



VALUING NATURE

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

Dr Cheryl Willis
University of Exeter
C.A.Willis@exeter.ac.uk

NERC Valuing Nature Placement Wrap-up Event
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Objectives of Placement

- To review natural science research on the occurrence and impacts of harmful algal blooms (HABs) on the coastal and marine environment
- To link this with social science understandings of how changing marine conditions impact on cultural services and human well-being
- To highlight the importance of inter-disciplinary approaches to environmental management

Key Activity 1: Literature Review of Natural Science HAB Research

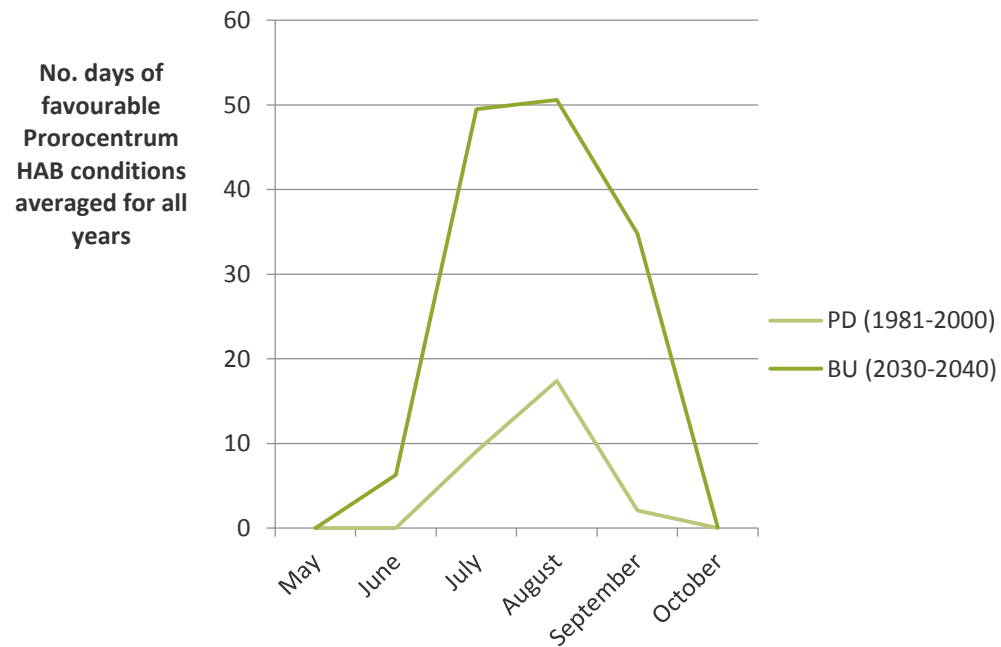


Key Activity 2: Learning From Experts at Plymouth Marine Laboratory (PML)

