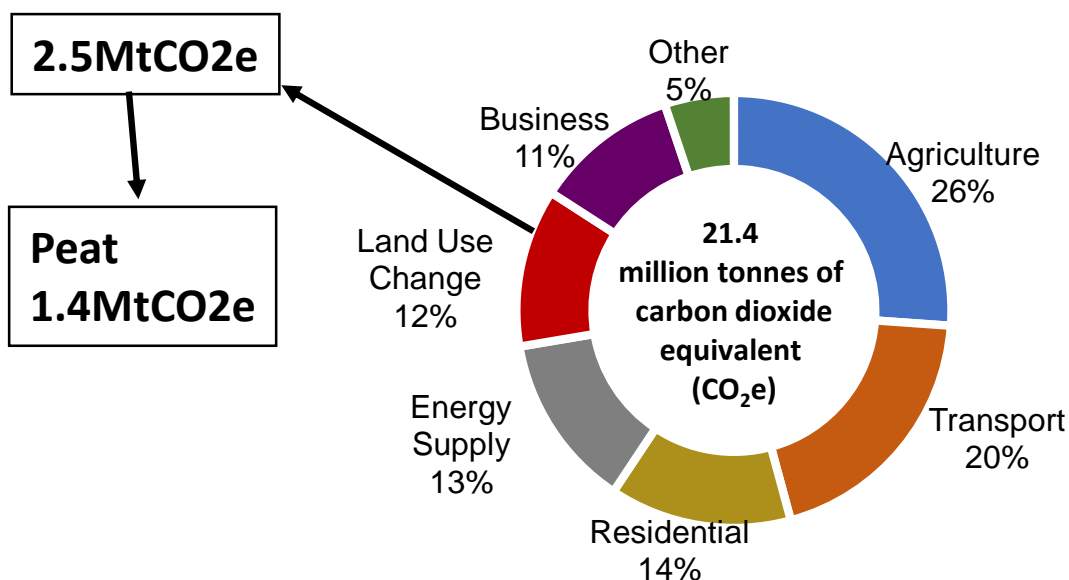


The role of Nature Based Solutions in meeting Northern Ireland’s Greenhouse Gas Emissions targets

Griscom et al. (2017)¹ demonstrated that **37% of the carbon emission reductions needed to meet the objective of the Paris Agreement by 2030 can be achieved by nature-based solutions**. There has been considerable focus on the carbon sequestration ability of terrestrial habitats such as forests, however the local role of peatlands and coastal habitats/the ocean must be recognised and be central to consideration of how Northern Ireland can meet ambitious greenhouse gas emissions reductions targets. Ulster Wildlife encourages holistic policy development across government departments to maximise the potential of nature-based solutions – investment in habitat restoration and protection now will reap enormous benefits by the turn of the century.

Peatlands

In Northern Ireland there are around 45 years’-worth of our current annual greenhouse gas emissions locked away as peat – healthy peatlands are crucial to the ability of land to sequester and store carbon. However, from the latest NI Greenhouse Gas Inventory (2019), **degraded peatlands account for 6% of NI GHG emissions:**

