



# VALUING NATURE

**Valuing the impact of storm surges on society and human welfare, in terms of the cultural services provided by estuarine flood alleviation schemes.**

Natasha Bhatia

Home organisation: Institute of Estuarine and Coastal Studies, UofHull

Host organisation: Hull University Business School

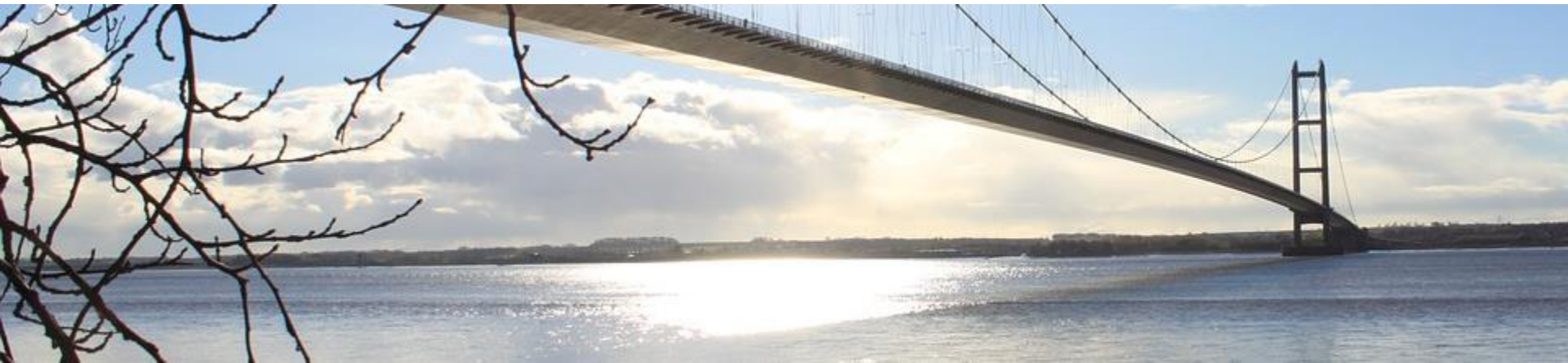
# Background

- 2008: BSc Marine and Freshwater Biology (University of Hull)
- 2014: PhD Ecological Economics  
“Ecological and economic valuation of managed realignment sites, Humber estuary, UK: benefits for society”
- 2012- present  
Marine ecologist and socio-economist at the Institute of Estuarine and Coastal Studies.

# Project outline

## Aim

**To use a business and economic setting to research the environmental, social and cultural impacts of flooding on the Humber estuary, with emphasis placed on the 2013 storm surge.**



# Project outline

## Why?

**The low lying areas around the Humber Estuary were heavily affected by the 2013 storm surge ecologically and economically, but little is known about the social and cultural impacts.**



# Project outline

## Key objectives

- **Creation of a robust evidence base**
  - ↳ **Valuation of cultural services**
    - ↳ **Use bow tie analysis to link impacts and threats**
      - ↳ **Use of stakeholder engagement**
        - ↳ **Creation of conceptual models based on level of flood threat**
          - ↳ **Summarise information to aid policy and management decisions**

# Project outputs and transferability

## Predicted outputs

- **Reporting**
- **Results from and analysis of non-market valuations, bow-tie analysis and conceptual models.**
- **Maps highlighting where cultural services are likely to be diminished, and therefore where human welfare is at risk.**
- **Suggestions for risk management and mitigation.**



# Project outputs and transferability

## Local community



UNIVERSITY OF Hull

## Regional

Lincolnshire Wildlife Trust



Yorkshire Wildlife Trust



## Transferability

## National



National Trust



## International



ICES

CIE





# Placement aspirations

To create an evidence base robust enough to be viably used in the decision making processes for policy and management,

**Coastal change**  **Cultural/social wellbeing**

But also... risk assessment techniques; conceptual flood modelling; risk of storm surges, coastal geography and climate change; non-market valuation techniques and stakeholder engagement.







# VALUING NATURE PROGRAMME



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Thanks for listening...