National Marine Plan Review 2021: Three Year Report on the effectiveness of Scotland's National Marine Plan

For period encompassing 26 March 2018 to 22 March 2021

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Executive Summary

Background

The National Marine Plan (NMP or "the Plan") was published in 2015. It sets out our vision for clean, healthy, safe, productive and diverse seas, managed to meet the long term needs of nature and people. In accordance with the Scottish and UK legislation, there is a requirement to review and report on the implementation of the Plan. The Plan was first reviewed in 2018 National Marine Plan Review 2018: three-year report - gov.scot (www.gov.scot).

This report fulfils the commitment in the UK legislation to review the Plan every three years. This review has been impacted in various ways by the Covid-19 pandemic. For example the "effectiveness" assessment is narrower in scope than we would have liked, and does not look at public decision makers beyond Marine Scotland (e.g. Local Authorities, NatureScot, SEPA, etc). In light of this we will seek views from stakeholders on the key findings of this review. Following consideration of the review report and any stakeholder comments, Ministers must then decide if replacement or amendment of the Plan is required.

Effectiveness of the Plan

In assessing the effectiveness of the Plan we looked in detail at: the extent to which it is used in the licensing decision making process for marine activities, and the key issues arising; the Scottish Marine Assessment 2020 which is a statutory requirement undertaken for the purpose of reviewing the Plan; and, the scientific and socio-economic monitoring approaches in place to underpin the Plan.

The key findings were:

- The assessment of licences issued by MS-LOT found that there was a wide coverage of NMP policies considered across the sample, showing the consistent use across Marine Scotland licensing operations. The assessment also found there to be a high representation of "spatial" general policies. This is indicative of the increasing competition for space in the marine environment. Whilst the current NMP provides for such deliberation up to a point, we consider that future pressures will likely require a more detailed framework on this issue.
- Scotland's Marine Assessment 2020 (SMA2020) was published on 21 December 2020. The assessment fulfils the requirement of the Marine (Scotland) Act 2010 which requires that an assessment of the state of Scotland's seas is undertaken. It sets out the condition of Scotland's seas and the pressures that they face. It is not intended as an evaluation of the NMP, and in this instance does not recommend changes to the NMP, but the assessment does outline areas of future work that can further help achieve its aims as well as outlining areas of concern within the marine environment.
- Socio-economic and scientific monitoring continues to improve with further opportunities given technological and methodological developments. For

example the ScotMer programme on socio-economics is leading to an improved understanding of social and economic impacts from offshore wind developments. This means that actions can be taken to improve outcomes for local and national populations. Whilst the body of evidence is certainly improving, the need to align with strategies, such as the Blue Economy Action Plan, it is imperative that further consideration is given to the objectives we are working towards and the continued evolution of the indicators that we use to measure success.

Review of "Relevant Matters"

In–line with our obligations under Section 11 of the Marine (Scotland) Act, this review has a particular focus on the impact of significant national and global developments that impact on our management of marine resources. Our assessment found that there is a clear need to begin work to replace it, in order to ensure that it is fully orientated to meet some significant emerging challenges:

- It is clear that in the 6 years since the National Marine Plan was adopted, significant external developments have arisen that are impacting on our marine environment and sectors.
- The exit of the UK from the European Union means that the legislative context for the plan has changed. Sectors such as the seafood industry face massive challenges in exporting their produce to market.
- The Global Climate Emergency is changing our seas and impacting the sectors which rely on its resources.
- The Covid-19 pandemic has affected every aspect of our society and economy. It is vital that our major policy frameworks, including the National Marine Plan, are orientated towards delivering a green recovery from COVID-19.
- It is clear there is a rapid pace of change and interest in the marine sphere, combined with changes in technology, new emerging industries and a greater recognition of the benefits that can come from our marine environment. This will mean a significant increase in activity and new sectors that will look to be active in the marine environment to deliver key economic, social and environmental outcomes.
- In the developing Blue Economy Action Plan the ambition is to deliver the best possible enabling environment to unlock the potential of the Blue Economy while providing support for business and encouraging innovation.
- This will put more focus on the transformational impact of our legal commitment to achieve net zero by 2045, and the challenge of effectively managing increasing competition for space and resources in the marine environment. The National Marine Plan will need to evolve if it is to be optimised to ensure we have a framework in place that can enable governance and management of these significant challenges.

Moving Forward

Advice will be provided to Ministers based on the findings of this review. It will be for Ministers to decide whether to amend or replace the plan – or indeed to keep the current version until at least a subsequent review in three years' time.

However, given that one of the ways the pandemic has impacted this review is the constraint on stakeholder consultation, we are keen to invite views on the key findings from all interested parties and individuals:

- Have we considered the right set of "relevant matters"? Is there anything we have missed?
- Do you agree that these matters and their impact on the management of co-existing activities in the marine environment point to the need to begin work to replace the NMP?

Please send any comments you have to nationalmarineplanning@gov.scot by 31 May 2021.

These views will accompany the advice to Ministers regarding the future of the National Marine Plan.

Background

National Marine Plan

The National Marine Plan was published in 2015. It sets out our vision for clean, healthy, safe, productive and diverse seas, managed to meet the long terms needs of nature and people. The Plan contributes to the delivery of this vision, as well as the High Level Marine Objectives (HLMOs), which are adopted by all UK Administrations and are published within the Marine Policy Statement (MPS). The adoption of the HLMOs as the strategic objectives for the Plan reflect the commitment to the five guiding principles of sustainability, around which the HLMOs and policies of the Plan are organised.

The Plan specifies a core set of General Policies which apply to all plan making and decision making in the marine environment. These apply to all existing and future use and development of the marine environment and are supplemented by sector policies that address specific issues beyond those set out in the General Policies.

Legislation Overview

Marine planning in Scotland's inshore waters (out to 12 nautical miles) and offshore waters (12 to 200 nautical miles) is governed by the Marine (Scotland) Act 2010[1], an Act of the Scottish Parliament and by the Marine and Coastal Access Act 2009[2], an Act of the UK Parliament, respectively. The two Acts (referred to as the Marine Acts) establish a legislative framework for marine planning to enable demands on marine resources to be managed in a sustainable way across all of Scotland's seas.

Scotland's first statutory marine plan, the National Marine Plan, was adopted and published in March 2015. The policies and objectives of the Plan establish how Scottish Ministers intend marine resources to be used and managed. The Plan supports development and activity in Scotland's seas while incorporating environmental protection into marine decision making to achieve sustainable management of marine resources. The policies and objectives of the Plan will also be reflected in the development of Regional Marine Plans (RMPs). RMPs will be developed by Regional Marine Planning Partnerships (RMPPs) and will implement national policies at a regional level, taking account of local circumstances and issues.

Three RMPPs have been established in Clyde, Shetland and Orkney. All three are working to produce their first Regional Marine Plans. The Environment, Climate Change and Land Reform Committee of the Scottish Parliament published a final report on its inquiry into Regional Marine Planning on 17 December 2020. The report identifies a number of challenges and makes a suite of recommendations to government. Scottish Ministers have confirmed that we will consider the committee's report in detail and make a full response later in 2021. This response will include an

[1] Marine (Scotland) Act 2010. Available at https://www.legislation.gov.uk/asp/2010/5/contents [accessed 22/03/2021]
[2] Marine and Coastal Access Act 2009. Available at http://www.legislation.gov.uk/ukpga/2009/23/contents [accessed 22/03/2021]

outline of how the Scottish Government intends to take forward regional marine planning over the next five to ten years.

Requirement for monitoring of and review of marine plans

Section 16(2) of the Marine (Scotland) Act 2010 requires Scottish Ministers to keep under review and publish a report on:

> *a) the effects of the policies in the plan,*
> *b) the effectiveness of the policies in securing that the objectives for which the plan was prepared and adopted are met,*
> *c) the progress being made towards securing the objectives,*
> *d) the progress being made towards securing that the objectives in the regional marine plan secure the objectives in the national marine plan.*

Section 61(3) of the UK's Marine and Coastal Access Act requires a) to c) above and also:

> *e) if a Marine Policy Statement governs marine planning for the marine plan authority's region, the progress being made towards securing that the objectives for which the MPS was prepared and adopted are met in that region.*

At this time no regional marine plan has been adopted. Therefore, this review will exclude requirement 16(2)d of the Marine (Scotland) Act 2010.

Further, Section 11 of the Marine (Scotland) Act 2010 sets out a duty to keep relevant matters under review which may be expected to affect the exercise of our functions relating to the preparation, adoption, amendment or withdrawal of a national marine plan. These matters include:

> *(i) the physical, environmental, social, cultural and economic characteristics of the Scottish marine area and of the living resources which the area supports,*
> *(ii) the purposes for which any part of the area is used,*
> *(iii) the communications, energy and transport systems*
> *(iv) any other considerations which may be expected to affect those matters*

The Marine Acts dictate different timescales for review. For inshore waters out to 12 nautical miles, the Marine (Scotland) Act 2010 requires that the first report must be published within five years of adoption, after which successive reports must be published at interval of no more than five years. For offshore waters (12 to 200 nautical miles) the Marine and Coastal Access Act requires reporting within three years of the first Plan and within three years of successive reports thereafter.

Plan Delivery

The Marine Acts require that public authorities must take authorisation or enforcement decisions in accordance with the National Marine Plan (and any other adopted marine plan) unless relevant considerations indicate otherwise. They must

have regard to the Plan in taking decisions which do not relate to authorisation or enforcement and which are capable of affecting the marine area. This applies to Marine Scotland and wider Scottish Government, Local Authorities and other public authorities including statutory advisors, regulators and agencies.

NMP Review 2018

The NMP was reviewed in 2018 in the National Marine Plan Review 2018: three-year report - gov.scot (www.gov.scot).[3] The 2018 review found that a number of policies and general aspects of the Plan were particularly effective or useful to decision making. New policies given statutory status by the Plan, such as those in relation to cables and Priority Marine Features (PMF), had influenced and underpinned decision making. Various challenges were also highlighted, including that the uncertainties around the UK leaving the EU meant that it was not the right time to amend or replace the plan.

NMP 2021 Review – the approach

This review considered two main aspects: the effectiveness of the plan (as required by Section 16(2) of the Marine (Scotland) Act 2010) and "relevant matters" impacting on its functions (as required by Section 11 of the Marine (Scotland) Act).

The assessment of the Plan's effectiveness considered two main areas:

- The findings set out in the Scottish Marine Assessment 2020; and,
- Existing data monitoring programmes including feedback by Marine Scotland-Licensing Operations Team (MS-LOT) and Marine Scotland Science.

However, in–line with our obligations under Section 11 of the Marine (Scotland) Act 2010, this review has a particular focus on the impact of significant national and global developments that impact on our management of marine resources and therefore on Scottish Minister's decision as to whether to amend or replace the current NMP. These developments include:

- The Global Climate Emergency
- The COVID-19 pandemic
- UK Exit from the EU

We will also consider the implications of wider Marine Scotland strategies including the Blue Economy Action Plan and the Future Fisheries Management Strategy.

This review has been impacted by the COVID-19 pandemic, as a result of which it has not involved substantive consultation with external stakeholders. We are clear however that should Ministers decide to amend or replace the plan, a considerable exercise would be necessary to deliver such an undertaking, which would include extensive stakeholder consultation.

[3] Scottish Government, National Marine Plan Review 2018: three-year report. Available at National Marine Plan Review 2018: three-year report - gov.scot (www.gov.scot) [accessed 22/03/2021]

Effectiveness of the Plan

Scottish Marine Assessment 2020

Scotland's Marine Assessment 2020[4] (SMA2020) was published on 21 December 2020. It provides a robust evidence base that we can use to help us protect and enhance our marine environment while we support building a sustainable blue economy. This peer-reviewed assessment provides an up-to-date review of the current state of Scotland's seas, updating Scotland's Marine Atlas, published in 2011. It sets out the condition of Scotland's seas and the pressures that they face which, in turn, informs this review of the National Marine Plan.

The assessment fulfils the requirement of the Marine (Scotland) Act 2010 which requires that, prior to reviewing the National Marine Plan, an assessment of the state of Scotland's seas is undertaken. It has been prepared over the last few years with peer review undertaken in 2019 and 2020. Given this background, SMA2020 does not take into account any effects of the COVID-19 pandemic.

SMA2020 is a culmination of over two years work undertaken by Marine Scotland, NatureScot, Scotland's Environment Protection Agency (SEPA), the Joint Nature Conservation Committee) (JNCC) and the academic community. It has 66 assessments including five topics which cover: 'Our Vision for the Sea'; 'Physical characteristics'; 'Clean and Safe'; 'Healthy and Biologically Diverse' (habitats and species); and 'Productive' (economic activities). Other assessments included are 'Climate Change', 'Ecosystem Services', 'Pressure from Activities' and 'Managing Human Activities'; while there is also a regional assessment for each of the 21 regions into which the Scottish seas have been divided.

The assessment contains a wide range of findings relevant to this review, which are also referenced throughout this document. The main headlines from the SMA2020 are:

- Progress is being made in improving the state of Scotland's seas especially in relation to contaminants. Eutrophication is not an issue in Scotland's seas. There are mixed pictures for marine mammals, birds, fish and marine litter and there are signs of change in plankton. There are increasing pressures associated with non-indigenous species, climate change and ocean acidification. The ability to draw conclusions about benthic habitats and underwater noise is limited by current knowledge.

- Climate change is the most critical factor affecting Scotland's marine environment. Impacts are already being seen across the Scottish marine ecosystem. For example, mean sea level around the coast is increasing in all marine regions, with the largest changes in the last 30 years observed at Stornoway, Kinlochbervie and Lerwick, increasing the risk of assets being

[4] Scotland's Marine Assessment 2020, available at https://marine.gov.scot/sma [accessed 22/03/2021]

damaged from coastal flooding and coastal erosion. Furthermore, the rise in sea temperature is causing changes in species distributions.

- Recent evidence on ocean acidification shows that it has the potential to have an impact on shellfish and other marine invertebrates in Scotland's seas, one of a number of increasing stressors which, in combination, will potentially have significant consequences for the sectors and communities that depend on them.

- Pressures associated with bottom-contacting and pelagic fishing continue to be the most geographically widespread, direct pressures across the majority of Scottish Marine Regions (SMR) and Offshore Marine Regions (OMR).

