Seagrass: Defining Issues and Trialling Solutions in Wales
SEAGRASS DISTRIBUTION IN WALES
Seagrass data is collected through;
- SAC monitoring
- Organised surveys (e.g. Phase 1 intertidal survey)
- Water Framework Directive
- Ad hoc records
Total area of seagrass bed in = Approx. 770ha
MANAGEMENT OF SEAGRASS
SKOMER MCZ AND MILFORD HAVEN
Skomer

- Seagrass bed located in North Haven
- Skomer MCZ manage pressure on seagrass bed through;
  - VNAZ & AZ (zoning plan)
  - Visitors moorings (seasonal)
  - Water liaison patrols
Monitoring seagrass at Skomer

- Skomer MCZ team have monitored the seagrass bed with help of volunteer divers for more than 20 years

Results from diver surveys from 2014 and 2018

Measuring the height of seagrass bed using Biosonics DT-X sonar equipment
Seagrass bed improvements - Milford Haven Waterway

The SAC Relevant Authorities Group worked with Port of Milford Haven, users and stakeholders to implement voluntary code of conduct

Designed to minimise impacts of anchoring and mooring on existing seagrass beds (and maerl)

Visitor buoys installed in 2015 by Port of Milford Haven popular with users and reduced anchoring within seagrass at Longoar Bay.

Two ‘voluntary no-anchor zones’

MAPPING ANCHORING, MOORING AND LAUNCHING

INCREASING THE EVIDENCE BASE
Mapping anchoring, mooring and launching

**Contract name:** ‘Recreational anchoring, mooring and launching in Wales’

**Aim:** Map distribution and intensity of anchoring, mooring and launching in Wales.

Maps can be overlaid with sensitive habitats to allow identification of potentially vulnerable areas.

**Consultant:** APEM ltd.

**Contract timescale:** 2018/19
Methodology:

- Spatial data (GIS format) from a number of sources obtained for anchoring, mooring and launching
- Included stakeholder consultation
- Values of intensity given to anchoring, mooring and launching polygons
  - Low
  - Medium
  - High

<table>
<thead>
<tr>
<th>AIS Value</th>
<th>Intensity value given to polygon</th>
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<tbody>
<tr>
<td>0 - &lt;1</td>
<td>Low</td>
</tr>
<tr>
<td>1 - &lt;3</td>
<td>Medium</td>
</tr>
<tr>
<td>3&gt;</td>
<td>High</td>
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</tbody>
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Outputs:

- Evidence Report detailing methodology

- **GIS dataset** including separate layers on:
  - Anchoring
  - Mooring
  - Launching
  - No-anchoring areas

<table>
<thead>
<tr>
<th>Slipways / launching areas</th>
<th>Anchoring polygons</th>
<th>Mooring polygons</th>
</tr>
</thead>
<tbody>
<tr>
<td>600</td>
<td>261</td>
<td>925</td>
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</table>
Outputs:

- Mooring
- Anchoring
- Slipways
Overlaying anchoring and mooring data with sensitive habitats...

Habitats (Section 7 / OSPAR / Annex 1) sensitive to ‘Abrasion / disturbance at the surface of the substratum’ and ‘Penetration and / or disturbance of the substratum below the surface’ (MarLIN pressures)

- Seagrass
- Maerl
- Reefs
- Seapens and burrowing megafauna
- Mudflats and sandflats
- Horse mussels
- etc

Overlay in ArcMAP …

… to produce maps of potentially vulnerable areas to anchoring and mooring
Locations where seagrass beds overlap with anchoring
Porthdinllaen
Seagrass Project
Alison Palmer Hargrave
Background

- SAC Officer, marine site – Pen Llŷn a’r Sarnau SAC
- Co-ordinate management
- My role includes:
  - Development and management of projects that tackle specific issues
    - e.g. litter, non natives, cetacean disturbance, access issues
  - Stakeholder engagement
  - Raising Awareness
  - Management scheme and groups that input into management
  - Monitoring
- National Trust
- Small Village
- Golf Course
- Important location
- Inner / outer harbour
- 90 moorings
- Fishing vessels
- Recreation vessels
- RNLI
Inner Harbour

Rope
Outer Harbour
Impacts
Mapping

- Validate extent of seagrass within Porthdinllaen based on aerial images.
- Undertake initial study of the density of seagrass within outer moorings.
- Establish effect moorings were having on seagrass
Conclusions

- Seagrass Beds much larger than expected
- Beds were highly fragmented (or patchy) amongst moorings
- Presence of “Wire Weed” (Sargassum muticum)
- Possibly the densest bed on mainland UK (and the largest in Wales!)
- Early results indicative of significant impact
Ecological Surveys

- Seagrass health assessments – sample analysis
- Seasonal fish sampling using large seine nets and fyke nets
- Baited video systems to examine subtidal seagrass
- Fish sampling to understand impacts of fragmentation (small seine nets)
Conclusions

- 33 species of fish recorded to date
- 10 commercially important fish use Porthdinllaen seagrass as a nursery
- The better the condition of seagrass, the higher the fish diversity
- The seagrass at Porthdinllaen is not in a healthy condition
Porthdinllaen Seagrass Project

**Aim:** To improve the condition of the seagrass without impinging on how people use the area
Stakeholder Engagement

- Stakeholder engagement key to the success of project
- Steering group – marine managers, site users, local organisations
- Steering group work together to discuss issues and possible solutions
- Open days, workshops, beach sessions, general raising awareness
Inner harbour

- Excess mooring have been removed
- Trott moorings replaced with concrete block anchors
- Moorings have been placed in neat rows with assigned numbers
- Helix anchors installed in 2019
Outer harbour

- Report on adapting outer moorings has been produced (includes modelling)

- We considered
  - Use fisherman's anchors
  - Floatation devices on riser
  - 3 point anchor system
  - Wrapping the chain

- Issue – only single point anchors systems have been tested
Vehicle impact

- Study has been conducted on the effects of vehicles on seagrass
- Working with fishermen and National Trust on recommendations
  - Use of more than one mooring
  - Dedicated tractor route
Next steps

- Continue the helical anchor trial
- Trial adapted mooring in the outer harbour
- Ensure vehicle impact recommendations are implemented
- Monitoring
- Continue to work with stakeholders