



UNIVERSITY OF
PLYMOUTH



Government of
JERSEY

How healthy is your seagrass?

Caroline Millan

With special thanks to:



Alderney
Wildlife Trust



BUTTERFIELD



Caroline Millan



BLUE MARINE
FOUNDATION

Credit: Matt Jarvis Media / Blue Marine Foundation



An underwater photograph showing a sandy seabed with several clumps of green seagrass. The water is clear and blue, and the lighting is bright, creating shadows on the sand.

Channel Island wide seagrass initiatives

George McLellan, Dr Mel Broadhurst-Allen, Julia Henney, Liz Sweet, Nicky Harris, Emily Dow



Supporting boaters in combating climate change.

#ProtectOurBeds

Savvy Navy

- Current known extent of seagrass is available through the Savvy Navy app to inform mariners.
- Plans are to continue measuring extent of beds for Savvy Navy initiative
- Implement further monitoring of traditional moorings selected for impact assessment
- Consider deployment/switch over of traditional moorings with AMS
- Consider other wide-scale assessments, including bay condition assessments

Clean
Sailors

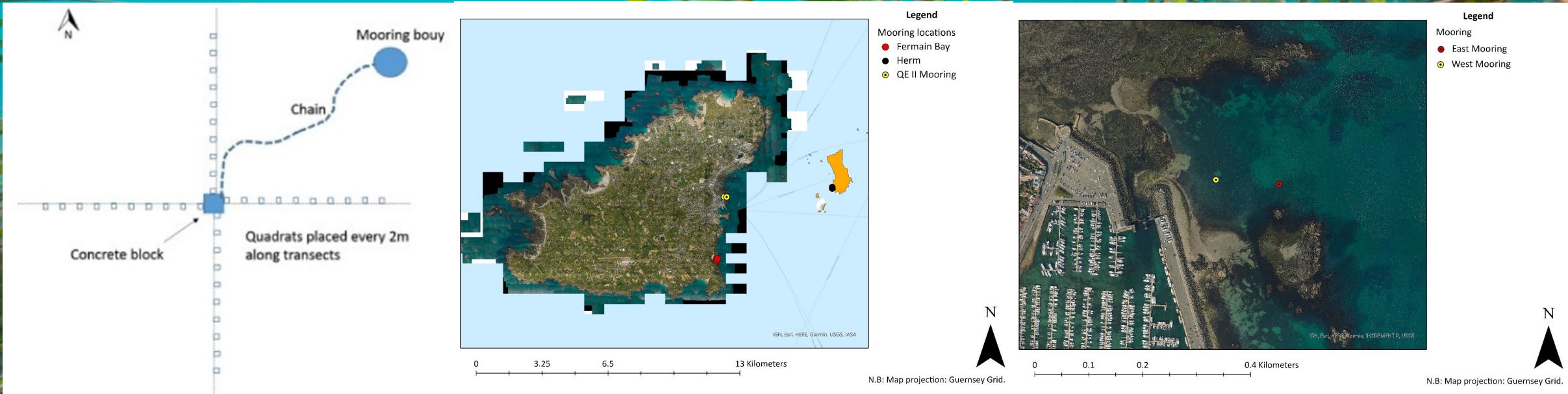
 savvy navy

 ocean
conservation
trust

Mooring damage

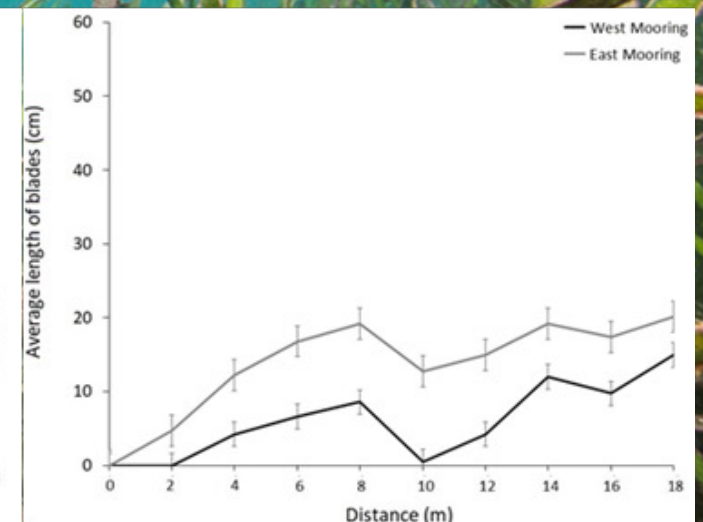
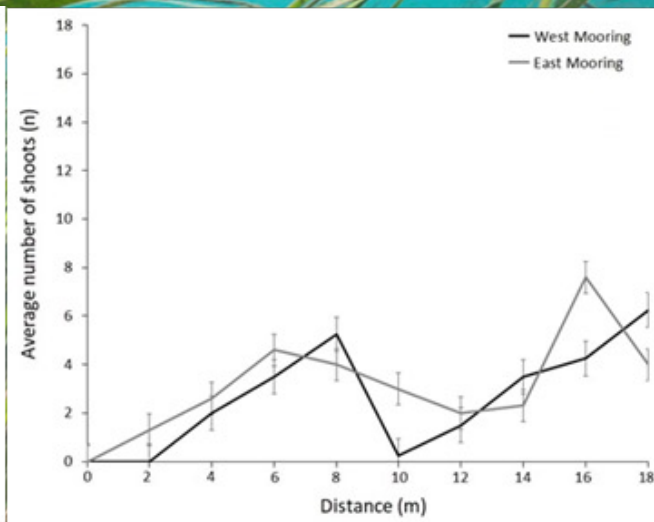
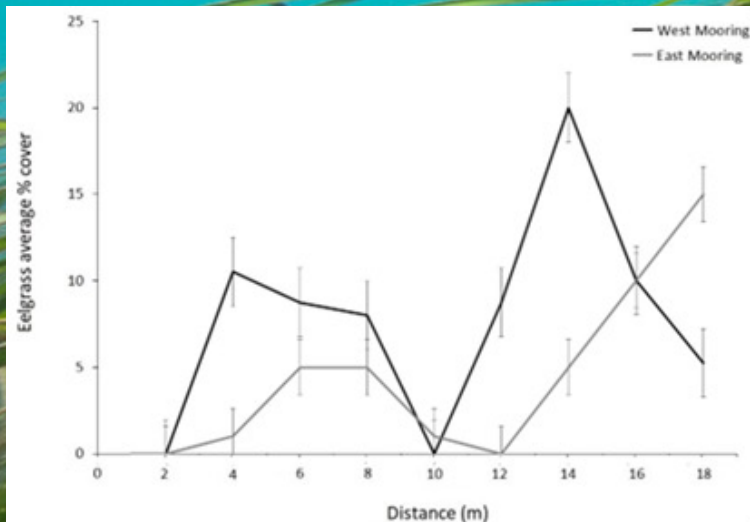


- Survey method follows Bunker and Green, 2019; Unsworth et al., 2017 and, Montefalcone et al., 2008.
- Guernsey sites include Fermain Bay, Herm and QE II – 2 x traditional moorings per site.
- Volunteer divers recorded Eelgrass (*Z. marina*) shoot density, length of blades and associated information (e.g. substrate type) within a 0.5m² at graduated (2m) distances away from mooring base in North, East, South and West directions.