- Measures are being implemented in response to recognised concerns. Some, such as fisheries management, have been in place for decades, evolving throughout that period to respond to changes in marine ecosystems. Measures will continue to develop to address current and future challenges, including those highlighted in this assessment.

- Marine Protected Areas and measures to tackle marine litter, have developed quite recently and need more time to be fully effective. In addition, further measures are required in response to the loss of biodiversity, impacts associated with climate change and ocean acidification, and to continue to support the aim of sustainable use of Scotland's seas.

- There are insufficient data to allow detailed assessment at the scale of the Scottish Marine Regions and Offshore Marine Regions. There are too few ecosystem monitoring sites and understanding cumulative impacts remains a significant challenge.

- Delivering clean, healthy, biologically diverse and productive seas will only happen through closer coordination and collaboration, including with coastal communities and international partners.

The SMA2020 also sets out a number of key next steps with implications for the National Marine Plan, in particular:

- **Future work on Scotland's National Marine Plan will take an ecosystem-based approach to the protection of Scotland's seas in the management of human activities:** As the environment becomes more unpredictable and unstable with increasing impacts from climate change, SMA2020 shows that the resilience of ecosystems will change. For example, species that can move will do so. Those species dependent on ocean currents for dispersal may be affected. Taking account of such changes, including those that are human induced, when considering, developing and implementing marine management measures has been integral to our statutory review of the National Marine Plan and would be a key part of the process to replace the plan .

- **The national dialogue must be diverse and effective:** The changes that are occurring are accelerating and will have societal impacts, especially on coastal communities and marine sectors. There is a strong imperative to continue to work hard on communicating the state of Scotland's seas with a range of different audiences, allowing decisions to be reached collaboratively about the measures required to address the impacts of human activities.

Achieving a Sustainable Marine Economy

The purpose of the Scottish Government is to deliver against the National Performance Framework outcomes which include creating a more successful country, giving opportunities to all people living in Scotland, increasing the wellbeing of people living in Scotland, creating sustainable and inclusive growth and, reducing inequalities and giving equal importance to economic, environmental and social progress.[5] The recent response to the Advisory Group on Economic Recovery confirmed commitment to the Wellbeing Economy which is categorised by the following principles[6]:

- Economic progress and prosperity
- Inclusion
- Sustainability
- Resilience

The National Marine Plan can be used to support a sustainable suite of marine economic sectors. The following objectives were previously agreed to deliver this:

- Infrastructure is in place to support and promote safe, profitable and efficient marine businesses. [HLMO 1]
- The marine environment and its resources are used to maximise sustainable activity, prosperity and opportunities for all, now and in the future. [HLMO 2]
- Marine businesses are taking long term strategic decisions and managing risks effectively. They are competitive and operating efficiently. [HLMO 3]
- Marine businesses are acting in a way, which respects environmental limits and is socially responsible. This is rewarded in the market place. [HLMO 4]

Should Ministers decide the Plan requires amendment or replacement these objectives will be reviewed in light of recent economic developments and approaches employed through the Wellbeing Economy.

For the purpose of this review there has been mixed progress on delivering indicators to measure progress against the above objectives [HLMO 1 – HLMO 4].

Positive developments which meet the aims identified in the Plan include evidence on:

- economic contribution and profitability for the key marine economy sectors listed above [HLMO 1 & 3];

[5] Scottish Government, National Performance Framework. Available at https://nationalperformance.gov.scot/what-it [accessed 22/03/2021],
[6] Scottish Government (2020) Economic Recovery Implementation Plan

- patterns of employment in marine economic sectors [HLMO 1 & 2];
- a Clean Seas Indicator and a Sustainability of Fish Stocks Indicator [HLMO 4]

Marine Scotland has launched an experimental statistics publication covering the economic contribution of Scotland's marine sectors[7]. In 2018, Scotland's marine economy generated directly £4.3 billion in GVA and employed 74,200 people.[8] It accounted for 3.0% of total Scottish GVA and 2.8% of total employment. Figure 1 illustrates the current composition of the Scottish marine economy as measured by the experimental statistics publication.

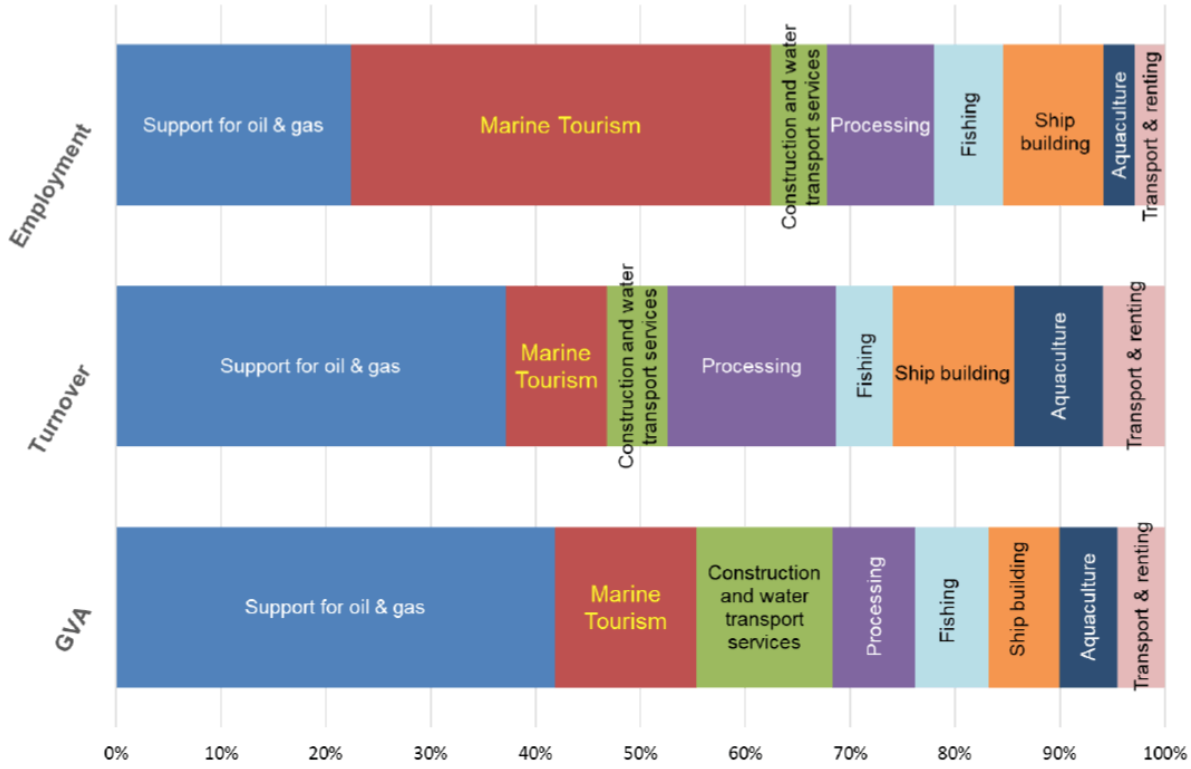

Figure 1 Scotland's marine economy - distribution of GVA, turnover and employment across sectors, 2018. Marine Scotland (2020)

The overall trend for GVA and Employment in the marine economy has been falling since 2011 (see Figure 2). However, this is driven largely by a reduction in oil and gas services which shrunk by approximately 4% per year between 2011 and 2018. Excluding that sector results in **a marginal increase in turnover and GVA over the whole period, with peaks in 2014 and 2017** followed by sharp falls, but overall growth in employment of 12% over the period.

[7] Scottish Government (2020), Scotland's marine economic statistics 2018
[8] ibid. Some sectors are not included due to a lack of data, this includes Marine Renewables and Research and Development. Oil and gas extraction are not included in this figure.

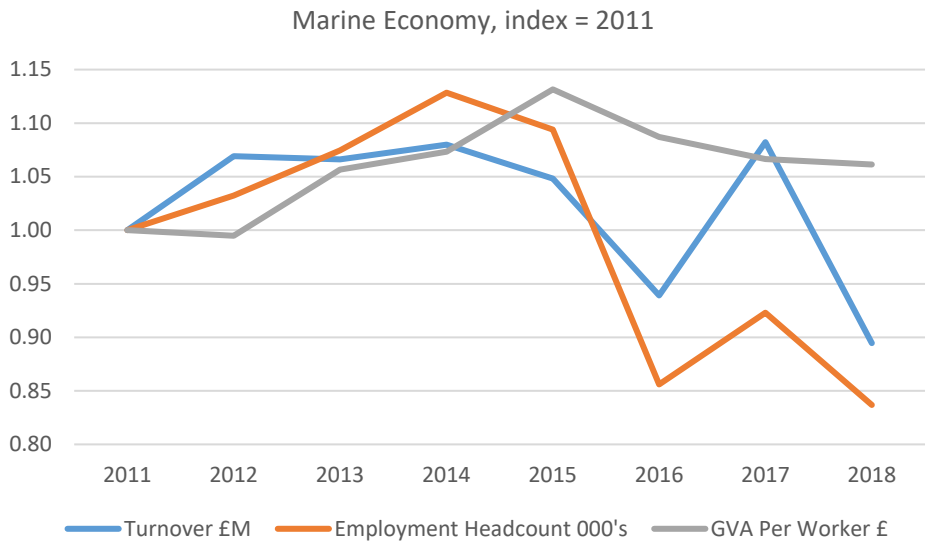

Figure 2 Scotland's marine economy, indexed to 2011. Note that oil and gas extraction and marine renewables are not included. Marine Scotland (2018) Marine Economic Statistics

The geographic distribution of marine economic activities and employment is also assessed in the Marine Economic Statistics, as is the relative importance of these sectors in coastal and island communities. The below figure illustrates the importance of the marine economy in different parts of Scotland in terms of contribution to jobs and Gross Value Added.[9]

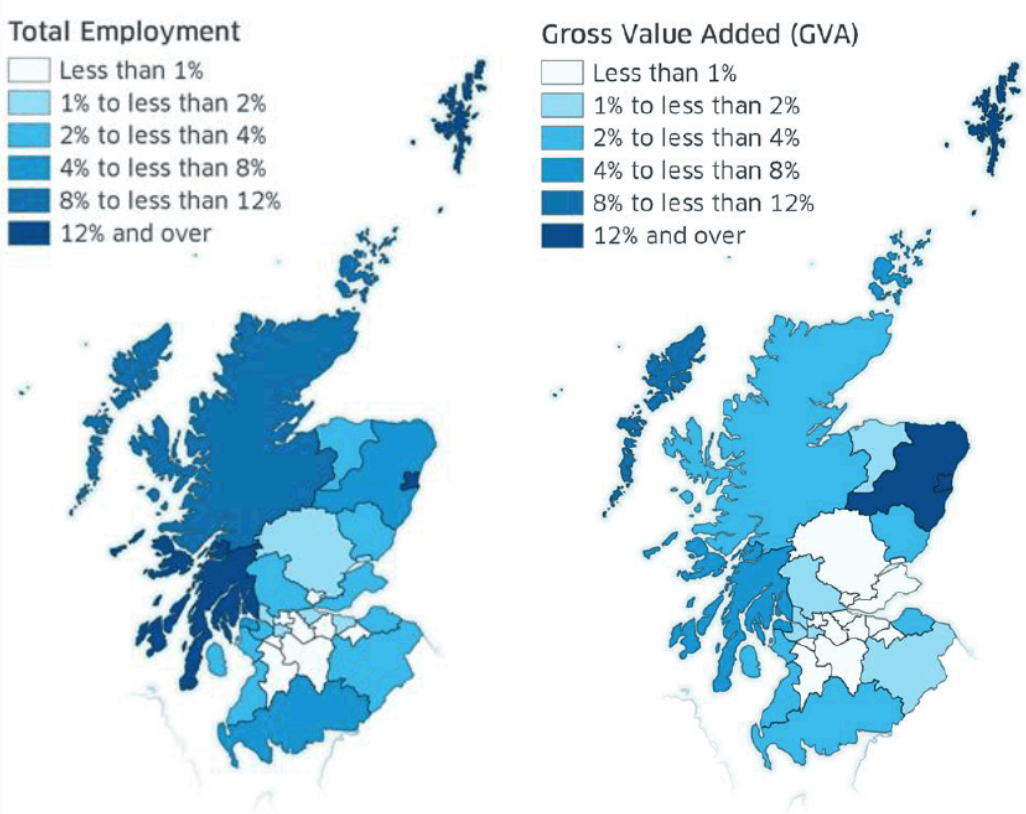

Figure 3 Percentage of overall employment and GVA accounted for by the marine sector by local authority, 2018

[9] Scottish Government (2020), Scotland's marine economic statistics 2018

Offshore renewables are not included in the Marine Economic Statistics publication. Therefore it is not possible to estimate trends equivalent trends for GVA.

Data from the Scottish Energy Statistics Hub collect data from BEIS and ONS and provides turnover and employment statistics for Offshore Wind in Scotland from 2014 to 2018. Electricity generation via offshore wind may have generated £0.26 billion in turnover in 2018, but has directly supported approximately 1,700 full-time equivalent jobs in Scotland[10].