Phytoplankton and HAB monitoring

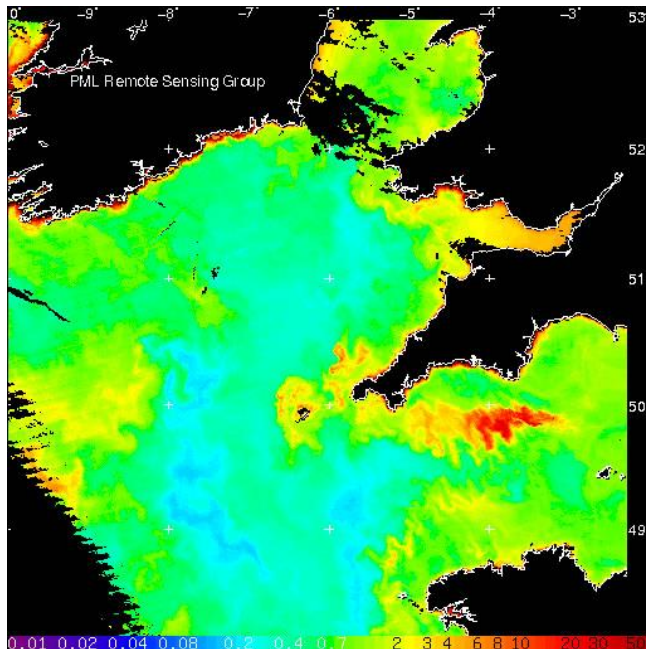


Modelling HABs

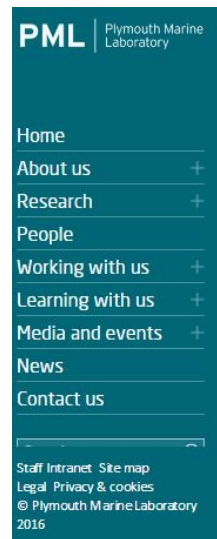


Key Activity 2: Learning from Key Experts at PML

Satellite Technology

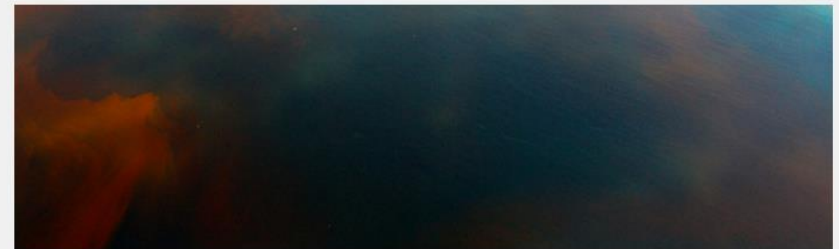


PML Media communications



How climate change will affect the impact of Harmful Algal Blooms

19 November 2014

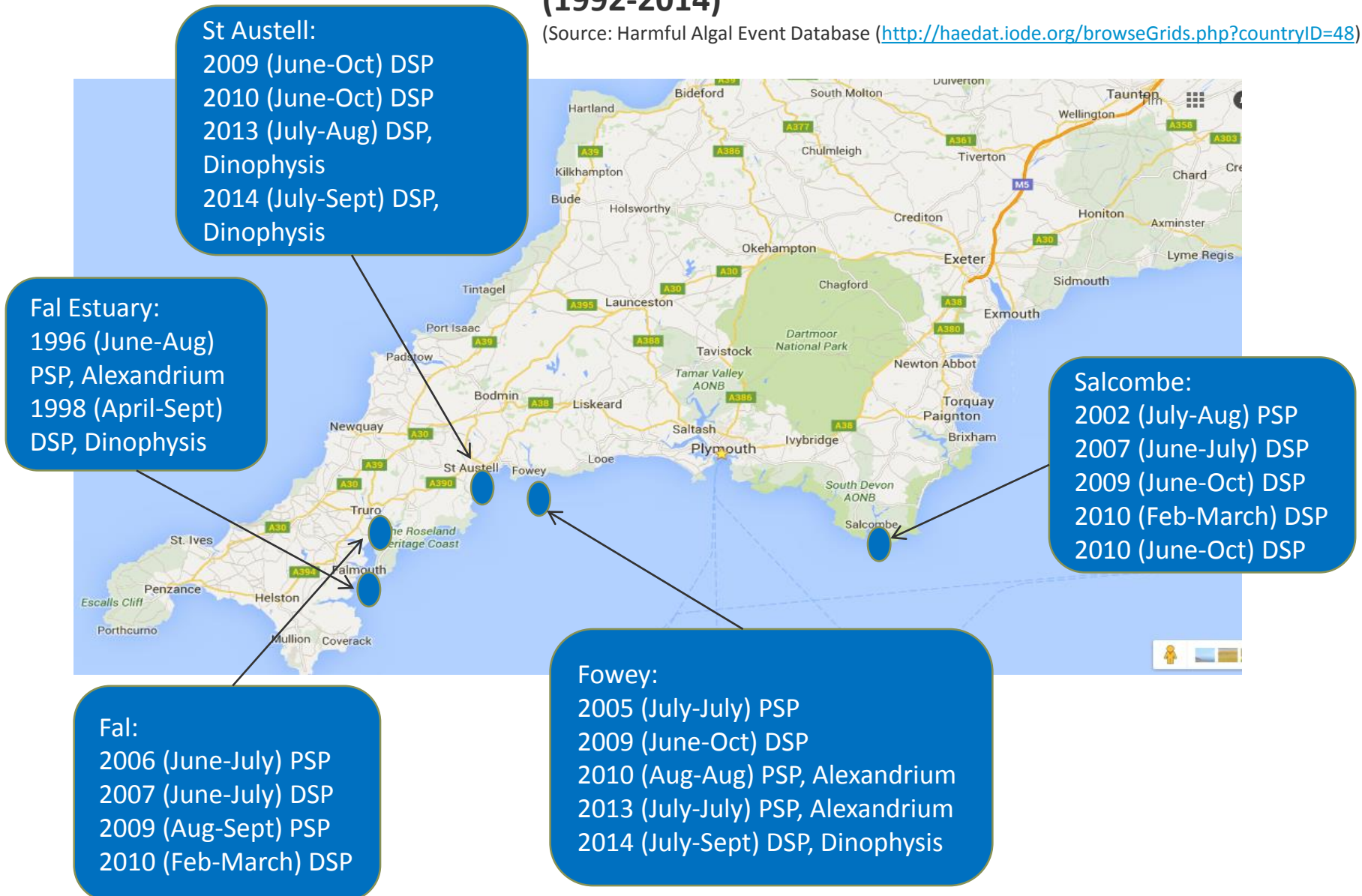


Red tide: Image courtesy of Wikimedia Commons_Alejandro Diaz

New research involving PML scientists suggests that of two Harmful Algal Bloom (HAB) types studied, one is expected to expand in North East Asia, and both are predicted to expand in the North West European/Baltic Sea region.

