NO_x) and particulate matter (PM₁₀). The exception is the AQMA at Grangemouth, in an area encompassing a petrochemical complex, which is designated for sulphur oxides (SO_x). The AQMA in Aberdeen City Centre borders the western boundary of Aberdeen Harbour and is designated for NO_x and PM₁₀.

⁴⁸ <http://naei.defra.gov.uk/data/map-uk-das>

⁴⁹ International Convention for the Prevention of Pollution from Ships Annex VI: Prevention of Air Pollution from Ships

⁵⁰ Directive 1999/32/EC relating to a reduction in the sulphur content of certain liquid fuels

⁵¹ World Health Organization, www.who.int

⁵² Further information is available at: http://www.scottishairquality.co.uk/laqm.php?a=l&la_id=i,

Figure 15. UK Emissions Map of NOx 2010

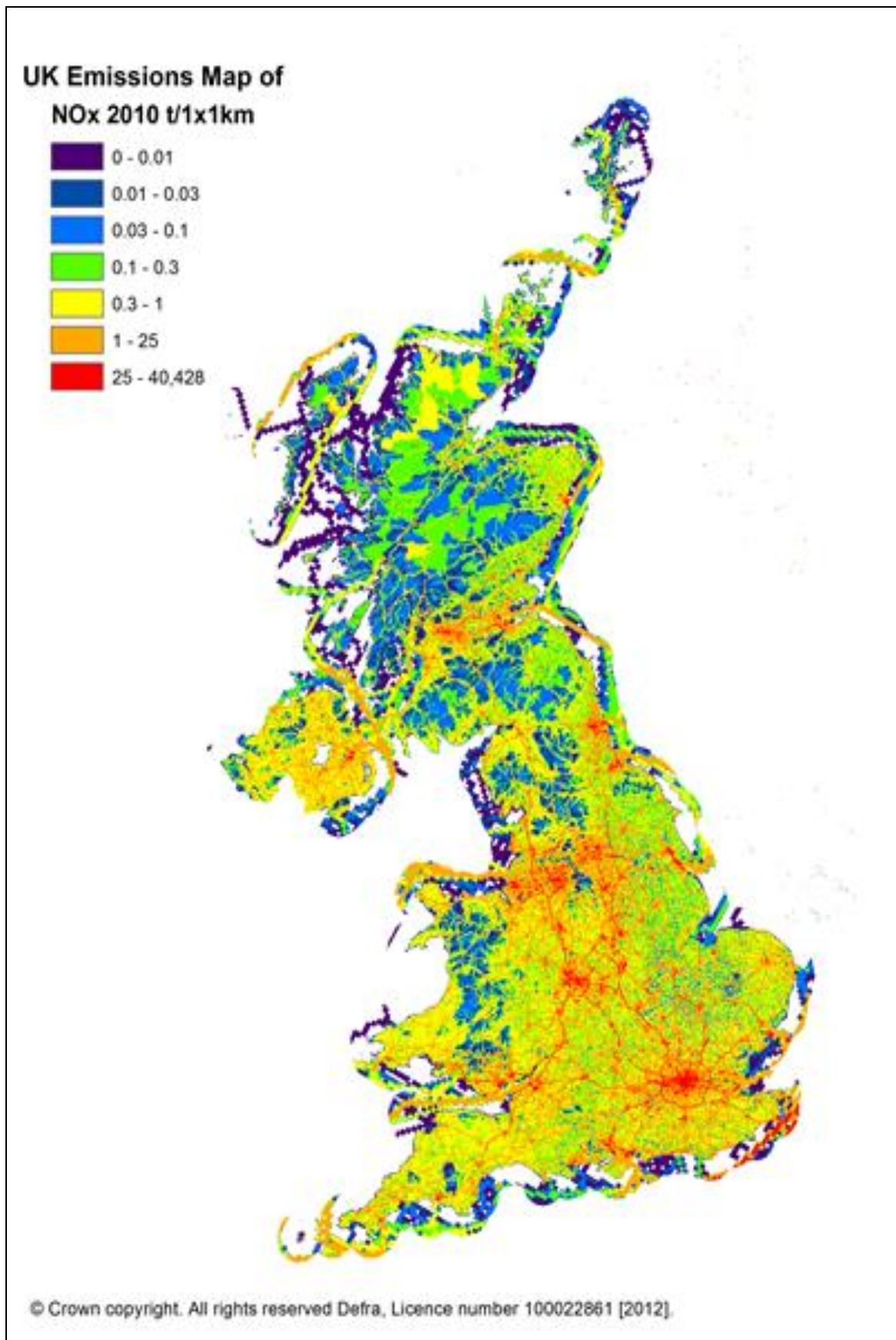


Figure 16. UK Emissions Map of PM₁₀ 2010

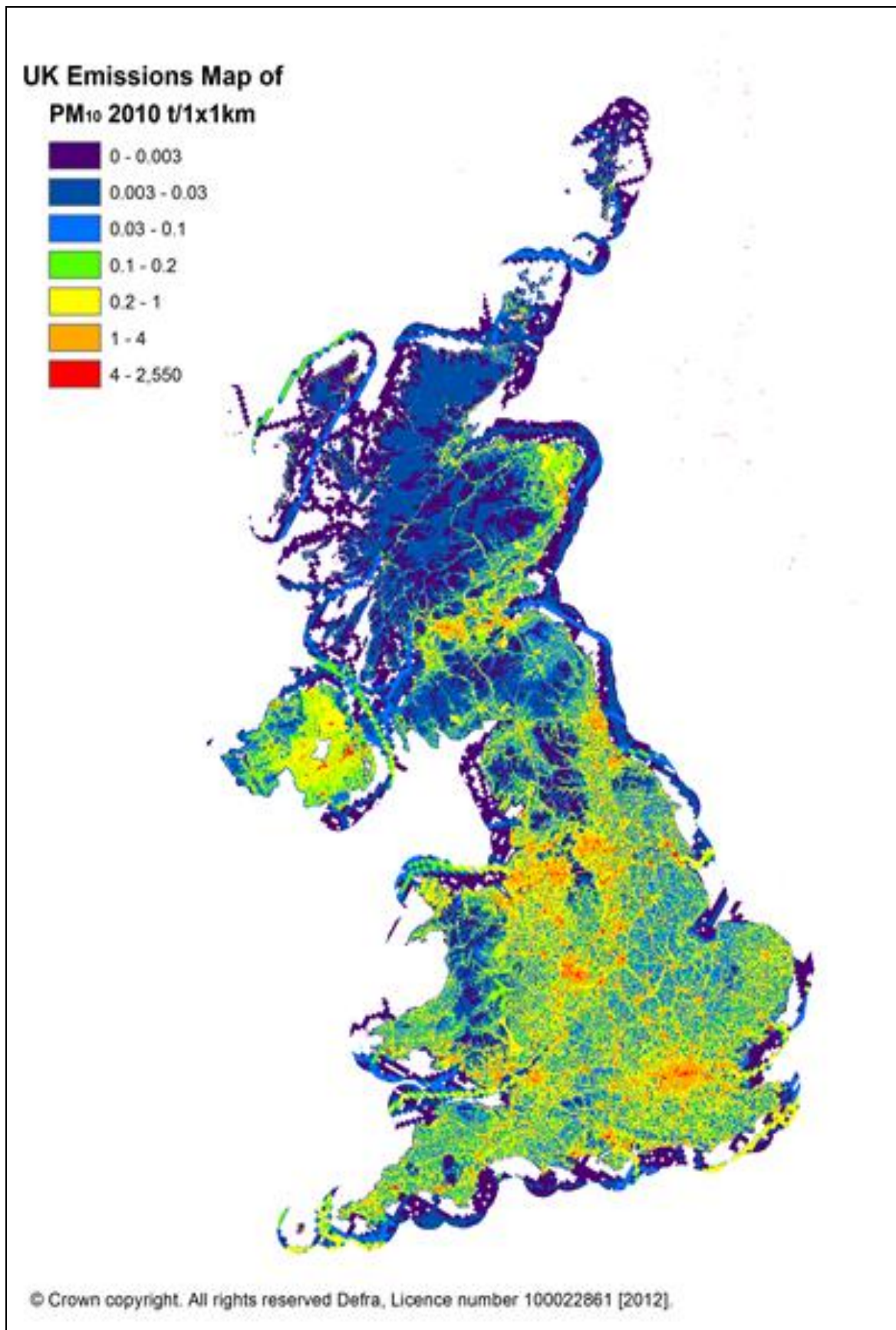
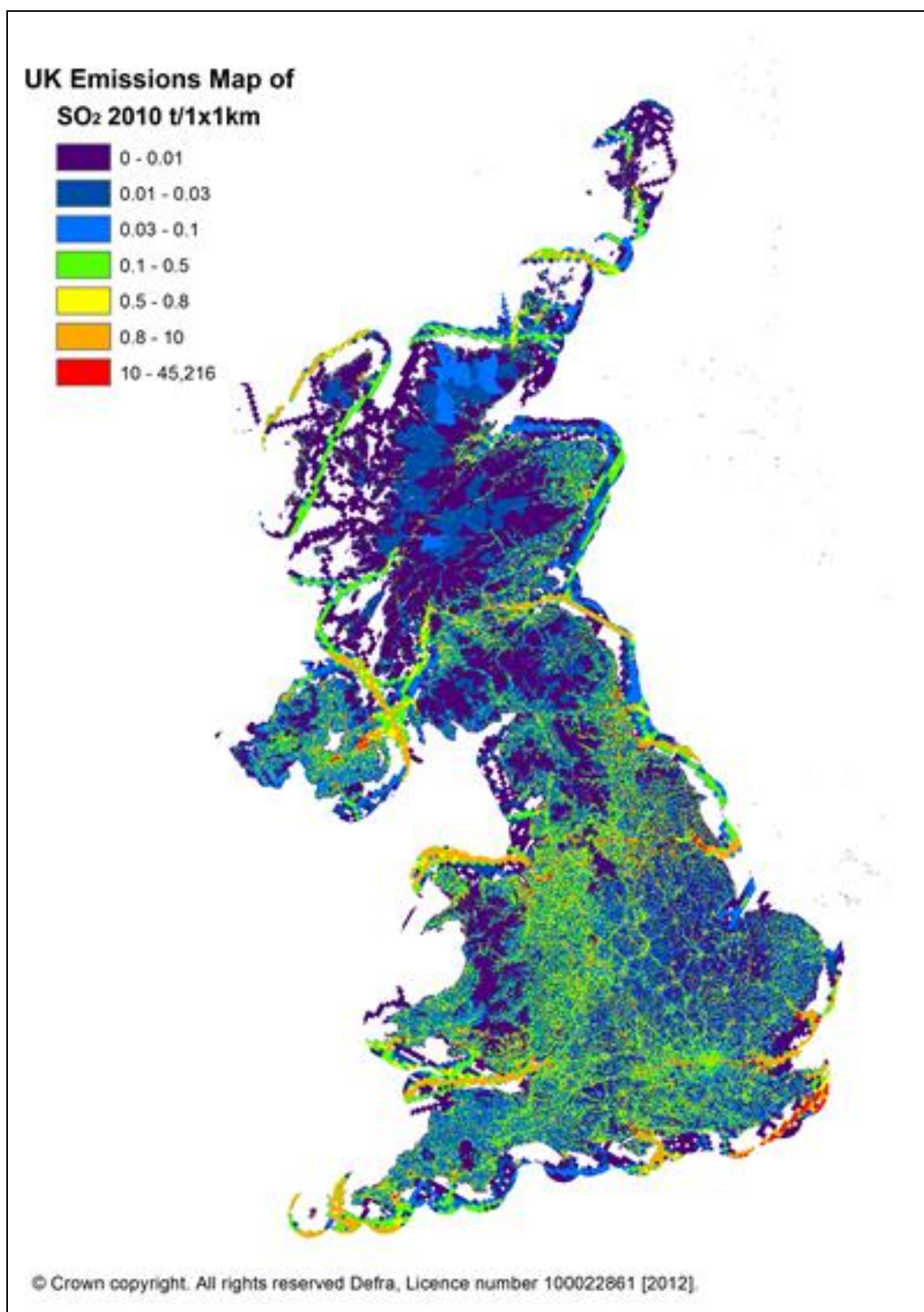


Figure 17. UK Emissions Map of SO₂ 2010



3.4.6 The aim of AQMAs is to ensure that the national air quality objectives will be achieved by the relevant deadlines. The objectives have been set to protect human health and the environment. From the existing data, it would appear that emissions from vessels are not breaching the national air quality objectives.

3.5 Climatic Factors

3.5.1 In the marine context, climate change has been predicted to lead to an increase in water temperatures, rise in sea levels, changes in wave heights and changes to coastlines. Since 1961, average temperatures in all parts of Scotland have risen for every season⁵³ and over the last three decades, sea-surface temperatures around the UK coast have also risen by approximately 0.7°C.⁵⁴ At the same time, the seas are becoming more acidic, particularly those to the north and west of Scotland, as increasing amounts of atmospheric carbon dioxide are absorbed at the sea surface. This change in acidity is already causing concern for marine ecosystems.⁵⁵

3.5.2 Sea levels around the UK rose by about 1 mm/yr in the 20th century (corrected for land movement), although it is estimated that recent increases have been higher than this.⁵⁶ Under projections from the UKCIP09 model⁵⁷, further rises of between 12 and 76 cm are projected by 2095⁵⁸, with the added potential for further adverse impacts on coastal areas and transitional waters. It should be noted that lower probability scenarios suggest this rise could be even greater.

3.5.3 Changes to sea levels, increased wave height and storm surges could have serious repercussions for the marine and coastal environments, and the many industries operating in them. As noted previously, climate change is already affecting the marine environment, and increasing the vulnerability of some habitats and species to future pressures.

3.5.4. For example, changes in the climate could result in a shift in distribution and changes in the abundance of fisheries through a loss of certain habitats and species, changes in species, changes in species migration and impact on breeding cycles and food supplies. Climate change may also favour some species leading to, for example, increased diversity of seabed marine life due to the warming of the air and seawater temperatures.⁵⁹ Risks from pests, diseases and invasive species may

⁵³ Sniffer (2006) A Handbook of Climate Trends Across Scotland, [online] Available at: www.sniffer.org.uk

⁵⁴ UKCIP (2011) Recent Climate Trends [online] Available at: <http://www.ukcip.org.uk/essentials/climate-trends/>

⁵⁵ Scottish Government (2012) Climate Change and Ocean Acidification [online] Available at: <http://www.scotland.gov.uk/Topics/marine/science/atlas/climatechange>

⁵⁶ UKCIP (2011) Recent Climate Trends [online] Available at: <http://www.ukcip.org.uk/essentials/climate-trends/>

⁵⁷ Marine Climate Change Impacts Partnership (2010) Coastal erosion and Coastal Geomorphology, [online] Available at: <http://www.mccip.org.uk/annual-report-card/2007-2008/marine-environment/coastal-erosion.aspx>

⁵⁸ Marine Scotland (2011) Scotland's Marine Atlas: Information for The National Marine Plan [online] Available at: <http://www.scotland.gov.uk/Publications/2011/03/16182005/9>

⁵⁹ SNH and The Marine Biological Association (undated) Impacts of climate change on seabed wildlife in Scotland [online] Available at: www.marlin.ac.uk/PDF/Climate_change_brochure.pdf

increase. There may also be a decline in ocean primary production and effects on increased ocean acidity.⁶⁰

Vessel fuel emissions

3.5.5 Carbon dioxide (CO₂) is the primary greenhouse gas emitted through human activities. The main human activity that emits CO₂ is the combustion of fossil fuels (coal, natural gas and oil). Marine diesel (also known as gas oil or red diesel) is used by the majority of fishing vessels and is also the main fuel used by ferries.

3.5.6 In 2011, greenhouse gas⁶¹ emissions from transport in Scotland amounted to 13 MtCO₂e, or 25.3% of total Scottish emissions. The majority (9.3 MtCO₂e) were from road transport.⁶²

3.5.7 Overall, transport emissions (including international aviation and shipping) have increased 0.1% since 1990. In 2011, emissions from domestic transport were 0.2% lower than 1990, at 10.47 MtCO₂e, while emissions from international aviation and shipping in 2011 were 2.49 MtCO₂e, up slightly from 2.45 MtCO₂e in 1990 (aviation emissions rose significantly while shipping emissions fell).

3.6 Cultural Heritage

3.6.1 Given Scotland's geographical position on a nodal sea route linking northern Europe with the world, its seas have historically been of international importance.⁶³ Scotland's seas and coasts therefore support a wide range of historic and archaeological sites. These are found on the coast, the foreshore and the seabed, ranging from the remains of ships and aircraft lost at sea to harbours, lighthouses and other structures along the coast. These historic assets are a non-renewable resource, and their survival is conditioned by a complex interplay of natural and man-made factors.

3.6.2 Coastal erosion poses a major threat to archaeological sites in many areas, a threat that is likely to be exacerbated given predictions of the likely effects of global warming (i.e. sea level rise, increased intensity of storms, erosion and risk of flooding). However, human activities such as anchoring, certain types of fishing, and coastal and marine development are also known drivers of change in the marine historic environment.

3.6.3 Many sites lie wholly within the marine environment; however, it is believed that there are many more unprotected sites of interest on and around the coastline. The Orkney and Shetland coasts, in particular, contain many Neolithic and Mesolithic structures that are now below sea level. As such, Scotland's seabeds and inter-tidal

⁶⁰ SEAFISH (2009) Fishing vessel fuel emissions, research and development fact sheet, April 2009 [online] Available at: <http://www.seafish.org/fishermen/fishing/fishing-gear/fuel-efficiency>

⁶¹ Carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride

⁶² Scottish Government (2013) Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027 - The Second Report on Proposals and Policies. Available from <http://www.scotland.gov.uk/Publications/2013/06/6387/9>

⁶³ Historic Scotland (undated) Towards a Strategy for Scotland's Marine Historic Environment [online] Available at: www.historic-scotland.gov.uk/marine-strategy.pdf

areas contain the remains of many important historic assets, ranging from artefacts and structures deposited on the seabed, structures built on the seabed or in inter-tidal areas, and submerged sites that were previously above sea level.

3.6.4 While the survival of prehistoric remains is likely to be mainly focused in the sheltered sea lochs and enclosed bays of the east coast of the Shetlands, Orkney and Fair Isle⁶⁴, and in submerged caves and gullies, the following potential locations for the survival of prehistoric archaeological material on the seabed have also been identified⁶⁵:

- on the shelf to the west of the Hebrides;
- the Hawes Bank and seabed around Coll and Tiree;
- around Islay, Jura, Colonsay and Oronsay;
- the Rum and Canna coastline;
- in sheltered inlets and reaches to the east of the Hebrides;
- in sheltered inlets around Skye;
- on submerged islands located between the Northern Irish coast and the south Hebridean islands;
- in the sea to the east of Orkney and Shetland; and
- off the east coast of the Scottish mainland.

Designated sites

3.6.5 While the number of heritage assets within the marine environment is significant, there are relatively few that have been afforded statutory protection through designation. At present Scotland has 34 statutory designated sites wholly within the marine environment (Figure 18). These include eight designated wreck sites around the coast, nine scheduled monuments (including seven wrecks in Scapa Flow), four listed lighthouses and 13 sites designated under the Protection of Military Remains Act 1986.⁶⁶ Several battlefields have also been identified in coastal locations.

3.6.6 Coastal sites include World Heritage Sites (St Kilda and the Heart of Neolithic Orkney), scheduled monuments, gardens and designed landscapes, archaeological remains, listed buildings and other sites located in conservation areas.⁶⁷

3.6.7 The Marine (Scotland) Act 2010 provides for the designation of Historic Marine Protected Areas (MPAs). The designation process will include a review and transition of existing designated wreck sites and underwater scheduled monuments to historic MPA status and identification of further priority sites, in line with guidelines and criteria drawn up by Marine Scotland. Further guidance on the management of changes within MPA sites is also currently being progressed.

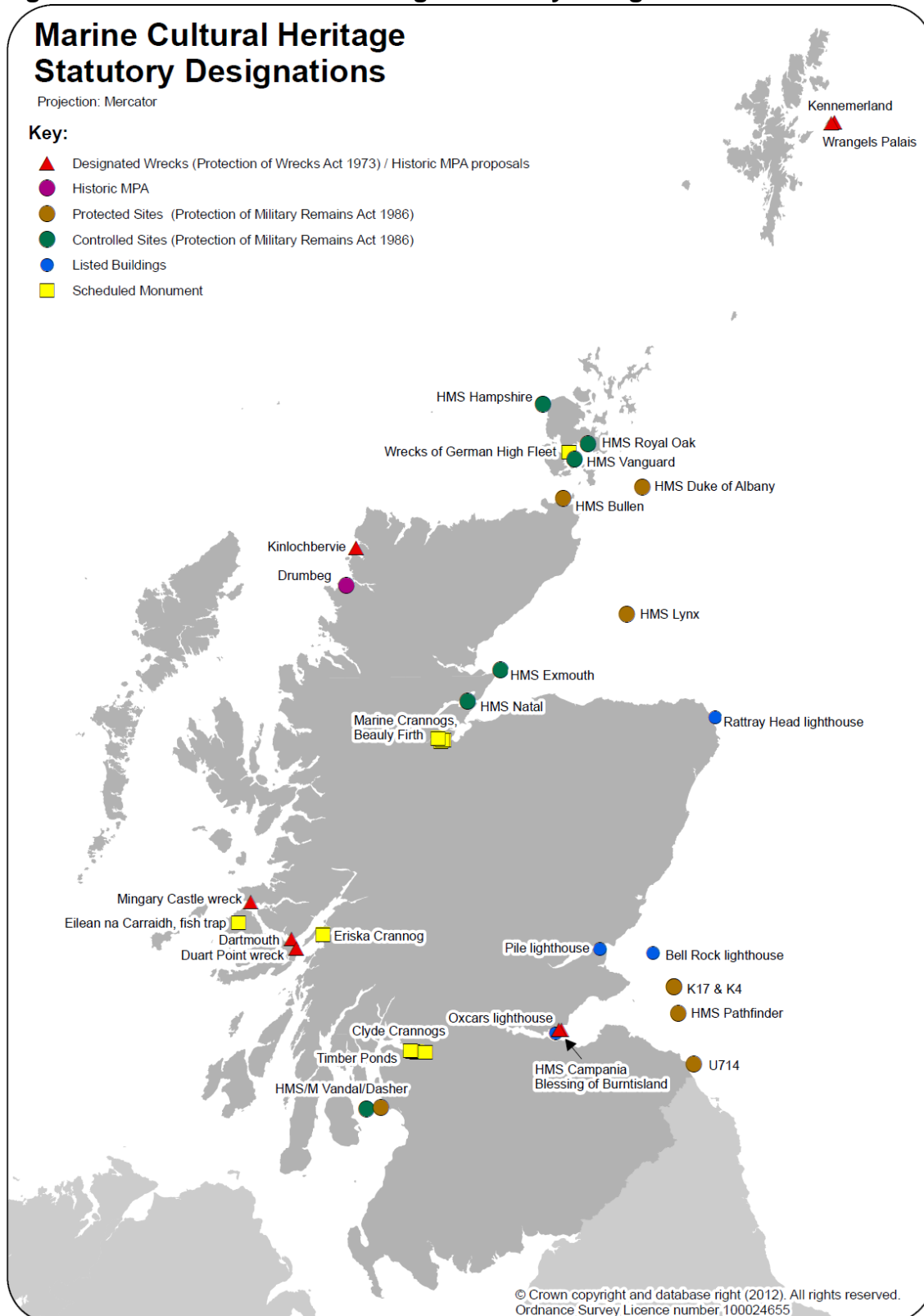
⁶⁴ Dti (2004) The scope of Strategic Environmental Assessment of North Sea Area SEA5 in regard to prehistoric archaeological remains [online] Available at http://www.offshore-sea.org.uk/site/scripts/consultation_download_info.php?downloadID=62 (accessed 28/06/2012)

⁶⁵ Dti (2007) SEA 7 Environmental Report 25th offshore oil and gas licensing round Strategic Environmental Assessment [online] Available at: http://www.offshore-sea.org.uk/consultations/SEA_7/SEA_7_Environmental_Report.pdf

⁶⁶ Scottish Government (2011) Scotland's National Marine Plan Interim sustainability appraisal report

⁶⁷ *ibid*

Figure 18. Marine Cultural Heritage Statutory Designations



3.7 Landscape/Seascape

3.7.1 Scotland has many high quality landscapes, with many iconic views and scenic areas. Nationally important landscapes are protected as National Scenic Areas. Scotland also has extensive areas of relatively remote and inaccessible wild land, particularly in the north and west.

3.7.2 The European Landscape Convention was ratified by the UK in 2006. Its aims are to promote protection, management and planning of all landscapes. These aims encompass both landscape and seascape, i.e. 'landscape with views of the coast or sea and the adjacent marine environment with cultural, historical and archaeological links with each other'.

3.7.3 The forty National Scenic Areas (NSAs) in Scotland represent Scotland's finest landscapes and cover 13% of the land area (Figure 19). NSAs are found across all of Scotland, with a significant concentration in the north and west, and are largely focused on upland and coastal landscapes, although they also include lochs, estuaries and river valleys. More than half contain a coastal and/or marine element.

3.7.4 The coast also provides the landscape setting for Scotland's World Heritage Sites at St Kilda and the Heart of Neolithic Orkney. Several sites located in Northern Ireland (i.e. Giant's Causeway and Causeway Coast World Heritage Site) and England (i.e. Frontiers of the Roman Empire and Hadrian's Wall World Heritage Site) have also been designated by the responsible authorities in those parts of the UK. World Heritage Status covers both landscape and historic environment attributes, and several of these sites have coastal elements.

3.7.5 A number of local authorities have identified local landscape designations. Many of these local designations lie in coastal locations in the Northern and Western Isles, and along the south-western, western, north-western and northern coastlines of the Scottish mainland.

3.7.6 Scottish Natural Heritage has been progressing work to identify areas of 'wild land'.⁶⁸ Areas with stronger wild characteristics are more commonly found in the north and west, particularly areas of higher ground, and some coastal and island areas. This is based on four attributes:

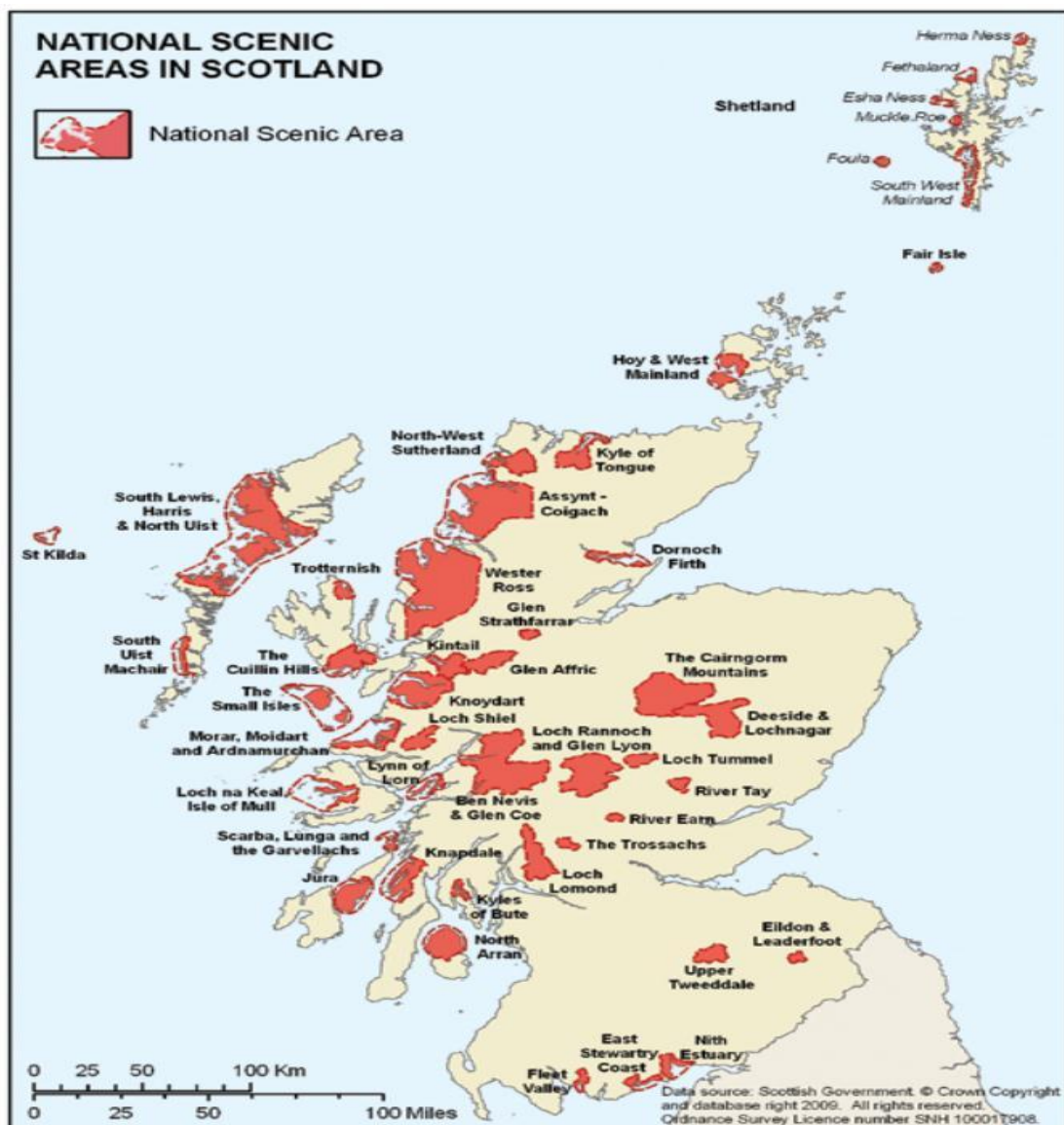
- perceived naturalness of the land cover,
- ruggedness of the terrain,
- remoteness from public roads or ferries, and
- visible lack of buildings, roads, pylons and other modern artefacts.

3.7.7 These are focused on land and do not include waters off the coast or further offshore. Figures 20 and 21 illustrate the core areas of wild land and provide an overview of the high level of wildness attributed to coastal areas on Scotland's north-west coast and in the Western Isles in particular.

