



# VALUING NATURE

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

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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

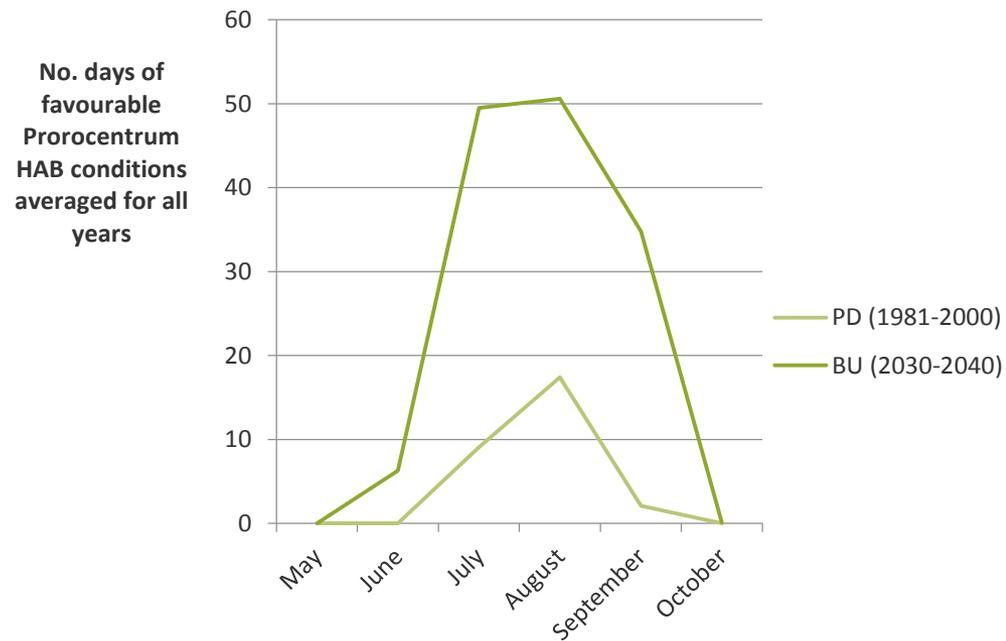


# Key Activity 2: Learning From Experts at Plymouth Marine Laboratory (PML)

## Phytoplankton and HAB monitoring

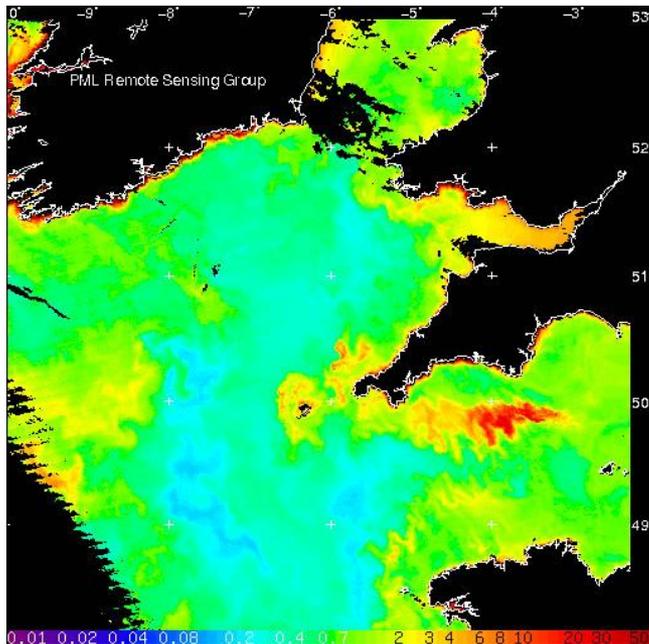


## Modelling HABs



# Key Activity 2: Learning from Key Experts at PML

## Satellite Technology



## PML Media communications

**PML** Plymouth Marine Laboratory

- Home
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- News
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Staff Intranet Site map  
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### How climate change will affect the impact of Harmful Algal Blooms

