

Highly Protected Marine Areas (HPMAs) Policy Framework and Site Selection Guidelines

Partial Business and Regulatory Impact Assessment

December 2022

Contents

| | |
|---|----|
| 1. Highly Protected Marine Areas (HPMAs) | 4 |
| 1.1. Background | 4 |
| 1.2. Proposal | 5 |
| 1.2.1. Policy Framework and Selection Guidelines | 5 |
| 1.3. Objective | 6 |
| 1.4. Rationale for Government intervention | 8 |
| 2. Consultation | 10 |
| 2.1. Within Government | 10 |
| 2.2. Public Consultation | 10 |
| 3. Options | 11 |
| 3.1. Option 1: Do nothing | 11 |
| 3.2. Option 2: Introduce HPMA Policy Framework and Site Selection Guidelines | 12 |
| 3.2.1. Sectors and groups affected | 12 |
| 4. Costs and Benefits | 14 |
| 4.1. Benefits | 14 |
| 4.1.1. Option 1: Do Nothing | 14 |
| 4.1.2. Option 2: Introduce HPMA Policy Framework and Site Selection Guidelines | 14 |
| 4.2. Costs | 19 |
| 4.2.1. Option 1: Do nothing | 19 |
| 4.2.2. Option 2: Introduce HPMAs | 19 |
| 5. Scottish Firms Impact Test | 32 |
| 6. Competition Assessment | 32 |
| 7. Consumer Assessment | 32 |
| 8. Test run of business forms | 33 |
| 9. Digital Impact Test | 33 |

| | |
|---|----|
| 10. Legal Aid Impact Test..... | 33 |
| 11. Enforcement, sanctions and monitoring | 33 |
| 12. Implementation and delivery plan..... | 33 |
| 13. Post-implementation review | 33 |
| 14. Summary and recommendation | 34 |
| 14.1. Summary costs and benefits table | 34 |
| 15. Declaration and publication | 35 |

1. Highly Protected Marine Areas (HPMAs)

1.1. Background

Scotland's seas are some of the most biologically diverse in Europe, supporting thousands of species of plants and animals across a wide variety of habitats¹. We take our role as custodians of our waters seriously. We are committed to working in collaboration with users of our seas to ensure a clean, healthy, safe, productive and biologically diverse marine and coastal environment that meets the long-term needs of people and nature. This includes managing our seas sustainably to protect their rich biological diversity and to ensure that our marine ecosystems continue to provide economic, social and wider benefits for people, industry and society. Our long-term goal, as set out in our [Blue Economy Vision](#), is that by 2045 Scotland's shared stewardship of our marine environment supports ecosystem health, improved livelihoods, economic prosperity, social inclusion and wellbeing.

The world faces the challenges of climate change and biodiversity loss - twin global crises which require us to work with nature to secure a healthier planet. In Scotland, the [Scottish Marine Assessment 2020](#) showed that a number of marine species were in decline. If we do not address biodiversity loss, there is a risk that the marine environment will not remain resilient enough to provide the resources and benefits we gain from it for the long term.

The [2019 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services \(IPBES\) Global Assessment of Biodiversity](#) identified five direct drivers of biodiversity loss globally:

- changing use of the land and sea
- direct exploitation of organisms
- climate change
- pollution

¹ Colin Moffat, John Baxter, Barbara Berx, Kirsty Bosley, Philip Boulcott, Martyn Cox, Lyndsay Cruickshank, Katie Gillham, Venetia Haynes, Ashley Roberts, David Vaughan & Lynda Webster (Eds.). (2021). Scotland's Marine Assessment 2020: Headlines and next steps. Scottish Government.

- invasive non-native species

The [UK Marine Strategy Regulations 2010](#) provide a comprehensive framework for the four UK administrations to work together to assess, monitor and take action to achieve or maintain Good Environmental Status (GES) across UK waters. The most recent [assessment](#), published in 2019, found that several elements were not achieving GES, including seabirds, marine mammals, and seabed habitats. The introduction of HPMA's should improve this situation and contribute to achieving GES for these elements.

1.2. Proposal

HPMA's are proposed to be designated areas of the sea that are strictly protected to allow the marine ecosystems within to recover and thrive. These areas safeguard all of their marine life for the benefit of the planet and current and future generations; providing opportunities for carefully managed enjoyment and appreciation.

The Scottish Government is committed to introducing HPMA's covering at least 10% of inshore and offshore waters by 2026. HPMA's in Scottish waters will allow for the protection and recovery of marine ecosystems, contributing to halting biodiversity loss and aiding our efforts to mitigate and adapt to the effects of climate change. They will build upon our existing network of Marine Protected Areas (MPA's), representing a significant increase in the overall level of protection afforded to Scotland's seas.

1.2.1. Policy Framework and Selection Guidelines

The subject of this consultation is a HPMA [Policy Framework](#) and [Site Selection Guidelines](#).

The Policy Framework sets out the Scottish Government commitment to designating a suite of HPMA's, our aims for HPMA's and our proposals for what HPMA's are and what they will mean for different marine activities. It also describes how we will account for socio-economic factors alongside ecological considerations and policy objectives for sustainable industries, net zero targets and existing conservation

measures. The commitment to designate at least 10% of Scotland's seas as HPMA's by 2026 is set out in the [Bute House Agreement](#).