⁶⁸ SNH (undated) Mapping Scotland's wildness and wild land [online] Available at: <http://www.snh.gov.uk/protecting-scotlands-nature/looking-after-landscapes/landscape-policy-and-guidance/wild-land/mapping/>

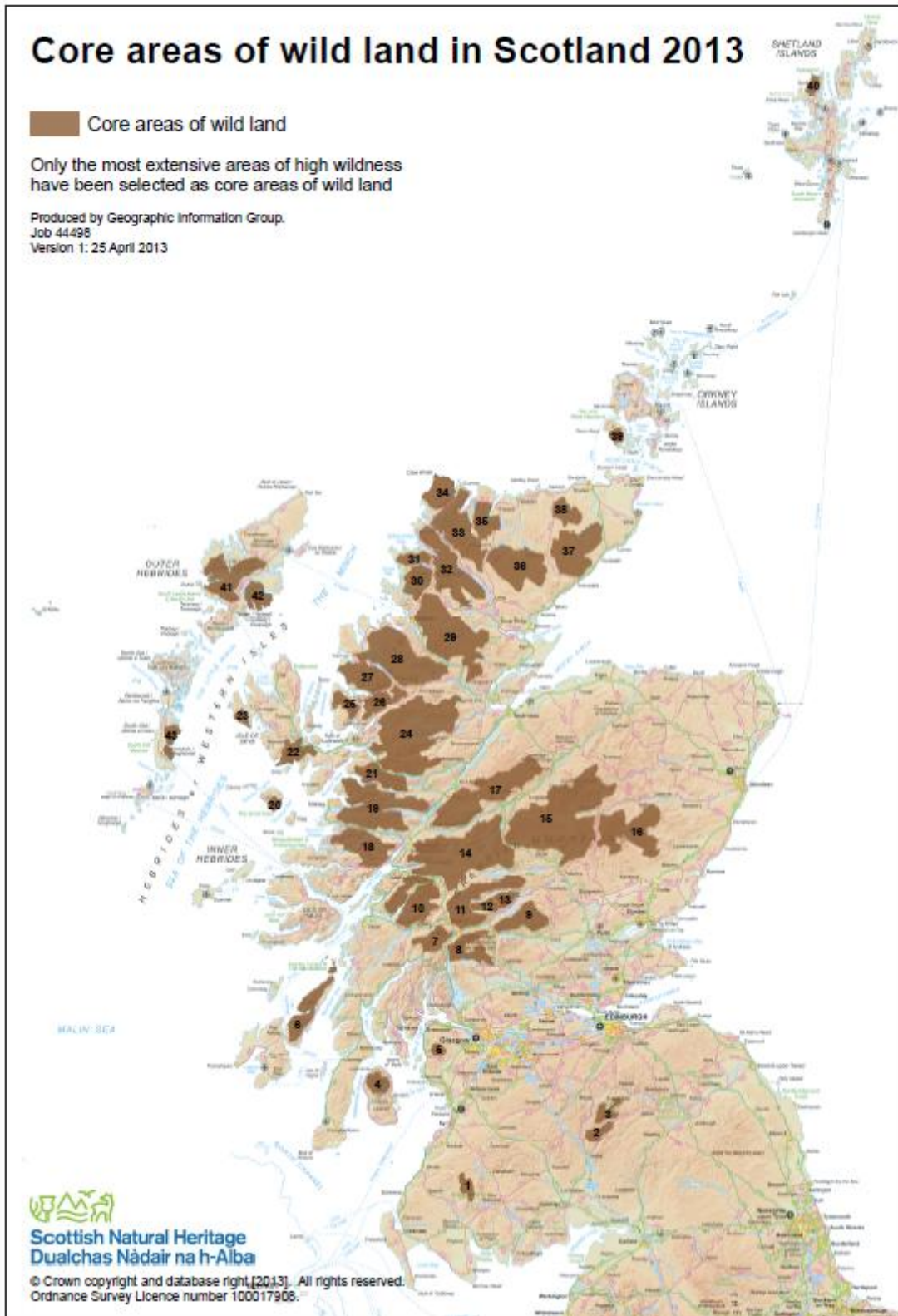
3.7.8 Scotland's landscape provides many different benefits.⁶⁹ Accessible attractive landscapes support health and well-being by encouraging physical activity, providing many opportunities for enjoyment and recreation. Tourism is vital to the economy: direct expenditure was £4.3 billion from overnight visitors in 2012, and there are 185,900 employees within the tourism sector (2011 figures), approximately 8% of employment in Scotland. The economic benefits of tourism are important for rural areas.

Figure 19. National Scenic Areas in Scotland



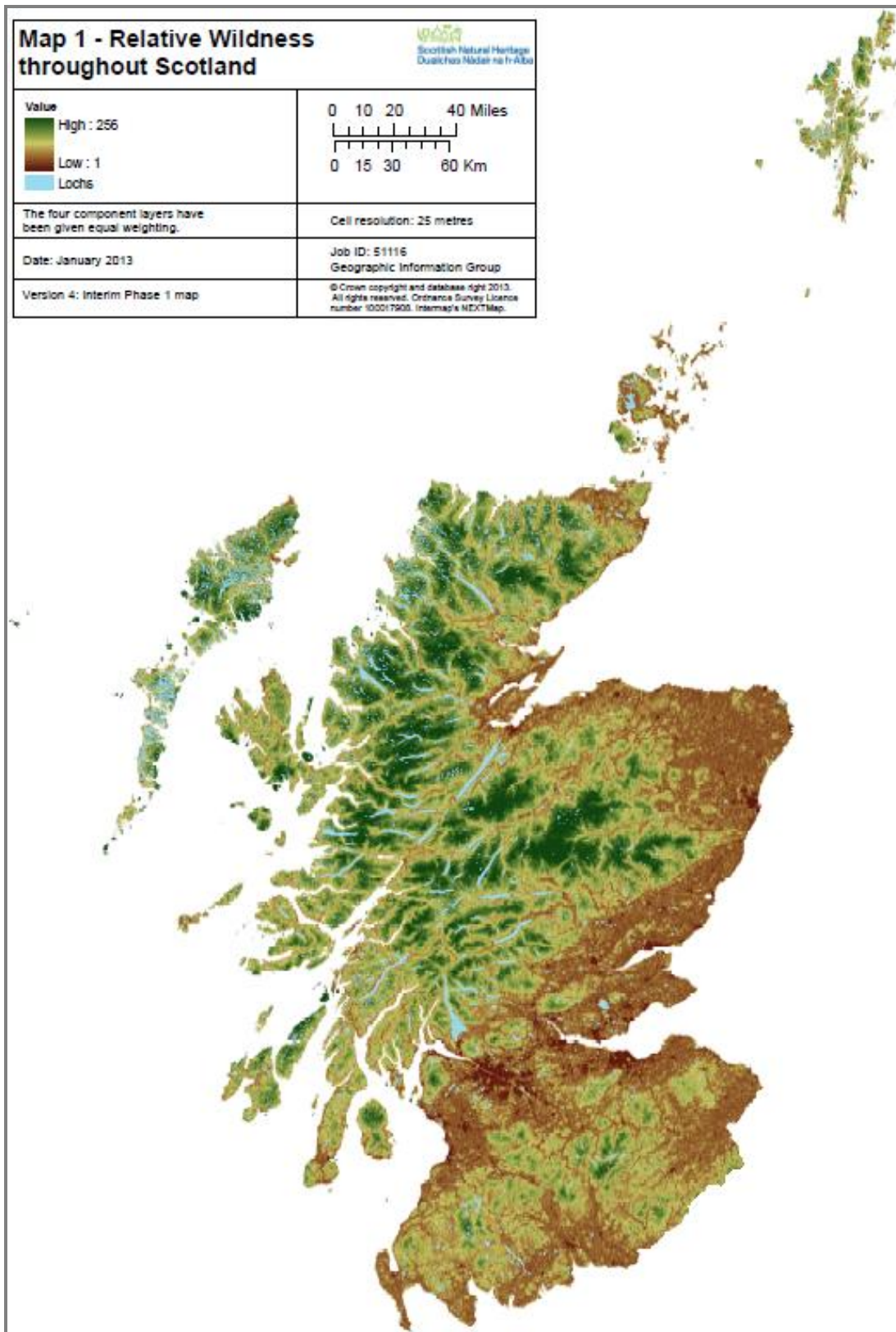
⁶⁹ The Scottish Landscape Forum's Report to Scottish Ministers (2007) Scotland's Living Landscapes <http://www.snh.gov.uk/docs/B173495.pdf>

Figure 20. Core Areas of Wild Land in Scotland 2013 ⁷⁰



⁷⁰ SNH (2013) Core Areas of Wild Land in Scotland 2013 Available at: <http://www.snh.gov.uk/docs/A916597.pdf>

Figure 21. Map of Relative Wildness in Scotland ⁷¹



⁷¹ SNH (2012) Map of Relative Wildness Throughout Scotland [online] Available at: <http://www.snh.gov.uk/docs/A810729.pdf> [accessed 09/05/2013]

3.8 Sediments and Coastal Processes

Seabed and sediments

3.8.1 The quality of the water environment is closely linked with both the quality of sediments and biodiversity. Marine sediments play a key role in marine ecosystems.

3.8.2 Data from the British Geological Society (BGS) demonstrates that Scottish waters display a wide range of seabed habitats, ranging from scoured rock or coarse sediment to muddy gravel or fine sand in some areas. In general, these marine sediments are sandy or gravelly and originate from deposits during the Quaternary glaciation. Muddy sediments occur principally nearshore or, further offshore, in depressions on the sea floor, where currents may be relatively weak. They also occur beyond the shelf break (200m water depth) to the west of Scotland. The concentration of calcareous material varies greatly in seabed sediments, reflecting the amount of shell material in different areas; locally, it can be very high.⁷²

3.8.3 Much of Scotland's landscape and coastline was initially formed through the processes of glacial erosion and deposition⁷³. Today the land continues to change through coastal processes such as wave action, sediment movement, erosion and accretion⁷⁴. The 2004 EuroSION survey of Scotland's coastline reported that it comprises predominantly hard coasts consisting of rocks and cliffs (70%); soft coasts considered potentially susceptible to erosion impacts, consisting of unconsolidated gravels, sand and silts (29%); and artificial coasts such as harbours and sea walls (less than 1%)⁷⁵.

Scotland's Bathymetry

3.8.4 The offshore environment in Scottish waters ranges from shelf sea areas to deep ocean regions with depths greater than 2,000m. The continental shelf includes the Malin and Hebrides Shelf Seas, Orkney and Shetland Shelf Seas, and the North Sea. The shelf seas are marked by notable features such as banks (e.g. Stanton Banks, Viking Bank) and deep channels.

3.8.5 The bathymetry of Scottish waters shows a sharp distinction between the east and west coasts. The east coast bathymetry presents mostly uniform depths and shallow inclines interspersed with localised trenches. The water deepens to the east towards the North Sea to an average of around 100m, with deeper sections of up to 200m present in some locations (e.g. the south east Moray Firth, the Devil's Hole and 110 mile Holes). These depths also increase to the north of the Shetland Isles, where the average depth is estimated to be around 110m inshore of the shelf edge.

⁷² Marine Scotland (2008) Scotland's Seas: Towards Understanding their State, Chapter 2.

⁷³ Gordon JE, Lees G, Leys KF, MacFayden CCJ, Puri G, Threadgould R and Kirkbride V (2002) Natural Heritage Zones: Earth Sciences, [online] Available at: <http://www.snh.gov.uk/docs/A337648.pdf>

⁷⁴ SNH (2001) Natural Heritage Futures – Coasts and Seas, [online] Available at: www.snh.gov.uk/docs/A306281.pdf

⁷⁵ SNH (undated) information on coastal erosion [online] Available at: <http://www.snh.gov.uk/about-scotlands-nature/rocks-soils-and-landforms/coasts/erosion/>

3.8.6 In contrast, the seabed off Scotland's west coast shelves steeply away from the coast, and deep waters occur relatively close to the land, contrasting the shallow shelving found to the west of the Outer Hebrides. The west coast bathymetry has been deepened by glacial scouring, as demonstrated by sea lochs such as those in the Argyll and Bute area, and depths can be highly variable. Beyond shallow coastal areas, it is estimated that the average depth is around 60m off Scotland's west coast, although a wide range of depths between 10 – 320m have also been identified in some areas.

3.8.7 The shelf edge or western trench creates a natural bathymetric demarcation that borders Scotland to the west. This trench starts at between 40 and 60 miles west of the Outer Hebrides, and follows a broadly north-south direction off the west of Scotland, and a northeast-southwest direction further to the north. Depths generally increase rapidly offshore, roughly ranging from 200m to greater than 2,000m⁷⁶.

Coastal Change

3.8.8 There is a strong interaction between wave, tide and current energy, and the processes of erosion and sedimentation. For example, these processes can aid stability of soft shorelines through the supply of sediment, and can reduce stability through the removal of sediment.

3.8.9 Coastal erosion and accretion are significant problems affecting many coastal communities, both in Scotland and around the world. While natural wave action, tidal currents and drainage have typically been the main drivers of coastal erosion, in more recent times, human activities (e.g. land reclamation, coastal or offshore, etc.) and natural disasters have also played a significant role in exacerbating these natural processes⁷⁷.

3.8.10 The Marine Climate Change Impacts Partnership (MCCIP) estimated that in 2010-11, around 7% of Scotland's coast was protected by engineering or artificial structures⁷⁸. The use of engineered sea defences and softer solutions such as the managed realignment of coastlines may become increasingly important in the future with additional pressures from rising sea levels and erosion/deposition associated with climate change⁷⁹. Of the estimated 429km of artificial coastline on Scotland's mainland, some 307km is part of coastal defences, with the remainder being other developments (i.e. piers and harbours)⁸⁰. However, these sea defences themselves can also have adverse effects on the coast. For example, inappropriate defences

⁷⁶ Scottish Government (2013) Bathymetry [online] Available at: <http://www.scotland.gov.uk/Topics/marine/science/MSInteractive/datatype/Bathymetry> [accessed 04/04/2013]

⁷⁷ Prasetya G (unknown) Chapter 4: Protection From Coastal Erosion, Thematic paper: The role of coastal forests and trees in protecting against coastal erosion [online] Available at: <ftp://ftp.fao.org/docrep/fao/010/ag127e/ag127e07.pdf> (accessed 04/04/2013)

⁷⁸ Marine Climate Change impacts Annual Report Card 2010-2011 <http://www.mccip.org.uk/media/7562/mccip-report-2010-2011.pdf> (accessed 04/04/2013)

⁷⁹ SNH (2010) Climate Change at the Coast, [online] Available at: <http://www.snh.gov.uk/about-scotlands-nature/rocks-soils-and-landforms/coasts/climate-change/> (accessed 04/04/2013)

⁸⁰ Scottish Government (2011) Scotland's Marine Atlas, Coastal Protection and Flood Defence [online] Available at: <http://www.scotland.gov.uk/Publications/2011/03/16182005/67> (accessed 04/04/2013)

can transfer erosion issues further along the coast⁸¹, and offshore developments have the potential for creating similar effects.

3.8.11 The EuroSION project undertaken in 2004 categorised Scotland's coast and summarised the nature of the coastline, whilst assessing its potential stability and behaviour (Figure 22). This assessment found that three quarters of Scotland's coast was considered broadly stable, and 8% was considered accretional⁸². In 2010-11, it was estimated that 12% of Scotland's coastline was erosional. The sections of Scotland's coastline identified as being subject to either erosion or accretion include key areas along the east coast between Montrose and Dunbar, the Firth of Clyde, the inner Moray Firth, and parts of the Northern and Western Isles (Figure 23). Coastal protection plans have been introduced in some of these areas⁸³. The erosional portion of coastlines largely consists of beaches, sand dunes, conglomerates/soft-rock cliffs, machair and marshes with muddy sediments⁸⁴.

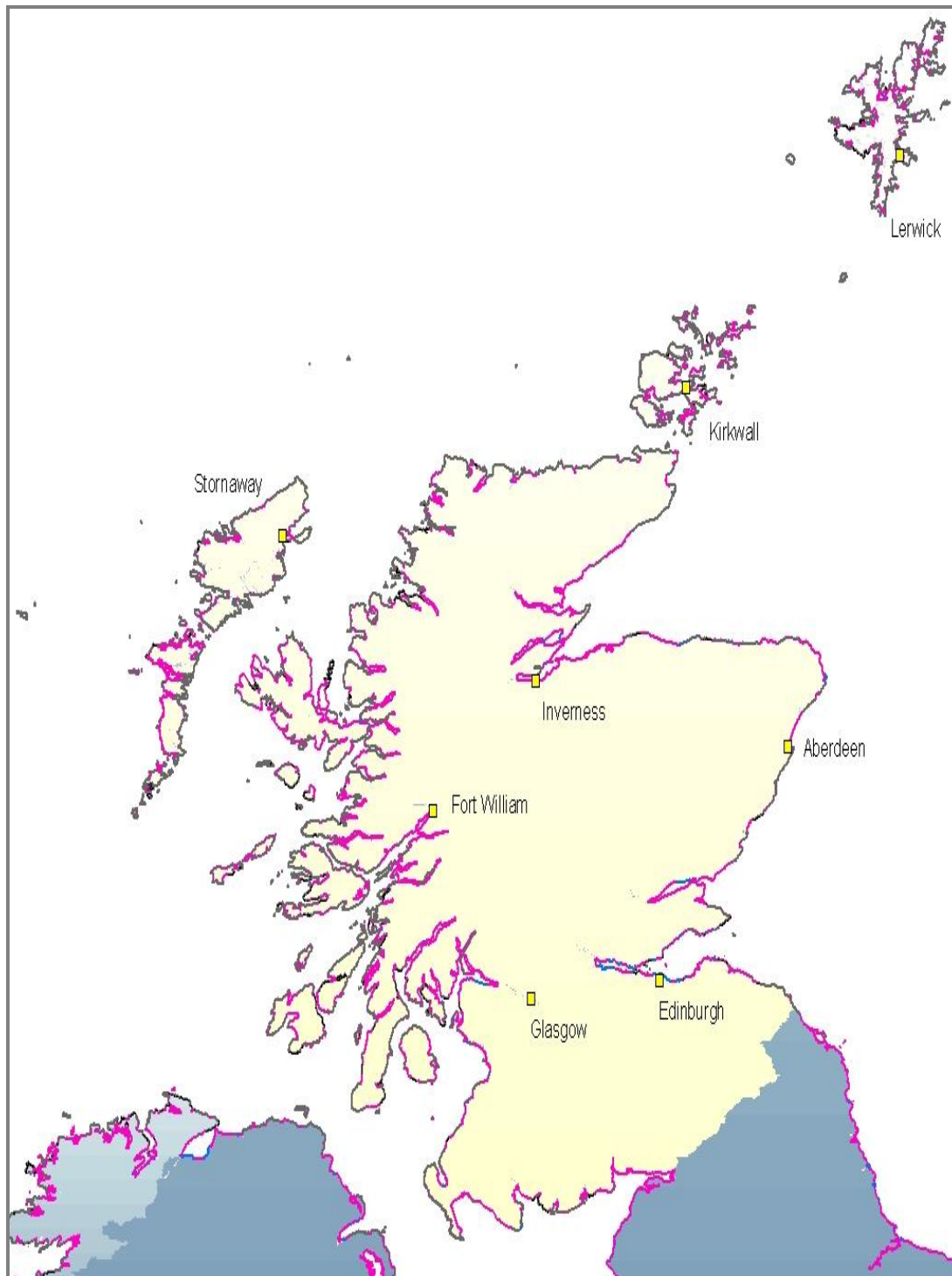
⁸¹ SNH (undated) information on climate change at the coast [online] Available at: <http://www.snh.gov.uk/about-scotlands-nature/rocks-soils-and-landforms/coasts/climate-change/>

⁸² SNH (2012) Coastal Erosion [online] Available at: <http://www.snh.gov.uk/about-scotlands-nature/rocks-soils-and-landforms/coasts/erosion/>

⁸³ SNH (2001) Natural Heritage Futures – Coasts and Seas, [online] Available at: www.snh.gov.uk/docs/A306281.pdf

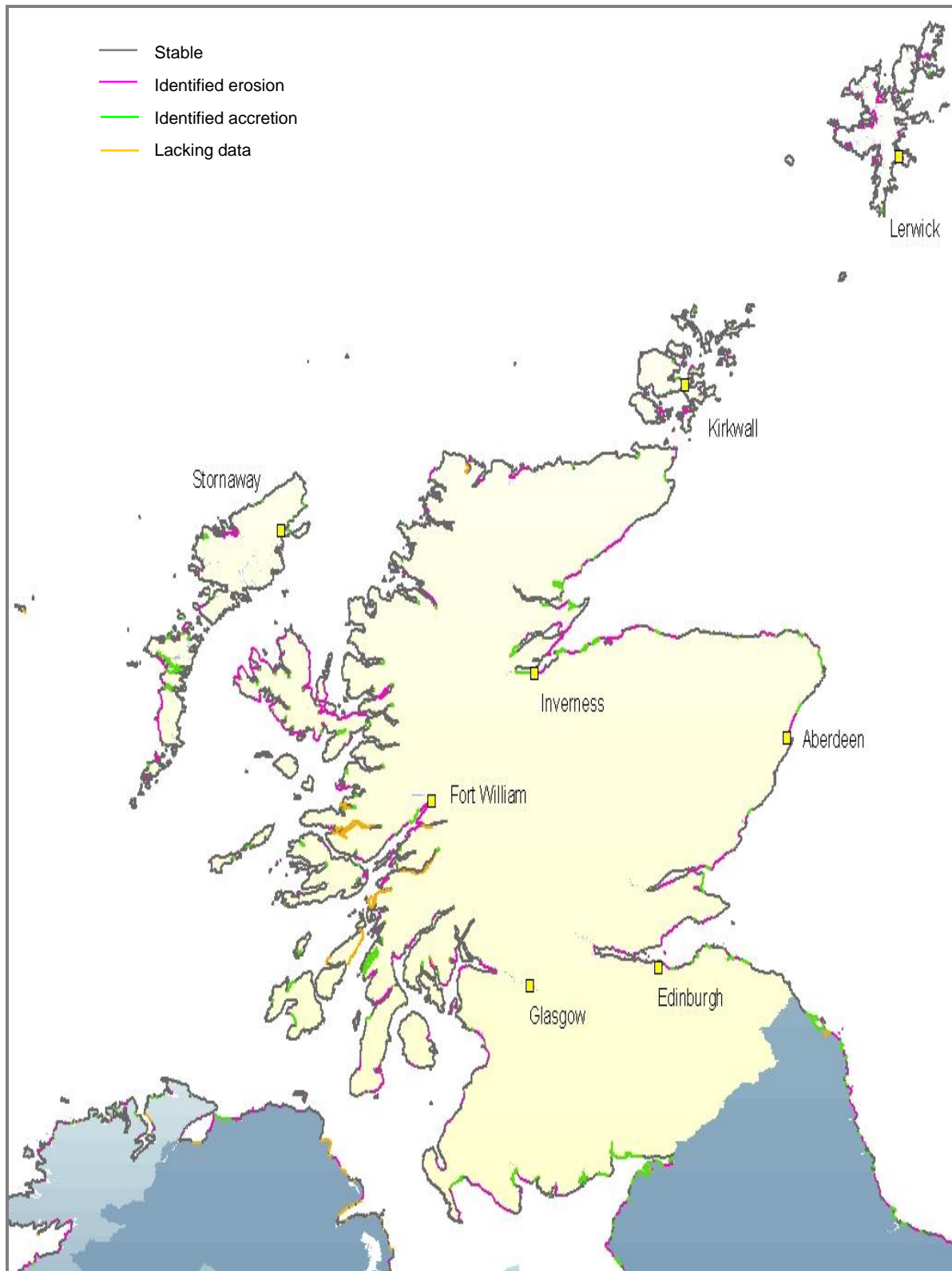
⁸⁴ European Commission (2004) EuroSION: Living with Coastal Erosion in Europe – Sediment and Space for Sustainability – Results for the EuroSION Study, [online] Available at: <http://www.euroSION.org/reports-online/reports.html>

Figure 22. EuroSION Coastal Survey and Erosion Potential



- Hard Cliffs/Rocks or Man-made Shoreline
(Not considered Susceptible to Erosion)
- Beaches, soft cliffs, estuaries, waddens, soft
Strands and machair (Considered susceptible
to erosion)
- Artificial/Man-made coastlines

Figure 23. EuroSION Coastal Erosion Survey 2000



4.0 Assessment Methodology

4.1 This section describes how the SA was undertaken, and sets out:

- the scope of the draft plan and the topics assessed;
- the SA objectives; and
- the assessment of reasonable alternatives.

Scope of the draft plan to be assessed

4.2 As noted in Section 2, the draft NMP contains:

- the vision for the draft plan, set out in Marine Scotland's marine vision and agreed at the UK level;
- the objectives for the draft plan, based on: the Scottish Government's national objectives; the High Level Marine Objectives; the criteria for 'good environmental status' under the MSFD; and the climate change objectives set out in the relevant legislation;
- sector-specific objectives; and
- policies.

4.3 The vision for the draft plan and its outcomes was agreed with the four UK administrations in 2002⁸⁵ and is not open for change through this draft NMP. It has therefore been scoped out of the SA, with the agreement of the Consultation Authorities.

4.4 Likewise, the key objectives set out in Chapter 3 of the draft plan have been either agreed amongst the four UK administrations or agreed by Scottish Ministers, and thus are also outwith the scope of the SA. Again, this has been agreed with the Consultation Authorities.

4.5 The SA has focussed on the assessment of the sector-specific objectives and the general and sector-specific policies.

4.6 The sectoral plans for wind, wave and tidal energy are also subject to SA, and are outwith the scope of the SA of the draft NMP. The future Regional Marine Plans will also be subject to a separate SA/SEA process.

Scope of the topic areas to be assessed

4.7 The scope of the SA is necessarily broad, and covers economic, social/ community and environmental interests. In addition, the initial review of the plan's scope, during the scoping exercise, suggested that effects on any specific SEA topic area could not be entirely ruled out and the Consultation Authorities agreed. Accordingly, all environmental topics identified in the Environmental Assessment (Scotland) Act 2005 have been scoped into the SA.

⁸⁵ Defra (2002) *Safeguarding our Seas: a strategy for the conservation and sustainable development of our marine environment*.

Approach to the assessment

4.8 This is a strategic level assessment of a high-level policy framework. The approach to the assessment reflects the broad and strategic nature of the NMP.

4.9 The policies and sector-specific objectives have been evaluated against SA objectives. As proposed at the scoping stage, a matrix was used for the detailed appraisal, using the SA objectives and a standard assessment marking system. A commentary has been provided to explain the assessment conclusions.

4.10 Table 3 sets out the SA objectives, which were developed on the basis of the scope of the SA, the environmental protection objectives (Section 2 and Appendix 2) and the initial review of the existing environment (Section 3). They take the form of key questions.

Assessment of alternatives

4.11 As noted in Section 2, alternative approaches to the preparation of the draft NMP were considered at the start of and during the marine planning process. These have been grouped into three tiers of alternative:

- Do nothing
- Use of alternative approaches:
 - A high level strategic plan. This is the preferred option.
 - A high level spatial plan.
- Use of alternative priorities
 - An economically-focused plan
 - An environmentally-focused plan

4.12 Workshops were held with the Consultation Authorities and key stakeholders in 2011 to discuss the application of alternative priorities, to see what a plan would look like when developed under the different policy drivers. The alternatives workshops took a strategic view of the impact of taking forward an environmentally-focused or economically-focused plan. The workshop exercise found the following:

- A predominantly economic focus would result in environmental damage which would reduce the future economic potential of a particular sector and/or of other sectors.
- A predominantly environmental focus would constrain the economic development of some sectors.
- The middle ground (Marine Scotland's preferred option) would ensure the necessary protection of the environment to ensure sustainable economic growth.

4.13 Further detail is provided in Section 5 of this report.

Table 3. National Marine Plan: Sustainability Appraisal Objectives

	Will the draft Plan ...	Relevant SA topic
1	Support the development of a sustainable marine economy?	Economy
2	Contribute to the growth of any marine industry without detriment to another?	
3	Safeguard and/or create jobs that support new or existing communities?	
4	Remove or avoid barriers to new marine enterprise opportunities? ⁸⁶	
5	Maintain or improve the accessibility and connectivity of remote island and coastal communities?	Communities, Population and Human Health
6	Promote access to the coastal and marine resource for tourism and recreation?	
7	Contribute to the resilience and cohesion of coastal and island communities?	
8	Avoid disturbance of key species as a result of marine activities?	Biodiversity, Flora and Fauna
9	Safeguard marine and coastal ecosystems and their interactions? ⁸⁷	
10	Avoid pollution of the coastal and marine water environment?	Water
11	Maintain and/or improve the ecological status of Scottish waters?	
12	Avoid adversely impacting on air quality, with particular regard to known existing concentrations of transport and industrial related pollution close to the coast?	Air
13	Reduce greenhouse gas emissions from vessels and other marine activities?	Climatic Factors
14	Contribute to adaptation to climate change?	
15	Improve understanding and knowledge about the marine historic environment?	Cultural Heritage
16	Protect the site and setting of marine and coastal historic environment features?	
17	Ensure that the value and special qualities of designated landscapes is protected?	Landscape/ Seascape
18	Recognise and respect the value of wider (non-designated) landscapes and seascapes?	
19	Encourage sectors to take into account the relative sensitivities of different seascapes?	
20	Avoid exacerbating coastal erosion?	Marine geology and coastal processes
21	Maintain the integrity of coastal processes?	
22	Maintain and protect the character and integrity of the seabed?	

⁸⁶ includes increasing transparency; communication/coordination between industries

⁸⁷ includes coastal processes

Approach to mitigation

4.14 An initial review of the uses of and activities in the marine environment was undertaken to identify the potential effects on economic, social, community and environmental interests. This information was then used to develop the cross-cutting policies in Chapter 4 of the draft NMP.

4.15 Avoidance or reduction of adverse effects has been built into the draft NMP, through inclusion of the cross-cutting policies. These set an overarching framework that applies to all planning and decision-making activities in the marine environment. The wide-ranging nature of these cross-cutting policies (sustainable economic growth, sustainable development, factors for consideration in decision-making – social, community, economic, environmental – as well as requirements for early engagement) means that they will act as balancing measures across the whole policy framework. Thus policies focused on development will be balanced by policies about communities or environment. Development proposals, for example, will need to be progressed and assessed in the context of this balanced policy framework.

4.16 Much will depend on the implementation of the cross-cutting and sectoral policies, and the regional marine planning system will have a crucial role to play in this regard, as will marine licensing and town and country planning.

