



Team Zostera

Casco Bay's Seagrass Stewards

COBALT/TEAM ZOSTERA

LESSONS LEARNED ON RESTORATION BOTTLENECKS

NOVEMBER 17, 2025



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GOOS Panel/BioEcosystems EOVS/Seagrass

EOV Specification Sheet: Seagrass Cover and Composition

Author(s): GOOS Biology and Ecosystems Expert Panel
This specification sheet is currently under development.

Doc Type	Reference Document
Status	Draft

Notes

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EOV Specification Sheet: Seagrass Cover and Composition (Version 2.0)

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Language: English



GOOS logo featuring a globe and the text 'GOOS'.



PERSPECTIVE

Global challenges for seagrass conservation

Richard K. F. Unsworth¹, Len J. McKenzie, Catherine J. Collier, Leanne C. Cullen-Unsworth, Carlos M. Duarte, Johan S. Eklöf, Jessie C. Jarvis, Benjamin L. Jones, Lina M. Nordlund

Received: 15 July 2018 / Revised: 18 October 2018 / Accepted: 23 October 2018 / Published online: 19 November 2018

Abstract Seagrasses, flowering marine plants that form underwater meadows, play a significant global role in supporting food security, mitigating climate change and supporting biodiversity. Although progress is being made to conserve seagrass meadows in select areas, most linkages between seagrass and climate change is required to adapt conservation accordingly. We also explicitly outline a series of proposed policy actions that will enable the scientific and conservation community to rise to these challenges. We urge the seagrass conservation community

Unsworth et al. 2018

UNDER
THREAT

Jones et al. 2025

UNDER
RESOURCED

UNDER
MONITORED

McKenzie et al. 2020

Review article



Conserving seagrass ecosystems to meet global biodiversity and climate goals

Carlos M. Duarte¹, Eugenia T. Apostolaki², Oscar Serrano³, Alexandra Steckbauer⁴ & Richard K. F. Unsworth^{4,5}

Abstract

Despite being relatively neglected until the early 2000s, seagrass ecosystems are now recognized as critical habitats supporting biodiversity and ecosystem services including carbon sequestration, coastal protection and food supply. In this Review, we discuss the structure and function of seagrass beds, the ways that they support

Sections

Introduction

Drivers of growth and persistence

Contributions to biodiversity and people

Duarte et al. 2025

UNDER
APPRECIATED

ENVIRONMENTAL RESEARCH ECOLOGY



PAPER

Mapping global threats to seagrass meadows reveals opportunities for conservation

Benjamin L H Jones^{1,2,*}, Lucy Coals^{1,3}, Leanne C Cullen-Unsworth⁴, Richard J Lilley⁴, Alex Bartlett⁵ and Richard K F Unsworth^{1,2}

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² Department of Earth and Environment, Institute of Environment, Florida International University, Miami, FL, United States of America

³ School of Life and Environmental Sciences, Deakin University, Geelong, Victoria, Australia

⁴ Conservation Ecology Group, Groningen Institute for Evolutionary Life Sciences (GELIFES), University of Groningen, Groningen, The Netherlands

⁵ Seagrass Ecosystem Research Group, Department of Biosciences, Swansea University, Swansea, United Kingdom

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Keywords: citizen science, local knowledge, human pressures, risk, seagrass ecosystems, vulnerability

Abstract

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Environmental Research Letters



LETTER

The global distribution of seagrass meadows

Len J McKenzie^{1,2}, Lina M Nordlund¹, Benjamin L Jones^{4,5}, Leanne C Cullen-Unsworth^{5,6}, Chris Roelfsema⁷ and Richard K F Unsworth^{3,6}

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⁶ Sustainable Places Research Institute, Cardiff University, 33 Park Place, Cardiff CF10 3BA, United Kingdom

⁷ Remote Sensing Research Centre, School of Earth and Environmental Sciences, The University of Queensland, Brisbane, Australia

