



UK Research
and Innovation



Department
for Environment
Food & Rural Affairs



Natural Capital
and Ecosystem
Assessment

TRACC

Transformative Research Actions for Resilient Coastal Communities

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01 May 2025

On behalf of the TRACC team



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TRACC

Aim & Approaches

**Explore and implement
new transformative governance structures**
to support coastal resilience and sustainability.

**Adopts
a place- and values-based approach**
looking at interrelations between biophysical,
sociocultural and economic dimensions.

**Focus on
Transdisciplinarity and Co-creation**



Note on Transformative Change

A fundamental change in the way we do things, in the way we collaborate, and we make decisions. It requires:

- **shift of frameworks through which we see the world.**
- **challenging existing dominant ontologies and epistemologies and structural relationships of power.**
- **questioning and redefining purposes**



Why – A place- and values-based approach

Community resilience is a dynamic set of place specific qualities.

Pressing Resilience challenges

environmental change

sea-level rise, flooding, coastal erosion, extreme weather, biodiversity loss and ecosystem degradation

socio-economic and cultural challenges

austerity/lack of public resources, youth emigration, ageing populations, reliance on seasonal income, multiple deprivation, industrial transition, stakeholder conflict, and loss of cultural heritage

Institutional challenges

power relationships, vested interests, dysfunctional policy regimes, devolution/reserved powers, lack of/poor quality of participation



Why – Transdisciplinarity and Co-creation

Community resilience

- **influenced by contested perspectives,** inequalities and differences in values, worldviews, power and interests.
- **shaped by multi-scale, near and distant factors**



Communities are not homogenous

Transdisciplinarity

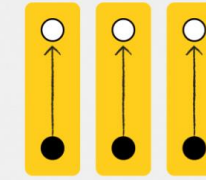
bring together diverse disciplines, public knowledge, and values

fosters ownership and willingness to act

Co-creation result to place specific solutions tailored to local challenges

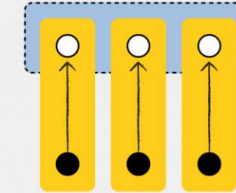
NOTE on Transdisciplinarity

- TD research produces **knowledge that goes beyond existing disciplines**
- **Values and integrates knowledge and experiences from non-academic actors**
- Considers how to **include more-than-humans**
- **Don't overemphasise consensus**
produce much more socially robust outcomes than those trying to eliminate disagreements



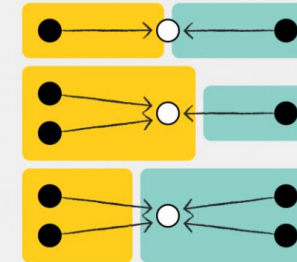
DISCIPLINARY

- Within one academic discipline
- Disciplinary goal setting
- Develops new disciplinary knowledge



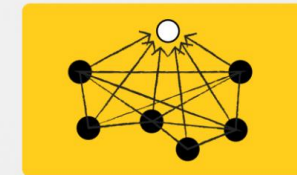
MULTIDISCIPLINARY

- Multiple disciplines
- Multiple disciplinary goals set under one thematic umbrella



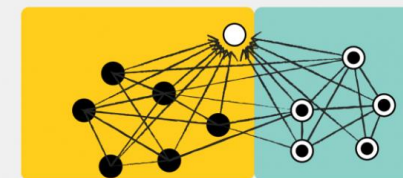
PARTICIPATORY

- Academic and non academic participants
- Knowledge exchange without integration



INTERDISCIPLINARY

- Crosses disciplinary boundaries
- Develops integrated knowledge
- Draws from and contributes to 'inderdisciplines'



TRANSDISCIPLINARY

- Crosses disciplinary and sectorial boundaries
- Common goal setting
- Develops integrated knowledge for science and society
- Draws from and contributes to 'inderdisciplines'