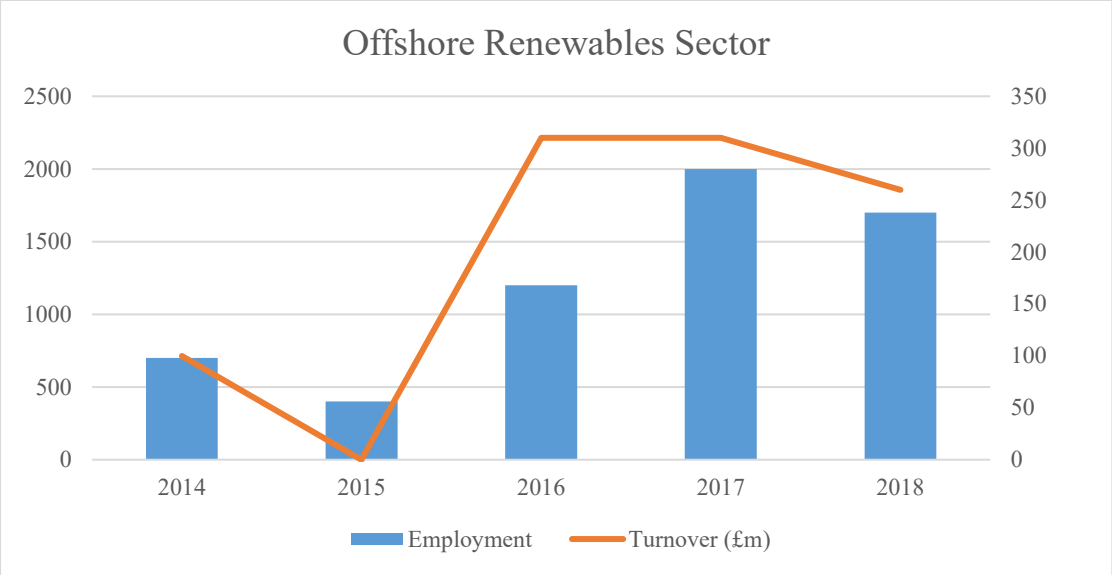

Figure 4

To contribute to the Government's purpose, Marine Scotland is leading a coordinated effort to develop the Blue Economy – a term which is recognised internationally and defined by the World Bank as the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health[11].

In parallel, two marine focused indicators have been developed for the National Performance Framework; the Clean Seas Indicator and the Sustainability of Fish Stocks Indicator.[12] These indicators, along with evidence from the SMA20, go some way to measure progress against HLMO 4, further work is required to fully measure performance of key sectors against relevant environmental limits and trends.

[10] Scottish Government, Scottish Energy Statistics Hub. Available at https://scotland.shinyapps.io/sg-scottish-energy-statistics/?Section=RenLowCarbon&Subsection=RenElec&Chart=RenElecSources. [accessed 22/03/2021]
[11] The World Bank, What is the Blue Economy? Available at https://www.worldbank.org/en/news/infographic/2017/06/06/blue-economy [accessed 22/03/2021]
[12] Scottish Government, accessed March 2021, Sustainability of fish stocks | National Performance Framework

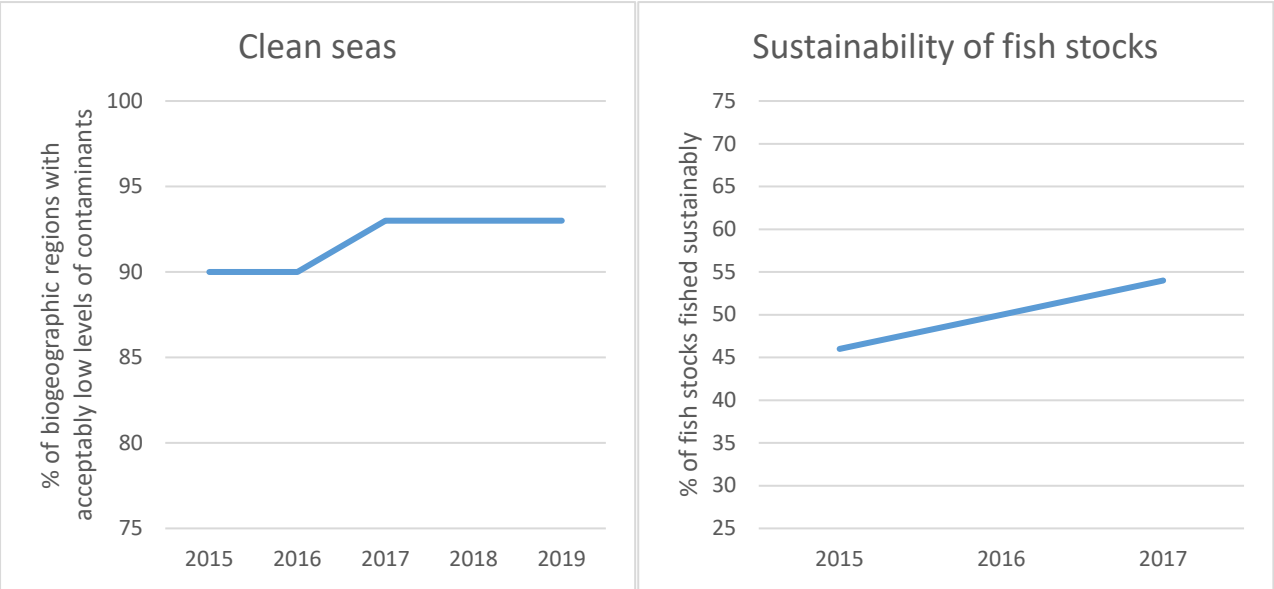

Figure 5 Marine National Performance Indicators. Scottish Government, National Performance Framework

Further work is required to deliver indicators for:

- infrastructure development for the marine economy [HLMO 1];
- diversity of Scotland's marine economy [HLMO 2];
- performance of key sectors against relevant environmental limits and trends for pressures in pressures for key economic activities [HLMO 4].

Overall there has been progress in developing measures to assess the delivery of the Plan's objectives however some gaps still remain with further work required to address these. GVA of the Marine Economy in Scotland has been relatively stagnant from 2011 to 2018, excluding oil and gas support which has been reducing as the wider oil and gas sector shrinks. Employment has increased 12% over the period but further data on diversity within the sector is needed to fully understand how this benefits the people living in Scotland.

Ensuring a Strong, Healthy and just Society

In addition to its economic impact, Scotland's marine economy and environment contributes to a number of Scottish Government outcomes for a healthier, fairer, safer and stronger Scotland. By providing healthy food and space for a wide range of recreational use, Scotland's marine environment can contribute to longer and healthier lives. Provision of jobs and their role in maintaining populations in coastal and island regions can contribute towards building strong, resilient and supportive communities.

The presence of some marine economy sectors like aquaculture and fishing to remote rural and island communities contributes to reducing regional inequalities in economic performance and in Scottish society. For example, in island communities of Shetland, Orkney and Western Isles, the marine economy accounts for 23%, 18% and 13% of gross value added, respectively. The evidence suggests that marine

economic labour productivity in these areas is higher than that in the rest of the economy.

Scotland's marine environment plays an important part in the development of the UK's defence industry and therefore contributes to the Government's outcomes for "lives safe from crime, disorder and danger".

In contributing towards the Scottish Government's outcomes, the National Marine Plan seeks to ensure that:

- People appreciate the diversity of the marine environment, its seascapes, its natural and cultural heritage and its resources and act responsibly (HLMO 5);
- The use of the marine environment is benefiting society as a whole, contributing to resilient and cohesive communities that can adapt to coastal erosion and flood risk, as well as contributing to physical and mental wellbeing (HLMO 6);
- The coast, seas, oceans and their resources are safe to use (HLMO 7);
- The marine environment plays an important role in mitigating climate change (HLMO 8);
- There is equitable access for those who want to use and enjoy the coast, seas and their wide range of resources and assets, and recognition that for some island and peripheral communities the sea plays a significant role in their community (HLMO 9); and,
- Use of the marine environment will recognise, and integrate with, defence priorities, including the strengthening of international peace and stability and the defence of the United Kingdom and its interests (HLMO 10).

Marine Scotland has developed specific evidence for monitoring the NMP impact on building a sustainable marine economy. This evidence includes the following:

- the level and patterns of engagement with Scotland's marine environment for recreation and tourism or cultural purposes (HLMO5 & HLMO 9). The below graph illustrates the engagement by males and females at the Scottish coast or sea within a 12 month period.[13]

[13] Scottish Government (2020), Marine Social Attitudes: Survey

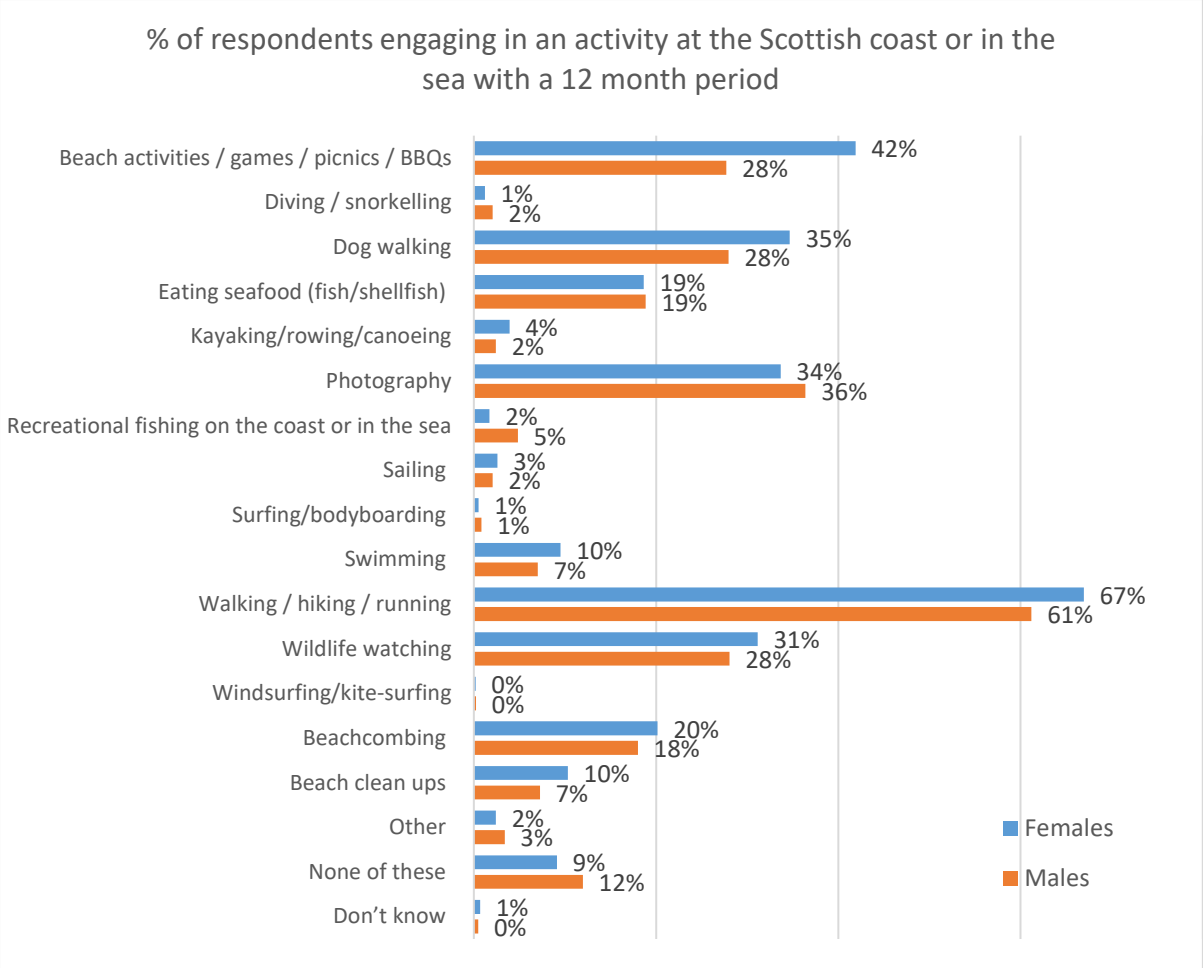

Figure 6 Percentage of respondents engaging in an activity at the Scottish coast or in the sea with a 12 month period. Marine Scotland (2020) Attitudes in Scotland on the Marine Environment and Marine Issues

- levels and patterns in the cleanliness and safety of Scotland's marine environment (HLMO 7). The below table illustrates trends in beach litter collected via Marine Conservation Society surveys, further detail on the methodology and results are available on the Scotland's Marine Assessment 2020 website.[14]

Summary of changes in number of pieces of litter (np)/100 m over the last decade for the Priority One Indicators in the five regions (as well as for Firth of Forth Harbours) with sufficient data. The greater the number, positive/negative, the greater the increase/decrease in litter The annual average for np/100 m over the 10 years (2008 – 2017) is also shown.

Type	SBLI	Clyde	Orkney	Moray Firth	East Coast (North)	Forth	Forth (harbours)
Individual Items	Plastic – Bottles*	-1.5	-1.9	-1.9	-2	-1.8	-1.1
	Plastic – Shopping Bags*	-2.5	-1.2	-1.9	-1.6	-1.6	0.1

[14] Beach litter | Scotland's Marine Assessment 2020

Summary of changes in number of pieces of litter (np)/100 m over the last decade for the Priority One Indicators in the five regions (as well as for Firth of Forth Harbours) with sufficient data. The greater the number, positive/negative, the greater the increase/decrease in litter The annual average for np/100 m over the 10 years (2008 – 2017) is also shown.

Type	SBLI	Clyde	Orkney	Moray Firth	East Coast (North)	Forth	Forth (harbours)
	Plastic – Straws*	1.1	RARE	-1.5	-1.9	-0.9	-2.9
	Sanitary – Cotton Buds	1.7	RARE	-1.6	-1.2	-1.5	0.5
	Sanitary – Wet Wipes	2.7	RARE	0.7	2.2	1.9	+2.9
	Paper – Coffee Cups*	0.6	RARE	-1.8	-0.6	0.7	-0.7
Totals	All Plastic	0.1	-1.5	0.2	-1.6	-0.9	-1.4
	All Sanitary	2	RARE	-0.4	-0.7	0.3	3
	All Litter	0.6	-1.5	-1	-1.5	-0.1	1.2
Average Total Litter Loading (np/100 m)		*670*	*40*	*320*	*250*	*341*	*1,600*

	Increasing by 2 or more standard deviations per decade		Increasing or decreasing by 0 to 1 standard deviations per decade		Decreasing by 1 or more standard deviations per decade

Indicators marked by an asterisk can include additional (but similar) litter items as well as the target item owing to the nature of the MCS survey recording protocols. np/100 m = number of litter items per 100 m survey transect.

Further work is required to deliver robust indicators for:

- contributions of the marine environment to Scotland's total energy generation (HLMO 8); and,
- the extent to which Scotland's marine environment is contributing to activities of the UK defence industry (HLMO 10).