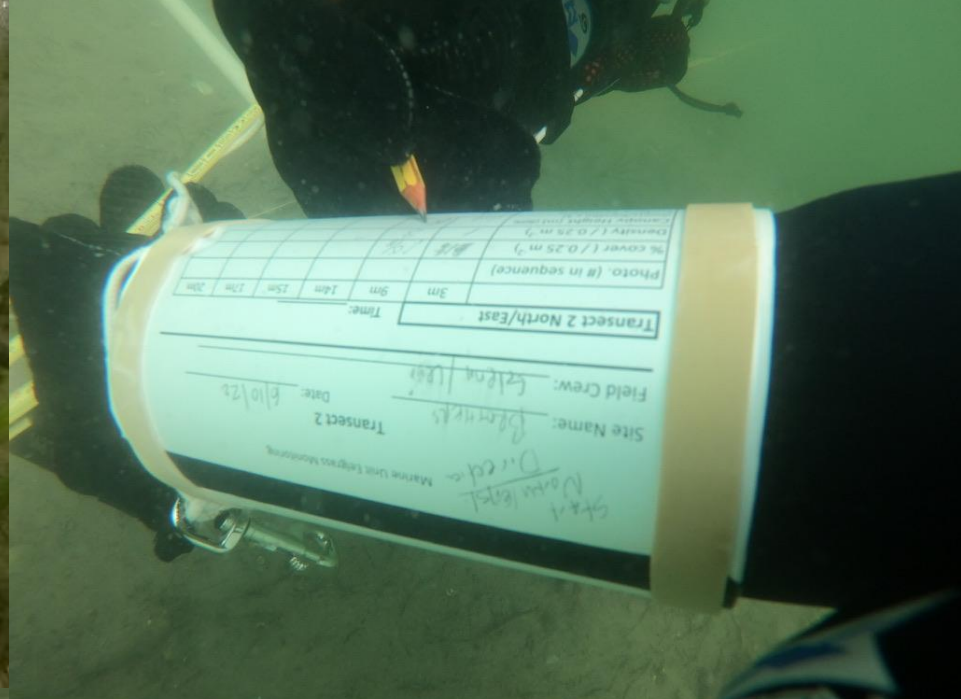
⁸ Seagrass Ecosystem Research Group, College of Science, Wallace Building, Swansea University, SA2 8PP, United Kingdom

E-mail: benjamin.jones@su.se

Keywords: mapping, species distribution, eelgrass, sea grass, global extent, spatial distribution

Supplementary material for this article is available online

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Marine Life Ecology Monitoring

Site Name: North Light
Dredge

Field Crew: Stella / Lee

Date: 6/10/26

Transect 2

Transect 2 North/East					
Time	3m	5m	10m	15m	20m
Photo (# in sequence)					
% cover (/ 0.25 m ²)					
Clarity (/ 0.25 m ²)					