Where we are working

Ireland
Lough Foyle



Scotland
Firth of Clyde



England
The Humber
Estuary



Mid-north
Wales



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Project Partners

ENGLAND

The Fitties CIC, Grimsby, England

Greater Lincolnshire Nature Partnership, Lincolnshire, England

Environment Agency, Bristol, United Kingdom

East Riding of Yorkshire Council, Beverley, United Kingdom

National Trust, Rotherham, United Kingdom

Our Big Picture, Lincolnshire, England

ONECOAST, London, England

Coastal Partnership Network, London, England

North Lincolnshire Council, Scunthorpe, England

Humber Nature Forum, Barton Upon Humber, England

North East Lincolnshire Council, Grimsby, England

WALES

Literature Wales, Cardiff, Wales

Wales Coasts and Seas Partnership, Cardiff, Wales

Wales Coastal Monitoring Centre, Barry, Wales

Gwynedd Council, Wales, United Kingdom

Pembrokeshire Coastal Forum CiC, Pembroke Dock, Wales

Natural Resources Wales Cardiff, United Kingdom

SCOTLAND

Creative Carbon Scotland, Edinburgh, United Kingdom

NatureScot Perth, Scotland

Clyde Marine Planning Partnership, Clydebank, Scotland

Royal Yachting Association, Edinburgh, Scotland

IRELAND

Donegal County Council, Litford, Ireland

Derry City Council, Derry, United Kingdom

Northern Ireland Environment Link, Belfast, Northern Ireland

TRACC Overarching Objectives

- **Create four Resilience Collectives (RCs)** composed by a core group of local people (including project team) and wider stakeholders
- **Transdisciplinary Action Plans (TAPs)** will be co-produced by each RC
- **Resilience Assembly** ±24 participants drawn from across the RCs and national experts to facilitate knowledge exchange between RCs and beyond.
- **Amplifying impacts** - Working in close collaboration with UK and devolved natural environment agencies



How TRACC works

- **WP0:** Transdisciplinarity and resilience - Theory and practice
- **WP1:** Transdisciplinary Action Plans for coastal community (Resilience Collectives established)
- **WP2:** Narratives of resilience and transformation (arts-led approaches)
- **WP3:** Values for nature and community resilience
- **WP4:** Knowledge synthesis and ocean-climate-coastal literacy
- **WP5:** Resilience Assembly: Leverage points and capacity building:
- **WP6:** Upscale learning and amplify impacts:

