Fishing Focus Group – 1st Meeting 2012
12 January 2012 - Conference Room 3 – Victoria Quay, Edinburgh, EH66QQ

1300 hours – Lunch will be available (in Conference room 8)

1400 hours – Meeting Start

AGENDA

1. Welcome, Introductions, and opening remarks
2. Minutes of the last meeting
3. Marine Planning
4. Marine Renewables
5. Marine Strategy Framework Directive
6. Marine Nature Conservation

Fishing focus meeting

12 January 2012 – CR 3 Victoria Quay, Edinburgh

Attendees

Marine Scotland : Linda Rosborough (chair), David Palmer, Allan Gibb, Phil Gilmour, David Mallon, Anna Donald, David Pratt, Michael Mcleod, Sebastian Howell

SFF : Bertie Armstrong, Alan Coghill, Patrick Stewart, Malcolm Morrison, Archie MacFarlane, Kenny Coull

SWFPA : Mike Park

IFGs: Nick Lake (NL)

Static gear sector: June Lochhead (JL) and Andrew Lochhead (AL)

JNCC : Tom Blasdale

Apologies

Billy Hughes, Roddy MacColl, and Duncan MacInnes

Introduction

The chair opened the meeting and welcomed everyone to the first focus meeting of 2012, and reminded everyone that this was an opportunity for the sector to provide views on new streams of marine policy work (planning, renewables and conservation).

SFF expressed concern about the late distribution of the MSFD paper and this was acknowledged. It was agreed to aim for earlier distribution and to indicate whether papers are for information or for discussion at the meeting.

SFF also want to ensure these sessions are as productive as possible going forward. Concerns also raised about delay in responding to some correspondence and other matters. SFF said they want to be sure their concerns are properly heard going forward.

Action : Further dialogue about procedures going forward.

Minutes of last meeting

SFF would like minutes available as soon as possible after the event with actions and any more formal decisions.

SWFPA support informal minutes as done at FMAC but with very important points recorded formally as required.

Actions from the last meeting

Sea Urchins are a type of shellfish and as such, out to 3 NM, the establishment of a farm and the associated deposit of equipment would come under terrestrial planning, although I think in practice a marine licence would be likely to be issued to cover the navigational aspect. Between 3 NM and 12NM (perhaps an unlikely scenario?) the deposit of equipment associated with sea urchin farming would be exempt from licensing except where the deposit was made for the purposes of disposal, made to create an artificial reef or caused/was likely to cause a danger to navigation. Between 12 and 200 NM, the deposit would require a marine licence. Jim may wish to comment on this assessment.

An algae farm, not being classified as 'fish or shellfish', is not covered by terrestrial planning and the deposit of associated equipment would require a marine licence within 3 NM. Neither would the exemption relating to fish and shellfish farming that applies to the deposit of equipment between 0 and 12 NM apply to algal farm equipment. i.e. the deposit of equipment relating to algae farms is a licensable activity between 0 and 200 NM.

MS said local grid issues will be examined as part of the sectoral marine planning process. Offshore Transmission is a UK Government issue. We are aware that work continues on this issue and will liaise with DG Energy and DECC colleagues to provide an update on progress.

NL: Grid cables going should be done in a structured manner to minimise the number of cables that are actually put in place.

SFF : Socio economics are not being considered as it does not cover displacement of inshore fisheries as this could squeeze small operators out of their grounds.

Although Marine Scotland does not have a statutory role on Grid it said it can seek to facilitate solutions through marine planning processes. Marine Scotland will start this process by including this issue in Regional Locational Guidance. MS will liaise on grid issues with DG Energy Grid Policy staff, the Grid transmission and distribution organisations and the potential developers through Scottish Renewables.

SFF said it still had concerns about how much the marine offshore energy industry is subsidised. It is objectionable to the fishing industry that the renewables industry is being subsidised.

ACTION : Group would like a better understanding of how this complicated subsidy process works. (David Palmer)

Marine Planning

MS said the planning system is designed to create a level playing field and the Marine Plan will set the policy direction going forward. SFF disagree with this and intend to raise the matter at the next Marine Strategy Forum.

The revised national marine plan is taking longer than expected but will be ready for consultation this year.

Drafting is also underway for an SI for Scottish marine regions. Considering a short consultation on the revised boundaries. Should be in a position to do this in the next 2-3 months.

Scottish Coastal Forum has developed a paper on governance explaining how parties should interact at the regional level. MS has not taken a view on the paper produced.

SFF noted that it mirrors the IFG governance and would be content.

MS said it was looking to ensure that there will be synergy between regional boundaries and IFGs to ensure there is no duplication.

SFF concerned that regions could have executive powers before the national plan is up and running properly. They suggest that regions should be advisory only.

NL: It still seems bizarre that we are talking about the regions before the national plan has been completed. It should be a top down process.

MS said that current work on SMRs is on defining the boundaries for regions. There is a statutory framework for marine regions. The transfer of processes will not take place overnight and will only be done as things develop over time.

SFF stated their perception that marine renewables has a priority over fishing in policy terms and MPAs have a priority in statutory terms.

MS said the plan for offshore wind made choices over various areas with some not making it through. This had to be developed ahead of the Marine Plan to deal with the circumstances in play before the marine plan could be put in place.

SFF said they have examples of consents causing fishing to be wholly excluded from areas and feel their objection was not considered appropriately

SFF : What valid relevant objection can we make against renewable consents. There is no statutory protection for the fishing industry?

MS said the sectoral and marine plan making procedures require socio-economic assessment and consultation processes. These processes allow the stakeholders to become fully involved and in the case of the fishing industry it is invited to sit on the socio-economics steering/advisory group to help develop better fit for purpose socio-economics. We will use relevant information on fish spawning and nursery grounds, our landings and VMS information and the roll out of Scotmap to seek to identify the commercial importance of our marine areas for fishing. With regard to consultation on sectoral plans we will take forward statutory and non-statutory consultation and use sectoral and regional approaches and report on these within Consultation Analysis reports to ensure that the decision maker (Scottish Ministers) are fully informed. If SFF believe the socio-economics work and consultation reporting do not properly inform the decision maker we are prepared to engage in discussion on how we can better represent views, opinions and the presentation of information. If SFF believe that this work based on an open invite to take part in and improve the information relevant to commercial fishing still does not represent the industry properly then you can seek to challenge our process through judicial review.

In the case of Section 36 of the Electricity Act and Marine Licensing we ask developers to prepare applications to cover impacts under the requirements of Environmental legislations. Again impact assessment and consultation are required and we believe developers are liaising with relevant fishing industry representative bodies. MS LOT will encourage effective consultation with developers and the fishing industry both within statutory and non statutory approaches. The aim of assessment and consultation processes at the application stage are to ensure the decision maker (Scottish Ministers) are aware of stakeholders views on the application and mitigation proposals. The fishing industry should seek to have effective dialogue with all relevant developers to ensure your concerns and requirements are known and understood by developers so that they can seek to mitigate impacts. If you believe your interests are not being taken into account you can raise your concerns with MS LOT, who will pass these to Scottish Ministers. If you do not believe that the application process has been handled properly by MS LOT or the developer you can seek a legal challenge through the courts.

Static gear sector: AL said he cannot move over to new grounds as for example lobsters prefer certain habitats. He said he has been fishing these grounds sustainably for 27 years on the same grounds but if the Solway renewable development goes ahead he feared he will be out of a job.

Renewables

DONG

In response to questions about DONG, MS said the Crown Estate has the ability to award area exclusivity to developers. Their own policy allows developers with exclusivity agreements which do not get through the SEA process to seek an alternative site in the geographic area. However sectoral and statutory plans and licenses and consents come from Scottish Ministers. There would be benefit for a planning / licensing meeting with fishing representatives to discuss these processes.

MS said it used the MARS model to identify potential options for development for Blue Seas – Green Energy and have now revisited this work to identify Plan options from first principles.

Regional Locational Guidance will now be used to better inform Plan option identification and a non statutory consultation stage. We will then take forward sustainability appraisal, which includes socio economics. This will result in options being identified within a draft Plan and statutory consultation before we can adopt a new Plan possibly by Spring 2013.

SFF: Disappointed with the way this is being done and it seems to be a moving process to ensure developers get to go forward.

SFF: Was the minister provided a socio-economic study of the Sound of Islay development?

MS: No, but there was engagement with the industry to discuss this.

SFF: We are concerned that consents are being given without a proper system in place.

MS: We acknowledge that some consents will be given before a full planning system will be in place as inevitable and we are managing this. LOT put fishing mitigation in place to help address some of the fishermen concerns regarding Sound of Islay.

SFF: How can the industry protect itself from renewables taking over fishing grounds? In Orkney the renewables industry expect consent because of the targets set by the Scottish Government.

Only 50% of the renewables developments have come through the process thus far. We will sit down with you and the licensing team to fully explain the process.

SFF: Would prefer any meeting about the licence process to focus on our rights in this process.

AL: How will you explain in 20 years when it has not worked?

NL: The future is about food and energy production.

The draft marine plan makes it clear that the production of food is of paramount importance.

SFF : We need a statutory means to defend ourselves in the planning context. We reached an agreement so that fishing was an act of navigation as per section 34 of the old coastal act. Vessels must also have a safe means of navigation even when fishing.

The Marine (Scotland) Act [Section 27] and the Marine and Coastal Access Act [Section 69] both contain conditions relating to applications for marine licences.

In determining a licence application, Scottish Ministers must have regard to the need to-

- protect the environment
- protect human health
- prevent interference with legitimate uses of the sea
- such other matters as the Scottish Ministers consider relevant

In determining of an application for, say, a wind-farm, fishing interests would be protected by the third bullet point here. The navigational aspect is also considered during determination, with the Commissioners of Northern Lighthouses and the Marine and Coastguard Agency both statutory consultees in the process.

SFF : Displacement and socio-economics are key issues going forward.

MS said the renewables team was happy to meet on the issues, with LOT being involved too, in order to ensure that things move more smoothly going forward. We are expecting at least 3-4 applications per year for licensing. We have established a Fishing / Renewables Policy Group to discussion generic solutions around mitigation, accommodation, etc.

SFF : This is welcomed but not a substitute for the fundamental issue of being able to object in the consenting process.

AL : when will you engage with us on Dong?

MS said it proposed to undertake non statutory and statutory consultation over the next year with the aim of finalising our new Plan by Spring 2013. Dong and the Crown Estate have been advised on our process and timescales, and we believe Dong intends to undertake public consultation in the Dumfries and Galloway area over the next few months..

MSFD

MS said the paper is an advance copy of the current draft of part of the consultation documentation (Descriptors 1,3,4,6). Currently agreeing all the documentation between the 4 administrations before Ministers exchange letters to give approval for the consultation to get underway. Some of the documents may change but major substantive changes not expected. The consultation will focus on 3 aspects of the UK Marine Strategy due to be submitted to the Commission this year

- What is the condition of our seas?
- What GES will look like?
- How will we measure it?

We then have to develop a programme of measures to achieve GES, which has to be drafted by 2015 and underway by 2016.

Annex B of the paper covers the main descriptors which are of importance to fisheries along with their targets. Some of the targets and indicators have options to be consulted on.

Annex E covers the main points of the impact assessment that has been developed. This includes estimates of cost and benefits of possible illustrative measures that may be required to achieve GES. There are a lot of assumptions in these, given the level of uncertainty currently inherent in the process.

The 4 administrations would like to bring together key fishing stakeholders to discuss the consultation and MS would be happy to take views on how best to engage.

