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Seagrass Ocean Rescue

Restoring ocean health to help tackle the nature and climate emergency

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SUMMARY

Seagrass captures carbon 35 times more efficiently than tropical rainforests, and provides nursery grounds to at least eight of the twelve most valuable commercial fish species in the UK. Yet, in the last century, we have lost at least half and possibly up to 92%¹ of seagrass in the UK due to pollution, coastal development and other human damage.

WWF, in partnership with Sky Ocean Rescue and Swansea University, is piloting the planting of 20,000m² of seagrass as a natural solution to help restore nature, capture carbon and support coastal fisheries and local communities. One million seeds have been collected and will be planted with the full involvement of local stakeholders and volunteers this winter.

Globally, seagrass, saltmarsh and mangroves collectively absorb over 70% of all carbon in ocean sediments², with the ocean in turn absorbing almost a third of all CO₂ emitted by humans.³ It also accounts for 10% of global annual ocean carbon storage, despite occupying only 0.2% of the seafloor⁴, showing its power far beyond its size. Large scale ocean recovery and protection of key UK carbon sinks like seagrass, muds and saltmarsh is therefore essential in the fight against the climate and nature crises and to help meet our net zero commitments.

WWF believes that UK Governments should collectively announce and oversee a large-scale restoration programme of key coastal and marine nature based solutions, as part of its commitments to tackle the climate crisis and to provide real leadership on the global stage. This should be backed by a blended “Ocean Recovery Fund” to leverage the investment needed.

INTRODUCTION

Seagrasses are flowering plants that live in shallow sheltered areas along our coast. These sensitive plants are different from seaweed and form bright green leaves. These leaves form large, dense meadows under the sea. Like the coral reefs and rainforests of the tropics, these underwater gardens are full of life, hosting many animals of different shapes, colours and sizes, including endangered species like seahorses. It is a crucial habitat for many of the fish we eat such as cod, plaice and pollock.

Seagrass is also a critical nature based solution in the fight against the climate emergency; it captures carbon from the atmosphere up to 35 times more efficiently than tropical rainforests, produces large quantities of oxygen and shelters coastal areas from erosion and storm damage. Furthermore, unlike forests, seagrass captures carbon and deposits it into the top layers of the seabed on a permanent basis, unless damaged.

Seagrass Ocean Rescue aims to restore 20,000 m² of the marine plant in west Wales, following the disappearance of up to 92 per cent of the UK’s seagrass in the last century. This could support 160,000 fish and

¹ The figure of up to 92% UK seagrass loss was calculated by Alix Green at Kings College London by examining historic datasets on UK seagrass for her PhD studies in collaboration with Richard Unsworth and Mike Chadwick.

² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5385666/>

³ <https://science.sciencemag.org/content/363/6432/1193>

⁴ <https://www.nature.com/articles/ngeo1477>

200 million invertebrates. The huge decline has been caused by pollution, runoff from the land, coastal development and damage from boat propellers and chain moorings.

This summer, one million seeds were collected from existing meadows around the British Isles by a group of volunteers led by Swansea University. The blades containing the seeds were snapped off – causing no harm to the plant – and then taken to laboratories where they are currently being sorted and prepared, and will be planted in naturally degrading hessian bags this winter. Stakeholder engagement has been a critical part and the exact site is being determined in consultation with local sea users.



NATURE BASED SOLUTIONS – THE POTENTIAL IN THE UK

The cutting-edge pilot project will create a model that could lead the way for large scale seagrass restoration throughout the UK and beyond. It is also a great example of how nature based solutions can benefit people, climate and nature at the same time in the UK’s own backyard, and a fantastic chance to involve local communities. WWF aspires to expand this work if it proves successful.

We believe that active restoration should go alongside, and not replace, wider measures to allow our seas to recover naturally. This includes reducing the impact of fisheries and other key pressures, including by introducing more highly protected marine areas (HPMAs) for which Richard Benyon has been leading an independent review on behalf of Defra. Currently, our seas are failing to meet even the basic requirements of a healthy state.⁵

If, however, this seagrass work could be matched with similar ambition to restore thousands of hectares of other key ocean habitats important for climate, such as saltmarsh, muds (seabed sediments store more carbon than peatlands⁶) and oyster reefs, this could make a huge difference not just to the health of our seas, but to our ability to mitigate and adapt to future climatic threats. It is also a very practical and positive chance to highlight how amazing our seas are.

A COORDINATED RESTORATION PROGRAMME

At present, these projects are delivered in a piecemeal and relatively small scale, despite the best efforts of those involved, including statutory agencies. As part of the UK Government’s commitments at forthcoming COPs in Chile and Glasgow, therefore, we consider that a major government-led restoration programme of coastal and marine ecosystems, including seagrass, would send a positive message to other countries that the UK continues to show leadership on ocean issues. This should complement, rather than replace, other action to reduce greenhouse gas emissions.

This should be backed by effective investment, for example in the form of a self-sustaining “Ocean Recovery Fund”, that could leverage large scale blended finance, invest wisely in such projects and reinvest returns on investment. WWF has been working on the initial design of such a fund and would be pleased to discuss this in due course.

Further information on Seagrass Ocean Rescue is available at <https://www.wwf.org.uk/what-we-do/projects/planting-hope-how-seagrass-can-tackle-climate-change>

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⁵ <https://moat.cefas.co.uk/summary-of-progress-towards-good-environmental-status/>

⁶ <https://www.bbc.co.uk/news/uk-scotland-highlands-islands-43049001>