The HPMA Selection Guidelines set out a process to determine how and where HPMA's will be identified. The guidelines set out a five-stage site selection process, based in all cases around the conservation of marine ecosystems as the priority, and driven by the presence of the following functions and resources of significance to Scotland's seas:

- Blue carbon
- Essential fish habitats (including prey species)
- Strengthening the Scottish MPA network
- Protection from storms and sea level rise
- Research and education
- Enjoyment and appreciation

The policy framework and accompanying site selection guidelines as a whole are intended to apply to both Scottish inshore waters (0-12 nautical miles from the coast) and Scottish offshore waters (beyond 12 nautical miles). The selection and designation of HPMA's in offshore waters is subject to the prior transfer of relevant powers by the UK Government to Scottish Ministers. Sections of this document which set out our proposals in relation to legal powers to designate HPMA's therefore relate only to inshore waters. Some of the marine activities, which take place in Scottish inshore and offshore waters, relate to matters which are currently reserved to the UK Government, i.e. are not in the competence of the Scottish Parliament. The prohibition or management of these reserved activities will be subject to agreement with the UK Government. We will work closely with the UK Government to realise our vision for HPMA's in relation to offshore waters and reserved matters.

1.3. Objective

Designating 10% of Scotland's seas as HPMA's is intended to deliver demonstrable benefit to the achievement of the Scottish Government's vision for the marine

environment and make a significant contribution to the achievement of broader UK, regional and global conservation ambition.

[Scotland's Nature Conservation Strategy for the marine environment](#) outlines a 'three-pillar' approach to nature conservation (species conservation, site protection, and wider seas policies and measures), in which, HPMA's are a part and aim to:

- Facilitating ecosystem recovery and enhancement
- Enhancing the benefits that coastal communities and others derive from our seas
- Contributing to the mitigation of climate change impacts
- Supporting ecosystem adaptation and improving resilience

The designation and management of HPMA's will protect all elements of the marine ecosystem within their boundaries, including the seabed, water column and everything that lives there. This will protect not only the species and habitats within them, but also the complex web of interactions and processes that form a marine ecosystem.

HPMA's will still allow for some recreational activities to continue provided they are at non-damaging levels. This means that the entire site (i.e., all habitats and species and their supporting environment) would be protected from damage: meaning that harm would be prohibited, irrespective of severity or duration, unless the effects were negligible to all marine biodiversity and associated functions and resources within the boundaries.

In areas where human activity has been relatively low HPMA's will ensure the marine ecosystem is preserved and allow for any recover to occur as necessary. This will also enable the effects of prevailing conditions to be monitored.

In areas where there have been more significant levels of human activity HPMA's will allow for the recovery of the marine ecosystem to a more natural state. Some HPMA's could also allow for active restoration to aid recovery of historically present habitats or species, such as seagrass and native oyster beds.

1.4. Rationale for Government intervention

Our seas are vital to Scotland's population and key to our identity. They sustain the livelihoods of thousands of people in communities up and down the country, providing food, energy and a thriving marine tourism industry, among many other benefits. HPMAs will ultimately help to protect the resources and industries we all rely on, ensuring industries can continue to benefit from our rich seas for generations to come. Designating HPMAs will impact how we use and interact with our marine environment but making space for nature is critical to address biodiversity loss and needs to occur alongside the growing demand for marine space for human activities.

The [UK Marine Strategy Regulations 2010](#) provide a comprehensive framework for the four UK administrations to work together to assess, monitor and take action to achieve or maintain Good Environmental Status (GES) across UK waters. The most recent assessment, published in 2019, found that several elements were not achieving GES, including seabirds, marine mammals, and seabed habitats. The introduction of HPMAs should improve this situation and contribute to achieving GES.

The introduction of HPMAs also supports us meeting our international environmental commitments. They will contribute to the strategic objectives set out by the OSPAR Commission for the protection of the marine environment of the North-East Atlantic in the [OSPAR North-East Atlantic Strategy 2030](#), which was adopted in October 2021. The vision for this strategy is a clean, healthy and biologically diverse North-East Atlantic Ocean, which is productive, used sustainably and resilient to climate change and ocean acidification.

Following EU Exit, the Scottish Government has committed to maintain or exceed EU environmental standards. The [EU Biodiversity Strategy for 2030](#) sets a target of 'strict protection' of 10% of the EU's seas by 2030. Our commitment to introduce comparable high protection to 10% of Scotland's seas by 2026 exceeds this EU target.

The [UN Convention on Biological Diversity post-2020 global biodiversity framework](#) aims to put nature on a path to recovery by 2030. Designating HPMAs in Scottish

waters will make a significant contribution to achieving this aim in Scotland. HPMAs will also contribute toward achieving the [UN Sustainable Development Goal 14 – Life Below Water](#), in particular targets 14.2 and 14.5.

The [Dasgupta review on the Economics of Biodiversity](#) (published in February 2021) identifies the need for improved regulation and protection of high value areas as necessary. The review highlights not just the relevant role of market failures in the failure to protect the environment but also of institutional failure.

The review highlights that there are market failures present in the management of the marine environment “Processes driving a wedge between our demand for the biosphere’s goods and services and its ability to supply them without undergoing decline harbour externalities. These are the unaccounted-for consequences for others, including future people, of actions taken by one or more persons” and “Inefficiencies in the production, consumption and exchange of goods and services are an expression of externalities.” Externalities occur when damage to the marine environment is not fully accounted for by users and there is no compensation payment. There is no monetary cost attached to using or taking from the marine environment and so the impact of damaging it is not directly considered by the market, leading to over ‘use’ relative to what society considers to be optimal. Therefore, governments must intervene if the marine environment is to be protected from damaging uses.

The open access characteristic of natural resources mean that the marine environment is a public good. Public goods have the characteristic that no one can be excluded from accessing or benefiting from it leading to over consumption and depletion of the good or service since there is no incentive to contribute to its maintenance. This can lead to under supply and under protection of these goods. This is the reason government may intervene to protect and ensure the continuation of the existence or supply of the marine environment.