Using sound science responsibly

HLMOs 19, 20 and 21 set out how the Plan will take account of using sound science responsibly by:

- Our understanding of the marine environment continues to develop through new scientific and socio-economic research and data collection. (HLMO 19)

- Sound evidence and monitoring underpins effective marine management and policy development. (HLMO 20)

- The precautionary principle is applied consistently in accordance with the UK Government and Devolved Administrations' sustainable development policy. (HLMO 21)

'Scotland's Marine Assessment 2020 provides an important source of information for the Plan, with associated information and data layers available on Marine Scotland Information and MS Maps NMPi The portals act as central repositories for spatial data currently available to Marine Scotland and can be made freely available to assist statutory authorities implement the Plan. The SMA2020 consists of 183 components linked into Themes, Assessments and Case Studies. Status assessments for the 21 assessment regions are provided, including regional assessments of anthropogenic pressures.

Although data and assessments in the Marine Assessment reflect those that were current at the time of developing the Plan, new evidence and data of the types underpinning the Assessment are continually being sourced and made available on MS Information.

Content of MS Maps NMPi is also regularly reviewed for currency and scope under the direction of The Scotland's Seas Data and Assessment Group, which includes Marine Scotland, SEPA, NatureScot, the JNCC and the Marine Alliance for Science and Technology for Scotland (MASTS) representatives.

As new spatial data types become available, Marine Scotland has, where possible, made data sets available in an INSPIRE compliant and downloadable format via the MS NMPi portal. Data have also been kept current during this period, with 121 data layers being updated since 2020. The total number of data sets on MS Maps NMPi is 1097 layers (approx). Many of these will enable new assessments of the state of Scotland's seas to be undertaken and determine whether new management action is needed. This demonstrates an active evidence gathering and dissemination process supporting marine planning in Scotland.

Requirements for new evidence are assessed continually and priorities identified in accordance with existing strategies such as:

- the forthcoming revision of the Scottish Marine Science Strategy
- the UK Marine Science Strategy 2010-2025 https://www.gov.uk/government/publications/uk-marine-science-strategy-2010-to-2025
- sectoral strategies such as the Aquaculture Science and Research Strategy http://www.scotland.gov.uk/Publications/2014/07/4459

- research frameworks such as the Scottish Marine Energy Research Programme (ScotMER)https://www.gov.scot/policies/marine-renewable-energy/science-and-research/

Prioritisation and commissioning of new evidence is often initiated through a joined-up and collaborative process involving industry, academia, and other national and international bodies. Examples of these include the Marine Alliance for Science and Technology for Scotland, the UK Marine Management Organisation (MMO), the International Council for Exploration of the Sea (ICES), and the OSPAR Commission.

Review of National Marine Plan Policies within Marine Scotland Licensing decisions

The Marine Scotland Licensing Operations Team (MS-LOT) issues licences and consents for activities in Scottish inshore and offshore waters on behalf of Scottish Ministers. These licences are required under The Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009. Consents for the generation of electricity are required under Section 36 of the Electricity Act 1989 for projects generating above 1 MW in inshore waters and above 50 MW beyond 12 NM. Not all activities are licensed by MS-LOT, Sea Fisheries for example being a particular case in point.

The National Marine Plan has been adopted into the MS-LOT licence and consent determination process. As a binding document on public bodies, consenting and licence decisions must be taken in accordance with the NMP. Accordingly, both references to the NMP provided in applications, and consideration of the NMP policies internally are recorded for each application and licence determination. Monitoring of policy use is recorded at the individual application level.

Under the NMP review 2018 covering the time period from the NMP launch in 2015 to end of 2017, MS-LOT had issued 1428 licences (including 277 variations – a non-material change to a licence). This assessment of MS-LOT activity covers licences issued from start 2018 to end 2020. Results below discuss only the new review period (2018 – 2020)

From January 2018 to end 2020, MS-LOT issued 1170 licences (including 314 variations).

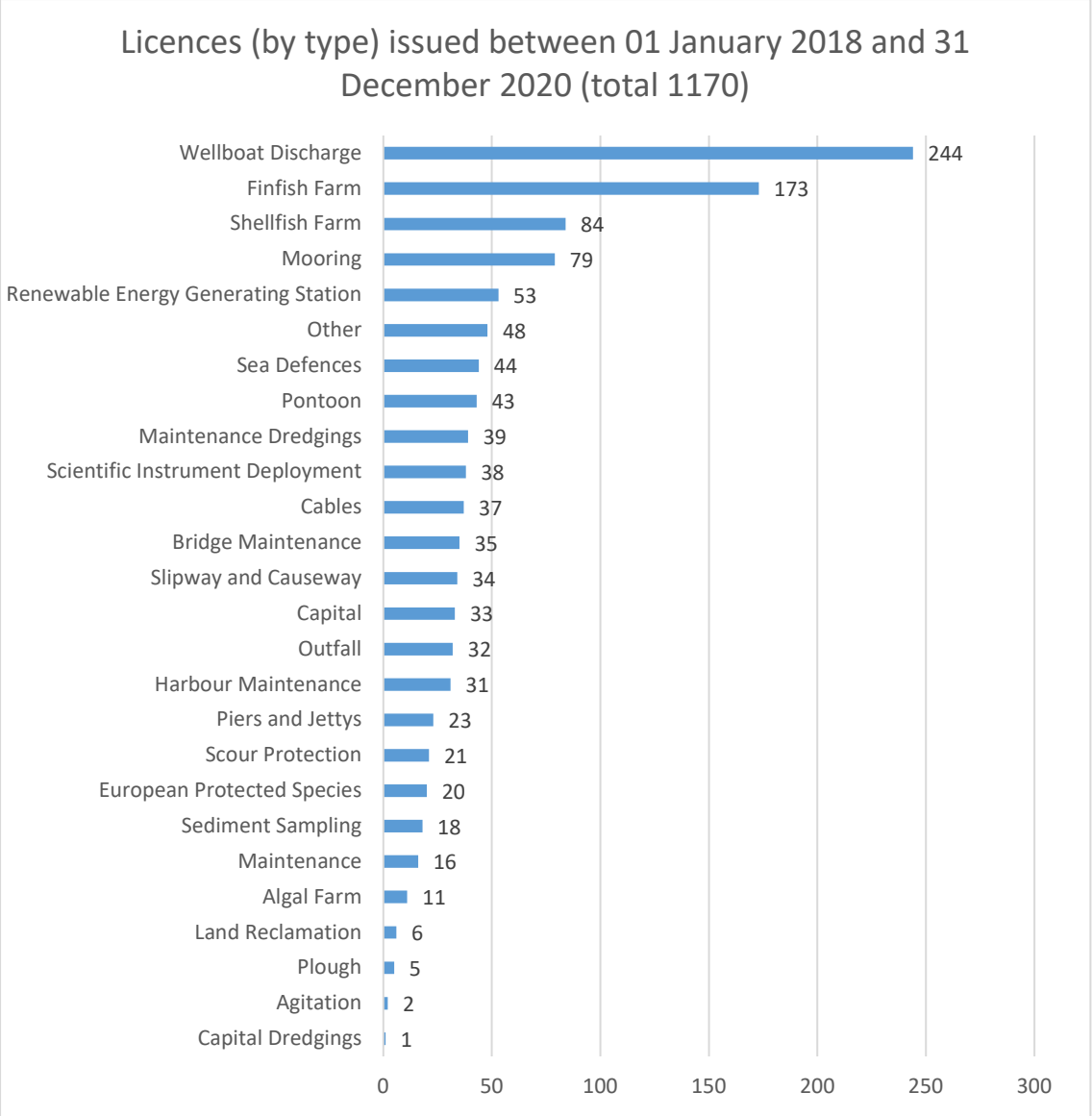

Table 1 - Licences (by type) issued January 2018 to end 2020

For the purposes of reviewing policy usage and references within applications considered and licences issued by MS-LOT, a subset of licences issued were analysed. In the 2018 NMP review, a six-month sample of licences were examined. Whilst this provided a good coverage of licence activity, the sample was dominated by wellboat discharge licences due to a large renewal that took place during this period.

To attempt to provide a wider range of licences reviewed, a random sample accounting for 150 licences (17.5% of the total issued over the 2-year period) were analysed. Table 2[15] provides the breakdown of licences reviewed. For each licence, a Case Handling Report ("CHR") is maintained by MS-LOT and these record

[15] The term "other" in this analysis comprises of 1 suction dredge licence, 1 seabed preparation licence for offshore wind, 1 realignment project and 1 beach re-profiling that was grouped with other applications.

considerations of the NMP by both the applicant and the Marine Scotland Casework Manager with respect to decisions taken.

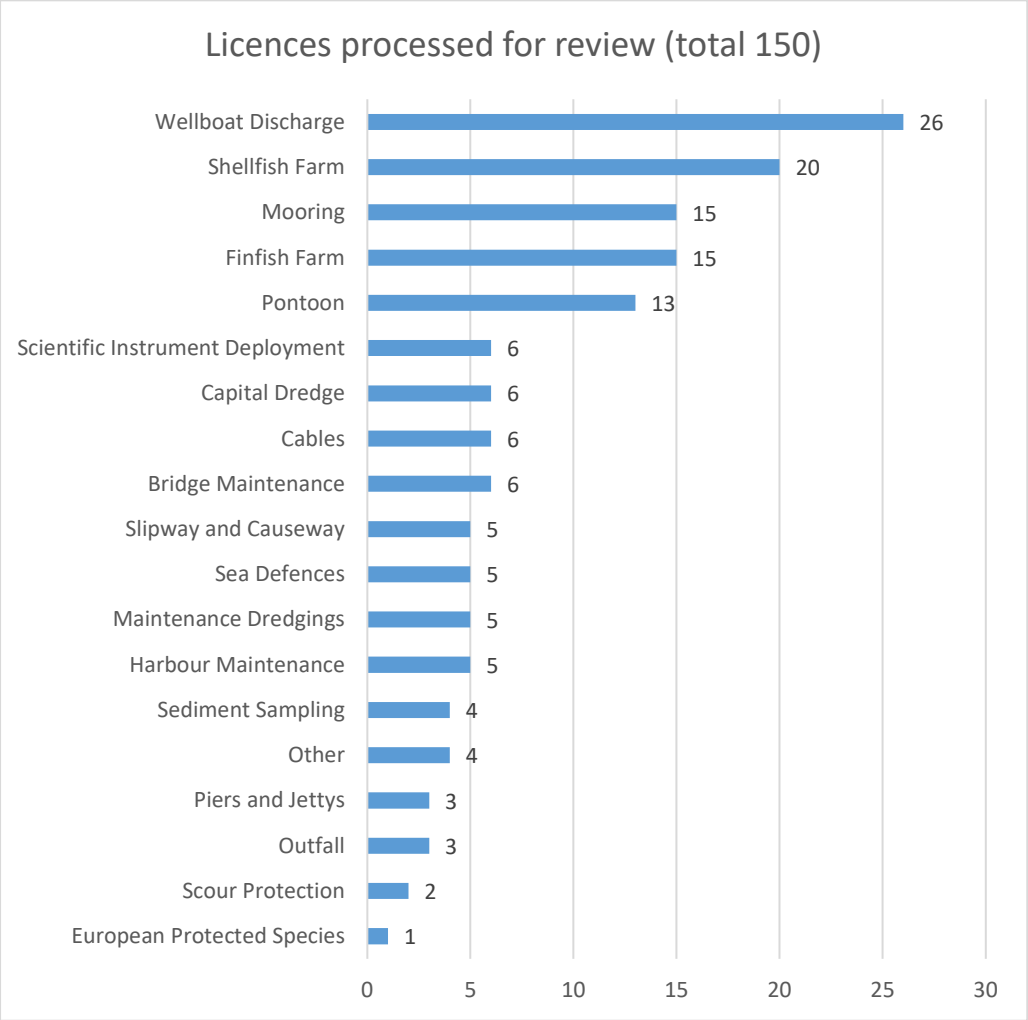

Table 2 - Licences processed for review (150 total)

Despite a random selection approach being used to identify licences for analysis, wellboat discharges and aquaculture (shellfish and finfish above) licences still make up a significant proportion of those reviewed. In fact, aquaculture and associated wellboat licences account for around 35% of licences processed by MS-LOT in the two-year period and around 41% of the sample reviewed.

When considered alongside previous data for the 2018 review, this presents a consistently high number of licences being processed for aquaculture and wellboat discharges, around 47 % of total licences since the launch of the NMP in 2015. As of December 2020, the regulatory responsibility for wellboat discharges has moved to SEPA.

Accordingly, the aquaculture section of the NMP is very well represented in data representing the individual consideration of policies in the licences reviewed. Table

3 identifies the total number of times each policy was referenced and considered in determining a licence, as recorded in the available CHRs. Aquaculture Policy 12:

"Applications which promote the use of sustainable biological controls for sea lice (such as farmed wrasse) will be encouraged"

is the highest referenced non-general policy in those licences used and is predominantly referenced in wellboat licences. This is followed by Aquaculture 5 and 4, which pertain to the landscape/seascape impact and site location respectively.

This suggests a strong consideration by both developers and casework managers to ensure that the wellboat applications are justified and evaluated in line with the NMP. The licensing of aquaculture projects is split between regulators, Marine Scotland consider the application in terms of navigational safety. As such, the predominance of Aquaculture 4 and 5 in table 3 corresponds to this aspect of the licence. The projects must be located in the correct areas (with reference to shellfish farms in Aquaculture 4) and whilst the visual impact must be considered, it also must not be a navigational risk. Whilst data reviewed does not show where modifications may have been made to applications, the large number of issued licences suggest that these policies allow these issues to be appropriately addressed and in line with the existing legislation.

More generally, across the 150 licences reviewed, there are references to policies from each section of the NMP with the exclusion of the Carbon Capture and Storage, Defence, and Aggregates sections. Although not all policies are referenced from each section in the NMP, this wide coverage across only 150 licences shows the consistent use across Marine Scotland licensing operations. The lack of reference to aggregates is not surprising as it is not an active industry in Scotland. Carbon Capture and Storage is still relatively new and whilst projects are developing, they are not likely to have reached the application stage. Consideration of defence and consultation with MoD on various marine licences is standard. The Defence policies, particularly 2 and 3, pertain to specific actions or reference to existing material and are likely not to have been relevant in these applications.

In a similar theme, the relatively low reference to renewables and oil and gas policies from the NMP, corresponds with the reduction of renewables applications over this period as current renewable projects have established licences and are moving to discharging conditions as projects are developed. The new offshore wind round, ScotWind, is set to conclude in 2021 and applications will start to progress following that stage.