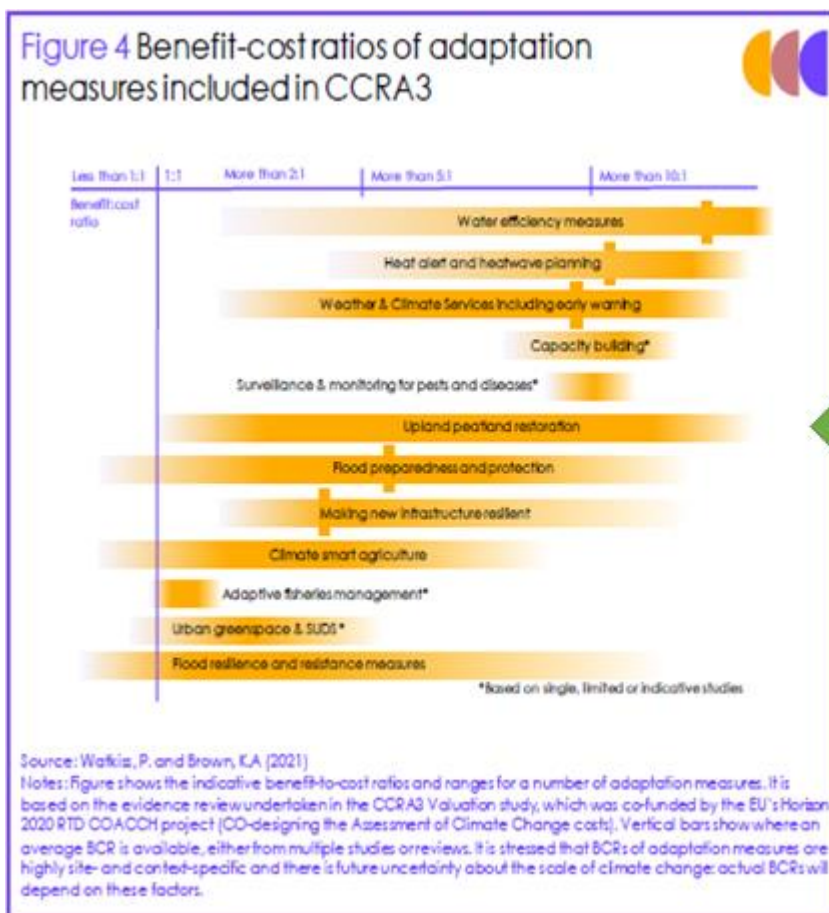


¹ Griscom, B.W., Adams, J., Ellis, P.W., Houghton, R.A., Lomax, G., Miteva, D.A., Schlesinger, W.H., Shoch, D., Siikamäki, J.V., Smith, P., Woodbury, P., Zganjar, C., Blackman, A., Campari, J., Conant, R.T., Delgado, C., Elias, P., Gopalakrishna, T., Hamsik, M.R., Herrero, M., Kiesecker, J., Landis, E., Laestadius, L., Leavitt, S.M., Minnemeyer, S., Polasky, S., Potapov, P., Putz, F.E., Sanderman, J., Silvius, M., Wollenberg, E. and Fargione, J. Natural Climate Solutions. Proceedings of the National Academy of Sciences Oct 2017, 114 (44) 11645-11650; <https://doi.org/10.1073/pnas.1710465114>

This represents a huge opportunity through peatland restoration to reduce emissions. It is vital to have effective policies to improve the resilience of peatlands, for climate change mitigation **and** adaptation:

- Restoring peatlands can have important wider benefits in addition to reducing greenhouse gas emissions, such as for health and wellbeing and improved biodiversity.
- Investment in Peatland restoration to aid adaptation to climate change is a low-regret intervention. The [Third Independent Assessment of Climate Risk](#) report (June 2021) showed that **adaptation actions have high net benefits, and positive benefit to cost ratios, in many cases, even when considering direct benefits alone:**

Peatland restoration Benefit:Cost – >5:1 to >10:1



Blue carbon

Blue carbon refers to carbon that is stored in marine ecosystems, where management of those ecosystems impacts that carbon.

Although blue carbon is not yet included in the UK's Nationally Determined Contributions (NDCs) to the Paris Agreement, in the first round of NDCs 28 countries included some kind of reference to coastal wetlands in their mitigation actions, while 59 countries included coastal ecosystems or coastal zones in their adaptation strategies. Guidance is also now available for incorporating blue carbon ecosystems in NDCs: <https://www.thebluecarboninitiative.org/policy-guidance> and the Climate Change Committee has advised that blue carbon should be considered by the UK in the NDCs in the near future as part of the strategy to reach a UK net zero target by 2050.

There is great potential for inclusion of blue carbon in policies to deliver greenhouse gas emissions – from coastal habitats such as saltmarsh and seagrass to the widespread distribution of sediment carbon stocks. Current area-based protections alone (e.g. Marine Protected Areas) are not likely to be sufficient to prevent carbon emissions from disturbance, however the carbon sequestration values of marine habitats are still largely unknown, especially locally in Northern Ireland, and requires research focus. An excellent summary of blue carbon is available in the UK Parliament POSTNOTE 651².

As noted by Lord Deben in his oral evidence to the AERA Committee on the Climate Change Bill (No. 1), the potential of oceans for managing our carbon budgets and meeting ambitious emissions targets is huge.

² <https://researchbriefings.files.parliament.uk/documents/POST-PN-0651/POST-PN-0651.pdf>