The “Team” in Team ZOSTERA

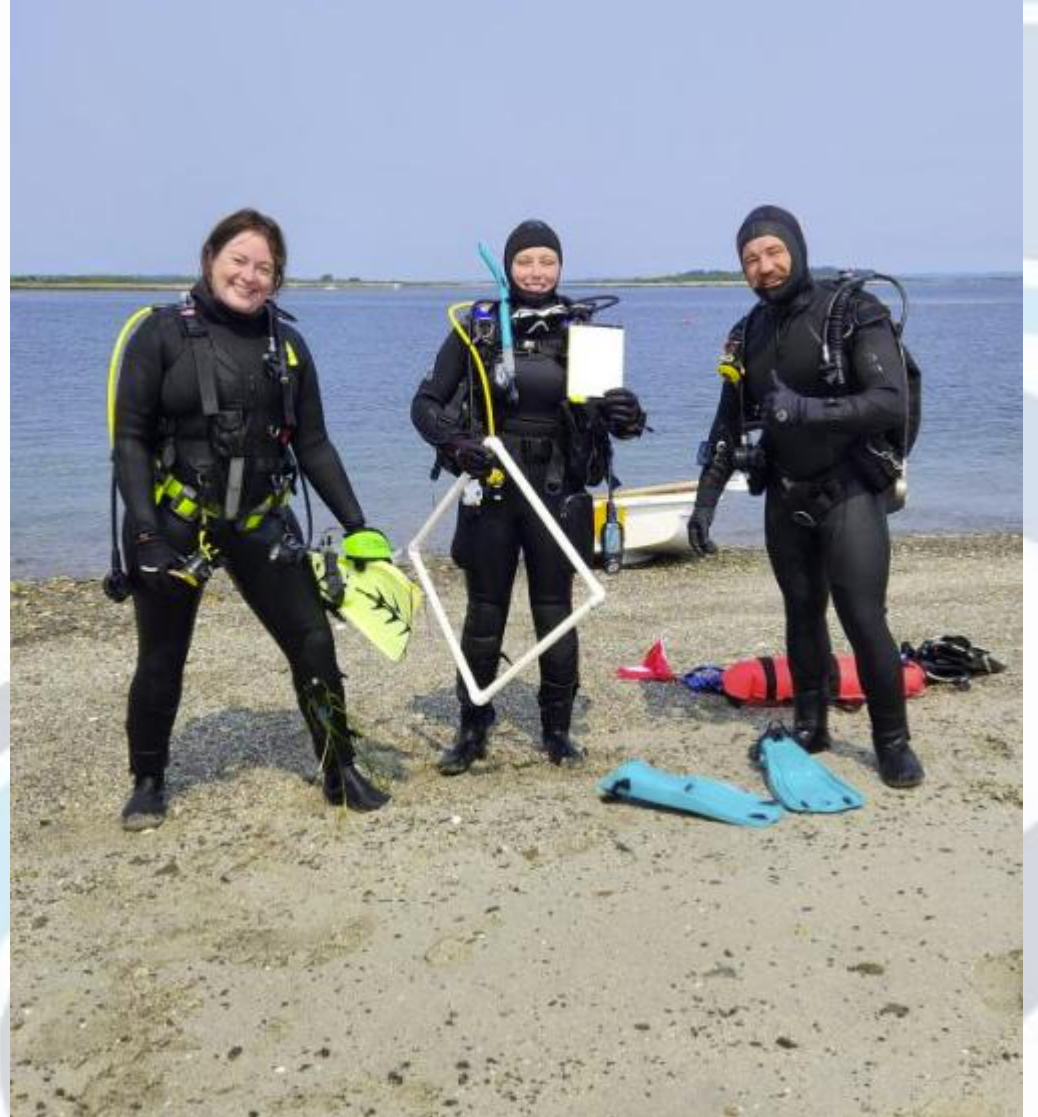


Scientific Diving Program

- 86 dives by 5 divers this year
- Total scientific dives since 2024 = 160
- Spent almost 60 hours u/w collecting data
- Application for AAUS OM
- Next onboarding planned for June 2026



AAUS
American Academy of
Underwater Sciences



Collaboration on Addressing Bottlenecks

- Site Selection: Finding a Suitable Environment for Restoration
- Seed Germination and Emergence
- Understanding of Conservation Genetics
- Role of Biological Interactions
- Sustainable Supply of Seagrass Propagules
- Knowledge Gaps within and across Species and Environments
- Learning from Failure

