Consultation on Scottish Highly Protected Marine Areas (HPMAs)

Response from Stop Climate Chaos Scotland
April 2023

Introduction

Stop Climate Chaos Scotland ("SCCS") is a diverse coalition of over 60 civil society organisations in Scotland who campaign together on climate change. Our members include environment, faith and belief groups, international development organisations, trade and student unions and community groups. We believe that the Scottish Government should take bold action to tackle climate change, with Scotland delivering our fair share of action in response to the Paris Agreement and supporting climate justice around the world.

Speaking at the Blue Carbon Conference, in Edinburgh in November 2021, Cabinet Secretary for Rural Affairs, Mairi Gougeon MSP, said:

> "*There is increasing recognition across the international community of the role of the carbon stored in our seas and ocean for enhancing action on climate change mitigation, adaptation and resilience.*"[1]

In the light of this recognition, we welcome the opportunity to respond to this consultation on Scottish Highly Protected Marine Areas (HPMAs) by means of this written submission. As our comments are strategic, this submission takes the form of a written contribution, rather than seeking to answer all the specific questions in the online consultation. A number of members of the SCCS coalition will also be submitting, more detailed, responses - those responses and this complement one another and are mutually supporting.

Climate and policy context

Global warming of 1˚C has already taken place since the pre-industrial period, almost entirely due to human emissions of greenhouse gases. The impacts are already being felt and further emissions make these increasingly worse. The Paris Agreement aims for countries to work to limit warming to well below 2˚C and to aim for 1.5˚C above pre-industrial levels. The UN's Intergovernmental Panel on Climate Change (IPCC)[2] states that restricting global warming to the 1.5˚C level would require a 45% reduction in net human-caused emissions of CO_2 by 2030, global carbon net neutrality by mid-century, and then the removal of billions of tonnes of atmospheric carbon dioxide for the rest of the century. The IPCC also stated that there are fewer than 12 years to make the necessary changes; we must therefore act now.

In August 2021, the IPCC issued the starkest warning yet about human impact on the planet, including more intense heat waves and more extreme weather events, with some changes now inevitable and irreversible[3]. The UN Secretary General branded the findings a "code red for humanity"[4]. The science is now overwhelming - without concerted action we're headed towards climate catastrophe; with the poorest communities and future generations suffering the most.

> "As First Minister of Scotland, I am declaring that there is a climate emergency. And Scotland will live up to our responsibility to tackle it."
>
> Rt. Hon. Nicola Sturgeon MSP, 28 April 2019[5].

[1] https://www.gov.scot/news/blue-carbon-international-policy-challenge/
[2] 'IPCC Special Report: Global Warming of 1.5˚C', October 2018. https://www.ipcc.ch/sr15/
[3] https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/
[4] https://www.bbc.co.uk/news/science-environment-58130705
[5] https://www.ukpol.co.uk/nicola-sturgeon-2019-speech-at-snp-conference/

In April 2019, the First Minister 'formally' declared a climate emergency[6]. This language was subsequently central to Scottish Government policy and statements – for instance, the (then) Cabinet Secretary's statement in May 2019[7] and the 2019-20 Programme for Government[8]. It remains a key element of policy with one of the six chapters within the Scottish Government – Scottish Green Party Shared Policy Programme entitled "Responding to the climate emergency"[9]. The co-operation agreement also creates a Cabinet Sub-Committee on the Climate Emergency "to provide cross-Government leadership and coordination of efforts to tackle climate change"[10].

In May 2019, the UK Climate Change Committee (CCC) recommended that Scotland could reach a net zero target for greenhouse gases by 2045 (ahead of the UK, which could meet the same target by 2050)[11]. The Scottish Government swiftly accepted these recommendations[12] and have now legislated to secure net zero emissions by 2045, with an interim target of a 75% reduction by 2030[13].

