The Northern Ireland Marine Taskforce (NIMTF) is a coalition of non-government environmental organisations – it includes RSPB, Ulster Wildlife, Wildfowl and Wetlands Trust, WWF Northern Ireland, National Trust, Friends of the Earth, Irish Whale and Dolphin Group, and Northern Ireland Environment Link. The NIMTF has the support of approximately 100,000 local people. We are working towards healthy, productive and resilient seas for Northern Ireland.

Northern Ireland Marine Task Force response to: Consultation on Northern Ireland's 2030 & 2040 Emissions Reduction Targets, First Three Carbon Budgets & Climate Change Committee (CCC) Advice Report: The path to a Net Zero Northern Ireland
Submitted: 11th October 2023

NIMTF thanks DAERA for the opportunity to comment on Northern Ireland's 2030 & 2040 Emissions Reduction Targets, the First Three Carbon Budgets & the Climate Change Committee (CCC) Advice Report: The path to a Net Zero Northern Ireland.

Northern Ireland is in a prime position to lead by example and achieve net zero targets outlined in the Climate Change (Northern Ireland) Act 2022[1]. A healthy and thriving marine environment is a key tool in mitigating against the escalating climate crisis. However, it is important to remember that not only are we facing a climate crisis, but also a combined nature crisis- with our seas in a state of decline and currently not achieving Good Environmental Status[2]. Below NIMTF have outlined the key areas of priority for sectors most closely related to the marine environment, Energy and Fisheries, highlighting what is needed for these sectors to meet their carbon budget targets whilst also protecting and restoring nature.

The Carbon Emission Reduction Targets

Question 1. The 2030 Target:

Do you agree that DAERA should follow the current advice provided by the CCC and keep the current 2030 emissions reduction target in the Act of an at least 48% reduction in emissions compared to the baseline?

X Yes
□ No - please provide your reasons and any suggested alternative (Noting, that if the target is to be changed, that the Act only allows it to be changed to a higher percentage).

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[1] https://www.legislation.gov.uk/nia/2022/31/contents/enacted
[2] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/921262/marine-strategy-part1-october19.pdf
[3] Reducing greenhouse gas emissions - Climate change - gov.scot (www.gov.scot)
[4] https://www.nienvironmentlink.org/ni-misses-deadline-for-environmental-improvement-plan/
[5] HIA Guidance A Manual_0.pdf (publichealth.ie)
[6] https://assets.publishing.service.gov.uk/media/5a7e013a40f0b62305b802ec/IntroToTheGHGI_2014_Final.pdf

Question 2. The 2040 Target:

Do you agree that DAERA should follow the current advice provided by the CCC and set a 2040 emissions reduction target of an at least 77% reduction in emissions compared to the baseline?

X Yes
□ No - please provide your reasons and any suggested alternative

We are in a climate emergency and must therefore set achievable, yet ambitious targets. NIMTF are satisfied with the current 2030 and 2040 emissions reduction targets as set out within the Climate Change (Northern Ireland) Act 2020 and wish to see these targets abided by. To guarantee success, NIMTF would like clarification on what, if any, are the consequences/ penalties were each sector not able to meet these statutory targets.

First 3 Carbon Budget Targets

Question 3. First Carbon Budget (2023-2027):

Do you agree that DAERA should follow the current advice provided by the CCC and set the first carbon budget at a level that has a 33% average annual reduction in emissions compared to the baseline?

X Yes
□ No - please provide your reasons and any suggested alternative.

Question 4. Second Carbon Budget (2028-2032):

Do you agree that DAERA should follow the current advice provided by the CCC and set the second carbon budget at a level that has a 48% average annual reduction in emissions compared to the baseline?

X Yes
□ No - please provide your reasons and any suggested alternative.

Question 5. Third Carbon Budget (2033-2037):

Do you agree that DAERA should follow the current advice provided by the CCC and set the third carbon budget at a level that has a 62% average annual reduction in emissions compared to the baseline?