HPMAs are intended to be areas of sea designated for the protection and recovery of marine ecosystems where all extractive, destructive and depositional uses will be prohibited. This legislation will contribute to the Scottish Government Environment,

Communities and Health National Outcomes. The Environment National Outcome sets our duty to protect and enhance our natural resources as essential to our economy, culture, way of life and the wellbeing of future generations. While the Communities National Outcome recognises that to be healthy and happy as a nation we must nurture and protect our local resources, environments and all who live in them. Our Health National Outcome recognises that our health is dependent on a wide variety of factors and actors, and we therefore need to take a whole system approach to promoting good health and activity, the marine environment will play a crucial part towards the achievement of these National Outcomes.

2. Consultation

2.1. Within Government

Consultation has been undertaken with policy colleagues within Marine Scotland, including aquaculture, sea fisheries, nature conservation, marine renewables, compliance as well as with colleagues in other UK government departments such as the Ministry of Defence and the Department for Environment, Food & Rural Affairs (Defra). Their inputs were used in development of the Policy Framework.

2.2. Public Consultation

To help guide our engagement we have produced a [Stakeholder Engagement Plan](#). This sets out how and when stakeholders can engage throughout the process of designating HPMA's, from bilateral engagement to cross-sectoral workshops and formal consultations.

Initial direct engagement with stakeholders was carried out in Spring and Summer 2022 to introduce the commitment, plan for delivery and inform development of the Policy Framework and Site Selection Guidelines. Stakeholders engaged at this stage included:

- Association of Scottish Shellfish Growers (ASSG)
- British Trout Association (BTA)
- Regional Inshore Fisheries Groups including:
 - North and East Coast Regional Inshore Fisheries Group (NECRIFG)

- o Orkney Sustainable Fisheries (Regional Inshore Fisheries Group)
- o Outer Hebrides Regional Inshore Fishery Group
- o Shetland Fisherman’s Association (SFA)
- o West Coast Regional Inshore Fisheries Group (WCRIFG)
- Scottish Creel Fishermen’s Federation (SCFF)
- Scottish Fishermen's Federation (SFF)
- Scottish Renewables
- Scottish Salmon Producers' Organisation (SSPO)
- Scottish Seaweed Industry Association (SSIA)
- Scottish White Fish Producers Association (SWFPA)

Following the end of public consultation, the Policy Framework and Site Selection Guidelines will be finalised and published.

A phase of site selection and assessment will then begin. During this phase, a series of cross-sectoral themed workshops will allow stakeholders to contribute to and comment on proposals as they emerge. A final public consultation on the proposed locations for HPMAs will be held in 2025.

This section will be updated following public consultation and stakeholder engagement undertaken as part of the site selection process.

3. Options

A non-regulatory option has not been considered going forward. This is in part due to the market failures stated above there is not real incentive to protect the marine environment by those who use it and therefore this option would be unlikely to achieve the aims of the policy.

3.1. Option 1: Do nothing

Option 1 is the ‘Do nothing’ option; this is the baseline scenario. Under this option, no additional powers would be sought provide competence to introduce HPMAs and no HPMAs will be introduced in Scottish Seas. The objectives of HPMAs will likely not be achieved.

3.2. Option 2: Introduce HPMA Policy Framework and Site Selection

Guidelines

Under this option, the HPMA Policy Framework and Site Selection Guidelines will be adopted and new powers will be sought for Scottish Ministers to designate HPMA in Scottish inshore waters. This will enable the five-stage site selection process, as set out in the Site Selection Guidelines, to be conducted, followed by a network level assessment, to select and assess a suite of HPMA, as defined in the Policy Framework. Subject to consultation, Scottish Ministers will then formally designate HPMA covering at least 10% of inshore and offshore waters by 2026.

3.2.1. Sectors and groups affected

The groups affected will span communities, society, businesses, industries and the public sector, now and in the future, directly or indirectly linked to the marine environment.

Sectors

The following sectors in Scotland have been identified as likely to be affected by the introduction of HPMA:

- Aquaculture – Finfish
- Aquaculture – Shellfish and Seaweed
- Carbon Capture and Undersea Storage
- Coast Protection and Flood Defence
- Commercial Fisheries
- Energy Generation
- Military and Defence
- Oil and Gas
- Ports and Harbours
- Power Interconnectors and Transmission Lines
- Recreational Angling
- Recreational Boating
- Seabed Mining

- Shipping
- Telecommunication Cables
- Tourism
- Water Sports

Businesses

A range of businesses will be affected directly by this legislation. These could include businesses of different sizes in each sector identified in the list above. There could also be businesses that are indirectly affected by the legislation such as fish processing businesses and businesses in the supply chain for the different sectors.

Communities

Communities affected by the legislation could include those communities directly or indirectly affected by a HPMA. Communities can have social and economic ties to the coast, potentially at some distance from the HPMA. The impacts will, therefore, not all be experienced within the area adjacent to the HPMA but potentially in numerous communities in a range of locations. Communities impacted by the legislation might include:

- “Communities of place”: the people who are connected through living in a particular place – in this case living in communities near an HPMA
- “Community of practice”: those who are connected through activities or livelihoods that they have in common even if they do not share the place.
- “Community of interest”: a community of people who share a common interest or passion but may not be linked in any other way. For example, this may include those with an interest in marine conservation

Public Sector

The Scottish Government and other public bodies and organisations will be affected by this legislation as there will be costs resulting from its introduction, monitoring and enforcement. Impacted bodies may include NatureScot, Joint Nature Conservation Committee (JNCC), Police Scotland and Scottish Courts and Tribunals Service (SCTS).

Scottish Government

Following a decision to designate individual sites, costs may be incurred by the public sector in the following broad areas:

- Site monitoring and evaluation
- Compliance and enforcement
- Promotion of public understanding
- Regulatory and advisory costs associated with licensing decisions and review of consents

Society

Society as a whole may be impacted by the legislation, from perception of protection afforded to the marine environment to their direct interaction with it through marine ecosystem services.