HAB events recorded for the South West of England (1992-2014)

(Source: Harmful Algal Event Database (<http://haedat.iode.org/browseGrids.php?countryID=48>))



Key Activity 3: Literature Review of Human Dimensions of HAB Research

- Economic and health impacts dominate the literature
- Some recognition of the importance of increased attention on wider human impacts;

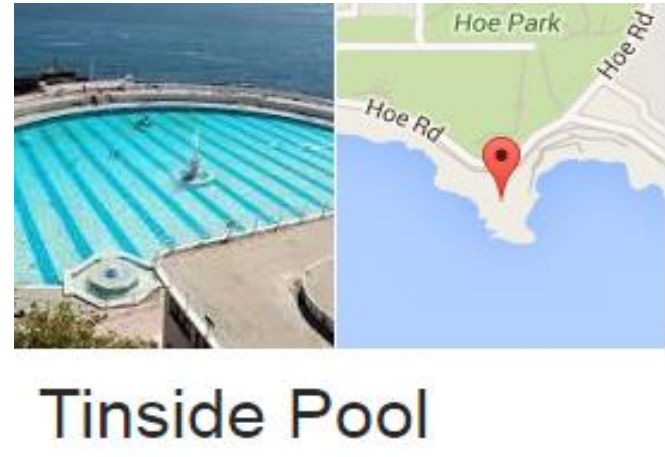
‘HAB events have an impact on communities, not only in terms of economic losses but also due to disruptions to social relationships and cultural practices’ (US Commission on Ocean Policy, 2004)

