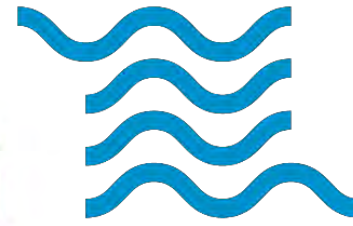




VALUING NATURE



The Wash and
North Norfolk
Marine Partnership

Protecting Nature and Culture



UNIVERSITY
OF HULL

Valuing ecosystem services and societal benefits provided by Marine Protected Areas using space-based imaging of the coastal zone

Sam Lew: The Wash and North Norfolk Marine Partnership

Daryl Burdon and Rodney Forster: Institute of Estuarine and Coastal Studies, University of Hull (host organisation)

The Wash and North Norfolk Marine Protected Area network

EC designated network of four Marine Protected Areas (MPAs)

- Part of the Natura 2000 network for nature conservation



The Wash and North Norfolk Marine Protected Area network



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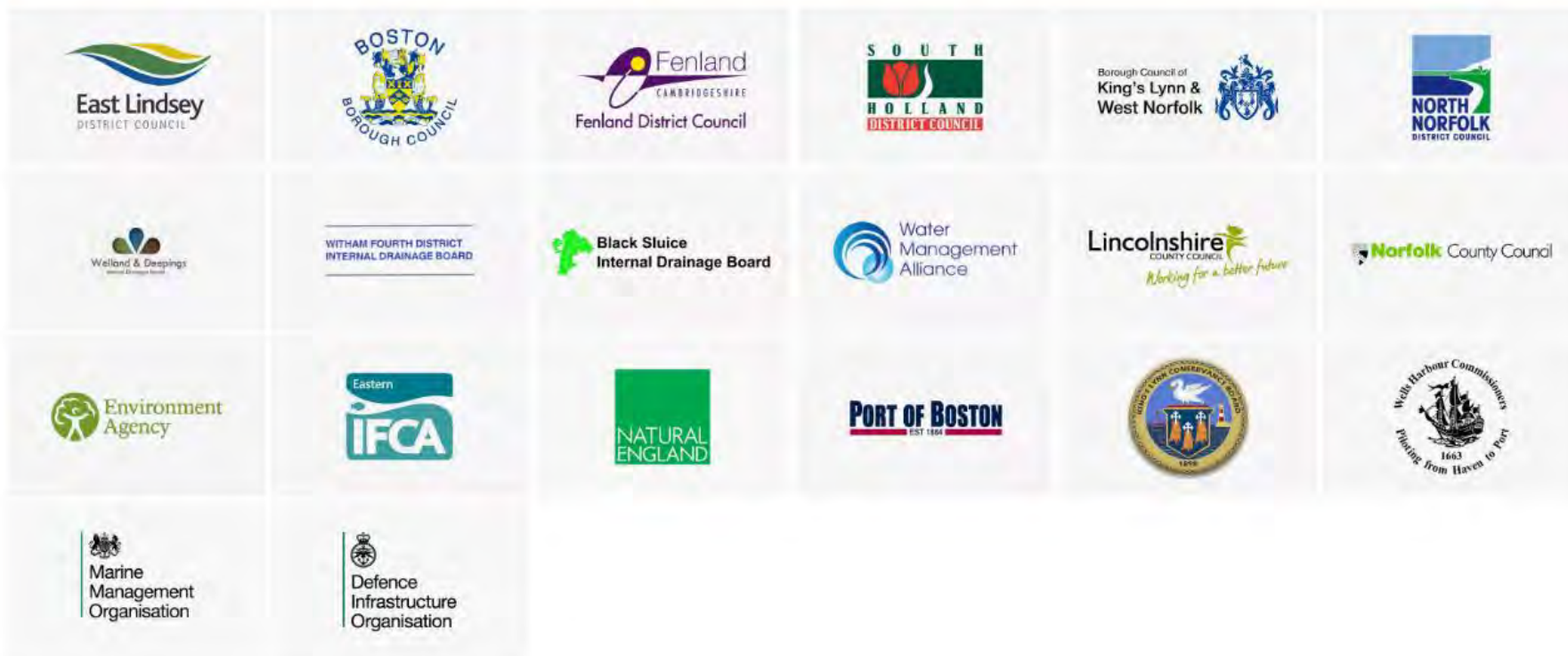
The Wash and North Norfolk Marine Protected Area network