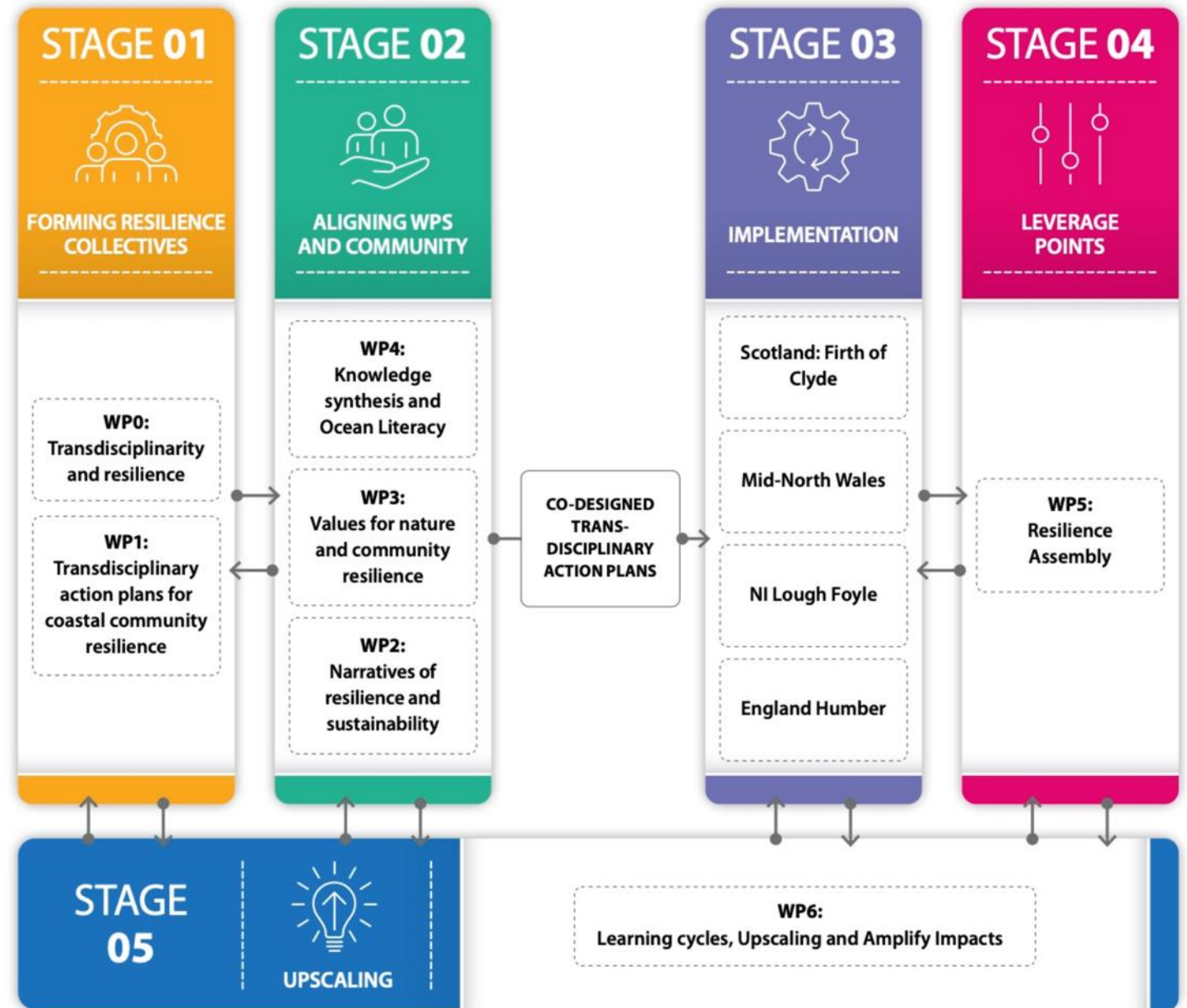