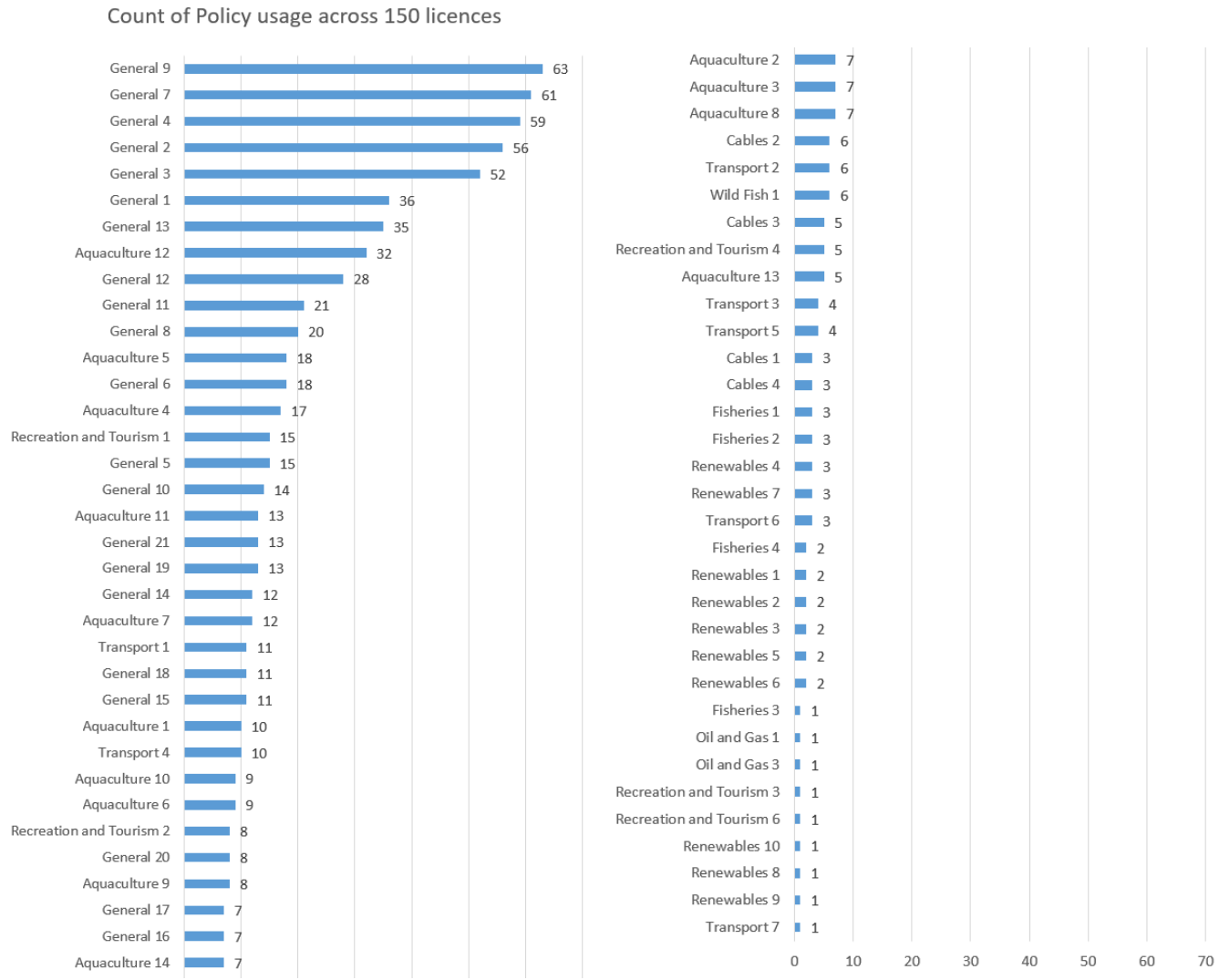

Table 3 - Count of policy references across 150 licences

By far the most obviously referenced policies are those under the general policies section of the NMP. These cover the wider NMP principles and aims and all sectoral policies must adhere to these principles. MS-LOT regularly refer to general policies and as per the previous review, consider these applicable across their regulatory duties. Those highlighted are often specifically picked out for particular applications.

Whilst these general policies will apply to all licences and in fact are general enough to be pertinent to all aspects of marine planning and decision making, it is worth noting that those general policies, 9, 7 and 4, that appear most often, discuss spatial considerations in particular. General policy 9 discusses the location of projects in respect of natural heritage, whilst 7 and 4 provide guidance on visual impact and co-existence of projects with one another. It can therefore be suggested that these general policies dealing with spatial considerations are used more often, possibly due to the clarity of the spatial component e.g. location, proximity or impact.

Whilst all General Policies were referenced in this sample, when considered against other general policies (Table 4) only General 2 and General 3 rise above the others to the same extent as those dealing in the more locational or spatial component. General 2 and 3 reference economic and social benefit respectively and as such, one would expect them to feature highly in consideration of licence applications.

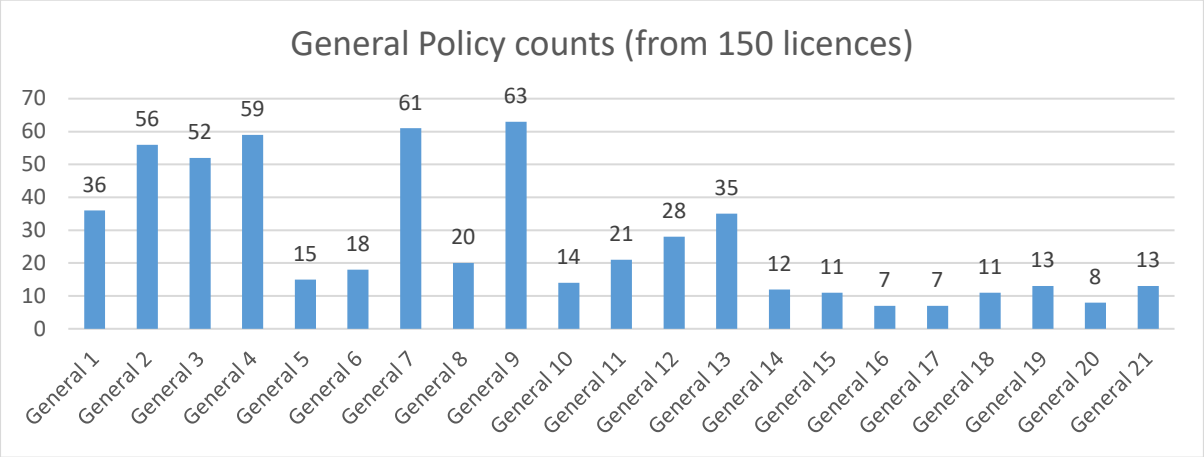

Table 4 - policy counts for General Policies only (150 licences)

Furthermore, the high representation of "spatial" general policies in the sample may be indicative of the busy and increasingly constrained marine environment. As more projects take place in the offshore environment, and our information about the spatial locations of sensitive features improves, it is more likely that applications for marine licences will overlap with other activities or sensitive features. The NMP attempts to address those overlaps through policies on spatial location and co-existence (General Policy 4) and as such these will naturally surface in the regulatory work.

Excluding Aquaculture and general policies, Table 5 shows the remaining policy counts. While not as distinct as with the general policies, the higher counts for Recreation and Tourism 1 and 2, and Transport 1 and 4, all show a correlation to "spatial" policies. Although Transport 4 is more specifically relating to development

and repair of ports and harbours in support to other sectors. This does have a spatial component in terms of which sectors and differences between regions i.e. for offshore wind or tourism but it is not a specific as the other policies.

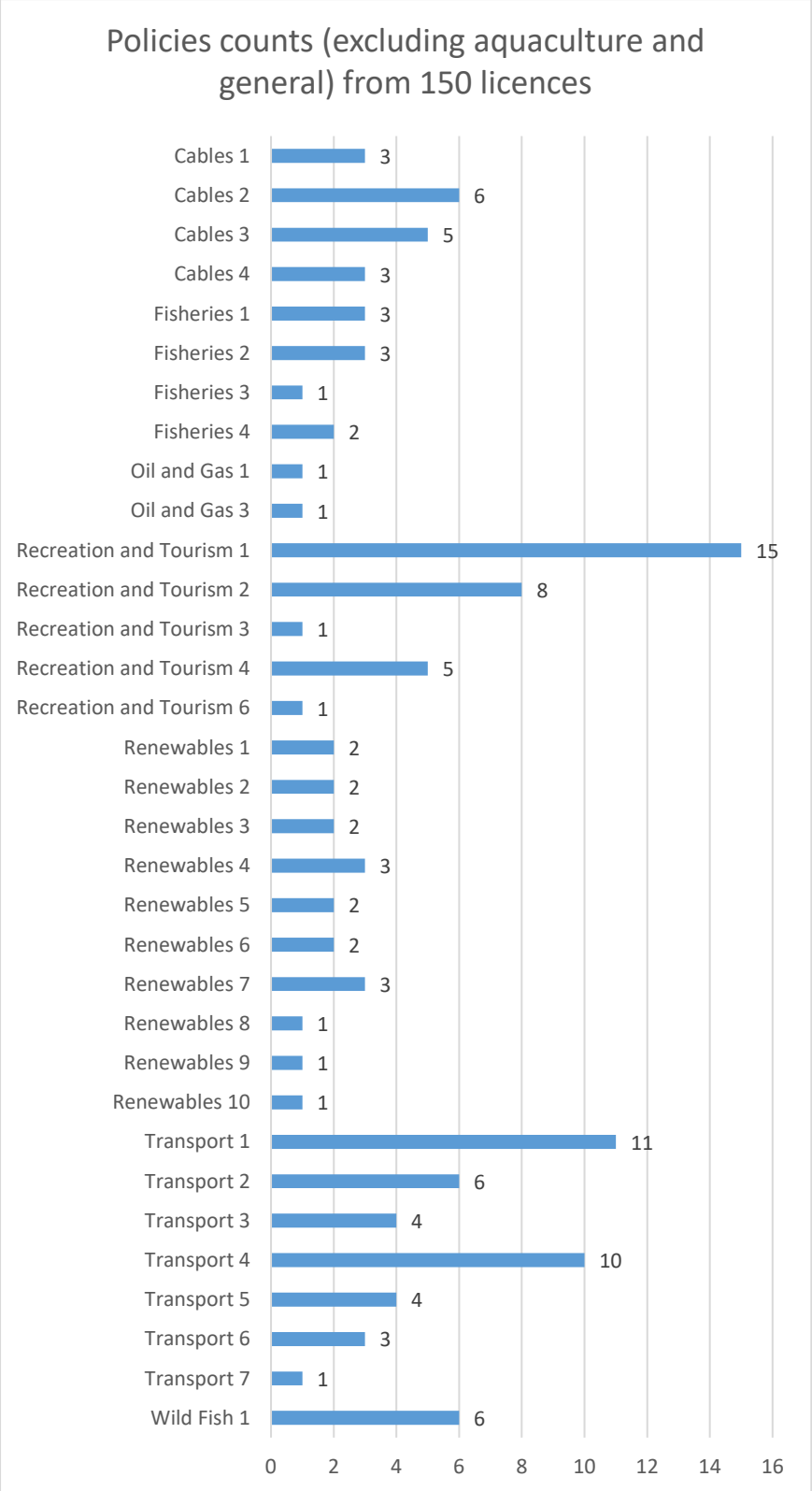

Table 5 - Policy counts (150 licences) excluding Aquaculture and General Policies

The relatively low numbers of policy use in the other sectors reflects the sample size and applications types included. However, it does demonstrate that the NMP remains effective and in good consideration within Marine Scotland's regulatory role for licensable marine activities.

As discussed in the 2018 review, the NMP is coupled with existing legislation and responsibilities and is not the sole consideration for licensing decisions. It is clear that the general policies and the sectoral policies that more specifically apply to application types remain relevant.

However, the predominance of spatial policies over others may be representative of the needs of regulators and the desire to seek clarity on primacy of projects in relation, both spatially and in sustainability, to each other. Whilst all policies of the NMP are considered by MS-LOT, it is these that are highlighted most often in data reviewed.

Since publication of the National Marine Plan in 2015 the increased collation and improved resolution of marine data has continued to foster a deeper understanding of the marine environment and the impact of anthropogenic activities.

SMA2020 has highlighted progress and trends across numerous receptors and provides detail on the pressures affecting the marine environment.

Whilst our scientific research and understating of the marine environment continues to improve, this will coincide with increased use of - and development in - Scottish Waters. Wider Scottish Government policies and targets, such as the Offshore Wind Policy Statement[16] and net zero targets and current developments such as the Blue Economy Action Plan, a Programme for Government[17] commitment, all have major implications for future use of the marine space. As described above, the high representation of policies focussing on the facilitation of overlapping sectoral and environmental interests and pressures suggests that this will continue to be a keen aspect for regulators and decision makers in the future.

Increased development of the marine environment holds significant opportunities for Scotland but these must be sustainable. A national marine plan provides a mechanism to manage the likely increased competition for space and finding routes to effective co-location or co-existence of activities and pressures in this environment is crucial to the successful management of our seas.

Recent planning work at a sectoral level, namely the Sectoral Marine Plan for Offshore Wind Energy, has highlighted the real likelihood of increased competition over access to areas of the sea/seabed. Plan-level mitigations have been

[16] Scottish Government, Offshore Wind Policy Statement. Available at https://www.gov.scot/publications/offshore-wind-policy-statement/, [accessed 26/02/2021].
[17] Scottish Government, Programme for Government. Available at https://www.gov.scot/publications/protecting-scotland-renewing-scotland-governments-programme-scotland-2020-2021/, [accessed 26/02/2021].

introduced to manage some of these potential conflicts. However, when scaled to a national or even cross border level, these considerations and the associated prioritisation of activities will need to be more fully considered in a national marine planning framework. This is particularly the case given the overarching legal commitment to achieve net zero over the next 24 years and the requirement to plan strategically for shared use of the sea which will enable delivery of that statutory duty.

Excluded from analysis

This analysis has not considered case of exempted activities, those that do not require a licence but of which Marine Scotland are still notified, or licence applications that were rejected. The latter are often rejected before consideration of the NMP is addressed and as such, no data are available. European Protected Species (EPS) licences are included in the licence data reviewed (20 licences over two years) but were not considered for policy analysis.