As indicated by the Cabinet Secretary (see above), the role of carbon stored in our seas is crucial, and thus any cross-Government approach to meeting the challenges of the climate emergency must include its policies in relation to the marine environment. In many ways, this is recognised, such as references to blue carbon and the "Blue Economy Action Plan" in the Climate Change Plan update[14] (although it is also notable that the Parliamentary scrutiny of this plan called for more recognition of and action to address blue carbon issues[15]).

Following the 2021 election and the "Bute House Agreement"[16], the Scottish Government is now committed to developing and publishing a new Climate Change Plan "in the first half of the current Parliament". The Scottish Government/Scottish Green Party commitment is to "set out the process to deliver a draft of the next Climate Change Plan, that demonstrates a credible pathway to achieving the 2030 target, for consideration in the first half of this parliamentary session"[17]. The Scottish Government's response to the CCC's progress report (press release issued 06/12/22 but not online) included a comment by the Cabinet Secretary that "we are actively considering the CCC's advice alongside work we have already started to prepare a new, detailed Climate Change Plan covering the period to 2040." This new plan is expected to be tabled, for Parliamentary scrutiny, in November 2023.

In September 2022, SCCS published a briefing entitled "*Action for Blue Carbon: Protecting the marine environment to support action on climate change*"[18]. This outlined the importance of Blue Carbon – as well as policies (especially 'no regret' actions) to protect and enhance blue carbon, including fishing policy reform, improved management of MPAs/HPMAs and coastal management and seaweed protection/cultivation. The summary of this briefing is reproduced in the annex to this response.

SCCS therefore warmly welcomes the publication of this consultation – as one small step forward towards the implementation of policies that can contribute to improved management of marine carbon. Our Blue Carbon briefing stressed:

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[6] https://www.bbc.co.uk/news/uk-scotland-scotland-politics-48077802

[7] https://www.gov.scot/publications/global-climate-emergency-scotlands-response-climate-change-secretary-roseanna-cunninghams-statement/

[8] https://www.gov.scot/news/protecting-scotlands-future/

[9] https://www.gov.scot/publications/scottish-government-and-scottish-green-party-shared-policy-programme/

[10] https://www.gov.scot/publications/scottish-government-and-scottish-green-party-cooperation-agreement/

[11] https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-The-UKs-contribution-to-stopping-global-warming.pdf

[12] https://www.gov.scot/news/climate-change-action-1/

[13] https://www.legislation.gov.uk/asp/2019/15/enacted

[14] https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/

[15] https://archive2021.parliament.scot/S5_Environment/Reports/ECCLR_2021.03.04_OUT_CS_CCPu_Report.pdf (paras 181-193).

[16] https://www.gov.scot/news/agreement-with-scottish-green-party/

[17] https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2021/09/scottish-government-scottish-green-party-shared-policy-programme/documents/scottish-government-scottish-green-party-shared-policy-programme/scottish-government-scottish-green-party-shared-policy-programme/govscot%3Adocument/scottish-government-scottish-green-party-shared-policy-programme.pdf

[18] https://www.stopclimatechaos.scot/wp-content/uploads/2022/09/SCCS-marine-carbon-briefing.pdf

> "it is vital that both … HPMAs, and the existing MPAs, are better managed to deliver blue carbon benefits. Such benefits must be clearly built into management objectives and management measures introduced to ensure their delivery".

Our response, below to the consultation paper, focuses on the place and nature of HPMAs within the wider marine policy landscape, and whether the proposals to date will deliver the potential blue carbon benefits highlighted above.

HPMAs - general

While welcoming the concept of HPMAs, and the progress represented by this consultation, it is important that Scottish HPMAs meet international standards for such sites. Thus, it is essential that Scottish HPMAs meet the IUCN "fully protected" definition[19], where no extractive or destructive activities are allowed, and all abatable impacts are minimised to best protect biodiversity and blue carbon. Scottish HPMAs must, therefore, provide a higher level of protection than other types of MPA, allowing these marine areas to recover to as natural a state as possible.