4.17 These cross-cutting policies are summarised in Table 4.

Table 4. Summary of Cross-Cutting Policies

Subject	Policy Number	Policy Text
General	GEN 1	There is a presumption in favour of sustainable development and use of the marine environment when consistent with the policies and objectives of this Plan.
General	GEN 2	Sustainable developments and marine activities which provide economic benefit to Scottish communities are encouraged when consistent with the objectives and policies of the Plan.
General	GEN 3	Sustainable developments and marine activities which provide social benefits are encouraged when consistent with the objectives and policies of the Plan.
General	GEN 4	Community impact - Government, planning authorities and stakeholders should consider the need for Scenario Mapping where there is potential for development to impact on communities.
General	GEN 5	Development proposals which enable multiple uses of marine space are encouraged where possible in planning and decision-making processes, when consistent with policies and objectives of the Plan.
General	GEN 6	Through integration of marine and terrestrial development plans, planning authorities should seek to facilitate appropriate access to the shore and sea and support marine and land-based components required by development and activities. <applies to inshore waters only>
General	GEN 7	Integration and compliance with other statutory plans, such as River Basin Management Plans, should also be undertaken; planners should take into account the objectives and policies of relevant non-statutory plans where appropriate to do so. <applies to inshore waters only>
General	GEN 8	All marine interests will be treated with fairness and transparency when decisions are being made in the marine environment.
Engagement	GEN 9	Early and effective engagement should be undertaken with the general public and all interested stakeholders in planning and consenting processes.
Using Sound Evidence	GEN 10	Decision-making in the marine environment will be based on a sound evidence base as far as possible. Where evidence is inconclusive, reasonable efforts should be made to fill evidence gaps. Decision makers may also need to apply precaution within an overall risk-based approach.
Good Environmental Status	GEN 11	Development in, and use of, the marine environment must take account of the achievement or maintenance of Good Environmental Status (GES) for UK waters as it develops under the Marine Strategy Framework Directive.
Nature conservation, biodiversity, and geodiversity	GEN 12	Marine planning and decision-making authorities should ensure that development and use of the marine environment complies with legal requirements for protected areas and protected species and does not result in a significant adverse effect on the national conservation status of other habitats or populations of species of conservation concern.

National Marine Plan: Sustainability Appraisal Report

Subject	Policy Number	Policy Text
Historic Environment	GEN 13	Marine planning and decision-making authorities should aim to protect and, where appropriate enhance, heritage assets in a manner proportionate to their significance when progressing development and use of the marine environment.
Landscape/seascape	GEN 14	Marine planning and decision-making authorities should ensure that development and use of the marine environment take seascape, landscape and visual impacts into account.
Air Quality	GEN 15	Marine planning and decision-making authorities should consider air quality issues, especially relevant statutory air quality limits, when progressing development and use of the marine environment.
Noise	GEN 16	Marine planning and decision-making authorities should consider man-made noise sources, especially their effects on sensitive species ⁸⁸ , in the marine area, when progressing development and use of the marine environment.
Coastal processes and flooding	GEN 17	Developments and activities in the marine environment should be resilient to coastal change and flooding, and not adversely impact coastal processes.
Water quality and resource	GEN 18	Developments and activities should not result in a deterioration of the quality of water to which the Water Framework Directive, Marine Strategy Framework Directive or other related directives apply.
Climate Change	GEN 19	<p>Developers and users of the marine environment should seek to minimise emissions of greenhouse gases. Marine planning should seek to increase resilience of the marine environment to climate change impacts by reducing human pressure, safeguarding significant examples of natural carbon sinks and allowing natural coastal change where possible.</p> <p>Developments and activities should have regard to possible future climate conditions particularly giving consideration to the vulnerability, scale and longevity of their operations.</p>

⁸⁸ <http://jncc.defra.gov.uk/page-4273>

5.0 Sustainability Appraisal Results

5.01 This results of the sustainability appraisal are provided in the detailed appraisal tables in Appendix 3. This section provides a summary of this information.

5.02 The potential effects of the sectoral objectives and policies on each of the SA topics are reported. Sections 5.1-5.7 provide information on environmental effects. Effects on socio-economic interests are discussed in Section 5.8. The appraisal of alternatives and cumulative effects is discussed in Sections 5.9 and 5.10 respectively. This structure is intended to satisfy the request of the Consultation Authorities that the environmental information be easily accessible.

5.1 Biodiversity, Flora and Fauna

Will the draft Plan ...	
8	Avoid disturbance of key species as a result of marine activities?
9	Safeguard marine and coastal ecosystems and their interactions? ⁸⁹

5.1.1 As noted in Section 3, there are existing pressures on biodiversity (including flora and fauna) from many of the activities and uses of the marine environment. Climate change is also exerting pressure on biodiversity.

5.1.2 The objectives and policies of the draft NMP recognise and address the potential for effects on biodiversity, while recognising that the NMP will work in conjunction with the overall legislative and policy framework for the marine environment outlined in Section 2.

Sea fisheries

5.1.3 The NMP recognises its role in setting policy for the sea fisheries sector, within the context of the Common Fisheries Policy and the powers of the Scottish Government to put domestic management measures in place. Both objectives and policies recognise the pressures on biodiversity resulting from fishing and fishing practices:

- The objectives aspire to sustainable harvesting using maximum sustainable yield. They are also directed to changing specific fishing practices, including maximising annual quota opportunities, monitoring total removals from the sea (rather than landings) and tackling the issue of discards. They recognise the need to manage fisheries in line with international and national environmental priorities.
- The policies focus on managing fishing to ensure sustainability of fish stocks. They also identify the desired outcomes for sea fisheries of marine planning, e.g. protection of vulnerable stocks, improved protection of the seabed, and the need for other sectors (when planning their activities) to take into account the need to protect fish and shellfish stocks and sustain healthy fisheries. There is also an overall requirement for other sectors to consider the environmental impact on fishing generally.

⁸⁹ includes coastal processes

5.1.4 Most of the policies are focused on the sustainability of the sea fisheries sector but, in doing so, they have positive implications for the sustainability of fish stocks as well.

5.1.5 Policy 3 identifies the need for protection of the seabed and the mitigation of impacts of fishing. We have therefore assumed that the term “sustainable” encompasses sustainable fishing gear issues and anticipate that the regional marine plans (with input from Inshore Fisheries Groups) will identify suitable regional/local policy regarding gear, using the national policies as a starting point.

5.1.6 The aspiration to maximise annual quota opportunities (Objective 2) should be viewed in the light of the aspiration to fish at maximum sustainable yield: the two should work together in the long-term to achieve sustainable fish stocks. In addition the cross-cutting general policies will assist both Scottish Government and regional marine plans in reducing the effect of fisheries on biodiversity in the long term.

5.1.7 It is anticipated that, in the long term, these policies and objectives (taken together with the cross-cutting general policies) will have positive implications for biodiversity.

Aquaculture

5.1.8 The aquaculture policies recognise the pressures on biodiversity resulting from aquaculture:

- Locational policies, when developed, will be informed by Marine Scotland’s spatial planning guidance which will be progressed on the basis of a sustainable aquaculture industry.
- Sustainable growth of the aquaculture industry is supported. As with sea fisheries, we have assumed that the term “sustainable” encompasses planning to avoid issues around sea lice, escapes, benthic habitat, nutrient enhancement, seals etc.
- The policies recognise that aquaculture must be located appropriately and explicitly require that the following issues be addressed in planning and development:
 - wild salmon interests on the north and east coasts
 - nutrient enhancement
 - benthic impacts
 - wild salmon in general
 - control of seals
 - escapes (through requirements around equipment specification)
 - sea lice

5.1.9 The objective to support growth in aquaculture production has the potential for adverse effects. However, the objective notes that the support is for sustainable production. The cross-cutting general policies in the draft NMP, e.g. GEN11 and 12, also require that this growth be progressed sustainably, avoiding adverse effects on biodiversity. In addition, sectoral policy (Aquaculture 2) requires that Marine Scotland’s future spatial aquaculture planning guidance be taken into consideration. We therefore anticipate that adverse effects on biodiversity will be prevented through application of this overall policy framework.

Wild Salmon and Migratory Fish

5.1.10 The policy on wild salmon and migratory fish requires that these interests be considered when progressing regional marine plans and making decisions at the project level. We have assumed that this includes working to avoid adverse effects (such as those identified in Section 3) and therefore anticipate that adverse effects on biodiversity will be prevented through application of this policy.

Oil and Gas

5.1.11 The policies and objectives support the continuing exploitation of oil and gas, but recognise that this must be at “minimum environmental cost”. We have assumed that this will include, for example, avoidance of seismic disturbance of cetaceans, air and water pollution incidents, etc. Taken together with the general cross-cutting policies, we therefore anticipate that adverse effects on biodiversity will be prevented. However, it should be recognised that policies alone will not prevent pollution and that regulatory agencies will continue to encourage prevention of accidents and/or pollution incidents.

Carbon Capture and Storage

5.1.12 The policies focus on the re-use of existing infrastructure and the development of marine utility corridors, which would prevent further disruption of the marine environment, particularly the seabed. Assuming that pollution incidents/issues are avoided, these advantages should not be offset by contamination issues (which would have implications for biodiversity).

5.1.13 Objective CCS 5 explicitly recognises the need for an environmental assessment to allow early consideration of these issues in the deployment of CCS. Taken together with the general cross-cutting policies, we anticipate that adverse effects on biodiversity will be avoided.

Renewable Energy

5.1.14 The policies and objectives for renewable energy recognise the need for development in this sector to be sustainable. For the purposes of this assessment, we have assumed that “sustainable” therefore includes avoidance of unacceptable adverse effects on biodiversity (e.g. obstacles to migration; noise disturbance during construction and operation; collision risk for birds, fish and cetaceans; benthic effects of anchoring; etc.). Taken together with the general cross-cutting policies, we therefore anticipate that adverse effects of biodiversity will be avoided.

5.1.15 This framework will also apply to the objectives for growth of this sector.

Recreation and Tourism

5.1.16 The policies and objectives for recreation and tourism recognise the need for development in this sector to be sustainable. We have assumed that “sustainable” will include management of such issues as disturbance of wildlife, trampling effects, benthic impacts, etc. This, taken together with the cross-cutting policies, should offset the growth aspirations expressed in the objectives, in particular, and result in the avoidance of adverse effects on biodiversity. This will be strengthened through the policies’ identification of the need to avoid unacceptable impacts on sensitive or

important habitats and species, and for compliance with codes of practice on invasive non-native species.

Transport

5.1.17 The policies and objectives explicitly recognise the need to reduce emissions to air, including greenhouse gases, by supporting fuel efficiency and making shore-based electricity available. They also focus on ensuring that this sector is able to adapt to the consequences of climate change.

5.1.18 Any development of port and harbour facilities (Transport 4) would be progressed in light of the general cross-cutting policies, and we therefore anticipate that adverse effects of such development on biodiversity would be avoided. This will rely on biodiversity issues (particularly those relating to Natura sites) being integrated into project planning and design.

Telecommunications

5.1.19 The policies and objectives, taken together, should work to avoid adverse effects on biodiversity including, for example, further loss, damage or disturbance of benthic habitat through additional cable laying.

Defence

5.1.20 The objectives and policies will not affect biodiversity. (Although operational activities may have some adverse effects, these are outwith the scope of this SA.)

Aggregates

5.1.21 The policies explicitly recognise the need for environmental issues to be considered in consenting and licensing, and emphasise sediment transport and coastal process issues. Taken together with the general cross-cutting policies, we anticipate that adverse effects on biodiversity will not be significant in the long-term.

5.2 Water

Will the draft Plan ...	
10	Avoid pollution of the coastal and marine water environment?
11	Maintain and/or improve the ecological status of Scottish waters?

5.2.1 There are existing pressures on the coastal and marine water environment (including biodiversity) from many of the activities and uses of the marine environment. These include historical contamination of sediments; diffuse pollution (including eutrophication); oil spills; and marine litter. Climate change is also exerting pressure on water through, e.g. increases in sea temperature etc.

5.2.2 The objectives and policies of the draft NMP recognise and address the potential for effects on the water environment, while recognising that the NMP will work in conjunction with the overall legislative and policy framework for the marine environment outlined in Section 2.

5.2.3 Note: a key objective for the assessment of water quality is “Maintain and/or improve the ecological status of Scottish waters”. This has been interpreted in the SA as the ability of Scottish waters to support marine biodiversity, and is therefore discussed in Section 5.1 (biodiversity) to avoid double counting.

Sea fisheries

5.2.4 The key issue for the fisheries sector in regard to water quality is accidental spills e.g. oil, as noted in Section 3.3.

5.2.5 Fisheries Objective 9 explicitly recognises the need to support international and national environmental priorities, which includes water quality. For the purposes of this assessment we have assumed that this includes compliance with MARPOL (Annex I of the International Convention for the Prevention of Pollution from Ships, 1973, as modified).

5.2.6 Fisheries Policy 4 focuses on protecting the environmental quality that underpins sea fisheries, and includes considering potential environmental effects on fishing grounds resulting from uses of the marine environment, so overall is positive for water quality.

5.2.7 It is anticipated that, in the long term, these policies and objectives (taken together with the cross-cutting general policies) will have positive implications for water.

Aquaculture

5.2.8 Objective 2 is focused on increases in sustainable production, which has the potential for adverse effects on water quality (e.g. nutrient release). The cross-cutting policies (GEN11 and GEN18) will be key here, as will the spatial planning exercise for aquaculture referred to in Objective 4 and Policy 2. We therefore anticipate that adverse effects on water quality will be prevented through application of this overall policy framework.

5.2.9 The aquaculture policies recognise the pressures on water quality resulting from aquaculture:

- Locational policies, when developed, will be informed by Marine Scotland’s spatial planning guidance which will be progressed on the basis of a sustainable aquaculture industry.
- Sustainable growth of the aquaculture industry is supported. As with sea fisheries, we have assumed that the term “sustainable” encompasses planning to avoid issues around nutrient enhancement, use of therapeutic, etc.
- The policies recognise that aquaculture must be located appropriately; for the purposes of this assessment, we have assumed that “appropriately” will include water quality interests, including assimilative capacity.

Wild Salmon and Migratory Fish

5.2.10 As for biodiversity, the policy on wild salmon and migratory fish requires that these interests be considered when progressing regional marine plans and making decisions at the project level. We have assumed that this includes working to avoid adverse effects, and therefore anticipate that adverse effects on water quality will be prevented through application of this policy.

Oil and Gas

5.2.11 The policies and objectives support the continuing exploitation of oil and gas, but recognise that this must be at “minimum environmental cost”. The policies, in particular, recognise the need for use of best available technology and practices to reduce risk of spills, etc. As for biodiversity, we have assumed that this will result in the reduction of water pollution incidents. Taken together with the general cross-cutting policies, we therefore anticipate that adverse effects on water quality will be prevented.

5.2.12 ACOPS (2011) reported discharges from oil and gas installations and vessels operating in UK waters, as noted in Section 3.3. It should therefore be recognised that policies alone will not prevent pollution, and Marine Scotland will work alongside other agencies to encourage prevention of accidents and/or pollution incidents.

Carbon Capture and Storage

5.2.13 The policies focus on the re-use of existing infrastructure and the development of marine utility corridors, which would prevent further disruption of the marine environment, particularly the seabed. Assuming that pollution incidents/issues are avoided, these advantages should not be offset by contamination issues (which would have implications for water quality).

5.2.14 Objective CCS 5 explicitly recognises the need for an environmental assessment to allow early consideration of these issues in the deployment of CCS. Taken together with the general cross-cutting policies, we anticipate that adverse effects on water quality will be avoided.

Renewable Energy

5.2.15 The policies and objectives for renewable energy recognise the need for development in this sector to be sustainable. For the purposes of this assessment, we have assumed that “sustainable” therefore includes avoidance of unacceptable adverse effects on water quality (e.g. spills during construction/installation). Taken together with the general cross-cutting policies, we therefore anticipate that adverse effects on water quality will be avoided.

Recreation and Tourism

5.2.16 The policies and objectives for recreation and tourism recognise the need for development in this sector to be sustainable. We have assumed that “sustainable” will include management of such issues as increased water abstraction and increased volumes of effluent discharges (e.g. sewage) resulting from increases in numbers of visitors. This, taken together with the cross-cutting policies, should offset any negative aspects of the growth aspirations expressed in the objectives, in

particular, and result in the avoidance of adverse effects on water quality. This will be strengthened by the sustainable development approach recommended for regional marine planning in Policy 2. In addition, the policies' identification of the need to avoid unacceptable impacts on sensitive or important habitats and species will provide positive support for water quality, given that these habitats and species are reliant on good water quality.

Transport

5.2.17 The policies and objectives emphasise the need to maintain navigational safety and thereby prevent collisions and consequent oil spills (as discussed in Section 3.3), which has benefits for water quality.

5.2.18 Any development of port and harbour facilities (Objectives 2 and 3 and Transport 4) would be progressed in light of the general cross-cutting policies, and we therefore anticipate that adverse effects of such development on water quality would be avoided. This will rely on water quality issues being integrated into project planning and design.

Telecommunications

5.2.19 The policies and objectives, taken together, should work to avoid adverse effects on water quality including, for example, increases in local water turbidity and/or smothering by preventing unnecessary additional cable laying.

Defence

5.2.20 The objectives and policies do not incur change from existing defence activities and uses of the marine environment, and therefore will not further affect water quality.

Aggregates

5.2.21 Policy 2 explicitly recognises the need for environmental issues to be considered in consenting and licensing. Taken together with the general cross-cutting policies, we anticipate that adverse effects on water quality from aggregate extraction (e.g. increased local turbidity and/or smothering) will not be significant in the long-term.

5.3 Air Quality

Will the draft Plan ...	
12	Avoid adversely impacting on air quality, with particular regard to known existing concentrations of transport and industrial related pollution close to the coast?

5.3.1 There are some pressures on the coastal and marine water environment (including air quality) from some of the activities and uses of the marine environment. Pressures include: emissions of NO_x, SO_x and particulates from shipping and other vessels; possible effects on human health in residential areas adjacent to ports and harbours; and emission of pollutants from infrastructure development and/or marine activities.

5.3.2 The cross-cutting policies (GEN15) of the draft NMP recognise and address the potential for effects on air quality, while recognising that the NMP will work in conjunction with the overall legislative and policy framework for the marine environment outlined in Section 2.

Sea fisheries

5.3.3 Fishing vessels give rise to atmospheric emissions as a result of fuel use. Emissions of sulphur dioxide and nitrous oxides are controlled.

Aquaculture

5.3.4 As with sea fisheries, atmospheric emissions from vessels supporting aquaculture operations are regulated.

Wild Salmon and Migratory Fish

5.3.5 Wild salmon and migratory fish are not known to affect air quality.

Oil and Gas

5.3.6 Oil and gas installations give rise to atmospheric emissions at the local level.

Carbon Capture and Storage

5.3.7 It is not envisaged that the carbon capture and storage sector will give rise to atmospheric emissions, so marine air quality is unlikely to be adversely affected by this sector.

Renewable Energy

5.3.8 As with sea fisheries and aquaculture, atmospheric emissions from vessels supporting renewable energy operations are regulated.

Recreation and Tourism

5.3.9 As with sea fisheries and aquaculture, atmospheric emissions from recreational and/or tourism-related vessels are regulated.

Transport

5.3.10 As with sea fisheries and aquaculture, atmospheric emissions from vessels are regulated.

5.3.11 However, there is one AQMA in Scotland adjacent to a port, in Aberdeen (see Section 3). Aberdeen City Council is monitoring the situation.

5.3.12 Any development of port and harbour facilities (Objectives 2 and 3 and Transport 4) would be progressed in light of the general cross-cutting policies, and we therefore anticipate that adverse effects of such development on air quality could be avoided. This will rely on air quality issues being integrated into project planning and design.

5.3.13 In addition, Objective 6 requires that the sector considers air quality implications as part of its consideration of climate change mitigation and adaptation.

Telecommunications

5.3.14 As with the other sectors, atmospheric emissions from cable-laying vessels are regulated. In consequence, this sector is not known to adversely affect air quality.

Defence

5.3.15 As noted earlier, atmospheric emissions from vessels supporting renewable energy operations are regulated.

Aggregates

5.3.16 As noted earlier, atmospheric emissions from vessels supporting renewable energy operations are regulated.

Overall

5.3.17 Vessel movements around the UK give rise to atmospheric emissions including SO_x, NO_x and particulates. It is difficult to identify vessels from one particular sector as being responsible, as it is likely that all contribute, despite emissions being controlled. The mapping of air quality for the UK shows that there are concentrations of certain pollutants in and around key shipping transport routes around the Scottish coast. Areas with higher concentrations of SO₂, NO_x and/or particulates include the Firth of Forth, Firth of Clyde, Irish Sea, routes around the west of Eilean nan Siar, and routes between Orkney and Shetland.

5.3.18 None of the sector-specific policies or objectives deals directly with air quality. However, cross-cutting policy GEN15 requires that air quality is taken into consideration when progressing development and use of the marine environment.

5.4 Seascape/Landscape

Will the draft Plan ...	
17	Ensure that the value and special qualities of designated landscapes is protected?
18	Recognise and respect the value of wider (non-designated) landscapes and seascapes?
19	Encourage sectors to take into account the relative sensitivities of different seascapes?

5.4.1 There are existing pressures on the coastal and marine water environment (including landscape and seascape) from many of the activities and uses of the marine environment. These include aquaculture; offshore wind; and development in sensitive seascapes/landscapes. The effects of climate change may also exert indirect effects on landscape through, for example, increased erosion of coastal features. There is also a need for seascape sensitivity to be recognised generally.

5.4.2 The objectives and policies of the draft NMP recognise and address the potential for effects on landscape and seascape, while recognising that the NMP will work in conjunction with the overall legislative and policy framework for the marine environment outlined in Section 2.

Sea fisheries

5.4.3 Sea fisheries are not known to directly affect landscape/seascape interests. Indirect effects may occur through marine litter arising from fisheries; work to control marine litter is being progressed through the Marine Litter Strategy.

Aquaculture

5.4.4 Objective 2 is focused on increases in sustainable production, which has the potential for adverse effects on landscape, particularly if production increases result in additional aquaculture facilities. We have assumed that the definition of “sustainable growth” includes consideration of seascape/landscape issues, and therefore anticipate that adverse effects on seascape/landscape will be prevented through application of this overall policy framework.

5.4.5 The aquaculture policies recognise the pressures on seascape/landscape resulting from aquaculture:

- Locational policies, when developed, will be informed by Marine Scotland’s spatial planning guidance which will be progressed on the basis of a sustainable aquaculture industry.
- Sustainable growth of the aquaculture industry is supported. As with sea fisheries, we have assumed that the term “sustainable” encompasses planning to avoid adverse effects on seascape/landscape.
- The policies recognise that aquaculture must be located appropriately; for the purposes of this assessment, we have assumed that “appropriately” will include seascape/landscape interests.
- In addition, Policy 4 requires that siting and design guidance should be taken into account in planning and decision-making

Wild Salmon and Migratory Fish

5.4.6 Wild salmon and migratory fish activities are not known to affect landscape/seascape interests.

Oil and Gas

5.4.7 Oil and gas installations may affect seascape by their presence, but are generally out of sight of land and/or tourism/recreation interests. Should this situation change, for example, by siting installations closer to shore or in the vicinity of sensitive landscapes (e.g. St Kilda), then the cross-cutting policies would come into play to manage adverse effects.

Carbon Capture and Storage

5.4.8 The policies focus on the re-use of existing infrastructure and the development of marine utility corridors, which would reduce the need for new infrastructure and thus prevent any further disruption of seascape and/or landscape

character, where this may already be present. Objective CCS 5 explicitly recognises the need for an environmental assessment to allow early consideration of these issues in the deployment of CCS. Taken together with the general cross-cutting policies, we anticipate that adverse effects on seascape and/or landscape will be avoided.

Renewable Energy

5.4.9 Offshore renewable energy arrays have the potential for adverse effects on seascape/landscape, the significance of which will depend on the nature of the seascape/landscape in question and on the characteristics of the renewable energy devices being deployed. The policies and objectives for renewable energy recognise the need for development in this sector to be sustainable. For the purposes of this assessment, we have assumed that “sustainable” will therefore include management of unacceptable adverse effects on seascape/landscape. Taken together with the general cross-cutting policies, we therefore anticipate that it will be possible to avoid adverse effects on the most sensitive landscapes and seascapes (e.g. National Scenic Areas, National Parks).

Recreation and Tourism

5.4.10 The policies and objectives for recreation and tourism recognise the need for development in this sector to be sustainable. We have assumed that “sustainable” will include management of such issues as increased recreational pressure, appropriate siting of tourism and recreational infrastructure, etc. In addition, Policy 1 identifies the need to protect the qualities important to recreational users, which include seascape and landscape. This, taken together with the cross-cutting policies, should offset the negative aspects of the growth aspirations expressed in the objectives, in particular, and result in the avoidance of adverse effects on seascape/landscape. This will be strengthened by the sustainable development approach recommended for regional marine planning in Policy 2.

Transport

5.4.11 Any development of port and harbour facilities (Objectives 2 and 3 and Transport 4) would be progressed in light of the general cross-cutting policies, and we therefore anticipate that adverse effects of such development on seascape/landscape would be avoided. This will rely on seascape/landscape issues being integrated into project planning and design.

Telecommunications

5.4.12 As with carbon capture and storage, the policies focus on the development of marine utility corridors, which would reduce the need for new infrastructure and thus prevent any further disruption of seascape and/or landscape character, where this may already be present.

Defence

5.4.13 Defence is not known to affect landscape/seascape interests.

Aggregates

5.4.14 Aggregate extraction in the marine environment is not known to affect landscape/seascape interests.

5.5 Historic Environment

Will the draft Plan ...	
15	Improve understanding and knowledge about the marine historic environment?
16	Protect the site and setting of marine and coastal historic environment features?

5.5.1 There are existing pressures on the historic environment from many of the activities and uses of the marine environment. The effects of climate change may also exert indirect effects on the historic environment through, for example, increased erosion of coastal features. Pressures include: development that results in loss of and/or damage to historic environment features, including effects on their setting; coastal erosion, with consequent loss of archaeological interests; and potential effects on underwater archaeological features from development involving anchoring, e.g. offshore wind, wave and tidal arrays, aquaculture, and recreational boating. Data gaps, particularly in regard to underwater archaeological features, remain to be resolved.

5.5.2 The objectives and policies of the draft NMP recognise and address the potential for effects on the historic environment, while recognising that the NMP will work in conjunction with the overall legislative and policy framework for the marine environment outlined in Section 2.

Sea fisheries

5.5.3 Sea fisheries are known to affect historic environment interests, particularly scallop dredging. Policy 3 ensures protection of the seabed and this will therefore include heritage features.

Aquaculture

5.5.4 Objective 2 is focused on increases in sustainable production, which has the potential for adverse effects on the historic environment, particularly if production increases result in additional aquaculture facilities. We have assumed that the definition of “sustainable growth” includes consideration of historic environment issues, and therefore anticipate that adverse effects on the historic environment will be prevented through application of this overall policy framework.

5.5.5 The aquaculture policies recognise the pressures on the historic environment resulting from aquaculture:

- Locational policies, when developed (we assume by regional marine plans), will be informed by Marine Scotland’s spatial planning guidance which will be progressed on the basis of a sustainable aquaculture industry.

- Sustainable growth of the aquaculture industry is supported. As with sea fisheries, we have assumed that the term “sustainable” encompasses planning to avoid adverse effects on the historic environment.
- The policies recognise that aquaculture must be located appropriately; for the purposes of this assessment, we have assumed that “appropriately” will include the historic environment.

Wild Salmon and Migratory Fish

5.5.6 Wild salmon and migratory fish activities are not known to affect historic environment interests.

Oil and Gas

5.5.7 Oil and gas installations may affect historic environment interests, depending on their location.

5.5.8 Should oil and gas installations be sited closer to shore or in the vicinity of sensitive cultural landscapes (e.g. St Kilda), then the cross-cutting policies (GEN13) would come into play to manage adverse effects.

Carbon Capture and Storage

5.5.9 The policies focus on the re-use of existing infrastructure and the development of marine utility corridors, which would reduce the need for new infrastructure and thus prevent any further disruption of the historic environment, where this may already be present. Objective CCS 5 explicitly recognises the need for an environmental assessment to allow early consideration of these issues in the deployment of CCS. Taken together with the general cross-cutting policies, we anticipate that adverse effects on the historic environment will be avoided.

Renewable Energy

5.5.10 Offshore renewable energy arrays have the potential for adverse effects on the historic environment (e.g. anchoring effects on underwater archaeology; effects on setting of historic environment features such as A-listed lighthouses), the significance of which will depend on the characteristics of the renewable energy devices being deployed and the nature of the historic environment features that may be affected. The policies and objectives for renewable energy recognise the need for development in this sector to be sustainable. For the purposes of this assessment, we have assumed that “sustainable” will therefore include management of adverse effects on the historic environment. Taken together with the general cross-cutting policies, we therefore anticipate that adverse effects on the historic environment will be avoided.

Recreation and Tourism

5.5.11 The policies and objectives for recreation and tourism recognise the need for development in this sector to be sustainable. We have assumed that “sustainable” will include management of such issues as increased recreational pressure, appropriate siting of tourism and recreational infrastructure, etc. In addition, Policy 1 identifies the need to protect the qualities important to recreational users, which may include historic environment features. This, taken together with the cross-cutting

policies, should offset any negative aspects of the growth aspirations expressed in the objectives, in particular, and result in the avoidance of adverse effects on the historic environment. This will be strengthened by the sustainable development approach recommended for regional marine planning in Policy 2.

Transport

5.5.12 Any development of port and harbour facilities (Objectives 2 and 3 and Transport 4) would be progressed in light of the general cross-cutting policies, and we therefore anticipate that adverse effects of such development on the historic environment would be avoided. This will rely on historic environment issues being integrated into project planning and design.

Telecommunications

5.5.13 As with carbon capture and storage, the policies focus on the development of marine utility corridors, which would reduce the need for new infrastructure and thus prevent any further disruption of the historic environment, where this may already be present.

Defence

5.5.14 Defence is not known to affect historic environment interests.

Aggregates

5.5.15 Aggregate extraction in the marine environment may affect historic environment interests, depending on its location. Extraction would be progressed in light of the general cross-cutting policies, and we therefore anticipate that adverse effects of such development on the historic environment would be avoided.

5.6 Climatic Factors

Will the draft Plan ...	
13	Reduce greenhouse gas emissions from vessels and other marine activities?
14	Contribute to adaptation to climate change?

5.6.1 There are existing pressures on the coastal and marine water environment from climate change through, e.g. increases in sea temperature etc.

5.6.2 The objectives and policies of the draft NMP recognise and address the need to integrate climate change issues into the sustainable development and use of the marine environment, while recognising that the NMP will work in conjunction with the overall legislative and policy framework for the marine environment outlined in Section 2.