SFF : Can you make this as least onerous as possible by not creating solutions to problems that do not exist. Lets not make unnecessary rods for our backs. We have concerns about some aspects of the proposals. Fishing is a data and information rich sector.

We have a desire not to unnecessarily duplicate or add to anything that will be covered by CFP reform. This is relevant to descriptor 3. The other descriptors 1 and 6 have a much wider context than fishing and this is where impacts on fisheries are most likely to come from.

SFF : MSY will be difficult to achieve in a multispecies fishery.

This has been developed over the last 2 years to be more relevant to the Scottish perspective.

SFF: Also concerned by seafloor integrity descriptors as they are very broadly expressed.

Happy to accept comments on how we can improve the language. We can have more focused discussions if necessary. We expect to start consultation in spring 2012.

NL: Descriptor 11 – Energy input. This must have issues for renewables and would be interested in seeing this

ACTION : Provide details on Descriptor 11 (Anna)

Marine Nature Conservation

MS said the aim is to identify the MPA network by end of 2012 and sensitivity matrices will also be developed to identify possible management implications for discussions with relevant sectors The next workshop will identify search locations for the remaining priority search features. A science led process is being followed but socio-economics can play a part in decisions on network design where possible sites have a similar ecological value.

Natura – work to complete SAC designations by EC end of 2012 deadline was progressing. The consultation on the Sound of Barra SAC proposal had recently closed and a further consultation on 5 offshore SAC proposals is planned to begin imminently. SNH and JNCC's marine SPA analysis work is continuing but running on a longer timescale with classification of seabird and waterfowl aggregations in inshore and offshore waters unlikely to be completed before 2015.

IFG: What sort of economic details are you gathering?

SFF : We are currently failing to take individual fishermen along with us on the journey. We might need some help with getting them on board. Fishermen do not take notice

IFG: We need to start taking about management before we can fully understand the socio economic impacts.

For search locations it is difficult to talk about management requirements until a firmer MPA proposal and boundary are developed. However we can use the matrices to work towards this as firmer MPA proposals emerge and the matrices will also highlight which features are more sensitive to particular activities.

SFF: Would like to see the good examples set by finalisation of boundaries for Stanton and Rockall SACs continue into the MPA process

NL: NGOs pushed very hard at the last MPA workshop for replication at MPA region level.

MS said coherence will be determined at the national level and in light of general feedback received at the last workshop it was working with SNH and JNCC to provide clearer information on the aims for network design for individual features.

IMPROVING DIALOGUE

MS said it will take forward the action to arrange a meeting involving LOT renewables and LOT to develop a better understanding of licensing. MS also asked how it can make this process better going forward and said it looked to SFF and other representatives to suggest how we can improve things going forward to get the best from these sessions.

SFF : Would like to discuss some higher level issues ahead of the next Marine Strategy Forum.

ACTIONS : Meet with SFF ahead of next MSF (Linda). Better delivery of agenda, papers, minutes (Michael)

Inshore fishing study pilot update, and plan for future roll out

Introduction

1. The aim of this study is to provide accurate and detailed information on inshore fishing activities in Scottish Territorial Waters. The objective is to provide the following information:
    - Spatial definition of the areas fished by non VMS vessels operating within 12 Nm;
    - the months of the year that these areas are fished;
    - the species fished for in each area;
    - the gear types used in each area;
    - the contribution made by each area to the vessel's earnings, and;
    - annual vessel's earnings (averaged over the past 5 years) and the proportion derived from fishing.

    The plan is to provide this information for the whole of Scottish territorial waters, and the study is being piloted in the Pentland Firth and Orkney Waters.

Data consents and data sharing amongst organisations.

2. A data consent form has been agreed with SFF. The purpose of this form is to ensure that participants in the study know how their data will be handled. The form sets out the obligations that the data collectors and the organisations are under to ensure that the data relating to individuals are not disclosed unnecessarily, and that the commercial confidentiality is maintained.
3. In addition to the data consent form, a data protocol has been drawn up by Marine Scotland and agreed by other organisations who wish to see the data. This protocol specifies who will have access to which elements of the data. As with the data consent form, it sets out the obligations that these organisations are under to ensure that commercial confidentiality is maintained.
4. The following organisations have signed up to the protocol:

- The Scottish Government
- Scottish Fishermen's Federation
- National Federation of Fishermen's Organisations
- The Fishermen's Association Ltd
- Scottish Natural Heritage
- Joint Nature Conservation Committee
- The Crown Estate

Progress to date

5. Data in the pilot area were collected over the Summer. Information relating to individual fishermen's areas fished and associated values has been collated into a database. Initial analysis of this database has been carried out to produce 'heatmaps' showing values per unit area. Two analyses are being carried on different spatial scales, coarse (squares of 0.1 degrees on the side) and fine (squares of 0.025 degrees on the side).

6. The steering group last met on 7 December to consider and advise on this initial analysis. They were shown the following draft maps:
   a) absolute value – i.e. the amount of money each unit area contributes to the gross vessel earnings;
   b) relative usage – the number of vessels fishing in each unit area, and;
   c) relative value – indicating the proportion in percentage of the value of each area.

   The steering group suggested two more maps should be generated:
   d) number of people employed (on vessels), and;
   e) dominant species (as indicated by economic value).

<u>Initial results:</u>

- The response rate from fishermen in this area was nearly 100%. A handful of respondents declined to give information relating to their gross vessel earnings. Many respondents welcomed this study.
- The fine spatial scale is consistent with, but appears to show more detail than the coarse one, i.e. the fine scale maps do not appear to be dominated by statistical noise but can actually show real spatial variations.
- The draft maps are able to distinguish between areas of different economic value, for different gear types and different species. This indicates the value of collecting these data to underpin the future process of marine spatial planning.

<u>Next steps</u>

7. The next steps of the pilot are:
   - A handful of remaining glitches in the database and the code need to be corrected before producing final versions of the maps.
   - Participating fishermen will be given a chance to view these maps in the fisheries offices in Kirkwall and Scrabster, before they are made public. Fishermen will also each be sent a copy of the information they provided, along with their consent form.
   - A report with the key findings will be published in mid February. Alongside the publication of this report, the final version of the anonymised database can be disseminated to those organisations signed up to the data protocol.

<u>Future roll out to cover Scottish Territorial Waters.</u>

8. It is planned to carry out the roll out of the project in 2012, with the aim of completing it by the end of the year. A dedicated steering group will be set up to oversee the roll out, consisting of representatives from the fishing sector and Marine Scotland. A detailed project plan is being worked up and agreed within Marine Scotland and will be discussed with the fishing sector as soon as possible in 2012. The following are the key points:

<u>Stage 1 – data gathering</u>

9. It is proposed that fisheries officers will continue to lead on the data gathering, working with representatives from the fishing sector. Data gathering will take place over the course of Summer and Autumn 2012.

<u>Stage 2 – data analysis</u>

10. The data collected needs to be entered into a database and then converted into maps. This stage will continue to be carried out in-house throughout 2012.

<u>Stage 3 – publication of report</u>

11. A report detailing the key findings of the roll out will be published in early 2013.

Marine renewables
December 2011

FISHING FOCUS GROUP MEETING – OFFSHORE RENEWABLE ENERGY UPDATE – 12-1-12

Scoping Report for Offshore Wind Developments in Scottish Waters

Introduction

1. The Sectoral Marine Plan for Offshore Wind Energy concluded that, as additional data and monitoring information, and improved data handling procedures, become available, these should be incorporated into the emerging iterative marine planning process, as applied to the medium term areas of search for wind farm development in STW, and to opportunities further offshore.

2. The Scottish Government has been using The Crown Estate Commissioner's Marine Resource System (MaRS) to help identify areas of resource, avoiding constraints, for offshore wind development. As part of this exercise we have been reviewing the work undertaken to help identify 'medium term' areas in Scottish Territorial Waters. In addition, the exercise has attempted to scope further areas for potential development in the Scottish Marine Area (0-200nm). This has involved the identification of shallow as well deeper water sites, which could be suitable as turbine structure technologies progress and become commercially deliverable. With reference to the content of the Scoping Report, the following paragraphs outline the key issues in relation to:

- Review of 'medium term' areas in Scottish Territorial Waters (0-12nm)
- Potential areas in the Scottish Waters (0-200nm)
    - 0 - 60m water depth
    - 60 - 80m water depth
    - 80 - 120m water depth
    - 120 - 300m water depth

Scoping – Review of 'medium term' areas in Scottish Territorial Waters (0-12nm)

3. In the East and North-East of Scotland, the Scoping exercise is broadly supportive of the existing medium-term areas of search within the Plan. There have been alterations to E1 and NE1, 2, 3 but these search areas are broadly as they were in the Offshore Wind Plan.

4. In the Northern Isles, the Scoping Exercise is broadly supportive of the existing medium-terms areas of search around the Shetland Islands. It also identifies two further areas of search to the North West of the Orkney Islands. It should be noted that these areas were identified in the last application of the MaRS but were subsequently ruled out through the Strategic Environmental Assessment process.

5. In the North and North West, the Scoping Report removes medium-term areas NW5 and 6 in the Plan due to significant levels of constraint. The area NW7 has been altered to reflect areas of higher constraint north of Lewis.

6. In the West, the Scoping exercise is broadly supportive of the existing medium-term areas of search within the Plan. The Scoping Study identifies a low to moderate levels of constraint in the outer parts of STW between Barra and Islay. This is reflected in the medium term options W1, W2 and W3, and in the STW sites off Tiree and Islay. The small medium term option area NW4 is located in the north western part of an area of moderate to low constraint west and north west of Coll and Tiree. There is an area of low to moderate constraint in the outer part of the Clyde Sea area. To a degree, this was recognised through the identification of the medium term option area W4. However, the current scoping study suggests that the boundaries of this area could be reviewed to incorporate areas of low and low to moderate constraint south and southwest of W4. There may also be an area of low constraint close inshore on the eastern side of the Clyde Sea north of Ballantrae.

7. The Solway area generally shows moderate to high levels of constraint. However, within the medium term search area SW3, SW4 and SW5 there is a strip of water of low to moderate constraint along the boundary between Scottish and Isle of Man waters. This area may therefore present opportunities for development in areas that are less sensitive than areas closer to the Galloway coast. Waters in the northern part of the search region (SW5) have higher levels of constraint.

Scoping – Waters between 12 and 200 miles beyond baseline

8. The Scoping exercise indicates that there are large areas or relatively low constraint both east and west of Scotland, and that therefore there may be very considerable opportunity for development in deeper water further offshore. The technical constraints on projects in these areas are likely to decrease as other developments occur. For example, the construction of offshore transmission grid networks to the east and west of Scotland may remove the necessity to bring power to the shore from the point of generation to obtain grid connection.