X Yes
□ No - please provide your reasons and any suggested alternative.

NIMTF are satisfied with the current 2030 and 2040 emissions reduction targets as set out within the Climate Change (Northern Ireland) Act 2020 and wish to see these targets abided by. To guarantee success, NIMTF would like clarification on what, if any, are the consequences/ penalties would be were each sector not able to meet these statutory targets.

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[7] https://www.ulsterwildlife.org/sites/default/files/2021-05/Blue%20Carbon%20Habitat%20Restoration%20in%20Northern%20Ireland%20-%20A%20Feasibility%20Study.pdf

CCC Advice

Question 6. CCC advice:

Do you agree that DAERA should follow any updated advice and recommendations from the CCC (as a result of the publication of the Northern Ireland 2021 Greenhouse Gas Inventory) when setting the first three carbon budgets?

□ Yes
X No - please provide your reasons.

The CCC are recommending a less ambitious first carbon budget to account for the fact we are currently within the first carbon budget time period. NIMTF do not feel that it is appropriate for Northern Ireland to lower the first carbon budget target as this goes against the statutory requirements already set out by the Climate Change Act. We appreciate that these targets are challenging, but for Northern Ireland to meet its net zero targets and lead by example in tackling the climate crisis, we must be ambitious. Therefore, NIMTF strongly advocates for the initial target of 33% to remain. As it stands, Northern Ireland is behind Scotland in setting ambitious targets to achieve net zero - with Scotland aiming to achieve net zero by 2045[3]. Northern Ireland therefore needs to set ambitious targets, backed up by clear, transparent actions for the upcoming Climate Change Action Plan that lead the way in achieving Net Zero across the respective budget time periods.

Question 7. Impact assessments

Can you provide any information (relating to the potential financial, economic, social, rural and equality impacts) which will help inform the completion of the relevant impact assessments on the proposed carbon budgets?

We must consider the wider implications of not meeting net zero not only for climate and nature, but for other sectors such as health, social, rural and equality impacts. Without an Environmental Improvement Plan[4], we currently do not have a clearly defined plan within legislation on how we achieve net zero in conjunction with nature. We want to strongly advocate for this plan to be put in place, and would propose that Health Impact Assessments[5] be incorporated, which would include health-related impacts in conjunction with environmental impacts as part of a Strategic Environmental Assessment (SEA) or Environmental Impact Assessment (EIA). This ensures that if environmental impacts have been identified, that any related health impacts are also identified and both can be managed accordingly. Examples of these have been found within Wales where this is a statutory requirement, but not yet within Northern Ireland.

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[8] MANACA Report, 2023
[9] https://nimtf.files.wordpress.com/2023/03/nimtf-response-to-oreap-2023-.pdf
[10] https://nimtf.files.wordpress.com/2023/06/north-channel-wind-scoping-consultation_final-nimtf.pdf
[11] https://nimtf.files.wordpress.com/2023/08/oreap-sea-hra-process_constraints-response-nimtf.pdf
[12] https://www.europarl.europa.eu/thinktank/en/document/EPRS_IDA(2015)573876
[13] https://econcretetech.com/
[14] Assessment of NI Fleet Emission, Report to ANIFPO/NIFPO May 2022
[15] https://www.seafish.org/document/?id=5E9A93D0-D178-4E5E-905E-CEC74913608B#:~:text=In%20the%20project%20two%20types,proved%20to%20be%20technically%20successful.

Ambition Scenarios

Question 8. Stretch Ambition Scenario to reach 93% reduction by 2050:
Do you think that the Northern Ireland Executive should follow the advice provided by the CCC and choose the Stretch Ambition Scenario?

□ Yes
X No - please provide your reasons and any suggested alternative.