Sea fisheries

5.6.3 The key issue for the fisheries sector, in regard to climatic factors, is the emission of greenhouse gases (GHG) as a result of fuel consumption. The sector is already aware of the need to reduce both fuel consumption and GHG emissions.

5.6.4 The objectives and policies together are working towards sustainable fishing practices and management, to ensure the sustainability of fish stocks (e.g. Policy 1). Other measures are also being utilised, e.g. cod recovery plans. Sustainable fish stocks in Scottish waters may reduce steaming distances to fishing grounds, which would reduce GHG emissions. However, this may be offset by increased sea temperatures and the potential for traditional catch species to move further north, thereby increasing steaming distances and fuel consumption.

5.6.5 The draft NMP requires consideration of sea fisheries when considering other marine development, and the issues of displacement and fuel use are explicitly recognised in Policy 4. This should assist in managing additional pressures for increased fuel consumption and GHG emissions.

5.6.6 Fisheries Objective 9 explicitly recognises the need to support international and national environmental priorities, which includes GHG emissions.

Aquaculture

5.6.7 Objective 2 is focused on increases in sustainable production, which has the potential for increases in GHG emissions if additional support vessel movements are involved and/or if facilities are located further offshore. The significance of this is currently unclear; however, the aquaculture policies recognise the pressures on climatic factors resulting from aquaculture:

- Locational policies, when developed (we assume by regional marine plans), will be informed by Marine Scotland's spatial planning guidance which will be progressed on the basis of a sustainable aquaculture industry.
- Sustainable growth of the aquaculture industry is supported. As with sea fisheries, we have assumed that the term "sustainable" encompasses consideration of increased fuel use, etc.
- The policies recognise that aquaculture must be located appropriately; for the purposes of this assessment, we have assumed that "appropriately" will include consideration of distance from shore.
- Policy 12 requires that aquaculture equipment be fit for purpose for the site conditions, subject to future climate change.
- In addition, GEN19 requires that developers and users of the marine environment should seek to minimise emissions of greenhouse gases and should have regard to possible future climate conditions.

Wild Salmon and Migratory Fish

5.6.8 The wild salmon and migratory fish sector is not known to affect GHG emissions (any emissions resulting from travel by recreational fishers are captured under "tourism and recreation").

5.6.9 Climate change may exert pressures on wild salmon and migratory fish while they are in the marine component of their life cycles, and may thus contribute to the existing trend in population decline of Atlantic salmon by affecting survival at sea, for example. The policies for this sector are intended to manage additional pressures on wild salmon and migratory fish from other sectors and, in addition, the draft NMP seeks to integrate climatic factor consideration into sustainable development and

use, including marine planning and decision-making that affects the marine environment.

Oil and Gas

5.6.10 The policies and objectives support the continuing exploitation of oil and gas, but recognise that this must be at “minimum environmental cost”. We therefore do not anticipate a change in GHG emissions from that which already occurs (i.e. no change from the baseline).

Carbon Capture and Storage

5.6.11 This sector focuses on carbon capture and storage, and we do not anticipate any additional GHG emissions in consequence. For the purposes of this assessment, we have assumed that infrastructure re-use will take the need for adaptation measures into consideration.

5.6.12 However, Objective CCS 5 explicitly recognises the need for an environmental assessment to allow early consideration of environmental issues in the deployment of CCS. Should this assessment identify climatic factors as a significant issue, this matter will be revisited.

Renewable Energy

5.6.13 The policies and objectives for renewable energy recognise the need for development in this sector to be sustainable. This sector will require vessel movements to the array sites, during both construction and operational stages, which has the potential for increases in GHG emissions. The significance of this is unclear.

Recreation and Tourism

5.6.14 The policies and objectives for recreation and tourism recognise the need for development in this sector to be sustainable. We have assumed that “sustainable” will include management of such issues as transport; however, this is unlikely to reduce GHG emissions from visitors travelling by private car. Policy GEN18 may assist in integrating such issues into marine planning and decision-making affecting the marine environment.

5.6.15 Policy 4 seeks to prevent damage from recreation and tourism to those environmental features which are either already vulnerable to climate change (e.g. maerl) or those which assist in mitigating climate change (e.g. salt marsh, kelp beds).

Transport

5.6.16 GHG emissions from shipping have been identified as a pressure. Work is already underway to reduce GHG emissions, e.g. through increasing engine efficiency, improved vessel design, amendments to existing management practices, etc.

5.6.17 Objective 6 recognises the need to reduce GHG emissions from vessels in port through increasing the availability of shore-based electricity and supporting efficiencies in fleet management and technology advances. Policy 5 requires port

and harbour operators to consider, and where appropriate implement, measures to ensure that their facilities remain resilient to climate change. Where proposals for marine development may displace vessels from their existing routes, resulting in longer journeys and increased GHG emissions, Policy 6 requires that this be taken into consideration as part of decision-making. Taken together, these policies and objectives (along with GEN18) will ensure that the climate change implications of and for marine transport will be considered in planning and decision-making.

Telecommunications

5.6.18 The policies and objectives, taken together, should work to avoid adverse effects on GHG emissions, for example, by preventing unnecessary additional cable laying.

Defence

5.6.19 The objectives and policies do not incur change from existing defence activities and uses of the marine environment, and therefore will not affect GHG emissions or adaptation measures.

Aggregates

5.6.20 Aggregate extraction activities (other than emissions from vessels) are not considered to have significant effects on climatic factors.

5.7 Marine Sediments

Will the draft Plan ...	
20	Avoid exacerbating coastal erosion?
21	Maintain the integrity of coastal processes?
22	Maintain and protect the character and integrity of the seabed?

5.7.1 There are existing pressures on coastal processes and marine sediment transport from some activities and uses of the coastal and marine environments. The effects of climate change may also exert indirect effects through, for example, increased erosion of coastal features.

5.7.2 The objectives and policies of the draft NMP recognise and address the potential for effects on marine sediments and coastal processes, while recognising that the NMP will work in conjunction with the overall legislative and policy framework for the marine environment outlined in Section 2.

Sea fisheries

5.7.3 Policies to improve seabed protection and/or to restore ecosystems have positive implications for marine sediments, in terms of maintaining the character and integrity of the seabed. In addition, Fisheries Objective 9 explicitly recognises the need to support international and national environmental priorities, which includes seabed integrity.

Aquaculture

5.7.4 As with biodiversity, significant growth in aquaculture has the potential to have negative effects on coastal and marine sediments, e.g. through anchoring. In addition, work to identify areas which are potentially suitable for new fish farm development and sensitive areas which are unlikely to be appropriate for such development is likely to assist in avoiding sensitive habitats and species which are a key feature of the seabed. Policies GEN11 and 12 should assist in balancing significant adverse effects, ensuring that these issues are taken into account in regional marine planning and project decision-making.

Wild Salmon and Migratory Fish

5.7.5 The policies and objectives for this sector are unlikely to have an effect on marine sediments.

Oil and Gas

5.7.6 The policies and objectives support the continuing exploitation of oil and gas, but recognise that this must be at “minimum environmental cost”. We therefore expect that this will include avoiding adverse effects on marine sediments. The maximisation of recovery, for example, has potential for adverse effect on marine sediments, so this and the cross-cutting policies in Chapter 4 should act to avoid and/or reduce negative effects, e.g. policies GEN11, GEN12, and GEN18. Marine sediments will also be a consideration when deciding to remove or retain decommissioned assets, as it is uncertain as to how much oil and gas infrastructure changes marine sediment patterns of movement and therefore what the effects would be.

Carbon Capture and Storage

5.7.7 The reuse of existing infrastructure and the employment of utility corridors will be positive for marine sediments, as this will reduce the amount of sea bed under development. It is uncertain as to how much oil and gas infrastructure changes marine sediment patterns of movement.

Renewable Energy

5.7.8 The effects of renewable energy policies on marine sediments are mixed. On the one hand, policy to support renewable energy development in Scotland’s seas has the potential for negative effects as it supports new development in the marine environment which could affect the character and integrity of the seabed. However, the cross-cutting policies in Chapter 4 will apply to the Sectoral Marine Plan process, and the SEA of these sectoral plans will identify any adverse effects and measures for their mitigation.

Recreation and Tourism

5.7.9 Policies to support the growth of tourism have the potential for negative effects, but these will be mitigated by planning and consenting decision-makers using the cross-cutting policies in Chapter 4. It is therefore expected that the overall environmental effects of these policies will be neutral.

Transport

5.7.10 Increased port activity, including recreation/tourism, may have negative effects on marine sediments if growth results in a need for new capital dredging. The policies in Chapter 4 will work to mitigate adverse effects, e.g. GEN11, GEN12 and GEN18.

Telecommunications

5.7.11 The telecommunications policies have positive implications for marine sediments, as they mainly seek to reduce disturbance to the seabed by focusing activity in fewer locations. When it comes to landfall, there may be coastal process and/or erosion issues, but use of the Chapter 4 policies (invoked by Policy 4, for example) should assist in preventing coastal erosion and/or its exacerbation.

Defence

5.7.12 No effects from defence policies are anticipated on marine sediments.

Aggregates

5.7.13 Aggregates policy specifically encompasses consideration of environmental issues and therefore is positive in its protection of marine sediments, particularly as it specifies: “including that sediment removal will not significantly adversely interfere with coastal processes and thus alter local rates of coastal erosion which could exacerbate the predicted effects of a changing climate”.

5.8 Socio-Economic Factors

	Will the draft Plan ...
1	Support the development of a sustainable marine economy?
2	Contribute to the growth of any marine industry without detriment to another?
3	Safeguard and/or create jobs that support new or existing communities?
4	Remove or avoid barriers to new marine enterprise opportunities? ⁹⁰
5	Maintain or improve the accessibility and connectivity of remote island and coastal communities?
6	Promote access to the coastal and marine resource for tourism and recreation?
7	Contribute to the resilience and cohesion of coastal and island communities?

5.8.1 There are existing pressures on the socio-economic component of the coastal and marine water environment. These include: employment, particularly in remote coastal and island communities; potential for conflict both within and between different marine sectors; competition for space; barriers to new marine enterprise opportunities; and connectivity, particularly of remote coastal and island communities.

⁹⁰ includes increasing transparency; communication/coordination between industries

5.8.2 The objectives and policies of the draft NMP recognise and address the need to integrate socio-economic issues into sustainable development and use of the marine environment, while recognising that the NMP will work in conjunction with the overall legislative and policy framework for the marine environment outlined in Section 2.

Sea fisheries

5.8.3 The key issue for the fisheries sector is the sustainability of the fishing industry in the long-term.

5.8.4 The objectives and policies together are working towards sustainable fishing practices and management, to ensure the sustainability of fish stocks (e.g. Policy 1). The potential for conflict between fisheries and other marine sectors is recognised, particularly in terms of competition for space, and the policies require that fisheries interests are taken into account in planning and decision-making, including engagement with fishers at the local level. This is likely to involve trade-offs between the sectors, which will be negative for some and positive for others. The key here is that these trade-offs would result from considered discussion and review, rather than through imposition.

5.8.5 Long-term sustainability of the sea fisheries industry is considered likely to maintain levels of employment and thus contribute to community cohesion and resilience.

Aquaculture

5.8.6 The objectives and policies, taken together, support the sustainable development of aquaculture, including increases in production and diversification of the industry. Locational policies, when developed, will be informed by Marine Scotland's spatial planning guidance which will be progressed on the basis of a sustainable aquaculture industry. The requirement for regional marine plans and terrestrial land use plans to identify potentially suitable areas for aquaculture should assist in reducing conflict between the sectors and/or managing uncertainty in the aquaculture and other marine sectors. Again, as with sea fisheries, there are likely to be trade-offs between the sectors, with both positive and negative implications.

5.8.7 As with sea fisheries, long-term sustainability of the aquaculture industry is considered likely to maintain levels of employment and thus contribute to community cohesion and resilience.

Wild Salmon and Migratory Fish

5.8.8 As with aquaculture, the objectives and policies, taken together, support the sustainable development of the wild salmon and migratory fish sector. In particular, there is a requirement for other sectors to recognise their potential adverse effects on wild salmon and other migratory species. This may result in mitigation and monitoring requirements, which may have negative implications for other sectors but is considered to be positive for the wild salmon and migratory fish sector.

5.8.9 As with other sectors, long-term sustainability of the aquaculture industry is considered likely to maintain levels of employment and thus contribute to community cohesion and resilience.

Oil and Gas

5.8.10 The policies and objectives support the continuing exploitation of oil and gas, recognising the challenges that the future may bring, e.g. decommissioning, development in more testing environments. Taken together, these policies and objectives will be positive in terms of supporting employment in this sector, with consequent benefits for community cohesion and resilience.

Carbon Capture and Storage

5.8.11 The objectives and policies focus on encouraging the development of this sector in a sustainable manner, and have positive implications for employment and community resilience, particularly in terms of skills transfer from the oil and gas sector. There is unlikely to be significant conflict with other sectors, e.g. in terms of competition for space, given the emphasis on re-use of existing infrastructure.

Renewable Energy

5.8.12 The policies and objectives for renewable energy encourage sustainable development of this sector. The policy link to the sectoral plans for offshore wind, wave and tidal energy will help to reduce uncertainty and thereby manage potential conflicts between sectors, e.g. in terms of competition for space, as will the requirement of Policy 9 to engage with existing users of the area.

5.8.13 There are positive implications for employment, which is likely to contribute to community resilience and cohesion. Policies GEN4 and GEN9 encourage engagement with local communities in the planning and development process.

Recreation and Tourism

5.8.14 The policies and objectives for coastal and marine recreation and tourism recognise the need for development of this sector to be sustainable. They also recognise the potential for conflict between this sector and other sectors, e.g. in terms of competition for space, effects on environmental quality etc. Accordingly, mechanisms for inclusion of coastal and marine recreation and tourism interests in planning and decision-making are included in the policies, in particular.

5.8.15 Sustainable development of this sector should contribute to employment in coastal and island communities. There may be negative implications for other sectors. Overall, assuming that trade-offs can be appropriately managed, there are positive implications for employment in coastal and islands communities, and therefore for community resilience and cohesion.

Transport

5.8.16 The objectives and policies provide protection to shipping (e.g. navigational safety, protection of shipping routes) and to ports and harbours (e.g. protection of access). They also provide mechanisms for ensuring that ports and harbours take note of the interests of other sectors, and vice versa.

5.8.17 Taken together, the objectives and policies support the sustainable development of both marine shipping and the port and harbour sectors. There may be trade-offs for other sectors, in terms of competition for space.

5.8.18 Air quality issues associated with such development will be taken into consideration in planning and decision-making (Objective 6), and this should avoid adverse effects on adjacent residential populations in the future.

Telecommunications

5.8.19 The policies and objectives, taken together, should work to support this sector and reduce conflict between this and other sectors.

Defence

5.8.20 The objectives and policies do not incur change from existing defence activities and uses of the marine environment, and therefore will not change socio-economic factors.

Aggregates

5.8.21 The policies and objectives work to protect this resource so that it is available for future need. This may involve trade-offs for other sectors, in terms of competition for space.

5.9 Assessment of alternatives

5.9.1 As noted in paragraph 2.2.14, three tiers of alternatives to the draft NMP were identified as the planning process progressed:

- Do nothing
- Use of alternative approaches:
 - A high level strategic plan
 - A high level spatial plan
- Use of alternative priorities
 - An economically-focused plan
 - An environmentally-focused plan

5.9.2 These alternatives have been assessed against the SA objectives and the detailed results are set out in Appendix 4. In summary, the assessment shows that:

- **Do nothing:** Under the “do nothing” approach, environmental, economic and social policies and initiatives would not benefit from the integration and coordination that the NMP would provide, and this would result in a lack of direct benefits for the economy, communities, population and human health. The same would apply to environment, as without the NMP there would be a lesser degree of integration between environmental and economic considerations, and planners and decision-makers would need

to rely on the comprehensive range of existing environmental protection legislation and policy in isolation⁹¹.

- **High-level strategic plan:** This option supports development of individual marine economic sectors, within environmental and social constraints. It provides some guidance on factors to consider in identifying preferred locations for different types of development (with a focus on marine renewables) but in the main sets out policy considerations (environmental, social and economic) which need to be recognised by regional marine plans and project decision-makers. This option is largely positive across the three topics of environment, economy, communities, population and human health through the emphasis on economic development of the individual marine sectors and the inclusion of the mitigating policies⁹².
- **High-level spatial plan:** This option provides a clear indication of the locations where certain marine economic activities can take place, including where different activities are compatible within the same locations. Key aspects of this approach include:
 - Availability and gathering of sufficient information to ensure sound decision making within the plan preparation process.
 - Weighting of environmental and economic considerations against each other to identify the best use of different areas.
 - Identifying the carrying capacity of different marine environments.
 - Understanding of market influences on different marine industries.

The preferred option has not taken a spatial approach, but has set out the broad policy direction. The spatial approach does not bring particular benefits across the appraisal topic areas, and would require a high degree of information gathering and analysis (which is a key purpose and benefit of regional marine planning). It was also considered that a spatially directive national plan could conflict with the regional marine planning process. As a result, there would be negative implications for communities, as there would be reduced opportunities for local planning/ decision making. Nevertheless, the plan is informed by nationally significant spatial outputs from other planning processes (e.g. Marine Protected Areas, draft plan options for offshore renewable energy)

- **Alternative priorities – economically focused plan:** This option explores the possible measures which would achieve greatest economic benefit. Although this option has a strong economic focus, it is not strongly positive in relation to the economic objectives which seek to reflect sustainability, balancing different marine economic interests, job creation and avoiding barriers. This option does not place sufficient emphasis on protecting the environmental quality and ecosystem services which are critical in supporting a large proportion of marine economic activities. It also does not reflect the complex interactions between different marine economic

⁹¹ Note: the “do nothing” option is not viable, since preparation of the NMP is a legislative requirement. It has been included here for completeness.

⁹² This is the preferred option identified for the NMP.

activities or recognise how one area of activity can adversely affect another.

- **Alternative priorities – environmentally focused plan:** This option prioritises protection of all aspects of the environment including habitats and species, water, air, cultural heritage and landscape/seascape. It is therefore strongly positive in relation to environmental objectives, but only partly positive in relation to the economic objectives as there are some tensions between the benefits for marine economic industries which rely on good environmental quality and those which do not. The impacts on communities, population and human health are partially linked to the environmental objectives, where positive effects for environmentally dependent marine industries support communities reliant on these.

5.10 Cumulative Effects

5.10.1 The Environmental Assessment (Scotland) Act 2005 requires that the cumulative environmental effects of the National Marine Plan are identified and evaluated.

5.10.2 Figures 2 and 3 set out the policy context within which the National Marine Plan (NMP) is being progressed, including the Marine Policy Statement and Scottish Planning Policy (SPP):

- The Marine Policy Statement sets out UK-level marine policy, and the policy framework in the NMP delivers these policies within the Scottish context.
- The NMP and the SPP, taken together, provide the overarching marine and terrestrial planning policy framework. This includes policy relating to activities where the two planning systems overlap, for example those which occur on and around the coast or in coastal waters, such as aquaculture.

5.10.3 Figures 2 and 3 also identify the plans and programmes for which the NMP acts as the overarching policy framework, including the sectoral marine plans for renewable energy and the Regional Marine Plans. The spatial elements of the marine and terrestrial planning systems will be provided by the spatial strategies set out in the sectoral and Regional Marine Plans and the National Planning Framework, alongside strategic and local development plans. These spatial strategies will be prepared in accord with the policy framework set out in the NMP and the SPP.

5.10.4 Given that the focus of the NMP is on policy, rather than proposals, this part of the assessment has focused on the cumulative effects of the NMP and the SPP. The cumulative effects of the spatial strategies will be assessed during the preparation of the relevant plans.

Scottish Planning Policy (SPP)

5.10.5 The purpose of the SPP is to set out Scottish Ministers' policy for planning, and to influence development plans and development management. The Scottish Government is in the process of revising the SPP, and a draft revised SPP was published for consultation in April 2013.

5.10.6 The current policy review considers the policy as a whole and aims to ensure that planning contributes as fully as possible to sustainable economic growth, and to Scotland's transition to a low carbon economy. Bringing together and updating the existing SPP, the draft SPP includes a number of proposed policies:

- Cross cutting/ overarching policies focusing on sustainable economic growth, sustainable development, engagement, climate change, place making and spatial strategies.
- Policies relating to buildings: delivery of new homes, supporting business and employment, and valuing the historic environment.
- Policies for the environment: valuing the natural environment, enhancing green infrastructure, sustainable resource extraction, and aquaculture.
- Policies on movement: making best use of existing infrastructure and reducing the need to travel whilst supporting sustainable transport options.
- Policies supporting development of utilities: delivering heat and electricity, digital communication, flood management and waste.

5.10.7 The draft SPP has been subject to strategic environmental assessment (SEA), alongside the Main Issues Report for the National Planning Framework 3, and the results are set out in the Environmental Report.⁹³ These show that the draft SPP will have largely positive or neutral environmental effects. Although some types of development have the potential for adverse environmental effects, the draft policies address these by promoting a sustainable approach to planning and decision-making.

Cumulative Effects Assessment

5.10.8 The NMP and the SPP will work together to set out a framework of social, economic and environmental policies which identify the issues to be taken into account when developing spatial plans and which are to be applied in making decisions about projects and/or activities in the marine and terrestrial environments. These cross-cutting policies also apply to the sectoral and subject-specific policies in the two plans. A review of the draft NMP and draft SPP against the SA objectives demonstrates how the two policy frameworks will work together (Table 5).

5.10.9 Thus, for example, both the NMP and the SPP emphasise the importance of sustainable economic growth and sustainable development. Alone, policies encouraging economic growth have the potential to result in adverse social, community and environmental effects. However, these economic policies are balanced by the requirement for economic growth and development to be sustainable, and this is further elaborated by policies which protect social, community and environmental interests.

5.10.10 The cumulative effect of this overarching policy framework is that economic growth is supported, focusing on the right type of development in the right place. The cross-cutting and sector-specific policies of the two policy frameworks will work to avoid and, where appropriate, reduce the potential adverse effects of development on coastal and marine communities (including social effects) and on the coastal and marine environment.

⁹³ The Environmental Report is available at <http://www.scotland.gov.uk/Publications/2013/04/3435>

5.10.11 In conclusion, the cumulative effects of the policy frameworks in the draft NMP and SPP are considered to be largely positive or neutral.

6.0 Monitoring

6.1 The Marine (Scotland) Act 2010 requires monitoring of the plan's implementation, once adopted. Such monitoring will meet the requirements of the Environmental Assessment (Scotland) Act 2005, which requires that significant environmental effects are monitored, as well as unanticipated effects. The focus of such monitoring will be on unanticipated effects, given that this assessment has not identified any significant effects arising from the draft plan.

6.2 Proposals for monitoring will be further addressed in the Post-Adoption Statement.

7.0 Next Steps

7.1 The consultation on the draft NMP and the accompanying SA Report and BRIA is now open, and will close 16 weeks after publication of this report. Views on this SA Report, and the draft plan to which it relates, are now invited.

7.2 Following the consultation period, the responses received will be analysed, and the findings from this analysis will be taken into account in the finalisation of the NMP (scheduled for submission to the Scottish Parliament in 2014). Upon adoption of the NMP, a Post-Adoption Statement will be prepared, reflecting on the findings of the assessment and the consultation, and outlining how the issues raised have been addressed.

7.3 Copies of the draft NMP, the SA report and the BRIA are available for viewing during office hours at the Scottish Government library at Saughton House, Edinburgh (K Spur, Saughton House, Broomhouse Drive, Edinburgh, EH11 3XD).

7.4 Please send your comments to the Marine Scotland NMP team, by 13 November 2013, at the following address:

Marine Scotland NMP team
1A (South)
Victoria Quay
Edinburgh EH6 6QQ
E-mail – marineconsultation@scotland.gsi.gov.uk
Telephone – 0131 244 7838

Table 5. Cumulative effects of the draft NMP and SPP

	Will the draft NMP and SPP...	Relevant SA topic
1	Support the development of a sustainable marine economy?	The draft NMP and SPP both support sustainable economic growth. This includes supporting proposals that will result in economic benefits, including jobs. Both note that economic benefits should be a consideration in decision-making. Both emphasise the need for fairness and transparency in decision-making.
2	Contribute to the growth of any marine industry without detriment to another?	
3	Safeguard and/or create jobs that support new or existing communities?	The draft NMP's policy framework supports the resolution of conflict between marine industries, and addresses barriers where appropriate. The draft SPP does not address these topics, given its terrestrial remit.
4	Remove or avoid barriers to new marine enterprise opportunities? ⁹⁴	
5	Maintain or improve the accessibility and connectivity of remote island and coastal communities?	
6	Promote access to the coastal and marine resource for tourism and recreation?	<p>The draft NMP and SPP both support resilience and cohesion in remote communities:</p> <ul style="list-style-type: none"> The draft NMP, in its cross-cutting policies, requires that job creation and social benefits supports the resilience and cohesion of these communities. The draft SPP identifies how development should be addressed in remote and fragile communities (which include those remote island and coastal areas), and this will contribute to the maintenance of resilience and cohesion within these communities. <p>Both contain policies to protect access to the coast (and thereby to the marine resource), to benefit both residents and visitors.</p> <p>Both contain policies regarding connectivity of communities. For remote coastal and island communities, the main emphasis is on ports and harbours. The draft NMP also protects lifeline ferry routes.</p>
7	Contribute to the resilience and cohesion of coastal and island communities?	
8	Avoid disturbance of key species as a result of marine activities?	Both the draft NMP and SPP contain cross-cutting policies to protect ecosystems in general, which includes marine and coastal ecosystems and their interactions, and key species. These apply to both spatial plans and development.
9	Safeguard marine and coastal ecosystems and their interactions? ⁹⁵	
10	Avoid pollution of the coastal and marine water environment?	The draft NMP contains both cross-cutting policies regarding the ecological status of Scottish waters, and sector-specific policies regarding the potential for pollution

⁹⁴ includes increasing transparency; communication/coordination between industries

⁹⁵ includes coastal processes

National Marine Plan: Sustainability Appraisal Report

	Will the draft NMP and SPP...	Relevant SA topic
11	Maintain and/or improve the ecological status of Scottish waters?	from marine and coastal activities. The draft SPP notes that “sustainable development” includes the protection and enhancement of water and biodiversity (amongst others), and also contains a cross-cutting policy for the protection and improvement of the water environment. The topic areas of “water” and “biodiversity” include ecological status of Scottish waters, as well as pollution.
12	Avoid adversely impacting on air quality, with particular regard to known existing concentrations of transport and industrial related pollution close to the coast?	The draft NMP contains a cross-cutting policy that requires the consideration of air quality when progressing development and use of the marine environment, which will cover both atmospheric emissions and ambient air quality. The draft SPP notes that “sustainable development” includes the protection and enhancement of air.
13	Reduce greenhouse gas emissions from vessels and other marine activities?	The policy frameworks in both the draft NMP and the draft SPP emphasise the need to address climate change, both in terms of reducing the emission of greenhouse gases and in progressing adaptation measures. Both include policies regarding development and flooding, including the need to site development so as to avoid or reduce flooding risk.
14	Contribute to adaptation to climate change?	
15	Improve understanding and knowledge about the marine historic environment?	Both the draft NMP and SPP include policies to promote the care and protection of the designated and non-designated historic environment. The draft NMP notes that such protection should be in a manner proportionate to the significance of these historic environment features; the draft SPP notes that the planning system should enable change to the historic environment which is informed by a clear understanding of the importance of built heritage assets and their viability over the long term.
16	Protect the site and setting of marine and coastal historic environment features?	
17	Ensure that the value and special qualities of designated landscapes is protected?	Both the draft NMP and SPP include policies to protect landscapes (the definition of which includes seascapes), both designated and non-designated. These apply to all sectors progressing development in both the marine and terrestrial environments (including the coast). Reference is also made to wild land.
18	Recognise and respect the value of wider (non-designated) landscapes and seascapes?	
19	Encourage sectors to take into account the relative sensitivities of different seascapes?	
20	Avoid exacerbating coastal erosion?	The draft NMP contains cross-cutting policies that deal specifically with the maintenance of coastal processes, including avoiding the exacerbation of coastal erosion. The sector-specific policies include requirements for the protection of the seabed. The draft SPP also includes similar policies about coastal processes and erosion. Both the draft NMP and SPP require that risks from coastal erosion should be a consideration when progressing new development.
21	Maintain the integrity of coastal processes?	
22	Maintain and protect the character and integrity of the seabed?	

Appendix 1. SEA/SA Checklist

1	An outline of the contents and main objectives of the plan, and of its relationship (if any) with other qualifying plans and programmes.	Section 2.2 Figure 4
2	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.	Section 2.1 Figures 2 and 3
3	The environmental characteristics of areas likely to be significantly affected.	Section 3
4	Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated [under the Birds and Habitats Directives].	Section 3
5	The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.	Section 2.3 and Appendix 2
6	The likely significant effects on the environment, including:	Section 5
	(a) on issues such as:	
	(i) biodiversity;	Section 5.1
	(ii) population;	Section 5.8
	(iii) human health;	Section 5.8
	(iv) fauna;	Section 5.1
	(v) flora;	Section 5.1
	(vi) soil;	Section 5.7
	(vii) water;	Section 5.2
	(viii) air;	Section 5.3
	(ix) climatic factors;	Section 5.6
	(x) material assets;	Section 5.8
	(xi) cultural heritage, including architectural and archaeological heritage;	Section 5.5
	(xii) landscape; and	Section 5.4
	(xiii) the inter-relationship between the issues referred to in heads (i) to (xii);	Section 5
	(b) short, medium and long-term effects;	Section 5 &
	(c) permanent and temporary effects;	Section 5.10
	(d) positive and negative effects; and	
	(e) secondary, cumulative and synergistic effects.	
7	The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.	Section 5
8	An outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of expertise) encountered in compiling the required information.	Section 2.2; 5.8
9	A description of the measures envisaged concerning monitoring in accordance with section 19.	Section 4
10	A non-technical summary (NTS) of the information provided under paragraphs 1 to 9.	Section 6
		NTS at front of report

Appendix 2. Environmental Protection Objectives

Plan, Programme or Strategy	Objectives
UN Convention on Biological Diversity (1992)	<p>The three main objectives of the UNCBD are:</p> <ul style="list-style-type: none"> • the conservation of biodiversity; • the sustainable use of biodiversity; and • the sharing of benefits from the use of genetic resources (including by appropriate access to these resources). <p>Article 6 requires that all parties to the Convention develop national biodiversity strategies, plans or programmes, and that they seek to integrate the provisions of these across other policy sectors. Article 7 requires the identification of key resources and their protection. Monitoring of potentially damaging processes and activities should also be undertaken. To establish representative networks of protected areas in the maritime environment by 2012.</p>
Bonn Convention on the Conservation of Migratory Species of Wild Animals 1979	Aims to conserve terrestrial, marine and avian species through international co-operation.
Convention on Wetlands of International Importance 1971 (amended 1982/87)	Otherwise known as the Ramsar Convention, this emphasises the special value of wetland, particularly as a key habitat for waterfowl. The Convention resulted in designation of sites for management and conservation.
Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) 1992.	The aim of the OSPAR convention is to prevent and eliminate pollution and to protect the maritime area against the adverse effects of human activities. The Convention led to establishment of a cross-regional commission promoting an ecosystems approach to marine management, including establishment of a network of MPAs. Its five work areas are biodiversity and ecosystems, eutrophication, hazardous substances, offshore industry, and radioactive substances). Climate change is also a key cross-cutting theme. Also includes a Biological Diversity and Ecosystems Strategy.
Agreement on the Conservation of African-Eurasian Migratory Waterbirds 1995 (AEWA)	An independent international treaty developed under the auspices of the UNEP/Convention on Migratory Species. The AEWA covers 255 species of birds ecologically dependent on wetlands for at least part of their annual cycle, including species of divers, grebes, cormorants, herons, ducks, swans, geese, waders, gulls, and terns. An action plan addresses issues including: species and habitat conservation, management of human activities, research, monitoring, education and implementation.
Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas 1992 (ASCOBANS)	An agreement on the protection of small cetaceans, noting that the migratory nature of dolphins, porpoises and whales means that they can be vulnerable to a range of marine activities and issues.