In defining such areas, it is also important to take a broad approach to area designation, this should focus on protecting degraded areas so that they act as spill over for unprotected areas of sea and size of sites should be big enough to have a significant impact in the wider ecosystem. Secondly, the key focus for selection should be protection/restoration of the ecosystem and blue carbon. As with European Sites, socio/economic factors should not be a criteria or factor that determines if an area is protected or not. Although, of course, these socio-economic issues should be addressed as part of the wider management of seas in and around these, and other, protected areas. akin to European Site designation.

Once defined, HPMAs must be managed in a manner that accords with the IUCN definition above: that is that "no extractive or destructive activities are allowed, all abatable impacts are minimised to best protect biodiversity and blue carbon" and nature (and blue carbon) is allowed to recover. This means that HMPA management plans (and the regulations that implement them) need to be robust in the control of activities such as the development/operation of energy infrastructure, shipping, fishing, etc. SCCS has previously highlighted the importance of a managed wind down of oil and gas[20], and the climate implications of fishing policy[21]. HMPAs could be a useful tool in delivering the wind down of oil and gas, the well-planned delivery of marine renewables, and a more sustainable fishing sector.

Notwithstanding the above, however, the consultation papers currently suggest:

> *"We do not consider that it is reasonable and practical to expect existing active oil and gas projects to relocate. It is therefore proposed that existing active oil and gas developments (including oil and gas pipelines) will be excluded from the HPMA selection process so that overlaps with proposed new HPMAs do not occur."*

This is disappointing - and potentially inconsistent with adopting both a scientific approach to HPMA selection and a managed wind down in oil and gas. Active drilling for oil and gas is known to be harmful to marine mammals, especially cetaceans. Noise pollution from the drilling can impact navigation and drive cetaceans away from feeding areas or migration routes; similarly loss of benthic habitat can have adverse effects on feeding habits and prey. There is a lack of research on the effects of these impacts on individual animals as opposed to generalised populations of marine mammals. There is also the risk of contamination from produced water discharges, which builds up over time, as well as the additional impacts if an oil spill were to occur, which would be catastrophic for biodiversity in the area. Multiple studies have shown that the impact of oil spills is frequently underestimated in risk assessments for oil and gas developments, as the subsurface impacts are far-reaching and

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[19] https://wdpa.s3.eu-west-1.amazonaws.com/MPA_guide/TheGraphicGuidetoMPAs_foronlineviewing_lowRes.pdf

[20] https://www.stopclimatechaos.scot/wp-content/uploads/2023/01/SCCS-briefing-a-managed-wind-down-of-North-Sea-oil-and-gas-production-in-line-with-a-Just-Transition.pdf

[21] https://www.stopclimatechaos.scot/wp-content/uploads/2022/06/SCCS-response-to-consultation-on-Future-Catching-Policy-1-1.pdf

stretch over time[22]. This means that impacts of oil spills may affect Highly Protected Marine Areas even if the spill itself does not occur within the HPMA. Given the significant impacts of existing oil and gas projects, the above statement should be rephrased to indicate that, should HPMAs and active oil and gas development overlap, management policies will be implemented to support the managed wind down of those developments - in a manner consistent with the Energy Strategy and Just Transition Plan[23].

In relation to any new oil and gas exploration, however, the consultation papers suggest:

> *"It is intended that 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".*

This intention is welcome and should be enhanced to be an integral management position for HPMAs. It is also consistent with the proposed presumption again new oil and gas developments set out in the the Energy Strategy and Just Transition Plan[24]. It is important that the Scottish Government should seek to apply this policy to new oil and gas projects that are already licensed, but as yet undeveloped, such as the Cambo and Rosebank oil fields to the west of Shetland, which if developed would necessitate the placement of a pipeline through the protected Faroe-Shetland Sponge Belt, which is a Nature Conservation Marine Protected Area. Thus, the Scottish Government should seek the revocation of licences for oil and gas exploration in any area designated as an HPMA, and oppose any future licensing in these areas for the reasons listed above.

