Development of the UK Benthic Imagery Action Plan

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NMBAQC **SJNCC**





NE Atlantic Marine Biological Analytical Quality Control Scheme

- 38% UK waters designated as MPAs
 - 371 inshore, offshore and deep sea MPAs form a network
- Two fifths of this network harbours reefs, rocky or sensitive habitats that are best surveyed using underwater cameras
 - Among most biodiverse marine habitats in UK;
 - Numerous ecosystem functions such as habitat provision, refuges, food sources and nursery areas
- All SNCBs, including JNCC, extract habitat and biological evidence from imagery to assess and report on the condition of rock and reef habitat in the MPA's, and across the UK





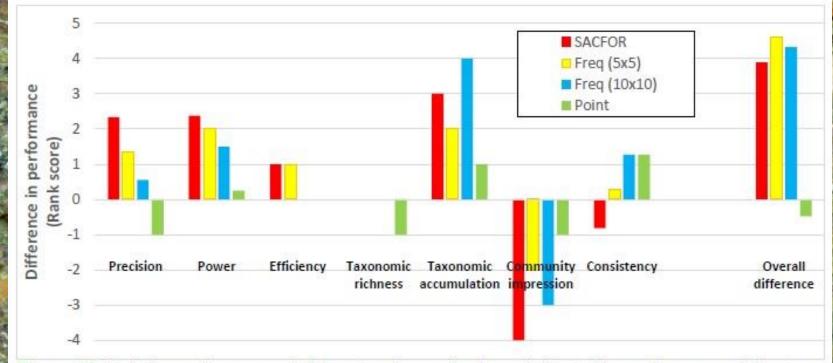


Figure 13. Relative performance of data extraction methods, as indicated by rank scores relative to combined scores of Abundance Count (erect/solitary taxa) and Percentage Cover (ground cover taxa) for all key data sets of every data metric in this study.

JNCC report: Moore, J., van Rein, H., Benson, A., Sotheran, I., Mercer, T. & Ferguson, M. (2019). Optimisation of Benthic Image Analysis Approaches, JNCC Report, No. 641, JNCC, Peterborough, ISSN 0963-8091. URL: http://data.incc.gov.uk/data/3dbf346b-685c-4db1-90a1-b205af482146/JNCC-Report-641-FINAL-WEB.pdf

Condition of Benthic Habitat Communities: The Common Conceptual Approach



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Marine online assessment tool

Introduction to UK Marine Strategy Summary of progress towards Good Environmental Status Biodiversity, food webs and marine protected areas Pressures from human activities Ocean processes and climate Uses of the Marine Environment Acknowledgements

marine environmental data & information network



Condition of Benthic H

The Common Concept

The achievement of Good Environmental Status is uncertain for intertidal and soft sediment habitats. The levels of physical damage to soft sediment habitats are considered to be consistent with the achievement of Good Environmental Status in UK waters to the west of the Celtic Seas, but not in the Celtic Seas or in the Greater North Sea.

For sublittoral rock and biogenic habitats Good Environmental Status has not yet been achieved.

How progress has been assessed

In the UK Marine Strategy Part One (<u>HM Government, 2012</u>) the UK set out "Characteristics of Good Environmental Status" for biodiversity and seafloor integrity:



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THE BIG PICTURE

Benthic Imagery Analysis Workshop

Workshop report April 2019

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Workshop report: http://www.nmbaqcs.org/media/1765/the-big-picture-workshop-2019.pdf/