National Marine Plan: Sustainability Appraisal Report

Plan, Programme or Strategy	Objectives
UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks 2001	Sets out principles for the conservation and management of specified fish stocks and establishes that such management must be based on the precautionary approach and the best available scientific information. The Agreement elaborates on the fundamental principle, established in UNCLOS, that States should co-operate to ensure conservation and promote the objective of the optimum utilisation of fisheries resources both within and beyond the exclusive economic zone.
International Plan of Action for the Conservation and Management of Sharks 1999	The objective of the IPOA-SHARKS is to ensure the conservation and management of sharks and their long-term sustainable use. Scotland has over 30 species of sharks, skates and rays recorded in its waters of which 25 are found in coastal waters, of which a high proportion are already or nearly at risk.
UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks 2001	Sets out principles for the conservation and management of specified fish stocks and establishes that such management must be based on the precautionary approach and the best available scientific information. The Agreement elaborates on the fundamental principle, established in UNCLOS that States should co-operate to ensure conservation and promote the objective of the optimum utilisation of fisheries resources both within and beyond the exclusive economic zone.
Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive) as Amended by Council Directive 97/147/EC	Established a commitment to designating networks of sites of ecological importance across Europe. These are known as Natura 2000 sites and include SPAs (designated under the Birds Directive – see following paragraph) and SACs.
Council Directive 2009/147/EC on the conservation of wild birds (the Birds Directive)	Protects all wild birds (together with their nests and eggs) and their associated habitats. Commitment to designation of SPAs (included in Natura 2000 sites - see preceding paragraph).
Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)	Aimed to promote co-operation between European states to protect biodiversity.
The Pan-European Biological and Landscape Diversity Strategy (1995)	The Strategy aims to reverse the decline of landscape and biological diversity, by promoting innovation and proactive policy making. It supports preceding measures for protecting natural heritage, and aims to supplement this by further promoting a number of action themes relating to different environmental resources. Emphasises the rapid decline of some key characteristics and resources, including traditional human-made landscapes, coastal zones, marine areas, wetlands, mountains and grassland.
EU Biodiversity Strategy (2011)	The Strategy runs until 2020, and focuses on six priority targets and related measures. These are aimed at: enforcing EU laws protecting birds and habitats; maintaining and improving ecosystems - restoring at least 15% of areas that have been damaged; getting farming and forestry to help improve biodiversity; ensuring sustainable use of fisheries resources by reducing catches to scientifically determined limits by 2015 - 88% of the EU's fish stocks are currently over-exploited or are significantly depleted; combating alien species that invade habitats - and currently threaten 22% of the EU's indigenous species; stepping up the EU's contribution to preventing global biodiversity loss.

National Marine Plan: Sustainability Appraisal Report

Plan, Programme or Strategy	Objectives
Wildlife and Countryside Act 1981	Provides the framework for protection of species other than European Protected Species. Sets out protection objectives for specified birds and wild animals. The Act's various schedules detail the species that are protected under the Act, including dolphins, porpoises, and numerous birds such as geese and ducks. This was reviewed and updated in December 2008 and it was recommended that several further species of marine fish should be added to the lists attached to the Act, including shark, seahorse and ray species.
The Conservation (Natural Habitats, &c) Regulations 1994	Transposes the requirements for protection of designated sites under the Habitats and Birds Directives, and the framework for protection of European Protected Species. Applies within 12nm. Several marine species are protected by various development consenting regimes covered by the Act. This includes marine turtles, all species of dolphins, porpoise and whale, seals and several types of marine fish (Atlantic salmon, Barbel, etc.).
The Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007 (the Offshore Marine Regulations)	The Regulations extend protection to important species and habitats under the Birds and Habitats Directives beyond UK territorial waters (i.e. outside 12 nm). Give protection to marine species, wild birds and habitats, mainly through the creation of offences and site protection mechanisms. Provide the definition of deliberate disturbance applicable to cetaceans, turtles and the Atlantic sturgeon
Conserving Biodiversity – the UK Approach (2007)	A framework document for biodiversity identifies six priorities for implementing biodiversity objectives within the integrating framework of an ecosystem approach: <ul style="list-style-type: none"> • protecting the best sites for wildlife; • targeting action on priority species and habitats; • embedding proper consideration of biodiversity and ecosystem services in all relevant sectors of policy and decision-making; • engaging people, and encouraging behaviour change; • developing and interpreting the evidence base; • ensuring that the UK plays a proactive role in influencing the development of Multilateral Environmental Agreements, and contributes fully to their domestic delivery.
Conservation of Seals Act 1970	Provides for the protection and conservation of seals in and in adjacent territorial seas. The Habitats Directive and the 1994 Regulations (see above) introduced additional measures for the protection of seals.
Nature Conservation (Scotland) Act 2004	Introduced a 'duty to further the conservation of biodiversity' for all public bodies, and sets out more specific provisions within this including for Sites of Special Scientific Interest. Also states a requirement for the preparation of a Scottish Biodiversity Strategy, to which all public bodies should pay regard. Applies to 12nm around Scotland and includes protection measures for marine species.
Scotland's Biodiversity – It's In Your Hands. A strategy for the conservation and enhancement of biodiversity in Scotland (2004)	Sets out Scottish aims relating to biodiversity over 25 year period. Seeks to go beyond a previous emphasis on protecting individual sites to achieve conservation at a broader scale. Aims to halt loss and reverse decline of key species, to raise awareness of biodiversity value at a landscape or ecosystem scale, and to promote knowledge, understanding and involvement amongst people. The Strategy notes the importance and health of Scotland's ecosystems, and summarises key trends.

National Marine Plan: Sustainability Appraisal Report

Plan, Programme or Strategy	Objectives
A Consultation on the 2020 Challenge for Scotland's Biodiversity (2012)	<p>The consultation paper is focused on desired outcomes for 2020 in response to the European Union's Biodiversity Strategy for 2020 and the 'Aichi Targets' set by the United Nations Convention on Biological Diversity. These call for a step change in efforts to halt the loss of biodiversity and restore the essential services that a healthy natural environment provides. The document aims to:</p> <ul style="list-style-type: none"> • increase the general level of biodiversity on land and in our seas, and support healthy, well-functioning ecosystems; • engage people with the natural world, for the health and well-being benefits that this brings, and empower them to have a say in decisions about their environment; • maximise the benefits for Scotland of a diverse natural environment and the services it provides, contributing to sustainable economic growth. <p>The consultation includes a section on the Marine environment seeking to protect marine and coastal biodiversity and maintain marine productivity.</p> <p>The strategy paper that follows the consultation in summer 2013 will form part of the Scottish Biodiversity Strategy, alongside the 2004 document. This would make it relevant to public bodies' biodiversity duty under the Nature Conservation (Scotland) Act 2004.</p>
A Fresh Start: The renewed Strategic Framework for Scottish Aquaculture (2009) (SFSA)	The Strategic Framework for Scottish Aquaculture (SFSA) is based on three guiding principles; economic; environmental; and social. It is the main policy instrument to deliver a diverse, competitive but sustainable aquaculture industry in Scotland and provides a set of parameters within which industry can balance socio-economic benefits against environmental impact.
Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003	This Act allows for the Salmon Conservation Regulations to be made where it is considered necessary to do so for the conservation of salmon e.g. relating to fishing in the sea, estuaries or rivers.
Aquaculture and Fisheries (Scotland) Act 2007	Covers fish farms and shellfish farms, refers to operational issues and covers both freshwater and sea fisheries. Covers payments relating to aquaculture and fisheries.
Scottish Aquaculture: A Fresh Start: A Consultation on a Renewed Strategic Framework for Scottish Aquaculture (2008)	Consultation updating the existing aquaculture strategy. This includes five main themes: health, improved systems and finance for new developments, reduced escapes, and improved image and marketing.
Food and Environment Protection Act 1985	Part II protects the marine ecosystem and human health by controlling the deposit of articles or materials or scuttling of vessels in the sea or tidal waters.
Land Reform (Scotland) Act 2003	Set out a new right of responsible access in Scotland, and made provisions for community right to buy. Core paths to be identified in each local authority area and identified in an adopted plan, promoting more widespread functional and recreational walking, cycling and riding and thereby supporting improved levels of physical activity.
Scottish Marine Wildlife Watching Code	Sets out a code of conduct for recreational operators and users when wildlife watching at sea. Aims to minimise disturbance to marine wildlife.

National Marine Plan: Sustainability Appraisal Report

Plan, Programme or Strategy	Objectives
IMO International Convention for the Prevention of Pollution from Ships 1973 (MARPOL)	Aims to prevent marine pollution from ships and in part from oil rigs and production platforms. It includes annexes covering pollution by oil, noxious liquids, harmful substances, sewage, garbage and air pollution. Recent changes focus on reducing the sulphur content and particulate emissions from fuel in the shipping sector.
International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990	Provides a framework for international co-operation in combating major incidents or threats of marine pollution.
London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 (as amended)	Prohibits the dumping of certain hazardous materials, requires a prior special permit for the dumping of a number of other wastes, and a prior general permit for other wastes or materials. It also creates a basis in international law to allow and regulate carbon capture and storage (CCS) in sub-seabed geological formations.
Water Framework Directive 2000/60/EC	This provides an overarching strategy, including a requirement for EU Member States to ensure that they achieve 'good ecological status' by 2015. RBMPs were defined as the key means of achieving this. While the recent Marine Strategy Directive (MSD) will extend coverage of coastal waters beyond 3nm, Good Chemical Status already applies beyond this limit.
The Merchant Shipping Regulations 2009	Enhances marine protection through stricter regulation of pollution from ships.
Merchant Shipping Act 1995	General provisions for merchant shipping, seamen, and safety. Part VI focuses on prevention of pollution, including oil pollution. Sets out responsibilities and liabilities. Also covers international incidents. Other issues include lighthouses, salvage and wrecks.
Environmental Protection Act 1990	Covers pollution control and waste management. Also covers litter, radioactive substances and genetically modified organisms. Pollution at sea is specifically controlled.
Environmental Liability (Scotland) Regulations 2009	Covers incidents of significant damage to biodiversity, water or land. In accordance with the European Environmental Liability Directive (2004/35/EC), aims to apply the polluter pays principle by requiring restoration in such instances.
Water Environment and Water Services (Scotland) Act 2003 (WEWS Act)	Transposes the Water Framework Directive into the Scottish context. Aims to protect the water environment by ensuring a reliable and high quality supply of water, reducing groundwater pollution, and protecting marine and other waters.
The Water Environment (Controlled Activities) (Scotland) Regulations 2011	Sets out the process by which activities that have the potential to affect Scotland's water environment are regulated. Authorisation under the Controlled Activities Regulations (CAR) is required for discharging to waters, disposal of pollutants to land, abstractions, impoundments and engineering works affecting water bodies.
Pollution Prevention and Control (Scotland) Regulations 2000	Implements Directive 96/61/EC (Integrated Pollution Prevention and Control). Regulating industrial and commercial activities which may cause environmental pollution and to prevent and control emissions that are capable of causing any pollution.
Scottish Executive Environment Group (2002) Scotland's Bathing Waters A Strategy for Improvement	Aims to reduce water pollution in order to specifically improve bathing water catchments. Measures include changes to agricultural practices to address diffuse pollution, ensuring compliance with controls of industrial discharges, and making more use of Sustainable Urban Drainage Systems (SUDS).

National Marine Plan: Sustainability Appraisal Report

Plan, Programme or Strategy	Objectives
Bathing Waters (Scotland) Regulations 2008	Implements the Bathing Waters Directive (2006/7/EEC) which aims to protect the public and the environment from pollution of waters used for bathing by large numbers of visitors. Achieves this by making information on quality public, and setting standards to be met by 2015.
Marine (Scotland) Act 2010	Provides a framework aimed at managing the competing demands on Scotland's seas. The main measures include: <ul style="list-style-type: none"> • a new statutory marine planning system to sustainably manage the increasing demands on Scottish waters; • a simpler marine licensing system; • improved marine nature and historic conservation with new powers to protect and manage areas of importance; • improved protection for seals and a new comprehensive licence system to ensure appropriate management when necessary; and • a range of enhanced powers of marine conservation and licensing.
Flood Risk Management (Scotland) Act 2009	Replaces the Flood Prevention (Scotland) Act 1961, and introduces a more sustainable and modern approach to flood risk management, suited to manage the impact of climate change. Creates a more joined up and coordinated process to manage flood risk at a national and local level. The main measures include: <ul style="list-style-type: none"> • a framework for coordination and cooperation between all organisations involved in flood risk management; • assessment of flood risk and preparation of flood risk management plans; • new responsibilities for SEPA, Scottish Water and local authorities in relation to flood risk management; • a revised, streamlined process for flood protection schemes; • new methods to enable stakeholders and the public to contribute to managing flood risk; and • a single enforcement authority for the safe operation of Scotland's reservoirs.
Electricity Act 1989	Provides the legislative background within which the energy sector functions. Sets out the framework within which applications for marine energy development should seek consent. Related regulations define EIA responsibilities.
Energy Act 2004	Covers the civil nuclear industry, sustainability and renewable energy sources. Aims to achieve diversification of supply in favour of renewable sources. Augments the system for determining developments within territorial waters. Provided the Crown Estate with rights to license the generation of renewable energy and grant leases for development sites out to 200nm.
Climate Change (Scotland) Act 2009	The Climate Change (Scotland) Act 2009 includes a greenhouse gas emissions reduction target of 80% by 2050 and an interim target of 42% by 2020. Proposals include setting of targets for 2050 and interim periods, requirement for annual reporting, and provisions for meeting targets through additional policies and legislation. The targets include emissions from the aviation and shipping sectors.

National Marine Plan: Sustainability Appraisal Report

Plan, Programme or Strategy	Objectives
Low Carbon Scotland: Meeting the Emissions Reduction Targets 2010-2022 (2011) and Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027 (2013) (the first and draft second climate change report on proposals and policies)	The reports set out the proposals and policies required to meet Scotland's targets for climate change mitigation included in the Act (above). Includes commitments to the development of the renewable energy sector.
Climate Change Sector Adaptation Action Plan: Marine and Fisheries (2011)	Sets out a number of objectives including raising awareness of climate change to the wider marine stakeholder community (through the Marine Strategy Forum). Also aims to build evidence to support future adaptation action and build further policies that respond to impacts.
Climate Ready Scotland: Scottish Climate Change Adaptation Programme (Consultation Draft) 2013	Currently out to consultation, the Programme addresses the impacts identified for Scotland in the UK Climate Change Risk Assessment (CCRA) published under section 56 of the UK Climate Change Act 2008. It sets out Ministers' objectives in relation to adaptation to climate change, targeting three key themes: the Natural Environment, Buildings and Infrastructure Networks, and Society. It outlines proposals and policies for meeting these objectives, the period within which the proposals and policies will be introduced, and setting out arrangements for wider engagement in meeting these objectives.
Scottish Soil Framework 2009	Provides an overarching policy framework for protection of soils in Scotland, in line with European Directive. Relates largely to the onshore environment, but this includes coastal areas and the principles are applicable more widely.
UNCLOS 1982 was ratified by the UK in 1997	Article 303 stipulates that 'states have the duty to protect objects of an archaeological and historical nature found at sea and shall co-operate for this purpose' and provides for coastal states to exert a degree of control over the archaeological heritage to 24 nautical miles
Joint Nautical Archaeology Policy Committee (JNAPC) Code of Practice for Seabed Developers (JNAPC 2008)	The JNAPC Code is voluntary but provides a framework that seabed developers can use in conducting their activities in an archaeologically sensitive manner. A guidance note on protocols to deal with the marine historic environment has been developed specifically for the offshore renewable energy sector.
Protection of Wrecks Act 1973	The 1973 Act provides protection for designated wrecks and for the designation of dangerous sites.
Ancient Monuments and Archaeological Areas Act 1979	Provides for the protection of archaeological heritage, including the scheduling of 'monuments'. The Act, which is administered by Historic Scotland, primarily deals with terrestrial locations but there is provision to designate submarine sites.
Protection of Military Remains Act 1986	Identifies scope for protected places and controlled sites, covering vessels. This reflects the status of these sites as war graves.
Scottish Historic Environment Policy (SHEP) (Updated 2011)	Provides the overarching framework for historic environment policy in Scotland, consolidating and replacing the previously separate SHEPs. Aims to promote effective conservation and to enhance enjoyment and understanding of the historic environment, linking it with the Scottish Government's central purpose. The updated SHEP includes provisions to broaden the types of sites which can be designated on the basis of their national importance, arrangements for consultation in advance of designation, and proposals for powers and provisions to allow for site maintenance.

National Marine Plan: Sustainability Appraisal Report







Plan, Programme or Strategy	Objectives
The Marine Historic Environment Strategy for the protection, management and promotion of marine heritage 2012-15	<p>Historic Scotland's strategy has the vision to protect and, where appropriate, enhancing the most important marine heritage assets in such a way that they can be valued, understood, and enjoyed. The aims of the Strategy are:</p> <ul style="list-style-type: none"> • helping to advance knowledge about marine heritage and make information widely available; • improving stewardship of key marine heritage sites; and • developing wider understanding and enjoyment of marine heritage.
Council of Europe, European Landscape Convention 2000	<p>States that landscapes across Europe make an important contribution to quality of life and cultural identity, but that they are being transformed as a result of a number of factors, including town planning, transport and infrastructure and the economy. Requires Member States to develop more comprehensive frameworks to protect and enhance landscapes. Notes that landscape has no boundaries and that people are central to its management. Includes inland water and marine areas in its coverage and emphasises the importance on non-designated landscapes in addition to those which are protected.</p>
SNH Natural Heritage Futures (Draft) 2008 Update: Coasts and Seas	<p>Provides baseline information and draws attention to particularly important issues, assets and changes. The key objectives are to:</p> <ul style="list-style-type: none"> • improve management, stewardship, awareness and understanding of marine ecosystems; • manage the coast in sympathy with natural processes; • safeguard and enhance the fine scenery and diverse character of coastal seascapes and landscapes; • enhance populations of over-exploited commercial fish species and ensure that fishing is sustainable; • ensure salmon fishing and other forms of aquaculture are environmentally sustainable; • improve the water quality of estuaries and seas; and • promote access to the sea and coast for public enjoyment and recreation.




Appendix 3. Assessment Matrices




6a Sea Fisheries Objectives	Assessment of Objectives
<p>1🟢 Ensure Fish stocks are harvested sustainably leading to exploitation of Scotland's commercial fish stocks at maximum sustainable yield and with increased long term stability.</p>	<p>Economy: The objective is positive in the long term for the economy as it supports the sustainability of the fishing industry and future fisheries jobs. There may be short-term issues if moving towards maximum sustainable yield requires reduced fishing effort over and above the reduction in the fleet that has already occurred. (This assessment assumes that management measures will be successful in re-establishing depleted stocks.)</p> <p>Communities, population and human health: The objective would have a positive effect in the long term, as it supports the future fishing industry and therefore the communities which rely on it. However, there may be short-term issues (as noted above).</p> <p>Biodiversity, flora and fauna: The objective is positive, as many commercial fish species are considered to be key species in biodiversity terms, e.g. Priority Marine Features, UK BAP species, etc. Sustainable harvesting of fish stocks would also support maintenance of existing marine ecosystems, on the basis that the volume of fish taken can be tolerated.</p> <p>Water, Air, Climatic factors, cultural heritage, landscape/seascape; marine sediments: No impact identified.</p>
<p>2🟢 Support the sea fisheries industry to:</p> <ul style="list-style-type: none"> • Maximise annual quota opportunities across Scotland's stocks; • Maximise the sustainable harvesting of wild fish • Maximise the value of its product, both on first landing and through the supply chain 	<p>As for Objective 1</p>
<p>3🟢🟡 Manage removals, not landings, where necessary, through fully documented fisheries.</p>	<p>As for Objective 1</p>
<p>4🟢 Tackle discarding through the elimination of unwanted catches.</p>	<p>Economy: The objective is positive as it increases the sustainability of fisheries and safeguards associated jobs.</p>

6a Sea Fisheries Objectives	Assessment of Objectives
	<p>Communities, population and human health: The objective would have a positive effect in the long term; its support of fish stocks would support the future fishing industry and therefore the communities which rely on it.</p> <p>Biodiversity, flora and fauna: The objective is positive as it improves the management of marine ecosystems.</p> <p>Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape; marine sediments: No impact identified.</p>
<p>5●Management of fisheries on a regional sea-basin basis with the whole sector empowered in the decision-making process.</p>	<p>Economy: Involving people in the decision making process should improve management (and therefore sustainability) of the sector.</p> <p>No impact identified on other topic areas.</p>
<p>6●Help sustain vibrant coastal communities where fishing is a viable career option and value is added throughout the supply chain maximising the contribution fisheries makes to Scotland.</p>	<p>Economy: The objective contributes positively to the sustainability of the fishing industry as a whole.</p> <p>Communities, population and human health: the objective supports viable coastal and remote communities.</p> <p>No impact identified for the other topic areas.</p>
<p>7◆ Take an evidence-based approach to fisheries management which is underpinned by sound science and is supported by the whole sector.</p>	<p>Economy: The objective contributes positively to the sustainable management of fisheries by using and evidence based approach.</p> <p>Communities, population and human health: The objective has a positive long-term benefit in terms of future employment.</p> <p>Biodiversity, flora and fauna: continuing use of sound science has potential benefits for sustainable management of fish stocks.</p> <p>No impact identified for the other topic areas.</p>
<p>8■Have a fishing fleet which is a leader in global fishing practices and is able to secure a long term and income from the available sustainable fishing opportunities across all sectors.</p>	<p>Economy: This objective contributes positively towards a sustainable economy.</p> <p>No impact identified on other topic areas.</p>

6a Sea Fisheries Objectives	Assessment of Objectives
<p>9▲ Manage fisheries in line with international and national environmental priorities.</p>	<p>Economy: The objective supports the sustainable management of fisheries which is positive, but could potentially entail additional requirements for the industry.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; marine sediments (in terms of seabed character and integrity): The objective is positive in supporting habitats and species and protected areas.</p> <p>Water: The objective is positive in supporting the quality of the water environment.</p> <p>Air: The objective is potentially positive in supporting air quality.</p> <p>Climatic factors: The objective is positive in supporting a reduction in greenhouse gas emissions and climate change adaptation.</p> <p>Cultural heritage; Landscape/Seascape; marine sediments (in terms of coastal erosion/coastal processes): No impact identified.</p>

6a Sea fisheries Policies	Assessment of Policies
<p>FISHERIES 1   : Manage fishing to ensure the sustainability of fish stocks.</p>	<p>Economy: The policy is positive overall as it supports sustainable fisheries, and safeguards existing and future fisheries jobs. By promoting sustainable fishing practices now, it may assist in preventing future barriers to fishing such as new closures etc.</p> <p>Communities, population and human health: The policy supports coastal communities through supporting future economic resilience.</p> <p>Biodiversity, flora and fauna: The policy is positive as sustainable management of fish stocks supports marine ecosystems as a whole, including targeted stocks.</p> <p>Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>FISHERIES 2   : Take account of fishing in consideration of any development in the marine environment. Local fishing interests should be consulted where appropriate.</p>	<p>Economy: The policy seeks to ensure that marine development considers potential effects on fishing interests. This is likely to involve trade-offs between the fishing sector and other sectors, for example in terms of project location, project timing/design, etc. Assuming that trade-offs are appropriately assessed and decisions made accordingly, the policy will have a net positive effect as it ensures that marine resources are put to their best use. Giving due consideration to fishing activity in decision-making processes will safeguard fishing jobs and incomes, but it is not possible to say in advance whether it will result in net job creation.</p> <p>Communities, population and human health: The policy is positive overall as it supports the sustainable and effective use of marine resources and therefore the communities which rely on it.</p> <p>No impact identified on the other topic areas.</p>
<p>FISHERIES 3   : Within the CFP's parameters effective marine planning should help to ensure:</p> <ul style="list-style-type: none"> • protection for vulnerable stocks (in particular of juvenile and spawning stocks through continuation of sea area closures where appropriate); • improved protection of the 	<p>Economy: The policy is likely to involve trade-offs between the fishing sector and other sectors e.g. changes to project design/location to protect spawning/nursery grounds. These trade-offs may benefit the fishing industry at the expense of other sectors but effective planning processes should ensure that the net effects are positive. In addition, this policy provides clear, up-front information to other marine sectors which should help to reduce uncertainty.</p> <p>It may also have short-term adverse effects on the fishing sector, for example if fishing activity is constrained or excluded by protection measures.</p>

6a Sea fisheries Policies	Assessment of Policies
<p>seabed through effective identification of high-risk areas and management measures to mitigate the impacts of fishing where appropriate;</p> <ul style="list-style-type: none"> • that other sectors take into account the need to protect fish stocks and sustain healthy fisheries for both economic and conservation reasons; • delivery of Scotland's international commitments in fisheries; • effective mechanisms for managing potential conflicts between fishermen and/or between the fishing sector and other users of the marine environment. 	<p>Assuming that trade-offs are appropriately assessed and decisions made accordingly, the policy will have a positive effect as in the long-term it will support the continued viability of the fishing sector alongside a diversified marine economy, with concomitant safeguarding and/or creation of jobs, and management of conflict.</p> <p>Communities, population and human health: The policy is positive as it supports fishing activity and therefore the communities which rely on it.</p> <p>Biodiversity, flora and fauna: Protection of fish stocks and the seabed ensures protection of fish, as part of the marine ecosystem, and of the wider ecosystem and is therefore positive.</p> <p>Marine sediments: Protection of the seabed also has positive implications for marine sediments.</p> <p>No impact identified on the other topic areas.</p>
<p>FISHERIES 4    : The following key factors should be taken into account when deciding on uses of the marine environment and the potential impact on fishing:</p> <ul style="list-style-type: none"> • the economic importance of fishing, in particular to vulnerable coastal communities; • the potential impact (positive and negative) of marine developments on the sustainability of fish and shellfish stocks and resultant opportunities for exploitation of new fishing opportunities in any given area; • the environmental impact on 	<p>Economy: The policy is positive overall as it ensures sustainability in decision making and supports the protection of fishing-related jobs. The policy sets out the parameters for balancing fishing with other sectors and avoiding the creation of barriers to fishing, but there are likely to be trade-offs with other sectors. Assuming that trade-offs are appropriately assessed and decisions made accordingly, the policy will have a positive effect.</p> <p>Communities, population and human health: The policy is positive as it ensures consideration of fishing where it is important to coastal and island communities.</p> <p>Biodiversity, flora and fauna: The policy is positive as it includes the consideration of environmental impacts of other marine uses on habitats and species.</p> <p>Water: The policy is positive as it refers to consideration of environmental impacts on fishing grounds, which includes effects on water quality will therefore be a factor in decision-making.</p>

6a Sea fisheries Policies	Assessment of Policies
<p>fishing grounds (such as nursery, spawning areas⁹⁶), commercially fished species, habitats and species more generally;</p> <ul style="list-style-type: none"> the potential effect of displacement activity on fish stocks; the wider environment; use of fuel; socio-economic costs to fishers and their communities; and other marine users. 	<p>Air and climatic factors: The policy is positive as it refers to the use of fuel which also impacts on air quality and emission of greenhouse gases.</p> <p>Marine sediments: Any protection of the seabed also has positive implications for marine sediments.</p> <p>Cultural heritage; Landscape/Seascape: No impact identified.</p>
<p>FISHERIES 5   : Where an impact on existing fishing activity may occur, a fisheries management plan should be prepared by the developer, involving full engagement with local fishing interests. All efforts should be made to agree the plan with those interests and it should include:</p> <ul style="list-style-type: none"> an assessment of the potential impact of the development or use on the affected fishery or fisheries, both in socio-economic terms and in terms of sustainability; a recognition that fishermen should be able to catch their fish quota reasonable measures to mitigate any constraints which the proposed development or use may 	<p>Economy: The policy is likely to involve trade-offs between the fishing sector and other sectors e.g. changes to project design/location to protect spawning/nursery grounds. These trade offs may benefit the fishing industry at the expense of other sectors but effective planning processes should ensure that the net effects are positive. In addition this policy provides clear, up-front information to other marine sectors. Assuming that trade-offs are appropriately assessed and decisions made accordingly, the policy is positive as it ensures sustainability of fishing activity and supports fishing jobs alongside development by other marine sectors. As well as ensuring balance between sectors, it assists in reducing uncertainty for other sectors and therefore reduces barriers.</p> <p>Communities, population and human health: The policy is positive as it ensures consideration of fishing and this will be important in supporting coastal and island communities.</p> <p>No impact identified on other topic areas.</p>

⁹⁶ The spawning period for most commercial species in British waters and further information on spawning and nursery areas can be found in “Fishery Sensitivity Maps in British Waters - Spawning Periods For Main Commercial Species.” Maps illustrating the spawning and nursery areas of some of the commercial fish species can also be found on the Marine Scotland website⁹⁶.