4. Costs and Benefits

4.1. Benefits

4.1.1. Option 1: Do Nothing

Sectors and businesses

Since this option means no powers to introduce HPMA, the benefits that currently occur to the incumbent sectors and businesses will not change in the short to medium term.

Communities and Society

The benefits that the status quo provides to communities and society will not be affected, such as employment from marine sectors in the short and medium term whilst marine resources are available.

4.1.2. Option 2: Introduce HPMA Policy Framework and Site Selection Guidelines

Sectors

Under this option, the main sectors that could directly benefit from the introduction of HPMA would be the recreation and tourism as these sectors could be allowed to

continue with their economic activities so long as they are carefully managed and not damaging to HPMAs. For example, a study by the European Commission looking at the economic benefits of MPAs² (generally less stringent controls than HPMAs) found that MPAs have been shown to deliver concrete benefits for the tourism industry in a number of case studies. It is not possible to quantify these potential benefits at this stage, but an attempt to quantify any benefits will be made during the development of the full business and regulatory impact assessment.

Overall, inshore sites are generally more accessible and more frequently visited than offshore sites. This means that if present, the tourism and recreation benefits to inshore sites on HPMA designation will be greater, though these benefits may take time to occur³.

Some in the fishing sector may benefit in the longer run as a result of the recovery in marine ecosystems and fish and shellfish species recovery which may spill over outside of the HPMA area. A DEFRA review into HPMAs⁴ shows that there is some evidence that biomass increases do go across HPMAs boundaries. There is also some evidence that fishers catch near a MPA can be larger than in other areas⁵⁶ benefiting fishers fishing adjacent to their boundaries. In the long term HPMAs could lead to a more sustainable fishing industry by providing a secure source of fish resources within the HPMAs spilling over to non-highly protected areas. The materialisation of these benefits is highly uncertain and will depend partly on the details of the policy which will be developed after this initial consultation on the framework and guidelines.

The designation of HPMAs and other spatial restrictions on the marine space could affect a wide range of fishing fleets, the impact will be dependent to a large degree on the behavioural responses of the fishing fleets which might respond in various

² [Study of the economic benefits of Marine Protected Areas – MedPAN](#)

³ [Monitoring the socio-economic impacts of Marine Protected Areas: report](#)

⁴ [Highly Protected Marine Areas \(HPMAs\) review 2019](#)

⁵ [Spillover from marine reserves and replenishment of fished stocks](#)

⁶ Goñi, R., Hilborn, R., Díaz, D., Mallol, S. and Adlerstein, S. (2010). Net contribution of spillover from a marine reserve to fishery catches. *Marine Ecology Progress Series* 400 233–243.

ways to the restrictions and change their fishing effort and practices leading to a range welfare impacts as a result. Displacement analysis will be carried out during the impact assessment process of the site selections for HPMA's which will attempt to assess some of these impacts on the fishing fleets and their welfare impacts.

Communities

Communities of place may benefit from the use of nearby HPMA's for recreational use. As referred to above, establishing HPMA's could create opportunities for recreation and leisure, and provide an attraction for tourism. This could benefit nearby communities by maintaining or creating new income opportunities for nature-based tourism.

Consumers

Consumer benefit translates as consumer surplus which occurs when they are able to purchase the goods and services that they prefer instead of other products and services which they could buy with the same money, or when they can purchase these products cheaper. If HPMA's increase the supply of these products for consumers, relative to the do nothing scenario, there could be an added benefit resulting from HPMA's. This benefit is expected to be relatively small but cannot currently be quantified.

Society

Under this option the main benefits will be to society as a whole and as a result of environmental benefits. The designation and management of the HPMA network may improve the extent and/or condition of the marine environment and its assets, which changes the quantity and quality of the beneficial services they provide in future, relative to the baseline of doing nothing. The value and contribution to economic welfare will be dependent on these changes.

Benefits on the value of ecosystem services may occur as a result of the management and achievement of the conservation objectives of the HPMA. A healthy marine environment provides many benefits to people. The benefits and the beneficiaries are not uniform and cover a wide range of ecosystem functions and

interdependencies. The concept of 'ecosystem services' is used to capture the different benefits provided as follows:

- Provisioning Services – the tangible goods and associated benefits produced by an ecosystem such as fish stocks and genetic resources
- Regulating Services – the benefits from the regulation of ecosystem processes such as carbon storage and climate regulation, storm protection, waste breakdown and detoxification of water and sediment stabilisation
- Cultural Services – the non-tangible ecosystem benefits either from experience of the ecosystem or knowledge of its existence such as knowledge and education, recreation and tourism, spirituality, health and wellbeing
- Supporting Services – those services whose function underlie all other ecosystem service provision

These benefits cannot be quantified at now as they will be site specific. It is worth noting that even at site level there are many challenges involved in valuing the environmental benefits and ecosystem services. However, the impact assessment which will be carried out for each HPMA designated area will attempt to quantify the benefits as extensively and robustly as possible.

It is believed that the marine ecosystems in HPMA could contribute to carbon sequestration and carbon storage⁷. Carbon storage is the storage of carbon in marine plants or organisms, and it is believed that the seabed serves as a carbon sequestration mechanism which means that HPMA could have the added benefit of helping with the fight against climate change. 'Blue carbon' is carbon that is stored in marine ecosystems. These ecosystems sequester and store around 2% of UK emissions per year⁸. Research on the current English North Sea MPA network has found that it stores nearly 20% of that held in UK forests and woodlands. The top

⁷ [Storage of carbon by marine ecosystems and their contribution to climate change mitigation](#)

⁸ [Blue carbon](#)

10cm of English North Sea seabed sediments is estimated to store 100.4Mt carbon - to put this into context, UK forests are estimated to store 529Mt carbon⁹.