Living within environmental limits

In relation to this theme, the Plan contains the following objectives

- Biodiversity is protected, conserved and, where appropriate, recovered, and loss has been halted. (HLMO 11)
- Healthy marine and coastal habitats occur across their natural range and are able to support strong, biodiverse biological communities and the functioning of healthy, resilient and adaptable marine ecosystems. (HLMO 12)
- Our oceans support viable populations of representative, rare, vulnerable and valued species. (HLMO 13)

Monitoring

Our understanding of the marine environment is derived from scientific and socio-economic research, monitoring and data collection. Marine Scotland and its partners undertake a very wide range of marine environment monitoring in order to undertake assessments of the state of Scotland's seas and inform marine management. The most recent assessment is Scotland's Marine Assessment 2020 (SMA2020). Most of this monitoring is undertaken according to a set of strategies and coordinated at a UK or Scottish level. Under certain circumstances, coordination is at the scale of the North-East Atlantic region. At the UK level, the UK Marine Monitoring and Assessment Strategy (UKMMAS), over seen by the Marine Science Coordination Committee (MSCC), provides the coordination framework for marine monitoring across the key themes of "Clean and Safe", "Healthy and Biologically Diverse", "Productive" and "Ocean Processes". In addition, the MSCC provides the framework for integrating marine observations, the monitoring of underwater sound and

assessment of the impacts of increasing concentrations of atmospheric greenhouse gases.

Each of the Evidence Groups coordinates the ongoing monitoring (see What is assessed | Scotland's Marine Assessment 2020[18]), assessment and data reporting of monitoring type. Monitoring is conducted according to the principles outlined in the OSPAR Joint Assessment and Monitoring Programme (JAMP) or in accordance with the protocols agreed by the various evidence groups. This includes the quality assurance processes. Some monitoring programmes are subject to specific strategies such as the Scottish MPA network[19]that is co-ordinated by Marine Scotland in conjunction with NatureScot and JNCC.

A summary of the types of monitoring that continue to be undertaken is provided below and can be seen on Marine Scotland Information and in SMA2020

Protective measures

In addition to monitoring, a number of measures have been introduced following the adoption of the National Marine Plan in 2015 to help meet these objectives.

Marine Protected Areas Network

Protected areas are one of the mechanisms used to ensure protection of some of the most vulnerable species and habitats. The Scottish MPA network covers approximately 37% of our seas and comprises:

- 35 nature conservation Marine Protected Areas (MPAs) are protecting a wide range of habitats and species such as maerl beds, flame shells, and basking sharks.
- One Demonstration and Research MPA around Fair Isle was designated in October 2016. This will investigate the factors affecting seabird populations on Fair Isle and demonstrate the socio-economic benefits of the marine environment and the additional benefits that MPA designation can bring to the community.
- We have 8 Historic MPAs to preserve sites of historical importance around the Scottish coast. The most recent HMPA was designated on 09 November 2016 to protect the wreck of the Iona I paddle steamer in the Firth of Clyde.
- 58 Special Areas of Conservation (SACs) protect species and habitats such as bottlenose dolphin, harbour porpoise, seals and coral reefs.
- 56 Special Protection Areas (SPAs) protect a range of vulnerable or migratory bird species such as puffins and kittiwakes.
- 65 Sites of Specific Scientific Interest (SSSI) for the further protection of species from seabirds and seals, to habitats from sea caves and rocky shores.

[18] Scottish Government, Scotland's Marine Assessment. Available at https://marine.gov.scot/sma/assessment-theme/what-assessed [accessed 22/03/2021]
[19] Scottish Government, MPA monitoring. Available at http://www.gov.scot/Topics/marine/marine-environment/mpanetwork/MPAmonitoring [accessed 22/03/2021]

- Fisheries management measures were implemented for the most vulnerable inshore sites in early 2016. Further measures for inshore MPAs and the most vulnerable Priority Marine Features are under development.
- For offshore sites which require them, fisheries management measures have been developed and will be taken forward under new national powers, recently added to the Marine and Coastal Access Act 2009.
- In 2020, the West of Scotland MPA was designated for the protection of a range of species and habitats in deep sea waters. The site covers over 100,000km^2, making it the largest protected area in territorial waters in Europe. Features of the site include ten of the OSPAR Threatened and/or Declining species and habitats including gulper shark and deep-sea sponge aggregations.
- An MPA Monitoring Strategy was developed in 2017 by Marine Scotland and NatureScot. It has ensured that the necessary information is collected from the MPA network to underpin our assessment and reporting obligations. The project will assist by providing opportunities for fishermen to engage in monitoring work while improving understanding of marine habitats over space and time.

A number of other initiatives have been introduced to ensure sufficient protection is afforded to vulnerable species within the Scottish Marine Area.

- *Seabirds* - At the end of 2020, we classified 12 new SPAs in Scottish waters. Two outstanding sites in Orkney are still under consideration.
- *Cetaceans* - All cetaceans already receive a high level of protection wherever they are found as European Protected Species (EPS).
    - Scotland is home to the most northerly pod of bottlenose dolphins, found within the Moray Firth - designated a marine Special Area of Conservation (SAC) in March 2005.
    - The Inner Hebrides and the Minches SAC was designated on 22 September 2016 to protect harbour porpoise. It is the second largest in Europe for the species, protecting over 5,000 animals.
    - In 2020, three MPAs for cetaceans were designated, including Sea of the Hebrides MPA and Southern Trench MPA for minke whale, and the North-east Lewis MPA for Risso's dolphin.
    - A broader UK conservation strategy for dolphin and porpoise is under development. This will ensure appropriate management to maintain favourable conservation status of a range of cetacean species in UK waters.
- *Seals* - Scotland has more seals than the rest of the European Union – around 122,500 grey seals and a minimum population of 26,900 harbour seals.
    - 15 SACs are designated in order to protect seals from disturbance within these sites.
    - 195 designated seal haul-out sites protect seals from harassment when found on land. The Ythan seal haul-out site, the latest to be added to this list, was designated in May 2017.
    - 5 seal conservation areas protect vulnerable local populations of harbour seals. The areas cover Moray Firth, Shetland, Orkney, Firth of Tay and the Western Isles.

Marine Scotland is funding a five year research programme on marine mammals with a main focus on harbour seal decline, marine renewable energy, abundance

and distribution, and seal-fisheries interactions. Scotland is known as one of the best places in Europe to watch marine wildlife, with our waters home to many iconic marine species. The Scottish Marine Wildlife Watching Code was revised in 2017 and contains a set of recommendations and practical guidance aimed at minimising disturbance to marine wildlife.

Assessing the seas around Scotland and the effectiveness of management measures

Assessment is fundamental to the management of human activities that have an impact on the marine environment. This process provides the opportunity to report on changes that might have occurred and, where appropriate, associate a specific change with an action (management measure) that has been taken (implemented).

Key to this process is the use of a common suite of indicators that describe some aspect of ecosystem health. Indicators can track biological metrics, such as the abundance of a particular species, the amount of environmental pollutants within the marine system, such as chemical or noise or litter, or they may track the fundamental characteristics of the sea, such as temperature, salinity, wave height, currents, stratification and pH.

Taken together or individually, the common indicators allow comparisons to be made across geographic scales that incorporate the seas of other countries. Such an approach is particularly relevant for the North Sea, which is surrounded by a number of countries. A shared approach is assured by operating within a common framework, as provided by the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic. OSPAR produced an Intermediate Assessment in 2017 which utilised a range of common indicators, based around the 11 Descriptors of Good Environmental Status (GES) as detailed in the Marine Strategy Framework Directive (MSFD, Directive 2008/56/EC).

The aim of the MSFD is to establish a programmes of measures across European member states that ensure that the pressures on the marine environment arising from human activities are consistent with achieving GES. The 11 MSFD descriptors of GES, which describe both the key human pressures facing European Seas, together with aspects of marine ecosystem structure and function, have been incorporated into the UK Marine Strategy (Figure 7). The cyclical process of the UK Marine Strategy is currently progressing through the second cycle, with Part 1 (Progress made towards the shared vision since 2012) having been prepared in 2019. Part 2 (Monitoring Programmes) was recently updated, and Part 3 (Programmes of Measures) is expected to be updated in December 2021.

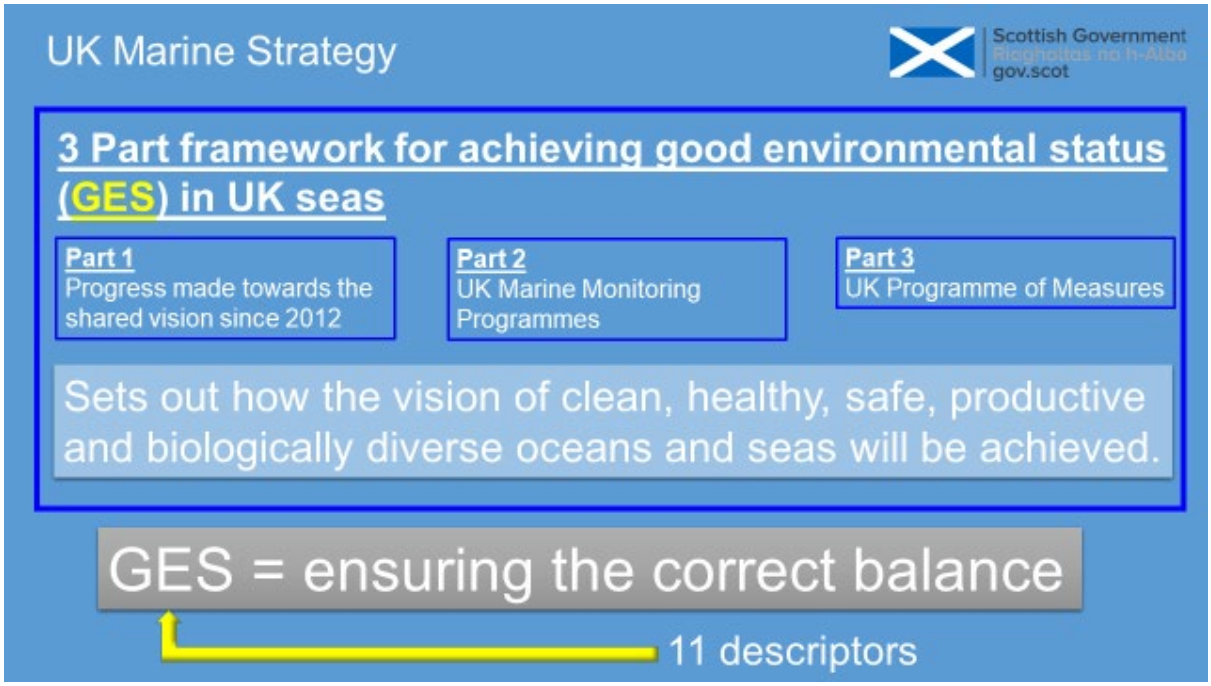

Figure 7 - The UK Marine Strategy, a three part framework for achieving good environmental status in UK seas.

The 11 descriptors of GES are:

D1 Biodiversity
Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions.

D2 Exotic species
Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems.

D3 Commercial fish stocks
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.

D4 Food web
All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.

D5 Eutrophication
Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters.

D6 Soil floor integrity

Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected.

D7 Hydrographical conditions
Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems.

D8 Hazardous substances
Concentrations of contaminants are at levels not giving rise to pollution effects.

D9 Hazardous substances in fish
Contaminants in fish and other seafood for human consumption do not exceed levels established by Community legislation or other relevant standards.

D10 Litter
Properties and quantities of marine litter do not cause harm to the coastal and marine environment.

D11 Energy supply, including underwater noise
Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment.

Scotland's Marine Assessment 2020 provides an assessment of the state of Scotland's seas using a suite of common indicators and some additional indicators that are in development. The NMP identifies the descriptors (NMP, Annex B) and targets associated with the UK Marine Strategy as part of Scotland's regional seas approach to marine nature conservation and states that the development and use of the marine environment must not compromise the achievement or maintenance of GES for UK waters. As such these strategic objectives form part of the ecosystem-based approach adopted by the NMP.

It is important to note that, depending on the purpose of the assessment, the scale and regions used in the assessment will vary. The seas around Scotland incorporate components of 4 of the 5 OSPAR Regions. In proportion to the size of the OSPAR Regions, Scotland has a relatively small part of the OSPAR 'Arctic Waters' and 'Wider Atlantic' Regions, but a much more significant proportion of the OSPAR 'Celtic Sea' and OSPAR 'North Sea' Regions.

For the purpose of SMA2020, the seas around Scotland are subdivided into 11 Scottish Marine Regions and 10 Offshore Marine Regions which are nested within existing boundaries, where possible. This allows the status of Scotland's seas to be assessed within this regional framework or more widely as part of the UK assessment for the North Sea and Celtic Seas. Although the scale of assessments is larger than Scotland's seas (UK parts of the North Sea and Celtic Seas sub-regions), monitoring and assessment of Scotland's seas forms a substantial and important part of the UK assessment and will be reflected in the outcomes.

The intermediate assessment produced by OSPAR served primarily to report on progress with respect to the implementation of the North-East Atlantic Strategy, but

also enabled assessment of GES for the EU MSFD at the scale of whole sub-regions using the common indicators agreed by the 15 Contracting Parties to OSPAR.

Although the 2017 intermediate assessment was conducted at a scale much larger than Scottish waters, and much of the assessment does not conclude on achievement of GES for specific descriptors and sub-regions, the process developed a number of assessment methodologies and new indicators which have been used to assess the state of Scotland's seas in the SMA2020. In addition, Scottish data were included in many of the indicator assessments forming part of the regional seas assessments. Therefore, many of the highlights and key messages from the Intermediate Assessment 2017 were relevant to Scotland and were included on Scotland's marine data and information portal, Marine Scotland Information and NMPI.

The key messages from the OSPAR intermediate assessment showed that there are improvements in many aspects of the NE Atlantic ecosystem. These improvements have been driven by, for example, the expansion of the marine protected area network, decreasing discharges and concentrations of radioactive substances, hazardous substances and nutrient pollution from both land based and offshore installations. There are also some signs of improvement in fish communities in some places. However, local problems with hazardous substances and eutrophication remain, along with a growing recognition more widely that marine litter is a problem. There are also concerns relating to the status of marine bird populations and benthic habitats, the latter affected by bottom-contacting fisheries.

