

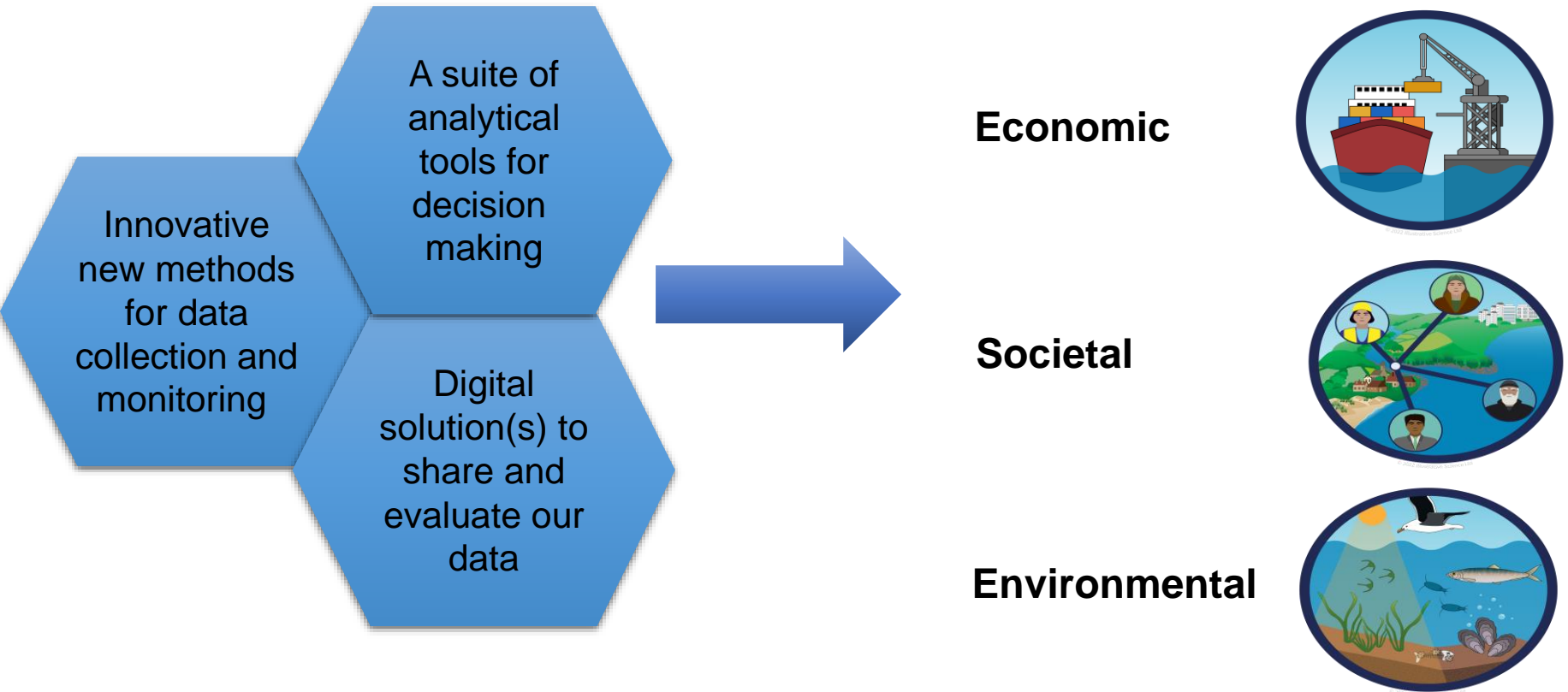
A place-based approach to explore sense of place in uk coastal areas using Participatory GIS mapping

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Project background

Marine Natural Capital and Ecosystem Assessment Programme



Improve understanding of the complex trade-offs faced in the sustainable use of the marine environment