19 November 2014

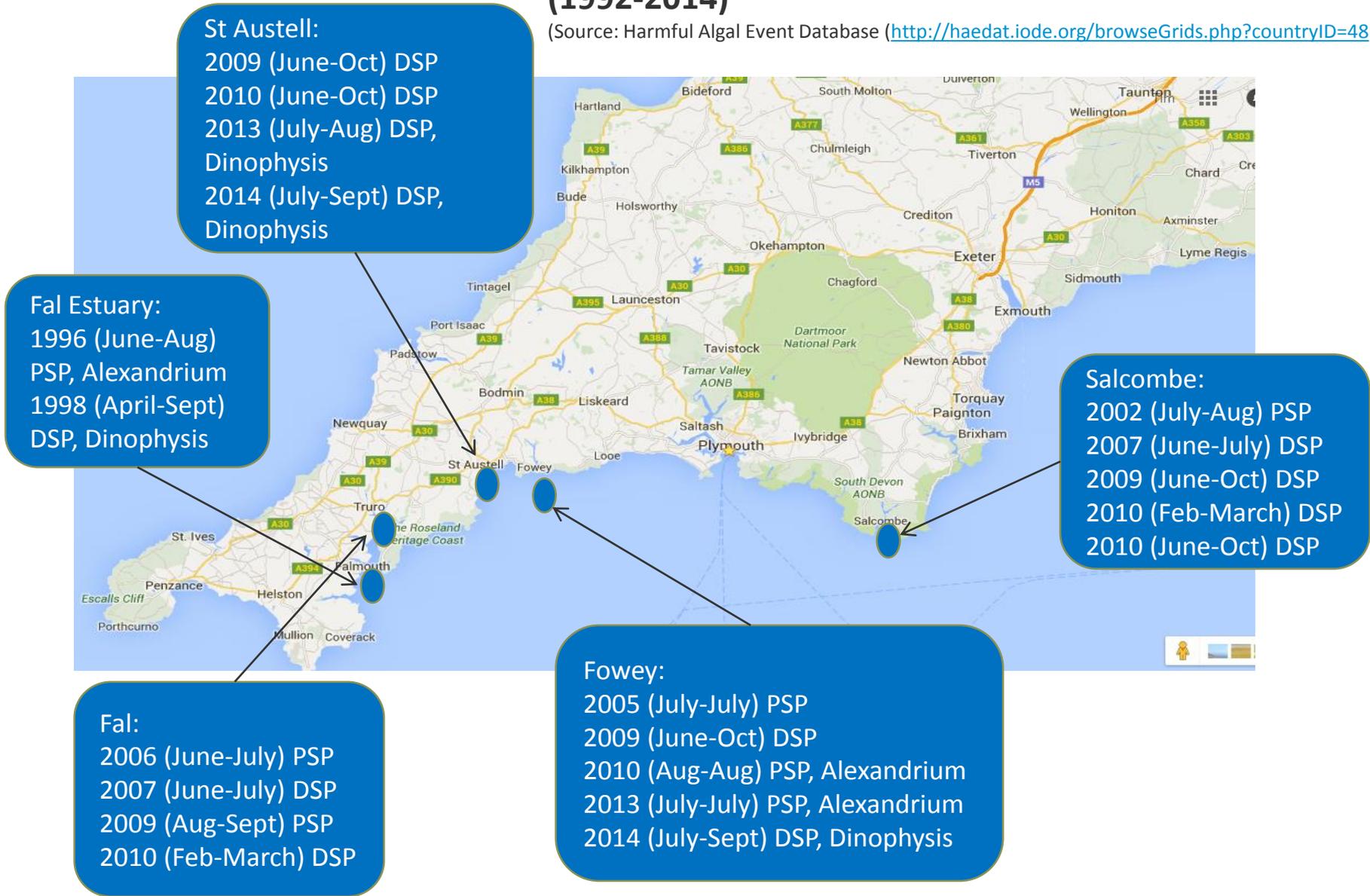


Red tide: Image courtesy of Wikimedia Commons\_Alejandro Diaz

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

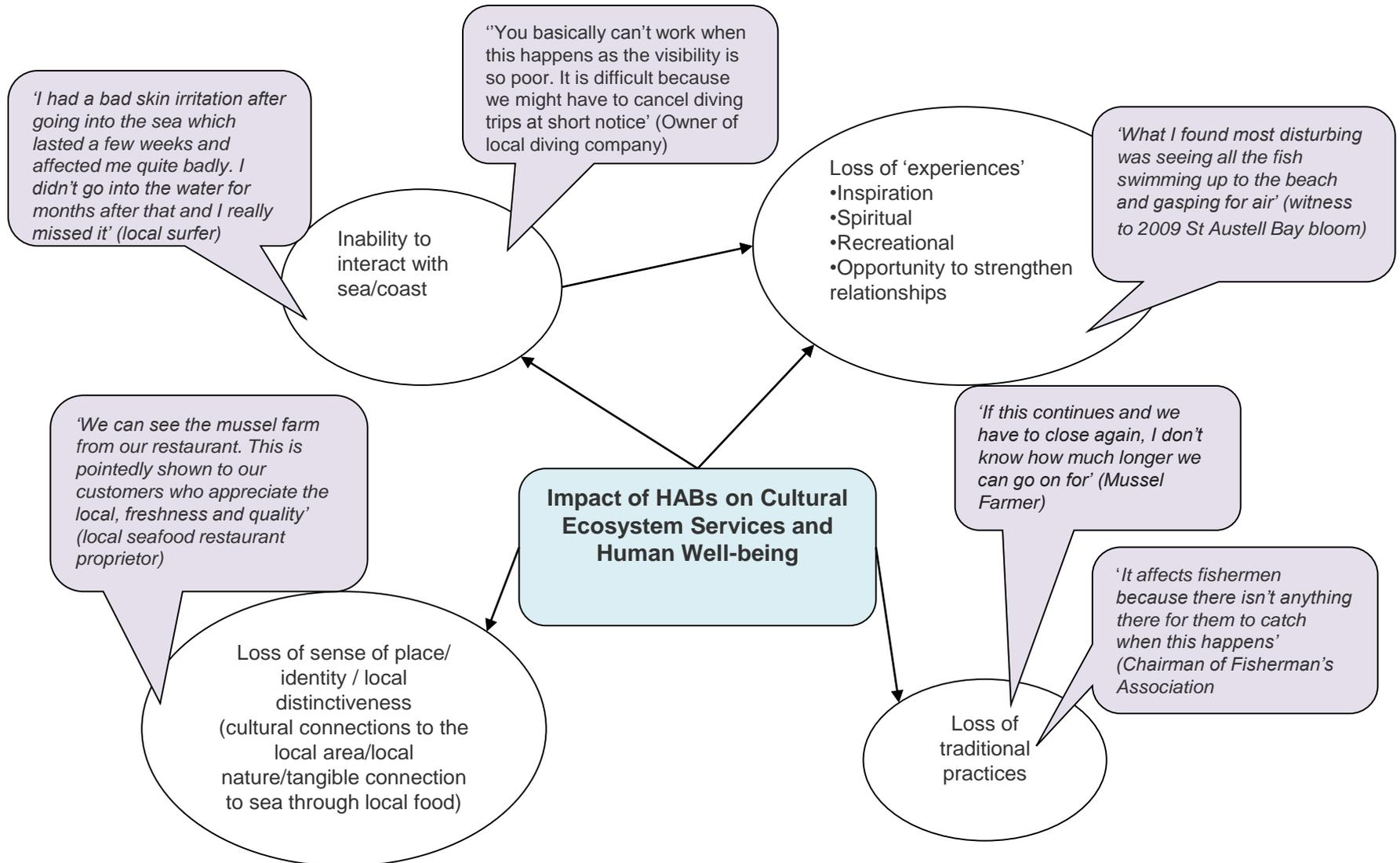