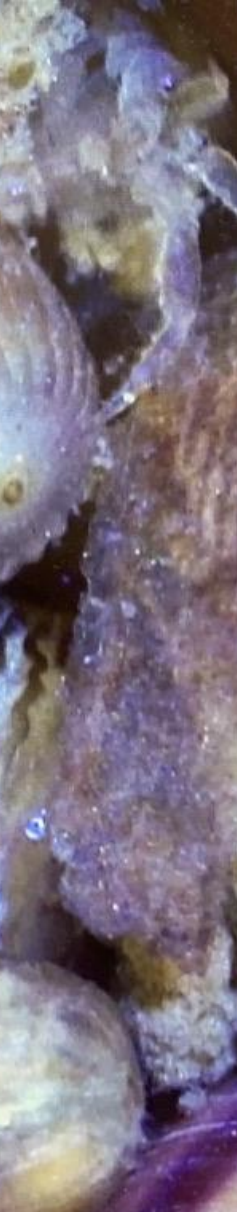
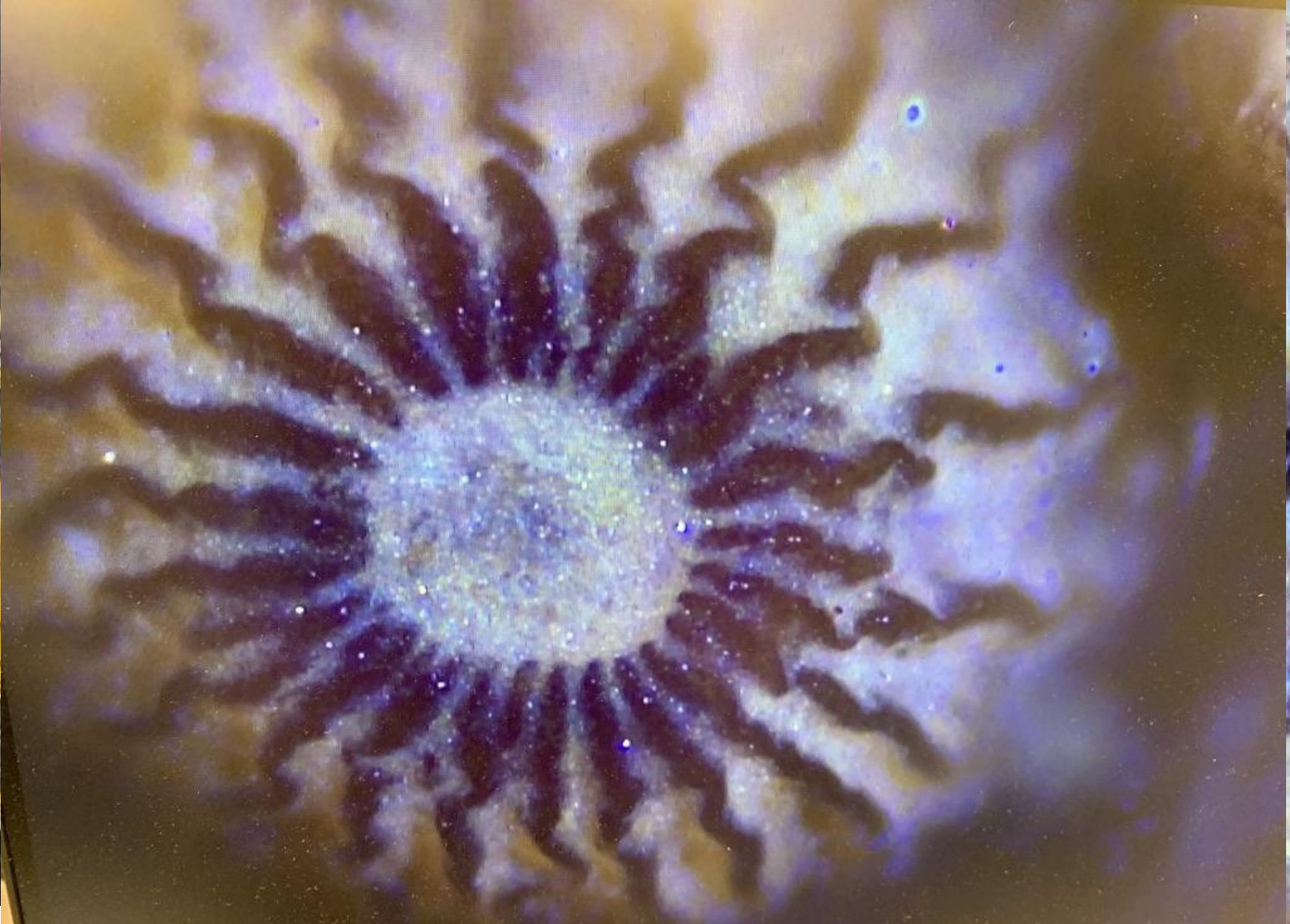
Site Selection: Suitable Sites for Restoration