Key Activity 4: Stakeholder Interviews in the South West of England

2009 Bloom

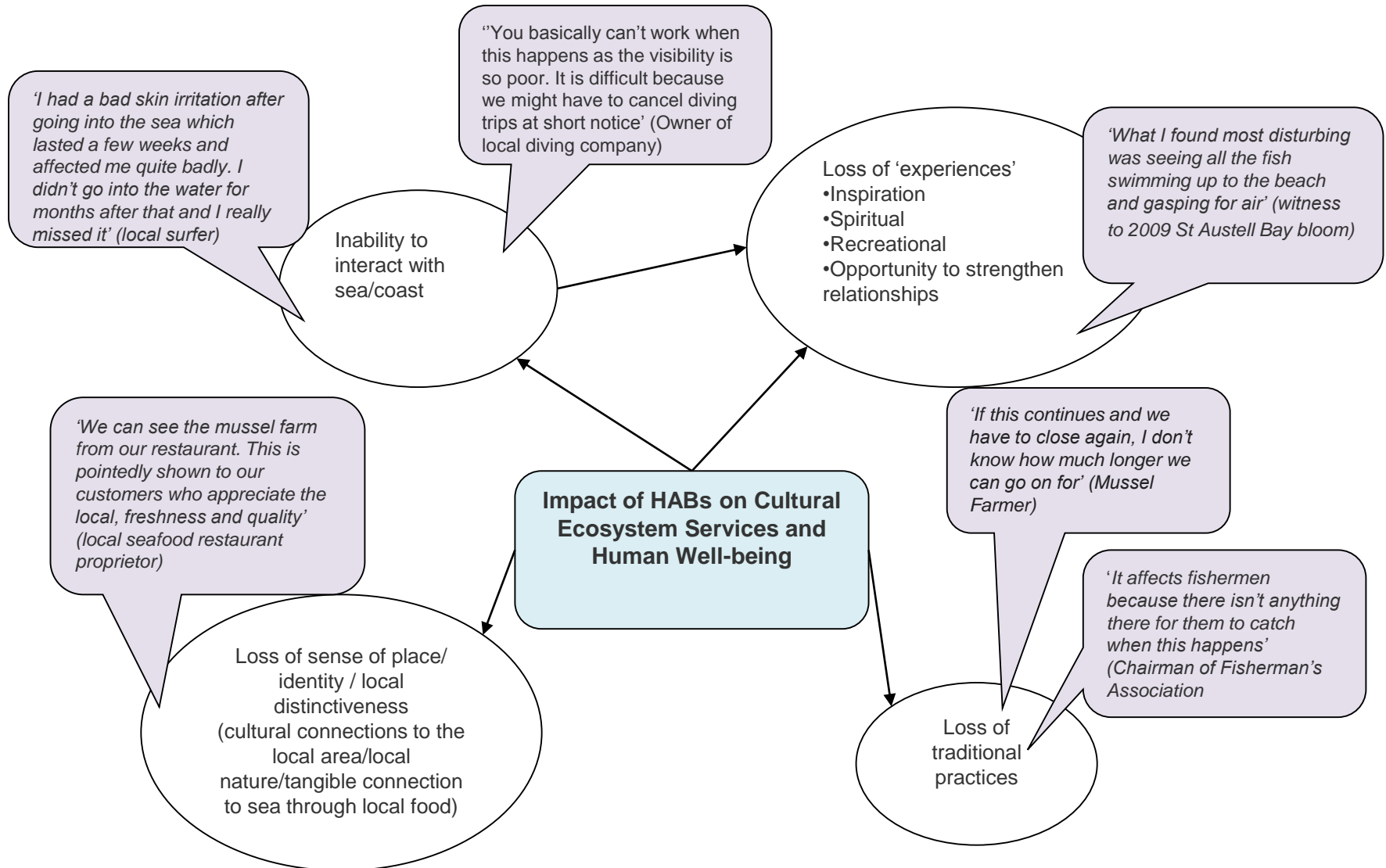


2012 Bloom



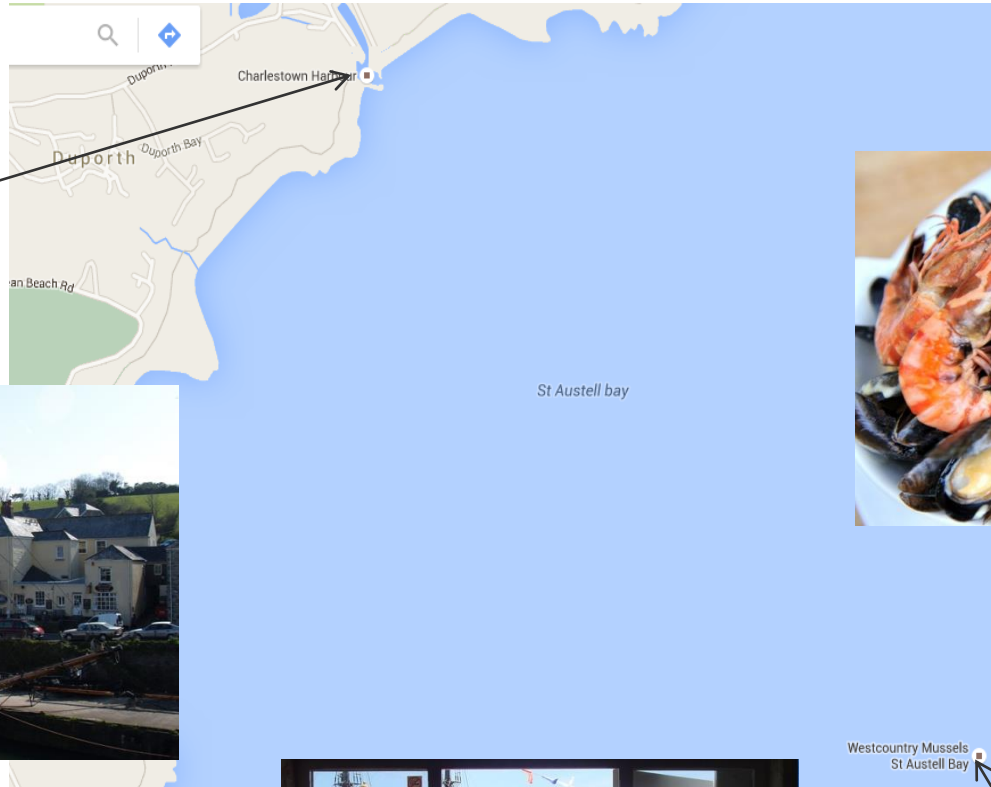
Tinside Pool

Impacts of HABs on Cultural Ecosystem Services: Evidence from the South West of England



‘The real business of Wreckers is all about serving you great Cornish produce’ <http://www.wreckers.me.uk/home.htm>

**Wreckers Seafood
restaurant**



**Westcountry
Mussels
(mussel farm)**

Learning Experiences and Challenges

- Inter-disciplinary work is vital in a more holistic understanding of the impacts of HABs
- Integrating different agendas and understanding different language of valuation
- Opportunities for continued work
 - Research proposal and collaborative paper underway