NIMTF are pleased to see that the additional scenarios set out include nature-based solutions, however none of the three scenarios mention or seek to include the marine environment. There are many different types of habitats which can sequester carbon within our local seas, including:

- Seagrass
- Kelp beds
- Saltmarsh
- Native Oyster Reefs
- Carbon storage in seabed sediments, such as sand & mud

It is imperative that these blue-carbon habitats are considered for the role they play in carbon sequestration, alongside the other ecosystem services which they provide. Incorporating blue carbon-based specific emissions into a carbon budget will be challenging as blue carbon is not yet recognised by the Greenhouse Gas Inventory[6]. To support this progress and profile the role blue carbon can play with NI's carbon budgets, we will need an ambitious Blue Carbon Action plan. Additionally, adequate funding is needed to continue to support research into properly quantifying the natural capital and carbon sequestration capacity of Northern Ireland habitats. This work can be supported by the upcoming Blue Carbon Action Plan, Ulster Wildlife's Blue Carbon Habitat Restoration in Northern Ireland - Feasibility Study[7], the Marine Natural Capital Assessment (MANACA) Report[8] and an upcoming RSPB and Wildlife Trust Blue Carbon Report (expected November 2023).

Sectoral Contributions to Net Zero

Question 13. Energy Sector Contribution to Net Zero:
Do you think that additional measures (over and above those in the Energy Strategy) should be taken to ensure alignment with the CCC's advice?

□ No
X Yes - please provide examples of additional measures.

To meet objectives set out by the Climate Change (Northern Ireland) Act 2022, 80% of electricity for NI must come from renewable sources by 2050. In order to do this, we need to ensure that the Climate Action Plan links appropriately with the Offshore Renewable Energy Action Plan (OREAP) that is also currently in development by the NI Dept. of Economy. The expected expansion in renewable energy will have a direct impact with the marine environment[8], via the establishment of Offshore Wind (OFW) farms in our local seas. NIMTF responded to the North Channel Wind (NCW) Public Consultation[9] on two arrays earlier this year.

Alongside other renewable technology which takes place within the marine environment such as wave and tidal, OFW is an exciting opportunity for Northern Ireland to lead by example on best

practice deployment of OFW that works in tandem with nature. In order to achieve this, sufficient Strategic Environmental Assessments (SEA) and Habitat Regulations Assessments (HRA) will need to be carried out. These are in the process of being updated and NIMTF have provided a response to the importance of these criteria being maintained[10].

The energy sectoral will additionally require further focus and funding in the following areas

- Implementation of the 'Mitigation Hierarchy' when deploying OFW in our seas.
- An improved sustainable development process which promotes marine habitat recovery throughout conception, development, operation and decommissioning of OFW.
- Consideration of installing mooring lines, anchor systems and cable design (including cabling) to shore in a sustainable manner that works for nature.
- Increased gathering of qualitative and quantitative data around interactions between bird, marine mammals (cetaceans and pinnipeds), elasmobranchs, crustaceans and benthic fish relating to renewable structures.
- Exploration of techniques which minimise underwater noise and reduce impacts on noise pollution sensitive marine species.
- Planning to limit vessel collision with marine megafauna.
- Addressing potential entanglement with marine species from infrastructure and OFW development.
- An adherence to the Precautionary Principle[11] when there is not enough data to confidently state no environmental impact from a development.
- Minimal disturbance from structures such as cabling on benthic communities, whilst promoting the use of sustainable materials to promote recovery - e.g. ECOncrete[12]
- Long-term monitoring and implementation of acoustic deterrent devices (ADDs) to ensure minimal/reduced disturbance to marine mammals (cetaceans and pinnipeds), especially around EMP fields coming from cabling.

Overall, it is important that proposals for sustainable developments at sea within the Energy sector follow the mitigation hierarchy and deliver on existing and upcoming strategies and policies, such as the NI Biodiversity Strategy, MPA Strategy Review, NI Seabird Conservation Strategy, NI Elasmobranch Strategy and NI Blue Carbon Action Plan.

Question 17. Fisheries Sector Contribution to Net Zero:

Do you think that the Northern Ireland Executive should follow the Fisheries sector advice provided by the CCC?

