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Climate Change, Environment and Infrastructure Committee
Rheoli'r amgylchedd morol / Marine environment management
ME02
Ymateb gan Ardal Cadwraeth Arbennig Forol Sir Benfro /
Evidence from Pembrokeshire Marine Special Area of Conservation

Evidence paper to help inform the Climate Change, Environment, and Infrastructure Committee's meeting on 9th December 2021.

Submitted by Sue Burton, Pembrokeshire Marine Special Area of Conservation (SAC) Officer. The views expressed here, whilst gained through my experience of policy delivery on the ground, are my own and not on behalf of the Relevant Authorities Group for whom I work. I have worked in marine conservation in Wales for over 20 years.

Blue Carbon potential and developments in Wales

1. I am not an expert or even hugely knowledgeable about blue carbon, but I have attempted to succinctly note some of my understanding and views.
2. It is indisputable (in so much as much research has been done globally and it is now regarded as clear) that seagrass meadows, mangrove forests, and coastal wetlands store vast amounts of carbon, and their preservation and restoration hold great potential to bank carbon in the form of carbon dioxide (CO_2) and keep it out of the atmosphere, thereby helping to mitigate climate change.
3. In the UK, attention has focused on seagrass meadows, intertidal (and subtidal) muds and saltmarsh and increasingly interest is growing in the potential for seaweed such as kelp.
4. With regard to carbon locked away / sequestered every year, it has been estimated (Armstrong et.al., 2021) that Welsh marine habitats sequester at least 26,100 tonnes of carbon (or 0.03 Mt C) every year, with saltmarshes and intertidal flats accounting for a large percentage of this. This represents around 7 % of the amount sequestered by Welsh forests every year (so by around 21,000 hectares of forest).
5. Armstrong et.al. (2021) also indicate that potentially a wide range of marine habitats contribute to carbon sequestration. Their analyses showed that subtidal muds, sands and gravel were found to sequester the greatest amount of carbon, followed by intertidal flats and saltmarshes.
6. It is important to differentiate between carbon storage and carbon sequestration. Carbon storage is what happens in the leaves of trees (or seagrass) – it is short-term. When those leaves fall, their carbon can be released back into the atmosphere. Long term storage (sequestering) is of most benefit to climate impact. Sequestration is in two forms: biomass, and soil/sediment storage. The key thing about seagrass carbon sequestration is that it

releases the carbon again vastly more slowly than rainforest does because ocean sediment decay processes are so much slower. Therefore, seagrass is described as being 35 times *more efficient* than rainforest despite the comparative lack of biomass. Its not just about the plant itself, but its sediment habitat.

7. Seagrass has been touted as being a climate 'hero'. In Wales, Seagrass Ocean Rescue planted around 1.2 million seeds in two phases during 2020 to restore a 2-hectare meadow off Dale in Pembrokeshire. This was the UK's first large-scale seagrass restoration project. Dr Richard Unsworth (Swansea University) reports that "it is now our belief that the seagrass is on a very firm footing for expanding and ultimately developing into a full meadow over the coming years. Where the seagrass is in expanding clumps, it often has a canopy height of up to 60cm which is great. Invertebrate life is beginning to settle amongst the plants, and fish appear to actively use it". Contribution to fighting climate change was one of the objectives for this effort, but alongside being a demonstrator of carbon sequestration, it was the biodiversity and ecosystem function enhancement that were key drivers for the project. The carbon sequestration potential of seagrass could incentivise its restoration, but this must be considered in addition to other co-benefits and ecosystem services provided by seagrass ecosystems.

8. Oreska et.al (2020) measured parameters for a seagrass meadow in Virginia, U.S.A., part of the largest, most cost-effective meadow restoration to date, to provide the first seagrass offset finance test-of-concept and calculated that the meadow now offsets nearly half a metric ton of CO_2 per hectare per year. But data on carbon sequestration rates for UK seagrasses are still lacking (Seagrass Restoration Handbook – Gamble et.al. 2021). Project Seagrass (pers comm.) say that we are still some way off achieving the figures needed for UK seagrass-generated carbon credits to be traded on carbon markets.

9. ABPmer (2021) detail the Blue Carbon value of carrying out intertidal wetland (saltmarsh) restoration though the managed realignment of coastal defences.

10. Interest in kelp may help seaweed producers attract financial backing to farm kelp for food or alginates, but the potential 'greenwashing' by overselling blue carbon benefits can detract from the genuine benefits that such enterprises can bring (e.g. reducing demand on wild stocks, local jobs…). Aquaculture is a potential growth industry in Wales, and we should take care to ensure that benefits to and impacts upon the natural environment are not overlooked in the blue carbon 'rush'.

11. Everyone wants to 'do blue carbon' no one wants to measure carbon!

12. The level of interest in, and advocacy for, blue carbon is huge. There are now many organisations and research institutions exploring this issue. They are seeking to better understand how the protection and creation of habitats (nature-based solutions) can play a more significant role in contributing to Nationally Determined Contributions (NDCs) for mitigating climate change under the 2015 Paris Agreement.