9. The depth of water is clearly an important aspect of the feasibility of development of offshore wind farms at the current time. Early offshore wind sites were generally located in rather shallow water, while the deeper water found in Round 3 and STW sites reflects the progressive improvements in the technical ability to construct projects in deeper water. However, depth of water remains a very important consideration in project design and development opportunity. For the purposes of the Scoping exercise, potential search areas for development in Scottish Waters have been classified as:

- 0 - 60m water depth
- 60 - 80m water depth
- 80 - 120m water depth
- 120 - 300m water depth

10. The main areas of low to moderate levels of combined constraint, with water depth less than 60m, are in the east of Scotland:

- North east of the Round 3 site off the Forth and Tay
- East and south of the Round 3 site in the Moray Firth

11. The main areas of low to moderate levels of combined constraint, with water depth of 60 – 80m, outside STW are:

- An extensive area east of Scotland between Peterhead and the Tay estuary
- In the outer part of the Moray Firth from Fraserburgh to Orkney
- An area north of Orkney
- Areas off the north coast of the Scottish mainland
- Smaller scattered areas west of the Outer Hebrides and south west of Tiree

12. At this time, the emphasis for 80-120m depth of water will be to identify potential sites for demonstration projects to establish the technical viability of development in depths that exceed those currently being used in Round 3 or STW sites. Potential sites with this suitability are found in areas of low to moderate levels of combined constraint, such as:

- Off the coast of east Scotland from Fraserburgh south to the northern boundary of the Round 3 site off the Tay
- In the strategic search areas identified round Shetland
- In an area between Orkney and the Farr Point wave power area
- In the STW strategic area at the northern end of the Minch (NW7)
- In the STW strategic area at the mouth of the Clyde Sea area (W4), and in scattered areas north and south of this between Islay and the Mull of Galloway

13. There is currently very limited commercial interest in water of greater than 120m depth. There are extensive areas of Scottish waters of 120 – 300m depth in the extreme north around Shetland, and to the north west of Scotland along the edge of the continental shelf possibly with long term development potential. There is probably greater development potential in the medium term in the Fladen area east of Scotland from Orkney to Peterhead.

Next Steps

14. The Scottish Government will now develop further Regional Locational Guidance in relation to the search areas identified in the Scoping Report. This Guidance will cover environmental, infrastructure and technical issues as well as seeking to capture the policies and views of the relevant Local Authorities, Agencies and stakeholders, including fisheries, within the guidance. Potential Developers will be advised to reflect the issues covered in the forthcoming Regional Location Guidance when seeking to progress developments within Scottish Waters.

15. The publication of the Scoping Report and development Regional Locational Guidance mark the start of the review of the Sectoral Plan for Offshore Wind Energy. This Review will take place over a two year period where further strategic environmental assessment (SEA), habitats regulations appraisal (HRA), socio-economic assessment work will be undertaken as well as consultation with both statutory consultees and the public. The outcome will be an updated set of areas where offshore wind energy should develop.

DONG – Outer Solway Project

1. In 2009, the Crown Estate Commissioners (CEC) undertook the first stage of lease bidding and awarded Exclusivity Agreements (the first step towards securing a commercial lease) for 10 sites in Scottish Territorial Waters.

2. In response to the CEC leasing round and to support the sustainable delivery of the potential for offshore wind around Scotland, the Scottish Government made a commitment to produce a Strategic Environmental Assessment (SEA) of the potential for offshore wind development in Scottish Territorial Waters, to include the 10 site options. A draft Plan was developed to accompany the SEA Environment Report, and thereby ensure that those reviewing the assessment findings during statutory consultation were clear about the emerging proposals.

3. In March 2011, The Scottish Government published *Blue Seas Green Energy – A Sectoral Marine Plan for Offshore Wind Energy in Scottish Territorial Waters.* The Plan confirmed 6 sites as suitable to progress offshore wind development and a further 25 medium-term areas of search.

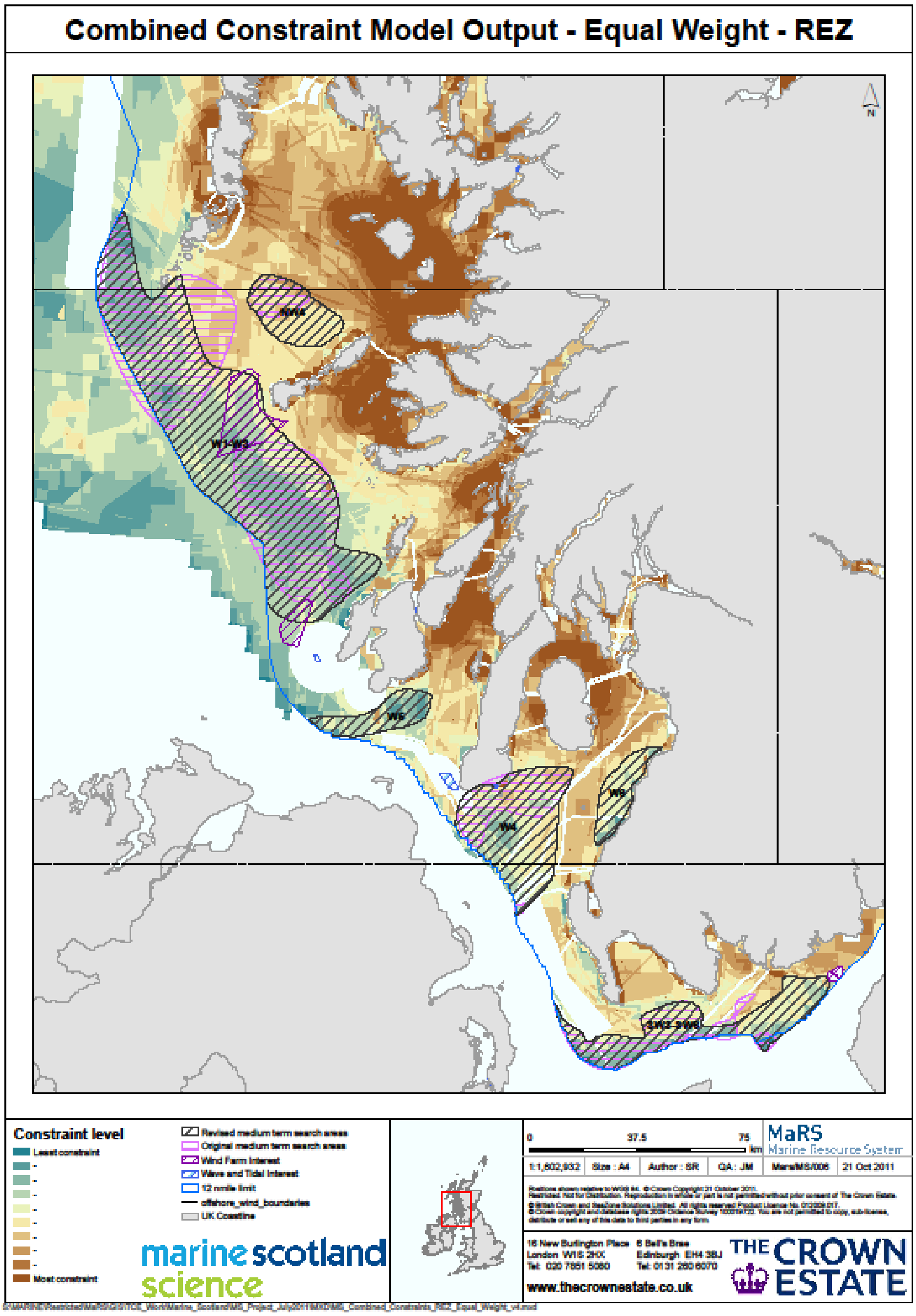
4. During the assessment and statutory consultation to underpin *Blue Seas – Green Energy* - A Sectoral Marine Plan for Offshore Wind in Scottish Territorial Waters, we encountered significant opposition to the E.on and Dong proposals to develop offshore wind energy sites in the Solway. Regional stakeholder views were that they would encounter the environmental and economic impacts of the project with none of the benefits. In the case of the original Dong proposal at Wigtown Bay, local stakeholders views were that it was too close to shore and would dominate views to sea, impacting on the naturalness and attractiveness of the area to residents, visitors and hence their property values and businesses.

5. Scottish Ministers decided in March this year to publish *Blue Seas – Green Energy* without including 3 of the 9 site proposals. The 2 Solway sites which included the Dong 'Wigtown' site were dropped due to environmental and economic effects/concerns.

6. The Crown Estate has a policy that where a developer proposal, a site with an Exclusivity Agreement, is not included in the resultant Plan they can pursue an alternative site within the related geographic area. Dong has therefore taken up this option for pursuing an alternative site and has entered into an Exclusivity Agreement with The Crown Estate. This is a commercial arrangement between the 2 parties. Dong accepts that it got its original 'Wigtown' site proposal wrong. It is now pursuing a new site which is further out of the Solway and further from shore in an attempt to reduce the visual environmental impact.

7. In November 2011, The Scottish Government published a Scoping Report for Offshore Wind Development in Scottish Waters. The Scoping Report concludes a technical exercise using The Crown Estate's Marine Resource System (MaRS) for identifying strategic search areas for offshore wind energy around Scottish Waters (0-200 nautical miles).

8. In the Solway area, the Scoping Report identified a strip of water of low to moderate constraint along the boundary between Scottish and Isle of Man waters. This area may present opportunities for development in areas that are less sensitive than areas closer to the Galloway coast. Dong are looking for a potential site within the search area identified in the Scoping Report. A map of this region is contained below.



Socio-Economic Baseline Review: Offshore Renewable Energy

1. A socio-economic impact assessment will be undertaken during the development of the following Sectoral Plans for Offshore renewable energy in Scotland's Renewable Energy Zone:

- Sectoral Marine Plan Review for Offshore Wind Energy
- Sectoral Marine Plan for Wave & Tidal Energy

2. The programme of work to complete this impact assessment will contain three distinct but interconnected stages:

1 Socio-Economic Baseline Review & Data Gap Analysis
2 Required Studies to address Data Gaps
3 Impact Assessments Stage. This includes:

- Socio-economic Impact Assessment of the Wave and Tidal Energy Sectoral Marine Plan
- Socio-economic Impact Assessment of Offshore Wind Sectoral Plan (as part of the overall review of this plan)
- Cumulative Socio-economic Impact Assessment of Offshore Wind & Wave and Tidal Energy
- Business & Regulatory Impact Assessment (BRIA) for the Sectoral Marine Plan Review for Offshore Wind Energy
- Business & Regulatory Impact Assessment (BRIA) for the Sectoral Marine Plan for Wave and Tidal Energy

3. The Socio-Economic Baseline Review & Data Gap Analysis is the first of three stages in the wider programme. The Socio-Economic Baseline Review and Data Gap Analysis should provide the basis for the socio-economic assessments ultimately to be undertaken in support of the respective Sustainability Appraisals and related impact assessments for:

- The Review of the Sectoral Marine Plan for Offshore Wind Energy
- The Sectoral Marine Plan for Wave & Tidal Energy

4. The findings from this specific project will inform the studies undertaken in Stage 2 of the programme of socio-economic impact assessment of the development of offshore renewable energy in Scotland's Renewable Energy Zone. They will also underpin the impact assessments undertaken at Stage 3. Consequently, it is expected that analysis in this project will be carried out with the needs of Stages 2 and 3 in mind.

5. A draft Baseline Review Report and draft Data Gap Analysis Report were circulated round the Steering Group for this study, on which the SFF are represented by Kenny Coull, for comments in December 2011. The consultants are currently working through the comments with further drafts to be circulated in January 2012 leading to a finalisation of the Reports in February 2012.