Seed Germination and Emergence



Understanding of Conservation Genetics



Role of Biological Interactions



Sustainable Supply of Seagrass Propagules



Project Seagrass: Porthdinllaen Donor Meadow



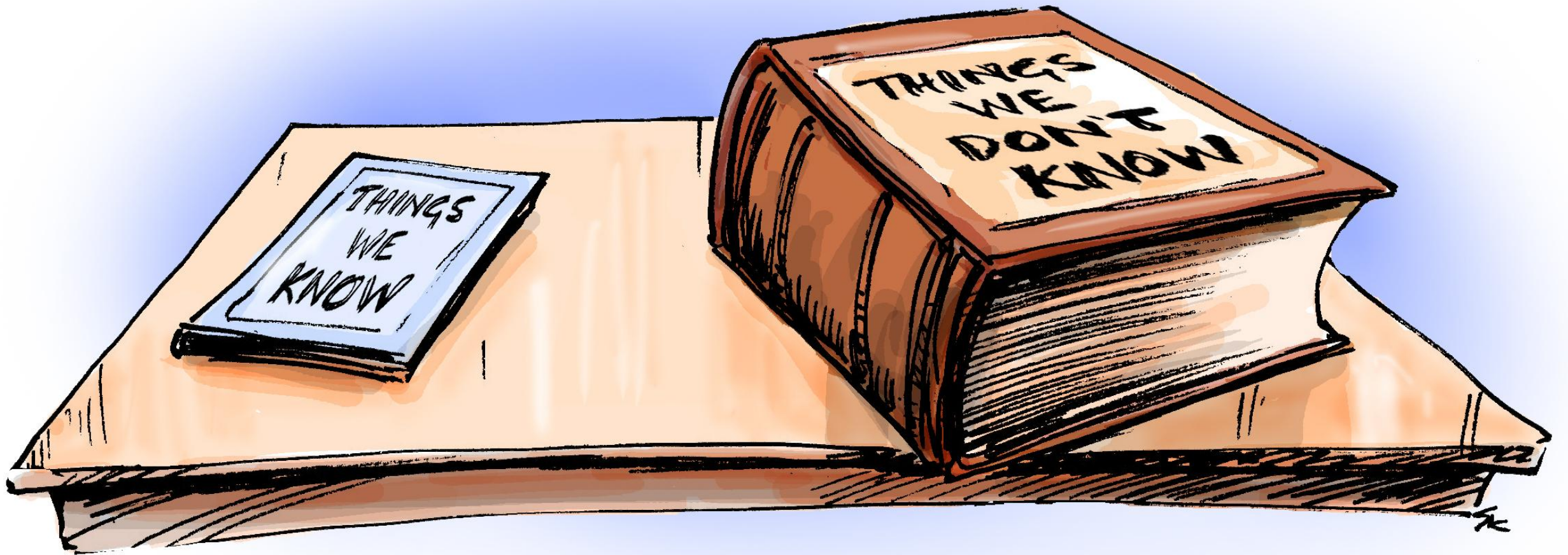
Laura Hughes