6a Sea fisheries Policies	Assessment of Policies
place on existing or planned fishing activity;	
<p>FISHERIES 6 ■ : Ports should seek to engage with fishing stakeholders at an early stage to discuss any changes in infrastructure that may affect them. Any port developments should take account of the needs of the dependent fishing fleets with a view to avoiding commercial harm where possible. Where a port has reached a minimum level of infrastructure required to support a viable fishing fleet there should be a presumption in favour of maintaining this infrastructure, provided there is an ongoing requirement for it to remain in place and that it continues to be fit for purpose.</p>	<p>Economy: The policy is likely to involve trade-offs between the ports and fishing sectors. Assuming that trade-offs are appropriately assessed and decisions made accordingly, the policy is positive overall as it supports the retention and maintenance of facilities to support fishing, and the jobs reliant on it, balancing this with the interests of the port. It seeks to reduce uncertainty and therefore reduces barriers to development as well as to fishing.</p> <p>Communities, population and human health: The policy is positive as it ensures consideration of fishing and this will be important in supporting coastal and island communities.</p> <p>No impact identified on other topic areas.</p>
<p>FISHERIES 7 ■: Inshore Fisheries Groups (IFGs) should work with recreational sea angling and other stakeholders who use the marine environment to agree joint management measures to help all those involved to realise the benefits our seas can provide.</p>	<p>Economy: The policy is positive overall as it supports sustainable management of fish stocks and supports balancing the interests of fisheries with those of other sectors. Trade-offs may be required from IFGs and recreational sea anglers, and it has been assumed that these can be appropriately assessed and decisions made accordingly.</p> <p>Communities, population and human health: The policy is positive as it supports access for recreational activities alongside fishing and other marine sectors.</p> <p>No impact identified on other topic areas.</p>
<p>FISHERIES 8 ◆◆◆: Government will continue to work with stakeholders within the Clyde, stakeholders to take appropriate practical measures which contribute towards the restoration of the ecosystem through the Clyde 2020 project .</p>	<p>Economy: The policy is positive overall as it supports sustainable fisheries management in the Clyde and safeguards jobs for the future through improving the quality of the ecosystem. It also removes future barriers to fishing through restoration work now.</p> <p>Biodiversity, flora and fauna: This policy supports restoration of the Clyde ecosystem, and is therefore positive for biodiversity, flora and fauna.</p>

6a Sea fisheries Policies	Assessment of Policies
	<p>Marine sediments: Restoration of the Clyde ecosystem may provide protection of the seabed, which would have positive implications for marine sediments.</p> <p>No impact identified on other topic areas.</p>

6b Aquaculture Objectives	Assessment of Objectives
<p>1 ■ Ensure an appropriate and proportionate regulatory framework within which the industry can achieve sustainable growth targets.</p>	<p>Economy: The objective is positive overall as it supports a proportionate regulatory framework, which would reduce costs to industry. Establishing this framework is likely to require some trade-offs between the aquaculture and wild fish sectors, and regulation may introduce barriers to other activities.</p> <p>No impact identified on other sectors.</p>
<p>2 ■ Support the industry and other stakeholders to increase sustainable production by 2020 (from a 2011 baseline) of:</p> <ul style="list-style-type: none"> ● marine finfish to 210,000 tonnes (requires a 32% increase); ● domestic juvenile salmon production to satisfy the salmon sector growth aspirations; ● shellfish, especially mussels, to 13,000 tonnes (requires an increase of at least 80%) 	<p>Economy: The objective is positive overall as it supports growth of the sector and protects and creates jobs.</p> <p>Communities, population and human health: The growth of the industry may have some positive benefits for employment in coastal and island communities.</p> <p>Biodiversity, flora and fauna: Significant growth in aquaculture has the potential to have negative impacts on ecosystems, habitats and species. Regional marine plans and project decision-making will need to take Policies GEN11 (water quality) and GEN12 (protected areas and species) into account. These considerations, alongside future spatial aquaculture plans, should ensure that the expansion of the aquaculture industry is undertaken sustainably.</p> <p>Water: Significant growth in aquaculture has the potential to result in negative impacts on water quality. Policies GEN11 and GEN 18 protect the ecosystem and water quality (see assessment for biodiversity, above).</p> <p>Marine sediments: As with biodiversity, significant growth in aquaculture has the potential to have negative effects on coastal and marine sediments, e.g. through anchoring. Policy GEN12 should assist in balancing significant adverse effects, ensuring that these issues are taken into account in regional planning and project decision-making.</p> <p>Air; Climatic factors; Cultural heritage: No impact identified.</p> <p>Landscape/Seascape: Significant growth in aquaculture has the potential for negative impacts on landscape. Policy GEN14 protects seascape and landscape to mitigate these negative effects, and will need to be considered by planning and decision-making authorities.</p>
<p>3 ■● Secure quality employment and sustainable economic activity in</p>	<p>Economy: The objective is positive as it supports economic growth and employment., However growth in aquaculture could require trade-offs with other sectors. Assuming that these trade-offs are appropriately</p>

6b Aquaculture Objectives	Assessment of Objectives
remote and rural communities.	<p>assessed and decisions made accordingly, the objective will be positive overall.</p> <p>Communities, population and human health: The objective has some positive impact as it supports employment which has positive benefits for communities.</p> <p>Biodiversity, flora and fauna; Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>4 ■ Improve business confidence and industry investment by identifying areas where sustainable aquaculture growth is optimal.</p>	<p>Economy: The objective is positive overall as it supports the economy and employment, and identifying areas reduces barriers for the industry by increasing certainty. However, identifying areas for aquaculture may have negative effects on other sectors by constraining their operation within these areas: there are likely to be trade-offs.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna: The objective is positive for biodiversity, assuming that spatial planning takes biodiversity constraints into account.</p> <p>Water: This objective is positive for water, assuming that spatial planning takes water quality considerations into account.</p> <p>Marine sediments: The objective is positive for marine sediments, assuming that spatial planning takes any constraints into account.</p> <p>Air; Climatic factors; Cultural heritage: No impact identified.</p> <p>Landscape/Seascape: This objective is positive for landscape, assuming that spatial planning takes landscape considerations into account.</p>
<p>5 ■ Maximise benefits to Scotland from the Scottish aquaculture value chain</p>	<p>Economy: The objective is positive as it supports a sustainable Scottish economy and employment within Scotland.</p> <p>Communities, population and human health: this objective will potentially provide some benefit to communities where the Scottish aquaculture chain is located in coastal and island communities.</p> <p>Biodiversity, flora and fauna; Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>

6b Aquaculture Policies	Assessment of Policies
<p>AQUACULTURE 1 ■: Marine planning and decision making authorities will seek to encourage sustainable aquaculture growth in appropriate locations.</p>	<p>Economy: The policy supports the sustainable growth of the aquaculture industry, and therefore is positive in terms of contributing to a sustainable economy and supporting existing and future employment (this conclusion assumes that additional growth in this sector can be accommodated without detriment to existing aquaculture facilities or other economic activities). Promoting aquaculture growth could have detrimental effects on other sectors in some areas, if there is competition for space. Trade-offs will be required.</p> <p>Communities, population and human health: The policy has some positive effect as it supports existing and future employment in a sector which is important to remote coastal and island communities.</p> <p>Biodiversity, flora and fauna; water; cultural heritage; landscape; and marine sediments: The policy is positive for these factors, assuming that spatial planning will take relevant constraints into account. (The policies in Chapter 4 will also apply.)</p> <p>Air; Climatic factors: No impact identified.</p>
<p>AQUACULTURE 2 ■: Terrestrial development plans and regional marine plans should identify areas which are potentially suitable for new fish farm development and sensitive areas which are unlikely to be appropriate for such development, reflecting Scottish Planning Policy and any other Scottish Government guidance on the issue (including further Marine Scotland spatial planning guidance). <applies to inshore waters></p>	<p>Economy: As with Policy 1, the effects of this policy are mixed: this policy is positive as it increases clarity on suitable locations and therefore reduces uncertainty, but also provides clarity on areas less suitable for development, with consequent trade-offs.</p> <p>Communities, population and human health: The policy makes future opportunity for aquaculture transparent, and therefore the associated jobs which can be supported.</p> <p>Biodiversity, flora and fauna; water; cultural heritage; landscape; and marine sediments: It has been assumed that the identification of sensitive areas unlikely to be appropriate for development will be undertaken in accordance with the policies set out in Chapter 4, and that these areas will therefore include sensitive habitats and species, water quality, cultural heritage resources, landscapes and seascapes, and marine sediments. This is positive as it will protect them from the adverse effects of aquaculture development. (Relevant cross-cutting policies include GEN12, GEN11, GEN18, GEN13, GEN14 and GEN17.)</p> <p>Air, Climatic factors: No impact identified.</p>
<p>AQUACULTURE 3 ■●: Further marine finfish farm development is</p>	<p>Economy: The overall economic impacts of this policy are unclear. Jobs and activity in wild salmon fisheries will be secured at the possible expense of growth in the farmed fish sector. It makes it clear</p>

6b Aquaculture Policies	Assessment of Policies
<p>expected on the West Coast and islands of Scotland. There is a continuing presumption against further marine finfish farm developments on the north and east coasts to safeguard migratory fish species (over 80% of wild salmon are located on the east and north coasts of Scotland). (Map 10 refers.)</p>	<p>where aquaculture will be supported, and therefore reduces uncertainty, but is a constraint to aquaculture development in these areas.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna: The policy is positive as it works to safeguard migratory fish species, including wild salmon.</p> <p>Water: The policy is positive as it directly protects the water quality and ecological status of the east coast from the adverse effects of finfish aquaculture (e.g. eutrophication, effects on benthic habitats and species).</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine Sediments: No impact identified.</p>
<p>AQUACULTURE 4  : Subject to licensing, in relation to nutrient enhancement and benthic impacts as set out under Locational Guidelines for the Authorisation of Marine Fish Farms in Scottish Waters⁹⁷, fish farm development is likely to be acceptable in Category 3 areas, subject to licensing and other criteria being satisfied. A degree of precaution should be applied to consideration of further fish farming development in Category 2 areas and there will be a presumption against further fish farm development in Category 1 areas. (Map 10 refers)</p>	<p>Economy: The policy is expected to deliver long-term benefits through the creation of a sustainable aquaculture sector but may have short-term negative consequences where it constrains or increases the costs of aquaculture developments. It also improves the transparency of the locations where fish farming is more likely to be sustainable.</p> <p>Communities, population and human health: sustainable economic activity supports dependent communities</p> <p>Biodiversity, flora and fauna; Water: The policy is positive overall as it protects the quality of the water environment (including ecological status) and benthic habitats.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine Sediments: No impact identified.</p>
<p>AQUACULTURE 5  : Shellfish waters will be protected in a proportionate manner by designation.</p>	<p>Economy: This policy supports shellfish production and employment. There may be some trade-offs resulting in costs or constraints for other sectors as shellfish waters may limit other activities within the same area, but designation of shellfish growing waters increases transparency for other industries.</p>

⁹⁷ Categories 1, 2 and 3 as defined under Marine Scotland's [Locational Guidelines for the Authorisation of Marine Fish Farms](#) .

6b Aquaculture Policies	Assessment of Policies
<p>Once shellfish waters are designated⁹⁸ there will be a presumption that future expansion of the sector should be located in designated areas.</p>	<p>Communities, population and human health: Jobs in shellfish sector protected, possibly at the expense of developments in other sectors.</p> <p>Biodiversity, flora and fauna: No impact identified.</p> <p>Water: This policy is positive as designation of shellfish growing waters maintains high water quality. Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>AQUACULTURE 6 ●: SNH guidance⁹⁹ on the siting and design of aquaculture in the landscape should be taken into account.</p>	<p>Economy: The effects of this policy are mixed: the policy avoids detrimental impacts on other sectors reliant on landscape quality (a benefit), but could constrain locations for the aquaculture industry (negative).</p> <p>Communities, population and human health; Biodiversity, flora and fauna; Water; Air; Climatic factors; Marine sediments: No impact identified.</p> <p>Cultural heritage: The policy is indirectly positive for cultural heritage as the historic environment contributes to landscape character.</p> <p>Landscape/Seascape: The policy is strongly positive as it supports the protection of landscape/seascape features through appropriate siting and design.</p>
<p>AQUACULTURE 7 ▲: New aquaculture sites should not bridge Disease Management Areas¹⁰⁰.</p>	<p>Economy: The policy is expected to deliver long-term benefits through the creation of a sustainable aquaculture and wild fishery sectors but may have short run negative consequences where it constrains or increases the costs of aquaculture developments. (Managing disease supports the sustainability of the aquaculture and wild salmon sectors.)</p> <p>No impact identified for other topic areas.</p>
<p>AQUACULTURE 8 ▲ ●: Operators and regulators should continue to utilise a risk based approach to the location of fish farms and potential impacts on wild fish and the wider</p>	<p>Economy: The policy may involve short run constraints or additional costs for the aquaculture sector but will deliver long run benefits as it enables and supports the overall sustainability of the aquaculture industry and limits any negative impacts on the wild fish sector.</p> <p>Communities, population and human health: sustainable economic activity supports dependent</p>

⁹⁸ Reference...

⁹⁹ <http://www.snh.org.uk/pdfs/publications/heritagemanagement/marineaquaculture.pdf>

¹⁰⁰ Disease Management Areas

6b Aquaculture Policies	Assessment of Policies
<p>environment. Guidance on harassment at designated¹⁰¹ seal haul out sites should be taken into account once developed and seal conservation areas should also be taken into account.</p>	<p>communities</p> <p>Biodiversity, flora and fauna: The policy is positive because it ensures consideration of wild fish and seals, as individual species and as part of the wider marine ecosystem.</p> <p>Water: The policy refers to impacts on the wider environment which is assumed to include water quality, and therefore is positive in avoiding pollution and improving the ecological status of Scottish waters.</p> <p>Marine sediments: The policy is positive because it ensures consideration of the wider marine ecosystem, which will include the seabed. The large structures used in aquaculture can result in obstructions in the water column that can alter currents and water flow, thereby affecting the way that sediments deposit and accumulate.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape: No impact identified.</p>
<p>AQUACULTURE 9🟢: Consenting and licensing authorities should be satisfied that emergency response plans are in place should a harmful plankton or algal bloom occur.</p>	<p>Economy: the policy has some positive benefit to the economy as it reduces potential losses in the event of a plankton or algal bloom.</p> <p>Communities, population and human health: The policy is positive overall as it protects both the industry and the communities reliant on it, and human health.</p> <p>Biodiversity, flora and fauna: The policy is positive because it protects water quality on which species depend, and therefore the ecosystem as a whole.</p> <p>Water: The policy is positive because it protects water quality.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>AQUACULTURE 10🟢: Fish farm operators should carry out pre-application discussion and consultation and engage with local communities to seek their support in advance of submitting an application.</p>	<p>Communities, population and human health: Some positive benefit in terms of local governance (NB see HLMO re governance).</p> <p>No impact identified for any other topic areas.</p>

¹⁰¹ Marine Scotland Act 2010, part 6, section 117 – Map available for publication.




6b Aquaculture Policies	Assessment of Policies
<p>AQUACULTURE 11◆◆: Aquaculture equipment, including but not limited to installations, facilities, moorings, pens and nets must be fit for purpose for the site conditions, subject to future climate change. Where a statutory technical standard is introduced, this must be adhered to.</p>	<p>Economy: This policy is positive because it protects against extreme weather, and therefore the industry and related jobs. It will incur costs to the industry, but these will bring benefit in the long run (e.g. avoiding costs of equipment and stock replacement).</p> <p>Communities, population and human health: sustainable economic activity supports dependent communities</p> <p>Biodiversity, flora and fauna; Water; Air; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p> <p>Climatic factors: The policy is positive as it is a policy driver for adaptation to climate change.</p>
<p>AQUACULTURE 12◆: Applications which promote the use of biological controls for sea lice (such as farmed wrasse) will be encouraged</p>	<p>Economy: No impact identified. This may have benefits in the long-term, by replacing the application of expensive therapeutants, but at this early stage the relative costs are unclear.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna: This policy is positive as the use of biological controls will avoid potential adverse impacts on biodiversity that may result from excess therapeutant. (This assumes that the farming of wrasse will be undertaken sustainably, taking account of issues around genetic integrity.)</p> <p>Water: This policy is positive as the use of biological controls will avoid adverse impacts on water quality and ecological status that may result from excess therapeutant.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>AQUACULTURE 13◆: Proposals that contribute to the diversification of farmed species will be supported, subject to other criteria being satisfied.</p>	<p>Economy: The policy is positive as it supports a diverse species base, thereby increasing the robustness of the sector, supporting jobs and reducing barriers to diversification.</p> <p>Communities, population and human health: The policy is positive as diversification may support employment in coastal and island communities.</p> <p>Biodiversity, flora and fauna; Water: No impact identified. These proposals must be undertaken in light of the cross-cutting policies in Chapter 4, such as GEN11, which would reduce the possibility of new non-native species being introduced to Scottish waters.</p>

6c Wild Salmon and other migratory fish Objectives	Assessment of Objectives
<p>1 ■ ● ▲ Ensure an appropriate management and regulatory framework is in place to sustainably manage salmon and migratory fish and fisheries resources to provide significant economic and social benefits for the people of Scotland.</p>	<p>Economy: The objective supports the sustainable management of the resource contributing to a sustainable economy, and potentially safeguarding jobs within the sector. The regulatory framework protects salmon and migratory fish and improves transparency in the process, but imposes regulatory requirements on other sectors.</p> <p>Communities, population and human health: The objective's (indirect) support for a sustainable sector is likely to be of benefit to the communities for which migratory fish are of economic importance.</p> <p>Biodiversity, flora and fauna; Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>2 ▲ ◆ Maintain and where possible improve healthy salmon and migratory fish stocks in support of sustainable fisheries through sound science-based management.</p>	<p>Economy: The objective is positive overall as it supports sustainable fish stocks which in turn support the economy; it also supports jobs reliant on salmon and migratory fish.</p> <p>Communities, population and human health: The objective supports fish stocks and is positive for communities which rely on migratory fish.</p> <p>Biodiversity, flora and fauna: The objective's support for healthy stocks would be of benefit to wild salmon and migratory fish, which are identified as Priority Marine Features (Special Areas of Conservation have also been designated in Scotland to protect Atlantic salmon). The support of sustainable fisheries through stock sourced from hatcheries will be progressed in light of the requirements of GEN12 such that genetic integrity will be a consideration in decision-making.</p> <p>Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>3 ● Better understand interactions with other activities in marine and coastal areas and resolve key issues.</p>	<p>Economy: The objective is positive as it improves sustainability through understanding interactions with other sectors and activities.</p> <p>No impact identified for other topic areas.</p>

6c Wild Salmon and other migratory fish Policies	Assessment of Policies
<p>1 ●●◆ The impact of development and use of the marine environment on migratory fish species should be considered in marine planning and decision making processes. Where evidence of impacts on salmon and other migratory species is inconclusive, mitigation should be adopted where possible and information on impacts on migratory species from monitoring of developments should be used to inform subsequent marine decision making</p>	<p>Economy: The policy prevents detriment to wild salmon from other marine sectors, and safeguards the jobs associated with wild salmon fishing. The policy will involve trade-offs between the wild salmon/migratory fisheries sector and other marine sectors, but it is assumed that these trade-offs can be identified and incorporated into planning decisions. The policy is transparent and therefore reduces uncertainty. Overall its effects are considered to be positive.</p> <p>Communities, population and human health: The policy has some positive effect by protecting wild salmon from the impacts of other developments, and this supports communities for which wild salmon is important.</p> <p>Biodiversity, flora and fauna: The policy is positive overall as it avoids disturbance of wild salmon and other migratory fish.</p> <p>Water: The policy is positive overall as, indirectly, it avoids pollution.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>

7a Oil and gas Objectives	Assessment of Objectives
<p>1 ■ To maximise the recovery of oil and gas reserves in the North Sea basin and West of Scotland at minimum environmental cost; supporting jobs, activity (offshore and onshore support activities), energy security, balance of payments and taxation as well as driving economic activity and growth for Scotland.</p>	<p>Economy: The objective is positive as it supports the continuing role of oil and gas in Scotland’s marine economy and safeguards oil and gas related employment.</p> <p>Communities, population and human health: The objective will have some positive effect for coastal and island communities that are reliant on the oil and gas sector for employment.</p> <p>Biodiversity, flora and fauna; Water; Marine sediments: The extraction of oil and gas, particularly in deep offshore waters, has potential for negative effects (especially in the event of accidents/incidents) on habitats and species. The objective identifies that such exploitation should be at “minimum environmental cost” so this and the cross-cutting policies in Chapter 4 should act to avoid and/or reduce negative effects, e.g. policy GEN11, GEN12, GEN 18.</p> <p>Air: No significant impact identified from oil and gas extraction activities.</p> <p>Climatic factors: No significant impact identified from oil and gas extraction activities.</p> <p>Cultural heritage; Landscape/Seascape: No impact identified.</p>
<p>2 ■ As the resource declines, where practicable and where international agreements allow, seek to reuse or remove infrastructure from the sea bed and water column as is necessary. Ensure decommissioning is an agreed process involving all relevant stakeholders.</p>	<p>Economy: The objective is positive overall as reuse of infrastructure is sustainable for the economy (for example, carbon capture and storage). The removal of disused infrastructure may also reduce obstruction/collision hazards to new marine enterprise, while the objective also encourages consideration of impacts on other activities in decision-making.</p> <p>Communities, population and human health: no impacts identified.</p> <p>Biodiversity, flora and fauna; Water: Decommissioning has potential negative effects on biodiversity through possible pollution of the water environment. However, decommissioning would be progressed in accordance with the cross-cutting policies in Chapter 4 (e.g. GEN 11, 12 and 18), and the effects are therefore considered to be neutral. Leaving redundant infrastructure in situ may have positive effects in terms of habitat creation.</p> <p>Marine sediments: effects on marine sediments are uncertain. However, decommissioning would be progressed in accordance with the cross-cutting policies in Chapter 4 (e.g. GEN 11 and 12), and the effects are therefore considered to be neutral.</p>

7a Oil and gas Objectives	Assessment of Objectives
<p>3●● To ensure the industry delivers high level risk management across all its operations and that it is especially vigilant in more testing environments. Continued technical development of enhanced oil recovery and exploration and the associated seismic activity carried out according to the principles of the Best Available Technology Not Exceeding Excessive Cost (BATNEEC) and Best Environmental Practice (BAP) approach.</p>	<p>Air; Climatic factors; Cultural heritage; Landscape/Seascape: No impact identified.</p> <p>Economy: The objective will have cost implications for the oil and gas industry in the short term. However, in the long-term it is positive overall as high level risk management helps avoid adverse environmental effects on other sectors.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; Water: The objective is positive overall as it helps to reduce the risk of potential negative effects on biodiversity and water quality (including good ecological status). It may also be of benefit to cetacean populations if seismic activity is carried out according to the BATNEEC and BAP principles, as this would require that cetacean interests are considered proactively in the planning of such activity.</p> <p>Air, Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>4■● Where possible, to work with emerging sectors so transferring the experience, skills and knowledge built up in the oil and gas industry allowing other sectors to benefit and reduce their environmental impact</p>	<p>Economy: The objective is positive overall as skills and knowledge transfer helps to support jobs in related marine industries, and can reduce barriers to development of new marine enterprise opportunities.</p> <p>Communities, population and human health: no impacts identified.</p> <p>Biodiversity, flora and fauna; Water: The objective indirectly avoids environmental impacts through the transfer of environmental skills and knowledge.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>

7a Oil and gas Policies	Assessment of Policies
<p>OIL & GAS 1 : The Scottish Government will work with DECC and the industry to maximise and prolong oil and gas exploration and production whilst ensuring that the level of environmental risks associated with these activities are regulated. Activity should be carried out using the principles of BATNEEC (Best Available Technology Not Exceeding Excessive Cost and Best Environmental Practice (BAP). Consideration will be given to key environmental risks including impacts of noise and chemical pollution.</p>	<p>Economy: The policy is expected to have a positive effect on supporting the development of the marine economy, doing so without being to the detriment of other industries, and sustaining oil and gas related jobs in existing communities.</p> <p>Communities, population and human health: The policy is expected to have a positive effect on the resilience and cohesion of coastal and island communities, as it is likely to support employment in oil and gas in communities where they are reliant on this industry.</p> <p>Biodiversity, flora and fauna; Water: Positive effect as the policy seeks to reduce the risk of accidents. In the event of an incident occurring, Policy 6 would come into play.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>OIL & GAS 2 : Where re-use of oil and gas infrastructure is not practicable, either as part of oil and gas activity or by other sectors such as carbon capture and storage, decommissioning must take place in line with standard practice, and as allowed by international obligations. Reuse or removal of decommissioned assets from the sea bed will be fully supported where practicable and adhering to relevant regulatory process.</p>	<p>Economy: The policy is expected to have a positive effect on supporting the development of a sustainable marine economy through supporting reuse and decommissioning of infrastructure.</p> <p>Communities, population and human health: no impact identified.</p> <p>Biodiversity, flora and fauna; Water: The policy has positive environmental effects, in terms of removal of decommissioned assets, as it removes any pollution risks associated with them. There may be negative effects on opportunities for enhancing fisheries habitat, which would be lost through the removal of redundant infrastructure. Reuse would have the opposite effects.</p> <p>Marine sediments: removal might be beneficial; uncertain as to how much oil and gas infrastructure changes marine sediment patterns of movement.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape: No impact identified.</p>
<p>OIL & GAS 3 : Supporting marine infrastructure for oil and gas developments, including for storage, should utilise the minimum space needed for activity.</p>	<p>Economy: The additional effect this policy will have on the development of a sustainable marine economy is unclear, as it may simply reflect existing industry practice, and its impacts are likely to vary on a case by case basis. If the policy leads to additional regulation and licensing requirements, it may add to barriers to new marine enterprise opportunities.</p>

7a Oil and gas Policies	Assessment of Policies
	<p>Marine sediments: will be positive as it will reduce the amount of sea bed under development. Uncertain as to how much oil and gas infrastructure changes marine sediment patterns of movement.</p> <p>For the other topic areas no impacts are identified.</p>
<p>OIL & GAS 4 ▲●: All oil and gas platforms will be subject to 9 nautical mile consultation zones in line with Civil Aviation Authority guidance.</p>	<p>Economy: no impacts are identified.</p> <p>For the other topic areas no impacts are identified.</p>
<p>OIL & GAS 5 ▲●◆: Consenting and licensing authorities should have regard to the potential risks, both now and under future climates, to offshore oil and gas operations in Scottish waters, and be satisfied that installations are appropriately sited and designed to take account of current and future conditions.</p>	<p>Economy: The policy is expected to have a positive effect on supporting the development of a sustainable marine economy, as it encourages consideration of potential future environmental risks in consenting and licensing decisions.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; Air; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p> <p>Water and Climatic factors: The policy supports adaptation of infrastructure used by the offshore oil and gas industry to changing climatic conditions, which will assist in reducing accidents/incidents in Scottish waters. This would have the benefits set out in the assessment of Oil & Gas 1.</p>
<p>OIL & GAS 6 ▲●: Consenting and licensing authorities should be satisfied that adequate risk reduction measures are in place, and that operators should have in place sufficient emergency response and contingency strategies that are compatible with the National Contingency Plan.</p>	<p>Economy: no impact identified.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; Water: The policy is positive because risk reduction avoids adverse impacts on habitats and species and the water environment.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>

7b Carbon Capture and Storage Objectives	Assessment of Objectives
<p>1 ■ ◆ To facilitate safe, cost effective, and timely deployment of Carbon Capture and Storage (CCS) assisting the delivery of Scotland's climate change objectives.</p>	<p>Economy: Positive through commitment to support development of new marine enterprise opportunity that makes use of existing marine infrastructure.</p> <p>Climatic factors: positive for assisting in the reduction of greenhouse gas emissions from coastal-based industries, e.g. electricity generation.</p> <p>All other sectors: No impact identified</p>
<p>2 ● Scotland to be at the forefront of the development and deployment of CCS technology by delivering successful demonstration projects.</p>	<p>Economy: Positive through commitment to support development of new marine enterprise opportunity that makes use of existing marine infrastructure</p> <p>Communities, population and human health: no impact identified.</p> <p>Biodiversity, flora and fauna; Water; Marine sediments: No impact identified, providing the chapter 4 mitigating policies GEN11 and GEN18 within the plan protect these interests.</p> <p>Climatic factors: CCS acts to capture greenhouse gases, and this would be considered positive.</p> <p>Air; Cultural heritage; Landscape/Seascape: No impact identified.</p>
<p>3 ◆ ● Make CCS available as a realistic low carbon deployment option for electricity generation in advance of 2020, and support the decarbonisation of electricity generation by 2030, without affecting the security of supply and utilising existing infrastructure where possible.</p>	<p>As Objective 2, apart from:</p> <p>Air: No change from baseline. CCS does not deal with atmospheric emissions other than greenhouse gases.</p> <p>Marine sediments: reuse of existing infrastructure will be positive as it will reduce the amount of sea bed under development. Uncertain as to how much oil and gas infrastructure changes marine sediment patterns of movement.</p>
<p>4 ■ ◆ To further develop the existing oil/gas pipeline infrastructure and CO₂ storage capability, so that the North Sea can become Europe's principal hub for surplus CO₂ storage, servicing electricity</p>	<p>Economy: Positive through commitment to support development of new marine enterprise opportunity that makes use of existing marine infrastructure</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; Water; Marine sediments: potential negative effects of pipeline network</p>

7b Carbon Capture and Storage Objectives	Assessment of Objectives
<p>generators and heavy industry from sources in the UK and throughout Europe¹⁰².</p>	<p>development would be mitigated by the Chapter 4 policies.</p> <p>Air: No change from baseline. CCS does not deal with atmospheric emissions other than greenhouse gases.</p> <p>Climatic factors: CCS acts to capture greenhouse gases, and this would be considered positive</p> <p>Cultural heritage; Landscape/Seascape: No impact identified.</p>
<p>5 ■ ● Initiate an environmental assessment, with relevant agencies, to allow early consideration of the environmental issues with deployment of CCS.</p>	<p>Economy: Some positive effects through ensuring consideration of environmental issues in wider decision-making which supports sustainable economic development.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; Water; Marine sediments: No impact identified as the assessment will identify and address key issues.</p> <p>Air; Climatic factors: No impact identified.</p> <p>Cultural heritage; Landscape/Seascape: No impact identified.</p>

¹⁰² [Carbon Capture & Storage - A Roadmap for Scotland](#)