Marine Renewables: Scoping and Regional Locational Guidance

Locational Guidance

1. The development of Locational Guidance was highlighted as required within the 2007 Marine Renewables Strategic Environmental Assessment. Locational Guidance will be used to identify initial plan options which will then be subject to Sustainability Appraisal in order produce draft Plan options. The draft Plan options and the Sustainability Appraisal Reports will then be subject to consultation with statutory authorities and the public. Locational Guidance has been interpreted to consist of 2 distinct stages:

- Scoping Report
- Regional Locational Guidance

Scoping Report

2. The Scottish Government will undertake a scoping exercise to identify further areas of opportunity for the development of wave and tidal energy in Scottish Waters, out to the 200 nautical mile limit. The Scottish Government will use The Crown Estate's Marine Resource System (MaRS) to help identify areas of resource for wave and tidal developments and assess known sectoral and environmental constraints. A Scoping Report for Wave Energy and Report for Tidal Energy will be published on our website and we will ensure sectors, communities and individuals who express an interest in this report are made aware of its publication. The current timeframe for publishing these Reports is February 2012

Regional Locational Guidance

3. Building upon the scoping report, the Scottish Government will also consider more detailed environmental, technical and socio-economic issues in relation to the identified areas of opportunity for wave and tidal energy development. The findings of this exercise will be published as Regional Locational Guidance (RLG). RLG can be used to consider a range of practical considerations relevant to Plan options including supply chain, ports and harbours provision, grid provision and connectability, construction and decommissioning requirements to facilitate development and economic growth. The further RLG to be produced will build on the existing Regional Locational Guidance for wave and tidal developments in the Pentland Firth and Orkney Waters[1] and for the Saltire Prize. The current timeframe for publishing the RLG is the end of March 2012.

4. The Scottish Government will seek to engage with all relevant sectors, including Fishing, in the development of RLG to ensure all policies, views and issues are appropriately captured.

[1] *Ibid*

MARINE STRATEGY FRAMEWORK DIRECTIVE

Background

The aim of the European Union's Marine Strategy Framework Directive (MSFD) is to protect the marine environment across Europe more effectively and to put measures in place to achieve Good Environmental Status (GES) by 2020. The MSFD establishes European marine regions on the basis of geographical and environmental criteria, with each Member State obliged to co-operate with other Member States and non-EU countries within a marine region in developing their own Marine Strategy. The relevant regions for UK waters are the Celtic Sea and the Greater North Sea. Regional co-ordination is being taken forward via OSPAR.

Each Marine Strategy consists of:

- Initial assessment of the marine waters
- Determination of the characteristics of GES for each of the 11 Descriptors set out in the Directive
- Environmental Targets and Indicators
- Programme for monitoring environmental status
- Programme of measures necessary to achieve or maintain GES.

The first three aspects (initial assessment, determination of GES and targets and indicators) must be notified to the European Commission during 2012. The deadline for the monitoring programme is 2014 and the programme of measures are to be devised by 2015 and operational by 2016.

The MSFD has been transposed into UK domestic legislation by The Marine Strategy Regulations 2010[1]. These set out that Scottish Ministers are the competent authority for the Directive out to 200 nautical miles. They also set out the framework of co-operation and consent that exists between the UK administrations in terms developing a UK-wide Marine Strategy.

Current progress

UK

There are close working relationships between policy makers and scientists across the UK in taking forward the early development of the Marine Strategy. This is co-ordinated by a UK wide policy steering group and also through the UK Marine Monitoring and Assessment Strategy (UKMMAS) community. A diagram detailing UKMMAS handling of the GES descriptors and associated target and indicator development is at Annex 3.

The public consultation exercise on the elements of the Marine Strategy to be submitted in 2012 is expected to commence in February. The consultation will focus on:

- A draft initial assessment of the state of the UK's seas.

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[1] http://www.legislation.gov.uk/uksi/2010/1627/contents/made

- Proposals for characteristics of GES for the UK's seas – these are a high-level, qualitative description of what GES looks like for UK waters.
- Proposals for more detailed targets and indicators of GES, through which progress towards achieving GES will be measured.

The consultation will be accompanied by an impact assessment, and cost-benefit analysis which underpins this will also be available.

The consultation paper will recognise that successful reform of the CFP is critical to the achievement of the GES targets and indicators proposed. The paper will also suggest that this may include additional management measures needed in relation to targets proposed for sediment habitats. However discussion of management measures is illustrative for the time being (in order to explore possible impacts in terms of costs and benefits) as measures will not be finalised until 2015.

More detailed draft content is contained in the Annexes to this paper as follows:

- Annex A: Coverage in the draft initial assessment of state of fish of communities; analysis of impact of commercial fisheries; and the costs of degradation associated with failing to meet MSY.
- Annex B: Proposed Characteristics of GES for Descriptors 1,3,4 and 6
- Annex C: Proposed Targets and Indicators for GES (relevant to Descriptors 1,3,4 and 6)
- Annex D: Impact assessment summary coverage relevant to fisheries

European

A Common Implementation Strategy is in place at the European level, consisting of a working group on GES; working group on economic and social analysis; and working group on data, information and knowledge exchange. This was previously focussed on informing the Commission's decision on criteria and methodologies on GES, which was finalised in September 2010[2] and is binding on future work at member state level.

Regional

Regional co-ordination is being taken forward through OSPAR.

Marine Scotland – Planning and Policy
December 2012

[2] http://ec.europa.eu/environment/water/marine/ges.htm

ANNEX A

INITIAL ASSESSMENT – FISH COMMUNITIES

More than 330 fish species are thought to inhabit the shelf seas surrounding the British Isles, ranging in size from the 11 m basking shark (*Cetorhinus maximus)*, to gobies and open-water species that rarely reach 1 cm in length. Fish diversity is considered to be greater in the south-west and along the western seaboard of the UK (Celtic Seas) than in with the southern and central North Sea (Greater North Sea) the least diverse areas.

Key pressures

- The main pressure on fish communities is the extraction of fish species by commercial fishing. Commercial fisheries in UK waters principally target 32 fish species and continue to exert a significant pressure on fish populations, both directly through removal of target fish, and indirectly by removing non-target fish that are predators, prey, competitors or physically impacting essential habitats.
- Other human pressures on fish communities are becoming increasingly recognised. As the use of the seas increases, physical pressures, including physical damage and loss of habitats and interference with hydrological pressures, are intensifying. There have also been concerns over the impact of hazardous substances, including endocrine disrupting substances[3]. The impacts of these additional pressures on fish communities have not been quantified at the regional assessment scale.
- Climate change is beginning to have a detectable impact on fish populations, with marked changes in distribution, timing of migration and reproduction, recruitment and growth rates all being documented. The mix of species present in each CP2 Region has changed appreciably over the past 50 to 100 years and predictions suggest that a very different assemblage of fishes, including some introduced non-native species, might exist in UK waters in years to come. Warm-water fishes such as red-mullet, seabass, anchovy and John Dory are spreading rapidly around the UK, whereas cold-water species such as cod have retreated northwards in recent years. Such distribution shifts will have profound consequences for commercial fisheries and for the achievement of stated conservation objectives.

General status and trends

- All parts of the marine fish community have been impacted on by human activities. Recent improvements in the status of some fish communities need, therefore, to be viewed within a longer historical context. Improvements in the status of demersal fish (i.e. fish that live on, or close to the sea bed) have predominantly a result of a reduction in fishing pressure. Further progress is needed in relation to these demersal fish communities to reach target levels as well as before the majority of commercial fish stocks are at safe levels, noting that a significant number of commercial fish stocks remain below safe levels. Fish communities in estuaries have also benefitted from improved water quality. However, there are particular concerns over the populations of several fish species that remain severely depleted with respect to the population sizes that are known to have existed 50 or 100 years ago. These include many deep-water fish species; sharks, rays and skates; as well as diadromous fish species, such as the European eel and salmon, that move between fresh and salt water during their life cycle. Many of

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[3] Substances from external sources that interfere with an organism's endocrine system, including hormone regulation and hormone equilibria, and produces adverse developmental, reproductive, neurological, or immune effects.

these species have been recognised as threatened under International Conventions and listed in need of protection under appropriate legislation.

- Charting Progress 2 provides the following regional conclusions on the overall status of fish communities in UK regional seas
  - *Greater North Sea sub-Region*: Fish communities in the southern North Sea (CP2 Region 2) have been subjected to intensive trawling pressure for longer and have been heavily impacted by fishing, as well as other human pressures. In the northern North Sea (CP2 Region 1) and the Eastern Channel (CP2 Region 3) fish communities have clearly been impacted in relation to historic conditions, but not as extensively as elsewhere.
  - *Celtic Sea sub-region*: In the western Channel and Celtic Sea area (CP2 Region 4) several indices of the demersal fish community have improved since the early 1980,s but other indices suggest a longer-term deterioration. The Celtic Seas is an intensively fished ecosystem, where fisheries developed relatively late. There is some evidence of recent decreases in the proportion higher trophic species in the pelagic fish community. In the Irish Sea (CP2 Region 5), west of Scotland (CP2 Region 6 and 7), Rockall Bank and Trough (CP2 Region 8), fish communities appear to have been impacted in relation to historic conditions, but there is high uncertainty over the status of fish communities to west of Scotland, Rockall Bank and Troug

Further summaries on the status of the different functional groups of fish species are given below:

- *Demersal fish*: Overall there are impacts on soft-bottom demersal fish communities in all CP2 Regions in relation to historical conditions, but over the last five years the diversity and overall abundance of these fish communities have improved appreciably in most regions. This probably reflects reduced fishing pressure through a combination of EU controls on total allowable catches and the reduction of the UK Whitefish (demersal trawl) fleet by around 15% through the two large-scale fishing vessel decommissioning schemes in 2001 and 2003. There continue to be concerns about the depletion of many demersal sharks, skates and rays.
- *Pelagic fish*: Although there was no specific assessment of the status of the pelagic fish community in Charting Progress 2, some inference of the status of pelagic species can be drawn from assessments of relevant stocks provided by ICES. Stocks of herring in the North Sea sub-Region were assessed as not at full reproductive potential and not harvested sustainably in the period covered by Charting Progress 2. There has been an improvement in the assessed status of herring in the most recent ICES stock assessments (2008-2011), with fishing pressure having been brought to more sustainable levels according to the precautionary approach. In addition, the distribution of some pelagic fish species appears to be shifting in response to climate change. For example, the distribution of mackerel has expanded to the north and west in recent years, possibly in relation to increased water temperature. A number of long-lived and slow growing pelagic shark species that occur in UK waters are of conservation

interest, for example basking shark is listed as a prohibited species on EC fisheries regulations, and there is currently a zero TAC for porbeagle.

- *Transitional and estuarine fish*: The condition of many estuaries has improved in recent years because of higher levels of urban waste water treatment and reductions in the input of hazardous substances. A gradual increase in fish diversity and overall numbers in estuaries has been linked to better conditions. As a result, the number of adult salmon and sea trout returning to rivers has increased on many rivers, although there have been declines in the River Thames, where they were previously re-stocked, Rivers Awe and Morar in western Scotland and the Bush in Northern Ireland. Populations of several diadromous fish species are considered threatened and many have been listed for protection. The number of European eel juveniles has fallen in many of the regions where this species occurs as has the abundance of yellow or silver eels, and this reflects an Atlantic-wide downturn in the numbers of elvers returning to rivers. Causes of this decline are unclear but suggestions include changes in oceanic conditions, overexploitation, freshwater habitat destruction, contaminants and introduction of the parasite *Anguillicola crassus* from Asia.
- *Deep-water fish*: Data are generally scarce for the deep-water fish assemblages to the west of the British Isles. However, those indices that can be derived suggest that the diversity in the fish communities at those depths most subject to deep-water fisheries has been reduced since the start of these activities.
- *Commercial fish and shellfish species. (see below)*
- *Species listed in community legislation of other international agreements:* Prospects of certain vulnerable fishes continued to deteriorate during the period up to 2010. This includes many deep-water fish species; sharks, rays and skates; and transitional/ diadromous species that move between fresh and salt water, such as the European eel and salmon. Many of these fish have been recognised as threatened under international conventions (e.g. the CITES Convention, Bern Convention, Convention on Biological Diversity, EU Habitats Directive, OSPAR Convention) and listed for protection under the UK Wildlife and Countryside Act.