□ Yes
X No - please provide your reasons and any suggested alternative.

Decarbonising the fleet

NIMTF works closely with the Northern Ireland Fishermen's Federation (NIFF) to support sustainable change within the NI fishing sector. Overall, the NI fleet is outdated. To drastically reduce emissions many vessels will require net zero technology to replace current engines. Industry has expressed it will be challenging to meet the first carbon budget (33% average annual reduction by 2027) due to the time needed for research, trials of decarbonised vessels and a rapid roll out of net-zero technology. Therefore to fully decarbonise the NI fishing fleet, adequate and sustained funding.

Key areas for considered include:

- The need for investment into research and development of decarbonising technology which meets the demands for a variety of shipping & fisheries vessels. Significant areas of concern remain around the dependency of rolling out certain technology that is proving successful on land, but may not work in a marine context, such as electrical equipment. Other explored options such as hydrogen powered engines take up substantial room so will often be restricted to vessels over 12m. These vessel dependent variables will need to be a key consideration.
- Infrastructure supporting net zero technology to be rolled out across all NI harbours.
- Investment in upskilling opportunities and traineeships to support mechanic and engineer capacity for net zero technology in NI.
- Fuel use, and therefore emission levels, varies depending on vessel and catch. Therefore, we should not be taking a one size fits all approach to decarbonising the overall NI fleet. For example, the Nephrops fleet makes the largest overall contribution, accounting for 52% of total fuel use and GHG emissions by the NI fleet. However, the largest carbon emitter per vessel in the NI fleet comes from the Scallop fishery (60 vessels in total) with a GHG intensity (KG CO2e/kg of landing) of 4.61[39]. This is due primarily to scallop degrading being a more intense extractive fishing activity which leads to increased fuel consumption. Therefore, a fishery and vessel prioritising exercise may be required to target effort and decarbonising technology roll-out towards the highest emitting fisheries and vessels. Gear alternatives that reduce fuel use alongside alleviating damage to marine habitats should be explored. For example, a recent report on the assessment of NI fleet highlights that scallops are predominantly targeted with bottom-contacting mobile gear, mainly using dredges. These penetrate the seabed and so impact benthic habitats as well as being fuel intensive. To date, no commercially viable alternative gear for harvesting scallops has been available. However, a very recent finding shows that even for these fisheries alternative gears may be possible. Researchers in England initially put LED lights in pots to experiment with bait-less pots targeting crab but discovered that scallops are clearly attracted to these LED lights and are now designing a scallop-targeting pot. They are confident that this can result in a commercially viable scallop pot fishery[39].

It is also likely that biofuels will play a key role in this transition. NIMTF have explored a range of different biofuels that are currently used within the UK – including bioethanol and biodiesel. Further funding will be needed to explore how biofuels can be implemented during the transition stage, ensuring that there are no adverse impacts for the marine environment in the process. Biofuel usage may also have a positive impact economically for the industry as it would be possible to manufacture your own biofuel, making it cheaper to use by those who are living quite remotely; eliminating transport costs which can add as much as 50% onto fuel price - however a Sea Fish report in 2004 highlighted that biofuels were not proven to be more cost effective than conventional fossil fuels[17.] Therefore, further funding and research into this topic is needed.
To successfully implement the above, the fisheries sector will require sustained government funding, alongside increased engagement with the fishing community to ensure fishers 'take a leap of faith' to adapt their vessels.