Many of these messages are true for Scottish waters as well as the North-East Atlantic as a whole. As stated earlier in this review, the more recent SMA2020 concludes that progress is being made in improving the state of Scotland's seas, especially in relation to contaminants. Eutrophication is not an issue in Scotland's seas. However, there are mixed pictures for marine mammals, birds, fish and marine litter and there are signs of changes in plankton communities. The SMA2020 notes increasing pressures associated with non-indigenous species, climate change and ocean acidification, while the ability to draw conclusions about benthic habitats and underwater noise within the assessment is limited by current knowledge.

The UK Marine Online Assessment Tool (MOAT) provides a summary of progress towards GES under the UK Marine Strategy. This describes GES as having been achieved for eutrophication, changes in hydrographical conditions, contaminants and contaminants in seafood. GES has been partially achieved for cetaceans, seals, pelagic habitats, food webs and input of anthropogenic sound. Finally, GES has not been achieved for birds, fish, benthic habitats, non-indigenous species, commercial fish and shellfish and litter.

Review of “Relevant Matters”

In–line with our obligations under Section 11 of the Marine (Scotland) Act 2010, this review will have a particular focus on the impact of significant external national and global developments that impact on our management of marine resources and therefore on Scottish Minister’s decision as to whether to amend or replace the current NMP.

Climate Change and the National Marine Plan

Marine industries and the marine environment have an important role to play in achieving Scotland’s climate change ambitions. The NMP contains a general policy requiring that planners and decision makers act in the way best calculated to mitigate, and adapt to, climate change (GEN 5). Consideration of mitigation and adaptation measures is also woven throughout the policies and objectives of the sectoral chapters.

The Global Climate Emergency

In 2019, the First Minister declared a Global Climate Emergency and followed this up by strengthening Scotland’s climate change targets, setting us on a pathway to net zero emissions by 2045. Whilst responding to COVID-19 has rightly been the priority of leaders around the world during 2020, the global climate emergency has not gone away and the Scottish Government remains absolutely committed to a “Just Transition” to net zero. As Scotland emerges from COVID-19, we have a chance to build a greener, fairer and more equal society and economy.

Scottish Climate Change Policy and Approach

The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, amending the Climate Change (Scotland) Act 2009, sets a legally binding target of net zero greenhouse gas emissions economy-wide by 2045. The Act also provides the framework for advice, plans and reports relating to emissions reductions and climate adaptation. The Scottish Government’s Climate Change Plan details policies and targets to reduce greenhouse gas emissions and increase CO_2 uptake and storage (e.g. afforestation and carbon capture, utilisation and storage). The Scottish Government’s Second Climate Change Adaptation Programme was published in 2019, and provides the framework for how Scotland is to adapt to the already changing climate. While the former document includes the marine environment and its sectors implicitly (under energy, industry and land use), there is a dedicated chapter to the marine and coastal environment in the Adaptation Programme.

Climate change impacts

The SMA2020 states that climate change is the most critical factor affecting Scotland’s marine environment. Although one of the most direct impacts is global warming, a number of other impacts have been identified on the physical and chemical properties of the seas and oceans, such as changes in circulation, ocean acidification and ocean oxygen-loss. These changes in ocean climate are also

having an impact on the plants and animals that live in the sea (from the smallest to the largest) and marine industries. All of these changes will have an impact on the Scottish economy and social well-being.

Opportunities for mitigating the effects of climate change are also highlighted in SMA2020. For example, marine renewable energy, carbon capture utilisation and storage, and blue carbon (the storage of carbon in marine ecosystems). The assessment is clear that to address these challenges and take advantage of the opportunities will require a national dialogue on climate change impacts that is 'diverse and effective', and a need to reach decisions collaboratively about the measures required to address the impacts of human activities. It highlights that as the environment becomes more unpredictable and unstable as a result of climate change impacts, there is a requirement that future work on Scotland's National Marine Plan will take an ecosystem-based approach.

Climate Change Conclusion

Scotland's climate change ambitions, and our understanding of the impacts of, and potential solutions to climate change has grown since 2015, particularly regarding the role of the blue economy. The SMA2020 highlights key recent developments in terms of scientific research and our understanding of the effects of climate change on the marine environment. It sets out a series of next steps to be taken into account in future work on the NMP.

The current NMP provides for consideration of climate change impacts throughout its policies and objectives. However, over the last two years a new level of urgency and intensity has developed around the need to tackle what is now recognised as a global climate emergency, something reflected in the findings of SMA2020. This suggests that the focus placed by the Plan on climate change needs to be raised to a new level and to respond to the transformational impact of the climate emergency on the marine space - both in terms of environmental impact and in terms of major changes in human use of Scotland's marine zone, which is set to become the home of some of Europe's most significant offshore renewable energy developments. This will help ensure the marine planning framework can best address the challenges caused by climate change impacts and help support a trajectory towards meeting Scotland's updated national emissions reduction targets.

EU Exit

The NMP Review in 2018 highlighted that the impact of EU Exit may well give rise to the need for future changes to the NMP:

> *"It was generally commented that given the large uncertainties around the UK leaving the EU, now is not the time to amend or replace the Plan. Only when full details of the future relationship with the EU are known, will it be possible to do an effective assessment of the impact on the Plan and determine what changes are needed."* NMP Review 2018

Today, the full impacts and implications of the UK's exit from the EU remain uncertain, particularly in the context of the ongoing response to COVID-19. However there are two primary impacts on the NMP which we can point to as part of this review: firstly from a technical perspective there are a number of references to EU legislation and policies which no longer apply in the same way as before; and secondly, it has had - and will continue to have – a hugely significant effect on the operations and economics of our key marine sectors, not least the seafood sector. Some of these key impacts are considered in this section, and others throughout this review.

Technical and Legislative Impacts

The NMP specifically points to the following EU legislation and policies as being of material consideration to the plan:

- The Maritime Spatial Planning Directive, EU Directive 2014/89/EU: the Plan has been prepared in accordance with, and gives consideration to this Directive.
- The EU Common Fisheries Policy.
- The EU Nature Directives – EU Directive 2009/147/EC on the Conservation of Wild Birds and EU Habitats Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna, as amended (which include the Natura 2000 network of protected sites).
- EU Water Framework Directive (WFD) – EU Directive 2000/60/establishing a framework for Community action in the field of water policy.
- EU Marine Strategy Framework (MSFD) – EU Directive 2008/56/EC on establishing a framework for community action in the field of marine environmental policy, known as the Marine Strategy Framework Directive.

The Scottish Government is clear that the EU will continue to be of fundamental importance to Scotland and that we will do everything possible to remain an active and constructive participant on EU matters. We share the EU's goal of ensuring the long term conservation and sustainable exploitation of marine biological resources and to deliver that we will continue to champion science-based approaches that are tailored to the needs of specific regions and ecosystems, are supported by robust yet proportionate management measures, and which take account of the shared challenges we face, such as climate change. We will also continue to meet – and where possible, exceed – our international obligations relating to fisheries and the marine environment, a great many of which are shared with the EU.

The UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021 ("Continuity Act") received Royal Assent on 29 January 2021. It aims to make sure that Scottish law can continue to align with EU law. The Continuity Act also sets up a new organisation called Environmental Standards Scotland. It will be responsible for making sure that public bodies in Scotland apply environmental law, and that environmental law in Scotland is effective in protecting the environment and our wellbeing.

Clearly the NMP does not account for these changes as currently drafted. The Scottish Government published guidance in October 2020 that sets out how

references to EU law and processes within the Plan should be interpreted to ensure that the Plan can still be understood and effectively implemented. Separate guidance has been developed by the UK Government to aid interpretation of the UK Marine Policy Statement. Whilst this guidance ensures that the NMP can continue to be functional, work to amend or replace the current NMP would afford the opportunity to ensure a clearer and more optimal approach to accounting for the new legislative and governance framework.

Economic Impacts

Exit from the European Union will have a major impact on the blue economy in a variety of ways. For example, the ability of businesses to trade, regulations affecting their operation and access to funding.

The Seafood sector has had to deal with some of the most significant challenges from the outset. The EU is Scotland's most significant overseas export market for seafood products, accounting for around three-quarters (76%) of Scottish seafood exports in 2019, and worth £777m. Scotland is a net exporter of seafood to the EU, with a trade surplus of £615m in 2019. Businesses who have faced losses due to COVID-19 hospitality closures across Europe are now losing products or facing additional costs due to border disruption and new non-tariff barriers.

European funding has played a key supportive role across many sectors, not least marine energy. For example, the European Maritime and Fisheries Fund (EMFF) programme in Scotland totalled nearly £100 million and ran from 2014–2020. The aim was to deliver on sustainable economic growth in the sea fisheries and aquaculture sectors, and supports communities to deliver economic benefits during the transition phase of the Common Fisheries Policy reform programme.

A range of UK and Scottish Government support has been made available to support businesses through the dual impact of COVID-19 and UK exit from the EU. Businesses will continue to seek to adapt and overcome the regulatory barriers, and new UK and Scottish funding schemes will come forward. The Scottish Government is developing a Blue Economy Action Plan (see below) to establish and grow "blue" as a natural capital asset in Scotland that will significantly contribute to economic recovery, enabling Scotland to "build back better" and support the "Just Transition" to net zero Greenhouse Gas emissions in 2045.

Impact of the COVID-19 Pandemic

The economic impact caused by COVID-19 is unprecedented in scale and scope. Its effect on the economy led to a collapse in economic activity. The marine economy wasn't immune to these effects and saw its international supply chains affected by the reduction in activity. This, in combination with the difficulty accessing markets, led to stock accumulation and further reduction of economic activity in the retail sector having a real impact on income and employment in our marine communities.

The Scottish Government established the Advisory Group on Economic Recovery (AGER) in April 2020. The remit of the Group was to provide expert advice on

Scotland's economic recovery once the immediate emergency, created by coronavirus, has subsided. The Advisory Group's Report 'Towards a Robust Wellbeing Economy for Scotland' was published on 22 June 2020 and our response to the Report entitled 'Economic Recovery Implementation Plan was published on 5 August 2020.

The report stated that one of the most critical areas for strategic focus in the context of a green recovery and climate change is the marine renewables sector. With huge wind resources and a marine area six times the size of Scotland's land mass, offshore wind offers considerable potential for sustainable economic growth. Scotland can and should be a leader in marine renewables. The report calls on the Scottish and UK Governments to review the existing policy, planning and licensing framework to ensure they are fit for purpose; and ensure that we can protect the rich natural resource of Scotland's biodiversity, while enabling the deployment of offshore wind to meet the challenges of the climate emergency.

The Scottish Government's response outlined that "*we are developing a clear framework to enable greater scale and speed in the growth in offshore and onshore wind development to support our commitments to delivering net zero by 2045. As part of our approach we will adopt Scotland's sectoral marine plan for offshore wind [since adopted in October 2020], outlining development areas for offshore wind leasing to support the sustainable expansion of offshore wind energy. In addition, we are implementing practical measures to increase the efficiency of processing marine licences, which will help optimise the resource available for offshore wind consenting.*"

Whilst the sectoral marine plan for offshore wind will deliver progress towards meeting Scotland's net zero commitments, it also raises questions as to how we manage spatial interactions across and between other sectors. The NMP needs to further evolve in order to best account for these increasing challenges.

More widely, in January 2021, Marine Scotland published the results of a business survey undertaken to understand the impact of the first wave of the coronavirus outbreak on business within the marine sectors of aquaculture, sea fisheries and recreational fishing[20].

The survey asks questions about businesses' turnover, cash flow, costs and trade impacts, employment, whether businesses have applied and received government rescue funding and their outlook on survival and employment prospects, in order to provide a snapshot of the impacts of COVID-19 pandemic. The report includes the following key findings:

[20] Scottish Government, Impact of Covid-19 on the Marine Economic Sector Research and Analysis Survey of Businesses. Available at https://www.gov.scot/binaries/content/documents/govscot/publications/research-and-analysis/2021/01/covid-19-business-survey-scottish-marine-sectors/documents/impact-covid-19-marine-economic-sector-research-analysis-survey-businesses/impact-covid-19-marine-economic-sector-research-analysis-survey-businesses/govscot:document/impact-covid-19-marine-economic-sector-research-analysis-survey-businesses.pdf [accessed 22/03/2021]

- Sea fisheries: all respondents reported activity and effort to have reduced during the period. The majority signalling a decrease in prices (88%) and access to markets (72%) being the main cause.

- Aquaculture: all the businesses incurred a decrease in turnover, the vast majority experienced decrease up to 50%, whilst 17% faced a decrease in turnover of more than this.

- Recreational fisheries: around 60% of recreational fishing businesses reported to have temporarily closed or paused their operation during the lockdown. All the businesses reported turnover to have decreased during this period with almost half reporting a decrease of more than 50%.

These findings illustrate the devastating impact of the pandemic on our marine economy. For context, sea fisheries and aquaculture alone contributed £540m to Scotland's GVA in 2018. Many of these businesses were able to draw on government support and continue to do so. However, we accept that this will far from mitigate the full impact and we remain committed to supporting our marine sectors to achieve a green recovery. This will be a key objective of the Blue Economy Action Plan (see below).

To ensure that our NMP is best orientated to supporting this seismic event, and acting as a key enabler of the Blue Economy Action Plan, it could be beneficial to amend or replace the existing sectoral policies in the plan. The objective of delivering a green recovery from COVID-19 could also be further supported by updating the plan to include greater detail on the issue of competition for space in an increasingly crowded marine environment.

Blue Economy Action Plan

The Scottish Government is committed to delivering a Blue Economy Action Plan with an initial set of actions scheduled to be developed in 2021. The Blue Economy is defined by the World Bank as the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health. In Scotland we are including freshwater within the scope of Blue Economy actions owing to the close inter-dependencies between the freshwater and marine environments (e.g. they are both essential for iconic species such as Atlantic salmon).