QE II preliminary results

- West mooring: Total number of Eelgrass shoots: 106. Length of blades 2 – 27 cm. Blade length increased with increasing distance from the traditional mooring bases.
- East mooring: Total number of Eelgrass shoots: 95. Length of blades 1 – 18.8 cm. Blade length increased with increasing distance from the traditional mooring bases.
- - Both results show a decline in Eelgrass shoot density, % cover and blade length around the 10 – 12 m mark, which may be due to the mooring chain looping down during low tides and damaging to seafloor.



The impact of block and chain swing mooring damage to the seabed within seagrass (*Zostera marina*) meadows; Jersey

Emily Dow (Jersey Marine Conservation and JICAS)

- Sediment samples were taken inside and outside three mooring scars in St Catherines harbour to investigate infaunal assemblages.
- Infaunal diversity (number of taxa) and abundance (number of individuals) were both found to be greater in the sediments with unaffected seagrass compared to the bare sediment within the mooring scar.
- Number of taxa: 3 (± 1.46) inside the scar and 5.47 (± 2.23) outside.
- Number of individuals: 5.6 (± 3.64) inside the scar and 10.8 (± 5.57) outside.



Image: Emily Dow, 2022



Image: Emily Dow



Image: Ports of Jersey, 2021

Seaflex moorings – a solution

- Eco mooring option to minimize damage to seagrass
- Several deployed in St. Catherines harbour
- Changes to seabed and colonisation of organisms on the block and buoys is being monitored by Jersey Marine Conservation