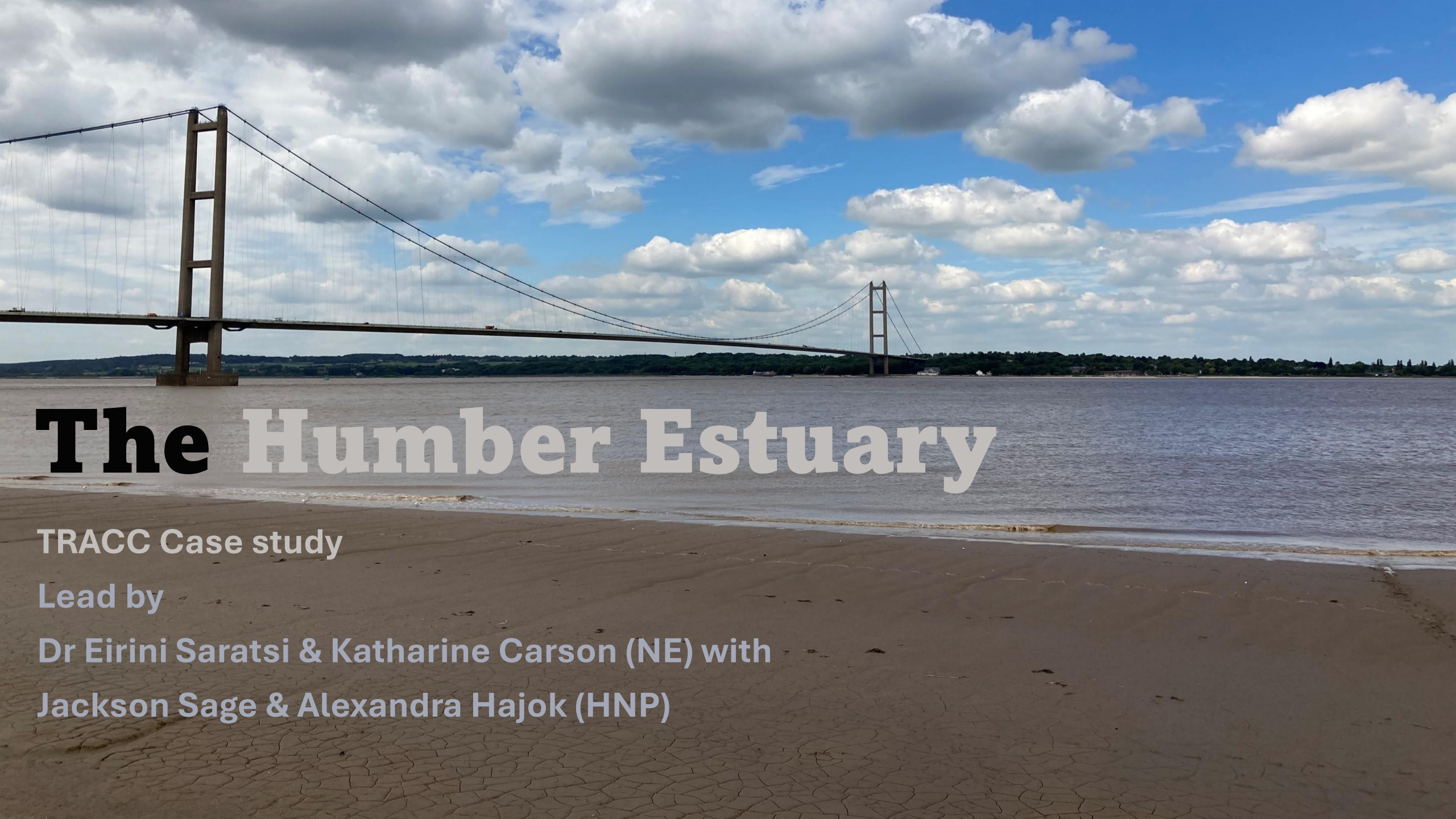


