



VALUING NATURE

Determining the Impacts of Harmful Algal
Blooms on Cultural Ecosystem Services and
Human Well-being

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Background / Research Interests

- PhD in geography, University of Exeter (2014)
- Research conducted at the Jurassic Coast, Dorset to develop conceptual understanding of cultural ecosystem services, the ways in which they contribute to human well-being and how to capture and measure them.
- Other relevant research in this area:
 - Part of UKNEA-FO cultural services team (case study from rural Devon)
 - Cultural ecosystem services in the coastal/marine area (Cornwall, UK)

The 'Blue Environment'

Analysis of English census data revealed a positive association between self-reported general and mental health and living near the coast (White et al., 2013).

Everyday visits to the coast were associated with higher levels of stress-reducing positive emotions (calmness, relaxation, revitalisation) than visits to urban parks or open countryside (Natural England, 2011)



The Impact of Harmful Algal Blooms on the Coastal/Marine Environment



PML

Plymouth Marine
Laboratory

With a strong track record in excellent marine science over four decades, we are committed to addressing the challenges facing our ocean today for the benefit of us all

Aspirations for Placement

- To develop understanding of the occurrences and impacts of HABs on the marine environment
- To link this with social science understandings of how these changing marine conditions impact on cultural services and human well-being
- To highlight the importance of inter-disciplinary approaches to environmental evaluation and management

Contribution to valuing nature debates

**Changing marine conditions:
HAB occurrences**

Cultural Services

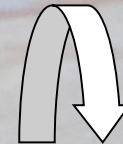
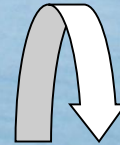
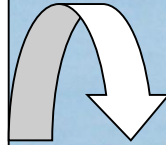
(e.g 'healthy' water and biodiversity in valued spaces for human-ecological interactions)

Cultural Benefits

(e.g. aesthetic value, recreation inspiration)

Human well-being

(e.g. attention restoration, stress reduction)



Outputs and Outcomes

- Collaborative academic paper integrating natural and social science to explore wide-ranging impacts of HABs
 - Research as basis for full research proposal
 - Report summarising key learning points for wider valuing nature community
- Contributing to wider knowledge:
- Communicating risks and impacts of HABs to wider audience
 - Demonstrate importance of integrated approach for understanding changing environmental conditions and impacts on society