## 2012 Bloom



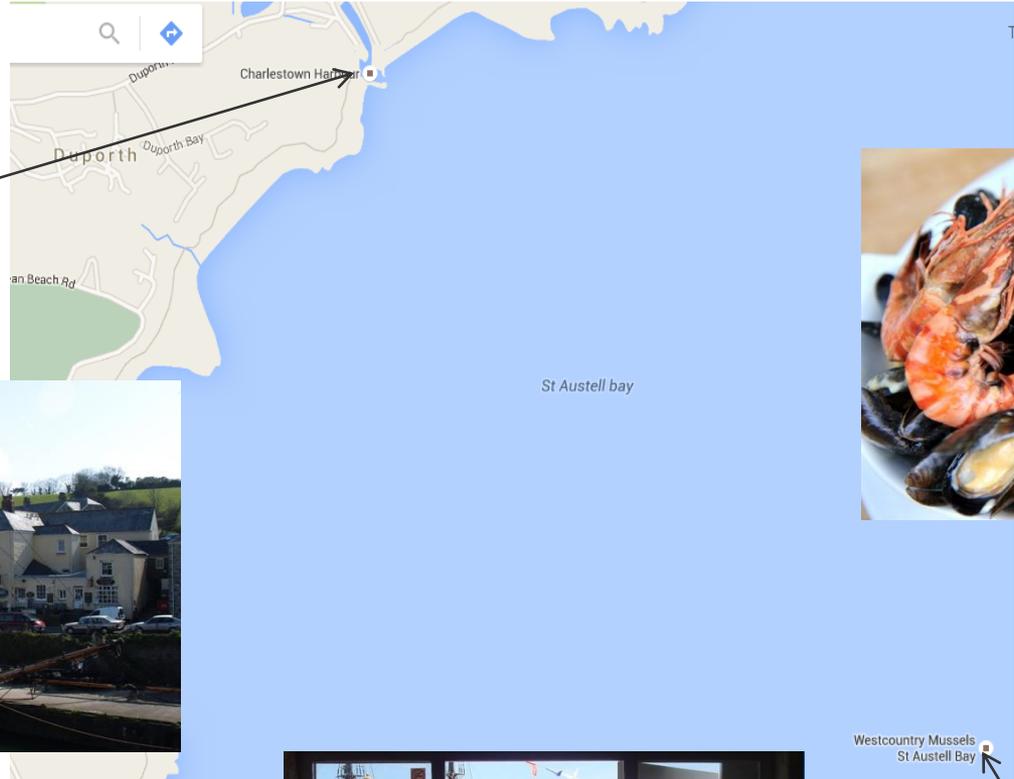
Tinside Pool

# 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  
St Austell Bay

**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