Fig 1. WP structure in relation to workflow



The Humber Estuary

TRACC Case study

Lead by

Dr Eirini Saratsi & Katharine Carson (NE) with
Jackson Sage & Alexandra Hajok (HNP)

The Humber Estuary - TRACC case study

Builds on existing engagement experiences and research

Humber is the largest coastal plain estuary on the east coast of Britain and the second-largest in the UK.

A highly complex stakeholder landscape

The Estuary is recognised as one of the most important estuaries in Europe for nature conservation.

It is protected by international and national designations

Areas with high levels of deprivation especially in urban coastal areas.

The area contains a **range of industries and important infrastructure** that is vital to the region and the wider country.



TRACC @ Humber

- WP0: Transdisciplinarity and resilience: Theory and practice
- WP1: Transdisciplinary Action Plans for coastal community resilience
- WP2: Narratives of resilience and transformation

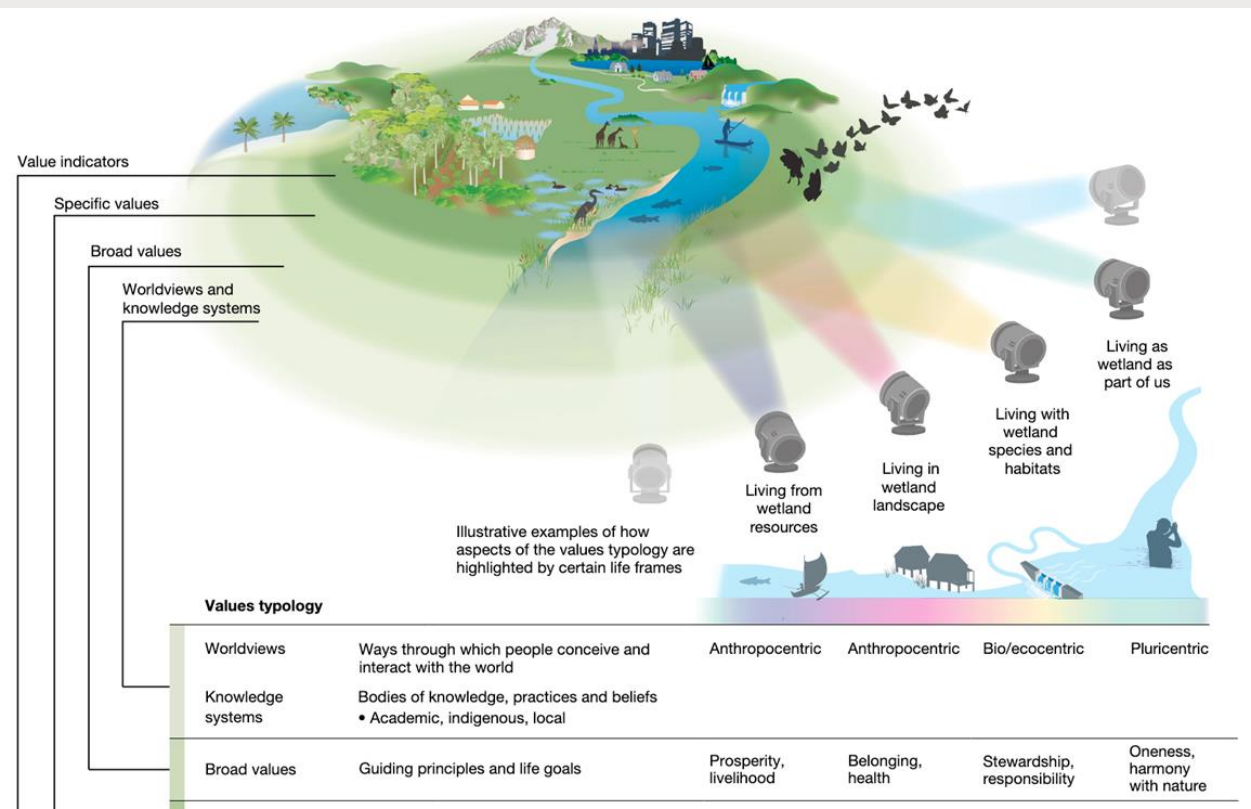
- Will work with our partners to **establish a RC and stakeholder groups** and manage the co-production of **Transdisciplinary Action Plans**.
- **Will use Arts-based research (ABR)** and participatory approaches to facilitate engagement with local communities, **elicit and co-create new knowledge**, emotions and affects about place-based coastal resilience.
- With creative practices **will engage those not usually involved in decision making** (marginalized groups) to co-creating resilience stories. Include use of Forum theatre, narratives and story telling, sound stories, exhibitions.