The Wash and North Norfolk Marine Partnership – *protecting nature*

Supporting regulators to meet their shared statutory duties to the MPA network and to meet conservation objectives

The Regulators



The Wash and North Norfolk Marine Partnership – *protecting culture*

Advisory groups: sea-users and regulators meet to ensure that management of MPA features is informed by local expertise



The Wash and North Norfolk Marine Partnership – *protecting culture*

Challenging to build relationships within a legislative framework that does not explicitly represent livelihoods or societal values



Valuing Nature Placement

Priorities for The Wash and North Norfolk Marine Partnership Protecting nature and culture

1. Understand and document community ecosystem services and societal values of MPA features
2. Pioneer new communication tools
3. Build bridges between different sea-user groups and regulators – support the Regulators' Code, 2014

All leads to improved management and healthier seas

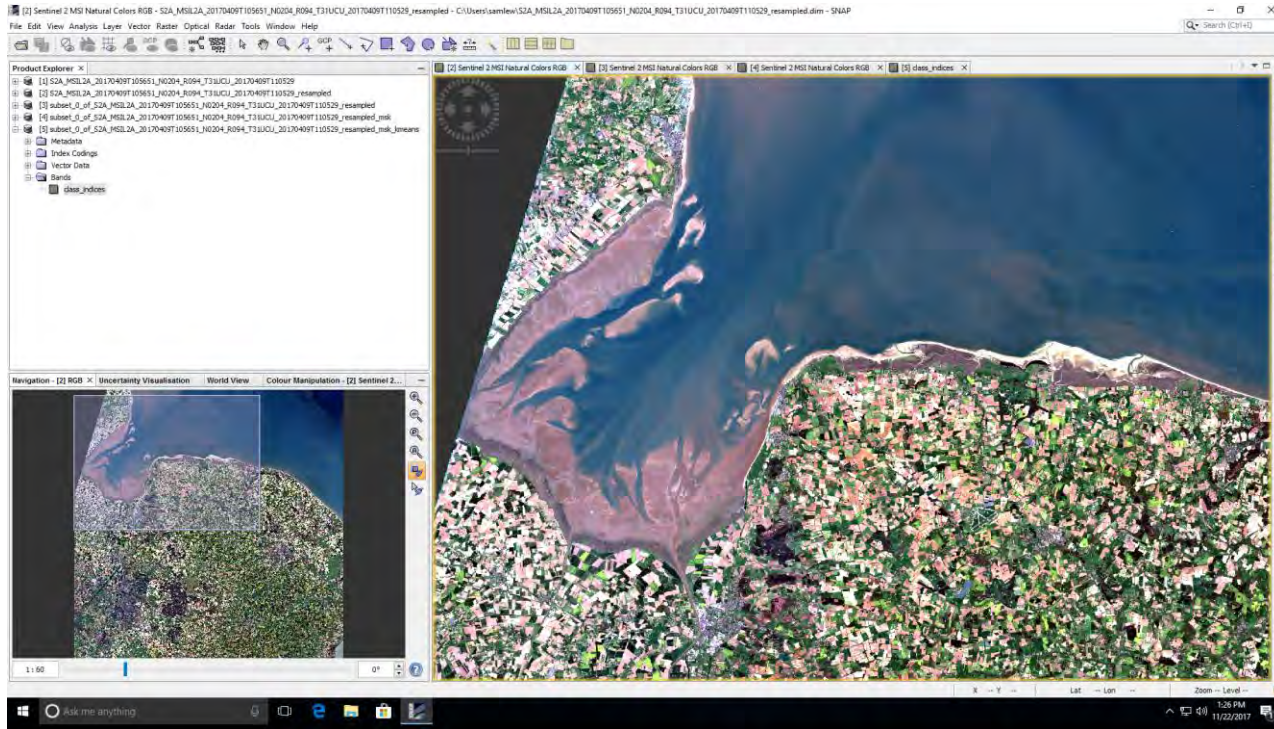
Valuing Nature Placement: objectives

Phase 1: Create stunning satellite imagery of MPA features using open-access data and software: full training at University of Hull, IECS

Pilot the approach using saltmarsh and identify sub-features

- The Wash and North Norfolk saltmarsh is the most extensive in UK
- Engaged saltmarsh user network within the WNNMP
- Extensive saltmarsh valuation research to support work
- Easily identifiable from space using pigment optical properties

