

a)



b)

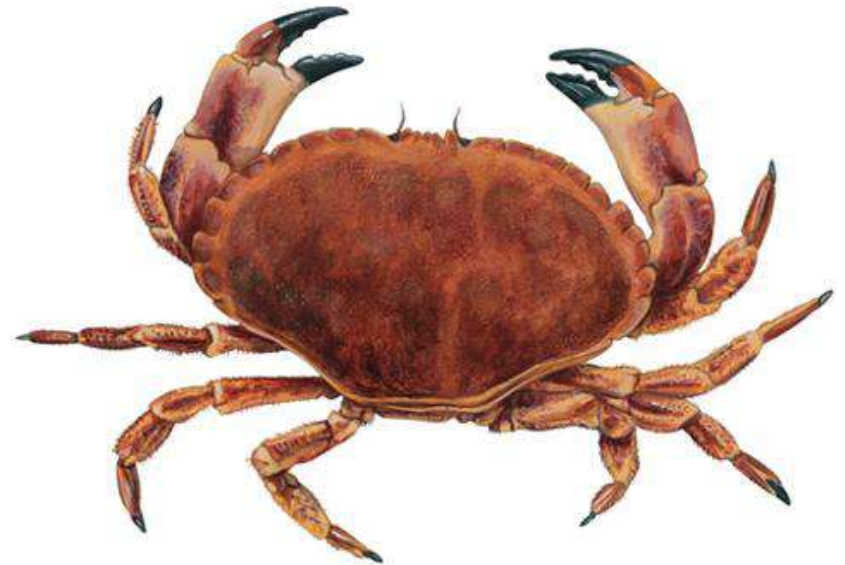


Image cred: Cornwall Good Seafood Guide <http://www.cornwallgoodseafoodguide.org.uk>



21 inches



Rationale

- Where - Lyme Bay MPA (Statutory Instrument) in its 11th year of protection from bottom towed fishing
- What - Recovering ecosystem, open to other methods of exploitation (fishing)
- Issue? - Anecdotal and sighting reports of increasing potting activity since closure (Mangi *et al.* 2011)
- Profitable and dominant fishery in English inshore
- Reduced conflict/increase in catch quality & quantity
- Impact of potting activity on benthos not well understood
- Controlled study carried out by University of Plymouth with the Blue Marine Foundation - 2014-2017