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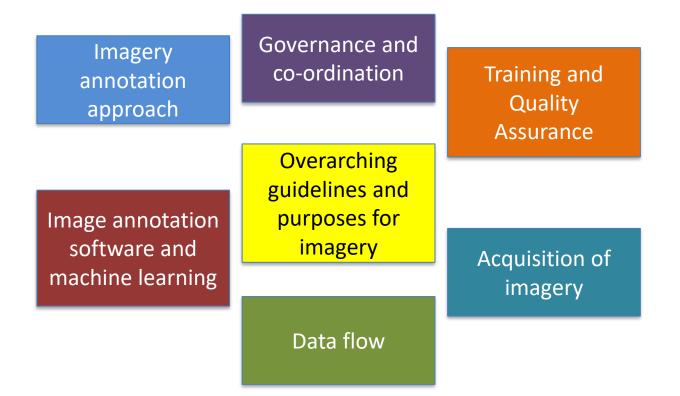
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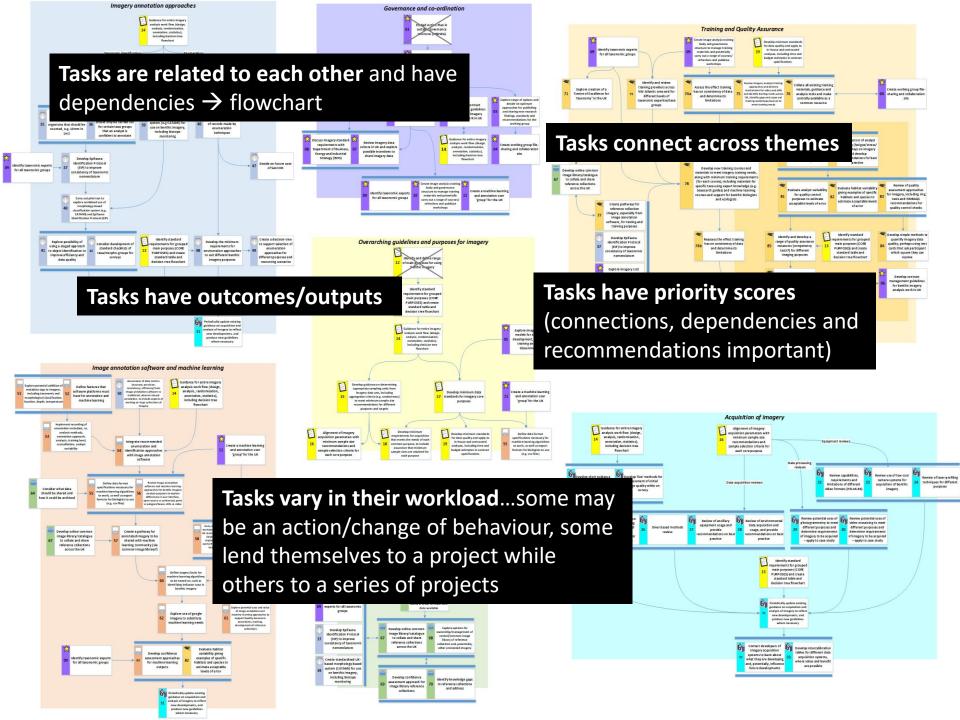
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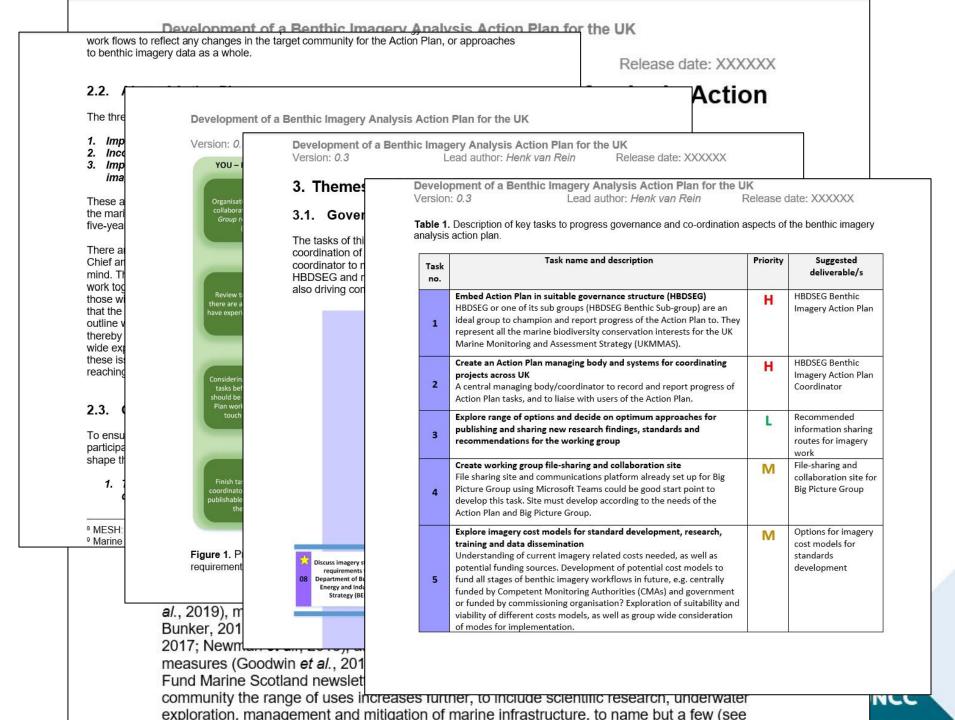
Development of Benthic Imagery Action Plan