Centre for Environment
Fisheries & Aquaculture
Science



Cefas

NCEA
Natural Capital and
Ecosystem Assessment

Project background

- ✓ **Cultural Ecosystem Services (CES)** – Included in in most typologies of ecosystem services (MEA, 2005; CICES, 2010; IPBES, 2015).
- ✓ Empirical studies focus on economic valuations of **use values**
- ✓ **Less attention** given to "*intangible*," "*nonmaterial*," and "*invisible*" CES
- ✓ **Sense of Place (SOP)** - One of the most **neglected** cultural ecosystem services (MEA, 2005)

“....sense of place is one of the *most abstract* and *illusive* concepts . . . Understanding what creates a true sense of place is a complex task” (Barker 1979, p. 164).



Objectives

✓ Identify key **determinants** influencing SOP

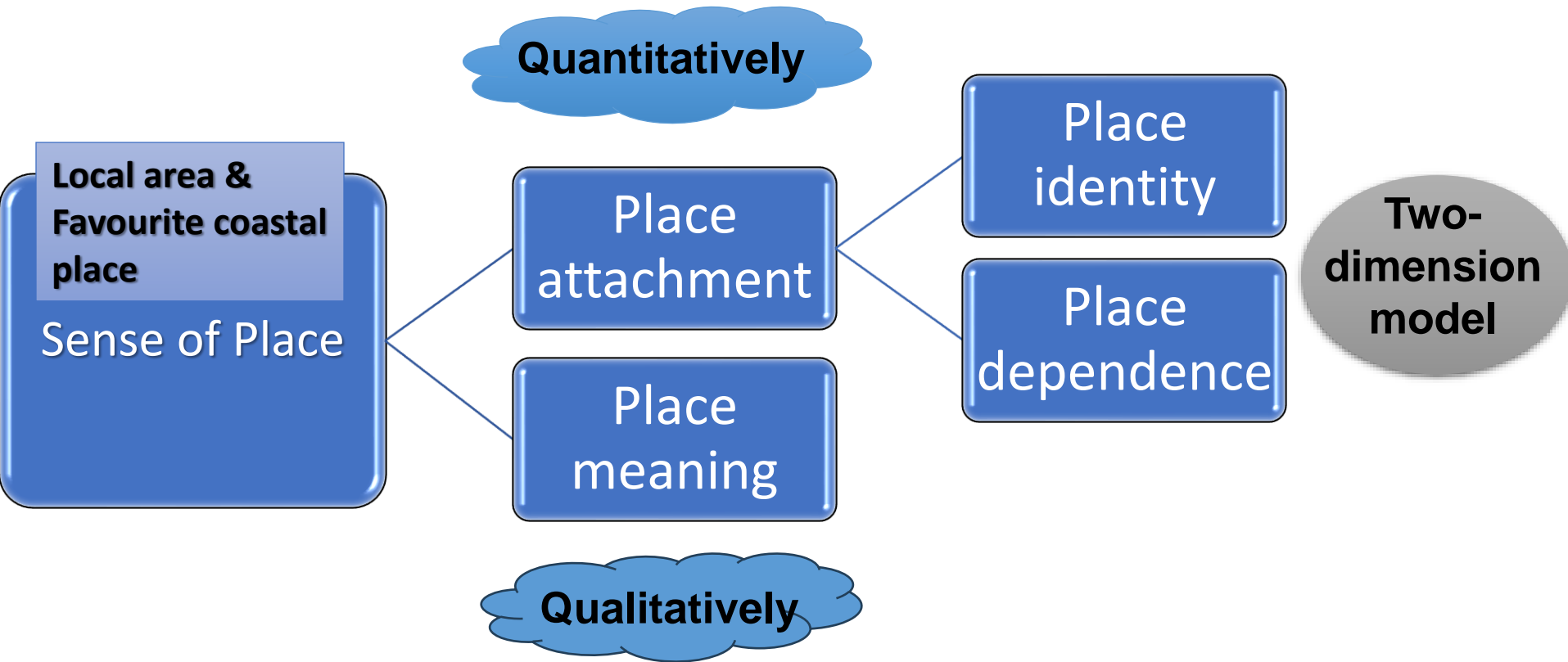
- *What drives coastal residents place attachment?*