Valuing Nature Placement: objectives

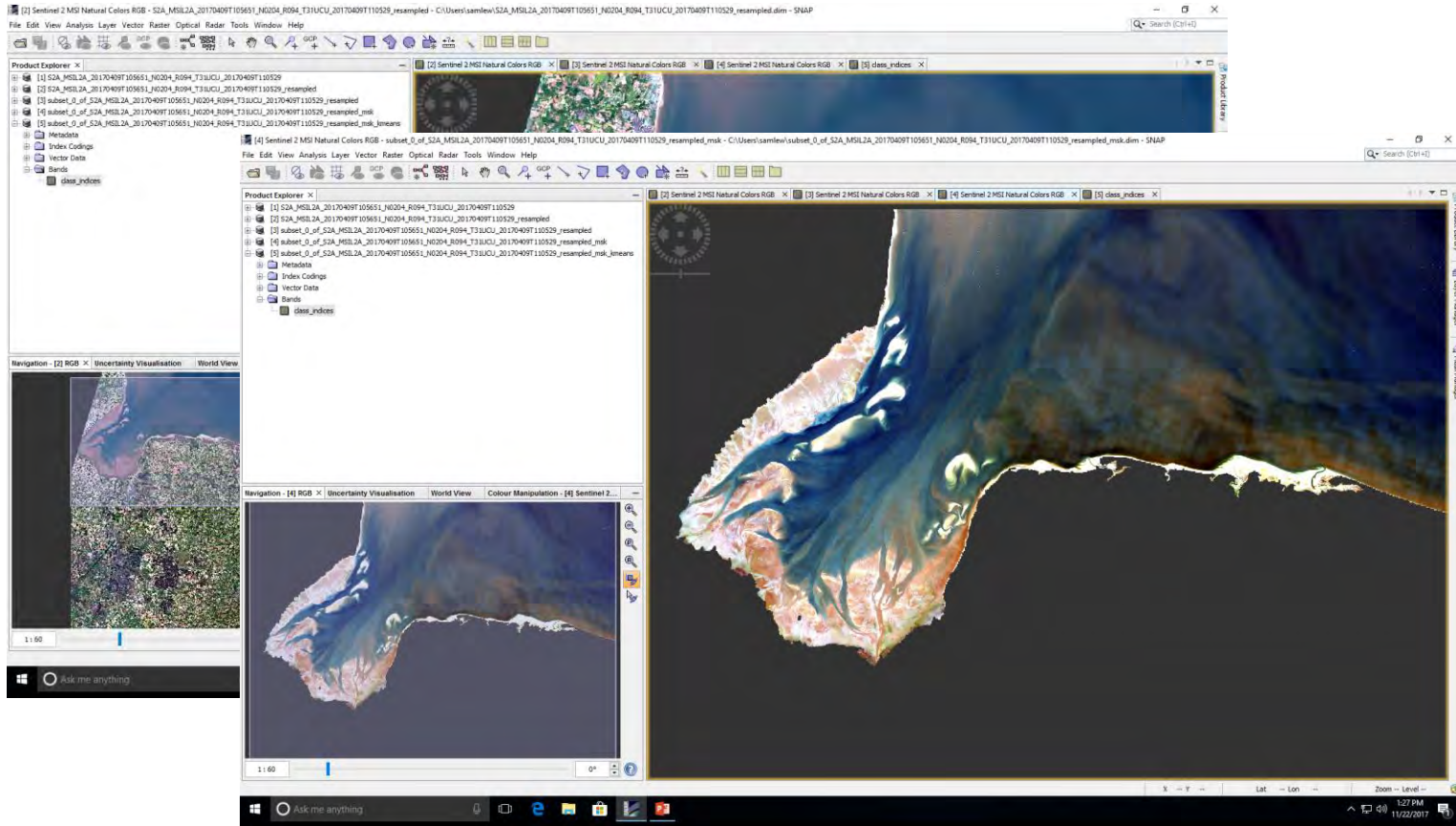


Data source: Sentinel 2 data from the EU Copernicus programme

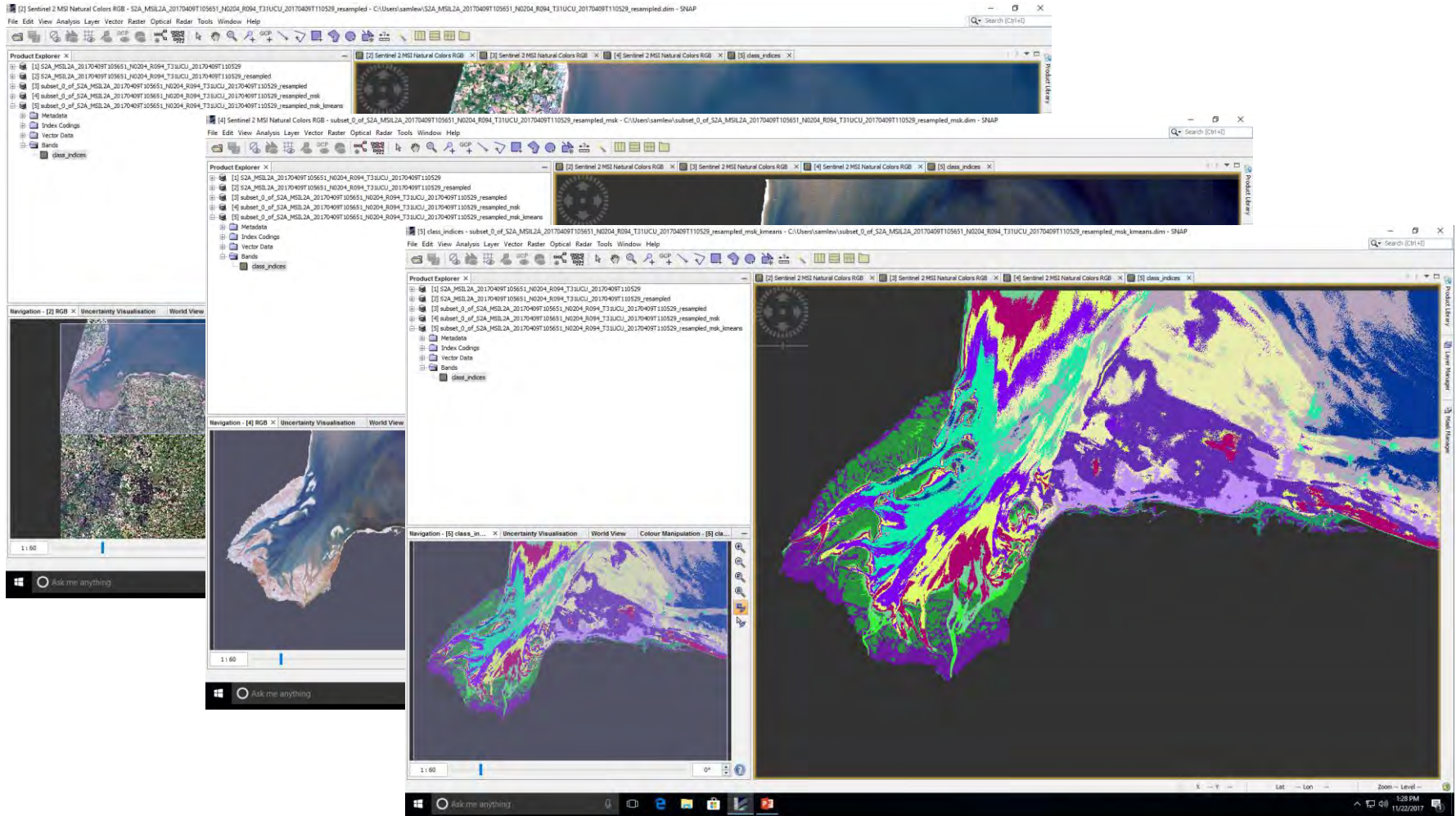
Data manipulation: SNAP - European Space Agency

Visualisation: QGIS - Geospatial visualisation software

Valuing Nature Placement: objectives



Valuing Nature Placement: objectives



Valuing Nature Placement: objectives

Phase 2a: Run workshops with regulators, saltmarshes users and coastal conservation NGOs to verify/query sub-features identified using satellite data: full training at University of Hull, IECS