HPMAs need to be part of a wider coherent management plan for fisheries and other activities - developed following full community consultation - including protection of inshore and MPAs from damaging activities. If this wider management and planning regime is not developed and implemented, the impact of HPMAs may inadvertently be detrimental to the environment and the communities that depend on it.

This wider plan for both fisheries and other marine activities will need to take account of the impact of HPMAs on fishing opportunities and on local or regional economies, including any predicted displacement. This underlines the need for (a) coherent plan but also (b) a just transition approach to implementing HPMAs and other policies for climate change mitigation in the marine environment. SCCS fully supports the Scottish Government's just transition approach - and would urge it to extend the current just transition planning to include fishing and other marine industries. Central to this would be a plan to mitigate for lost fishing grounds by establishing low impact fishing zones. This could, for example, include areas around HPMA designated sites where, with proper fisheries management measures in place, sustainable low-impact fishing could take place. We believe within this there should be priority access for those delivering the best social,e economic and environmental outcomes for local communities. Wider marine planning, as well as just transition planning, should involve all relevant stakeholders, especially local communities and Trades Unions, albeit on the basis that engagement relates to how to meet climate change and blue carbon objectives, not whether they should be met.

HPMAs and blue carbon

For HPMAs, as well as other wider protected area network and management arrangements for fisheries, to have climate benefits, they must:

- Ensure that habitats and species which are capable of sequestering carbon are not further reduced in extent. This is especially important in relation to biological blue carbon habitats given the historic decline in many of these habitats. Many are already overdue protection (either within MPAs or under the PMF review commitment and duties), HPMAs must add something additional to those processes. For example, they could include a wider array of blue carbon habitats than is already incorporated into those processes. If it does not offer anything additional, it is unlikely to meet the commitments set out in the Bute House Agreement.

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[22] Cordes, E. E., D. O. B. Jones, T. A. Schlacher, D. J. Amon, A. F. Bernardino, S. Brooke, R. Carney, D. M. DeLeo, K. M. Dunlop, E. G. Escobar-Briones, A. R. Gates, L. Génio, J. Gobin, L.-A. Henry, S. Herrera, S. Hoyt, M. Joye, S. Kark, N. C. Mestre, A. Metaxas, S. Pfeifer, K. Sink, A. K. Sweetman and U. Witte. 2016. "Environmental Impacts of the Deep-Water Oil and Gas Industry: A Review to Guide Management Strategies". Frontiers in Environmental Science 4(58). pages 13-14.

[23] https://www.gov.scot/publications/draft-energy-strategy-transition-plan/

[24] https://www.gov.scot/publications/draft-energy-strategy-transition-plan/

- Create the conditions which enable a significant increase in the extent and sequestering ability of those habitats – this is necessary to meet the Bute House Agreement commitment to "recovery".
- Contribute to the recovery of fish populations by protecting and increasing the number of areas which are functioning as spawning and juvenile fish grounds - thus increasing recruitment into fish populations. This will also create a greater abundance of low carbon seafood.
- Prevent the release of blue carbon from sediments and other blue carbon stores - this will include organic carbon stores for which the greatest concentration of carbon appears to be in muddy sea loch and seafloor sediments, kelp forests, maerl beds and saltmarsh.

Applying the approaches outlined above to the selection and management of HPMAs will protect important areas of blue carbon. This approach also provides a "win-win" as the recovery of these habitats will be beneficial for the Government's objectives for nature and climate change.

Specific questions and issues arising from the consultation.

In addition to the general and strategic observations offered above, a review of the consultation also raises several specific questions and issues in relation to blue carbon. These are explored below.