Additional value of HPMA's to society can come from the well-being that people experience from the knowledge that the marine environment is protected for current and future generations. This is defined as 'non-use' or non-market value. There are economic techniques that can be used to calculate these values such as revealed and stated preference, however, there are many challenges in the application of methodologies in the context of HPMA's.

The concept of intrinsic value is also important in that people recognise the marine environment as having a value regardless of whether it adds utility to themselves.

Ecosystem Services benefits

Ecosystems are very complex and it is thought that the more complex an ecosystem is the more resilient it is to change. Therefore, if it is damaged or if a species or habitat is removed from that ecosystem, the chances of survival for those services reduce as the ecosystem becomes weaker. However, by conserving or allowing the species and habitats that make up that ecosystem to recover, we can be more confident of the continuation of the long-term benefits the marine environment provides.

Non-use value of the natural environment is the benefit people get simply from being aware of a diverse and sustainable marine environment even if they do not themselves 'use it'. We take for granted many of the things we read about or watch, such as bright colourful fish, reefs and strange deep sea curiosities. To lose them would be a loss to future generations that will not be able to experience them. Due to the uncertainty involved it is challenging to put a robust and reliable quantitative estimate of value on this but the high quality experience and increasing knowledge of Scotland's seas can be better preserved through measures such as HPMA's. It is expected that non-use value will be attained as a result of designation from the

⁹ [Assessment of Carbon Capture and Storage in Natural Systems within the English North Sea \(Including within Marine Protected Areas\)](#)

knowledge that the features are receiving adequate protection as well as the wider conservation objectives that designation supports.

4.2. Costs

Give details of all costs (additional and savings) associated with each option you are considering. This should, where applicable, include non-monetary costs.

4.2.1. Option 1: Do nothing

Under the do nothing or baseline option, the legislation to introduce HPMA in Scottish water will not be put in place and therefore the designation and management of HPMA will not be taken forward. Under this option it is assumed that the changes to ecosystems and biodiversity will continue in line with the trend so those which are deteriorating will continue to deteriorate at the same rate and those which are stable will continue to be so. This means that any benefits currently being experienced will decrease or remain stagnant, depending on the trend.

This will mean that the high levels of protection to all marine biodiversity and associated ecosystem services within the boundaries of an HPMA from damaging levels of human activities will not materialise. The impacts of this on the marine environment and society are not fully known. Some impacts could include the absence of ecosystems recovery and enhancement and the associated benefit to coastal communities and others derived from the marine environment. There could also be a worsening of the impacts of climate change since the mitigation impacts resulting from the ecosystems regeneration in HPMA will not take place leading to decreased coastal protection, food security and other unforeseen impacts.

4.2.2. Option 2: Introduce HPMA

Businesses

A range of businesses will be affected by this legislation. We expect small, medium and large businesses to be affected directly and indirectly in a number of different sectors. Since the selection site for HPMA has not taken place yet, we cannot estimate the costs to businesses.

The expected costs to sectors and businesses that will result from HPMA sites and measures will be analysed and presented in terms of GVA, turnover and employment once the sites have been selected and data within those sites can be drawn. Effects of displacement will be considered as best as possible at the final BRIA stage.

For some sectors, there may also be impacts associated with delays in consenting as a result of the designations or impacts on investor confidence. However, it is not possible to quantify these potential impacts as it is not possible to predict whether or where they might occur. It is recognised that these costs could potentially be large for some sectors and possibly larger than some of the quantified costs.

There would be additional time costs for all businesses in familiarising themselves with the policies and legislation. These costs will be estimated at the final BRIA stage.

Sector

There will be a cost to all business sectors associated with the familiarisation to the new regulation.

Commercial fisheries

Commercial fishing of any kind will not be permitted within HPMA's. This includes fishing with static gear, mobile gear and hand collection by divers.

Transit of HPMA's by fishing vessels will be permitted and anchoring will be permitted at non-damaging levels. Fishing gear will need to be lashed and stowed on board while the vessel is within an HPMA boundary. There may be additional requirements at the individual site level for the purposes of monitoring and enforcement, such as minimum speed requirements for transiting sites.

The following potential impacts will require assessment:

- Exclusion of commercial fishing activity from HPMA's
- Minimum speed requirement for transiting sites

- Restriction on fixed engines and net and coble fisheries

Depending on the site selected for HPMA, the impact and the behavioural responses of fishers will vary. Commercial fisheries businesses operating in the areas designated as HPMA would have to cease their economic activity in these areas. This could mean a loss of income as a result. Fishers could choose to displace their fishing effort to another location in order to ameliorate some of the costs resulting from the establishment of the HPMA. There may be some costs associated with this displacement of activity as there could be a need to diversify, expand their operation or upgrade their vessels in order to reach areas further offshore. The displacement could also lead to costs to fishers already fishing in the displacement areas as a result of the crowding of fishing vessels and competition in open areas.

In the case of inshore fishing grounds there could be increased tensions created between static and towed gear fishers by the towed gear fishers, displaced from the closed area, moving into grounds traditionally used by static gear fishers. Additional costs could be accrued due to increased costs in time and fuel consumption resulting from the displacement of economic activity and costs associated with the spatial interaction with other activities such as tourism or aquaculture.

Once the sites for HPMA have been selected the estimation of potential costs to commercial fisheries will include analysis of commercial fishing activity excluded from HPMA.

Some businesses in the supply chain such as fish processing businesses or other businesses associated with the fishing sector may also be indirectly affected by HPMA. We cannot estimate these costs now as HPMA sites have not been proposed but there is likely to be some costs on these groups.

Aquaculture – Finfish

The proposal is that aquaculture of any form, will not be permitted within HPMA, therefore consents for new aquaculture sites will not be granted within HPMA and, in the event of overlaps, any existing sites within HPMA will need to relocate.