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[16] https://www.wwt.org.uk/uploads/documents/2023-01-30/wwt-blue-carbon-route-map-2023.pdf

[17] https://www.naturebasedsolutionsinitiative.org/wp-content/uploads/2023/06/Developing_UK_Seagrass_Carbon_Code_Summary_2023.pdf

Nature based solutions

The advice that has been provided by CCC in relation to the Fisheries sector primarily focuses on emission reductions; decarbonisation of the fleet and zero-carbon fuels. Northern Ireland is a marine nation, so it is vital these carbon budgets explore the potential nature-based solutions role our oceans play in helping meet the carbon budget targets. NIMTF would therefore propose further objectives relating to marine nature-based solutions and blue carbon habitats (saltmarsh[18], seagrass[19], native oyster reefs[20], etc) be included within the carbon budget targets. Many of these habitats not only provide additional ecosystem-based services to NI communities (water purity, food provision, flood defence) and support local marine biodiversity- but they also have the potential to be significant carbon stores, a marine equivalent to peatland habitats in the terrestrial environment.

However, many blue carbon habitats are under threat in NI, from decades of habitat loss and unsustainable activities within our seas. For example, activities such as trawling, potting, and anchoring have the potential to disturb blue carbon habitats such as seagrass and seabed sediments, releasing carbon. Additionally, we're still lacking data on the full extent and condition of these habitats. Therefore, it is now imperative that we turn this tide and utilise the full potential of these habitats in our fight against climate change.

For the fishing sector, a focus on blue carbon will predominantly involve prioritising management practices that focus on gear type and limiting interactions with the seabed, alongside funding into the long-term monitoring and gear sustainability to reduce overall impacts. There is also an opportunity here to explore potential collaborative restoration projects between fisheries and eNGOs to restore and create further blue carbon habitats.

Overall, long-term funding should be prioritised for the following areas of the fishing industry:

- Decarbonising the fleet via a transition to electric vessels and sustainable fuels e.g. biofuels
- Considering the impacts industry has on blue carbon habitats and mitigating against this, for example, seabed and gear interactions.

These targets set out by the CCC will be a challenge for all sectors to meet, but it is important to acknowledge that if successful, communities from across Northern Ireland will reap the rewards. This includes fishing communities. The modelled scenarios by the United Nations Framework for the Convention on Climate Change (UNFCCC) currently lay out a likely scenario of 1^{o}C - 3.5^{o}C warming by 2100 if we continue to take no action on climate change[13]. This will have countless, devastating impacts for all sectors associated with these carbon budgets, including the fishing industry, who will be facing the prospect of reduced fish populations due to a likely migration of local species to cooler more northerly waters. Therefore, it is of the highest priority that we seize the opportunity to meet our net zero targets and support the sector in taking innovative approaches to make real progress. Additionally, NI will be the only UK nation with a specific fisheries sector target, providing a real opportunity to lead the way within UK climate friendly fishing practices.

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[18] https://www.ulsterwildlife.org/news/new-glenarm-nursery-set-release-800-million-oyster-larvae-boost-biodiversity-and-clean-local

[19] https://unfccc.int/resource/iuckit/infokit.pdf

Conclusion

In conclusion, NIMTF is pleased to see that nature based solutions are being considered throughout these plans, however the consultation does not reflect the full scale of opportunities to incorporate marine nature based solutions within the carbon budget targets. NIMTF believes that Northern Ireland has the capacity to lead the way in tackling the climate crisis, but this cannot be achieved through environmental loss and damage. Sustainability and providing capacity for recovery of marine species and habitats needs to be key.The protection and recovery of the marine environments needs to be considered by both fisheries and energy sectors moving forward if we are to achieve net zero. Objectives from these carbon budgets also need to be consistent with other relevant pieces of legislation, such as the NI Offshore Renewable Energy Action Plan (OREAP). Finally, we again wish to emphasise whilst the total carbon emissions produced by fisheries pale in comparison to other sectors, such as agriculture and transport, but rather than viewing fisheries emissions as insignificant, it is important we recognise the opportunity this presents for the sector to be innovative in approaches taken and make real progress to achieve net zero. Additionally, NI will be the only UK nation with a specific fisheries sector target, providing a real opportunity to lead the way within UK climate friendly fishing practices.

For further information, please contact Robert Walsh, Northern Ireland Marine Task Force Officer on robert.walsh@nimtf.org