

# THE FUTURE OF SEAGRASS IN WALES



Seagrass is vital to the health of the ocean, and an incredible ally in tackling the climate and nature crisis. Healthy meadows are critical for biodiversity, they provide nursery grounds for over one fifth of the world's largest 25 fisheries<sup>3</sup>, and habitat for a range of species from octopus to seals to anemones. Seagrass also provides essential ecosystem services by absorbing carbon, filtering pollutants, cycling nutrients, stabilising sediments and reducing coastal erosion. However, research suggests up to 92% of UK seagrass meadows have been lost in the last century<sup>4</sup>.

## DECLINE IN UK SEAGRASS EXTENT FROM 1930 - PRESENT DAY

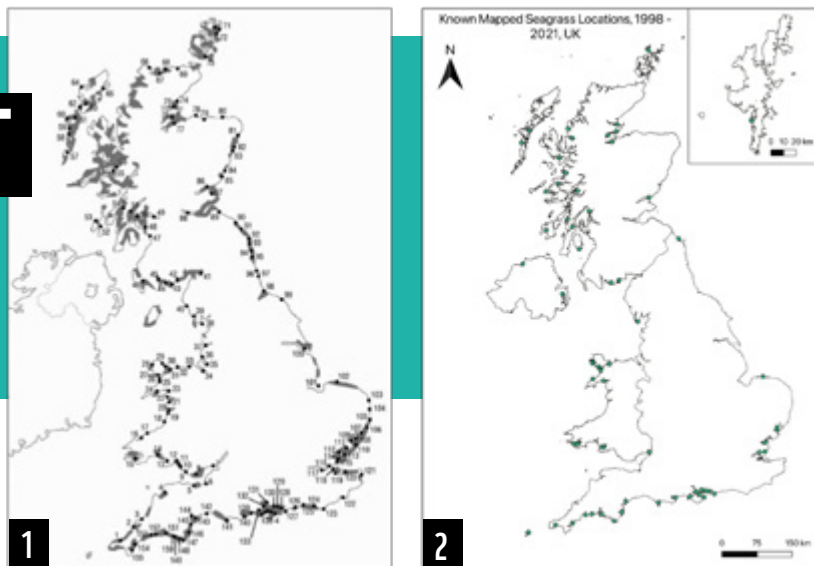


Figure 1. 1930s estimation of seagrass extent<sup>4</sup>  
 Figure 2. Present day seagrass extent.<sup>6</sup>

### WHAT WE'RE DOING

Through the Seagrass Ocean Rescue project, WWF and Project Seagrass are working with communities in Wales to plant and manage 12 new hectares of seagrass meadow by 2026. Swansea University are also developing and trialling innovative technology and methods for restoring seagrass to make it easier and more cost effective to restore at scale. Whilst this makes an important contribution to restoration efforts, it is not enough. There needs to be large scale restoration across Wales.

### WHAT WE NEED FROM WELSH GOVERNMENT

The Welsh government has recognised the importance of seagrass and has pledged to establish a targeted scheme to support restoration of seagrass habitats along our coastline<sup>5</sup>. There is no time to spare, we need action now to protect the remaining seagrass meadows we have in Wales and restore those that have been lost.

Project Seagrass and WWF have developed recommendations for short, medium and long term actions that can form the basis of the Welsh Government seagrass scheme:

### ACTIONS FOR IMMEDIATE DELIVERY:

ACTION	DETAILS	OUTCOMES
1. SUPPORT THE WALES SEAGRASS NETWORK (WSN)	Support the set up and running of an online collaborative platform connecting all seagrass work and stakeholders across Wales. ~£5,000	<ul style="list-style-type: none"> <li>Improved management and monitoring through collaboration and data sharing.</li> <li>Greater involvement of communities through sharing volunteer opportunities</li> <li>Connected restoration and collaborative projects</li> </ul>
2. ADVANCED MOORING SYSTEMS	Fund a series of advanced mooring systems for the boating community, to replace existing damaging infrastructure, £2,500-£3,000 plus installation cost per mooring	<ul style="list-style-type: none"> <li>Reduced damage to seagrass beds from anchoring from traditional swinging chain moorings</li> </ul>

