



# Understanding species' responses to changing environmental conditions using citizen science approaches to data gathering

Stephanie Dickens - CoCoast Project Coordinator  
Newcastle University



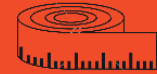
# The Project

*“A unique interdisciplinary research project that explores the extent to which members of the public can contribute meaningfully to marine evidence gaps and address ecological hypotheses”*

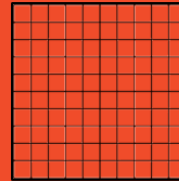
- HLF funded, 3 year, UK wide project
- Baseline of robust & relevant data
- ~3,000 people trained in intertidal survey techniques



**1,710 SURVEY DAYS**



**2,772 TRANSECTS**



**22,411 QUADRATS**



**275,661 DATA POINTS**

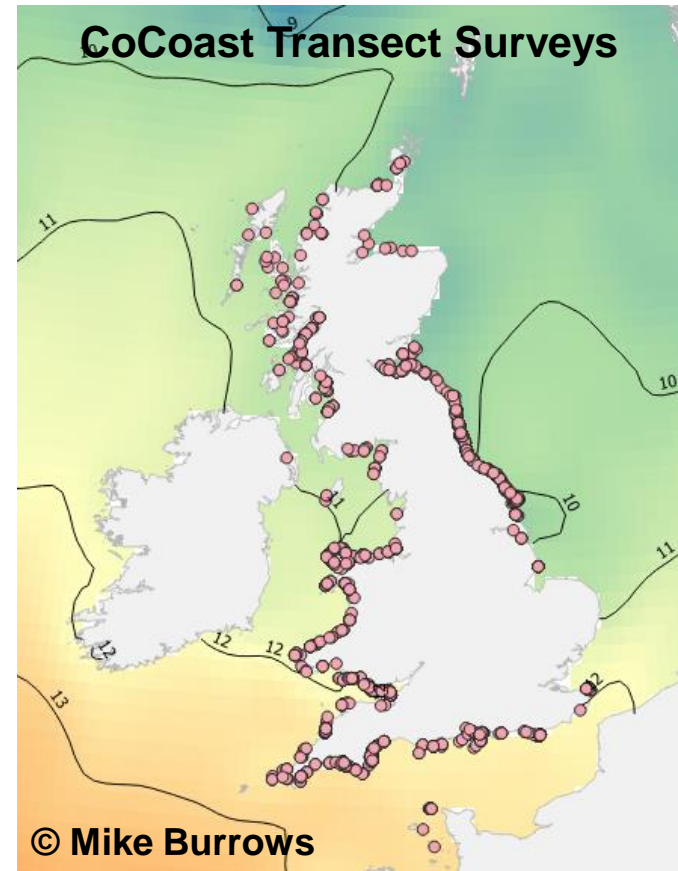
MARINE BIOLOGICAL ASSOCIATION  
PLYMOUTH

CAPTURING  
OUR COAST



# Preliminary Analysis – Thermal Niches

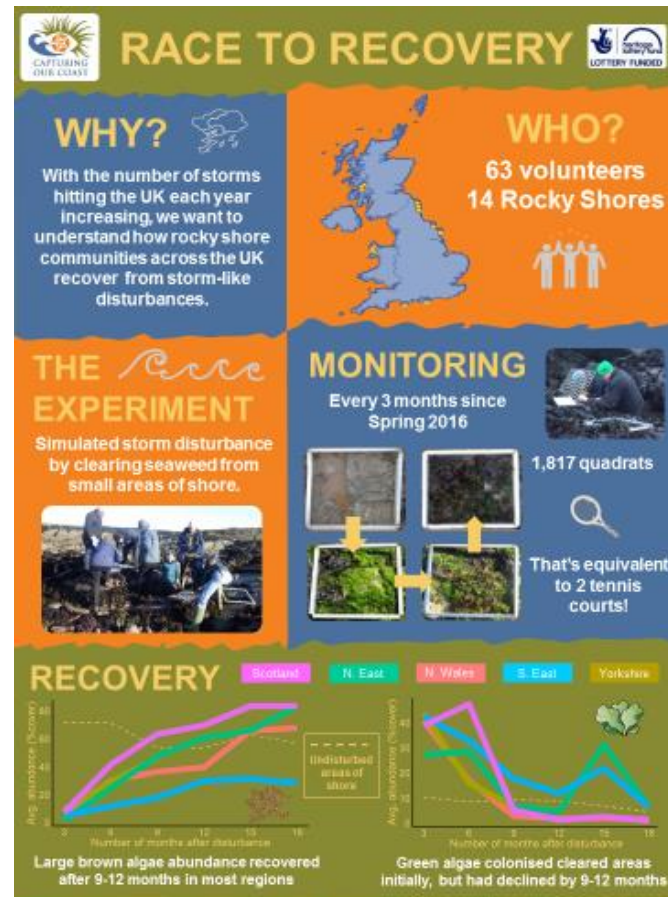
- $H_0$ : Species are more abundant in centre of climatic range (Whittaker, 1956)
- Requires large datasets – broad geographic scales & comparable methods
- Expect species at cold end to **↑** warm end **↓** with increasing temperatures
- Can demonstrate which species are likely to be more vulnerable if temperature changes occur



# Ecological Resilience

- Variation in recovery between and within regions
- Clear pattern of succession at all sites
- Large brown algae recovered after 8-12 months
- Reached it's original length after 2 years

Results video @ Capturing our Coast YouTube channel



# The CoCoast Legacy

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- Increased scientific knowledge
- Data available through NBN
- Activities tailored to policy needs – CoastXplore App/Marine Invaders surveys

CoCoast has demonstrated that marine citizen science can generate evidence and contribute meaningfully to robust marine ecological data



# Thank you

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Thank you to all our CoCoast volunteers, who have been enthusiastic and dedicated - without them this project would not have happened

[cocoast@newcastle.ac.uk](mailto:cocoast@newcastle.ac.uk)  
[www.capturingourcoast.co.uk](http://www.capturingourcoast.co.uk)  
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