Activity in areas above mean low water springs (MLWS) will not be affected as these areas will not be included within HPMA's.

The following have been identified as potential impacts and will be considered for further assessment:

- Removal of existing sites and associated infrastructure
- Loss of production due to the relocation process
- Additional assessment costs to support marine licence determinations for new development proposals and renewals adjacent to HPMA's
- Costs of scoping the new site
- Installation costs and costs associated with supportive terrestrial infrastructure
- Replacement of ADDs adjacent to HPMA's with anti-predator nets
- Sterilisation of potential development sites
- Cost of uncertainty and delays

Aquaculture – Shellfish and Seaweed

The proposal is that aquaculture of any form, will not be permitted within HPMA's, therefore consents for new aquaculture sites will not be granted within HPMA's and, in the event of overlaps, any existing sites within HPMA's will need to relocate. Activity in areas above MLWS will not be affected as these areas will not be included within HPMA's.

The following have been identified as potential impacts and will be considered for further assessment:

- Removal of existing sites and associated infrastructure
- Loss of production due to the relocation process
- New development proposals and marine licence renewals adjacent to HPMA's
- Sterilisation of potential development sites
- Cost of uncertainty and delays

Carbon Capture Utilisation and Storage

The policy intention is that construction of new infrastructure associated with carbon capture utilisation and storage will not be permitted within HPMA.

Existing oil and gas pipelines (which may be repurposed for carbon dioxide transportation in future) will be considered as part of the HPMA selection and assessment process, to avoid unnecessarily scoping out areas which may be suitable for designation as HPMA. In the event of any overlap with proposed HPMA, decisions on whether to include these areas within sites will be taken on a case-by-case basis, with advice from Nature Scot and JNCC. This could include consideration of the spatial extent of infrastructure within a proposed site (particularly in relation to more sensitive elements of the marine ecosystem) and the level and environmental impact of activity required for repairs and maintenance.

The following potential impacts HPMA may require assessment:

- Additional assessment costs to support marine licence determinations for new development proposals and repair and maintenance to carbon-capture-associated infrastructure within HPMA
- Obstruction/deviation of pipeline routes
- Sterilisation of potential development sites
- Cost of uncertainty and delays

Coast Protection and Flood Defence

Coastal protection and flood defences are considered critical infrastructure, therefore associated activities will be permitted within HPMA. Such activities may include maintenance or repair of existing infrastructure, as well as construction of new flood protection and coastal defences. The following potential impacts may require assessment:

- Additional assessment costs to support planning and licence applications for maintenance of existing/construction of new flood defence or coastal protection within HPMA

Energy Generation

The proposal is that existing renewable energy developments, as well as any areas with option agreements or consents already in place for future renewable developments, will be excluded from the HPMA selection process so that overlaps do not occur. New developments will not be permitted within HPMA's.

In general, the construction of new subsea cables within HPMA's will not be allowed, with the following exceptions:

- The laying of new cables in relation to lifeline services to remote and island communities, such as, for example, power distribution cables or cables related to broadband/telecommunication services
- The laying of new cables which are permitted in accordance with international law (United Nations Convention on the Law of the Sea (UNCLOS))

For the limited instances where the laying of new cables are consented, the repair and maintenance of those cables can also be allowed on a case by case basis.

Existing active cables would not be compatible with HPMA's due to the infrastructure and activities associated with maintaining and repairing them. Existing active cables are excluded from the HPMA selection process as it would not be practical to move them.

Water abstraction (for example required for power station cooling) would not be allowed in HPMA's.

The following have been identified as potential impacts and will be considered for further assessment:

- Additional assessment costs to support marine licence determinations (for impacts of maintenance, repair, or removal, of existing infrastructure within pHPMA's, or for new developments within a buffer of pHPMA's)
- Deviation of cable routes to avoid HPMA's
- Water abstraction and discharge of cooling water from power stations

- Cost of uncertainty and delays

Military and Defence

Military and defence activities are a reserved matter under the responsibility of Ministry of Defence (MoD). The policy intention is that HPMAs will not be designated in some areas where Ministry of Defence (MoD) activities are carried out, such as areas of MoD estate and other infrastructure, and areas where it is possible to define the type and extent of activities at a suitable scale to allow their exclusion.

MoD activities relating to national security may need to go ahead within HPMAs. Where activities do need to go ahead, operators and planners will need to follow relevant environmental protection guidelines.

The following have been identified as potential impacts and will be considered for further assessment:

- Revision of Marine Environment and Sustainability Assessment Tool (MESAT) (and other MoD environmental tools) and additions to electronic charting by the Hydrographic Office
- Subsequent compliance with MESAT revisions

Oil and Gas

The regulatory regime for licensing offshore petroleum installations and pipelines for oil and gas exploration and exploitation of oil and gas in the Scottish inshore and offshore regions is a reserved matter under the Scotland Act 1998, Schedule 5, Section D2. More generally, the authorisation and operation of oil and gas installations takes place in a complex regulatory environment, involving a mix of reserved and devolved responsibilities and authorities.

Activities associated with oil and gas exploration, extraction and storage, including any exploratory activity and the construction of new infrastructure should be avoided within HPMAs. The Scottish Government will work with the UK Government to avoid, wherever possible, these activities taking place within a HPMA.

Existing active oil and gas developments will be excluded from the HPMA selection process so that overlaps do not occur. New activity will not be consented, so any exploratory activity or construction of new infrastructure will therefore be excluded from the HPMA selection process so that overlaps do not occur. However, areas where there are existing active oil and gas pipelines, inactive pipelines and other inactive infrastructure such as plugged and abandoned wells will be considered as part of the HPMA selection and assessment process to avoid unnecessarily scoping out areas. In the event of any overlap of inactive infrastructure with proposed HPMA, decisions on whether to include these areas within sites will be taken on a case-by-case basis, with advice from Nature Scot and JNCC.