Porthdinllaen Donor Meadow



Knowledge Gaps



Learning from Failure

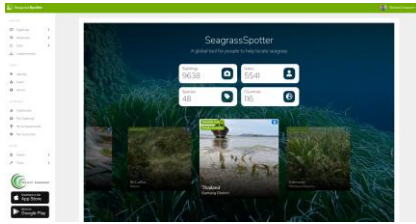
ZOOMING IN & ZOOMING OUT



Learning By Sharing Lessons Learned

SeagrassSpotter

Operational for 10 years and
active in 116 countries



SeagrassTracker

Under pilot testing



SeagrassSentinals

Under construction

No early view
available

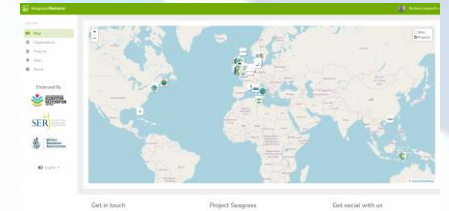
SeagrassViewer

Under early pilot testing

No early view
available

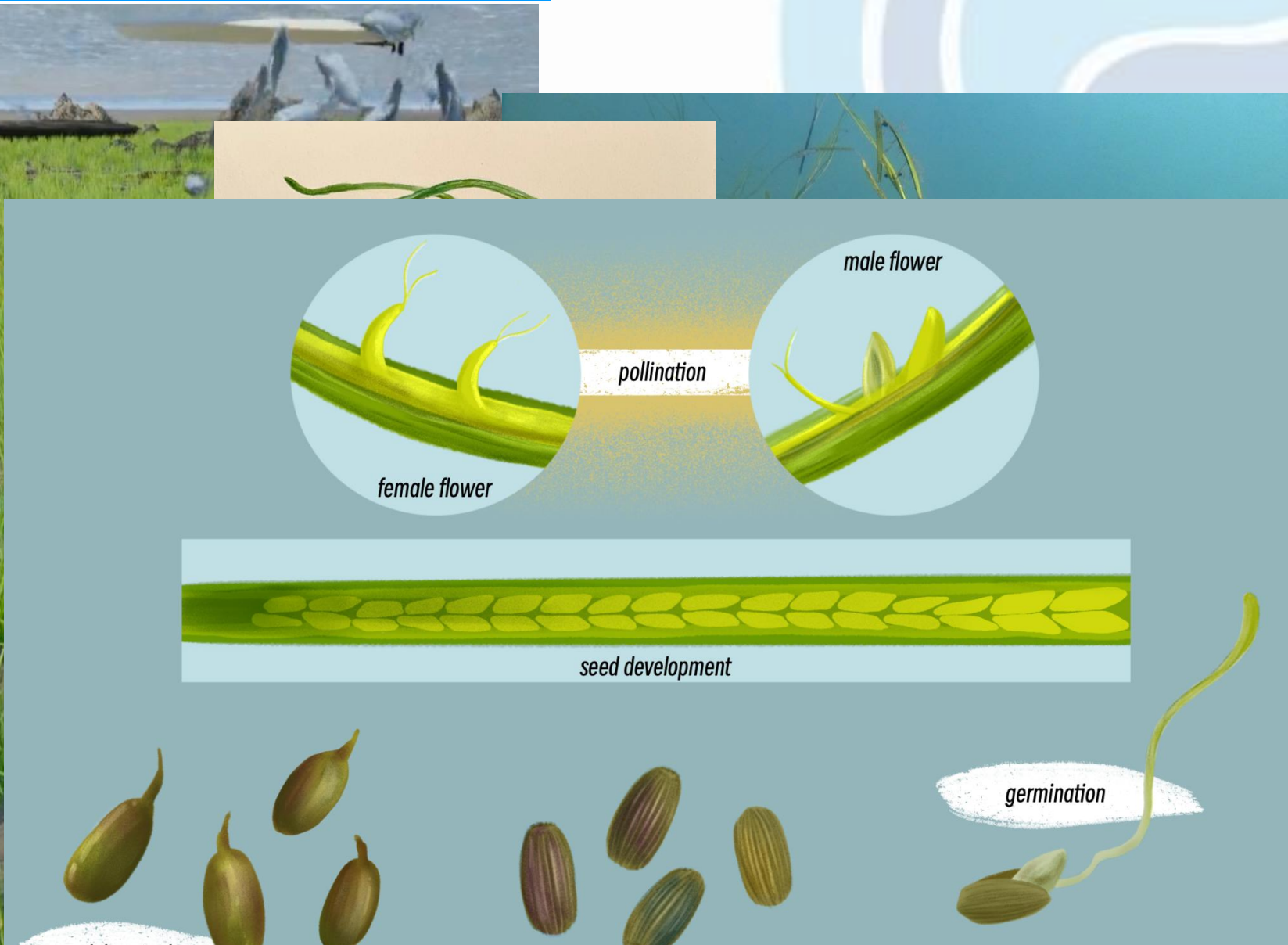
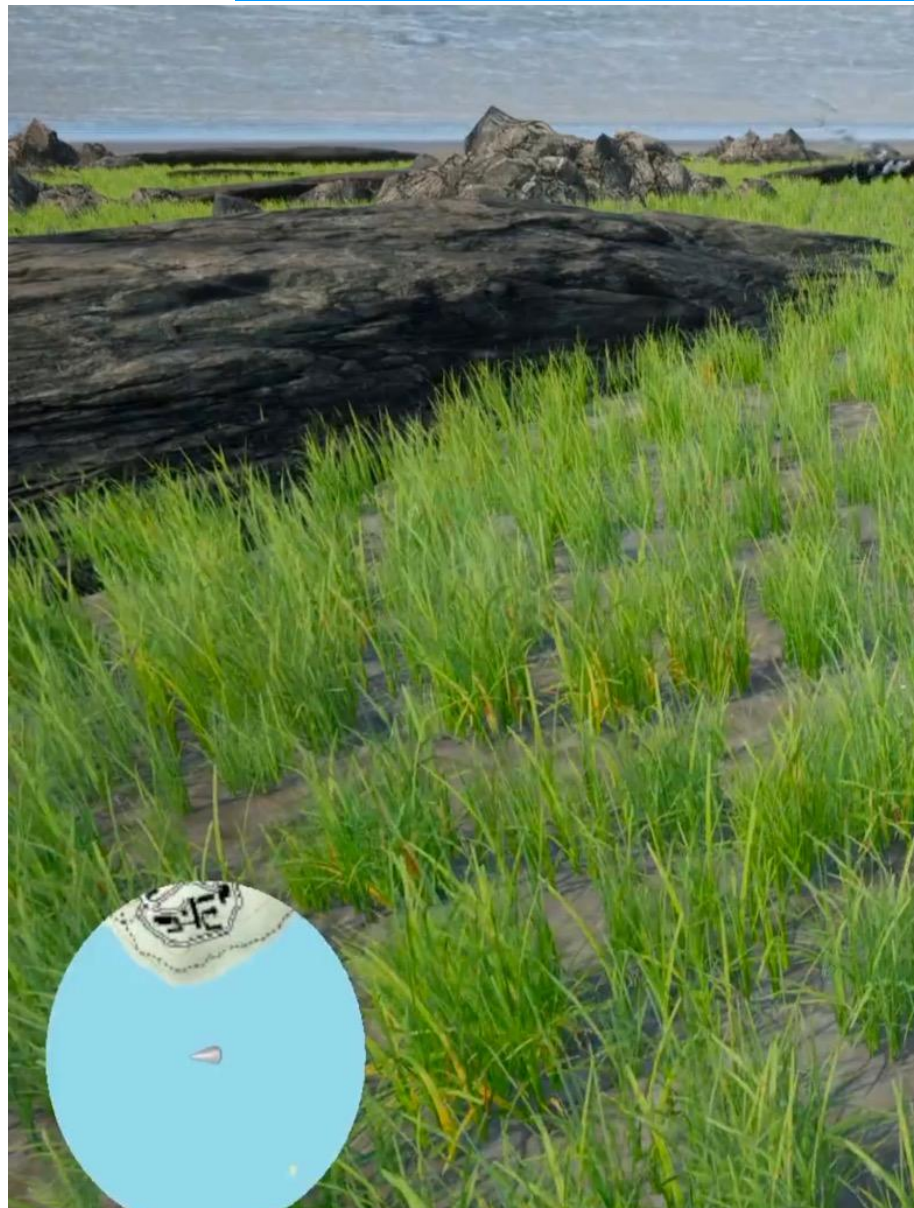
SeagrassRestorer