<b>3. MARINE LICENSING REFORMS TO ENCOURAGE BENEFICIAL CONSERVATION PROJECTS</b>	The current marine licensing system is costly, complicated and lengthy and presents a major barrier for increasing marine restoration initiatives. Reforms are needed to facilitate and expedite restoration in our seas.	<ul style="list-style-type: none"> <li>Reduced cost of seagrass restoration supporting an increased number of restoration projects in Wales and encouraging participation of charitable and community organisations</li> </ul>
<b>4. PHDS/ RESEARCH</b>	Fund applied, solution driven PhDs. ~£100,000 per 3 year PhD	<ul style="list-style-type: none"> <li>Better understanding of seagrass protection and restoration – leading to cheaper and more widescale restoration across Wales</li> <li>Better understanding of seagrass meadow benefits – providing evidence to support greater investment from a range of sources for seagrass protection and restoration e.g. carbon market opportunities</li> </ul>
<b>5. COMMUNITY MONITORING INITIATIVES</b>	Fund community monitoring initiatives e.g. Seagrass Watch training and equipment, full kit - £1800, training - £1500-£2000 per community	<ul style="list-style-type: none"> <li>Increased quantity of robust monitoring data to feed into improved management</li> <li>Engagement of communities with their local environment</li> <li>Provide a blueprint for successful community restoration schemes – potentially catalysing other schemes to develop</li> </ul>
<b>6. WELSH SEAGRASS NURSERY</b>	Investment and continued support for the UK's first specialist seagrass nursery based in Laugharne, Carmarthenshire.  One off investment - Specialist laboratory facilities 15K; toilet facilities £15K; pond expansion (£20K)  Annual running costs (> £25K)	<ul style="list-style-type: none"> <li>Improved methods</li> <li>Reduced cost of seagrass restoration</li> <li>Increased seagrass restoration activities</li> </ul>

### MEDIUM TERM ACTIONS (>5 YEARS):

ACTION	DETAILS	OUTCOMES
<b>7. COMMUNITY RESTORATION / PLANTING TRIALS</b>	Provide funding to communities to develop small scale community restoration initiatives, £5,000-£10,000 per initiative	<ul style="list-style-type: none"> <li>Engagement of communities with their local environment</li> <li>Increased area of seagrass coverage in Wales</li> </ul>
<b>8. CATCHMENT SCALE WATER QUALITY IMPROVEMENT PILOT</b>	Pilot scheme at a catchment scale, working with local stakeholders e.g. farmers & water authorities on land management to improve water quality, £300,000-£500,000	<ul style="list-style-type: none"> <li>Protect/ reduce loss of existing seagrass meadows and other vulnerable coastal habitats</li> <li>Widescale benefits including for biodiversity and human health and recreation</li> <li>Better water quality allowing for more widescale seagrass restoration (&amp; other riverine and coastal habitats)</li> </ul>

### LONGER TERM ACTIONS (>10 YEARS)

ACTION	DETAILS	OUTCOMES
<b>9. SEAGRASS CONSERVATION AND RESTORATION CENTRE OF EXCELLENCE</b>	An ambitious project to develop a world leading Centre of Excellence for seagrass conservation and restoration science based in Wales. Total cost £10M, match funding from WG - £2M	<ul style="list-style-type: none"> <li>Better understanding of seagrass science and restoration methods – reducing costs and increasing the success of restoration efforts</li> </ul>
<b>10. BLUE CARBON AND BIODIVERSITY CREDIT TRIAL SITE</b>	Restoration/conservation site to develop the legal framework enabling investment for blue carbon/biodiversity credits	<ul style="list-style-type: none"> <li>Develop alternative long term financing for seagrass restoration</li> </ul>

<sup>1</sup>Hemminga, M.A., and Duarte, C.M. (2000) Seagrass ecology, Cambridge, UK: Cambridge University Press

<sup>2</sup>Armstrong, S., Hull, S., Pearson, Z., Wilson, R. and Kay, S., 2020. Estimating the Carbon Sink Potential of the Welsh Marine Environment. NRW, Cardiff, 74p

<sup>3</sup>Unsworth, R., Nordlund, L., and Cullen-Unsworth, L. (2018). Seagrass meadows support global fisheries production. Conservation letters. Vol 12, Issue 1.

<sup>4</sup>Green, A., Unsworth, R., Chadwick, M. and Jones, P. (2021). Historical analysis exposes catastrophic seagrass loss for the United Kingdom. Frontiers in Plant Science.

<sup>5</sup>Welsh Government - Programme for Government – Update. <https://gov.wales/sites/default/files/publications/2022-01/programme-for-government-update-december-2021.pdf>

<sup>6</sup>Rice, Unsworth, Green, 2021 taken from Potouroglou, M and Unsworth, R. (Seagrass Restoration: An Introduction. In: Seagrass Restoration Handbook (eds. Gamble C., Debney, A., Glover, A., Bertelli, C., Green, B., Hendy, I., Lilley, R., Nuutila, H., Potouroglou, M., Ragazzola, F., Unsworth, R. and Preston, J). Zoological Society of London, UK., London, UK

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