Predicted status in 2020/2030 given business as usual

- The future status of all fish species groups is difficult to predict given the wide range of pressures on them and our lack of knowledge on species interactions. The proportion of large fish may improve due to measures under the reformed Common Fisheries Policy and area-based protection measures(e.g. marine protected areas including Marine Conservation Zones), but the rate of improvement will depend upon life-history characteristics particular to each species and there may be time lags in responses beyond 2030.
- It is likely also that there will be continued shifts in the distribution of fish species in response to climate-driven warming of the sea which may have profound consequences for commercial fisheries and for the achievement of stated conservation objectives.

State of the evidence base and development needs

- The summary above is based upon the analysis presented in Charting Progress 2, which considers trends in multiple datasets where possible, for each CP2 Region, in order to gain some idea of confidence and uncertainty in the trends detected. However, much of the analysis has focussed on soft-bottom demersal species, whereas trends with respect to estuarine, coastal, pelagic, deep-water, migratory and diadromous species are much more uncertain and should be interpreted with care. The UK will work to improve the basis for assessments, taking these components of the marine fish communityinto account. There is also a need for research to help characterise the impact on fish of climate change and ocean acidification and the pressures from other human activities than fishing, as well as to develop improved information on the causes of declines in diadromous fish species and highly migratory fish such as oceanic sharks.

ANNEX A (CONT) – INITIAL ASSESSMENT - IMPACTS

Commercial fisheries (Descriptor 3)

MSFD Descriptor 3: Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.
MSFD Annex III Table 2: Pressures and impacts — Selective extraction of species, including incidental non-target catches (e.g. by commercial and recreational fishing).

Key driving forces

Commercial fisheries in UK waters principally target 32 fin-fish species, as well as a variety of shellfish species, including crabs, lobsters, scallops and *Nephrops*.

Current status of commercial fish species

Although, there has been a substantial increase in the number of fish stocks that are harvested sustainably over the period 2000 -2010, a significant proportion of indicator stocks (>60%) continue to be harvested at rates that are unsustainable and/or have reduced reproductive capacity. Further reductions in fishing pressure on approximately half of stocks in UK waters would be needed to ensure levels expected to provide the highest long term yield (maximum sustainable yield). There is a lack of consistent and quality data for shellfish species from throughout the UK, which means that robust stock assessment has not so far been possible at a regional level.

Charting Progress 2 reported that during the period 1997 to 2007 fishing mortality declined in 67% of assessed fin-fish stocks. This has been achieved through the combination of EU controls on catches and the decommissioning of fishing vessels in the UK and some other countries. The UK demersal trawl fleet was decommissioned by 15% over this period and the total fishing effort in the international demersal fisheries has fallen by around 30% or more in the North Sea, west of Scotland and in the Irish Sea.

Charting Progress 2 reviewed the status of the 20 indicator fin-fish stocks in 2007, for which the International Council for the Exploration of the Sea (ICES) is able to provide quantitative advice in relation to safe biological limits for both fishing mortality (F) and spawning stock biomass (B). These represent 40% of all fin-fish species landed by UK vessels into the UK and abroad. By 2007 the proportion of these 20 indicator stocks with acceptable reproductive capacity (i.e. with spawning stock biomass above precautionary limits) and acceptable level of fishing mortality (i.e. fishing mortality below precautionary limits) had risen to 25%, having been around 10% in the early 1990s to 25%. The proportion of these 20 indicator fin-fish stocks with acceptable reproductive capacity had changed little since 1990, while the proportion being fished at an acceptable level had risen from 10% to around 40% over the same time period. The lack of a concomitant increase in reproductive capacity following reductions in fishing mortality was linked to time lags in the recovery of stock biomass, or environmental factors affecting recruitment. For the remaining stocks where ICES is not able to provide quantitative advice, available information suggests that the proportion of stocks with each status is probably comparable with these 20 indicator stocks.

The following sub-Regional patterns were identified.

- *Greater North Sea sub-Region*. In the North Sea (CP2 Regions 1, 2) during 1998–2007, for a predominance of stocks there were significant reductions in fishing mortality whereas in the previous decade for most stocks there was no trend and for some, fishing mortality increased (Figure 3.17).This may reflect the large reductions in fishing capacity of the Scottish offshore fleet following decommissioning. The benefits in terms for spawning stock biomass were less clear, only a single additional stock showed a significant increase in 1998–2007 compared with the preceding decade.

- *Celtic Seas sub-Region*: To the west of the UK (CP2 Regions 4,5, 6, 7, 8 east), reductions in fishing mortality were acheived for an increased number of stocks over the period 1998-2007 . Two additional stocks showed improvements in spawning stock biomass over the period 1998–2007 compared with the previous decade and one less showed a downwards trend.

The latest available information (based on 2010 ICES advice) suggests that of those stocks of commercial interest to the UK for which a robust scientific assessment is possible, nearly 40% are being fished at the right level to achieve a maximum sustainable yield in the longer term or better and around 50% have a spawning component commensurate with maximum sustainable yield. However, this implies that at least half of stocks in UK waters will need to improve their position to ensure GES. What is more, the status of almost a third of all UK commercial finfish stocks is uncertain – and this will need to be taken account of, in the future management of EU fisheries under the EU Common Fisheries Policy. Although the assumption is that the focus on representative species for each sea area will ensure the health of the wider ecosystem is also improved.

Current status of commercial shellfish species

The life histories and behaviours of crustaceans are relatively complicated and assessments use a variety of indices, including length composition, landings and surveys, to provide an indication of the state of exploitation of a stock and whether increased yields could be expected through a reduced fishing rate. There is an absence of consistent data from throughout UK Seas. Shellfish assessments in Scottish waters indicate that most edible crab stocks are fully exploited or over-exploited, lobster stocks are either fully exploited or over-exploited and scallop stocks to the west of Scotland exhibit a declining biomass while those to the east fluctuate without an obvious trend. Overall shellfish to the south and west of Scotland appear heavily exploited, while those to the north and east appear less heavily exploited. In the Western Irish Sea the *Nephrops* stock has maintained it status over the past four decades suggesting it is fished sustainably while data suggest that scallop stocks around the Northern Irish Coast are withstanding current levels of exploitation. .

Underwater television camera surveys have shown a general trend of increasing burrow density of *Nephrops* from the mid-1990s to the mid-2000s in the northern part of the Greater North Sea This is also indicated by the North Sea Commission Fisheries Partnership stock survey, which uses a questionnaire approach to determine fishermen's perceptions of year-on-year changes in abundance of Nephrops and other commercially important fish stocks (ICES, 2008a). A similar trend has also been observed for *Nephrops* stock to the west of Scotland, although with some between year variations.

Predicted status in 2020/2030 given business as usual

It is concluded that effective implementation of the Common Fisheries Policy will prevent further collapse of most fisheries stocks in UK waters but may not deliver significant progress in achieving objectives such as the recovery of stocks to support Maximum Sustainable Yield across fisheries, or a fully-integrated ecosystem-based management approach to fisheries. This may be due to time lags in stock recovery and impacts from other pressures such as climate change. Recovery plans assume that recruitment will follow a historic relationship between recruits and SSB (in full). However, in most cases the properties of collapsed stocks are different from healthy stocks, in terms of distributional extent and size truncation and these factors are likely to be at least as important as climate change in causing the time lag. Other factors are discussed below under uncertainties.

State of the evidence base and development needs

The assessments of indicator fin-fish presented in Charting Progress 2 were based upon the stock assessment advice to the European Commission prepared by ICES. There is confidence in the assessments of these indicator stocks in most regions. Comparable and good quality assessments for shellfish species are more scarce and a monitoring and assessment system needs to be developed. This needs to be informed by improvement in the methodology for status assessment, knowledge and biological parameter estimation and through improvements in the quality of commercial data.

ANNEX A (CONT) COST OF DEGRADATION – LOSS IN REVENUES FROM FISH STOCKS NOT AT MSY

Reductions in the abundance of fish stocks would lead to a decrease in provisioning services and recreational services (e.g. from activities such as sea angling and diving).

Some stocks are currently in good condition i.e. around Maximum Sustainable Yield (MSY), for example North Sea haddock, others are in a depleted state. The Business as Usual scenario predicts that the Common Fisheries Policy will prevent any further significant deterioration in fish stocks, but will not deliver significant progress in achieving objectives such as the recovery of stocks to support Maximum Sustainable Yield across all fisheries, or a fully-integrated ecosystem-based management approach to fisheries. Therefore GES targets have been defined to ensure that key fish stocks reach Maximum Sustainable Yield. In terms of benefits this would imply higher levels of provisioning services (i.e. higher numbers of fish, shellfish and crustaceans for consumption). The costs of degradation for fisheries will be the loss of these benefits in the absence of GES targets.

Table 6.1 provides an illustrative assessment of the loss in revenue from fish stocks not reaching MSY levels, focusing on five fish stocks. This analysis provides a rough indication of the magnitude of benefits arising from improvements in the abundance of fish stocks. The key assumptions underpinning the analysis are as follows:

- Price per tonne does not change when fish stocks reach Maximum Sustainable Yield. This is unlikely as with increase in supply, prices will fall. However, it is difficult to estimate what this fall in price will be. The sensitivity analysis section below looks at scenarios of a 20% and 50% fall in price.
- The analysis is a snapshot, i.e. it describes the loss in revenue from not reaching Maximum Sustainable Yield tomorrow. In reality Maximum Sustainable Yield may be reached over a longer time period. Also, for the initial period the increase in benefits to fishermen will be more in terms of reduction in effort (under the same quota) and then at a later stage benefits will accrue in terms of increase catch levels (from readjustment of the quota based on higher healthy stocks).

For some stocks the transition towards Maximum Sustainable Yield will be partly driven by Common Fisheries Policy reform (included in the Business as Usual scenario) and hence not all the benefits from increased fish stocks (or loss in revenue from lower fish stocks in the baseline) are attributable to MSFD. Three scenarios have been considered based on attributing 50%, 25% and 10% of the benefits to MSFD rather than the Common Fisheries Policy.

Table 6.1. Loss in revenue from fish stocks not achieving maximum sustainable yield (MSY). [4]

Type of fish stock	ICES' catch (2010,tonnes)	Yield at F_{MSY}	F_{MSY} *	Increase in catch (tonnes)	£/tonne	Relative stability ***	Loss in revenue
IV							
Cod (IV,	69286	43700	0.19	367714	2,030	0.32	£242,059,

IIIaW, VIId)		0					279
Sole (IV)	12600	16940	0.22	4340	8,408	0.04	£1,557,973
VI a							
Haddock (VIa)	4824	13345	0.30	8521	1,316	0.78	£8,730,417
VII a							
Cod (VIIa)	1192	11000	0.40	9808	2,030	0.43	£8,495,617
Sole (VIIa)	275	1292	0.16	1017	8,408	0.22	£1,897,239
VII e							
Plaice (VIIe)	1227	2600	0.19	1373	1,114	0.29	£444,811
VII fg							
Plaice (VIIfg)	1133	1653	0.19	520	1,114	0.23	£135,769

*FMSY is the fishing mortality rate that would, in theory, give the Maximum Sustainable Yield (MSY) from a particular stock year after year.
**Average price from Jan to May 2011, Monthly Return Of Sea Fisheries Statistics for England, Wales, Scotland and Northern Ireland, MMO
***UK's share of TAC based on 2011 shares

Table 6.1 shows that the loss in revenue from fish stocks not reaching Maximum Sustainable Yield (across the five depleted stocks listed below) amounts to £263m in a given year. This can also be expressed as the benefit of achieving the GES targets for Descriptor 3. Discounting the benefits over 10 years gives a present value of £2.3bn. Based on the apportionment scenarios described above, the benefits attributable to MSFD alone would be £1.13bn (50%), £567m (25%) and £227m (10%) respectively.

