



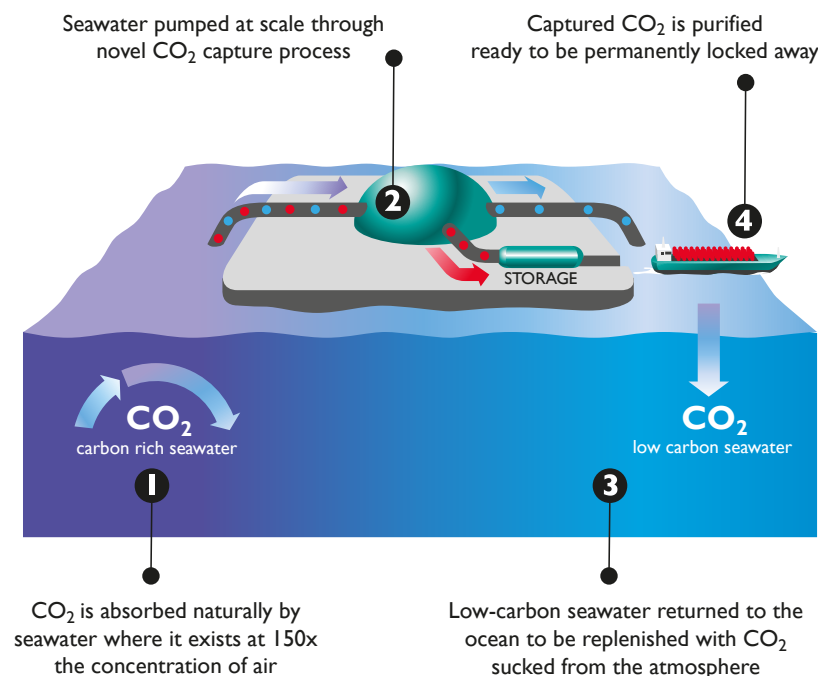
Success and opportunity in marine carbon dioxide removal

The SeaCURE project has developed and demonstrated new technology to achieve carbon dioxide removal from the atmosphere, via seawater. We have built a global first-of-a-kind pilot plant in Weymouth (UK), undertaken state-of-the-art ocean modelling and fieldwork to verify atmospheric carbon dioxide (CO_2) removal, and conducted world-first experiments to understand the implications of such activity. We have developed a network that comprises leading academics, industry partners, and government organisations, who are engaged with moving marine carbon dioxide removal forwards.

Why do this?

Even under the most optimistic future climate scenario, CO_2 removal is likely to be required at a massive scale to meet Paris Agreement targets and deliver a stable climate.

SeaCURE has developed a globally-unique testing facility: A pilot plant designed and developed by an expert team of engineers and marine scientists with a thorough understanding of the marine environment and the local region. The team is at the forefront of the marine carbon dioxide removal conversation and is poised to address the critical challenges this nascent industry faces.



Next steps in....

....technological development.

We need funding to conduct R&D at the SeaCURE facility to improve efficiency, drive down cost, and prepare for upscaling. The plant is modular and is suitable for testing and developing SeaCURE and other marine carbon dioxide removal technologies (e.g. Ocean Alkalinity Enhancement).

....quantifying atmospheric CO₂ removal.

We have a state-of-the-art model to understand regional water movements and chemistry, verified with two weeks of preliminary observations. Funding is needed to develop and improve equipment, methods and models to prove local and regional scale uptake of atmospheric CO₂ for SeaCURE and other marine carbon dioxide removal technologies. We want to test initially in Weymouth and then expand to assess other sites worldwide.

....obtaining environmental impact evidence to inform responsible marine stewardship.

SeaCURE has developed and tested laboratory protocols to assess marine carbon dioxide removal impacts, and holds an Environment Agency permit to perform real world testing. We need funding to deliver the evidence base for regulation and therefore permitting of larger-scale operation whilst safeguarding the marine environment.

....public engagement.

The co-location of the SeaCURE facility within SEALIFE Weymouth provides a unique opportunity for public engagement. We need funding to deliver a comprehensive programme of public and stakeholder engagement. Co-developing understanding and agency with communities will underpin the social license for commercial scale marine carbon dioxide removal.

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The journey is just beginning.

Current funding (£3.25M, DESNZ) ends in March 2025 but the SeaCURE site will remain until at least mid-2026, supported by the University of Exeter.

We want to work with partners to facilitate and address these critical next steps. If you are interested in partnering with us, please contact seacure@exeter.ac.uk.



Find out more on our website:

<https://sites.exeter.ac.uk/seacure/>



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With thanks to SEA LIFE Weymouth