Design overview

- 4 treatments introduced - where potting densities were controlled

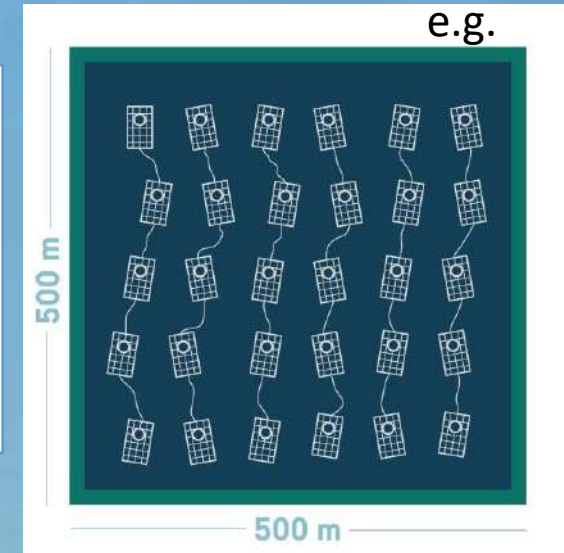
No Potting areas - control

Low potting areas

Medium potting areas

High potting areas - elevated fishing effort

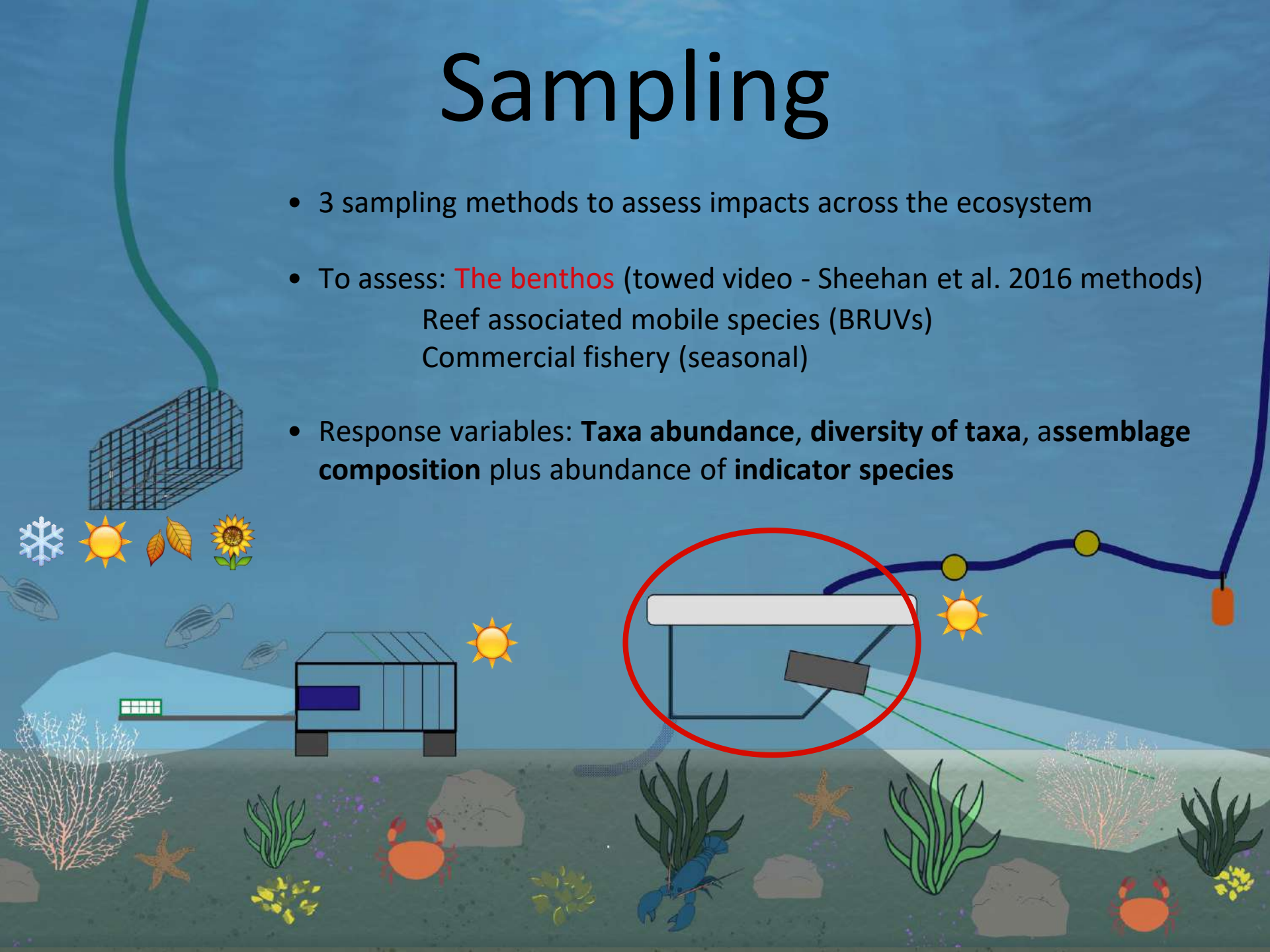
Close to ambient levels

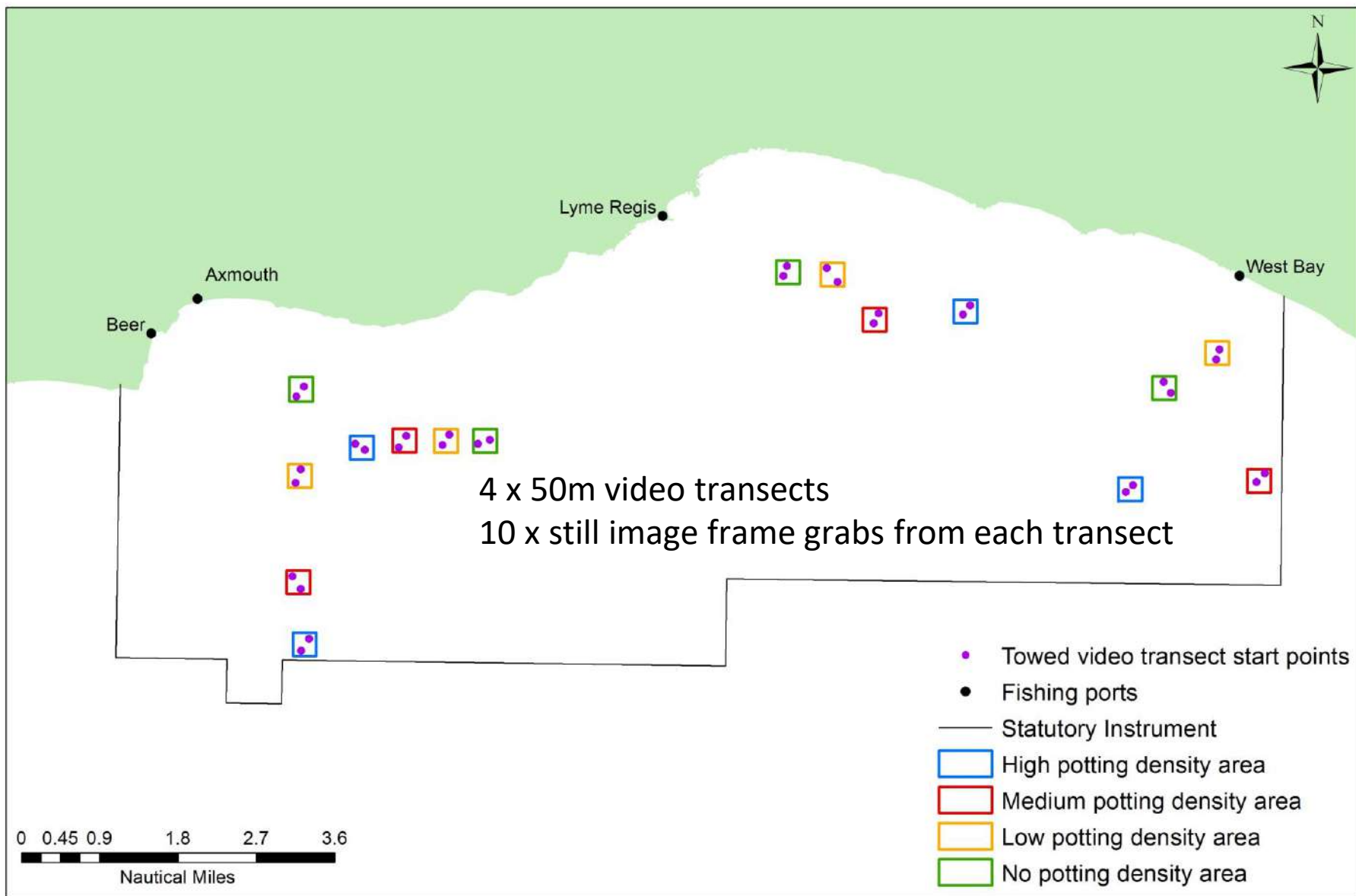


- Sited on reef habitat inside the Lyme Bay MPA
- Replicated 4 times (16 total) and monitored over 4 years
- Densities maintained through collaboration with fishing industry - normal episodes of fishing

Sampling

- 3 sampling methods to assess impacts across the ecosystem
- To assess: **The benthos** (towed video - Sheehan et al. 2016 methods)
Reef associated mobile species (BRUVs)
Commercial fishery (seasonal)
- Response variables: **Taxa abundance, diversity of taxa, assemblage composition** plus abundance of **indicator species**





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3:15:54



Summary

- Main takeaway - first time threshold of reef impact associated with potting demonstrated
- Physical damage to some species in areas of high potting activity possible
- Sensitive species impacted by sustained high levels of potting - Ross Coral and Neptune's Heart Sea Squirt
- Relatively large and slower growing – ecologically functionally important
- Management implications for achieving well-managed MPAs and meeting management objectives – i.e. protecting reef
- At present over half of the UK's MPAs are being introduced to protect reef habitats and features
- Large amount of potting effort in the inshore fishing sector
- Keep an eye out for DEFRA and peer reviewed publication



Thanks Questions at the 🍺?

With thanks to:
Blue Marine Foundation
DEFRA
Lyme Bay fishermen



**BLUE MARINE
FOUNDATION**



**UNIVERSITY OF
PLYMOUTH**
School of Biological and
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Department
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