Although this is a relatively simplistic model, it does give an indication of the magnitude of benefits that could be expected if all the relevant fish stocks and crustaceans were included in the assessment.

There are also likely to be losses in recreational services from fish stocks not reaching Maximum Sustainable Yield . The Scottish Government recently commissioned an assessment of sea angling and its contribution to employment and income both in Scotland as a whole and its regions[5]. This assessment estimated the total expenditure on sea angling across the whole of Scotland was £140.86m[6] in 2009. Using the GDP deflator to update figures to 2010 and looking at benefits over 10 years provides an estimate of £937m[7]. Estimates from a 2004 report by Drew Associates[8] suggest that the total expenditure by anglers resident in England and Wales was £538m per year based on the average expenditure per day per angling activity and the total number of days of angling activity. Using GDP deflators the 2010 figure would be £626m per year which amounts to £5.8bn over 10 years[9]. On the basis of these studies the benefits to the UK from expenditure as a result of sea-angling are likely to be at least £6.7bn over 10 years[10]. These high expenditures help provide an indication that society benefits from such recreational services. Assuming that sea-angling activity would increase due to improvements in fish stock abundance from the achievement of GES, these benefits will be lost if we do not reach Maximum Sustainable Yield levels. It is not currently possible to estimate how significant the loss in these benefits might be and further analysis will need to be carried out post consultation.

Sensitivity analysis

Some sensitivity analysis was carried out on the assumptions outlined in paragraph 179. This considered a scenario of a 20% and 50% fall in price (following a rise in the abundance of fish stocks) and assesses the impact this would have on the loss of revenues. A 20% reduction in price would imply loss of revenue of £1.7bn over 10 years, while a 50% reduction in price would imply loss of revenue of £887m over 10 years. Both these figures show that in spite of a decline in prices (due to increased supply of fish) the provisioning benefits to society from increased fish stock abundance are likely to be high. Table 6.2 shows the benefits for each scenario of apportionment:

TABLE 6.2: Sensitivity analysis under different apportionment scenarios

% Fall in price following a rise in supply	50% apportionment to MSFD	25% apportionment to MSFD	10% apportionment to MSFD
20%	£857m	£427m	£171m
50%	£443m	£222m	£89m

Table 6.2 demonstrates that there will be a lower loss in revenue from not achieving MSFD targets under a 10% apportionment scenario and a 50% reduction in price.

ANNEX B – PROPOSED GES CHARACTERISTICS

TABLE 1 - PROPOSED GES CHARACTERISTICS FOR DESCRIPTORS 1, 4 and 6	
Proposed characteristics of GES for Descriptor 1 (biodiversity)	The proposed UK characteristics of GES for this Descriptor are as follows: • Biodiversity[11] loss is halted and where possible restored, with key ecosystems maintained or recovered[12]. • The abundance, distribution and condition of species and habitats in UK waters reflects, or is consistent with, prevailing environmental conditions[13], taking into account sustainable use of the marine environment. • The extent and natural range of habitats and species is not being significantly reduced (nor likely to be so in the foreseeable future) and the specific structures and functions necessary for their long-term maintenance exist and are likely to exist for the foreseeable future. • Habitats and species defined as rare or threatened under existing national or international agreements are conserved effectively through appropriate national or regional[14] mechanisms. • Impacts of human activities do not lead to significant degradation of marine habitats or adversely affect species at the population or key functional group level.
Proposed Characteristics of GES for Descriptor 4 (food webs)	The proposed UK characteristics of GES for this Descriptor are as follows: • Populations of key species groups within the food web occur at levels that ensure the long-term sustainability of the marine ecosystem of which they are part with an age and size structure for these and other key species, indicative of sustainable populations e.g. a high proportion of larger, more mature individuals in fish populations. • The bycatch of non-target species in fisheries is reduced to a level which does not threaten food web structure, taking account of other pressures on the respective populations.
Proposed Characteristics of GES for Descriptor 6 (sea-floor integrity)	The proposed UK characteristics of GES for this Descriptor are as follows: • The sea-floor habitats (physically and structurally) are both productive and sufficiently extensive at the UK seas level, to carry out natural functionality, including the necessary ecological processes (e.g. cycling carbon and nutrients) and to provide ecological goods and services (e.g. food security and climate regulation) - and are capable of supporting a healthy and sustainable ecosystem for the long term. • The seafloor habitats most susceptible to the significant detrimental impacts of human activity are protected to ensure their extent and functioning is maintained.

TABLE 9 - PROPOSED GES CHARACTERISTICS FOR COMMERCIAL FISH (Descriptor 3)	
Proposed characteristics of GES for Descriptor 3 (commercial fish)	The proposed UK characteristics of GES for this Descriptor are as follows: • The level of stock mortality generated by fishing activity (F) is equal to or lower than Fmsy - the level capable of producing Maximum Sustainable Yield (MSY) for the long-term. Where Fmsy is not known, the proxy will be the catch/biomass ratio that is consistent with MSY.

	• The spawning stock (SSB) is at a level capable of delivering MSY. • Each fish stock contains a high proportion of mature fish and an appropriate age structure.

ANNEX C – PROPOSED GES TARGETS

TABLE 2 - PROPOSED TARGETS FOR MARINE MAMMALS (Descriptors 1 and 4)	
Marine mammal targets – *Species distribution* Reference BDMM1	• In all of the indicators monitored, there should be no statistically significant[15] contraction in the distribution of marine mammals caused by anthropogenic activities[16].
Marine mammal targets –*Population size* Reference BDMM2	• In all of the indicators monitored, there should be no statistically significant decrease in abundance of marine mammals caused by anthropogenic activities[17]
Marine mammal targets –*Population condition* Reference BDMM3	• There should be no statistically significant decline in seal pup production and bottlenose dolphin calf production; and mortality of marine mammals due to fishing by-catch should be sufficiently low so as not to inhibit population size targets being met[18]
Marine mammal targets – *Productivity of key species* Reference BDMM4	• There should be no statistically significant decline in seal pup production and bottlenose dolphin calf production caused by anthropogenic activities[19]
Marine mammal targets - *Abundance/ distribution of key species/ trophic groups* Reference BDMM5	• In all of the indicators monitored, there should be no statistically significant decrease in abundance of marine mammals caused by anthropogenic activities [20]

TABLE 3 – PROPOSED GES TARGETS FOR BIRDS (Descriptors 1 and 4)		
	OPTION 1 (preferred option)	**OPTION 2**
Bird targets – *Species distribution* Reference BDB1	• No major shifts or shrinkage in the population distribution of marine birds in 75% of species monitored[21].	• No major shifts or shrinkage in the population distribution of marine birds in 90% of species monitored[22].
Bird targets – *Population size* Reference BDB2	• Changes in abundance of marine birds should be within individual target levels in 75% of species monitored[23].	• Changes in abundance of marine birds should be within individual target levels in 90% of species monitored[24].
Bird targets – *Population condition* Reference BDB3	• Annual breeding success of black-legged kittiwakes should not be significantly different, statistically, from levels expected under prevailing climatic conditions (i.e. sea surface temperature); widespread seabird colony breeding failures should occur rarely (i.e. at <5-15%[25] of colonies in no more than three	• Same as Option 1

	years out of six); and mortality of marine birds due to fishing bycatch and aquaculture should be sufficiently low to not inhibit population size targets being met.	
Bird targets – *Productivity of key species* Reference BDB4	• Annual breeding success of black-legged kittiwakes should not be significantly different, statistically, from levels expected under prevailing climatic conditions (i.e. sea surface temperature).	• Same as Option 1
Bird targets *Abundance/distribution of key species/trophic groups* Reference BDB5	• Changes in abundance of marine birds should be within individual target levels in 75% of species monitored[26].	• Changes in abundance of marine birds should be within individual target levels in 90% of species monitored[27].

TABLE 3 – PROPOSED GES TARGETS FOR FISH (Descriptors 1 and 4)	
Fish targets – *Species distribution* Reference BDF1	• The geographic and depth distribution of fish should meet individual indicator targets in a statistically significant proportion of species monitored.
Fish targets – *Population size* Reference BDF2	• The population abundance density and population biomass density of fish should meet individual indicator targets in a statistically significant proportion of species monitored.
Fish targets – *Ecosystem structure* Reference BDF3	• More than 30% (by weight) of fish in the Greater North Sea and 40% (by weight) of fish in the Celtic Seas exceed a length of 40cm and 50cm respectively.
Fish targets – *Proportion of selected species at the top of the top of food webs* Reference BDF4	• A specified proportion (by weight) of fish in any defined marine region should exceed a stipulated length threshold.

TABLE 5 – PROPOSED GES TARGETS FOR PELAGIC HABITATS (Descriptors 1, 4 and 6)	
Pelagic habitat targets - *Habitat distribution* Reference BDP1	• Distribution of plankton community not significantly influenced by anthropogenic drivers
Pelagic habitat targets - *Habitat condition* Reference BDP2	• Condition of plankton community not significantly influenced by anthropogenic drivers
Pelagic habitat targets - *Ecosystem structure* Reference BDP3	• Structure of plankton community not significantly influenced by anthropogenic drivers
Pelagic habitat targets - *Abundance/distribution of key species/trophic groups* Reference BDP4	• Abundance/distribution of plankton community not significantly influenced by anthropogenic drivers
Pelagic habitat targets - *Condition of the benthic community* Reference BDP5	• Condition of the meroplanktonic (plankton with benthic life phase) community not significantly influenced by anthropogenic drivers

TABLE 6 – PROPOSED GES TARGETS FOR ROCK AND BIOGENIC REEF HABITATS (Descriptors 1 and 6)	
Rock & Reef targets - *Habitat distribution* Reference	• <u>All listed (special) and predominant habitat types</u> - Range and distribution are stable or increasing and not smaller than the baseline value (Favourable Reference Range[28] for Habitats Directive habitats).