The following have been identified as potential impacts and will be considered for further assessment:

- Additional assessment costs to support licensing determinations (new development proposals, repair and maintenance, and decommissioning)
- Deviation of new pipelines around HPMA
- Sterilisation of potential development sites (i.e. exploration sites)
- Costs of uncertainty and delays

Ports and Harbours

In the event of overlaps, it would not be feasible to relocate existing ports and harbours within HPMA. HPMA will therefore not be designated in areas that overlap with existing ports and harbours. This will include associated infrastructure and any associated areas which are dredged for navigational purposes and associated dredge deposit sites.

The proposal is that development and construction of new ports, harbours and marinas will not be permitted within HPMA. Disposal of waste from dredging associated with ports and harbours will not be permitted within HPMA.

The following potential impacts may require assessment:

- Additional assessment costs for marine licence determinations (new development proposals, maintenance dredging and disposal)
- Anchorages
- Cost of uncertainty and delays

Power Interconnectors and Transmission Lines

In general, the construction of new subsea cables within HPMA's will not be allowed, with the following exceptions:

- The laying of new cables in relation to lifeline services to remote and island communities, such as, for example, power distribution cables or cables related to broadband/telecommunication services
- The laying of new cables which are permitted in accordance with international law (UNCLOS)

For the limited instances where the laying of new cables are consented, the repair and maintenance of those cables can also be allowed on a case by case basis.

Existing active cables would not be compatible with HPMA's due to the infrastructure and activities associated with maintaining and repairing them. Existing active cables are excluded from the HPMA selection process as it would not be practical to move them.

The following have been identified as potential impacts and will be considered for further assessment:

- Additional assessment costs to support marine licence determinations
- Deviation of new cable routes to avoid HPMA's
- Cost of uncertainty and delays

Recreational Fishing

The proposal is that recreational fishing of any kind will not be allowed within HPMA's. This will include all fixed engine fisheries, net and coble fisheries, creel

fisheries, rod and line fisheries (including catch and release) and hand gathering operating in areas below MLWS.

Recreational angling in areas above MLWS will not be affected as these areas will not be included within HPMA's.

The following have been identified as potential impacts and will be considered for further assessment:

- Restriction on sea fishing in HPMA's (below MLWS)
- Restriction on shore fishing below MLWS
- Restriction on catch and release
- Restriction on other types of recreational fisheries which can occur around Scotland's coast (including fixed engine fisheries, net and coble fisheries, creel fisheries)

Recreational Boating

The proposal is that recreational motor and sail vessels (excluding those partaking in recreational angling), personal watercrafts and windsurfing will be permitted within HPMA's at 'non-damaging levels', therefore, there may be restrictions to minimise impact on HPMA's. HPMA's may also impact future marina developments.

The following have been identified as potential impacts and will be considered for further assessment:

- Restrictions on anchoring (spatial, at 'non-damaging' levels, or anchor size/type)
- Vessel number restrictions (at 'non-damaging' levels)
- Additional assessment costs for marine licence determinations for marinas

Seabed Mining

Seabed mining is a reserved matter, so cannot be regulated by the Scottish Parliament. The Scottish Government intends to work with the UK Government to

avoid these activities taking place in HPMAs. The timing and location of any future mining developments is unknown.

The following have been identified as potential impacts and will be considered for further assessment:

- Additional assessment costs for marine licence determinations
- Sterilisation of potential development sites

Shipping

The policy intention is that shipping and ferries will not be impacted by HPMAs. Right of innocent passage and freedom of navigation is enshrined in international law (UNCLOS). Therefore, there will not be a need for deviation of shipping routes.

Telecommunication Cables

The policy intention is that wherever possible activities associated with subsea cables (including telecommunication cables) should be avoided within HPMAs. In general, the construction of new subsea cables within HPMAs will not be allowed, with the following exceptions:

- The laying of new cables in relation to lifeline services to remote and island communities, such as, for example, power distribution cables or cables related to broadband/telecommunication services
- The laying of new cables which are permitted in accordance with international law (UNCLOS)

For the limited instances where the laying of new cables are consented, the repair and maintenance of those cables can also be allowed on a case by case basis.

Existing active cables would not be compatible with HPMAs due to the infrastructure and activities associated with maintaining and repairing them. Existing active cables are excluded from the HPMA selection process as it would not be practical to move them.

The following have been identified as potential impacts and will be considered for further assessment:

- Additional assessment costs to support marine licence determinations for laying new telecommunication cables (to provide critical infrastructure or lifeline services) within HPMAs
- Deviation of telecommunication cable routes to avoid HPMAs

Tourism

Many marine tourism activities are low impact and will be able to continue within HPMAs, with management measures potentially needed to ensure this is at 'non-damaging' levels.

The following have been identified as potential impacts and will be considered for further assessment:

- Restrictions on numbers/frequency/size of vessels for Marine wildlife watching
- Comply with codes of practice/best practice

Water Sports

The majority of water sports will be permitted within HPMAs at 'non-damaging' levels. Potential impacts may require assessment and introduction of restrictions of water sports to 'non-damaging' levels. For example through:

- Restrictions to 'non-damaging' levels
- Follow existing codes of practice/best practice

Communities

The impact on communities associated with the selected HPMAs and management measures may include a direct impact to their economic welfare. In which case, this will be strongly connected to the nature, scale and distribution of the economic impacts. Any significant change in employment, for example generated because of restrictions on fishing activity, can have significant social impacts. Employment is recognised as being a particularly important generator of social benefit. It is the key

means by which individuals fulfil material wellbeing, as well as being central to social linkages, individual identity, social status and an important contributor to physical and mental health. Conversely, unemployment can be detrimental to physical and mental health and a key cause of deprivation and associated issues of community cohesion.