1. Definition of HPMAs
   The consultation documents define HPMAs as:
   > *"designated areas of the sea that are strictly protected from damaging levels of human activities, allowing marine ecosystems 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".*

   This definition makes no reference to blue carbon or its protection/recovery. This contrasts with the "aims" of HPMAs, which do refer to blue carbon and its functions, saying:
   > *"HPMAs aim to: ….. Contribute to the mitigation of climate change impacts ….. All marine biodiversity, the supporting environment and associated ecosystem services within the boundaries of an HPMA will be protected from damaging levels of human activities".*

   Given the importance of blue carbon and the government's wider climate change objectives, the definition should be altered to reflect this, and the aims that have been set out.

2. Blue carbon "hotspots"
   The consultation refers to "blue carbon hotspots" but does not offer a definition or explanation. It is, however, fairly clear what it roughly means; that is, large carbon stocks per unit area. This should be set out explicitly.

3. Landward limit of HPMAs
   The consultation strongly suggests that this should be MLWS. However, many blue carbon rich habitats and hotspots (e.g., salt marsh and *Zostera* beds) are above MLWS. As such, SCCS considers that the landward limit of HPMAs should be MHWS.

4. Blue carbon and/or ecosystem restoration
   The draft Guidelines state that a blue carbon HPMA will only be designated if it will "*also provide for ecosystem protection and/or recovery"*. Such multiple purposes are, of course, very welcome. However, if a site that provides a blue carbon function, somehow does not also "provide for ecosystem protection and/or recovery" it is unclear why it should not be designated.

   The guidelines should, therefore, be revised to allow for HPMAs that are purely for blue carbon if they are of sufficient importance for blue carbon. This would, of course, be as well as (not instead) those for ecosystem protection/recovery, or both.

5. Geological blue carbon

The site selection guidelines do not specify how blue carbon HPMAs which seek to protect geological blue carbon hotspots will be selected. The selection process must take into account multiple factors including:

- the quantity of the carbon stored;
- the ongoing carbon sequestration rate (i.e. how much additional C continues to be deposited on the site);
- the reactivity of the carbon (i.e. how labile it is);
- the vulnerability of the carbon to;
    - anthropogenic disturbance such as benthos-impacting mobile fishing gears.
    - natural disturbance such as hydrodynamic or bioturbation processes, or temperature rises in surrounding sea water.

The consultation documents do not set out how these factors will be weighted in order to identify potential geological blue carbon HPMAs.

The Site Selection Guidelines must set out the factors and weightings for selecting potential geological blue carbon HPMAs and how they will use relevant metrics including the Carbon Vulnerability Ranking or the Carbon Reactivity Index to ensure a consistent and robust approach to selection.

Notwithstanding the foregoing, it is increasingly clear that reactivity of organic matter in benthic sediments typically declines with distance from the shore. This relationship is determined by a range of factors including proximity to river outflows, bathymetry, mean annual terrestrial precipitation, and chlorophyll-a levels. However, river deposits and land runoff appear to be the key determinants. So locations where these are significant are likely to have the greatest vulnerability to increased remineralisation following physical disturbance.

This suggests that sites close to the coast - within 2NM - with high terrestrial influx and frequent physical disturbance should be site selection priorities for blue carbon HPMAs in Scottish waters. Sea lochs in particular have been identified as such areas. This is especially the case for upper reaches of sea lochs whose muds are vulnerable to bottom trawling. Research from the Firth of Clyde indicates that inner waters including Loch Fyne, Kyles of Bute, Loch Striven, Holy Loch, Loch Goil, Loch Long, Gare Loch and the Clyde estuary contain high quantities of OC comprised of biodegradable C which is most vulnerable to disturbance. Conversely, stores of less reactive C which is resistant to disturbance is typically found in the outer Firth of Clyde.

6. <u>Biological blue carbon</u>
   The site selection guidelines do not indicate whether blue carbon HPMAs will seek to protect biological as well as geological blue carbon. It is important that both are protected in order to ensure balanced representation within the HPMA network.