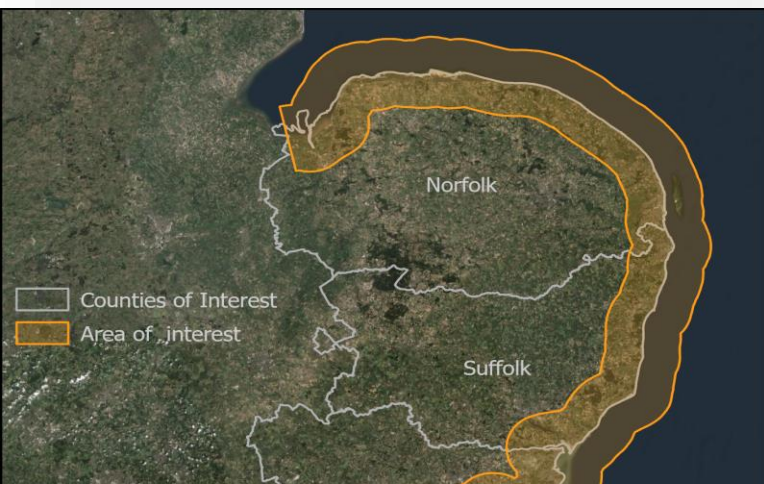


✓ Use a **place-based** approach to map *hotspots* of SOP



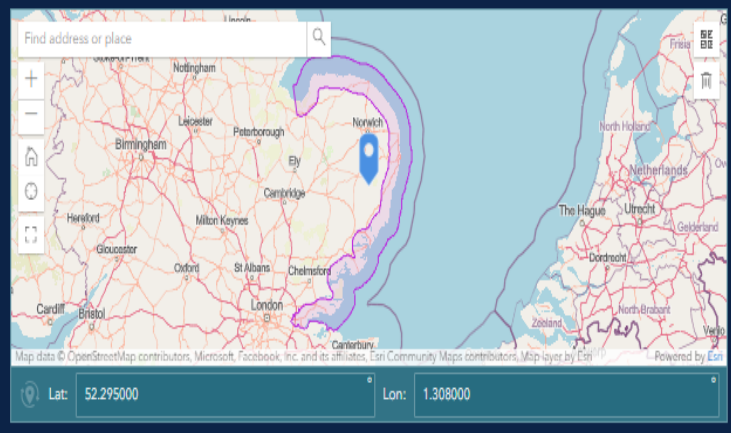
SOP framework





Please use the map below to add a marker anywhere in the area within the map boundaries to choose your favourite coastal/marine place or feature along the East Coast of England. Please be as accurate as possible.

- Instructions on how to use map:
- The + lets you zoom in, the - lets you zoom out (if you are using a **tablet** or a **laptop**)
 - If you are using your mobile phone please pinch 2 or more fingers together or apart to adjust zoom
 - The **home** symbol shows the default map view
 - If you have pinned a place you are not happy with, please use the **bin** symbol to delete the pin and select another place on the map
 - The **circle** symbol shows your current location (only if you are using a mobile device - **phone/tablet** - with GPS on)
 - The **square** symbol (if you are using a **tablet** or a **laptop**) opens a larger map



- Coastal communities' **residents** in East of England (Norfolk, Suffolk and Essex)
- Three parts web-based Participatory GIS survey:
 - I. Housing characteristics and local area
 - II. Favourite coastal place – Participatory GIS
 - III. Socio-demographic characteristics
- Participants recruitment: 1) East Anglian Coast and Estuaries conference, and 2) Panel vendor
- **Place attachment** : 6 statements adapted from APAS scale (Boley et al., 2021)
- **Place meaning - open question: Features liked/not liked**