Society

HPMAs could also impose environmental costs, such as the concentrating of fishing effort next and around the boundary of HPMAs and the displacement of fishing effort to less managed areas where the stocks might also be vulnerable.

Public sector

There are costs associated with HPMAs:

- Site monitoring and evaluation
- Compliance and enforcement
- Promotion of public understanding
- Regulatory and advisory costs associated with licensing decisions and review of consents

Compliance and enforcement will be considered and imbedded throughout the process of identifying sites, setting their boundaries and developing the required legislation. The compliance and enforcement measures needed will therefore be considered in the overall legislation, and in site specific designation orders, as well as through regular prioritisation and assessment of compliance assets.

Cumulative Impacts

The cumulative effects of marine protection with other marine activities could lead to an increase in spatial conflict displacing some marine activity leading to additional costs to the wider industries and supply chains. Since the HPMA sites have not been selected yet it is not possible to estimate this cost.

5. Scottish Firms Impact Test

This legislation affects a number of marine sectors in Scotland which undertake several activities relating directly and indirectly to trade and investment. This includes commercial fisheries, ports and harbours, renewable energy, oil and gas, and recreation among others. However, the legislation also stipulates that existing infrastructure for a number of these sectors will not be affected by the legislation, for example in the case of ports and harbours, oil and gas, etc. as well as areas of national importance such as those earmarked for renewable developments such as ScotWind and INTOG areas and the areas of associated transmission infrastructure. New investment in some sectors, such as commercial fisheries, might be impacted by the legislation in terms of international trade and investment.

During the consultation period we will consult with relevant sectors and try to gather evidence and information on international trade activities that could be affected by the legislation. Always with the caveat that HPMA sites have not been selected yet.

6. Competition Assessment

The introduction of HPMA it is not foreseen to have a direct impact on competition since all businesses will be excluded from the area. There could be some indirect impacts on competition if displacement within the fishing sector was to take place. The information gathered during the consultation period will allow us to assess any indirect impacts on competition more thoroughly.

7. Consumer Assessment

The introduction of this legislation is not foreseen to have a direct impact on consumers. This would only be the case if there was an aggregate reduction in the number of fish and seafood caught and eaten in Scotland and there was a causal effect between the introduction of this legislation and the aggregate reduction. Scotland is a small open economy and as such it exports most of the fish and seafood that are caught in Scotland - in 2021, Scottish exports of fish and seafood were valued at £1.0 billion (204 thousand tonnes) and accounted for 60% of total Scottish food exports (£1.7bn). And while also importing some the fish and seafood that consumers eat in Scotland, there are not accurate figures on the domestic

consumption of landed, farmed or processed seafood, including the origin of this seafood.

8. Test run of business forms

There are no new business forms to test at present.

9. Digital Impact Test

The introduction of this legislation will not have a direct or indirect impact on digital technology or markets or the access to them.

10. Legal Aid Impact Test

It is not expected that HPMA's will have any impact on the current level of use that an individual makes to access justice through legal aid or on the possible expenditure from the legal aid fund as any legal/authorisation decision impacted by the management measures will largely affect businesses rather than individuals.

11. Enforcement, sanctions and monitoring

Marine Scotland has responsibility for compliance, monitoring and enforcement of the measures.

12. Implementation and delivery plan

The designation of HPMA's are proposed to be delivered by Scottish Statutory Instrument no later than March 2026.

13. Post-implementation review

As HPMA's will form part of Scotland's MPA network it is intended that they will be subject to the existing six-yearly MPA network reporting cycle to the Scottish Parliament. In this reporting cycle, HPMA's will be reviewed to ensure that they are meeting, or are progressing towards meeting, their agreed conservation objectives and whether any additional management measures are likely to be required.

Monitoring will inform future decisions on the suitability of existing management measures to ensure that allowed activities remain at non-damaging levels. We will

take into account the recovery of some ecosystems or habitats may take several years (potentially decades in some cases) so measurable benefits from HPMA may not be apparent within the timeframe of a single monitoring cycle.

14. Summary and recommendation

It is proposed that the HPMA Policy Framework and Site Selection Guidelines will be adopted and new powers will be sought for Scottish Ministers to designate HPMA in Scottish inshore waters. A five-stage site selection process should be conducted, as set out in the Site Selection Guidelines, followed by a network level assessment, to select and assess a suite of HPMA, as defined in the Policy Framework. Subject to consultation, Scottish Ministers should then formally designate HPMA covering at least 10% of inshore and offshore waters by 2026.

14.1. Summary costs and benefits table

| Option | Total benefit per annum: - economic, environmental, social | Total cost per annum: - economic, environmental, social - policy and administrative |
|--------|---|---|
| 1 | TBC | TBC |
| 2 | | |
| 3 | | |
| 4 | | |

15. Declaration and publication

I have read the Business and Regulatory Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options. I am satisfied that business impact has been assessed with the support of businesses in Scotland.

Signed: Mairi McAllan

Date: 5 December 2022



© Crown copyright 2022

OGL

This publication is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. To view this licence, visit nationalarchives.gov.uk/doc/open-government-licence/version/3 or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email: psi@nationalarchives.gsi.gov.uk.

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

This publication is available at www.gov.scot

Any enquiries regarding this publication should be sent to us at

The Scottish Government
St Andrew's House
Edinburgh
EH1 3DG

ISBN: 978-1-80525-268-9 (web only)

Published by The Scottish Government, December 2022

Produced for The Scottish Government by APS Group Scotland, 21 Tennant Street, Edinburgh EH6 5NA
PPDAS1161083 (12/22)

W W W . g o v . s c o t