TRACC @ Humber

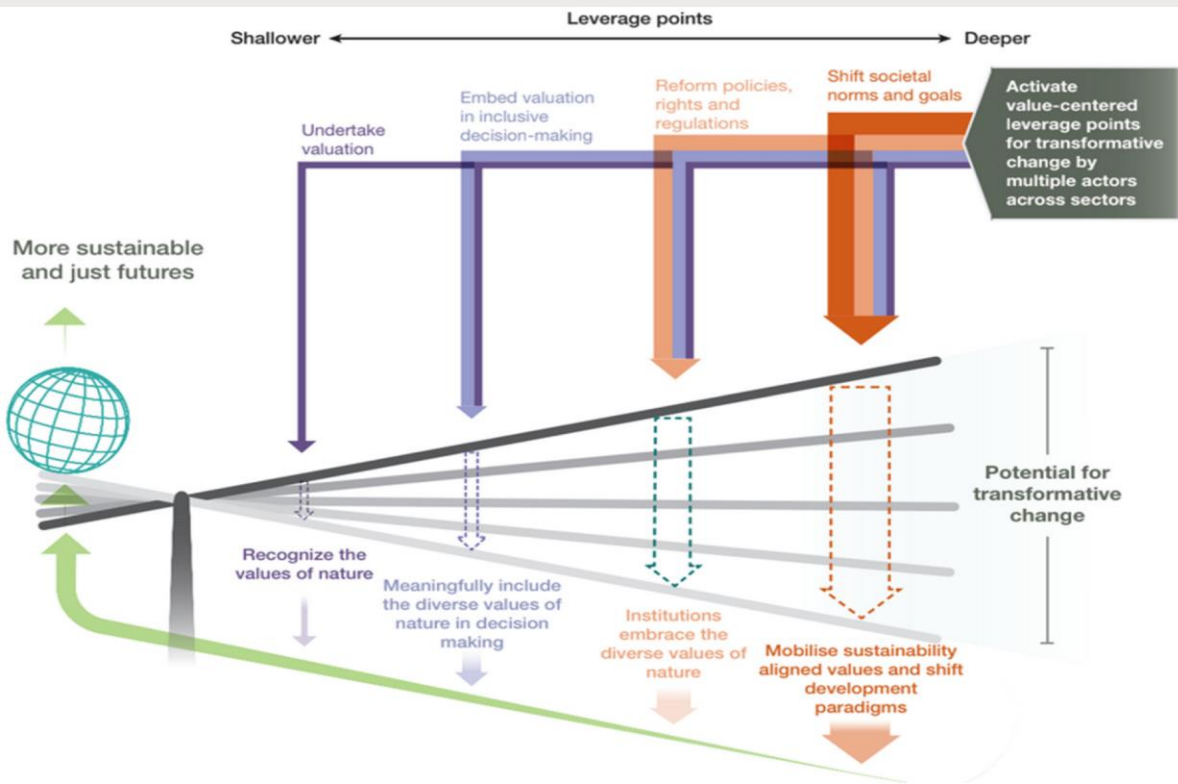
- WP3 Values for nature and community resilience

- Will consider **interactions between community resilience and nature's multiple values** (following **IPBES Values Typology**), adopting but also going beyond natural capital approaches.
- Will **integrate biophysical, monetary, and sociocultural evidence and indicators into real-world RC decision contexts** (e.g. marine plans) through iterative stakeholder-citizen social learning processes.
- **Use of ecosystem data and models (StrathE2E), Natural capital assessments, socio-cultural valuation, citizen panels, response options for transformative change.**



TRACC @ Humber

- WP4 Knowledge synthesis and ocean-climate-coastal literacy
- WP5 Resilience Assembly: Leverage points and capacity building



- Will evaluate **baseline levels of ocean-climate literacy** and co-create further evaluation tools (through stakeholder [online/in-person] and Citizen Panels [in-person] workshops, building on the **Defra national ocean literacy survey**; **focus on adaptive capacity**;
- Will evaluate **impact** through assessing change in ocean-climate literacy within each RC during the life of the project.
- The RA will identify **transformative change pathways, key leverage points and levers**, building on the **IPBES Global Assessment**, Values Assessment, and upcoming Transformative Change Assessment.

TRACC @ Humber

- WP6 Upscale learning and amplify impacts

- Working in involved natural enclosure collaboration with UK and environment agencies

- **will interface learning between RCs, wider perspectives, and national context.**

- It will facilitate a learning/action cycle for each RC (established in TAPs) and review existing best practice approaches to inform RC discussions and decisions



Final Thought

- **TRACC is grounded** in a belief that **innovative solutions** to many of the pressing issues facing our coasts and seas **will only be created through**
- **Developing new ways of working** across academia, practitioners, and civil society
- **Embracing different ways of knowing** to identify and catalyse leverage points for transformative change.



Thank you

Any questions?