BDRBR1	
Rock & Reef targets - *Habitat extent* Reference BDRBR2	• All listed (special) and predominant habitat types - Area is stable or increasing and not smaller than the baseline value (Favourable Reference Area[29] for Habitats Directive habitats).
Rock & Reef targets - *Habitat condition*; *Physical damage; Condition of the benthic community* Reference BDRBD3	• All listed (special) & predominant habitat types - Area of habitat below GES (as defined by condition indicators) must not exceed 5% of the baseline value (Favourable Reference Area for Habitats Directive habitats)

TABLE 7 - TARGETS FOR SEDIMENT HABITATS (Descriptors 1 and 6)		
	OPTION 1 (preferred option)	**OPTION 2**
Sediment habitat targets - *Habitat distribution* Reference BDSH1	• Predominant habitat types - No target proposed – see qualitative target below for habitat condition • All listed (special) habitat types - Range and distribution is stable or increasing and not smaller than the baseline value (Favourable Reference Range for Habitats Directive habitats)	• All listed (special) & predominant habitat types - Range and distribution is stable or increasing and not smaller than the baseline value (Favourable Reference Range for Habitats Directive habitats)
Sediment habitat targets - *Habitat extent* Reference BDSH2	• Predominant habitat types – No target proposed – see qualitative target below for habitat condition • All Listed (special) habitat types: o Area is stable or increasing and not smaller than the baseline value (Favourable Reference Area for Habitats Directive habitats) o WFD extent targets for saltmarsh and seagrass should be used within WFD boundaries as appropriate.	• Predominant habitat types - area of habitat lost, plus area of habitat below GES (as defined by condition indicators) is ≤15%. • All Listed (special) habitat types: o Area is stable or increasing and not smaller than the baseline value (Favourable Reference Area for Habitats Directive habitats) o WFD extent targets for saltmarsh and seagrass should be used within WFD boundaries as appropriate.
Sediment habitat targets - *Habitat condition*; *Physical damage; Condition of the*	• Predominant habitat types – Improve the condition of benthic habitats, taking action to reduce impacts where these have been identified as unacceptable. • All Listed (special) habitat types: o Area of habitat below GES (i.e. unacceptable impact / unsustainable use) as defined by condition indicators must not	• Predominant habitat types - area of habitat lost, plus area of habitat below GES (as defined by condition indicators) is ≤15%. • All Listed (special) habitat types: o Area of habitat below GES (i.e. unacceptable impact / unsustainable use) as defined by condition indicators must

benthic community Reference BDSH3	exceed 5% of baseline value (favourable reference area for HD habitats) o WFD targets (km2 thresholds) for area of unacceptable impact for benthic invertebrates, macroalgae, saltmarsh and seagrass should be used within WFD boundaries as appropriate.	not exceed 5% of baseline value (favourable reference area for HD habitats) o WFD targets (km2 thresholds) for area of unacceptable impact for benthic invertebrates, macroalgae, saltmarsh and seagrass should be used within WFD boundaries as appropriate.

PROPOSED GES TARGETS AND INDICATORS FOR COMMERCIAL FISH (Descriptor 3)	
Proposed targets for Descriptor 3 – *Fishing Mortality*	• As a first step, all stocks must be exploited at F_{pa} or lower (short-term objective by 2015). • Subsequently, the exploitation rate of each stock is either at F_{MSY} for each stock, or where specified, within the range of possible fishing mortalities consistent with F_{MSY} for each stock (medium- to long-term objective)[30]
Proposed targets for Descriptor 3 – *Reproductive Capacity of Stock*	• It is proposed that the target would be the spawning stock biomass / total biomass/ biomass proxy is above the agreed stock specific threshold.[31]

ANNEX D: APPROACH TO SETTING GES TARGETS SETTING FOR COMMERCIAL FISH

Fish stock management within the CFP currently utilises "safe biological limits" within the Precautionary Approach (PA). These limits are defined in terms of thresholds for the upper level of fishing mortality and lower level of (adult) spawning stock biomass. This prevents high levels of fishing mortality reducing stock size and impeding reproductive potential. Where possible scientific evaluation of each stock's status relative to its safe biological limits is published annually by the International Council for the Exploration of the Sea (ICES) – based on information provided by Member States' scientific authorities. ICES also provide an assessment against more ambitious stock specific <u>targets</u> for fishing mortality rates to achieve high levels of average yield (MSY).

For this Descriptor experts have proposed that MSFD targets are based on the achievement of stocks within the safe biological limit precautionary thresholds, whilst aiming, in the medium-long term, for the more ambitious stock specific targets for fishing at levels consistent with the Maximum Sustainable Yield. Achieving a fishing mortality rate of MSY for all stocks is considered to be equivalent to safe biological limits, while also reducing fishing pressure on the wider ecosystem[32].

The UK government has accepted the principle of MSY under a number of different commitments including the World Summit on Sustainable Development (WWSD). However, MSY is a single-species target, taking no account of species interactions or the mixed nature of many EU fisheries. Therefore, given the variability inherent in the targets for single species and the difficulty of simultaneously maintaining all stocks in a mixed fishery at MSY, for some stocks MSY may be considered to be a range of exploitation rates which take into account changes in stock dynamics. The proposed targets will not be directly applied to all fish and shellfish stocks exploited in UK waters but instead to a selection of stocks chosen to be representative of all commercial stocks, based on scientific advice.

There is currently little detailed information about the approach other Member States are likely to take to setting targets for this Descriptor. However, ICES is in the process of developing advice on methodologies for GES targets for commercial fish and the approach proposed in this impact assessment has been put forward by UK scientists in ICES.

<u>Implications of the proposed targets</u>

Delivering the proposed targets for GES under this descriptor will, with the exception of measures for shellfish and other stocks where there is some scope for national measures, be dependent on the success of the fisheries management measures that will be determined and agreed under the reformed CFP[33]. The UK's approach to CFP reform is consistent with the approach to targets proposed for this Descriptor. Additional management measures necessary to achieve MSY could include thing such as limits on landings and various technical measures.

For shellfish, as most commercial species are not managed directly through the CFP, we have considered the potential costs of other measures which could be taken on a national or more local basis; e.g. technical conservation[34], limits to landings, use of less destructive gear and the protection of key shellfish life stages.

More information on the potential costs and benefits associated with these target proposals can be found in the Impact Assessment.

No new monitoring programmes will be required in relation to these targets for finfish stocks, provided the stocks selected as indicators are those already covered by the EU Data Collection Framework. There could however be some additional monitoring and assessment costs in relation to shellfish stocks (e.g. for scallops, crab and lobster). These costs will vary depending on which stocks are included in the assessment of GES.

Gaps and development needs

No targets have been proposed for Criterion 3.3 Population age and size distribution in the Commission Decision on Good Environmental Status. This is on the basis that there is no scientific agreement on whether the population age and size distribution can be defined for single species/stocks in isolation. It is considered that achieving “safe biological limits” will invariably result in a “healthy” age and size distribution.

For many fish stocks and the majority of shellfish stocks there are currently no agreed indices of exploitation rate and biomass status due to limited data availability. In the short term, studies will need to be conducted for shellfish stocks in particular, to derive the required proxy indicators and the level of their targets/thresholds.

ANNEX E: IMPACT ASSESSMENT

Costs

Monetised costs to business have been assessed by looking at the costs of *illustrative* management measures. These are estimated as follow:.

- <£3.5m-£17.3m over 10 years to the fishing industry from measures to reduce the impacts of fishing on biodiversity (Descriptors 1, 4 and 6)
- £50m-£252m over 10 years to the fishing industry from measures to achieve Maximum Sustainable Yield in commercial fisheries (Descriptor 3)[35]. Apportionment scenarios of 50%, 25% and 10% have been applied.

A significant proportion of the monetised costs would fall on the fishing industry. The GES targets proposed in this impact assessment are entirely consistent the UK's approach to reform of the Common Fisheries Policy (CFP). Achieving the proposed targets for Descriptors 1 (biodiversity). 4 (food webs), 6 (seafloor integrity) and 3 (commercial fish) will be dependent on successful implementation of fisheries management measures agreed under the reformed CFP (e.g. use of less destructive fishing gears, limits on landings). However, as the MSFD is a key driver in ensuring CFP achieves its environmental goals a *proportion* of the costs (and benefits) of these management measures should be attributed to the MSFD.

It has not been possible to monetise the costs of all the potential management measures which may be needed to achieve the proposed GES target and these costs are described qualitatively in the IA. The main affected group is likely to be the fishing industry, through potential measures to reduce the impact of fishing practices on particular marine species (e.g. seabirds) and seafloor habitats.

The cost of the following measures have not been quantified in the IA:

- *Additional Illustrative management measures for fisheries (for vulnerable fish, seabed integrity and shellfish).* These include measures to protect threatened or vulnerable fish species (as we are unclear of the specific location of the species and hence the extent to which additional measures would need to be applied), measures to modify fishing gear to make it less damaging to the seabed (loss of Gross Value Added to fishermen is likely to be low but one off changes to fishing gear can be significant if changes are to be made in short time scales) and measures to protect key shellfish life stages (though costs to fishermen are likely to be low as this would only apply to lobsters in specific areas).

Benefits

It has only been possible to monetise a small proportion of the likely benefits of achieving the proposed GES targets, mainly those benefits related to the fishing industry. These include the following:

- £267m-£1.1bn over 10 years to fishermen from increased revenue if fish stocks reach Maximum Sustainable Yield (MSY) level[36].
- £118m over 10 years to the fishing industry from reducing litter levels in marine waters (through reduced damage to vessels). The targets for litter proposed under this option would require more significant action to reduce litter levels than the targets under the

non-preferred option and therefore the associated benefits are *higher* under this option than under the non-preferred option.

2011

Position at Start of Year

Following stakeholder workshops

11 search feature priorities remain

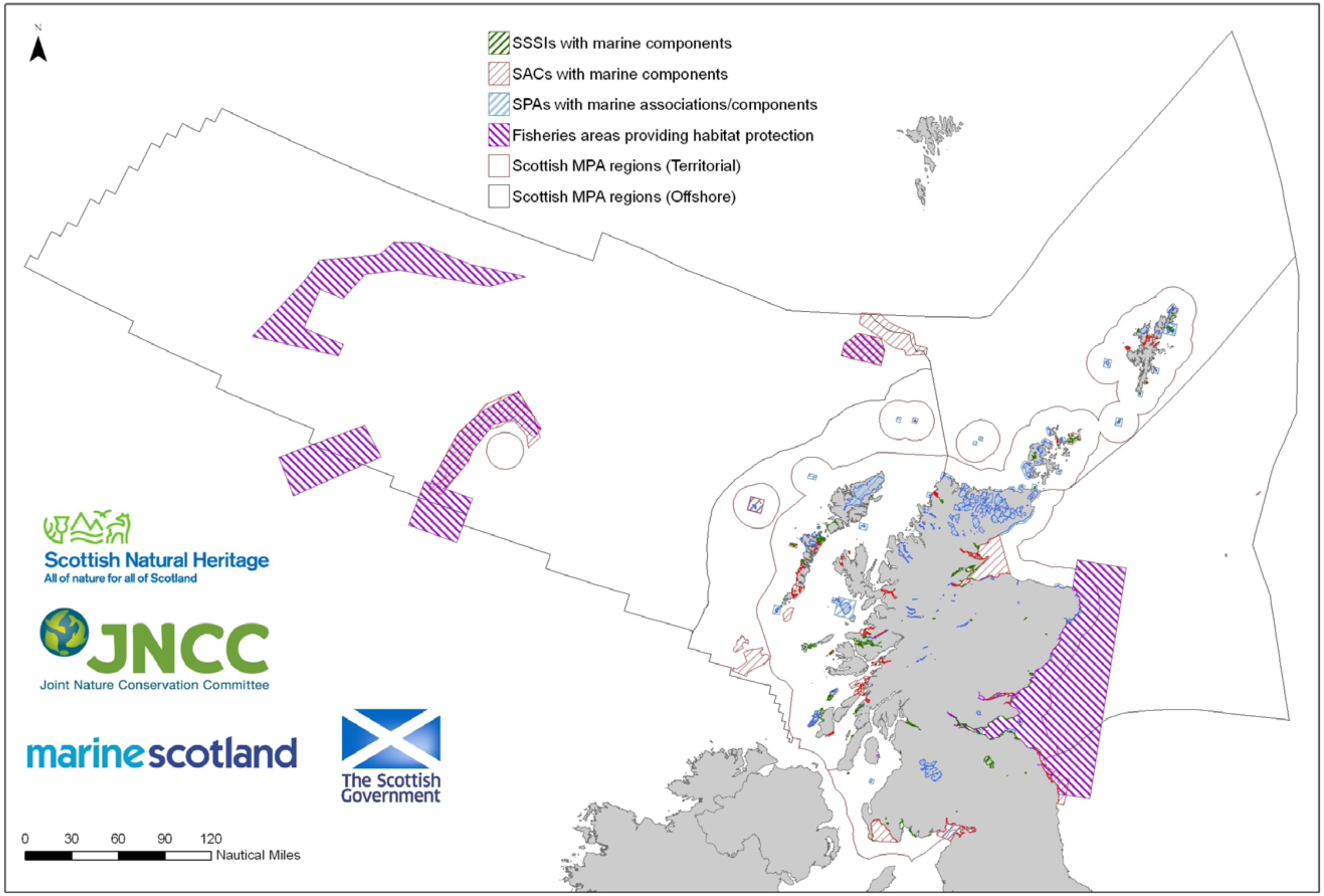
42 search features
things we wish to protect