13. Blue carbon potential should not be all about new restoration, but also protection of what we already have. For example, loss or deterioration of seagrass beds not only leads to the loss of their carbon sink capacity but could also potentially release the carbon already sequestered in their sediments.

14. Armstrong et.al. (2021) state that whilst there is limited evidence on how human activities may disrupt carbon sequestration, protecting marine habitats from damaging activities is likely to be important. Studies such as Luisetti et al. (2019) for example have proposed that the cessation of bottom trawling would promote improved carbon storage in subtidal sedimentary habitats.

15. Blue carbon is being used as a major incentive for Marine Protected Area (MPA) protection/restoration. This is a concern as many claims for carbon capture and figures for "offsetting" are currently unsupportable (although there are networks that are working on improving this).

16. Using blue carbon potential as a driver for MPA management is a suspect tactic as figures are currently so unsubstantiated. However, using the blue carbon 'carrot' in addition to the solid biodiversity and ecosystem function benefits of better protected MPAs can perhaps be useful if it attracts badly needed support and resource for MPA management. But personally, I find the constant distraction from the core need of MPAs to address the decline in biodiversity saddening. Why is supporting marine protection, conservation and restoration for the sake of nature and its associated ecosystem benefits to the planet and us (at face value) not enough? The human economic desire to measure everything's worth before it can be regarded as valuable has delayed progress and stalled marine conservation efforts for decades. This is why we now find ourselves facing a biodiversity emergency as well as a climate one.

References:

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Marine Protected Area (MPA) Management

17. I input to the original Marine Protected Area (MPA) inquiry by the Climate Change, Environment, and Infrastructure Committee (CCERA) in 2017 on behalf of the Relevant Authorities Group (RAG) for the Pembrokeshire Marine Special Area of Conservation (SAC). CCERA members conducted a very thorough inquiry, and I was impressed at the comprehensiveness of understanding shown for the complex issues involved.

18. The final report and recommendations in "Turning the tide? Report of the inquiry into the Welsh Government's approach to Marine Protected Area management" (August 2017) was an excellent summary of what needed to be done to improve MPA management in Wales.

19. I also input to the follow-up in 2019 with a letter on behalf of the RAG (April 2019 - the content is still all valid) and provided oral evidence in the Senedd in June 2019. CCERA then published its report "Welsh Government's progress on Marine Protected Area management" (November 2019).

20. As with the original report in 2017, the 2019 follow-up report showed a clear understanding of the issues and made some useful recommendations. I will comment on (some of) these individually below. It was even stronger than the 2017 report and very welcome as it helped to raise the profile of and provide momentum to MPA management discussions (as indeed is CCERA's current short piece of work on marine environment management).

21. In January 2020, Welsh Government provided a written response to the 2019 follow-up report and its recommendations. This was not sent out to or raised with the Welsh MPA Management Steering Group (MSG) and it was April 2020 before I and some members of the MSG were made aware of it.

22. My dismay at not being aware of Welsh Government's response was compounded further upon reading it. I will comment as relevant within the discussion on the recommendations below.

23. Recommendation 1 (MPA strategy) – Whilst the production of the Framework and Action plan by the MPA MSG has marked progress, there is a distinct lack of ambition and vision for what is needed and wanted with respect to management of the marine environment. The current MPAs and their management do not meet the needs of the people of Wales for a healthy and productive and well-managed environment. There is a need to increase understanding of the marine environment, what it contains, and our reliance upon it for multiple purposes. The documentation produced to date is process-driven and dry (noted that the target audience is marine managers) and because of that it is hard to follow, much less be enthused by. Perhaps the lack of a strategy is due to Welsh Government not wanting to raise expectations (or invite further pressure) due to its failure to look after what we have already? Failure to adequately manage the marine environment is a global one, so Welsh Government should not feel alone here, but their ambition in areas such as well-being of future generations and sustainability does more to highlight their shortfall towards improving biodiversity. A strategy would aid wider stakeholder engagement. It is possible to frame things whilst managing expectations.

24. Recommendation 2 (MPA Management Steering Group wider reach) – The Wales MPA MSG is effectively a Wales-wide Relevant Authority Group and I can understand why Welsh Government need to limit membership, not least because of size. The WMAAG provides opportunity for greater input and the MSG have since 2020-21 invited non-MSG members to submit applications for their annual action plan funding round. But, to connect to recommendation 1, greater understanding of the importance of well-managed MPAs would

aid input to the MSG and benefit MPA management as a whole. To quote David Attenborough "No one will protect what they don't care about".