Phase 2b: Feed workshop results back into sub-feature classification maps

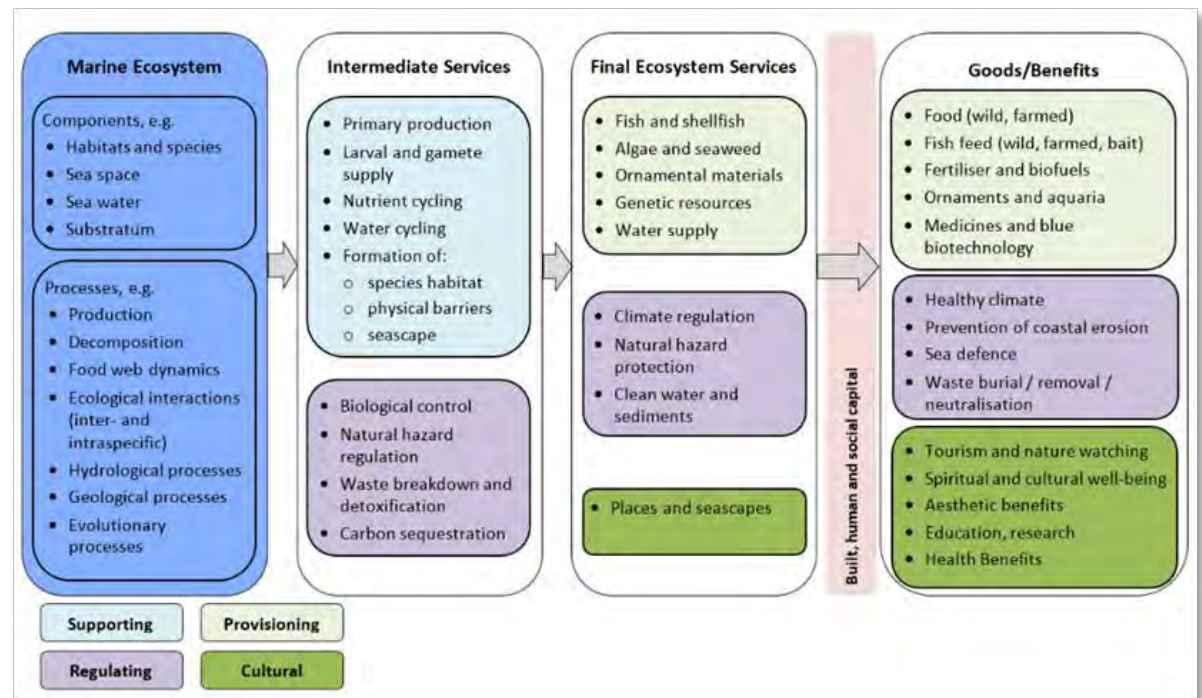
Phases 1 and 2 create visual communication tools through collaboration between academic researchers, regulators, conservation NGOs and sea-users

Valuing Nature Placement: objectives

Phase 3: Identify community ecosystem services of saltmarsh features using stakeholder workshops building on satellite maps

Resources available to build a tailored approach

1. Ecosystem services matrices
(Turner et al., 2015)



Valuing Nature Placement: objectives

Phase 3: Identify community ecosystem services of saltmarsh features using stakeholder workshops building on satellite maps

Resources available to build a tailored approach

1. Ecosystem services matrices
2. 1000+ minutes of video interviews on MPA values
 - MCS and E-IFCA
 - Training for qualitative data analysis on NVivo



Valuing Nature Placement: outputs

MPA Mapping and Values research tool kit

- Step-by step instructions to deliver research phases 1 -3
- Share the approach and test the tool kit by delivering a workshop to MPA officers managing saltmarsh features

Peer review methods paper on the approach in *Remote Sensing of Environment* or similar journal

Platform for student participation in WNNMP by continuing the research with other designated features of the MPA network

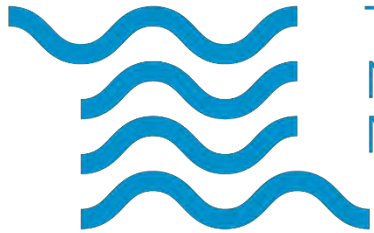
Valuing Nature Placement: outcomes

Multidisciplinary saltmarsh management network involving regulators, conservation NGOs, academic researchers and local stakeholders

Saltmarsh community ecosystem services and societal values identified and formalised using novel satellite visual tools and collaborative workshops

Strengthened relationships between regulators and local saltmarsh user community

Contacts



The Wash and
North Norfolk
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