SOP determinants

Variables	APAS Home (n = 131, R2 = 0.3455)	APAS Favorite Place (n = 123, R2 = 0.348)	
Age	18 to 24	(Base Case)	(Base Case)
	25 to 34 years	-0.075 (0.482)	1.276 (0.590)**
	35 to 44 years	0.263 (0.425)	0.926 (0.608)
	45 to 54 years	-0.136 (0.474)	0.484 (0.681)
	55 to 64 years	0.426 (0.443)	1.351 (0.605)**
	65+ years	0.547 (0.414)	1.112 (0.645)*
Home ownership	Does not own	(Base Case)	(Base Case)
	Own home (mortgage)	-0.088 (0.283)	-0.269 (0.322)
	Own home (outright)	0.074 (0.248)	-0.258 (0.352)
Years lived in home	1 year or less	(Base case)	(Base case)
	2 to 4 years	-0.436 (0.323)	-0.281 (0.397)
	5 to 9 years	-0.054 (0.327)	0.024 (0.425)
	10+ years	-0.936 (0.339)***	-0.613 (0.451)
Frequency of visits to coast/favourite coastal place –	Less than every 3 months	(Base Case)	(Base Case)
	Once every 2 to 3 months	-0.241 (0.408)	0.312 (1.043)
	Once or twice a month	0.388 (0.355)	0.503 (1.031)
	Once a week	-0.299 (0.433)	0.666 (1.006)
	Twice a week	0.777 (0.377)*	0.744 (0.999)
	More than twice a week	0.679 (0.360)*	0.708 (1.018)
	Everyday	-0.022 (0.453)	0.748 (0.981)
Frequency of meeting friends –	No friends nearby	(Base Case)	
	Once a month	0.930 (0.364)**	N/A
	Once a week	0.694 (0.373)*	
	Several days	0.449 (0.419)	
Frequency of meeting family	Everyday	0.868 (0.577)	
	No family nearby	(Base Case)	
	Once a month	0.324 (0.318)	
	Once a week	0.442 (0.316)	N/A
	Several days	0.549 (0.307)	
I frequently meet friends and family at this place	Everyday	0.294 (0.437)	
	Agree/Somewhat Agree/Strongly Agree	N/A	0.514 (0.230)**
In this area I feel a deep feeling of oneness with the natural environment	Agree/Somewhat Agree/Strongly Agree	1.069 (0.236)***	0.788 (0.253)***
Travel Time (from home address to favourite coastal place)	Minutes travel time by car	-0.006 (0.002)***	0.001 (0.002)
Constant		3.411 (0.516)***	2.970 (1.147)

- ✓ **Age** - significant positive effect on attachment to favourite coastal places
- ✓ More **frequent** visits to the coast have a significant and positive effect on home place attachment
- ✓ Significant positive impact of **social** and **nature** bonding on attachment to local area and favourite coastal place
- ✓ **Proximity** to a favourite place is important to predict individuals' local area attachment

SOP hotspots

Quantitative and qualitative data into digital **visual narratives**

The interactive map displays information about place **attachment** and place **meanings** focusing on:

- i. **Hotspots** related to *attachment* (scores) to home place and favourite coastal place.
- ii. **Hotspots** of favourite coastal places
- iii. **Meanings** attributed to both home and favourite coastal places

[Mapping Sense of Place in the East of England \(arcgis.com\)](https://arcgis.com)



Conclusive remarks

- Spatially explicit data combined with quantitative and qualitative information **reinforce** the specific nature of coastal SOP
- **Local knowledge** and **public participation** can aid trade-off analysis of natural capital and ecosystem services
- Recognizing and valuing **unique cultural** and **social** connections with natural blue spaces can inform coastal and marine policies and plans



Thank you!

Any questions?

Together we are working for
a sustainable blue future