   HPMAs selected for biological blue carbon must seek to protect and restore not only the organisms which sequester carbon (such as macroalgae - like kelp forests), but also the pathways for the detritus from these organisms to their ultimate storage sinks. As these pathways are impacted by processes mediated by benthic faunal communities it is therefore important that these communities (as well as the source communities) are considered for protection within the site selection process.

   It is also vital that the process of selecting biological blue carbon HPMAs takes into account the sites' vulnerability to future environmental and physical changes (such as sea temperature and sea level rise or anthropogenic disturbance). It is not clear from the consultation documents how these factors will be weighted in order to select biological blue carbon HPMA sites. **The Site Selection Guidelines must set out these factors and weightings for identifying biological blue carbon HPMAs.**

For the forthcoming HPMA designation process to be of greatest benefit to the protection/recovery of blue carbon, the above issues (and other detailed matters raised by our members) should be addressed.

Conclusion

Climate change is rightly a priority for the Scottish Government. Increasingly, it is widely recognised that the protection and management of blue carbon must be a key component of any response to the climate crisis. Part of this protection will involve the selection and designation of HPMAs for *inter alia* for blue carbon purposes.

This consultation on HPMAs is therefore very welcome and represents a positive step in the process. In taking forward the proposals, however, the Scottish Government must ensure that there is more rigour and detail in the process – and a greater focus on securing the blue carbon (and ecosystem) benefits. In addition, proposals for HPMAs need to be implemented in parallel with the management of the MPA network and wider seas. SCCS' briefing on blue carbon said:

> "*While actions for protected areas are a good start, they should be seen as a first step (trial?) for measures to protect wider blue carbon*".

Once improved and finalised (not least in response to the comments made in this response), the proposals set out for Scottish HPMAs may be such a good "first step". However, they also need to be complemented by wider actions for the protection and enhancement of blue carbon, such as improved fisheries management, coastal habitat management and policies in relation to the sustainable cultivation of seaweed.

Stop Climate Chaos Scotland
April 2023

ANNEX

Summary of SCCS briefing: "*Action for Blue Carbon: Protecting the marine environment to support action on climate change*"[25].

"Blue carbon " is the term that is used to collectively refer to carbon stored in and/or sequestered by the sea and marine environments. Scotland's blue carbon environments store 9,636 MtCO2-eq and sequester 28.4 MtCO2-eq per year. This store is roughly equivalent to the total carbon stored in Scotland's land-based ecosystems and the sequestration rate is three times greater than the annual carbon sequestration of Scottish forestry. Adding emissions related to activities at sea, the wider 'marine carbon' balance is, therefore, vital to efforts to address climate change.

Scotland's seas are, environmentally, in a poor condition – and we are failing to meet our obligations for their restoration. Action to address marine carbon issues can also address the poor environmental condition of our seas – and vice versa. It is a potential win-win.

At present, neither blue carbon nor some aspects of the wider marine emissions are included in the UN's greenhouse inventories. This means that they are not measured or reported in Scotland's annual emissions' report or addressed in the Climate Change Plan.

Nevertheless, blue carbon (and its release, store and sequestration) will affect the climate whether it is 'counted' in the inventory or not. Not addressing blue carbon is delaying action that will, one day, be 'counted' and makes meeting the Paris target all the harder. The approach to act now to protect blue carbon was supported by the (then) Environment, Climate Change and Land Reform (ECCLR) Committee in the last Parliament.

The new Climate Change Plan should not only refer to blue carbon and ongoing research, but also include clear and specific actions to protect such carbon stores, and environmental improvements that will increase sequestration rates.

In addition to a substantial marine section in the new CCP, we also recommend that the Scottish Government ensures more investment in appropriate research and monitoring. It should also implement a range of 'no regret' actions to protect and enhance blue carbon, including fishing policy reform, improved management of MPAs/HPMAs and coastal management and seaweed protection/cultivation.

[25] https://www.stopclimatechaos.scot/wp-content/uploads/2022/09/SCCS-marine-carbon-briefing.pdf