25. Recommendation 3 (IFCA potential) – For the sake of brevity all I will say here is that I feel that we are disadvantaged in Wales in not having IFCAs. I acknowledge that BREXIT has completely overshadowed fisheries management abilities, but even fishermen I know bemoan the loss of the sea fisheries committees and want improvements to management. As with an MPA strategy, why can't we look at what we need, and look for ways to work towards it rather than unquestioningly settle for what we have?

26. Recommendation 4 (funding an area-based approach) – As a site-based MPA Officer, I was obviously extremely disappointed to see that Welsh Government outright rejected this recommendation. I know through discussion with multiple MSG members that they would welcome readdressing this. There appears to have been some "historical revision" going on regarding this issue and the decisions recalled from 2015/16. I would like to bring some clarity. The funding breakdown suggestion presented by Welsh Government in 2015/2016 was rejected by MSG members because it was inequitable and not proportionate to management authority jurisdiction (I provided this marked "confidential – sensitive" by Welsh Government within my input in 2019). No alternative break down was suggested as NRW and Welsh Government were of the opinion at the time that they could not fund the MPA network as discussed and there was unfortunately no room for negotiation on the issue. This was an attempt to get relevant authorities to pay more and for NRW to hugely reduce their costs and just pay the same as for example a single local authority (grossly unfair given NRW's size and jurisdiction). Welsh Government pointed out that they effectively contribute via NRW and local authority revenue streams. In my opinion it seems that following presentation of an unsuitable funding model, and with no further determined investigation into alternatives, further pursuit of funding for the MPA existing (or enhanced) network was shelved which allowed the MSG to focus on strategic work. From the MPA MSG minutes, 27th January 2016: "It was noted that a full-time post at each of the current seven areas was the preferred option; however, a part-time post would be more practical and affordable. Group members expressed concerns over the enlargement of areas. It was suggested that when locality was lost, local authorities were less likely to support the areas". Five years later then it seems reasonable to return to discussing funding an area-based approach to MPA management. It was not the proposal for the seven-area approach that was rejected, but rather the unequitable funding model presented to support it at that time.

27. The insistence towards directing effort/resources towards (only) strategic work (that benefits NRW responsibilities under international agreements such as OSPAR for example) restricts the ability to progress much-needed local management and compromises site-level management momentum. Feasibility studies and 'pilots' that can be applicable across the network (which are permitted within the MSG action plan funding) cannot always cover local management action needs.

28. There has been much concern from RAGs following NRW's adjustment of core funding to project funding. Further pursuit of NRW funding for RAG work has been halted due to NRW's assertion that there is no appropriate funding mechanism under which to do so. It is essential

to RAG future functioning that NRW contribute financially to the partnerships. If other managing authorities see that the statutory conservation agency is not paying in, then they will be (justifiably) far less inclined to continue to do so. I'd also like to point out the vast practical difference between guaranteed core funding you can plan on, and competitive grant funding you can't predict, and which is not suitable for ongoing pro-active management work.

29. Feature condition across sites appears to have declined further since input to the MPA Inquiry in 2017. This makes funding of effective MPA management even more imperative. It is extremely difficult to link work/effort to positive changes in feature condition (I know as we were tasked to do that some years ago and justify all the work we had been doing to NRW). Whilst there have been some useful pieces of work, there is very little that has actually been delivered nationally that has made a demonstratable local positive difference to site condition.

30. Actions emerging from the national level to address strategic pressures often need to be taken on a local level, implemented by officers working locally and capitalising on local relationships and support. Partnership working is valued by NRW. Nature Partnerships across Wales have Welsh Government support – why not marine nature partnerships?

31. In Welsh Governments response in January 2020, it was stated that "The nature and the spatial scale of the MPA network in Welsh waters has changed significantly from when there were large spatially discrete sites, such as the five marine Special Areas of Conservation (SACs), to the current complex matrix of 139 offshore and inshore sites." This is distracting and simply not as significant as made out as the vast majority of MPAs (including multiple intertidal SSSIs) sit within the boundaries of the five main marine SACs touching the coast. There does need to be greater joining-up between management of offshore sites however and cross-border sites are complex.

32. Recommendation 5 (integrated working with RAGs) – Although Welsh Government have accepted this recommendation, progress has yet to be made on it. No doubt this has been overshadowed by BREXIT closely followed by the Covid-19 pandemic.

33. I have run out of time and space to write further on the remaining 10 recommendations, but as above no doubt BREXIT and Covid-19 are largely a reason for delays in progress, although some work (e.g. the Assessing Welsh Fishing Activity project) really should have been progressing and reporting before then. I was hopeful that the area statement work by NRW (notably here the Marine Area Statement) would provide some impetus for action. The value they will hopefully add will be created by partners working locally.

34. Fundamentally in the marine environment a multi-sectoral approach is needed and experience to date shows that acting on these responsibilities jointly is the only logical route to successful management implementation. I am grateful but also frustrated to be in the position where I can aid this. I look forward to the opportunity to provide oral evidence to the CCERA Committee and hope to be able to expand as needed then.