7b Carbon Capture and Storage Policies	Assessment of Policies
<p>CCS 1 ◆ ◆: CCS demonstration projects or developments should be supported where proposals allow timely deployment of CCS to re-use suitable existing redundant oil and gas infrastructure.</p>	<p>Economy: The policy is expected to have a positive effect on the development of a sustainable marine economy, and to contribute to the growth of CCS without detriment to other industries, particularly oil and gas. It may also help maintain employment in new or existing communities.</p> <p>Communities, population and human health: no impact identified.</p> <p>Biodiversity, flora and fauna; Water: The effects of this policy are mixed. The reuse of existing infrastructure potentially means less environmental effects than the installation of new infrastructure (positive). However, the reuse of existing infrastructure may raise pollution issues (negative).</p> <p>Marine sediments: reuse of existing infrastructure will be positive as it will reduce the amount of sea bed under development. Uncertain as to how much oil and gas infrastructure changes marine sediment patterns of movement.</p> <p>Air; Climatic factors: No impact identified.</p> <p>Cultural heritage: Reduces risk to cultural heritage by reusing existing infrastructure, and therefore positive effect.</p> <p>Landscape/Seascape: Reduces the need for new infrastructure and new landscape impacts with positive effect.</p>
<p>CCS 2 ◆ ◆ ◆: Consideration should be given to the development of marine utility corridors which will allow CCS to capitalise on current infrastructure in the North Sea including shared use of spatial corridors and pipelines</p>	<p>Economy: Marine utility corridors provide efficient use of resources which is positive for a sustainable economy, but their use could generate additional costs to some sectors and add barriers to new marine enterprise opportunities should they represent a departure from industries' existing practices.</p> <p>Communities, population and human health: No impacts identified.</p> <p>Biodiversity, flora and fauna: The reuse of existing corridors potentially means less environmental effects than a new route, which is a positive effect.</p> <p>Marine sediments: reuse of existing infrastructure will be positive as it will reduce the amount of sea bed under development. Uncertain as to how much oil and gas infrastructure changes marine sediment</p>

7b Carbon Capture and Storage Policies	Assessment of Policies
	<p>patterns of movement.</p> <p>Water; Cultural heritage: The reuse of existing corridors potentially means less environmental effects than a new route, which is a positive effect.</p> <p>Air; Climatic factors; Landscape/Seascape: No impacts identified.</p>






7c Renewable energy Objectives	Assessment of Objectives
<p>1 ■●◆ To promote the sustainable development of offshore wind, wave and tidal renewable energy in the most suitable locations.</p>	<p>Economy: The objective is positive as it supports development of new marine enterprise opportunities, and (where possible) in ways that minimise impacts on other marine economic activities and wider environmental and social impacts. The growth of renewables in the most suitable locations could however impact on other industries.</p> <p>Communities, population and human health: No impact identified.</p> <p>No impact identified on other topic areas as the policy includes the wording ‘sustainable development’ and ‘suitable locations’, and the chapter 4 policies will work with these to limit environmental effects.</p>
<p>2 ■◆ To achieve sustainable economic growth through the development of offshore renewable energy</p>	<p>Economy: The objective is positive as it supports development of new marine enterprise opportunities, and (where possible) in ways that minimise impacts on other marine economic activities and wider environmental and social impacts. Renewables growth could however result in detrimental impacts on other industries reliant on access or landscape quality.</p> <p>No impact identified on other topic areas as the policy includes the wording ‘sustainable economic growth’, and the chapter 4 policies will work with this to limit environmental effects.</p>
<p>3 ■◆ Ensure joined up marine planning and efficient licensing processes to help facilitate sustainable green energy development within Scottish waters.</p>	<p>Economy: The objective is positive overall as it supports reductions of barriers to new marine enterprises by supporting joined up marine planning and efficient licensing processes.</p> <p>No impact identified on other topic areas.</p>
<p>4 ■◆ To promote the development of an integrated terrestrial and marine electricity transmission grid in Scottish Waters</p>	<p>Economy: The objective is positive as it supports the development of new marine enterprise opportunities by promoting the development of required supporting infrastructure.</p> <p>Although grid development has potential for negative environmental effects, the chapter 4 cross-cutting policies will limit these.</p>
<p>5 ■◆ To contribute to achieving the renewables target to generate electricity equivalent to 50% of Scotland's gross annual electricity consumption from renewable sources by 2015 and 100% by 2020.</p>	<p>Economy: no impact identified.</p> <p>Communities, population and human health: no impact identified.</p> <p>No impact identified on other topic areas.</p>
<p>6 ■◆ Facilitate the development of demonstration facilities and projects</p>	<p>Economy: The objective is positive as it supports development of new marine enterprise opportunities by reducing barriers to testing and development.</p>

7c Renewable energy Objectives	Assessment of Objectives
for offshore wind, wave and tidal marine energy devices.	The potential significant impacts of demonstration facilities will be contained by application of the cross-cutting policies in Chapter 4.

7c Renewable energy Policies	Assessment of Policies
<p>RENEWABLES 1 ■● : There is a presumption in favour of adopted Plan Options¹⁰³ identified through the Sectoral Marine Plan process (map 13 refers). The inclusion of these adopted Plan Options in the National Marine Plan does not imply that licences or consents will be granted, but preference will be given to proposals within these areas.</p> <p>Note: these Sectoral Marine Plans are also subject to SA and details will be provided in the relevant reports</p>	<p>Economy: The policy is positive overall as it supports marine renewable energy development and supports the creation of new jobs in marine renewables. There will be trade-offs with other marine sectors, e.g. as a result of spatial exclusion, but the policy will also increase transparency over the preferred locations for marine renewables, thereby reducing uncertainty barriers to other sectors.</p> <p>Communities, population and human health: The policy supports renewables jobs which will in turn support community resilience.</p> <p>Biodiversity, flora and fauna; Water; Cultural heritage; Landscape/Seascape; Marine sediments: The policy has the potential for negative effects as it supports new development in the marine environment which could affect these interests. However, the cross-cutting policies in Chapter 4 will apply to the Sectoral Marine Plan process. The SEA of these sectoral plans will identify any adverse effects and measures for their mitigation.</p> <p>Air; Climatic factors: No impact identified.</p>
<p>RENEWABLES 2 ■●◆ : Support the development of the Pentland Firth and Orkney Waters Marine Energy Park¹⁰⁴. The Pentland Firth and Orkney Waters were identified in the Scottish Government's Strategic Environmental Assessment as areas of high energy resource for wave and tidal power. To aid potential development and to guide</p>	<p>Economy: The policy is expected to have a positive effect on the development of a sustainable marine economy, and offers increased certainty as to the location of these activities. The overall impact on other marine activities and employment is unclear, as these are likely to vary on a case by case basis.</p> <p>Communities, population and human health: The policy's contribution to the resilience and cohesion of coastal communities is unclear, as it is likely to depend on decisions made in the development of the park itself.</p> <p>Biodiversity, flora and fauna; Water; Cultural heritage; Landscape/Seascape; Marine sediments: The</p>

¹⁰³ The areas contained in Sectoral Marine Plans are referred to as adopted Plan Options. Blue Seas – Green Energy: A Sectoral Marine Plan for Offshore Wind Energy in Scottish Territorial Waters¹⁰³ was published in 2011. This Plan is currently being reviewed to identify further Plan Options. Plan Options are identified through a Scoping and Regional Locational Guidance process which identifies initial Areas of Search. Areas of search are zones of resource which have limited overlap with other sectoral use and/or areas of environmental sensitivity. These areas of search can become Plan Options which are subject to Sustainability Appraisal (including Strategic Environmental Assessment, Habitats Regulations Appraisal and Socio-economic Assessment,) or adopted Plan Options following Appraisal, Statutory Consultation and Ministerial decision making on the final Plan.

¹⁰⁴ Map to be included

7c Renewable energy Policies	Assessment of Policies
<p>development opportunities, draft Regional Locational Guidance¹⁰⁵ and a Marine Spatial Plan Framework¹⁰⁶ for the region have been published.</p> <p>Note: the Marine Spatial Plan Framework will be subject to SEA and details will be provided in the relevant reports</p>	<p>policy has the potential for negative effects as it supports new development in the marine environment which could affect these interests. However, the cross-cutting policies in Chapter 4 will apply to the Pentland Firth and Orkney Waters Marine Spatial Plan, and the SEA of the plan will identify any adverse effects and measures for their mitigation.</p> <p>Air; Climatic factors: No impact identified.</p>
<p>RENEWABLES 3   : There is a presumption in favour of renewable energy developments in areas identified to support the Saltire Prize (map x refers). Regional Locational Guidance (RLG)¹⁰⁷ has been produced to inform a further Scottish Leasing Round for wave and tidal energy projects to support The Saltire Prize.</p>	<p>As for Renewables 2.</p>
<p>RENEWABLES 4  : Applications for marine licenses and consents relating to offshore renewable energy projects should be made in accordance with the guidance set out in the marine licensing manual¹⁰⁸ and Marine Scotland's Licensing Policy Guidance (LPG) including the Survey, Deploy and Monitor LPG¹⁰⁹.</p>	<p>Economy: no impacts are identified against the economy objectives.</p> <p>No impact identified on other topic areas.</p>






¹⁰⁵ <http://www.scotland.gov.uk/Topics/marine/marineenergy/wave/rlg/pentlandorkney/RLGFinal>

¹⁰⁶ <http://www.scotland.gov.uk/Topics/marine/marineenergy/wave/rlg/pentlandorkney/mspfinal>

¹⁰⁷ The RLG is provided primarily to assist developers interested in competing for the Saltire Prize to identify and develop projects rapidly, but may also be of interest to planners and regulators..

¹⁰⁸ Ref needed

¹⁰⁹ Ref needed

7c Renewable energy Policies	Assessment of Policies
<p>RENEWABLES 5 : Specific impacts on species and habitats should be mitigated through appropriate design, construction and operation methods. Marine planning and decision making authorities should take these into consideration in their decision processes.</p>	<p>Economy: The policy is expected to have a positive effect on the development of a sustainable marine economy, as it encourages developers to mitigate against potential adverse environmental impacts. However, where this departs from existing practice, it is likely to impose additional costs on developers, which may increase barriers to new marine enterprise opportunities.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna: The policy is positive overall as it includes a requirement for mitigation of impacts on habitats and species, providing additional support for the policies in Chapter 4. This may also be positive for marine sediments.</p> <p>No impact identified on other topic areas.</p>
<p>RENEWABLES 6   : Where new grid connections are planned, work should be undertaken with developers and Grid provider organisations within the Sectoral Marine Planning process to address environmental and socio-economic issues to help deliver reduced impacts and develop an improved regional strategy.</p>	<p>Economy: The policy is expected to have a positive effect on the development of a sustainable marine economy, as it encourages development that mitigates against potential adverse environmental and socio-economic impacts on others. However, where this departs from existing practice, it is likely to impose additional costs on developers, which may increase barriers to new marine enterprise opportunities.</p> <p>Communities, population and human health: The policy is expected to make a positive contribution to the resilience and cohesion of coastal and island communities because it ensures that socio-economic issues are addressed when planning and constructing new grid connections.</p> <p>Biodiversity, flora and fauna; Water; Cultural heritage; Landscape/Seascape; Marine sediments: The policy is positive as it supports working together to address issues and to deliver reduced impacts on these environmental interests.</p> <p>Air; Climatic factors: No impact identified.</p>
<p>RENEWABLES 7 : There is a presumption that cables will be buried or rock dumped.</p>	<p>Economy: The effect of this policy on the development of a sustainable marine economy, and its contribution to the growth of marine industries without detriment to others, is unclear, as impacts are likely to vary on a case by case basis. If the policy differs from current industry practice, it may increase industry construction and operating costs, which could increase barriers to new marine enterprise opportunities.</p> <p>Communities, population and human health: No impact identified.</p>

7c Renewable energy Policies	Assessment of Policies
	<p>Biodiversity, flora and fauna; marine sediments: The environmental impacts of cable laying methods are generally local and temporary, although they could impact adversely on habitats and species. Policy GEN12 protects protected areas, habitats and species, so will work to prevent this adverse effect.</p> <p>Water; Air; Climatic factors; Landscape/Seascape: No impact identified.</p> <p>Cultural heritage: Cable burying and rock dumping may be detrimental to marine historic environment features. Policy GEN 13 protects the historic environment, so will work to prevent this adverse effect.</p>
<p>RENEWABLES 8 ■: Developers should report on the effects of offshore projects and their onshore elements within a single EIA and a single HRA document.</p>	<p>No impact identified for all topics.</p>
<p>RENEWABLES 9 ■●: Developers bringing forward proposals for new developments must actively engage at an early stage with existing users of the area to which the proposal relates; and of adjoining areas which may be affected.</p>	<p>Economy: The policy is expected to make a positive contribution to developing a sustainable marine economy because engagement with other sectors supports sustainable economic growth, and also avoids detrimental impacts on other sectors. The policy may also have both positive and negative effects as active engagement with other sectors may help to remove or avoid barriers to new marine enterprise opportunities from others' opposition. However, it may also add to developers' costs if it imposes new obligations on them, which may act as a barrier.</p> <p>Communities, population and human health: The policy is positive because active engagement with communities will ensure that their views on accessibility and connectivity are taken into account.</p> <p>No impact identified for other topics.</p>
<p>RENEWABLES 10 ●: Scenario mapping should be undertaken for commercial scale development to allow local communities to fully understand the range of possible implications.</p>	<p>The policy is expected to make a positive contribution to developing a sustainable marine economy because engagement with other sectors supports sustainable economic growth, and also avoids detrimental impacts on other sectors. The policy may also have both positive and negative effects as active engagement with other sectors may help to remove or avoid barriers to new marine enterprise opportunities from others' opposition. However, it may also add to developers' costs if it imposes new obligations on them, which may act as a barrier.</p> <p>Communities, population and human health: The policy is positive because active engagement with communities will ensure that their views on accessibility and connectivity are taken into account.</p>

7c Renewable energy Policies	Assessment of Policies
	No impact identified for other topics.
<p>RENEWABLES 11 ♦ 11: Government will work with developers to maximise economic benefit and reduce climate change impacts in Scotland.</p>	<p>Economy: The policy is expected to make a positive contribution to the sustainable development of the marine economy, as it encourages inclusion of wider environmental impacts in decision-making, and signals support for developments that generate economic benefit.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; Water; Marine sediments: potential benefits from reducing climate change; effects of adaptation measures likely to be neutral.</p> <p>Air; Cultural heritage; Landscape/Seascape: No impact identified.</p> <p>Climatic factors: The policy is positive as it seeks to reduce climate change impacts in Scotland, presumably through adaptation actions.</p>

8 Recreation and tourism Objectives	Assessment of Objectives
<p>1 ■ ● Continue to develop and consolidate Scotland as a world class sustainable tourism and marine recreation destination</p>	<p>Economy: Positive through commitment to support development of tourism, leisure and recreation in a manner consistent with sustainable development. However, promotion of recreation and tourism may impact on other uses of the marine environment.</p> <p>Communities, population and human health: Some positive effects as the objectives supports promotion of access to the coastal and marine resource for tourism and recreation.</p> <p>Biodiversity, flora and fauna; Water: The objective's wording refers to sustainable tourism and recreation. The policy has mixed effects: improved management of the resource to support recreation activity (positive), but also issues around disturbance, e.g. of wildlife, aquatic environment generally, etc (negative). The chapter 4 policies GEN11, 12 and 18 will work to mitigate these negative effects.</p> <p>Air: Increased tourism activity could have adverse local impacts on air quality, but these are unlikely to impact on air quality limits.</p> <p>Climatic factors: Developing and consolidating Scotland as a sustainable recreation destination is unlikely to reduce greenhouse gas emissions, and may increase them. Policy GEN 19 may assist through encouraging developers, users and planners to consider climate change issues as part of their work.</p> <p>Cultural heritage: positive effect as sustainable tourism and recreation may increase knowledge and understanding about the marine historic environment, but also potential for negative effects from recreation pressure. Chapter 4 policy GEN13 will assist in mitigation, since it seeks to protect historic environment assets.</p> <p>Landscape/Seascape: There is potential for both positive and negative effects on this topic area. Sustainable tourism and marine recreation should support the quality of the landscapes on which it is reliant; however, tourism and recreation infrastructure could have negative landscape impacts. Chapter 4 policy GEN14 will assist in mitigation, since it ensures consideration of the landscape and seascape in planning for these activities.</p> <p>Marine sediments: Commitment to sustainable tourism should assist in protecting seabed (e.g. from anchoring damage).</p>

8 Recreation and tourism Objectives	Assessment of Objectives
2 ■ ● ◆ Encourage the sustainable development of marine and coastal recreation activities and industries in Scotland	As Objective 1.
3 ■ ● Ensure continued and improved access to marine and coastal resources for leisure activities and recreational use. Improve existing, and develop new facilities, and encourage the sharing of facilities and supporting infrastructure	As Objective 1.
4 ● Improve data on marine and coastal recreational activities, including key recreation resources and access points, enabling better targeted and long term planning for these activities.	<p>Economy: greater provision of data may help to reduce informational barriers to development of new marine enterprise opportunities.</p> <p>No impact identified on other topic areas; however, improving data and informing planning could have positive and negative effects on the environment through supporting increased infrastructure provision or informing where activities may be having a detrimental effect on the environment.</p>
5 ■ ● Support participation in a range of waterborne recreational activities that support participation and sport development, encourage an appreciation of the environment in which they take place, contribute to life skills and support a healthier nation	<p>Economy: no impact identified</p> <p>Communities, population and human health: positive impact on promotion of access to the coastal and marine resource for tourism and recreation.</p> <p>Biodiversity, flora and fauna; water; marine sediments: Increased participation could result in negative effects from disturbance to wildlife and to the seabed, water pollution etc., but the Chapter 4 policies will work to reduce these effects. No impact identified on other topic areas.</p>

8 Recreation and tourism Policies	Assessment of Policies
<p>REC & TOURISM 1 ●: Proposals for recreation and tourism activities or developments that are subject to marine licensing or other consents, including terrestrial planning, should take the following factors into account:</p> <ul style="list-style-type: none"> ● the extent to which the proposal interferes with access to the shore, the water, use of the resource for recreation or tourism purposes, existing navigational routes or navigational safety ● the extent to which the proposal is likely to adversely affect the qualities important to recreational users ● where significant impacts are likely, whether reasonable alternatives can be identified for the proposed activity or development ● where there are no reasonable alternatives, whether mitigation through recognised measures can be achieved at no significant cost to the marine leisure or tourism sector interests <p>Proposals supporting tourism and recreation activity will be looked upon favourably within the context of the</p>	<p>Economy: Mixed effects: this policy ensures consideration of recreation alongside other marine activities and helps to avoid conflict with other marine users (positive), although there are likely to be costs incurred by other sectors taking recreation into account, and some trade-offs between activities may arise (negative).</p> <p>Communities, population and human health: Supports balance between recreation and tourism and other marine users, which may support coastal and island communities reliant on recreation and tourism. However, there are likely to be some trade-offs between users.</p> <p>Biodiversity, flora and fauna; Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: This policy has the potential for negative effects but these will be mitigated by planning and consenting decision-makers using the cross-cutting policies in Chapter 4. It is therefore expected that the overall environmental effects of this policy will be neutral.</p>

8 Recreation and tourism Policies	Assessment of Policies
other policies of the plan.	
<p>REC & TOURISM 2 ■: Marine planning authorities should identify areas within their region that are of recreational value and where prospects for significant development exist, including more localised and/or bespoke recreational opportunities.</p>	<p>Economy: The policy would benefit from the inclusion of the word ‘sustainable’ to ensure balance between economic, social and environmental interests.</p> <p>The policy may make a positive contribution to the development of a sustainable marine economy. However, its impact may vary on a case by case basis, depending on whether it leads to restrictions or presumptions against other activities in recreation areas, or restricts development of tourism and recreation elsewhere.</p> <p>Communities, population and human health: The policy provides positive support for access to the coastal and marine resource for tourism and recreation purposes</p> <p>Biodiversity, flora and fauna; Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: This policy may have mixed effects: focusing interest in a particular area will increase recreational pressure on that area but may relieve pressure on another, more sensitive area. The identification of locations for significant development will be undertaken in accordance with the cross-cutting policy framework set out in Chapter 4, and this should take environmental sensitivities into account as part of the marine planning process. (Regional Marine Plans will also be subject to SEA. As noted above, the policy would benefit from inclusion of the word ‘sustainable’ to ensure that environmental interests are included in the recreational planning process.</p>
<p>REC & TOURISM 3 ■●: Access to the marine area and appropriate facilities to enjoy recreation and tourism are protected, provided, maintained and/or improved.</p>	<p>Economy: the overall effect of this policy is unclear, as its impacts on sustainable development, other activities and barriers to new marine enterprise opportunities may vary on a case by case basis.</p> <p>Communities, population and human health: supports access for recreation and tourism.</p> <p>Biodiversity, flora and fauna; Water; Air; Climatic factors; Landscape/Seascape; Marine sediments: where access is “provided”, there may be adverse effects depending on the nature of the work. Cross-cutting policies should mitigate this effect such that it can be avoided.</p> <p>Cultural heritage: A positive effect through increased understanding and knowledge of the marine historic environment through the support of access and facilities.</p>
<p>REC & TOURISM 4 ●◆: Marine recreation and tourism activity should</p>	<p>Economy: Mixed effects: this policy may result in costs to the recreation and tourism sector (negative) but also supports long-term sustainability of the environment that supports recreation and tourism (positive).</p>





8 Recreation and tourism Policies	Assessment of Policies
<p>not unacceptably impact on sensitive or important habitats and species, those most vulnerable to a changing climate, or those, such as salt marsh and sea grass, which help mitigate climate change</p>	<p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; Marine sediments: Strongly positive as the policy supports protection of habitats and species.</p> <p>Water: Habitats and species are reliant on water quality, and therefore the policy provides positive support for water quality.</p> <p>Air: No impact identified.</p> <p>Climatic factors: The policy protects habitats important as carbon sinks, which will assist in reducing the effects of greenhouse gas emissions.</p> <p>Cultural heritage: There may be indirect benefits where cultural heritage features coincide with important habitats or species, e.g. crannogs.</p> <p>Landscape/Seascape: There may be indirect benefits where important landscapes coincide with important habitats or species.</p>
<p>REC & TOURISM 5 ●: Consideration should be given to the facility requirements of marine recreation with a focus on support for participation and development in sport. Co-operation and sharing infrastructure or facilities with complementary sectors will be supported by decision makers</p>	<p>Economy: This policy potentially reduces barriers to shared and multi-use developments of marine infrastructure. .</p> <p>Communities, population and human health: Supporting the provision of facilities will support access to the coast for recreation and potentially support provision of community facilities.</p> <p>Biodiversity, flora and fauna; Cultural heritage; Landscape/Seascape; Marine sediments: The provision of facilities has the potential for negative effects, e.g. through land take. As with Rec & Tourism 2, this policy may have mixed effects: providing facilities in a particular area will increase recreational pressure on that area but may relieve pressure on another, more sensitive area or over the wider area. The policies in Chapter 4 will assist in mitigating negative effects, e.g. policies GEN12 and GEN17 mitigate negative effects by supporting protected habitats and species and coastal processes, GEN13 seeks to protect and enhance heritage assets, and GEN14 seeks to take seascape and landscape impacts into account.</p> <p>Water; Air; Climatic factors: No impact identified.</p>

8 Recreation and tourism Policies	Assessment of Policies
<p>REC & TOURISM 6 ●: The impact of new recreation and tourism activities or development on coastal residents should be taken into account when decisions are being made.</p>	<p>Economy: this policy is expected to contribute positively to the sustainable development of the marine economy, as it encourages the wider impacts of recreation and tourism activities and developments to be taken into account in decision-making.</p> <p>This policy is likely to contribute to the cohesion and resilience of local communities (Communities, population and human health). No other impacts are identified.</p>
<p>REC & TOURISM 7 ●: Codes of practice on invasive non-native species should be complied with.</p>	<p>Economy: Positive for a sustainable economy as the policy helps to avoid introduction and/or spread of invasive non-native species which, uncontrolled, could have adverse effects on other economic activities.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; Marine sediments: Positive as the policy protects key species and marine and coastal ecosystems from the threat of invasive non-native species.</p> <p>Water: Positive as the policy helps to avoid release of invasive non-native species, which supports ecological status of waters.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape: No impact identified.</p>

9 Transport: Shipping, ports, harbours and ferries Objectives	Assessment of Objectives
<p>1 ■ To protect navigational safety in relevant areas used by shipping now and in the future</p>	<p>Economy: Protecting navigational safety contributes to a sustainable marine economy, and allows different sectors to operate in harmony, but this may incur costs for some industries. Overall, however, it avoids the creation of physical barriers to marine enterprise opportunities.</p> <p>Communities, population and human health: The objective is positive overall through helping to maintain connectivity and accessibility of communities and potentially supporting access to the coastal and marine resource for tourism and recreation.</p> <p>Biodiversity, flora and fauna; Water: This objective is positive, as it will work to avoid accidents/incidents (e.g. collisions), which will in turn protect biodiversity, water quality and ecological status.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>2 ■ To maintain and grow business in Scottish Ports</p>	<p>Economy: The objective is positive overall by supporting business growth which also safeguards and creates jobs.</p> <p>Communities, population and human health: There is a potential positive effect on coastal and island communities that are economically reliant on ports.</p> <p>Biodiversity, flora and fauna; Water; Air; Cultural heritage; Landscape/Seascape; Marine sediments: There are potential negative environmental effects resulting from increased port activity including pollution and disturbance. This could include adverse effects on marine sediments if growth results in need for dredging. The policies in Chapter 4 will work to mitigate adverse effects, e.g. GEN11, 12, 13, 14, 15 and 18.</p> <p>Climatic factors: Increases in vessel activity are likely to result in an increase in greenhouse gas emissions. The ports will need to consider ways in which such increases could be mitigated, e.g. cold-ironing, offsetting, etc.</p>
<p>3 ■ To encourage and support development of port and harbour infrastructure</p>	<p>Economy: The objective is positive overall as developing infrastructure supports economic growth, but this may have negative effects on other users of ports. Overall improving infrastructure helps to safeguard jobs and ensures ports provide appropriate facilities to support new or existing enterprise.</p>






9 Transport: Shipping, ports, harbours and ferries Objectives	Assessment of Objectives
	<p>Communities, population and human health: The objective will potentially contribute positively to improving the accessibility and connectivity of remote island communities. Infrastructure may also improve access for coastal and marine recreation and the economy of coastal and island communities.</p> <p>Biodiversity, flora and fauna; Water; Cultural heritage; Landscape/Seascape; Marine sediments: There are potential negative effects on these environmental interests from the development of port infrastructure. The policies in Chapter 4 will work to mitigate adverse effects, e.g. GEN11, 12, 13, 14, 15 and 18.</p> <p>Air; Climatic factors: No impact identified from infrastructure development.</p>
4 ■● To safeguard essential maritime transport links to island and remote mainland communities	<p>Economy: The objective is overall positive as it protects maritime links to existing communities and the jobs within the communities. It prevents the creation of barriers to new or existing enterprise opportunities which rely on transport links to island and remote mainland communities.</p> <p>Communities, population and human health: The objective is overall positive as it maintains accessibility through transport links to communities which also supports community resilience.</p> <p>Biodiversity, flora and fauna; Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
5 ■ To maximise the tourism potential of ports and harbours	<p>Economy: The objective is positive overall as it supports sustainable economic growth, and ensures consideration of tourism alongside other sectors. It also safeguards tourism-related jobs and prevents physical barriers to new tourism enterprise. Maximising tourism potential of ports and harbours could, however, limit the activities of other industries so there would be trade-offs.</p> <p>Communities, population and human health: The objective is positive overall as it helps to maintain the accessibility and connectivity of island and coastal communities and increases access for tourism and recreation. This will also help support a wider economic base, supporting community resilience.</p> <p>Biodiversity, flora and fauna; Marine sediments: Increasing tourism potential of ports could have negative effects on biodiversity through increasing levels of disturbance. This would be mitigated by Policy GEN11 and GEN12, which support protection of marine ecosystems and protected areas, habitats and species.</p> <p>Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape: No impact identified.</p>

9 Transport: Shipping, ports, harbours and ferries Objectives	Assessment of Objectives
<p>6 ♦ To contribute to climate change mitigation and improve air quality by increasing the availability of shore based electricity when in port, supporting efficiencies in fleet management and technology advances, and ensuring port infrastructure and shipping services are able to adapt to the consequences of climate change</p>	<p>Economy: The objective is positive overall as it improves the sustainability of the marine economy through improving efficiencies of ships in port. There will be costs involved for the provision of additional electricity generation.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; water; cultural heritage; landscape/seascape; marine sediments: No impact identified.</p> <p>Air: The objective has a positive impact on local air quality through reducing use of ship fuel when in port.</p> <p>Climatic factors: The objective has a positive impact as it increases efficiency by reducing fuel use of ships when in port. It also supports climate change adaptation by ensuring port infrastructure and shipping services are able to adapt. .</p>

9 Transport: Shipping, ports, harbours and ferries Policies	Assessment of Policies
<p>TRANSPORT 1  : Navigational safety in relevant areas used by shipping now and in the future will be protected, respecting the rights of innocent passage and freedom of navigation contained in UNCLOS. The following factors will be taken into account when reaching decisions regarding activities and developments:</p> <p>(a) the extent to which the locational decision interferes with existing or planned shipping routes, access to ports and harbours and navigational safety.</p> <p>(b) where interference is likely, whether reasonable alternatives can be identified.</p> <p>(c) where there are no reasonable alternatives, whether mitigation through measures adopted in accordance with the principles and procedures established by the International Maritime Organization can be achieved at no significant cost to the shipping or ports sector.</p>	<p>Economy: The policy has mixed effects: it protects existing and future shipping routes and supports the operation of different activities alongside each other (positive), although this may mean that the growth of activities may be to the detriment of others (negative). It may also safeguard existing jobs which rely on maintaining access and avoids the creation of physical barriers to access.</p> <p>Communities, population and human health: Positive overall as the policy facilitates navigational access to island and coastal communities and protects recreational access (where these may use shipping lanes).</p> <p>Water: Indirect positive effect as the risk of collisions and pollution incidents is reduced.</p> <p>Climatic factors: No impact identified unless longer/shorter routes to navigate.</p> <p>Biodiversity, flora and fauna; Air; Cultural heritage; Landscape/Seascape: No impact identified.</p> <p>Marine sediments: As this policy focuses on navigational safety, no impact identified. (Potential positive effect if this induces dredging for additional/replacement shipping lanes.)</p>
<p>TRANSPORT 2  : Marine development and activities should not be permitted where they will restrict access to ports and harbours which are nationally or regionally significant, or which are identified as National Developments¹¹⁰ in the</p>	<p>Economy: The policy has mixed effects: it protects access to nationally and regionally important ports and harbours, and requires consideration of access to ports in decision-making, which also supports sustainable economic growth (positive). However, the protection of ports in this manner may place restrictions on the development of other activities (negative).</p> <p>Communities, population and human health: The objective supports economic development by ensuring</p>