In developing the Blue Economy Action Plan, our vision is to establish and grow "blue" as a natural capital asset in Scotland that will significantly contribute to economic recovery, enabling Scotland to "build back better" and support the "Just Transition" to net zero Greenhouse Gas (GHG) emissions in 2045. The Scottish Government will provide leadership and a joined up approach across government, public agencies, academia and Blue Economy sectors to deliver a cross cutting plan.

The Blue Economy Action Plan will seek to deliver the following outcomes

- **Inclusive Blue Economy Growth.** The ambition is to deliver the best possible enabling environment to unlock the potential of the Blue Economy while providing support for business and encouraging innovation.

- **Creation of Resilient Places.** Given the importance of the marine environment to our island and coastal communities the Action Plan will seek to increase resilience through provision of long term and high quality employment. This outcome provides a place-based focus to "building back better" in response to the immediate economic shocks from the UK exit from the EU and COVID-19.

- **Contributing to a Just Transition to Net Zero.** By 2030 the innovation required to deliver economic growth from hydrogen and through CCUS will be a reality. Before then we will need to provide the planning and regulatory framework to enable a transformative step-change in the scale and pace of offshore renewable energy development in Scottish waters.

- **Improve Marine Biodiversity and Environment.** We will continue to work towards our vision for a clean, healthy, safe, productive and biologically diverse marine and coastal environment. This will entail updating our objectives to reflect the 2030 priorities that emerge from the Kunming Conference of Parties under the Convention of Biological Diversity in 2021. It will also mean approaching marine biodiversity from a natural capital perspective, as a vital building block of marine economic growth.

The Blue Economy Action Plan provides an opportunity to address a range of challenges including supply chain investment, stimulating innovation, fostering valuable skills, and spatial planning and policy that provides for the equitable use of the marine resource and space by different sectors. The ambition of the proposal means that competition for space and resources, balanced against the continued need for environmental protections, will be one of the major challenges to successful delivery.

The NMP is therefore one of the most important tools available to Scottish Government to help ensure new marine development occurs in a manner that delivers the Blue Economy outcomes. In order to achieve this effectively and efficiently there is a need for the NMP policies to reflect, and be aligned with, the Blue Economy Action Plan ambition. Looking ahead to the future, the Plan will need to clearly articulate the strategic direction of travel in this respect, and in doing so address some of the strategic choices before us as we make the "Just Transition" to net zero. In short, we envisage the Just Transition becoming a prism through which we view the overall future aims and objectives of the NMP.

Fisheries

Scotland's Future Fisheries Management Strategy 2020-2030

Scotland's Future Fisheries Management Strategy ("the Strategy") sets out our approach to managing Scotland's sea fisheries from 2020 to 2030, as part of the wider Blue Economy. It explores how we will achieve the delicate balance between environment, economic and social outcomes, and how we will work in partnership

with our fisheries stakeholders at home, within the UK, and in an international context, to deliver the best possible results for our marine environment, our fishing industry and our fishing communities.

It outlines our approach to transparent decision making, our continued commitment to co-management and strengthening local management arrangements under the Regional Inshore Fisheries Groups (RIFGs).

The Strategy links to the National Performance Framework, the National Marine Plan, the Blue Economy Action Plan, the Scottish Government's Climate change commitment and transition to net zero, and the national mission to help create new jobs, good jobs and green jobs. The overarching vision contained within the NMP sets the scene for our overall approach to fisheries management and the policies which we deliver.

The Strategy confirms our belief that supporting biodiversity in our seas is vitally important, alongside taking account of the wider ecosystem when developing and delivering policies and in our decision making processes. The strategy will adopt the principles of ecosystem-based management. ICES uses several key phrases to define what an ecosystem-based approach to fisheries management looks like, these are: "*management of human activities, consideration of collective pressures, achievement of good environmental status, sustainable use, optimization of benefits among diverse societal goals, regionalization, trade-offs, and stewardship for future generations".*[21]

These descriptors will shape our own ecosystem based approach under this strategy, taking a holistic and inclusive approach, having environmental sustainability as a key tenet and achieving this through inclusive engagement and not taking decisions in isolation.

As part of our ecosystem-based approach we will work in close collaboration with our stakeholders to focus on:

- Using spatial management measures to protect inshore spawning grounds and juvenile fish in order to help maintain healthy populations, drawing on fishers' knowledge and scientific evidence in order to develop sensible and proportionate measures
- Fishing at sustainable levels and making use of appropriate technology to properly account for activity and build our shared and accessible scientific evidence base
- Taking fisheries management decisions which make the most of fishers' knowledge, which account for impacts on the wider environment, and acknowledge and mitigate against negative outcomes both for the environment and the fishing sector
- Supporting fishers to demonstrate their compliance with rules and regulations, e.g. through the use of technology such as vessel tracking to monitor compliance with area closures

[21] ICES and Ecosystem-Based Management. Available at https://www.ices.dk/about-ICES/Documents/ICES%20and%20EBM.pdf [accessed 22/03/2021]

- Conservation of vulnerable and protected species, for example, by limiting unwanted bycatch and encouraging proper handling practices when returning protected species to the sea
- Where appropriate, restricting fishing activity and prohibiting fishing for species which are integral components of the marine food web, such as sandeels.

The strategy recognises that fishing must play its part in tackling the climate change emergency, by reducing emissions and helping to create a low carbon economy with clean, green jobs. It proposes that a response from across the stakeholder landscape, as well as making the most of the experience of the fishing industry and use their innovation and expertise to explore challenges and develop solutions in collaboration which will help to secure a robust evidence base and develop a firm plan to set out direct action.

As part of a wider ecosystem approach and the actions to tackle climate change, we will take further positive action to reduce levels of marine litter and tackle single-use plastics. As part of this initiative, we will work with the fishing industry to consider ways to recycle and reuse fishing gear, and to encourage the landing of end of life gear ashore.

The strategy confirms our intention to continue to take an evidence based approach, underpinned by the best scientific advice, and will seek to strengthen our knowledge and evidence base where needed. Key policies to support this will include our Inshore Modernisation Programme. The strategy explains that where appropriate we will introduce additional measures, for example Remote Electronic Monitoring (REM)[22] to help protect our marine environment.

It also sets out how we will take an integrated approach to stock management, explicitly linking stock advice, quotas, and management measures such as technical and spatial rules, through our Future Catching Policy.

The Strategy sets out our intention to strengthen links between the catching sector and onshore interests, and using specific policies to support this, including allocation of additional quota opportunities, the introduction of the economic link licence condition from 2022 and our drive to ensure that quota remains in the control of the active fishing industry.

Underpinning the entire strategy is a 12 point action plan aimed at delivering across the range of outcomes and supporting a strong, safe and resilient fishing sector, with close ties to onshore industries and local communities, which also respects and protects the wider marine environment[23]

[22] REM refers to the remote monitoring of fishing activity at sea. This can include the use of traditional tracking devices, such as Vessel Monitoring Systems (VMS), and also the use of CCTV cameras and sensors.

23 Scottish Government, Future fisheries: management strategy - 2020 to 2030. Available at https://www.gov.scot/publications/scotlands-future-fisheries-management-strategy-2020-2030/pages/9/ [accessed 22/03/2021]

International approach following EU Exit

Scotland is a major fishing nation in the north-east Atlantic and we manage our fisheries in partnership at an international level. Whilst responsibility for management decisions is often defined by lines on a map, fish stocks rarely respect such boundaries.

Departure from the EU has changed the international context in which we operate, but we are determined to continue to play a full and key role in supporting and delivering international fisheries management, whether it be through our contribution to science and technology, through our international compliance contribution which sees us sharing intelligence and best working practices, or through taking joint decisions on the management of shared stocks. This includes continuing to play a full and active role in ICES, where Scottish scientists have and continue to make significant contributions to all levels of the ICES advisory process. Scotland is already well regarded by other nations and our opinions, knowledge and expertise will continue to be important in the future.

As a Coastal State the UK controls and manages fishing in its Exclusive Economic Zone in accordance with international obligations. We will work closely with the UK Government and as part of the UK delegation, the Scottish Government will be an active partner at international negotiations, especially in relation to stocks which are predominantly present in Scottish waters and in relation to access to Scottish waters by foreign vessels.

We will continue to engage with the EU to influence future reform of the CFP where appropriate and to demonstrate leadership in addressing key issues and challenges. We will seek to influence the approach of others, demonstrating best practice and encouraging other fishing nations, both EU and non-EU, to meet certain standards including around fair treatment of workers and tackling modern slavery.

We will take an integrated approach to stock management, explicitly linking stock advice, quotas, and management measures such as technical and spatial rules, through our Future Catching Policy.

We also want to help ensure our fishing fleet, and others fishing in our waters are compliant with the management measures that we put in place and we will do this through our Promote, Prevent, Respond approach to Compliance. Supporting this approach we will continue to use traditional measures such as using our Marine Protection Vessels (MPVs) to undertake inspections at sea, using drones and RIBS to monitor our inshore waters, and using our coastal inspectors to verify catches in port. We will also seek to continue to modernise our approach with additional measures, making full use of appropriate technology including, but not limited to, Remote Electronic Monitoring (REM) and Artificial Intelligence (AI).

Since we exited the EU on 31 December 2020, a number of functions have been transferred to Scottish Ministers as a result of the deficiency fixing work to transpose EU law into domestic legislation. This involved removing European references from legislation and replacing with UK equivalents (such as removing references to the commission and replacing it with references to the appropriate UK Fisheries

Administration). As a result of this work a number of powers and, more importantly, obligations formerly wielded by the commission have now come to Scottish Ministers, especially in regards to the Marine Environment. Work has been ongoing in understanding these functions to assess where the most action is needed and how to mitigate any risks associated with these functions.

Fisheries conclusion

As previously stated, Scotland's Future Fisheries Management Strategy aligns with the vision of the NMP. Additionally, the need to broaden understanding of the NMP (and other international and domestic commitments) so that stakeholders at all levels can understand what is being delivered and how it will work in practice, came out as a strong theme in the responses to the National Discussion Paper on the Future of Sea Fisheries Management in Scotland published on 4 March 2019[24]. If work was to be taken forward to amend or replace the NMP, it would give the opportunity to deliver comprehensive consistency and clarity across both frameworks.

In terms of the fisheries implications in the NMP as a result of EU Exit, the principles are essentially the same as those outlined in the 'EU Exit' section on above: that guidance has been published allowing interpretation of the current policies in respect of the legislative and governance changes – but that future amendment in the plan itself would allow for greater clarity; and, that a new NMP would allow for the impacts of EU Exit to be fully considered in revised fisheries policies.

[24] Future fisheries management - discussion paper: analysis - gov.scot (www.gov.scot)

Moving forward

Scotland's first National Marine Plan has been in place since 2015. It has served as an effective policy framework towards achieving our vision for clean, healthy, safe, productive and diverse seas, managed to meet the long terms needs of nature and people. It has also acted as an overarching framework for the development of the Sectoral Marine Plan for Offshore Wind Energy, and emerging regional plans. It has helped get us to a place where Scotland is regarded internationally as having a well thought through marine planning process.

Key Findings

The following key conclusions can be drawn from this review:

1. The Plan remains effective:

- The assessment of licenses issued by MS-LOT found that there was a wide coverage of NMP policies considered across the sample, showing the consistent use across Marine Scotland licensing operations. The assessment also found there to be a high representation of "spatial" general policies. This is indicative of the increasing competition for space in the marine environment. Whilst the current NMP provides for such deliberation up to a point, we consider that future pressures will likely require a more detailed framework on this issue.
- Scotland's Marine Assessment 2020 (SMA2020) was published on 21 December 2020. The assessment fulfils the requirement of the Marine (Scotland) Act 2010 which requires that an assessment of the state of Scotland's seas is undertaken. It sets out the condition of Scotland's seas and the pressures that they face. It is not intended as an evaluation of the NMP, and in this instance does not recommend changes to the NMP, but the assessment does outline areas of future work that can further help achieve its aims as well as outlining areas of concern within the marine environment.
- Socio-economic and scientific monitoring continues to improve with further opportunities given technological and methodological developments. For example the ScotMER programme on socio-economics is leading to an improved understanding of social and economic impacts from offshore wind developments meaning that actions can be taken to improve outcomes for local and national populations. However, whilst the body of evidence is certainly improving, with the need to align with strategies such as the Blue Economy Action Plan, it is imperative that further consideration is given to the continued evolution of the indicators that we use to measure success.

2. A review of "relevant matters" impacting on the Plan point strongly to the need to begin work to replace it, to ensure that it is fully orientated to meet these challenges:

- It is clear that in the 6 years since the National Marine Plan was adopted, significant external developments are impacting on our marine environment and sectors.

- The exit of the UK from the European Union means that the legislative context for the plan has changed. Sectors such as the seafood industry face massive challenges in exporting their produce to market.
- The Global Climate Emergency is changing our seas and impacting the sectors which rely on its resources.
- The COVID-19 pandemic has affected every aspect of our society and economy. It is vital that our major policy frameworks, including the National Marine Plan, are orientated towards delivering a green recovery from COVID-19.
- It is clear there is a rapid pace of change and interest in the marine sphere, combined with changes in technology, new emerging industries and a greater recognition of the benefits that can come from our marine environment. This will mean a significant increase in activity and new sectors that will look to be active in the marine environment to deliver key economic, social and environmental outcomes.
- In the Blue Economy Action Plan the ambition is to deliver the best possible enabling environment to unlock the potential of the Blue Economy while providing support for business and encouraging innovation.
- This will put more focus on the transformational impact of our legal commitment to achieve net zero, and the challenge of effectively managing increasing competition for space and resources in the marine environment. The NMP will need to evolve if it is to be optimised to ensure we have a framework in place that can enable governance and management of these significant challenges.

Next steps

Advice will be provided to Ministers based on the findings of this review. It will be for Ministers to decide whether to amend or replace the plan – or indeed to keep the current version until at least a subsequent review in three years' time.

However, given that one of the ways the pandemic has impacted this review is the lack of stakeholder consultation, we are keen to invite views on the key findings from all interested parties and individuals:

- Have we considered the right set of "relevant matters"? Is there anything we have missed?
- Do you agree that these matters and their impact on the management of co-existing activities in the marine environment point to the need to begin work to replace the NMP?

Please send any comments you have to nationalmarineplanning@gov.scot by 31 May 2021.

These views will accompany the advice to Ministers regarding the future of the National Marine Plan.

ENDS