39 search features
28 are well represented by the work to date

30 search locations;
Place we're looking

31 search locations
7 of which no further assessment

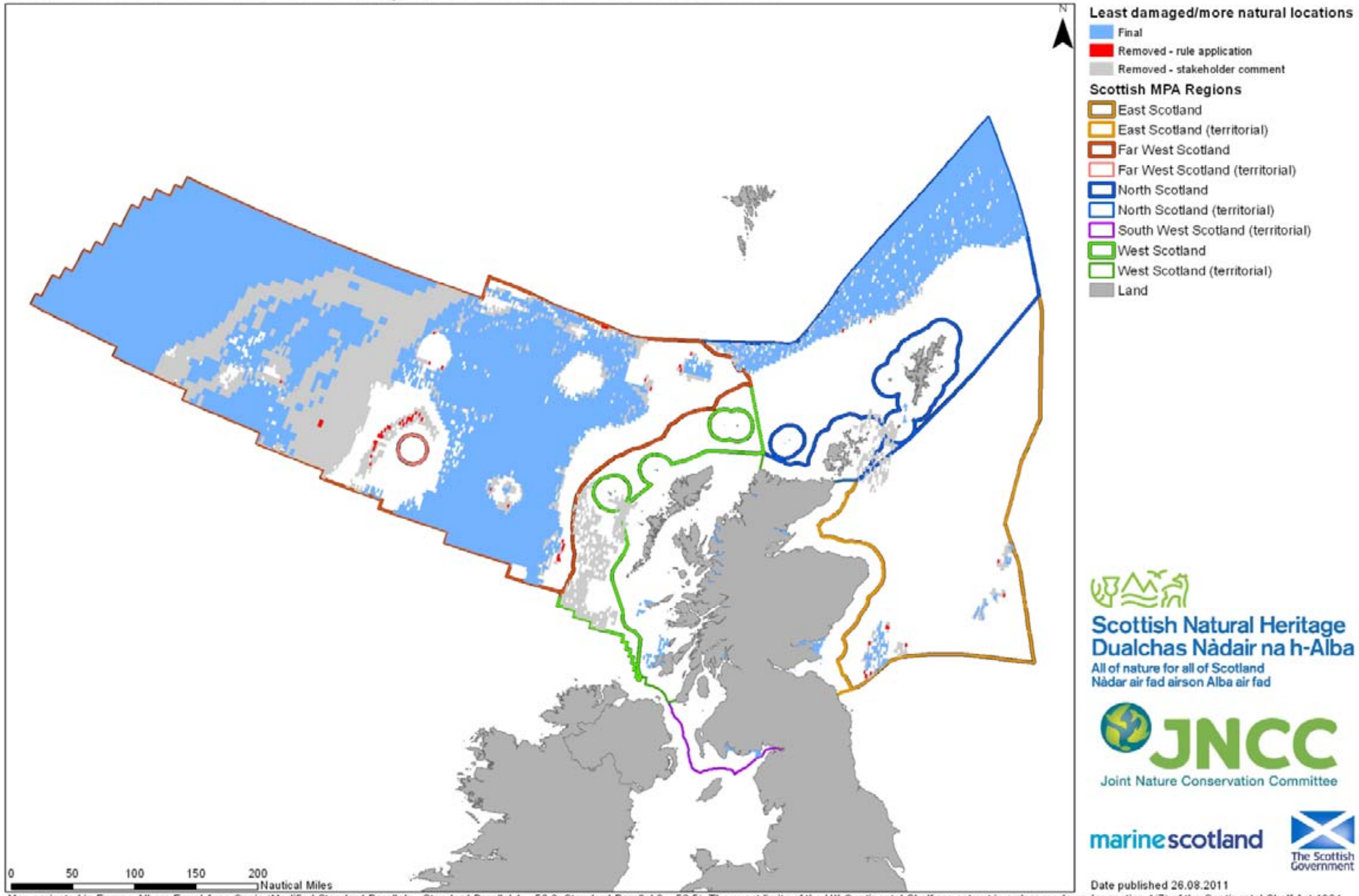
Stakeholder Workshops in March, June & October



Main map projected in Europe Albers Equal Area Conic (Modified Standard Parallels - Standard Parallel 1 = 50.2; Standard Parallel 2 = 58.5). Insert maps projected in British National Grid. The exact limits of the UK Continental Shelf are set out in orders made under section 1(7) of the Continental Shelf Act 1964 (© Crown Copyright). Land, World Vector Shoreline © US Defense Mapping Agency. NOT TO BE USED FOR NAVIGATION. Map copyright JNCC 2011. OCA 28.09.11. Date published 28.09.2011

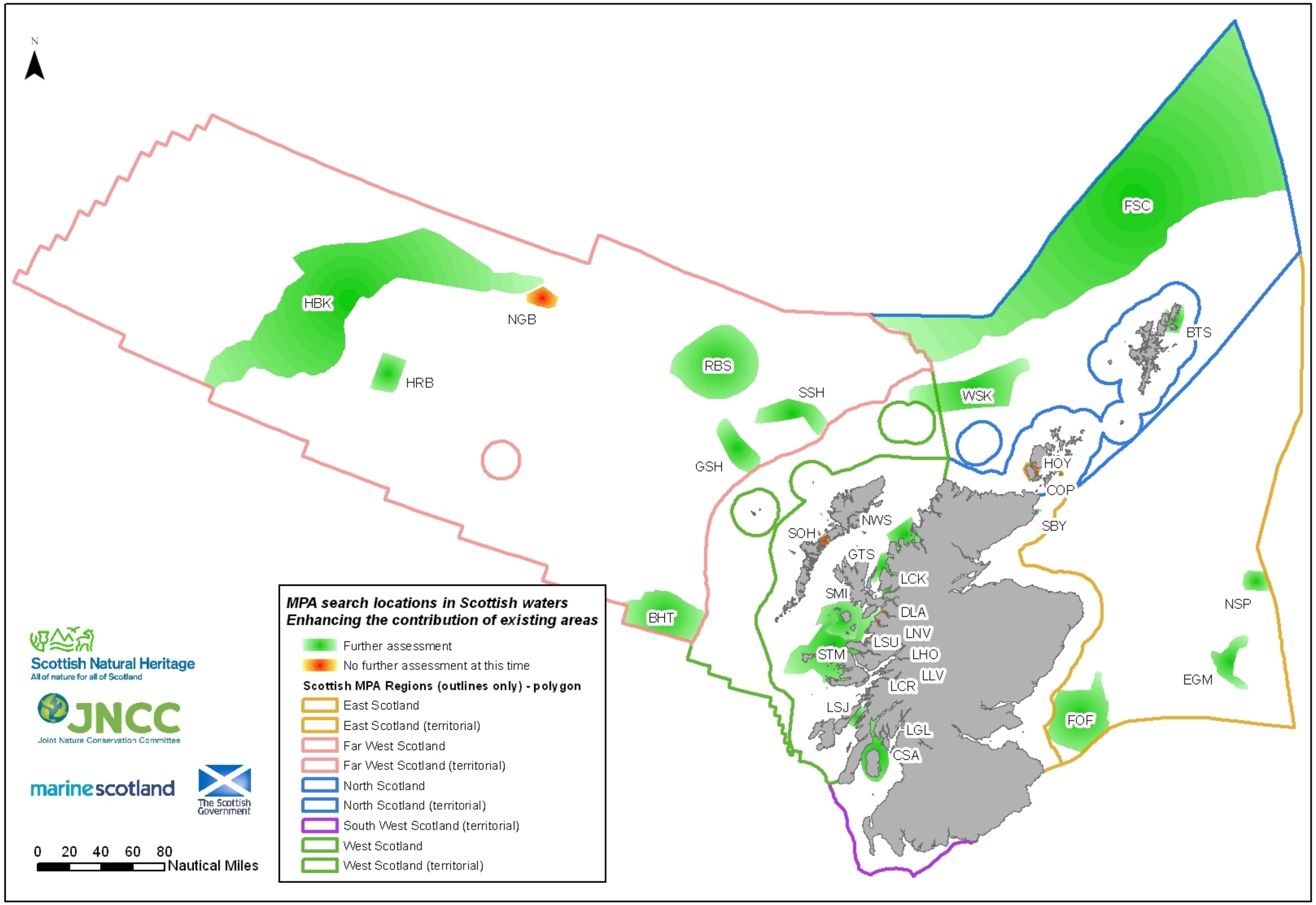
Existing protected areas in Scotland’s seas

Areas considered to be least damaged/more natural in Scotland's seas



Date published 26.08.2011

Map projected in Europe Albers Equal Area Conic (Modified Standard Parallels - Standard Parallel 1 = 50.2; Standard Parallel 2 = 58.5). The exact limits of the UK Continental Shelf are set out in orders made under section 1(7) of the Continental Shelf Act 1964 (© Crown Copyright). World Vector Shoreline © US Defense Mapping Agency. NOT TO BE USED FOR NAVIGATION. Map copyright JNCC 2011. OCA 26.08.11



Map projected in Europe Albers Equal Area Conic (Modified Standard Parallels - Standard Parallel 1 = 50.2; Standard Parallel 2 = 58.5). The exact limits of the UK Continental Shelf are set out in orders made under section 1(7) of the Continental Shelf Act 1964 (© Crown Copyright). Coastline - Ordnance Survey Licence number 100017908. © Crown copyright and database right [2011]. All rights reserved. Seabed habitat derived from UKSeaMap2010 version 7. NOT TO BE USED FOR NAVIGATION. Map copyright SNH & JNCC 2011. 06.10.11

MPA Draft programme plan for 2012

January and February

- Stakeholder Workshop 4 to explore:
- Initial reactions to latest round of search locations for remaining priority features
- Possible socio-economic concerns of locations under consideration
- Initial Management discussions on a feature / activity basis

March and April

- Meetings with industry representatives from fisheries, renewables and oil & gas, etc.
- Meetings with Regional bodies and/or community groups on a geographic interest basis

June

- Stakeholder workshop 5 (possibly via Marine Scotland Forum) to report and refine the first iteration of what the MPA network could look like.
- Further discussion and refinement of management guidelines

August and September

- Possible round of further meetings with industry representatives
- Possible round of further meetings with Regional bodies and community groups
- Probable continual refinement of the proposed MPA network

November

- SNH and JNCC present recommendations to Marine Scotland
- BRIA findings incorporated into advice
- MS present proposed MPA Network to Cabinet Secretary for consideration

December

- Cabinet Secretary presents progress to Parliament and MPAs proposals being considered for inclusion in network

Collation and refinement of information for Business and Regulatory Impact Assessments