¹¹⁰ Ref to National Developments in NPF

9 Transport: Shipping, ports, harbours and ferries Policies	Assessment of Policies
<p>current National Planning Framework or as priorities in the National Renewables Infrastructure Plan (map 15 refers). Regional Marine Plans should identify regionally important ports and harbours and set out criteria against which proposed activities and developments should be evaluated.</p>	<p>access is maintained which supports community resilience.</p> <p>Biodiversity, flora and fauna; Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>TRANSPORT 3 ●: Ferry routes and maritime transport links to island and remote mainland activities provide essential connections and should be safeguarded from inappropriate marine activities and development that would significantly interfere with their operation. Developments will not be consented where they will interfere with lifeline ferry services.</p>	<p>Economy: The policy is positive as it protects transport links to island and remote communities which supports economic development in these areas. However, it may restrict scope for development of other activities.</p> <p>Communities, population and human health: The policy supports maintenance of accessibility and connectivity of remote island and coastal communities.</p> <p>Biodiversity, flora and fauna; Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>TRANSPORT 4 ●: Maintenance, repair and development of port and harbour facilities in support of other sectors in the Plan, including renewables, fishing and marine tourism and recreational activities should be supported in marine planning and decision making.</p>	<p>Economy: The policy is overall positive and supports the maintenance of port facilities to support other economic activities which supports a range of marine industries.</p> <p>Communities, population and human health: The policy is expected to have a positive impact on maintaining accessibility and connectivity of remote island and coastal communities, which helps contribute to their resilience.</p> <p>Biodiversity, flora and fauna; Water; Air; Climatic factors; Cultural heritage; Landscape/Seascape: Any development of ports and harbour facilities would be progressed in light of the cross-cutting policies in Chapter 4, which should result in the adverse effects of such development being avoided. This will rely on environmental issues being integrated into project planning and design.</p> <p>Marine sediments: The cross-cutting policies in Chapter 4 will apply to any development of port and harbour facilities, which should result in neutral effects on marine sediments</p>
<p>TRANSPORT 5 ◆: Port and harbour operators should take into account</p>	<p>Economy: The policy has a positive effect as it encourages the incorporation of potential future climate change impacts into decision-making.</p>

9 Transport: Shipping, ports, harbours and ferries Policies	Assessment of Policies
<p>future climate change and sea level projections, and where appropriate take the necessary steps to ensure their ports and harbours remain viable and resilient to a changing climate. Climate and sea level projections should also be taken into the account in the design of any new ports and harbours, or of improvements to existing facilities.</p>	<p>Communities, population and human health: no impacts identified.</p> <p>Climatic factors: The policy is positive because it supports climate change adaptation.</p> <p>Biodiversity, flora and fauna; Water; Air; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>TRANSPORT 6   : Increased emissions caused by longer shipping journeys should be taken into account in considering proposals for marine activity and development that would result in increased existing shipping route length.</p>	<p>Economy: The policy Is expected to have a positive effect on sustainable development as it encourages the inclusion of wider environmental costs into decision-making.</p> <p>Communities, population and human health: no impact identified.</p> <p>Climatic factors: The policy is positive in that it works to avoid increases in greenhouse gas emissions from shipping</p> <p>Biodiversity, flora and fauna; Water; Air; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>TRANSPORT 7  : Statutory notices for the merchant shipping sector on ship to ship transfers of oil as cargo must be adhered to.¹¹¹</p>	<p>Economy: The policy is positive overall as it is a form of risk management which supports a sustainable economy, and also avoids adverse impacts on other industries (particularly sectors that rely on good water quality).</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna: The policy is positive overall as it ensures environmental issues are</p>

¹¹¹ Assessment assumes this refers to http://www.dft.gov.uk/mca/080508_final_si_sts_for_cons.pdf which notes that ship to ship transfers of cargo of a hazardous nature are subject to prior authorisation by the relevant harbour authority as part of a programme of transfers in respect of which the Secretary of State has given environmental consent, having carried out an assessment of the programme's likely impact on the environment by the procedure set out in Schedules 1 and 2 to the Regulations. Where a programme of transfers may have an effect on a European site, the procedure implements Article 6 of the Habitats Directive

9 Transport: Shipping, ports, harbours and ferries Policies	Assessment of Policies
	<p>evaluated, which should avoid risk to biodiversity.</p> <p>Water: The policy is positive overall as it ensures environmental issues are evaluated, which should avoid risk to the water environment.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape; Marine sediments: No impact identified.</p>
<p>TRANSPORT 8 🟢: Marine planning authorities and decision makers should ensure that decisions comply with maritime law. International Maritime Organization (IMO) regulations for ship recycling and IMO best practice recommendations for Ballast Water Management should be adhered to.</p>	<p>Economy: The policy is positive overall because it improves the sustainability of ship recycling and ballast water activities, reducing the potential for negative effects on other industries.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; marine sediments: The policy is positive overall because better regulation of ship recycling and ballast water is positive for species and habitats both in Scotland and at a global level.</p> <p>Water: The policy is positive overall because better regulation of ship recycling and ballast water is positive for the water environment both in Scotland and at a global level.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape: No impact identified.</p>

10 Telecommunications cables Objectives	Assessment of Objectives
<p>1. ■ ◆ To protect submarine cables whilst achieving successful seabed user co-existence.</p>	<p>Economy: The objective supports the economic use of the marine environment in a manner beneficial (or not detrimental) to other marine activities.</p> <p>Marine sediments: No impact identified (this is about protection of submarine cables, not encouraging development of the seabed).</p> <p>No impact identified for other topic areas.</p>
<p>2. ● ◆ To achieve the highest possible quality and safety standards and reduce risks to all seabed users and the marine environment.</p>	<p>Economy: The objective supports the development of a sustainable marine economy as it seeks to avoid physical risks to all seabed users and risks to the marine environment.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna: The objective potentially reduces risk to marine species and coastal ecosystems.</p> <p>Water: The objective potentially reduces risk to water quality.</p> <p>Marine sediments: No impact identified (this is about protection of submarine cables, not encouraging development of the seabed).</p> <p>No impact identified for other topic areas.</p>

10 Telecommunications cables Policies	Assessment of Policies
<p>TELECOMMUNICATION CABLES 1 ● ▲: Network owners and marine users should take a joined up approach to development and activity to minimise impacts on the environment</p>	<p>Economy: The policy has both positive and negative effects as it brings potential benefits but also costs to network owners and marine users as they adopt a joined-up approach.</p> <p>Communities, population and human health: no impacts identified.</p> <p>Biodiversity, flora and fauna; marine sediments: The policy is positive as it seeks to minimise impacts on the environment, potentially through focusing activity in fewer locations to reduce disturbance.</p> <p>Water: The policy is positive as it seeks to minimise impacts on the environment.</p> <p>Climatic factors: There is a possible positive effect as there is potential for shared resources for maintenance.</p> <p>Cultural heritage: There is a potential positive effect as a more joined up approach reduces risk to the environment and the policy seeks to minimise impacts on the environment.</p> <p>Air; Landscape/Seascape: No impact identified.</p>
<p>TELECOMMUNICATION CABLES 2 ● ▲: Consideration should be given to creation of cable corridors to protect cables from damage by other marine users and where possible routed around obstacles to avoid displacement or disturbance. Proposals for co-location with other sectors such as shared use of spatial corridors and pipelines should be supported.</p>	<p>Economy: The policy has a potential positive effect through avoiding conflict between marine users through the creation of cable corridors and avoiding barriers, however this may also incur costs to developers laying cables as they have to take longer routes to fit with corridors.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; marine sediments: The policy is positive as it seeks to minimise impacts on the environment, potentially through focusing activity in fewer locations to reduce disturbance.</p> <p>Water: The policy is positive as it seeks to minimise impacts on the environment.</p> <p>Climatic factors: There is a possible positive effect as there is potential for shared resources for maintenance.</p>

10 Telecommunications cables Policies	Assessment of Policies
	<p>Cultural heritage: There is a potential positive effect as using cable corridors reduces risk to the environment.</p> <p>Air; Landscape/Seascape: No impact identified.</p>
<p>TELECOMMUNICATION CABLES 3 ● ▲: A risk based approach should be applied to the removal of redundant submarine cables with consideration given to cables being left in situ minimising environmental impact.</p>	<p>Economy: The policy is positive overall as it avoids unnecessary cable removal, supports cable removal where it poses a risk to other marine users.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna: The policy is positive because it seeks to avoid unnecessary cable removal where this would create risks to the environment.</p> <p>Water: The policy is positive because it seeks to avoid unnecessary cable removal where this would create risks to the environment.</p> <p>Cultural heritage: The policy is potentially positive as it may lead to cables being left in situ where their removal would negatively impact on cultural heritage resources.</p> <p>Marine sediments: No impact identified (assumes cables are buried and that there is no influence on patterns of sediment movement).</p> <p>Air; Climatic factors; Landscape/Seascape: No impact identified.</p>
<p>TELECOMMUNICATION CABLES 4 ▲ ◆: When seeking locations for land-fall of telecommunications equipment and cabling, marine developers and decision makers should consider the policies pertaining to flooding and coastal protection in Chapter 4 of the NMP, as well as those outlined in SPP.</p>	<p>Economy: The policy is positive because it supports the sustainable location of equipment and protects future interests from flooding impacts.</p> <p>Biodiversity, flora and fauna: The policy invokes the use of the Chapter 4 policies in relation to flooding and coastal protection which protects coastal ecosystems.</p> <p>Marine sediments: The policy invokes the use of the Chapter 4 policies and this also applies to marine sediments, in terms of prevention of coastal erosion and/or its exacerbation.</p> <p>No impact identified on other topics.</p>

11 Defence Objectives	Assessment of Objectives
<p>● In order for the Royal Navy Army and Royal Air Force to use Scotland's seas for defence purposes they require:</p> <ul style="list-style-type: none"> • The ability to deploy and develop a flexible and broad range of capabilities. • The exclusive use of certain areas during particular times of the year. • To use exemptions in planning law for the purposes of national security. • To retain the statutory right to close areas in internal waters and create by laws for complete closures and exclusions. 	<p>Economy: overall impacts unclear, although there is the potential for some negative impacts through the potential exclusion and restriction of other marine activities in affected areas. As such, defence activities may impose barriers to new marine enterprise activities. However, other activities have coexisted alongside defence activities for a long time (as evidenced by agreements between MoD and some marine sectors, e.g. fishing).</p> <p>Communities, population and human health: Defence activities do not change existing access to remote and island communities, and they maintain defence jobs which support some coastal communities.</p> <p>Biodiversity, flora and fauna; Water; Air; Climatic factors; Marine sediments: The objectives are procedural and therefore do not directly impact on these topic areas (although operational activities may have some adverse effects, these are outwith the scope of this SA).</p> <p>Cultural heritage; Landscape/Seascape: No impact identified.</p>

11 Defence Policies	Assessment of Policies	
<p>MOD 1 ●: To allow the MOD to maintain operational effectiveness in Scottish waters used by the armed services by managing activity and development in these areas:</p> <p>(i) Naval areas including bases and ports (Map 16): Safety of navigation and access to naval bases and ports will be maintained. The extent to which a development or use interferes with access or safety of navigation, and whether reasonable alternatives can be identified will be taken into account by consenting bodies. Development proposals should be discussed with the MOD at an early stage in the process.</p> <p>(ii) Firing Danger Areas (Map 16): Permanent infrastructure is unlikely to be compatible with the use of Firing Danger Areas by the MOD. Permitted activities may have temporal restrictions imposed. Proposals for development and use should be discussed with the MOD at an early stage in the process.</p> <p>(iii) Exercise Areas (Map 16): Within Exercise Areas, activities may be subject to temporal restrictions. Development that either individually or cumulatively obstructs or otherwise prevents the defence</p>	<p>Economy: The policy does not incur change from the baseline and facilitates continued defence use.</p> <p>Communities, population and human health: The policy does not incur change from the baseline.</p> <p>No impact identified for other topic areas.</p>	

11 Defence Policies	Assessment of Policies	
<p>activities supported by an exercise area may not be permitted. Development proposals should be discussed with the MOD at an early stage in the process.</p> <p>(iv) Communications: Navigations and surveillance including RADAR: Development which causes unacceptable interference with RADAR and other systems necessary for national defence may be prohibited if mitigation cannot be determined. Proposals should be discussed with the MOD at an early stage in the process</p>		
<p>MOD 2 ●: Where required for the purposes of national defence, the MOD may establish bye-laws for exclusions and closures of sea areas. In most areas this will mean temporary exclusive use of areas by the MOD. Where potential for conflict is identified, appropriate mitigation will be identified and agreed with the MOD, prior to planning permission , a marine licence, or other consent being granted.</p>	<p>Economy: The policy facilitates defence activities, and supports mitigation of potential conflicts between exclusion areas and closures.</p> <p>Communities, population and human health: The policy provides mitigation for potential conflicts and therefore has a neutral impact on this topic area.</p> <p>No impact identified for other topic areas.</p>	
<p>MOD 3 ■●: The established code of conduct for managing fishing and military activity detailed in the documents 'Fishing Vessels</p>	<p>Economy: The policy supports the management of conflict between fishing and military activity which is positive for the support of a sustainable marine economy.</p> <p>No impact identified for other topic areas.</p>	

11 Defence Policies	Assessment of Policies
<p>operating in Submarine Exercise Areas¹¹² and 'Fishing vessel avoidance: The UK Code of Practice Fishing Vessel Avoidance'¹¹³ will be adhered to.</p>	

¹¹² Fishing Vessels Operating in Submarine Exercise Areas. Marine Safety Agency. Marine Guidance Note MGN 12 (F).

¹¹³ Fishing vessel avoidance: The UK Code of Practice Fishing Vessel Avoidance. The UK Code of Practice. SMP 95 Change 5. Ministry of Defence
http://webarchive.nationalarchives.gov.uk/20081120170436/http://royalnavy.mod.uk/upload/pdf/%5B%281423%29-08-07-2002%5DUK_FV_Code_for_www.pdf

12 Aggregates Objectives	Assessment of Objectives
<p>■ Ensure that existing licensed marine aggregate sites are protected from development that would compromise future extraction potential. As other strategic sites are identified, they should be afforded the same level of protection.</p>	<p>Economy: The objective is positive overall as it ensures that the resource is available for future use and prevents sterilisation of a very location specific resource. The objective avoids barriers to future extraction, but there is potential for some constraint on other industries, however this is unlikely to be significant.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; marine sediments: Safeguarding the area does not impact on the environment, although extraction activities may, and chapter 4 policies will work to mitigate environmental effects.</p> <p>Water: Safeguarding the area does not impact on the environment, although extraction activities may, and chapter 4 policies will work to mitigate environmental effects.</p> <p>Air; Climatic factors; Cultural heritage; Landscape/Seascape: No impact identified.</p>

Aggregates Policies	Assessment of Policies
<p>AGGREGATES 1 ■: Impacts of development or activity on identified marine aggregate sites should be considered, including whether the development / activity would inhibit future aggregate or mineral exploitation.</p>	<p>Economy: The policy is positive overall as it ensures consideration of the future interests of marine aggregate extraction, which is location specific. Consideration of other sectors may however impose some limitations on the operation of these sectors in order to protect the marine aggregate resource which is very location specific.</p> <p>No impacts identified on the other topic areas.</p>
<p>AGGREGATES 2 ■●▲: Consenting and licensing authorities should ensure all the necessary environmental issues are considered and safeguards are in place, including that sediment removal will not significantly adversely interfere with coastal processes and thus alter local rates of coastal erosion which could exacerbate the predicted effects of a changing climate.</p>	<p>Economy: This policy is expected to have a positive impact on the sustainable development of the marine economy, as it encourages wider environmental impacts to be considered in decision-making.</p> <p>Communities, population and human health: No impact identified.</p> <p>Biodiversity, flora and fauna; Water; Cultural heritage; Landscape/Seascape: The policy encompasses consideration of environmental issues and therefore is positive in its protection of key species and coastal ecosystems, the water environment, cultural heritage and landscape/seascape.</p> <p>Marine sediments: The policy is positive as it encompasses consideration of impacts of extraction on coastal processes and sediment transport. This may also be positive for climatic factors, as it avoid exacerbating the effects of climate change, e.g. increased erosion.</p> <p>Air: No impact identified.</p>

Appendix 4. Assessment of Reasonable Alternatives

Option 1 – Do not produce a NMP					
<p>Note: The preparation of the National Marine Plan is a requirement of the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009, and this option is therefore not considered to be viable. However, its implications are considered here for completeness.</p>					
<p>Assumptions Under this option, the National Marine Plan would not be adopted. Instead, the existing policy framework governing Scottish inshore, offshore and territorial waters would remain in place. This includes the Marine Policy Statement and European Directives such as the Marine Strategy Framework Directive, Water Framework Directive and Habitats Directive as well as international commitments, e.g. OSPAR Convention. Existing decision-making bodies, such as Local Authorities, The Crown Estate, SEPA and Marine Scotland, would continue to exercise their functions. However, the tier of decision-making represented by the National Marine Plan would not be filled, meaning that there would be a gap between high-level marine planning and policies and regional and local marine decision-makers. Also, given the direction provided by the National Marine Plan to regional marine plans, the absence of a National Marine Plan would create uncertainty as to whether regional marine plans would be prepared and implemented. Some of the policies and requirements contained within the National Marine Plan are a reiteration of policies and planning requirements already in place. These would continue in the absence of the National Marine Plan, though they would not benefit from the consolidation and/or integration provided by the National Marine Plan.</p>					
Implications for Environment		Implications for Economy		Implications for Communities, population and human health	
Objective 8	+	Objective 1	0	Objective 5	0
Objective 9	+	Objective 2	-	Objective 6	0
Objective 10	+	Objective 3	0/+	Objective 7	0
Objective 11	+	Objective 4	0		
Objective 12	+				
Objective 13	+				
Objective 14	+				
Objective 15	+				
Objective 16	+				
Objective 17	+				
Objective 18	+				
Objective 19	+				
<p>The existing policy framework provides protection of protected species and habitats, the water environment, terrestrial and marine air quality, greenhouse gas emissions, climate change adaptation, protection of the historic environment resource, and landscape and seascape. Although environmental protection is provided through the existing legislation and policy framework, not producing the NMP would result in a lack of clarity and co-ordination between economic, social and environmental considerations.</p>		<p>The existing policy framework seeks to manage certain sectors to effect sustainable growth. However, without the integration provided by a NMP, this option would not support sustainable growth of the marine economy, nor seek to ensure balance between the different marine sectors/ industries. It would not explicitly safeguard or create jobs or remove barriers to marine enterprise opportunities.</p>		<p>Without the NMP there would be less of a co-ordinated approach towards ensuring that the access and economic interests of island and coastal communities are considered. There would be no specific promotion of access to the coast for coastal and marine recreation, or direct contributions to the resilience and cohesion of coastal and island communities.</p>	
<p>Summary The option would result in a lack of direct benefits for the economy, communities, population and human health. There is a comprehensive range of existing environmental protection legislation and policy which is positive for the environment; however without a NMP there would be a lesser degree</p>					

of integration between environmental and economic considerations.

Outcome

The creation of a National Marine Plan is a requirement of the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009, and therefore this option is not considered to be a viable policy option.

Option 2 – A NMP which is a high level plan setting out the broad policy direction for the marine environment

Assumptions

This option supports development of individual marine economic sectors, within environmental and social constraints. It provides some guidance on preferred locations for different types of development (with a focus on marine renewables) but in the main sets out policy considerations (environmental, social and economic) which need to be recognised by regional marine plans and project decision-makers. A key focus of the plan is the inclusion of environmental, social and economic policies which ensure integration of these factors into planning and decision-making.

Implications for Environment		Implications for Economy		Implications for Communities, population and human health	
Objective 8	+	Objective 1	+	Objective 5	0/+
Objective 9	+	Objective 2	+/-	Objective 6	+
Objective 10	+	Objective 3	+	Objective 7	+
Objective 11	+	Objective 4	+/-		
Objective 12	+				
Objective 13	+				
Objective 14	+				
Objective 15	+				
Objective 16	+				
Objective 17	+				
Objective 18	+				
Objective 19	+				

The inclusion of environmental mitigation within the plan means that this option is largely positive for all of the environmental objectives.

This option supports a sustainable marine economy and associated employment by supporting development of the individual marine economic sectors. It is not certain how this approach will balance the needs of different marine economic sectors and how the needs of different sectors or the environment could create barriers to other marine economic sectors.

This option is largely positive for communities, population and human health through the mitigating policies which support maintaining connectivity of communities. Through the support for recreation and tourism as a marine economic industry this option is also positive. This option also supports all of the marine economic sectors which is positive for communities which are reliant on these for employment.

Summary

This option is largely positive across the three topics of environment, economy, communities, population and human health through the emphasis on economic development of the individual marine sectors and the inclusion of the mitigating policies.

Outcome:

This is the preferred option identified for the NMP.

Option3 – An NMP which sets out spatially the preferred locations for different types of marine economic activity

Assumptions

This option provides a clear indication of the locations where certain marine economic activities can

take place, including where different activities are compatible within the same locations.

Key aspects of this approach include:

- Availability and gathering of sufficient information to ensure sound decision making within the plan preparation process.
- Weighting of environmental and economic considerations against each other to identify the best use of different areas.
- Identifying the carrying capacity of different marine environments.
- Understanding of market influences on different marine industries.

The plan would provide certainty in relation to the extent of available resource for different marine economic sectors. It is assumed that this approach provides positive protection for the environment within the context of sustainable economic development.

Implications for Environment		Implications for Economy		Implications for Communities, population and human health	
Objective 8	+	Objective 1	+	Objective 5	+
Objective 9	+	Objective 2	-	Objective 6	+/-
Objective 10	0	Objective 3	0	Objective 7	0
Objective 11	+	Objective 4	-		
Objective 12	0				
Objective 13	0				
Objective 14	0				
Objective 15	0				
Objective 16	+				
Objective 17	+				
Objective 18	+				
Objective 19	0				
<p>This option could result in the concentration of activity within certain areas however it is assumed that the spatial zoning of activities takes environmental considerations into account and this option would be positive for habitats and species, the water environment, cultural heritage and landscape/seascape. It does not necessarily provide any benefit in relation to air quality or climatic factors</p>		<p>This option has mixed effects in relation to the objectives. It supports a sustainable economy by identifying the potential areas for economic activity, balanced within environmental constraints. It clearly sets out where different marine industries will be favoured, but a spatial plan at the national level could place restrictions on some marine industries at the expense of others. The option will create some certainty in relation to current and future employment within the different marine industries, but does not contribute directly to job creation.</p> <p>The option improves clarity in relation to the preferred location of marine industries but will also potentially create barriers to marine industries which are then precluded from locating in these areas.</p>		<p>The option improves clarity in the location of marine economic activity and should also maintain transport links to remote and island communities through the spatial zoning of activity.</p> <p>The spatial zoning of activity will include identifying areas which are important for tourism and recreation, however this may also limit access in other locations.</p> <p>The option increases certainty about economic development opportunities in different geographical areas, but does not directly contribute to the resilience and cohesion of coastal and island communities.</p>	

Summary

This option has some environmental benefits through zoning activities and taking environmental considerations into account, but is not strongly positive. It has some potential negative effects on the

economic objectives as a result of constraint on the location of activities and creation of barriers to development. The option has some positive effects in relation to communities through creating certainty in acceptable locations for economic development and opportunities for recreation and tourism, but there would also be reduced opportunity for local planning/ decision-making.

A spatially directive national plan would conflict with the need for regional marine planning

Outcome:

The preferred option has not taken a spatial approach, but has set out the broad policy direction. The spatial approach does not bring particular benefits across the appraisal topic areas, and would require a high degree of information gathering and analysis (which is a key purpose and benefit of regional marine planning).

Option 4 – An NMP which prioritises activities which deliver economic benefit as a priority

Assumptions

This option explores the possible measures which would achieve greatest economic benefit. Key aspects of this approach include:

- reducing environmental regulation and licensing,
- supporting marine economic activity through a variety of active measures such as designating enterprise areas,
- encouraging investment in marine activities with greatest economic benefit,
- expanding all marine based activity,
- using a market driven approach to locate marine development activities,
- taking a short term view of fisheries,
- exploiting all marine resources,
- marketing the marine environment for use by other countries,
- charging for recreational use,
- protecting environmental resources where these provide economic benefit through e.g. green tourism, expanding infrastructure within ports and harbours,
- protecting coasts through hard defences.

Implications for Environment		Implications for Economy		Implications for Communities, population and human health	
Objective 8	-/+	Objective 1	-	Objective 5	-
Objective 9	-	Objective 2	-	Objective 6	-
Objective 10	-	Objective 3	+	Objective 7	-/+
Objective 11	-	Objective 4	-		
Objective 12	-				
Objective 13	-				
Objective 14	-				
Objective 15	-				
Objective 16	-				
Objective 17	-				
Objective 18	-				
Objective 19	-				
This option does not provide protection for key species and ecosystems unless they provide direct economic benefit through green tourism. Protecting species and habitats for green tourism is also likely to conflict with the other economic objectives.		Reducing environmental regulation and increasing marine economic development is likely to result in environmental damage which impacts on future economic potential of those marine activities which rely on a high quality environment or the		This option includes allowing exclusive use of sea areas for different economic activities and this could impact negatively on the accessibility and connectivity of coastal and island communities. Reducing environmental regulation may result in adverse	

<p>Reducing environmental regulation and increasing economic activity is likely to increase risk to the water environment, although the existing legislative framework would provide some protection. Increasing economic activity is likely to result in increased impacts on air quality and greenhouse gas emissions, however there is some protection of coast to support adaptation to climate change. This is also likely to increase negative impacts on cultural heritage and landscape through extensive economic development.</p>	<p>health of key species. The short term horizon of the option will potentially result in decline in future economic activity for sectors such as aquaculture and fisheries. Using a market driven approach to locating development will allow those sectors which have the greatest financial backing to locate, disadvantaging other sectors. The option will create jobs, but as already discussed, the long term benefits of these is limited by potential environmental damage. The option will potentially remove some regulatory barriers to marine enterprise, but the approach of some industries operating to the exclusion of other industries is likely to result in creation of significant barriers for some.</p>	<p>impacts on the resources which communities use as a source of income, such as fisheries, or the environmental quality which supports industries such as aquaculture or recreation and tourism, and negatively affecting their resilience. The support for all marine economic activity could also support community resilience through providing employment.</p>
<p>Summary Although this option has a strong economic focus, it is not strongly positive in relation to the economic objectives which seek to reflect sustainability, balancing different marine economic interests, job creation and avoiding barriers. This option does not place sufficient emphasis on protecting environmental quality which is inherent in supporting a large proportion of marine economic activities. It also does not reflect the complex interactions between different marine economic activities or recognise how one area of activity can adversely affect another. The option also reflects a short term view which is inherently unsustainable and will result in a lack of future economic opportunity.</p> <p>Outcome: The influence of the findings of this option can be seen in the preferred option which largely results in positive effects for the economic objectives through supporting sustainable economic development, seeking a balance between different marine economic interests, avoiding creation of barriers and therefore supporting the associated jobs.</p>		

<p>Option 5 - An NMP which prioritises activities which deliver environmental benefit</p> <p>Assumptions This option prioritises protection of all aspects of the environment including habitats and species, water, air, cultural heritage and landscape/seascape. Key aspects of this approach include:</p> <ul style="list-style-type: none"> • A more stringent approach to environmental regulation and licensing and the use of the precautionary approach when allowing development. • Increased environmental regulation, including protection of landscape and cultural heritage invoke precautionary approach; • Supporting climate change adaptation through coastal realignment; • Reducing environmental impacts of fishing activity through managing types of fishing, target species, and use of sustainable quotas; • Locating marine economic activity based on environmental appraisal; • Avoiding noise disturbance and regulating the vessels which cause noise disturbance; • Managing non-native and invasive species; • Protecting ecosystem services; • Protecting habitats and species, water quality, air quality, landscape capacity, cultural

heritage.					
Implications for Environment		Implications for Economy		Implications for Communities, population and human health	
Objective 8	+	Objective 1	+	Objective 5	0
Objective 9	+	Objective 2	+/-	Objective 6	-
Objective 10	+	Objective 3	+/-	Objective 7	+/-
Objective 11	+	Objective 4	-		
Objective 12	+				
Objective 13	0				
Objective 14	+				
Objective 15	+				
Objective 16	+				
Objective 17	+				
Objective 18	+				
Objective 19	+				
<p>This option is strongly positive across the environmental objectives through the protection of habitats, species, air quality, water quality, climatic factors cultural heritage and landscape.</p>		<p>This option supports a sustainable marine economy through protecting the environmental qualities on which a number of marine economic activities depend. It prioritises environmental protection to avoid detrimental impacts on marine activities which depend on the environment, but this could be at the detriment to marine economic activities which are not dependent on environmental quality such as renewables, CCS or oil and gas exploration.</p> <p>In the short-term, it safeguards jobs in marine economic activities which rely on environmental quality such as fisheries, aquaculture, recreation and tourism, but is less positive for other sectors. However, it may also lead to a reduction in overall fishing effort, or a reduction in other activities which rely on environmental quality. This option also potentially creates new regulatory barriers to marine economic activities.</p>		<p>The option is focused on environmental protection which does not directly impact on the accessibility and connectivity of remote island and coastal communities.</p> <p>The option is potentially restrictive to promoting access to the coastal and marine resource for tourism and recreation because of the increased regulation of potentially environmentally damaging recreational activities. The focus on environmental protection will support the resilience of communities which rely on economic activities which are dependent on high environmental quality.</p>	
<p>Summary</p> <p>This option is strongly positive in relation to environmental objectives but is also partly positive in relation to the economic objectives. There are however some tensions between the benefits for marine economic industries which rely on good environmental quality and those which do not. The impacts on communities, population and human health are partially linked to the environmental objectives, where positive effects for environmentally dependent marine industries support communities reliant on these. The option is also potentially restrictive in relation to access for marine tourism and recreation which is negative for communities.</p>					
<p>Outcome</p>					

The benefits of an environmentally focused plan are clearly reflected in the preferred option which largely recognises that sustainable economic development is also reliant on good environmental quality, but does not involve environmental controls which are unnecessarily restrictive to economic activity.



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