Operational for 6 months
and active in 17 countries



BUILDING A FAMILY OF GLOBALLY
INTEGRATED OPEN ACCESS
PLATFORMS THAT LINK AND
COMMUNICATE DATA

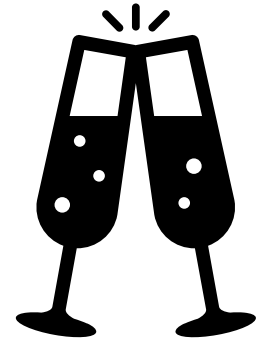
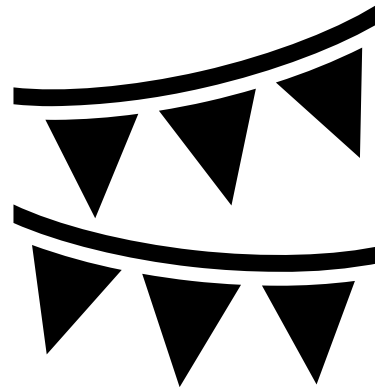
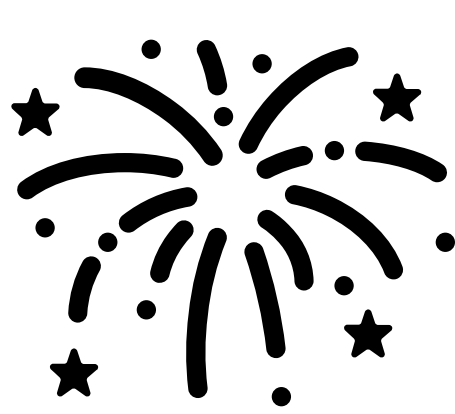
A Living Atlas of Seagrass Regeneration



Learning Through Celebration

A GLOBAL CELEBRATION OF SEAGRASS

- Seagrass for the Senses

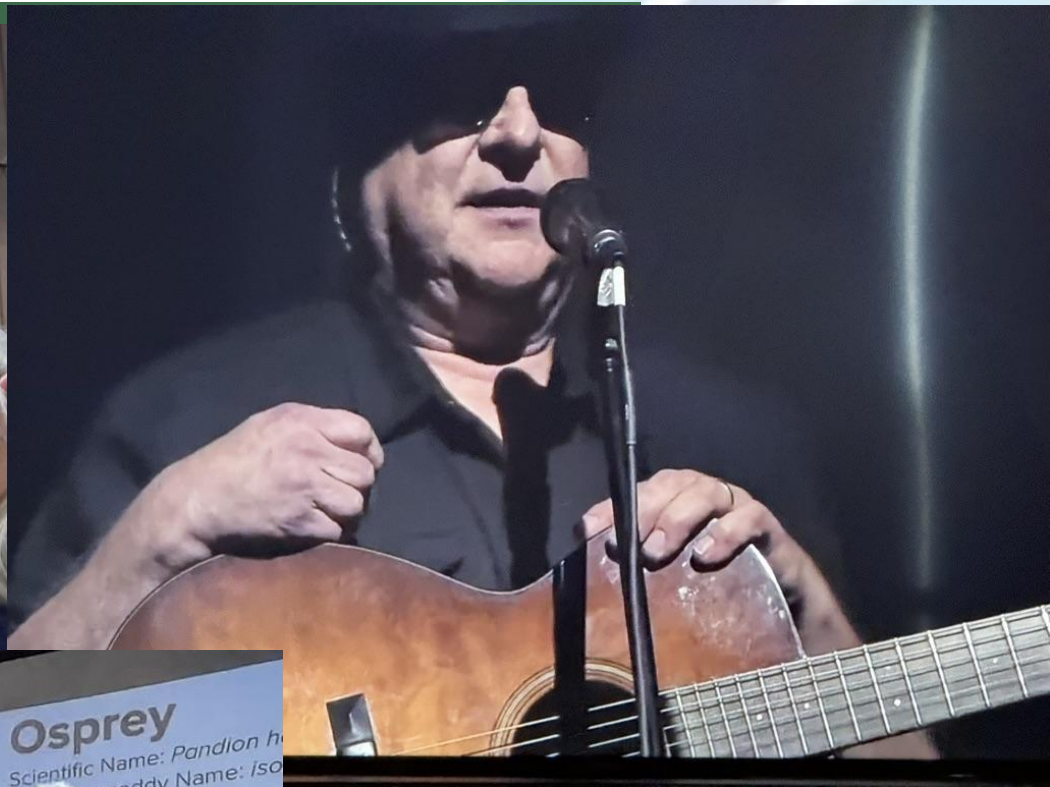


story • art • theatre • music • dance

Public Engagement/Outreach on the Islands



May 22nd
Meeting
Arts, Fr
Maine





Seagrass
meadow
coffee mugs
(Julie Corwin)





Team Zostera

Casco Bay's Seagrass Stewards



THANK YOU!

NOVEMBER 7, 2025