 Carried out by Plan Development Group from BIG PICTURE workshop (JNCC (lead), MSS, NOC, Cefas, NRW, Envision);



 PDG identified 87 tasks and organised them into 7 themes from BIG PICTURE workshop





Nevelonment of a Benthic Imageny Analysis Action Plan for the UK work flows to reflect any changes in the target community for the Action Plan, or approaches

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to benthic imagery data as a whole.

Scope Marine biodiversity conservation community of the UK for next five years (2020-25)

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The tasks of th coordination of coordinator to HBDSEG and also driving co

Governance Coordinated under North-East Atlantic Marine Biological Analytical Quality Control Scheme (NMBAQC) reporting to the Healthy and Biologically Diverse Seas Evidence Group (HBDSEG)

> *al.*, 2019), m Bunker, 201

2017; Newm

measures (Goodwin et al., 201 Fund Marine Scotland newslet Aims are to:

- Improve quality and comparability of benthic imagery data across UK
- Incorporate advances in benthic imaging technology into existing work flows

Release date: XXXXXX

Action

• Improve collaboration opportunities for organisations working with benthic imagery



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community the range of uses increases rurner, to include scientific research, underwater exploration, management and mitigation of marine infrastructure, to name but a few (see



Under the governance of the NMBAQC, the Action Plan lays out a 'road map' for collaborating organisations to follow for the next five years, encompassing the immediate needs for method improvement and standardisation. However, this Action Plan should also be considered as a 'live' and developing process, rather than a static document. In this way the development and incorporation of emergent technologies may be introduced to the benthic imagery workflows in future. A working group, The Big Picture Group, has been set up to tackle tasks in the Action Plan and a facilitator, The Action Plan Coordinator, appointed to manage working collaborations of the Big Picture Group.

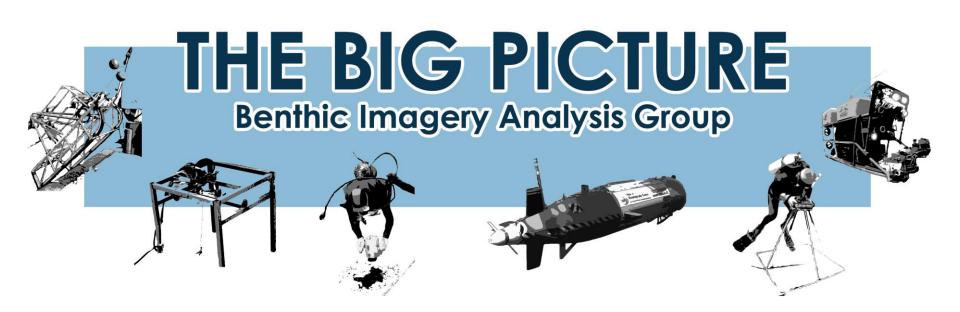
Action Plan resources:

The Big Picture Group (Benthic Imagery Working Group for NMBAQC)



Questions?





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